Southwestern Public Service Company

Summary of Test Year Production O&M Expenses

Line No	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018
		Steam Power Operation								
1	500	Supervision & Engineering	2 08%	$ 329,887	$ 175,401	$ 173,999	$ 169,596	$ 182,910	$ 158,148	$ 222,726
2	502	Steam Expense	10 92%	1,305,364	307,841	928,403	996,906	1,114,726	912,862	1,118,569
3	505	Electric Expense	9 19%	851,371	909,081	856,436	1,054,901	762,267	702,973	895,163
4	506	Miscellaneous	13 11%	988,682	(263,161)	2,442,292	934,042	1,076,906	1,056,009	995,995
5	507	Rent	6 07%	343,731	651,410	603,983	432,632	421,042	474,700	500,283
6	509	Allowances	0 12%	-	-	-	-	-	-	28,654
7		**Total Steam Power Operations**	**41.50%**	**$ 3,819,035**	**$ 1,780,572**	**$ 5,005,113**	**$ 3,588,077**	**$ 3,557,851**	**$ 3,304,692**	**$ 3,761,391**
		Steam Power Maintenance								
8	510	Supervision & Engineering	1 31%	$ 150,280	$ 117,745	$ 95,443	$ 119 376	$ 167,751	$ 129,586	$ 132,096
9	511	Structures	4 76%	446,887	391,050	453,303	480,333	444,950	311,610	310,349
10	512	Boilers	17 54%	1,027,921	1,464,739	720,271	1,214 217	1,092,368	1,468,936	2,415,388
11	513	Electric Plant	12 11%	723,617	652,226	678,556	583,405	744,481	887,240	2,091,381
12	514	Miscellaneous Plant	11 08%	651,462	963,195	993,897	955,117	836,586	779,010	913,957
13		**Total Steam Power Maintenance**	**46.80%**	**$ 3,000,167**	**$ 3,588,955**	**$ 2,941,471**	**$ 3,352,448**	**$ 3,286,136**	**$ 3,576,383**	**$ 5,863,171**
		Other Power Operation								
14	546	Supervision & Engineering	0 03%	$ 8,457	$ 2,875	$ 3,214	$ 2,856	$ (13,504)	$ 2,397	$ 2,778
15	548	Generation Expense	0 27%	15,804	62,710	268,949	62,220	11,593	9,817	18,760
16	549	Miscellaneous	0 45%	95,764	(53,582)	31,534	43,246	22,522	35,203	35,776
17	550	Rents	0 68%	18,031	30,517	29,840	41,758	41,371	46,580	48,407
18		**Total Other Power Operation**	**1.43%**	**$ 138,056**	**$ 42,519**	**$ 333,537**	**$ 150,080**	**$ 61,981**	**$ 93,997**	**$ 105,721**
		Other Power Maintenance								
19	551	Supervision & Engineering	0 16%	$ 17,272	$ 18,523	$ 15,158	$ 7,421	$ 18,361	$ 25,402	$ 11,847
20	552	Structures	0 35%	47,682	19,844	36,986	22,422	49,059	16,274	57,625
21	553	Electric Plant	1 52%	71,327	100,733	87,541	149,045	159,640	81,200	85,097
22	554	Miscellaneous Plant[1]	0 34%	3,957	8,082	19,772	36,587	3,344	11,262	20,857
23		**Total Other Power Maintenance**	**2 38%**	**$ 140,238**	**$ 147,182**	**$ 159,457**	**$ 215,477**	**$ 230,403**	**$ 134,138**	**$ 175,425**
		Other Power Supply								
24	556	System Control & Load Dispatch[2]	0 96%	$ 97,035	$ 89,800	$ 102,429	$ 91,408	$ 93,316	$ 70,478	$ 63,998
25	557	Other Expenditures	6 93%	231,866	1,287,832	5,465	669,388	558,687	495,752	630,327
26		**Total Other Power Supply**	**7.90%**	**$ 328,901**	**$ 1,377,632**	**$ 107,893**	**$ 760,796**	**$ 652,003**	**$ 566,230**	**$ 694,325**
27	**Totals**		**100 00%**	**$ 7,426,397**	**$ 6,936,860**	**$ 8,547,470**	**$ 8,066,878**	**$ 7,788,374**	**$ 7,675,439**	**$ 10,600,032**

Line No	FERC Account	Description of Account	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Updated Test Year Totals[3]
		Steam Power Operation									
1	500	Supervision & Engineering	$ 161,507	$ 141,941	$ 167,912	$ 149,080	$ 207,666	$ 180,340	$ 234,935	$ 208,476	$ 2,185,237
2	502	Steam Expense	1,061,530	801,103	772,908	797,101	733,177	799,646	1,160,693	1,177,555	11,446,776
3	505	Electric Expense	1,021,153	889,896	616,062	690,736	573,177	815,518	826,472	790,523	9,638,842
4	506	Miscellaneous	789,792	2,050,265	1,250,052	1,044,156	1,223,573	1,079,834	1,110,231	1,134,690	13,745,545
5	507	Rent	623,743	749,686	467,798	526,144	561,071	479,513	593,944	532,647	6,363,204
6	509	Allowances	-	93,836	-	-	-	-	-	-	122,490
7		**Total Steam Power Operations**	**$ 3,657,726**	**$ 4,726,728**	**$ 3,274,732**	**$ 3,207,216**	**$ 3,298,664**	**$ 3,354,851**	**$ 3,926,275**	**$ 3,843,892**	**$ 43,502,094**
		Steam Power Maintenance									
8	510	Supervision & Engineering	$ 77,642	$ 88,544	$ 164,765	$ 119 532	$ 98,376	$ 134,281	$ 70,810	$ 71,046	$ 1,373,803
9	511	Structures	235,795	1,229,350	323,799	366,008	321,519	222,565	427,762	320,259	4,994,300
10	512	Boilers	1,852,832	2,223,130	812,278	1,122,800	2 123,436	1,322,238	1,788,131	951,185	18,386,938
11	513	Electric Plant	1,512,413	1,127,494	747,500	1,040,896	1,551,610	987,984	859,720	560,070	12,694,196
12	514	Miscellaneous Plant	933,100	1,256,057	892 479	1,000,479	923,480	771,984	1,128,905	1,219,626	11,610,780
13		**Total Steam Power Maintenance**	**$ 4,611,781**	**$ 5,924,575**	**$ 2,940,821**	**$ 3,649,715**	**$ 5,018,421**	**$ 3,439,053**	**$ 4,275,328**	**$ 3,122,186**	**$ 49,060,017**
		Other Power Operation									
14	546	Supervision & Engineering	$ 2,433	$ 1,828	$ 2,613	$ 2,171	$ 2,687	$ 8,970	$ 9,059	$ 9,150	$ 33,439
15	548	Generation Expense	20,624	70,853	18,986	23,013	19,691	21,474	3,928	3,650	284,608
16	549	Miscellaneous	63,365	(4,365)	48,951	54,569	11,253	39,776	60,920	61,530	472,744
17	550	Rents	58,368	70,040	36,759	42,651	45,143	39,407	47,772	190,430	708,685
18		**Total Other Power Operation**	**$ 144,789**	**$ 138,356**	**$ 107,308**	**$ 122,404**	**$ 78,773**	**$ 109,627**	**$ 121,679**	**$ 264,760**	**$ 1,499,476**
		Other Power Maintenance									
19	551	Supervision & Engineering	$ 47,814	$ 19,359	$ 24,548	$ 2,300	$ 4,247	$ 1,794	$ 1,731	$ 5,368	$ 170,190
20	552	Structures	22,670	65,637	30,238	8,202	27,049	26,875	21,842	21,842	369,736
21	553	Electric Plant	111,685	233,068	136,780	28,402	78,801	49,739	74 258	410,885	1,598,601
22	554	Miscellaneous Plant[1]	89,582	38,885	15,111	19,441	37 705	26,259	26,521	26,786	352,339
23		**Total Other Power Maintenance**	**$ 271,751**	**$ 356,949**	**$ 206,677**	**$ 58,345**	**$ 147,802**	**$ 104,667**	**$ 124,353**	**$ 464,882**	**$ 2,490,866**
		Other Power Supply									
24	556	System Control & Load Dispatch[2]	$ 99,490	$ 70,290	$ 118,527	$ 65,946	$ 112,790	$ 86,079	$ 69,921	$ 69,366	$ 1,011,609
25	557	Other Expenditures	448,577	727,325	847,407	(195,591)	1 148,317	639,968	646,368	652,832	7,269,357
26		**Total Other Power Supply**	**$ 548,068**	**$ 797,615**	**$ 965,933**	**$ (129,646)**	**$ 1,261,107**	**$ 726,047**	**$ 716,289**	**$ 722,197**	**$ 8,280,965**
27	**Totals**		**$ 9,234,114**	**$ 11,944,223**	**$ 7,495,471**	**$ 6,908,035**	**$ 9,804,767**	**$ 7,734,245**	**$ 9,163,923**	**$ 8,417,917**	**$ 104,833,419**

Notes: This schedule contains estimates for the period of April 1, 2019 through June 30, 2019 referred to as the "Update Period." As discussed by Southwestern Public Service Company ("SPS") witness William A. Grant, SPS will file actual costs for the Update Period, including an updated version of this schedule no later than the 45th day after the date of the initial filing of this rate c as required by PURA § 36 112

Costs not directly assigned to a plant were allocated on the basis of directly assigned plant costs in each FERC account to total directly assigned costs in each FERC account

Utility Share $ and % not applicable because SPS does not jointly own any generation facilities

[1] A portion of Miscellaneous Plant expenses were not directly assignable to the plants

[2] System Control & Load Dispatch expenses were not directly assignable to the plants

[3] This column represents the total amounts for the period between July 1, 2018 and June 30, 2019 also known as the updated test year

Schedule H-1
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Sponsors: Freitas, Low
2019 TX Rate Case

Southwestern Public Service Company

Nuclear Expense Summaries

Schedules:

H-1.1	Nuclear Company-wide O&M Expenses Summary
H-1.1a	Nuclear Plant O&M Summary
H-1.1a1	Nuclear Unit O&M Summary

The H-1.1 schedules are not applicable to Southwestern Public Service Company ("SPS") because SPS does not own or operate nuclear facilities.

Southwestern Public Service Company

Fossil Company-Wide O&M Expenses Summary

Line No.	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Updated Test Year Totals[3]
		Steam Power Operation																	
1	500	Supervision & Engineering	2 08%	$ 329,887	$ 175,401	$ 173,999	$ 169,596	$ 182,910	$ 158,148	$ 222,726	$ 161,507	$ 141,941	$ 167,912	$ 149,080	$ 207,666	$ 180,340	$ 234,935	$ 208,476	$ 2,185,237
2	502	Steam Expense	10 92%	1,305,364	307,841	928,403	996,906	1,114,726	912,862	1,118,569	1,061 530	801,103	772,908	797,101	733,177	799,646	1,160,693	1,177,555	11 446,776
3	505	Electric Expense	9 19%	851,371	909,081	856 436	1,054,901	762,267	702,973	895,163	1,021,153	889,896	616,062	690,736	573,177	815,518	826,472	790,523	9,638,842
4	506	Miscellaneous	13 11%	988,682	(263,161)	2,442,292	934,042	1,076,906	1,056,009	995,995	789,792	2,050,265	1,250 052	1,044,156	1,223,573	1,079,834	1,110,231	1 134,690	13,745,545
5	507	Rent	6 07%	343,731	651,410	603,983	432,632	421,042	474,700	500,283	623,743	749 686	467,798	526,144	561,071	479,513	593,944	532,647	6,363,204
6	509	Allowances	0 12%	-	-	-	-	-	-	28,654	-	93,836	-	-	-	-	-	-	122,490
7		**Total Steam Power Operations**	**41.50%**	**$ 3,819,035**	**$ 1,780,572**	**$ 5,005,113**	**$ 3,588,077**	**$ 3,557,851**	**$ 3,304,692**	**$ 3,761,391**	**$ 3,657,726**	**$ 4,726,728**	**$ 3,274,732**	**$ 3,207,216**	**$ 3,298,664**	**$ 3,354,851**	**$ 3,926,275**	**$ 3,843,892**	**$ 43,502,094**
		Steam Power Maintenance																	
8	510	Supervision & Engineering	1 31%	$ 150,280	$ 117,745	$ 95,443	$ 119,376	$ 167,751	$ 129,586	$ 132,096	$ 77,642	$ 88,544	$ 164,765	$ 119,532	$ 98,376	$ 134,281	$ 70,810	$ 71,046	$ 1,373,803
9	511	Structures	4 76%	446,887	391,050	453,303	480,333	444,950	311,610	310,349	235,795	1,229,350	323,799	366,008	321,519	222,565	427,762	320,259	4,994,300
10	512	Boilers	17 54%	1,027,921	1,464,739	720,271	1,214,217	1,092,368	1,468,936	2,415,388	1,852,832	2,223,130	812,278	1,122,800	2,123,436	1,322,238	1,788,131	951,185	18 386,938
11	513	Electric Plant	12 11%	723,617	652,226	678,556	583,405	744,481	887,240	2,091,381	1,512,413	1,127,494	747,500	1,040,896	1,551,610	987,984	859,720	560,070	12,694,196
12	514	Miscellaneous Plant	11 08%	651,462	963,195	993 897	955,117	836,586	779,010	913,957	933,100	1,256,057	892,479	1,000,479	923,480	771,984	1,128,905	1,219,626	11,610,780
13		**Total Steam Power Maintenance**	**46 80%**	**$ 3,000,167**	**$ 3,588,955**	**$ 2,941,471**	**$ 3,352,448**	**$ 3,286,136**	**$ 3,576,383**	**$ 5,863,171**	**$ 4,611,781**	**$ 5,924,575**	**$ 2,940,821**	**$ 3,649,715**	**$ 5,018,421**	**$ 3,439,053**	**$ 4,275,328**	**$ 3,122,186**	**$ 49,060,017**
		Other Power Operation																	
14	546	Supervision & Engineering	0 03%	$ 8,457	$ 2,875	$ 3,214	$ 2,856	$ (13,504)	$ 2,397	$ 2,778	$ 2,433	$ 1,828	$ 2,613	$ 2,171	$ 2,687	$ 8,970	$ 9,059	$ 9,150	$ 33,439
15	548	Generation Expense	0 27%	15,804	62,710	268,949	62,220	11,593	9,817	18,760	20,624	70,853	18,986	23,013	19 691	21,474	3,928	3 650	284,608
16	549	Miscellaneous	0 45%	95,764	(53,582)	31,534	43,246	22,522	35,203	35,776	63,365	(4,365)	48,951	54,569	11,253	39,776	60,920	61,530	472,744
17	550	Rents	0 68%	18,031	30,517	29,840	41,758	41,371	46,580	48,407	58,368	70,040	36,759	42,651	45,143	39,407	47,772	190,430	708,685
18		**Total Other Power Operation**	**1.43%**	**$ 138,056**	**$ 42,519**	**$ 333,537**	**$ 150,080**	**$ 61,981**	**$ 93,997**	**$ 105,721**	**$ 144,789**	**$ 138,356**	**$ 107,308**	**$ 122,404**	**$ 78,773**	**$ 109,627**	**$ 121,679**	**$ 264,760**	**$ 1,499,476**
		Other Power Maintenance																	
19	551	Supervision & Engineering	0 16%	$ 17,272	$ 18,523	$ 15,158	$ 7,421	$ 18,361	$ 25,402	$ 11,847	$ 47,814	$ 19,359	$ 24,548	$ 2,300	$ 4,247	$ 1,794	$ 1,731	$ 5,368	$ 170,190
20	552	Structures	0 35%	47,682	19,844	36,986	22,422	49,059	16 274	57,625	22,670	65,637	30,238	8,202	27,049	26,875	21,842	21,842	369,736
21	553	Electric Plant	1 52%	71,327	100,733	87,541	149,045	159,640	81,200	85 097	111,685	233,068	136,780	28,402	78,801	49,739	74 258	410,885	1,598,601
22	554	Miscellaneous Plant [1]	0 34%	3,957	8,082	19,772	36,587	3,344	11,262	20 857	89,582	38,885	15,111	19,441	37,705	26,259	26,521	26,786	352,339
23		**Total Other Power Maintenance**	**2.38%**	**$ 140,238**	**$ 147,182**	**$ 159,457**	**$ 215,477**	**$ 230,403**	**$ 134,138**	**$ 175,425**	**$ 271,751**	**$ 356,949**	**$ 206,677**	**$ 58,345**	**$ 147,802**	**$ 104,667**	**$ 124,353**	**$ 464,882**	**$ 2,490,866**
		Other Power Supply																	
24	556	System Control & Load Dispatch [2]	0 96%	$ 97,035	$ 89,800	$ 102,429	$ 91,408	$ 93,316	$ 70,478	$ 63,998	$ 99,490	$ 70,290	$ 118,527	$ 65,946	$ 112,790	$ 86,079	$ 69,921	$ 69,366	$ 1,011 609
25	557	Other Expenditures	6 93%	231,866	1,287,832	5,465	669,388	558,687	495,752	630,327	448,577	727,325	847,407	(195,591)	1,148,317	639,968	646,368	652,832	7,269,357
26		**Total Other Power Supply**	**7.90%**	**$ 328,901**	**$ 1,377,632**	**$ 107,893**	**$ 760,796**	**$ 652,003**	**$ 566,230**	**$ 694,325**	**$ 548,068**	**$ 797,615**	**$ 965,933**	**$ (129,646)**	**$ 1,261,107**	**$ 726,047**	**$ 716,289**	**$ 722,197**	**$ 8,280,965**
27		**Totals**	**100.00%**	**$ 7,426,397**	**$ 6,936,860**	**$ 8,547,470**	**$ 8,066,878**	**$ 7,788,374**	**$ 7,675,439**	**$ 10,600,032**	**$ 9,234,114**	**$ 11,944,223**	**$ 7,495,471**	**$ 6,908,035**	**$ 9,804,767**	**$ 7,734,245**	**$ 9,163,923**	**$ 8,417,917**	**$ 104,833,419**

Notes: This schedule contains estimates for the period of April 1 2019 through June 30, 2019 referred to as the "Update Period." As discussed by Southwestern Public Service Company ("SPS") witness William A Grant, SPS will file actual costs for the Update Period, including an updated version of this schedule, no later than the 45th day after the date of the initial filing of this rate case, as required by PURA § 36 112

Costs not directly assigned to a plant were allocated on the basis of directly assigned plant costs in each FERC account to total directly assigned costs in each FERC account

Utility Share $ and % not applicable because SPS does not jointly own any generation facilities

[1] A portion of Miscellaneous Plant expenses were not directly assignable to the plants

[2] System Control & Load Dispatch expenses were not directly assignable to the plants

[3] This column represents the total amounts for the period between July 1 2018 and June 30, 2019 also known as the updated test year

Schedule H-1.2
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Sponsors: Freitas, Low
2019 TX Rate Case

Southwestern Public Service Company

Natural Gas Plant O&M Summary

Line No.	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Updated Test Year Totals[3]
		Steam Power Operation																	
1	500	Supervision & Engineering	1.85%	$ 125,093	$ 67,055	$ 61,196	$ 60,340	$ 70,419	$ 59,398	$ 123,176	$ 60,127	$ 66,084	$ 60,417	$ 73,579	$ 68,784	$ 59 733	$ 77,816	$ 69,052	$ 848,927
2	502	Steam Expense	10.45%	888,042	(177,663)	341,131	437,602	427,008	364,885	357,239	399,066	437,766	297,838	325,110	330,497	360,460	523,210	530,811	4,791,492
3	505	Electric Expense	12.59%	517,178	484,231	494,230	602,674	479,094	405,418	475,430	675,364	519,512	286,830	400,126	367,544	522,942	529,966	506,914	5,771,815
4	506	Miscellaneous	14.40%	404,950	(25,024)	481,422	420,600	563,560	495,872	458,394	463,827	931,634	588,518	503,951	586,012	517,170	531,729	543,443	6,604,711
5	507	Rent	6.59%	162,148	307,372	285,022	211,922	206,195	232,654	228,971	284,918	342,473	224,172	252,132	268,870	229,787	284,623	255,249	3,021,965
6	509	Allowances	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7		**Total Steam Power Operations**	**45.88%**	**$ 2,097,411**	**$ 655,971**	**$ 1,663,001**	**$ 1,733,139**	**$ 1,746,277**	**$ 1,558,226**	**$ 1,643,209**	**$ 1,883,303**	**$ 2,297,470**	**$ 1,457,776**	**$ 1,554,898**	**$ 1,621,707**	**$ 1,690,091**	**$ 1,947,344**	**$ 1,905,470**	**$ 21,038,910**
		Steam Power Maintenance																	
8	510	Supervision & Engineering	1.53%	$ 51,038	$ 70,239	$ 35 235	$ 43,215	$ 49,192	$ 48,948	$ 50,320	$ 75,739	$ 41,297	$ 76,730	$ 67,715	$ 65,004	$ 88,729	$ 46,789	$ 46,945	$ 700,622
9	511	Structures	5.05%	200,430	184,885	228,338	231,168	216,749	148,013	180,521	103,859	395,669	124,518	176,043	184,265	127,553	245,153	183,543	2,317,052
10	512	Boilers	11.69%	449,565	817,012	339,499	551,895	392,328	343,530	537,117	499,217	636,089	245,016	573,323	543,225	338,260	457,446	243,335	5,360,780
11	513	Electric Plant	10.74%	360,573	358,712	443,012	301,092	304,630	370,193	235,892	293,045	603,162	318,125	756,380	682,183	434,378	377,986	246,241	4,923,307
12	514	Miscellaneous Plant	8.65%	256,737	267,410	346,542	373,560	287,531	207,065	333,324	263,306	617,674	206,678	364,619	300,001	250,786	366,735	396,206	3,967,485
13		**Total Steam Power Maintenance**	**37.66%**	**$ 1,318,343**	**$ 1,698,258**	**$ 1,392,626**	**$ 1,500,930**	**$ 1,250,429**	**$ 1,117,748**	**$ 1,337,173**	**$ 1,235,167**	**$ 2,293,890**	**$ 971,068**	**$ 1,938,080**	**$ 1,774,677**	**$ 1,239,706**	**$ 1,494,108**	**$ 1,116,271**	**$ 17,269,247**
		Other Power Operation																	
14	546	Supervision & Engineering	0.07%	$ 8,457	$ 2 875	$ 3 214	$ 2,856	$ (13,504)	$ 2 397	$ 2 778	$ 2,433	$ 1,828	$ 2,613	$ 2,171	$ 2,687	$ 8,970	$ 9,059	$ 9 150	$ 33,439
15	548	Generation Expense	0.61%	14,368	62,610	268,949	61,948	11,593	8,717	18,703	20,624	69,692	18,986	19,464	19,600	21,375	3,910	3,633	278 242
16	549	Miscellaneous	0.93%	82,888	(46,699)	26,480	35,865	15,036	30,362	25,366	62,287	(4,539)	47,561	52,327	10,483	37,055	56,753	57,321	425,877
17	550	Rents	1.51%	15,462	26,167	25,587	38,551	38,195	43,004	46,693	56,301	67,559	36,759	42,651	45,143	39,407	47,772	190,430	692,465
18		**Total Other Power Operation**	**3.12%**	**$ 121,175**	**$ 44,952**	**$ 324,229**	**$ 139,220**	**$ 51,320**	**$ 84,480**	**$ 93,539**	**$ 141,645**	**$ 134,541**	**$ 105,918**	**$ 116,613**	**$ 77,912**	**$ 106,807**	**$ 117,494**	**$ 260,534**	**$ 1,430,023**
		Other Power Maintenance																	
19	551	Supervision & Engineering	0.37%	$ 17,272	$ 18,523	$ 15,158	$ 7,421	$ 18,361	$ 25,402	$ 11,847	$ 47,814	$ 19,359	$ 24,548	$ 2,300	$ 4,247	$ 1,794	$ 1,731	$ 5,368	$ 170,190
20	552	Structures	0.80%	46,717	19,801	30,511	24,255	49,116	14,070	56 020	21,594	65,637	30,238	8,202	27,049	26,875	21,842	21,842	366,740
21	553	Electric Plant	3.32%	57,596	90,491	80,859	138 943	154,535	74,613	77,421	104,602	220,768	134,142	23,823	76,057	48,008	71,673	396,580	1,521,165
22	554	Miscellaneous Plant[1]	0.77%	3,957	8,082	19,772	36,192	3,344	11,262	20 857	89,582	38,885	15,111	19,441	37,705	26,259	26,521	26,786	351,944
23		**Total Other Power Maintenance**	**5.26%**	**$ 125,542**	**$ 136,898**	**$ 146,300**	**$ 206,811**	**$ 225,355**	**$ 125,346**	**$ 166,144**	**$ 263,592**	**$ 344,649**	**$ 204,039**	**$ 53,766**	**$ 145,058**	**$ 102,935**	**$ 121,767**	**$ 450,577**	**$ 2,410,039**
		Other Power Supply																	
24	556	System Control & Load Dispatch[2]	0.99%	$ 43,438	$ 40,199	$ 45,852	$ 40,919	$ 41,773	$ 31,549	$ 28,649	$ 44,537	$ 31,465	$ 53,058	$ 29,521	$ 50,490	$ 38,533	$ 31,300	$ 31,052	$ 452,846
25	557	Other Expenditures	7.10%	103,795	576,497	2,446	299,651	250,096	221 923	282,165	200,805	325,587	379,341	(87,556)	514,043	286,481	289 346	292,240	3,254,123
26		**Total Other Power Supply**	**8.08%**	**$ 147,232**	**$ 616,696**	**$ 48,298**	**$ 340,570**	**$ 291,869**	**$ 253,473**	**$ 310,814**	**$ 245,342**	**$ 357,052**	**$ 432,399**	**$ (58,036)**	**$ 564,534**	**$ 325,015**	**$ 320,646**	**$ 323,291**	**$ 3,706,969**
27		**Totals**	**100.00%**	**$ 3,809,704**	**$ 3,152,776**	**$ 3,574,455**	**$ 3,920,669**	**$ 3,565,250**	**$ 3,139,273**	**$ 3,550,880**	**$ 3,769,049**	**$ 5,427,600**	**$ 3,171,200**	**$ 3,605,322**	**$ 4,183,888**	**$ 3,464,554**	**$ 4,001,360**	**$ 4,056,143**	**$ 45,855,187**

Notes This schedule contains estimates for the period of April 1, 2019 through June 30 2019, referred to as the "Update Period" As discussed by Southwestern Public Service Company ("SPS") witness William A Grant, SPS will file actual costs for the Update Period including an updated version of this schedule no later than the 45th day after the date of the initial filing of this rate case, as required by PURA § 36 112

Costs not directly assigned to a plant were allocated on the basis of directly assigned plant costs in each FERC account to total directly assigned costs in each FERC account

Utility Share $ and % not applicable because SPS does not jointly own any generation facilities

[1] A portion of Miscellaneous Plant expenses were not directly assignable to the plants

[2] System Control & Load Dispatch expenses were not directly assignable to the plants

[3] This column represents the total amounts for the period between July 1, 2018 and June 30, 2019, also known as the updated test year

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Sponsors: Freitas, Low
2019 TX Rate Case

Southwestern Public Service Company

Natural Gas (Steam Generation) O&M Summary

Total Summary

Line No.	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Updated Test Year Totals[3]
		Steam Power Operation																	
1	500	Supervision & Engineering	2.02%	$ 125,093	$ 67,055	$ 61,196	$ 60,340	$ 70,419	$ 59,398	$ 123,176	$ 60,127	$ 66,084	$ 60,417	$ 73,579	$ 68,784	$ 59,733	$ 77,816	$ 69,052	$ 848,927
2	502	Steam Expense	11.40%	888,042	(177,663)	341,131	437,602	427,008	364,885	357,239	399,066	437,766	297,838	325,110	330,497	360,460	523,210	530,811	4,791,492
3	505	Electric Expense	13.74%	517,178	484,231	494,230	602,674	479,094	405,418	475,430	675,364	519,512	286,830	400,126	367,544	522,942	529,966	506,914	5,771,815
4	506	Miscellaneous	15.72%	404,950	(25,024)	481,422	420,600	563,560	495,872	458,394	463,827	931,634	588,518	503,951	586,012	517,170	531,729	543,443	6,604,711
5	507	Rent	7.19%	162,148	307,372	285,022	211,922	206,195	232 654	228,971	284,918	342,473	224,172	252,132	268,870	229,787	284,623	255,249	3,021,965
6	509	Allowances	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7		**Total Steam Power Operations**	**50.07%**	**$ 2,097,411**	**$ 655,971**	**$ 1,663,001**	**$ 1,733,139**	**$ 1,746,277**	**$ 1,558,226**	**$ 1,643,209**	**$ 1,883,303**	**$ 2,297,470**	**$ 1,457,776**	**$ 1,554,898**	**$ 1,621,707**	**$ 1,690,091**	**$ 1,947,344**	**$ 1,905,470**	**$ 21,038,910**
		Steam Power Maintenance																	
8	510	Supervision & Engineering	1.67%	$ 51,038	$ 70,239	$ 35,235	$ 43,215	$ 49,192	$ 48,948	$ 50,320	$ 75,739	$ 41,297	$ 76,730	$ 67,715	$ 65,004	$ 88,729	$ 46,789	$ 46,945	$ 700,622
9	511	Structures	5.51%	200,430	184 885	228,338	231 168	216,749	148,013	180,521	103,859	395,669	124,518	176,043	184,265	127,553	245,153	183,543	2,317,052
10	512	Boilers	12.76%	449,565	817,012	339,499	551,895	392,328	343,530	537,117	499,217	636 089	245 016	573,323	543 225	338,260	457 446	243,335	5,360,780
11	513	Electric Plant	11.72%	360,573	358,712	443,012	301,092	304,630	370,193	235,892	293,045	603,162	318,125	756,380	682,183	434,378	377,986	246,241	4,923,307
12	514	Miscellaneous Plant	9.44%	256,737	267,410	346,542	373,560	287,531	207,065	333,324	263,306	617,674	206,678	364,619	300,001	250,786	366,735	396,206	3,967,485
13		**Total Steam Power Maintenance**	**41.10%**	**$ 1,318,343**	**$ 1,698,258**	**$ 1,392,626**	**$ 1,500,930**	**$ 1,250,429**	**$ 1,117,748**	**$ 1,337,173**	**$ 1,235,167**	**$ 2,293,890**	**$ 971,068**	**$ 1,938,080**	**$ 1,774,677**	**$ 1,239,706**	**$ 1,494,108**	**$ 1,116,271**	**$ 17,269,247**
		Other Power Operation																	
14	546	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	548	Generation Expense	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	549	Miscellaneous	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	550	Rents	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18		**Total Other Power Operation**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
		Other Power Maintenance																	
19	551	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20	552	Structures	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	553	Electric Plant	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	554	Miscellaneous Plant[1]	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23		**Total Other Power Maintenance**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
		Other Power Supply																	
24	556	System Control & Load Dispatch[2]	1.08%	$ 43,438	$ 40,199	$ 45,852	$ 40,919	$ 41,773	$ 31,549	$ 28,649	$ 44,537	$ 31,465	$ 53,058	$ 29,521	$ 50,490	$ 38,533	$ 31,300	$ 31,052	$ 452,846
25	557	Other Expenditures	7.75%	103 795	576,497	2,446	299,651	250,096	221 923	282 165	200,805	325,587	379,341	(87,556)	514,043	286,481	289,346	292,240	3,254,123
26		**Total Other Power Supply**	**8.82%**	**$ 147,232**	**$ 616,696**	**$ 48,298**	**$ 340,570**	**$ 291,869**	**$ 253,473**	**$ 310,814**	**$ 245,342**	**$ 357,052**	**$ 432,399**	**$ (58,036)**	**$ 564,534**	**$ 325,015**	**$ 320,646**	**$ 323,291**	**$ 3,706,969**
27	**Totals**		**100.00%**	**$ 3,562,986**	**$ 2,970,926**	**$ 3,103,926**	**$ 3,574,638**	**$ 3,288,575**	**$ 2,929,447**	**$ 3,291,196**	**$ 3,363,812**	**$ 4,948,411**	**$ 2,861,243**	**$ 3,434,942**	**$ 3,960,918**	**$ 3,254,812**	**$ 3,762,099**	**$ 3,345,032**	**$ 42,015,126**

Notes: This schedule contains estimates for the period of April 1 2019 through June 30, 2019, referred to as the "Update Period" As discussed by Southwestern Public Service Company ("SPS") witness William A Grant, SPS will file actual costs for the Update Period, including an updated version of this schedule no later than the 45th day after the date of the initial filing of this rate case, as required by PURA § 36 112

Costs not directly assigned to a plant were allocated on the basis of directly assigned plant costs in each FERC account to total directly assigned costs in each FERC account

Utility Share $ and % not applicable because SPS does not jointly own any generation facilities

[1] A portion of Miscellaneous Plant expenses were not directly assignable to the plants

[2] System Control & Load Dispatch expenses were not directly assignable to the plants

[3] This column represents the total amounts for the period between July 1, 2018 and June 30, 2019 also known as the updated test year

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Page 1 of 7
Sponsors: Freitas, Low
2019 TX Rate Case

Southwestern Public Service Company

Natural Gas (Steam Generation) O&M Summary

Plant Name Cunningham

Line No.	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Updated Test Year Totals[3]
		Steam Power Operation																	
1	500	Supervision & Engineering	0 04%	$ -	$ -	$ -	$ -	$ -	$ 1,460	$ -	$ 39	$ -	$ 977	$ 633	$ -	$ -	$ -	$ -	$ 3,108
2	502	Steam Expense	22 41%	473,819	(223,749)	116,406	129,218	117,307	102,855	93,957	117,149	159,102	112,784	111,450	116,683	127,261	184,720	187,404	1,559,889
3	505	Electric Expense	8 08%	38,586	46,045	38,900	26,227	53 873	32,325	41,790	40,882	48,401	32,700	37,132	47,526	67,620	68,528	65,548	562,551
4	506	Miscellaneous	16 25%	30,051	16,697	25,305	4,557	60,026	113,401	65,650	30,697	243,161	79,354	74,007	123,754	109,216	112,291	114,765	1,130,879
5	507	Rent	8 50%	35,191	66,806	62,008	50,124	48 995	54,991	38,063	46,973	56,497	43,806	49,270	52,541	44,904	55,619	49,879	591,662
6	509	Allowances	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7		**Total Steam Power Operations**	**55 28%**	**$ 577,648**	**$ (94,201)**	**$ 242,619**	**$ 210,126**	**$ 280,200**	**$ 305,032**	**$ 239,461**	**$ 235,740**	**$ 507,161**	**$ 269,620**	**$ 272,492**	**$ 340,504**	**$ 349,001**	**$ 421,159**	**$ 417,595**	**$ 3,848,089**
		Steam Power Maintenance																	
8	510	Supervision & Engineering	1 49%	$ 15 955	$ 19,340	$ 3,198	$ 1,873	$ 2 275	$ 2 621	$ 2,049	$ 2,184	$ 6,855	$ 17,962	$ 10,452	$ 15,025	$ 20,509	$ 10,815	$ 10,851	$ 103,472
9	511	Structures	4 22%	7,544	11,575	31,627	12,673	1 208	4,251	19,520	3,367	56,589	7,686	13,231	43,614	30,191	58,026	43,444	293 801
10	512	Boilers	17 86%	218,440	585 047	75,224	287,707	75,429	75,173	157,596	140,401	101 311	38,627	108,217	88,906	55,361	74,867	39,825	1,243,420
11	513	Electric Plant	9 19%	168 129	135,851	156,067	76,049	94,038	69,767	73,286	37,588	108,866	41,104	51,886	34,055	21,685	18,870	12 293	639,486
12	514	Miscellaneous Plant	4 15%	17,411	18,686	38,853	40,780	35,287	14,658	28,193	21,288	22,003	3,116	15,016	24,782	20,716	30 294	32,729	288,862
13		**Total Steam Power Maintenance**	**36 91%**	**$ 427,479**	**$ 770,498**	**$ 304,969**	**$ 419,082**	**$ 208,238**	**$ 166,470**	**$ 280,643**	**$ 204,828**	**$ 295,623**	**$ 108,495**	**$ 198,803**	**$ 206,383**	**$ 148,462**	**$ 192,872**	**$ 139,141**	**$ 2,569,041**
		Other Power Operation																	
14	546	Supervision & Engineering	0 00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	548	Generation Expense	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	549	Miscellaneous	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	550	Rents	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18		**Total Other Power Operation**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
		Other Power Maintenance																	
19	551	Supervision & Engineering	0 00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20	552	Structures	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	553	Electric Plant	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	554	Miscellaneous Plant[1]	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23		**Total Other Power Maintenance**	**0 00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
		Other Power Supply																	
24	556	System Control & Load Dispatch[2]	0 95%	$ 6,372	$ 5,897	$ 6,726	$ 6,002	$ 6,128	$ 4,628	$ 4 202	$ 6,533	$ 4,616	$ 7,783	$ 4,330	$ 7,406	$ 5,652	$ 4,591	$ 4,555	$ 66,426
25	557	Other Expenditures	6 86%	15,225	84,564	359	43,955	36,686	32,553	41,390	29,455	47,759	55,644	(12,843)	75,403	42,023	42,443	42,868	477,337
26		**Total Other Power Supply**	**7.81%**	**$ 21,597**	**$ 90,461**	**$ 7,085**	**$ 49,957**	**$ 42,813**	**$ 37,181**	**$ 45,592**	**$ 35,988**	**$ 52,375**	**$ 63,427**	**$ (8,513)**	**$ 82,810**	**$ 47,675**	**$ 47,035**	**$ 47,423**	**$ 543,763**
27		**Totals**	**100.00%**	**$ 1,026,724**	**$ 766,758**	**$ 554,673**	**$ 679,165**	**$ 531,251**	**$ 508,683**	**$ 565,697**	**$ 476,556**	**$ 855,158**	**$ 441,543**	**$ 462,781**	**$ 629,696**	**$ 545,138**	**$ 661,066**	**$ 604,159**	**$ 6,960,894**

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Costs not directly assigned to a plant were allocated on the basis of directly assigned plant costs in each FERC account to total directly assigned costs in each FERC account

Utility Share $ and % not applicable because SPS does not jointly own any generation facilities

[1] A portion of Miscellaneous Plant expenses were not directly assignable to the plants

[2] System Control & Load Dispatch expenses were not directly assignable to the plants

[3] This column represents the total amounts for the period between July 1 2018 and June 30, 2019 also known as the updated test year

Southwestern Public Service Company

Natural Gas (Steam Generation) O&M Summary

Plant Name: Jones

Line No.	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Updated Test Year Totals[3]
		Steam Power Operation																	
1	500	Supervision & Engineering	4 82%	$ 93,274	$ 41,616	$ 42,829	$ 39,857	$ 46,701	$ 40,504	$ 97,358	$ 44,655	$ 40,789	$ 54,393	$ 44,193	$ 52,678	$ 45,747	$ 59,596	$ 52,884	$ 619,355
2	502	Steam Expense	11 79%	110,805	114,914	105,345	174,381	144,405	136,098	102,220	123,670	124,821	70,269	89,416	104,130	113,570	164,848	167,243	1,515,071
3	505	Electric Expense	14 18%	141,853	145,693	141,368	183,150	152,817	133,405	132,932	389,834	125,618	89,078	95,292	99,298	141,281	143,178	136,951	1,822,833
4	506	Miscellaneous	14 01%	107,955	(34,500)	128,589	154,029	152,775	81,285	32,786	109,217	324,797	118,875	156,840	180,350	159,164	163,644	167,249	1,801,011
5	507	Rent	5 08%	34,926	66,179	61,349	42,221	41,099	46,304	50,539	63,119	75,861	49,350	55,505	59,190	50,586	62,658	56,191	652,622
6	509	Allowances	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7		**Total Steam Power Operations**	**49.87%**	**$ 488,814**	**$ 333,902**	**$ 479,480**	**$ 593,637**	**$ 537,796**	**$ 437,595**	**$ 415,835**	**$ 730,496**	**$ 691,886**	**$ 381,965**	**$ 441,246**	**$ 495,646**	**$ 510,347**	**$ 593,924**	**$ 580,518**	**$ 6,410,892**
		Steam Power Maintenance																	
8	510	Supervision & Engineering	2 25%	$ 21,341	$ 20,040	$ 18,078	$ 17,261	$ 17,289	$ 20,571	$ 21,571	$ 22,197	$ 22,685	$ 29,602	$ 32,887	$ 27,462	$ 37,485	$ 19,767	$ 19,833	$ 288,611
9	511	Structures	6 12%	91,085	81,251	70,937	86,501	81,812	46,523	72,721	44,878	125,031	48,414	76,973	50,648	35,060	67,385	50,450	786,396
10	512	Boilers	11 90%	54,172	41 122	33,032	21,981	38,524	90,387	31,659	16,741	140 037	70,202	269,411	292,136	181,909	246,005	130,861	1,529,854
11	513	Electric Plant	17 36%	50,973	41 475	22,123	31,543	56,962	46,140	40 951	28,222	199,567	136,783	575 219	437,574	278,624	242,452	157,947	2,231,984
12	514	Miscellaneous Plant	4 50%	32,122	56,232	36,041	57,758	17,342	24,662	55,525	21,672	54,795	22,174	82,559	55,361	46,279	67,676	73,115	578,920
13		**Total Steam Power Maintenance**	**42 13%**	**$ 249,694**	**$ 240,119**	**$ 180,211**	**$ 215,045**	**$ 211,929**	**$ 228,283**	**$ 222,426**	**$ 133,710**	**$ 542,114**	**$ 307,175**	**$ 1,037,050**	**$ 863,182**	**$ 579,359**	**$ 643,286**	**$ 432,206**	**$ 5,415,766**
		Other Power Operation																	
14	546	Supervision & Engineering	0 00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	548	Generation Expense	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	549	Miscellaneous	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	550	Rents	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18		**Total Other Power Operation**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
		Other Power Maintenance																	
19	551	Supervision & Engineering	0 00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20	552	Structures	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	553	Electric Plant	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	554	Miscellaneous Plant[1]	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23		**Total Other Power Maintenance**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
		Other Power Supply																	
24	556	System Control & Load Dispatch[2]	0 98%	$ 12,039	$ 11,142	$ 12,709	$ 11,341	$ 11,578	$ 8,744	$ 7,940	$ 12,344	$ 8,721	$ 14,706	$ 8,182	$ 13,994	$ 10,680	$ 8,675	$ 8,606	$ 125,514
25	557	Other Expenditures	7 02%	28,769	159,786	678	83 054	69,318	61,510	78 207	55,657	90,242	105,141	(24,268)	142,476	79,403	80,197	80,999	901,937
26		**Total Other Power Supply**	**7.99%**	**$ 40,808**	**$ 170,928**	**$ 13,387**	**$ 94,395**	**$ 80,897**	**$ 70,254**	**$ 86,148**	**$ 68,001**	**$ 98,963**	**$ 119,847**	**$ (16,086)**	**$ 156,470**	**$ 90,084**	**$ 88,873**	**$ 89,606**	**$ 1,027,451**
27		**Totals**	**100.00%**	**$ 779,316**	**$ 744,948**	**$ 673,078**	**$ 903,077**	**$ 830,622**	**$ 736,133**	**$ 724,409**	**$ 932,207**	**$ 1,332,963**	**$ 808,986**	**$ 1,462,210**	**$ 1,515,298**	**$ 1,179,790**	**$ 1,326,083**	**$ 1,102,330**	**$ 12,854,109**

Notes: This schedule contains estimates for the period of April 1, 2019 through June 30, 2019, referred to as the "Update Period." As discussed by Southwestern Public Service Company ("SPS") witness William A Grant, SPS will file actual costs for the Update Period, including an updated version of this schedule, no later than the 45th day after the date of the initial filing of this rate case, as required by PURA § 36 112

Costs not directly assigned to a plant were allocated on the basis of directly assigned plant costs in each FERC account to total directly assigned costs in each FERC account

Utility Share $ and % not applicable because SPS does not jointly own any generation facilities

[1] A portion of Miscellaneous Plant expenses were not directly assignable to the plants

[2] System Control & Load Dispatch expenses were not directly assignable to the plants

[3] This column represents the total amounts for the period between July 1, 2018 and June 30, 2019 also known as the updated test year

Southwestern Public Service Company

Natural Gas (Steam Generation) O&M Summary

Plant Name: Maddox

Line No.	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Updated Test Year Totals[3]
		Steam Power Operation																	
1	500	Supervision & Engineering	0 24%	$ -	$ -	$ -	$ -	$ 528	$ -	$ -	$ -	$ 706	$ -	$ -	$ 1,760	$ 1,529	$ 1,992	$ 1,767	$ 8,282
2	502	Steam Expense	16 67%	226,480	(157,747)	44,012	32,513	31,758	39,832	68,054	44,999	52,600	51,173	50,624	40,745	44,439	64,503	65,441	586 681
3	505	Electric Expense	8 15%	16,754	21 097	26,246	24,958	23,237	9,983	22,234	20,347	35,490	14,052	33,281	19,738	28,083	28,461	27,223	287,086
4	506	Miscellaneous	12 64%	56 472	14,652	39,365	79,051	51,521	84,731	(52,863)	34,774	61,806	50,011	32,054	27,995	24,706	25,402	25,961	445,149
5	507	Rent	10 23%	18,879	35,772	33,161	24,644	23,989	27,585	27,622	34,016	40,883	26,847	30,195	32,200	27,519	34,086	30,569	360,155
6	509	Allowances	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7		**Total Steam Power Operations**	**47.93%**	**$ 318,585**	**$ (86,226)**	**$ 142,784**	**$ 161,166**	**$ 131,033**	**$ 162,130**	**$ 65,048**	**$ 134,136**	**$ 191,484**	**$ 142,082**	**$ 146,155**	**$ 122,438**	**$ 126,276**	**$ 154,444**	**$ 150,960**	**$ 1,687,353**
		Steam Power Maintenance																	
8	510	Supervision & Engineering	0 08%	$ 240	$ -	$ 62	$ -	$ 2 121	$ -	$ -	$ -	$ 266	$ -	$ 974	$ (100)	$ (136)	$ (72)	$ (72)	$ 2,981
9	511	Structures	4 02%	20,357	6,251	25,558	12,149	20,362	13,496	15,348	1,851	42,464	9,913	7,276	4,631	3,206	6,161	4,613	141,470
10	512	Boilers	11 92%	38,639	37,751	58,079	39,861	39 957	22,845	67,034	58,279	60,614	15,926	48,648	22,875	14,244	19 263	10 247	419,793
11	513	Electric Plant	5 82%	6,722	6,656	12,662	6,017	8,881	7,586	26,823	49,945	34,468	13,451	5,695	20,360	12 964	11,281	7,349	204,820
12	514	Miscellaneous Plant	21 97%	77,053	49,656	105,286	74,305	71,576	45,947	82,693	77,239	94,216	42,251	61,601	51,022	42,652	62,372	67,384	773,259
13		**Total Steam Power Maintenance**	**43.81%**	**$ 143,010**	**$ 100,314**	**$ 201,647**	**$ 132,333**	**$ 142,897**	**$ 89,874**	**$ 191,898**	**$ 187,314**	**$ 232,028**	**$ 81,541**	**$ 124,194**	**$ 98,788**	**$ 72,930**	**$ 99,005**	**$ 89,521**	**$ 1,542,324**
		Other Power Operation																	
14	546	Supervision & Engineering	0 00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	548	Generation Expense	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	549	Miscellaneous	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	550	Rents	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18		**Total Other Power Operation**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
		Other Power Maintenance																	
19	551	Supervision & Engineering	0 00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20	552	Structures	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	553	Electric Plant	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	554	Miscellaneous Plant[1]	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23		**Total Other Power Maintenance**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
		Other Power Supply																	
24	556	System Control & Load Dispatch[2]	1 01%	$ 3,407	$ 3 153	$ 3,596	$ 3,209	$ 3,276	$ 2,474	$ 2,247	$ 3,493	$ 2,468	$ 4,161	$ 2,315	$ 3,960	$ 3,022	$ 2,455	$ 2,435	$ 35,516
25	557	Other Expenditures	7 25%	8 141	45 214	192	23,501	19,615	17,405	22,130	15,749	25 535	29,751	(6,867)	40,316	22,468	22,693	22,920	255,217
26		**Total Other Power Supply**	**8.26%**	**$ 11,547**	**$ 48,367**	**$ 3,788**	**$ 26,711**	**$ 22,891**	**$ 19,880**	**$ 24,377**	**$ 19,242**	**$ 28,003**	**$ 33,913**	**$ (4,552)**	**$ 44,276**	**$ 25,491**	**$ 25,148**	**$ 25,355**	**$ 290,733**
27	**Totals**		**100.00%**	**$ 473,143**	**$ 62,455**	**$ 348,219**	**$ 320,209**	**$ 296,821**	**$ 271,884**	**$ 281,322**	**$ 340,692**	**$ 451,515**	**$ 257,536**	**$ 265,797**	**$ 265,502**	**$ 224,697**	**$ 278,597**	**$ 265,837**	**$ 3,520,410**

Notes: This schedule contains estimates for the period of April 1, 2019 through June 30, 2019 referred to as the "Update Period" As discussed by Southwestern Public Service Company ("SPS") witness William A Grant, SPS will file actual costs for the Update Period, including an updated version of this schedule, no later than the 45th day after the date of the initial filing of this rate case as required by PURA § 36 112

Costs not directly assigned to a plant were allocated on the basis of directly assigned plant costs in each FERC account to total directly assigned costs in each FERC account

Utility Share $ and % not applicable because SPS does not jointly own any generation facilities

[1] A portion of Miscellaneous Plant expenses were not directly assignable to the plants

[2] System Control & Load Dispatch expenses were not directly assignable to the plants

[3] This column represents the total amounts for the period between July 1 2018 and June 30, 2019 also known as the updated test year

Southwestern Public Service Company

Natural Gas (Steam Generation) O&M Summary

Plant Name: Moore County

Line No.	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Updated Test Year Totals[3]
	Steam Power Operation																		
1	500	Supervision & Engineering	0 00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2	502	Steam Expense	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	505	Electric Expense	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	506	Miscellaneous	71 06%	852	1,305	(2,496)	909	-	246	283	62	922	248	198	140	123	127	130	3,388
5	507	Rent	2 85%	3	6	5	-	-	-	24	30	36	7	8	8	7	9	8	136
6	509	Allowances	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7		**Total Steam Power Operations**	**73.92%**	**$ 855**	**$ 1,311**	**$ (2,491)**	**$ 909**	**$ -**	**$ 246**	**$ 307**	**$ 92**	**$ 958**	**$ 255**	**$ 206**	**$ 148**	**$ 130**	**$ 135**	**$ 137**	**$ 3,524**
	Steam Power Maintenance																		
8	510	Supervision & Engineering	0 00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	511	Structures	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	512	Boilers	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	513	Electric Plant	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	514	Miscellaneous Plant	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13		**Total Steam Power Maintenance**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
	Other Power Operation																		
14	546	Supervision & Engineering	0 00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	548	Generation Expense	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	549	Miscellaneous	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	550	Rents	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18		**Total Other Power Operation**	**0 00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
	Other Power Maintenance																		
19	551	Supervision & Engineering	0 00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20	552	Structures	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	553	Electric Plant	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	554	Miscellaneous Plant[1]	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23		**Total Other Power Maintenance**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
	Other Power Supply																		
24	556	System Control & Load Dispatch[2]	3 19%	$ 15	$ 13	$ 15	$ 14	$ 14	$ 11	$ 10	$ 15	$ 11	$ 18	$ 10	$ 17	$ 13	$ 10	$ 10	$ 152
25	557	Other Expenditures	22 90%	35	193	1	101	84	74	95	67	109	127	(29)	172	96	97	98	1,092
26		**Total Other Power Supply**	**26.08%**	**$ 49**	**$ 207**	**$ 16**	**$ 114**	**$ 98**	**$ 85**	**$ 104**	**$ 82**	**$ 120**	**$ 145**	**$ (19)**	**$ 189**	**$ 109**	**$ 108**	**$ 108**	**$ 1,243**
27	**Totals**		**100.00%**	**$ 904**	**$ 1,517**	**$ (2,475)**	**$ 1,023**	**$ 98**	**$ 331**	**$ 411**	**$ 174**	**$ 1,078**	**$ 400**	**$ 186**	**$ 337**	**$ 239**	**$ 243**	**$ 246**	**$ 4,767**

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Page 5 of 7
Sponsors: Freitas, Low
2019 TX Rate Case

Southwestern Public Service Company

Natural Gas (Steam Generation) O&M Summary

Plant Name: Nichols

Line No.	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Updated Test Year Totals[3]
		Steam Power Operation																	
1	500	Supervision & Engineering	0.04%	5,662	2,141	(7)	-	-	-	2,734	856	-	-	-	-	-	-	-	3,590
2	502	Steam Expense	4.78%	20,716	27,982	22,040	26,357	76,652	33,389	23,112	41,423	48,551	26,403	24,965	25,118	27,396	39,765	40,343	433,474
3	505	Electric Expense	24.79%	238,809	191,132	224,919	292,719	183,937	167,292	206,752	155,347	242,604	107,254	164,966	138,940	197,684	200,340	191,626	2,249,461
4	506	Miscellaneous	17.80%	111,208	3,464	154,492	91,402	171,827	113,644	214,606	211,900	(48,165)	180,969	136,827	145,750	128,628	132,249	135,163	1,614,802
5	507	Rent	8.37%	40,192	76,158	70,599	52,116	50,732	57,156	58,008	72,447	87,070	56,455	63,497	67,712	57,869	71,679	64,282	759,023
6	509	Allowances	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7		**Total Steam Power Operations**	**55.77%**	**416,588**	**300,877**	**472,043**	**462,593**	**483,148**	**371,481**	**505,213**	**481,974**	**330,061**	**371,081**	**390,254**	**377,521**	**411,578**	**444,033**	**431,413**	**5,060,350**
		Steam Power Maintenance																	
8	510	Supervision & Engineering	2.69%	8,342	25,209	8,411	13,779	10,709	17,215	16,562	41,745	13,372	24,170	19,392	22,895	31,252	16,480	16,535	244,105
9	511	Structures	4.88%	31,458	42,909	43,249	60,234	51,045	52,606	50,241	22,124	48,456	22,023	35,889	24,867	17,214	33,084	24,769	442,552
10	512	Boilers	9.82%	84,382	49,148	72,570	70,050	74,282	32,329	174,930	58,870	136,804	64,763	75,877	69,816	43,474	58,792	31,274	891,261
11	513	Electric Plant	6.53%	76,179	91,346	182,394	83,204	81,197	57,485	37,415	48,791	83,296	45,874	36,488	46,560	29,647	25,798	16,806	592,561
12	514	Miscellaneous Plant	11.84%	72,496	81,018	71,144	101,742	77,426	76,737	75,723	80,900	112,725	80,359	79,746	88,757	74,196	108,500	117,219	1,074,030
13		**Total Steam Power Maintenance**	**35.76%**	**272,857**	**289,629**	**377,768**	**329,009**	**294,660**	**236,371**	**354,871**	**252,430**	**394,654**	**237,188**	**247,393**	**252,895**	**195,782**	**242,653**	**206,604**	**3,244,509**
		Other Power Operation																	
14	546	Supervision & Engineering	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	548	Generation Expense	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	549	Miscellaneous	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	550	Rents	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18		**Total Other Power Operation**	**0.00%**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Other Power Maintenance																	
19	551	Supervision & Engineering	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	552	Structures	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	553	Electric Plant	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	554	**Miscellaneous Plant**[1]	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23		**Total Other Power Maintenance**	**0.00%**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Other Power Supply																	
24	556	System Control & Load Dispatch[2]	1.03%	9,003	8,332	9,503	8,481	8,658	6,539	5,938	9,231	6,521	10,997	6,118	10,465	7,986	6,487	6,436	93,856
25	557	Other Expenditures	7.43%	21,512	119,483	507	62,105	51,834	45,995	58,481	41,618	67,480	78,621	(18,147)	106,539	59,375	59,969	60,569	674,441
26		**Total Other Power Supply**	**8.47%**	**30,515**	**127,815**	**10,010**	**70,586**	**60,492**	**52,534**	**64,419**	**50,849**	**74,002**	**89,618**	**(12,028)**	**117,004**	**67,362**	**66,456**	**67,005**	**768,297**
27		**Totals**	**100.00%**	**719,960**	**718,321**	**859,821**	**862,188**	**838,300**	**660,386**	**924,502**	**785,252**	**798,717**	**697,887**	**625,618**	**747,419**	**674,721**	**753,143**	**705,021**	**9,073,155**

Notes: This schedule contains estimates for the period of April 1, 2019 through June 30 2019, referred to as the "Update Period." As discussed by Southwestern Public Service Company ("SPS") witness William A. Grant SPS will file actual costs for the Update Period, including an updated version of this schedule, no later than the 45th day after the date of the initial filing of this rate case, as required by PURA § 36.112

Costs not directly assigned to a plant were allocated on the basis of directly assigned plant costs in each FERC account to total directly assigned costs in each FERC account

Utility Share $ and % not applicable because SPS does not jointly own any generation facilities

[1] A portion of Miscellaneous Plant expenses were not directly assignable to the plants

[2] System Control & Load Dispatch expenses were not directly assignable to the plants

[3] This column represents the total amounts for the period between July 1, 2018 and June 30, 2019 also known as the updated test year

Southwestern Public Service Company

Natural Gas (Steam Generation) O&M Summary

Plant Name: Plant X

Line No.	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Updated Test Year Totals(3)
		Steam Power Operation																	
1	500	Supervision & Engineering	2.23%	$ 26,157	$ 23,298	$ 18,374	$ 20,483	$ 23,191	$ 17,434	$ 23,084	$ 14,577	$ 24,588	$ 5,047	$ 28,753	$ 14,345	$ 12,458	$ 16,229	$ 14,401	$ 214,591
2	502	Steam Expense	7.25%	56,222	60,937	53,327	75,133	56,887	52,712	69,895	71,825	52,692	37,209	48,655	43,821	47,794	69,373	70,381	696,378
3	505	Electric Expense	8.85%	81,175	80,264	62,797	75,622	65,230	62,413	71,721	68,954	67,399	43,747	69,456	62,042	88,273	89,459	85,568	849,884
4	506	Miscellaneous	16.76%	98,411	(26,642)	136,168	90,651	127,412	102,565	197,931	77,177	349,114	159,062	104,025	108,022	95,332	98,016	100,175	1,609,481
5	507	Rent	6.86%	32,956	62,452	57,900	42,818	41,381	46,618	54,714	68,333	82,127	47,707	53,657	57,219	48,902	60,572	54,320	658,368
6	509	Allowances	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7		**Total Steam Power Operations**	**41.96%**	**$ 294,922**	**$ 200,310**	**$ 328,566**	**$ 304,707**	**$ 314,100**	**$ 281,742**	**$ 417,346**	**$ 300,866**	**$ 575,920**	**$ 292,773**	**$ 304,546**	**$ 285,450**	**$ 292,759**	**$ 333,649**	**$ 324,846**	**$ 4,028,702**
		Steam Power Maintenance																	
8	510	Supervision & Engineering	0.64%	$ 5,160	$ 5,651	$ 5,486	$ 10,302	$ 16,798	$ 8,541	$ 10,138	$ 9,613	$ (1,881)	$ 4,996	$ 4,009	$ (279)	$ (381)	$ (201)	$ (201)	$ 61,454
9	511	Structures	6.80%	49,986	42,899	56,967	59,610	62,321	31,137	22,691	31,638	123,129	36,483	42,674	60,504	41,883	80,497	60,267	652,832
10	512	Boilers	13.29%	53,932	103,945	100,594	132,295	164,135	122,796	105,898	224,926	197,324	55,498	71,170	69,492	43,272	58,519	31,129	1,276,452
11	513	Electric Plant	13.06%	58,569	83,384	69,766	104,279	63,551	189,215	57,418	128,500	176,964	80,913	87,092	143,634	91,458	79,585	51,846	1,254,455
12	514	Miscellaneous Plant	13.04%	57,655	61,818	95,218	98,975	85,900	45,062	91,191	62,208	333,935	58,778	125,696	80,079	66,942	97,892	105,759	1,252,415
13		**Total Steam Power Maintenance**	**46.84%**	**$ 225,302**	**$ 297,698**	**$ 328,031**	**$ 405,460**	**$ 392,705**	**$ 396,749**	**$ 287,335**	**$ 456,885**	**$ 829,470**	**$ 236,668**	**$ 330,641**	**$ 353,429**	**$ 243,174**	**$ 316,292**	**$ 248,799**	**$ 4,497,608**
		Other Power Operation																	
14	546	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	548	Generation Expense	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	549	Miscellaneous	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	550	Rents	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18		**Total Other Power Operation**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
		Other Power Maintenance																	
19	551	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20	552	Structures	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	553	Electric Plant	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	554	Miscellaneous Plant(1)	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23		**Total Other Power Maintenance**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
		Other Power Supply																	
24	556	System Control & Load Dispatch(2)	1.37%	$ 12,602	$ 11,663	$ 13,303	$ 11,872	$ 12,119	$ 9,153	$ 8,312	$ 12,921	$ 9,129	$ 15,393	$ 8,565	$ 14,648	$ 11,179	$ 9,081	$ 9,009	$ 131,381
25	557	Other Expenditures	9.83%	30,113	167,256	710	86,936	72,559	64,385	81,863	58,258	94,461	110,056	(25,402)	149,136	83,115	83,946	84,786	944,099
26		**Total Other Power Supply**	**11.20%**	**$ 42,716**	**$ 178,918**	**$ 14,013**	**$ 98,808**	**$ 84,678**	**$ 73,538**	**$ 90,175**	**$ 71,180**	**$ 103,589**	**$ 125,449**	**$ (16,838)**	**$ 163,785**	**$ 94,295**	**$ 93,027**	**$ 93,795**	**$ 1,075,481**
27		**Totals**	**100.00%**	**$ 562,940**	**$ 676,926**	**$ 670,609**	**$ 808,975**	**$ 791,484**	**$ 752,029**	**$ 794,855**	**$ 828,930**	**$ 1,508,979**	**$ 654,890**	**$ 618,349**	**$ 802,664**	**$ 630,228**	**$ 742,968**	**$ 667,440**	**$ 9,601,791**

Notes: This schedule contains estimates for the period of April 1, 2019 through June 30, 2019, referred to as the "Update Period." As discussed by Southwestern Public Service Company ("SPS") witness William A. Grant, SPS will file actual costs for the Update Period, including an updated version of this schedule, no later than the 45th day after the date of the initial filing of this rate case, as required by PURA § 36.112

Costs not directly assigned to a plant were allocated on the basis of directly assigned plant costs in each FERC account to total directly assigned costs in each FERC account

Utility Share $ and % not applicable because SPS does not jointly own any generation facilities

(1) A portion of Miscellaneous Plant expenses were not directly assignable to the plants

(2) System Control & Load Dispatch expenses were not directly assignable to the plants

(3) This column represents the total amounts for the period between July 1 2018 and June 30, 2019 also known as the updated test year

Southwestern Public Service Company

Natural Gas (Combustion Turbine) O&M Summary

Total Summary

Line No.	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Updated Test Year Totals[3]
		Steam Power Operation																	
1	500	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2	502	Steam Expense	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	505	Electric Expense	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	506	Miscellaneous	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	507	Rent	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	509	Allowances	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7		**Total Steam Power Operations**	**0.00%**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		Steam Power Maintenance																	
8	510	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	511	Structures	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	512	Boilers	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	513	Electric Plant	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	514	Miscellaneous Plant	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13		**Total Steam Power Maintenance**	**0.00%**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		Other Power Operation																	
14	546	Supervision & Engineering	0.87%	$ 8,457	$ 2,875	$ 3,214	$ 2,856	$ (13,504)	$ 2,397	$ 2,778	$ 2,433	$ 1,828	$ 2,613	$ 2,171	$ 2,687	$ 8,970	$ 9,059	$ 9,150	$ 33,439
15	548	Generation Expense	7.25%	14,368	62,610	268,949	61,948	11,593	8,717	18,703	20,624	69,692	18,986	19,464	19,600	21,375	3,910	3,633	278,242
16	549	Miscellaneous	11.09%	82,888	(46,699)	26,480	35,865	15,036	30,362	25,366	62,287	(4,539)	47,561	52,327	10,483	37,055	56,753	57,321	425,877
17	550	Rents	18.03%	15,462	26,167	25,587	38,551	38,195	43,004	46,693	56,301	67,559	36,759	42,651	45,143	39,407	47,772	190,430	692,465
18		**Total Other Power Operation**	**37.24%**	**$ 121,175**	**$ 44,952**	**$ 324,229**	**$ 139,220**	**$ 51,320**	**$ 84,480**	**$ 93,539**	**$ 141,645**	**$ 134,541**	**$ 105,918**	**$ 116,613**	**$ 77,912**	**$ 106,807**	**$ 117,494**	**$ 260,534**	**$ 1,430,023**
		Other Power Maintenance																	
19	551	Supervision & Engineering	4.43%	$ 17,272	$ 18,523	$ 15,158	$ 7,421	$ 18,361	$ 25,402	$ 11,847	$ 47,814	$ 19,359	$ 24,548	$ 2,300	$ 4,247	$ 1,794	$ 1,731	$ 5,368	$ 170,190
20	552	Structures	9.55%	46,717	19,801	30,511	24,255	49,116	14,070	56,020	21,594	65,637	30,238	8,202	27,049	26,875	21,842	21,842	366,740
21	553	Electric Plant	39.61%	57,596	90,491	80,859	138,943	154,535	74,613	77,421	104,602	220,768	134,142	23,823	76,057	48,008	71,673	396,580	1,521,165
22	554	Miscellaneous Plant[1]	9.17%	3,957	8,082	19,772	36,192	3,344	11,262	20,857	89,582	38,885	15,111	19,441	37,705	26,259	26,521	26,786	351,944
23		**Total Other Power Maintenance**	**62.76%**	**$ 125,542**	**$ 136,898**	**$ 146,300**	**$ 206,811**	**$ 225,355**	**$ 125,346**	**$ 166,144**	**$ 263,592**	**$ 344,649**	**$ 204,039**	**$ 53,766**	**$ 145,058**	**$ 102,935**	**$ 121,767**	**$ 450,577**	**$ 2,410,039**
		Other Power Supply																	
24	556	System Control & Load Dispatch[2]	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
25	557	Other Expenditures	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26		**Total Other Power Supply**	**0.00%**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
27	**Totals**		**100.00%**	**$ 246,718**	**$ 181,850**	**$ 470,529**	**$ 346,031**	**$ 276,675**	**$ 209,826**	**$ 259,683**	**$ 405,237**	**$ 479,189**	**$ 309,957**	**$ 170,379**	**$ 222,970**	**$ 209,742**	**$ 239,261**	**$ 711,111**	**$ 3,840,062**

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Schedule H-1.2a2
Page 1 of 5
Sponsors: Freitas, Low
2019 TX Rate Case

Southwestern Public Service Company

Natural Gas (Combustion Turbine) O&M Summary

Plant Name: Carlsbad[4]

Line No	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Updated Test Year Totals[3]
		Steam Power Operation																	
1	500	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2	502	Steam Expense	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	505	Electric Expense	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	506	Miscellaneous	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	507	Rent	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	509	Allowances	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7		**Total Steam Power Operations**	**0.00%**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		Steam Power Maintenance																	
8	510	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	511	Structures	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	512	Boilers	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	513	Electric Plant	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	514	Miscellaneous Plant	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13		**Total Steam Power Maintenance**	**0.00%**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		Other Power Operation																	
14	546	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	548	Generation Expense	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	549	Miscellaneous	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	550	Rents	42.88%	39	66	65	740	733	825	107	130	156	-	29	-	-	-	-	2,720
18		**Total Other Power Operation**	**42.88%**	$ 39	$ 66	$ 65	$ 740	$ 733	$ 825	$ 107	$ 130	$ 156	$ -	$ 29	$ -	$ -	$ -	$ -	$ 2,720
		Other Power Maintenance																	
19	551	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20	552	Structures	47.94%	-	-	57	732	355	916	784	-	-	7	-	68	68	55	55	3,041
21	553	Electric Plant	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	554	Miscellaneous Plant[1]	9.19%	-	-	1,146	218	364	-	-	-	-	-	-	-	-	-	-	583
23		**Total Other Power Maintenance**	**57.12%**	$ -	$ -	$ 1,203	$ 950	$ 720	$ 916	$ 784	$ -	$ -	$ 7	$ -	$ 68	$ 68	$ 55	$ 55	$ 3,624
		Other Power Supply																	
24	556	System Control & Load Dispatch[2]	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
25	557	Other Expenditures	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26		**Total Other Power Supply**	**0.00%**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
27	**Totals**		**100.00%**	$ 39	$ 66	$ 1,268	$ 1,690	$ 1,453	$ 1,741	$ 892	$ 130	$ 156	$ 7	$ 29	$ 68	$ 68	$ 55	$ 55	$ 6,344

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Utility Share $ and % not applicable because SPS does not jointly own any generation facilities.

[1] A portion of Miscellaneous Plant expenses were not directly assignable to the plants.

[2] System Control & Load Dispatch expenses were not directly assignable to the plants.

[3] This column represents the total amounts for the period between July 1, 2018 and June 30, 2019, also known as the updated test year.

[4] Carlsbad was placed in retirement December of 2017.

Southwestern Public Service Company

Natural Gas (Combustion Turbine) O&M Summary

Plant Name. Cunningham

Line No.	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Updated Test Year Totals[3]
	Steam Power Operation																		
1	500	Supervision & Engineering	0 00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2	502	Steam Expense	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	505	Electric Expense	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	506	Miscellaneous	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	507	Rent	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	509	Allowances	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7		**Total Steam Power Operations**	**0.00%**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Steam Power Maintenance																		
8	510	Supervision & Engineering	0 00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	511	Structures	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	512	Boilers	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	513	Electric Plant	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	514	Miscellaneous Plant	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13		**Total Steam Power Maintenance**	**0.00%**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Other Power Operation																		
14	546	Supervision & Engineering	1 86%	$ 4,228	$ 1,438	$ 1,607	$ 1,428	$ 1,422	$ 1,199	$ 1,389	$ 1,275	$ 914	$ 2,613	$ 2,171	$ 2,687	$ 8,970	$ 9,059	$ 9,150	$ 42,276
15	548	Generation Expense	4 95%	13,816	12,180	11,606	7,045	11,310	8,407	13,165	14,269	9,553	10,641	10,720	11,105	12,110	2,215	2,059	112,598
16	549	Miscellaneous	14 10%	9,417	8,474	22,544	32,147	7,754	25,224	20,707	30 033	(5,119)	42,896	45 205	7,900	27,925	42,769	43,197	320,639
17	550	Rents	23 89%	7,370	12 475	12,198	21,701	21,501	24 208	20,218	24,378	29 252	36,759	42,621	45,143	39,407	47,772	190,430	543,389
18		**Total Other Power Operation**	**44.80%**	**$ 34,831**	**$ 34,566**	**$ 47,954**	**$ 62,321**	**$ 41,986**	**$ 59,038**	**$ 55,478**	**$ 69,955**	**$ 34,600**	**$ 92,909**	**$ 100,718**	**$ 66,834**	**$ 88,412**	**$ 101,815**	**$ 244,836**	**$ 1,018,902**
	Other Power Maintenance																		
19	551	Supervision & Engineering	5 79%	$ 14,803	$ 11,538	$ 12,342	$ 4,331	$ 9,949	$ 17 970	$ 5,658	$ 37 287	$ 19,314	$ 17,473	$ (2,848)	$ 13,635	$ 1,794	$ 1,731	$ 5,368	$ 131,662
20	552	Structures	9 61%	5,185	11,344	25,002	14,820	41,895	8,393	34,563	15,039	50 580	15 468	5,328	8,966	8,908	7,240	7,240	218,440
21	553	Electric Plant	24 35%	24,765	33,678	15,470	25,792	24 651	23 504	69,518	41,609	154,639	81,954	11,932	15,433	9,741	14,543	80,472	553,787
22	554	Miscellaneous Plant[1]	15 45%	3,957	7,474	18,626	35,973	2 979	11,262	20,857	89,582	38,885	15,111	19 441	37,705	26,259	26,521	26,786	351,361
23		**Total Other Power Maintenance**	**55.20%**	**$ 48,710**	**$ 64,034**	**$ 71,441**	**$ 80,916**	**$ 79,475**	**$ 61,127**	**$ 130,596**	**$ 183,516**	**$ 263,417**	**$ 130,006**	**$ 33,853**	**$ 75,739**	**$ 46,702**	**$ 50,036**	**$ 119,866**	**$ 1,255,250**
	Other Power Supply																		
24	556	System Control & Load Dispatch[2]	0 00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
25	557	Other Expenditures	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26		**Total Other Power Supply**	**0.00%**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
27	**Totals**		**100.00%**	**$ 83,542**	**$ 98,600**	**$ 119,395**	**$ 143,236**	**$ 121,460**	**$ 120,165**	**$ 186,075**	**$ 253,471**	**$ 298,017**	**$ 222,915**	**$ 134,571**	**$ 142,574**	**$ 135,114**	**$ 151,851**	**$ 364,702**	**$ 2,274,152**

Notes: This schedule contains estimates for the period of April 1, 2019 through June 30, 2019, referred to as the "Update Period." As discussed by Southwestern Public Service Company ("SPS") witness William A Grant SPS will file actual costs for the Update Period, including an updated version of this schedule, no later than the 45th day after the date of the initial filing of this rate case, as required by PURA § 36 112

Costs not directly assigned to a plant were allocated on the basis of directly assigned plant costs in each FERC account to total directly assigned costs in each FERC account

Utility Share $ and % not applicable because SPS does not jointly own any generation facilities

[1] A portion of Miscellaneous Plant expenses were not directly assignable to the plants

[2] System Control & Load Dispatch expenses were not directly assignable to the plants

[3] This column represents the total amounts for the period between July 1, 2018 and June 30, 2019, also known as the updated test year

Southwestern Public Service Company

Natural Gas (Combustion Turbine) O&M Summary

Plant Name: Maddox

Line No.	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Updated Test Year Totals[3]
		Steam Power Operation																	
1	500	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2	502	Steam Expense	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	505	Electric Expense	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	506	Miscellaneous	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	507	Rent	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	509	Allowances	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7		**Total Steam Power Operations**	**0.00%**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		Steam Power Maintenance																	
8	510	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	511	Structures	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	512	Boilers	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	513	Electric Plant	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	514	Miscellaneous Plant	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13		**Total Steam Power Maintenance**	**0.00%**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		Other Power Operation																	
14	546	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	548	Generation Expense	6.51%	553	50,430	207,060	4,903	78	310	5,538	6,355	9,909	8,345	8,470	8,495	9,264	1,695	1,575	64,936
16	549	Miscellaneous	6.83%	70,407	(55,574)	3,334	3,149	6,169	4,196	4,597	3,215	518	4,184	6,388	2,317	8,189	12,542	12,668	68,131
17	550	Rents	10.08%	6,389	10,814	10,574	8,864	8,782	9,888	19,979	24,091	28,907	-	-	-	-	-	-	100,511
18		**Total Other Power Operation**	**23.43%**	$ 77,348	$ 5,669	$ 220,968	$ 16,917	$ 15,029	$ 14,393	$ 30,114	$ 33,661	$ 39,334	$ 12,529	$ 14,858	$ 10,812	$ 17,453	$ 14,237	$ 14,242	$ 233,578
		Other Power Maintenance																	
19	551	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20	552	Structures	1.64%	2,712	593	1,455	3,135	1,607	2,230	1,648	170	(578)	488	801	1,895	1,883	1,530	1,530	16,339
21	553	Electric Plant	74.93%	18,621	31,036	49,763	106,881	125,235	30,527	4,121	3,800	6,657	4,601	10,046	58,438	36,886	55,069	304,710	746,971
22	554	Miscellaneous Plant[1]	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23		**Total Other Power Maintenance**	**76.57%**	$ 21,332	$ 31,629	$ 51,218	$ 110,016	$ 126,842	$ 32,757	$ 5,768	$ 3,970	$ 6,079	$ 5,089	$ 10,846	$ 60,333	$ 38,769	$ 56,599	$ 306,240	$ 763,310
		Other Power Supply																	
24	556	System Control & Load Dispatch[2]	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
25	557	Other Expenditures	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26		**Total Other Power Supply**	**0.00%**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
27		**Totals**	**100.00%**	$ 98,681	$ 37,298	$ 272,186	$ 126,932	$ 141,871	$ 47,150	$ 35,882	$ 37,631	$ 45,413	$ 17,618	$ 25,704	$ 71,145	$ 56,223	$ 70,836	$ 320,482	$ 996,888

Notes: This schedule contains estimates for the period of April 1, 2019 through June 30, 2019, referred to as the "Update Period." As discussed by Southwestern Public Service Company ("SPS") witness William A. Grant, SPS will file actual costs for the Update Period including an updated version of this schedule, no later than the 45th day after the date of the initial filing of this rate case, as required by PURA § 36.112

Costs not directly assigned to a plant were allocated on the basis of directly assigned plant costs in each FERC account to total directly assigned costs in each FERC account

Utility Share $ and % not applicable because SPS does not jointly own any generation facilities

[1] A portion of Miscellaneous Plant expenses were not directly assignable to the plants

[2] System Control & Load Dispatch expenses were not directly assignable to the plants

[3] This column represents the total amounts for the period between July 1 2018 and June 30, 2019, also known as the updated test year

Southwestern Public Service Company

Natural Gas (Combustion Turbine) O&M Summary

Plant Name Jones

Line No	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Updated Test Year Totals[3]
		Steam Power Operation																	
1	500	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2	502	Steam Expense	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	505	Electric Expense	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	506	Miscellaneous	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	507	Rent	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	509	Allowances	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7		**Total Steam Power Operations**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
		Steam Power Maintenance																	
8	510	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	511	Structures	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	512	Boilers	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	513	Electric Plant	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	514	Miscellaneous Plant	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13		**Total Steam Power Maintenance**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
		Other Power Operation																	
14	546	Supervision & Engineering	-1.57%	$ 4,228	$ 1,438	$ 1,607	$ 1,428	$ (14,925)	$ 1,199	$ 1,389	$ 1,158	$ 914	$ -	$ -	$ -	$ -	$ -	$ -	$ (8,837)
15	548	Generation Expense	17.90%	-	-	50,284	50,000	205	-	-	-	50,230	-	274	-	-	-	-	100,709
16	549	Miscellaneous	6.59%	3,064	402	602	569	1,114	942	62	29,038	62	481	734	266	941	1,442	1,456	37,106
17	550	Rents	8.15%	1,665	2,812	2,750	7,246	7,180	8,083	6,388	7,703	9,244	-	-	-	-	-	-	45,845
18		**Total Other Power Operation**	**31.07%**	**$ 8,957**	**$ 4,651**	**$ 55,243**	**$ 59,243**	**$ (6,427)**	**$ 10,224**	**$ 7,839**	**$ 37,900**	**$ 60,450**	**$ 481**	**$ 1,008**	**$ 266**	**$ 941**	**$ 1,442**	**$ 1,456**	**$ 174,823**
		Other Power Maintenance																	
19	551	Supervision & Engineering	6.85%	$ 2,469	$ 6,985	$ 2,816	$ 3,091	$ 8,411	$ 7,432	$ 6,188	$ 10,527	$ 45	$ 7,075	$ 5,148	$ (9,389)	$ -	$ -	$ -	$ 38,528
20	552	Structures	22.91%	38,820	7,864	3,996	5,568	5,259	2,531	19,025	6,385	15,635	14,275	2,073	16,120	16,016	13,017	13,017	128,920
21	553	Electric Plant	39.17%	14,211	25,778	15,626	6,271	4,648	20,583	3,782	59,193	59,473	47,587	1,846	2,186	1,380	2,060	11,399	220,406
22	554	Miscellaneous Plant[1]	0.00%	-	608	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23		**Total Other Power Maintenance**	**68.93%**	**$ 55,500**	**$ 41,235**	**$ 22,438**	**$ 14,929**	**$ 18,318**	**$ 30,546**	**$ 28,995**	**$ 76,105**	**$ 75,153**	**$ 68,937**	**$ 9,066**	**$ 8,917**	**$ 17,396**	**$ 15,077**	**$ 24,415**	**$ 387,855**
		Other Power Supply																	
24	556	System Control & Load Dispatch[2]	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
25	557	Other Expenditures	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26		**Total Other Power Supply**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
27	**Totals**		**100.00%**	**$ 64,457**	**$ 45,886**	**$ 77,681**	**$ 74,172**	**$ 11,891**	**$ 40,769**	**$ 36,835**	**$ 114,005**	**$ 135,603**	**$ 69,417**	**$ 10,075**	**$ 9,183**	**$ 18,337**	**$ 16,518**	**$ 25,871**	**$ 562,677**

Notes: This schedule contains estimates for the period of April 1, 2019 through June 30, 2019, referred to as the "Update Period." As discussed by Southwestern Public Service Company ("SPS") witness William A. Grant, SPS will file actual costs for the Update Period, including an updated version of this schedule, no later than the 45th day after the date of the initial filing of this rate case, as required by PURA § 36.112

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Utility Share $ and % not applicable because SPS does not jointly own any generation facilities

[1] A portion of Miscellaneous Plant expenses were not directly assignable to the plants

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[3] This column represents the total amounts for the period between July 1, 2018 and June 30, 2019, also known as the updated test year

Schedule H-1.2b
Page 1 of 3
Sponsors: Freitas, Low
2019 TX Rate Case

Southwestern Public Service Company

Coal Plant O&M Summary

Total Summary

Line No.	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Updated Test Year Totals(3)
	Steam Power Operation																		
1	500	Supervision & Engineering	2 27%	$ 204,794	$ 108,346	$ 112,803	$ 109,256	$ 112,490	$ 98 750	$ 99,550	$ 101,380	$ 75,858	$ 107,495	$ 75,501	$ 138,882	$ 120,607	$ 157,118	$ 139,423	$ 1,336,311
2	502	Steam Expense	11 32%	417,322	485,504	587,272	559,305	687,718	547,977	761,330	662,464	363,337	475,070	471,991	402,680	439,186	637,483	646,744	6,655,283
3	505	Electric Expense	6 58%	334,193	424,850	362,206	452,226	283 174	297,556	419,733	345,789	370,384	329,232	290 610	205,634	292,576	296,506	283,609	3 867,028
4	506	Miscellaneous	12 08%	583,732	(238,138)	625,636	513,442	513,346	560,137	537,601	325 965	1 118,631	661,534	503,662	637,561	562,664	578,502	591,247	7,104,292
5	507	Rent	5 68%	181,584	344,037	318,961	220,710	214,847	242,046	271,313	338,825	407 213	243,625	274,012	292,201	249,727	309,321	277,399	3,341,239
6	509	Allowances	0 21%	-	-	-	-	-	-	28,654	-	93,836	-	-	-	-	-	-	122,490
7		**Total Steam Power Operations**	**38.15%**	**$ 1,721,625**	**$ 1,124,600**	**$ 2,006,878**	**$ 1,854,939**	**$ 1,811,574**	**$ 1,746,466**	**$ 2,118,181**	**$ 1,774,423**	**$ 2,429,258**	**$ 1,816,956**	**$ 1,615,776**	**$ 1,676,957**	**$ 1,664,759**	**$ 1,978,931**	**$ 1,938,422**	**$ 22,426,642**
	Steam Power Maintenance																		
8	510	Supervision & Engineering	1 15%	$ 99,242	$ 47,506	$ 60,208	$ 76,161	$ 118,559	$ 80,638	$ 81,776	$ 1,902	$ 47,247	$ 88,034	$ 51,817	$ 33,372	$ 45,552	$ 24,021	$ 24,101	$ 673,181
9	511	Structures	4 55%	246,457	206,164	224,965	249,165	228,202	163,598	129,828	131,936	833,682	199,281	189,965	137,254	95,012	182,609	136,717	2,677,248
10	512	Boilers	22 16%	578,355	647,727	380,772	662,322	700,040	1,125,407	1,878,271	1,353,614	1,587,041	567,262	549,477	1,580,211	983,979	1,330,685	707,849	13,026,158
11	513	Electric Plant	13 22%	363,045	293,514	235,544	282,313	439,852	517,046	1,855 490	1,219 368	524,333	429,375	284,516	869,427	553,606	481 735	313,829	7,770,888
12	514	Miscellaneous Plant	13 00%	394,725	695,786	647,356	581,557	549,055	571,945	580 633	669 794	638,383	685,801	635 860	623,479	521,198	762,170	823,419	7,643,295
13		**Total Steam Power Maintenance**	**54.07%**	**$ 1,681,824**	**$ 1,890,697**	**$ 1,548,845**	**$ 1,851,518**	**$ 2,035,707**	**$ 2,458,634**	**$ 4,525,998**	**$ 3,376,614**	**$ 3,630,686**	**$ 1,969,754**	**$ 1,711,634**	**$ 3,243,744**	**$ 2,199,346**	**$ 2,781,219**	**$ 2,005,915**	**$ 31,790,770**
	Other Power Operation																		
14	546	Supervision & Engineering	0 00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	548	Generation Expense	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	549	Miscellaneous	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	550	Rents	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18		**Total Other Power Operation**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
	Other Power Maintenance																		
19	551	Supervision & Engineering	0 00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20	552	Structures	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	553	Electric Plant	0 00%	-	-	-	-	-	-	-	-	-	-	66	98	62	92	508	825
22	554	Miscellaneous Plant(1)	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23		**Total Other Power Maintenance**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 66**	**$ 98**	**$ 62**	**$ 92**	**$ 508**	**$ 825**
	Other Power Supply																		
24	556	System Control & Load Dispatch(2)	0 95%	$ 53,597	$ 49,601	$ 56,576	$ 50,489	$ 51,543	$ 38,928	$ 35,349	$ 54,954	$ 38,825	$ 65,468	$ 36 425	$ 62,300	$ 47,546	$ 38,621	$ 38,314	$ 558,763
25	557	Other Expenditures	6 83%	128,071	711,335	3,019	369,737	308,591	273,829	348,161	247,772	401 739	468,066	(108,035)	634,274	353,487	357,022	360,592	4,015,234
26		**Total Other Power Supply**	**7.78%**	**$ 181,669**	**$ 760,936**	**$ 59,595**	**$ 420,226**	**$ 360,134**	**$ 312,758**	**$ 383,511**	**$ 302,725**	**$ 440,563**	**$ 533,534**	**$ (71,610)**	**$ 696,573**	**$ 401,033**	**$ 395,643**	**$ 398,906**	**$ 4,573,996**
27	**Totals**		**100.00%**	**$ 3,585,117**	**$ 3,776,233**	**$ 3,615,318**	**$ 4,126,683**	**$ 4,207,415**	**$ 4,517,857**	**$ 7,027,690**	**$ 5,453,762**	**$ 6,500,507**	**$ 4,320,243**	**$ 3,255,866**	**$ 5,617,372**	**$ 4,265,200**	**$ 5,155,884**	**$ 4,343,752**	**$ 58,792,234**

Notes: This schedule contains estimates for the period of April 1 2019 through June 30, 2019, referred to as the "Update Period " As discussed by Southwestern Public Service Company ("SPS") witness William A Grant, SPS will file actual costs for the Update Period, including an updated version of this schedule, no later than the 45th day after the date of the initial filing of this rate case as required by PURA § 36 112

Costs not directly assigned to a plant were allocated on the basis of directly assigned plant costs in each FERC account to total directly assigned costs in each FERC account

Utility Share $ and % not applicable because SPS does not jointly own any generation facilities

(1) A portion of Miscellaneous Plant expenses were not directly assignable to the plants

(2) System Control & Load Dispatch expenses were not directly assignable to the plants

(3) This column represents the total amounts for the period between July 1, 2018 and June 30 2019, also known as the updated test year

Southwestern Public Service Company

Coal Plant O&M Summary

Plant Name: Harrington

Line No.	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Adjusted Test Year Totals[3]
	Steam Power Operation																		
1	500	Supervision & Engineering	2 71%	$ 139,144	$ 74,423	$ 82,095	$ 75,180	$ 72,963	$ 73,344	$ 73,205	$ 69,958	$ 62,568	$ 75,580	$ 47,201	$ 83,423	$ 72,446	$ 94,377	$ 83,748	$ 883,992
2	502	Steam Expense	13 99%	248,664	308 279	417,878	369,374	501,335	358,655	403,355	411,589	419,023	322 041	326,071	274,417	299,295	434,430	440,741	4,560,327
3	505	Electric Expense	6 42%	244,930	252,367	210,903	279,524	69,239	176,683	230,114	184,383	224,925	233,246	177,003	98,396	139 997	141,878	135,707	2,091 096
4	506	Miscellaneous	12 42%	319,342	(111,283)	328,452	321,127	269,595	265,843	273,448	196,216	1,044,669	368,799	297,696	272,006	240,052	246,809	252,247	4,048,509
5	507	Rent	5 88%	104,332	197,677	183,282	129,245	125,811	141,737	153,322	191,474	230,121	139,588	156,998	167,420	143,084	177,229	158,939	1,914,967
6	509	Allowances	0 38%	-	-	-	-	-	-	28,654	-	93,836	-	-	-	-	-	-	122,490
7		**Total Steam Power Operations**	**41 79%**	**$ 1,056,412**	**$ 721,464**	**$ 1,222,610**	**$ 1,174,450**	**$ 1,038,944**	**$ 1,016,262**	**$ 1,162,099**	**$ 1,053,621**	**$ 2,075,141**	**$ 1,139,254**	**$ 1,004,969**	**$ 895,662**	**$ 894,874**	**$ 1,094,724**	**$ 1,071,382**	**$ 13,621,381**
	Steam Power Maintenance																		
8	510	Supervision & Engineering	0 87%	$ 65,189	$ 6,788	$ 23,363	$ 26,829	$ 49,476	$ 31,551	$ 34,640	$ (25,383)	$ 23,142	$ 58,549	$ 35,513	$ 13,012	$ 17,761	$ 9,366	$ 9,397	$ 283,853
9	511	Structures	1 99%	73,342	121,718	75,214	74,301	69,964	44,705	34,664	59,016	99,091	54,517	66,900	35,863	24,825	47,714	35,722	647,282
10	512	Boilers	24 85%	324,110	383,391	323,160	462,888	548,962	826,145	913,160	700,807	348,735	299,369	377,816	1,243,169	774,107	1,046,864	556,873	8,098,894
11	513	Electric Plant	10 12%	135,254	115,148	94,968	87,805	98,727	335,248	442,903	128,593	95,611	176,907	207,585	675,695	430,247	374 391	243,899	3,297,611
12	514	Miscellaneous Plant	11 38%	223,834	368,914	320,373	322,830	336,367	229,029	253,045	331,163	325,138	298,090	335,728	291,756	243,894	356,656	385,318	3,709,016
13		**Total Steam Power Maintenance**	**49.20%**	**$ 821,730**	**$ 995,958**	**$ 837,078**	**$ 974,653**	**$ 1,103,497**	**$ 1,466,679**	**$ 1,678,412**	**$ 1,194,197**	**$ 891,717**	**$ 887,432**	**$ 1,023,542**	**$ 2,259,494**	**$ 1,490,833**	**$ 1,834,990**	**$ 1,231,209**	**$ 16,036,655**
	Other Power Operation																		
14	546	Supervision & Engineering	0 00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	548	Generation Expense	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	549	Miscellaneous	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	550	Rents	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18		**Total Other Power Operation**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
	Other Power Maintenance																		
19	551	Supervision & Engineering	0 00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20	552	Structures	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	553	Electric Plant	0 00%	-	-	-	-	-	-	-	-	-	-	66	-	-	-	-	66
22	554	Miscellaneous Plant [1]	0 00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23		**Total Other Power Maintenance**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 66**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 66**
	Other Power Supply																		
24	556	System Control & Load Dispatch [2]	1 10%	$ 34,404	$ 31,839	$ 36,316	$ 32,409	$ 33,085	$ 24,988	$ 22,691	$ 35,274	$ 24,921	$ 42,024	$ 23,381	$ 39,990	$ 30,519	$ 24,791	$ 24,594	$ 358,667
25	557	Other Expenditures	7 91%	82,208	456,602	1,938	237,332	198,083	175,770	223,483	159,044	257,874	300,449	(69,347)	407,137	226,902	229,171	231,462	2,577,360
26		**Total Other Power Supply**	**9 01%**	**$ 116,612**	**$ 488,441**	**$ 38,254**	**$ 269,741**	**$ 231,169**	**$ 200,758**	**$ 246,174**	**$ 194,318**	**$ 282,796**	**$ 342,473**	**$ (45,966)**	**$ 447,127**	**$ 257,421**	**$ 253,961**	**$ 256,056**	**$ 2,936,027**
27	**Totals**		**100.00%**	**$ 1,994,754**	**$ 2,205,863**	**$ 2,097,942**	**$ 2,418,844**	**$ 2,373,609**	**$ 2,683,698**	**$ 3,086,684**	**$ 2,442,135**	**$ 3,249,654**	**$ 2,369,159**	**$ 1,982,611**	**$ 3,602,283**	**$ 2,643,129**	**$ 3,183,675**	**$ 2,558,646**	**$ 32,594,128**

Notes: This schedule contains estimates for the period of April 1, 2019 through June 30 2019, referred to as the "Update Period" As discussed by Southwestern Public Service Company ("SPS") witness William A Grant, SPS will file actual costs for the Update Period, including an updated version of this schedule, no later than the 45th day after the date of the initial filing of this rate case as required by PURA § 36 112

Costs not directly assigned to a plant were allocated on the basis of directly assigned plant costs in each FERC account to total directly assigned costs in each FERC account

Utility Share $ and % not applicable because SPS does not jointly own any generation facilities

[1] A portion of Miscellaneous Plant expenses were not directly assignable to the plants

[2] System Control & Load Dispatch expenses were not directly assignable to the plants

[3] This column represents the total amounts for the period between July 1, 2018 and June 30, 2019 also known as the updated test year

Southwestern Public Service Company

Coal Plant O&M Summary

Plant Name: Tolk

Line No	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Adjusted Test Year Totals[3]
		Steam Power Operation																	
1	500	Supervision & Engineering	1.73%	$ 65,650	$ 33,923	$ 30,708	$ 34,076	$ 39,527	$ 25,406	$ 26,345	$ 31,422	$ 13,290	$ 31,916	$ 28,300	$ 55,459	$ 48,161	$ 62,741	$ 55,675	$ 452,318
2	502	Steam Expense	8.00%	168,658	177,225	169,394	189,931	186,383	189,323	357,976	250,874	(55,686)	153,029	145,920	128,263	139,891	203,053	206,003	2,094,956
3	505	Electric Expense	6.78%	89,264	172,483	151,303	172,702	213,934	120,872	189,619	161,406	145,460	95,985	113,607	107,238	152,579	154,628	147,902	1,775,932
4	506	Miscellaneous	11.66%	264,390	(126,854)	297,184	192,315	243,750	294,293	264,153	129,749	73,962	292,734	205,966	365,555	322,611	331,693	339,000	3,055,783
5	507	Rent	5.44%	77,251	146,360	135,679	91,465	89,036	100,310	117,991	147,351	177,093	104,037	117,014	124,781	106,643	132,092	118,460	1,426,272
6	509	Allowances	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7		**Total Steam Power Operations**	**33.61%**	**$ 665,213**	**$ 403,137**	**$ 784,268**	**$ 680,489**	**$ 772,630**	**$ 730,204**	**$ 956,083**	**$ 720,802**	**$ 354,117**	**$ 677,701**	**$ 610,807**	**$ 781,296**	**$ 769,885**	**$ 884,207**	**$ 867,040**	**$ 8,805,261**
		Steam Power Maintenance																	
8	510	Supervision & Engineering	1.49%	$ 34,053	$ 40,718	$ 36,846	$ 49,332	$ 69,082	$ 49,087	$ 47,136	$ 27,285	$ 24,105	$ 29,486	$ 16,303	$ 20,361	$ 27,792	$ 14,655	$ 14,704	$ 389,328
9	511	Structures	7.75%	173,115	84,446	149,751	174,864	158,238	118,893	95,165	72,920	734,591	144,764	123,065	101,391	70,186	134,895	100,994	2,029,966
10	512	Boilers	18.81%	254,246	264,336	57,612	199,434	151,078	299,261	965,111	652,807	1,238,306	267,893	171,662	337,042	209,872	283,821	150,977	4,927,265
11	513	Electric Plant	17.07%	227,791	178,366	140,576	194,508	341,125	181,798	1,412,587	1,090,775	428,722	252,468	76,931	193,732	123,359	107,344	69,930	4,473,278
12	514	Miscellaneous Plant	15.02%	170,890	326,872	326,983	258,727	212,687	342,917	327,588	338,630	313,245	387,711	300,131	331,723	277,304	405,514	438,102	3,934,279
13		**Total Steam Power Maintenance**	**60.13%**	**$ 860,094**	**$ 894,738**	**$ 711,767**	**$ 876,866**	**$ 932,210**	**$ 991,956**	**$ 2,847,586**	**$ 2,182,418**	**$ 2,738,968**	**$ 1,082,322**	**$ 688,092**	**$ 984,250**	**$ 708,513**	**$ 946,229**	**$ 774,706**	**$ 15,754,116**
		Other Power Operation																	
14	546	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	548	Generation Expense	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	549	Miscellaneous	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	550	Rents	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18		**Total Other Power Operation**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
		Other Power Maintenance																	
19	551	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20	552	Structures	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	553	Electric Plant	0.00%	-	-	-	-	-	-	-	-	-	-	-	98	62	92	508	759
22	554	Miscellaneous Plant[1]	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23		**Total Other Power Maintenance**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 98**	**$ 62**	**$ 92**	**$ 508**	**$ 759**
		Other Power Supply																	
24	556	System Control & Load Dispatch[2]	0.76%	$ 19,193	$ 17,762	$ 20,260	$ 18,080	$ 18,458	$ 13,940	$ 12,659	$ 19,679	$ 13,903	$ 23,444	$ 13,044	$ 22,310	$ 17,026	$ 13,830	$ 13,721	$ 200,095
25	557	Other Expenditures	5.49%	45,863	254,732	1,081	132,404	110,508	98,059	124,678	88,728	143,864	167,616	(38,688)	227,136	126,585	127,851	129,130	1,437,874
26		**Total Other Power Supply**	**6.25%**	**$ 65,056**	**$ 272,495**	**$ 21,341**	**$ 150,485**	**$ 128,966**	**$ 112,000**	**$ 137,337**	**$ 108,407**	**$ 157,768**	**$ 191,061**	**$ (25,644)**	**$ 249,446**	**$ 143,612**	**$ 141,681**	**$ 142,850**	**$ 1,637,969**
27	**Totals**		**100.00%**	**$ 1,590,363**	**$ 1,570,369**	**$ 1,517,376**	**$ 1,707,839**	**$ 1,833,806**	**$ 1,834,160**	**$ 3,941,006**	**$ 3,011,627**	**$ 3,250,854**	**$ 1,951,084**	**$ 1,273,255**	**$ 2,015,089**	**$ 1,622,071**	**$ 1,972,209**	**$ 1,785,105**	**$ 26,198,105**

Notes. This schedule contains estimates for the period of April 1 2019 through June 30, 2019, referred to as the "Update Period." As discussed by Southwestern Public Service Company ("SPS") witness William A. Grant, SPS will file actual costs for the Update Period, including an updated version of this schedule, no later than the 45th day after the date of the initial filing of this rate case, as required by PURA § 36.112

Costs not directly assigned to a plant were allocated on the basis of directly assigned plant costs in each FERC account to total directly assigned costs in each FERC account

Utility Share $ and % not applicable because SPS does not jointly own any generation facilities

[1] A portion of Miscellaneous Plant expenses were not directly assignable to the plants

[2] System Control & Load Dispatch expenses were not directly assignable to the plants

[3] This column represents the total amounts for the period between July 1 2018 and June 30, 2019, also known as the updated test year

Southwestern Public Service Company

Lignite Plant O&M Summary

Schedule H-1.2c is not applicable to Southwestern Public Service Company ("SPS") because SPS does not own or operate lignite facilities.

Southwestern Public Service Company

Other (Diesel) - Other Plant O&M Summary

Total Summary

Line No.	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Updated Test Year Totals[3]
	Steam Power Operation																		
1	500	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2	502	Steam Expense	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	505	Electric Expense	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	506	Miscellaneous	19.65%	-	-	1,335,234	-	-	-	-	-	-	-	36,542	-	-	-	-	36,542
5	507	Rent	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	509	Allowances	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7		**Total Steam Power Operations**	**19.65%**	**$ -**	**$ -**	**$ 1,335,234**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 36,542**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 36,542**
	Steam Power Maintenance																		
8	510	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	511	Structures	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	512	Boilers	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	513	Electric Plant	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	514	Miscellaneous Plant	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13		**Total Steam Power Maintenance**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
	Other Power Operation																		
14	546	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	548	Generation Expense	3.42%	1,435	100	-	273	-	1,100	58	-	1,161	-	3,549	91	99	18	17	6,366
16	549	Miscellaneous	25.20%	12,876	(6,883)	5,054	7,381	7,486	4,841	10,410	1,078	174	1,390	2,242	770	2,721	4,167	4,209	46,867
17	550	Rents	8.72%	2,569	4,350	4,253	3,207	3,176	3,576	1,714	2,067	2,481	-	-	-	-	-	-	16,220
18		**Total Other Power Operation**	**37.34%**	**$ 16,880**	**$ (2,433)**	**$ 9,307**	**$ 10,860**	**$ 10,661**	**$ 9,517**	**$ 12,181**	**$ 3,144**	**$ 3,816**	**$ 1,390**	**$ 5,791**	**$ 861**	**$ 2,820**	**$ 4,185**	**$ 4,226**	**$ 69,453**
	Other Power Maintenance																		
19	551	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20	552	Structures	1.61%	964	43	6,475	(1,832)	(57)	2,204	1,605	1,076	-	-	-	-	-	-	-	2,995
21	553	Electric Plant	41.19%	13,731	10,242	6,682	10,103	5,105	6,587	7,676	7,083	12,300	2,638	4,513	2,646	1,670	2,493	13,797	76,612
22	554	Miscellaneous Plant[1]	0.21%	-	-	-	396	-	-	-	-	-	-	-	-	-	-	-	396
23		**Total Other Power Maintenance**	**43.01%**	**$ 14,696**	**$ 10,284**	**$ 13,157**	**$ 8,666**	**$ 5,047**	**$ 8,792**	**$ 9,281**	**$ 8,159**	**$ 12,300**	**$ 2,638**	**$ 4,513**	**$ 2,646**	**$ 1,670**	**$ 2,493**	**$ 13,797**	**$ 80,003**
	Other Power Supply																		
24	556	System Control & Load Dispatch[2]	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
25	557	Other Expenditures	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26		**Total Other Power Supply**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
27	**Totals**		**100.00%**	**$ 31,576**	**$ 7,851**	**$ 1,357,698**	**$ 19,526**	**$ 15,709**	**$ 18,309**	**$ 21,462**	**$ 11,303**	**$ 16,115**	**$ 4,028**	**$ 46,847**	**$ 3,507**	**$ 4,490**	**$ 6,679**	**$ 18,023**	**$ 185,998**

Notes: This schedule contains estimates for the period of April 1, 2019 through June 30, 2019, referred to as the "Update Period." As discussed by Southwestern Public Service Company ("SPS") witness William A. Grant, SPS will file actual costs for the Update Period, including an updated version of this schedule no later than the 45th day after the date of the initial filing of this rate case, as required by PURA § 36.112

Costs not directly assigned to a plant were allocated on the basis of directly assigned plant costs in each FERC account to total directly assigned costs in each FERC account

Utility Share $ and % not applicable because SPS does not jointly own any generation facilities

[1] A portion of Miscellaneous Plant expenses were not directly assignable to the plants

[2] System Control & Load Dispatch expenses were not directly assignable to the plants

[3] This column represents the total amounts for the period between July 1 2018 and June 30 2019, also known as the updated test year

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Sponsors: Freitas, Low
2019 TX Rate Case

Southwestern Public Service Company

Other (Diesel) - Other Plant O&M Summary

Plant Name: Quay

Line No.	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Updated Test Year Totals[3]
		Steam Power Operation																	
1	500	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2	502	Steam Expense	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	505	Electric Expense	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	506	Miscellaneous	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	507	Rent	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	509	Allowances	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7		**Total Steam Power Operations**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
		Steam Power Maintenance																	
8	510	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	511	Structures	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	512	Boilers	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	513	Electric Plant	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	514	Miscellaneous Plant	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13		**Total Steam Power Maintenance**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
		Other Power Operation																	
14	546	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	548	Generation Expense	4.26%	1,435	100	-	273	-	1,100	58	-	1,161	-	3,549	91	99	18	17	6,366
16	549	Miscellaneous	31.36%	12,876	(6,883)	5,054	7,381	7,486	4,841	10,410	1,078	174	1,390	2,242	770	2,721	4,167	4,209	46,867
17	550	Rents	10.85%	2,569	4,350	4,253	3,207	3,176	3,576	1,714	2,067	2,481	-	-	-	-	-	-	16,220
18		**Total Other Power Operation**	**46.47%**	**$ 16,880**	**$ (2,433)**	**$ 9,307**	**$ 10,860**	**$ 10,661**	**$ 9,517**	**$ 12,181**	**$ 3,144**	**$ 3,816**	**$ 1,390**	**$ 5,791**	**$ 861**	**$ 2,820**	**$ 4,185**	**$ 4,226**	**$ 69,453**
		Other Power Maintenance																	
19	551	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20	552	Structures	2.00%	964	43	6,475	(1,832)	(57)	2,204	1,605	1,076	-	-	-	-	-	-	-	2,995
21	553	Electric Plant	51.26%	13,731	10,242	6,682	10,103	5,105	6,587	7,676	7,083	12,300	2,638	4,513	2,646	1,670	2,493	13,797	76,612
22	554	Miscellaneous Plant[1]	0.26%	-	-	-	396	-	-	-	-	-	-	-	-	-	-	-	396
23		**Total Other Power Maintenance**	**53.53%**	**$ 14,696**	**$ 10,284**	**$ 13,157**	**$ 8,666**	**$ 5,047**	**$ 8,792**	**$ 9,281**	**$ 8,159**	**$ 12,300**	**$ 2,638**	**$ 4,513**	**$ 2,646**	**$ 1,670**	**$ 2,493**	**$ 13,797**	**$ 80,003**
		Other Power Supply																	
24	556	System Control & Load Dispatch[2]	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
25	557	Other Expenditures	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26		**Total Other Power Supply**	**0.00%**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
27	**Totals**		**100.00%**	**$ 31,576**	**$ 7,851**	**$ 22,464**	**$ 19,526**	**$ 15,709**	**$ 18,309**	**$ 21,462**	**$ 11,303**	**$ 16,115**	**$ 4,028**	**$ 10,304**	**$ 3,507**	**$ 4,490**	**$ 6,679**	**$ 18,023**	**$ 149,456**

Notes: This schedule contains estimates for the period of April 1 2019 through June 30, 2019, referred to as the "Update Period." As discussed by Southwestern Public Service Company ("SPS") witness William A. Grant, SPS will file actual costs for the Update Period including an updated version of this schedule, no later than the 45th day after the date of the initial filing of this rate case, as required by PURA § 36.112

Costs not directly assigned to a plant were allocated on the basis of directly assigned plant costs in each FERC account to total directly assigned costs in each FERC account

Utility Share $ and % not applicable because SPS does not jointly own any generation facilities

[1] A portion of Miscellaneous Plant expenses were not directly assignable to the plants

[2] System Control & Load Dispatch expenses were not directly assignable to the plants

[3] This column represents the total amounts for the period between July 1, 2018 and June 30, 2019, also known as the updated test year

Southwestern Public Service Company

Other (Diesel) - Other Plant O&M Summary

Plant Name Gaines County[4]

Line No.	FERC Account	Description of Account	Percent Total	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	Estimated April 2019	Estimated May 2019	Estimated June 2019	Updated Test Year Totals[3]
		Steam Power Operation																	
1	500	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2	502	Steam Expense	0.00%	-	-		-	-	-	-	-	-	-		-	-	-	-	-
3	505	Electric Expense	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	506	Miscellaneous	100.00%	-	-	1,335,234	-	-	-	-	-	-	-	36,542	-	-	-	-	36,542
5	507	Rent	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	509	Allowances	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7		**Total Steam Power Operations**	**100.00%**	$ -	$ -	$ 1,335,234	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 36,542	$ -	$ -	$ -	$ -	$ 36,542
		Steam Power Maintenance																	
8	510	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	511	Structures	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	512	Boilers	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	513	Electric Plant	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	514	Miscellaneous Plant	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13		**Total Steam Power Maintenance**	**0.00%**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		Other Power Operation																	
14	546	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	548	Generation Expense	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	549	Miscellaneous	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	550	Rents	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18		**Total Other Power Operation**	**0.00%**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		Other Power Maintenance																	
19	551	Supervision & Engineering	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20	552	Structures	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	553	Electric Plant	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	554	Miscellaneous Plant[1]	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23		**Total Other Power Maintenance**	**0.00%**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
		Other Power Supply																	
24	556	System Control & Load Dispatch[2]	0.00%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
25	557	Other Expenditures	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26		**Total Other Power Supply**	**0.00%**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
27	**Totals**		**100.00%**	$ -	$ -	$ 1,335,234	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 36,542	$ -	$ -	$ -	$ -	$ 36,542

Notes: This schedule contains estimates for the period of April 1, 2019 through June 30, 2019, referred to as the "Update Period." As discussed by Southwestern Public Service Company ("SPS") witness William A. Grant, SPS will file actual costs for the Update Period, including an updated version of this schedule, no later than the 45th day after the date of the initial filing of this rate case, as required by PURA § 36.112.

Costs not directly assigned to a plant were allocated on the basis of directly assigned plant costs in each FERC account to total directly assigned costs in each FERC account.

Utility Share $ and % not applicable because SPS does not jointly own any generation facilities.

[1] A portion of Miscellaneous Plant expenses were not directly assignable to the plants.

[2] System Control & Load Dispatch expenses were not directly assignable to the plants.

[3] This column represents the total amounts for the period between July 1, 2018 and June 30, 2019, also known as the updated test year.

[4] Gaines County includes the writeoff of Capital investment.

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Southwestern Public Service Company

Summary of Adjusted Test Year Production O&M Expenses

Line No.	FERC ACCOUNT	DESCRIPTION OF ACCOUNT	PERCENT TOTAL	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018
		STEAM POWER OPERATION									
1	500	Supervision & Engineering	2 07%	$ 329,887	$ 175,401	$ 173,999	$ 169,596	$ 182,910	$ 158,148	$ 222,726	$ 161,507
2	502	Steam Expense	10 04%	1 305,364	307,841	928,403	996,906	1,114 726	912,862	1,118,569	1,061,530
3	505	Electric Expense	9 09%	851,371	909,081	856,436	1,054 901	762,267	702,973	895,163	1,021,153
4	506	Miscellaneous	12 57%	988,682	(263,161)	2 442,292	934,042	1,076 906	1,056,009	995,995	789,792
5	507	Rent	5 88%	343,731	651,410	603 983	432 632	421,042	474,700	500,283	623,743
6	509	Allowances	0 11%	-	-	-	-	-	-	28,654	-
7		Total Steam Power Operations	39 76%	$ 3,819,035	$ 1,780,572	$ 5,005,113	$ 3,588,077	$ 3,557,851	$ 3,304,692	$ 3,761,391	$ 3,657,726
		STEAM POWER MAINTENANCE									
8	510	Supervision & Engineering	1 35%	$ 150,280	$ 117 745	$ 95,443	$ 119 376	$ 167,751	$ 129,586	$ 132,096	$ 77,642
9	511	Structures	4 92%	446,887	391,050	453,303	480,333	444,950	311,610	310,349	235,795
10	512	Boilers	16 22%	1,027,921	1,464,739	720,271	1,214,217	1,092,368	1,468,936	2,415,388	1,852,832
11	513	Electric Plant	11 42%	723,617	652,226	678,556	583 405	744,481	887,240	2,091 381	1,512,413
12	514	Miscellaneous Plant	10 27%	651,462	963,195	993,897	955,117	836,586	779,010	913,957	933,100
13		Total Steam Power Maintenance	44 17%	$ 3,000,167	$ 3,588,955	$ 2,941,471	$ 3,352,448	$ 3,286,136	$ 3,576,383	$ 5,863,171	$ 4,611,781
		OTHER POWER OPERATION									
14	546	Supervision & Engineering	0 02%	$ 8,457	$ 2,875	$ 3,214	$ 2,856	$ (13 504)	$ 2 397	$ 2,778	$ 2,433
15	548	Generation Expense	0 56%	15,804	62,710	268,949	62,220	11,593	9,817	18,760	20,624
16	549	Miscellaneous	0 36%	95,764	(53,582)	31,534	43 246	22,522	35,203	35,776	63 360
17	550	Rents	0 47%	18,021	30,517	29,840	41,758	41,371	46,580	49,005	58,368
18		Total Other Power Operation	1 40%	$ 138,046	$ 42,519	$ 333,537	$ 150,080	$ 61,981	$ 93,997	$ 106,319	$ 144,784
		OTHER POWER MAINTENANCE									
19	551	Supervision & Engineering	0 20%	$ 17,272	$ 18,523	$ 15,158	$ 7,421	$ 18,361	$ 25,402	$ 11,847	$ 47,814
20	552	Structures	0 37%	47 682	19,844	36,986	22,422	49,059	16,274	57,625	22,670
21	553	Electric Plant	1 22%	71,327	100,733	87,541	149,045	159,640	81,200	85,097	111,685
22	554	Miscellaneous Plant[1]	0 28%	3 957	8,082	19,772	36,587	3,344	11 262	20,857	89,582
23		Total Other Power Maintenance	2 08%	$ 140,238	$ 147,182	$ 159,457	$ 215,477	$ 230,403	$ 134,138	$ 175,425	$ 271,751
		OTHER POWER SUPPLY									
24	556	System Control & Load Dispatch[2]	0 99%	$ 97,035	$ 89,800	$ 102,429	$ 91,408	$ 93,316	$ 70,478	$ 63,998	$ 99,490
25	557	Other Expenditures	11 59%	704,243	2,162 422	454,061	1,488,684	966 272	663,705	1,094,569	2,386,706
26		Total Other Power Supply	12 59%	$ 801,278	$ 2,252,222	$ 556,489	$ 1,580,092	$ 1,059,588	$ 734,183	$ 1,158,567	$ 2,486,196
27		**TOTALS**	100.00%	$ 7,898,763	$ 7,811,450	$ 8,996,066	$ 8,886,174	$ 8,195,959	$ 7,843,392	$ 11,064,873	$ 11,172,238

Notes: Costs not directly assigned to a plant were allocated on the basis of directly assigned plant costs in each Federal Energy Regulatory Commission ("FERC") account to total directly assigned costs in each FERC account

[1] A portion of Miscellaneous Plant expenses were not directly assignable to the plants

[2] System Control & Load Dispatch expenses were not directly assignable to the plants

[3] Adjustments to O&M include accounting adjustments, Commission-ordered adjustments, and pro forma adjustments, as well as an adjustment to reflect O&M for the period between April 1 2019 through June 30 2019 also know as the Update Period Please refer to the Direct Testimony of Arthur P Freitas for more information on O&M adjustments

This schedule contains estimates for the period of April 1 2019 through June 30, 2019, referred to as the "Update Period " As discussed by Southwestern Public Service Company ("SPS") witness William A Grant, SPS will file actual costs for the Update Period, including an updated version of this schedule, no later than the 45th day after the date of the initial filing of this rate case, as required by PURA § 36 112

Southwestern Public Service Company

Summary of Adjusted Test Year Production O&M Expenses

Line No.	FERC ACCOUNT	DESCRIPTION OF ACCOUNT	December 2018	January 2019	February 2019	March 2019	Test Year Ended March 31, 2019	Adjustments[3]	Adjusted Test Year Total
	STEAM POWER OPERATION								
1	500	Supervision & Engineering	$ 141,941	$ 167 912	$ 149 080	$ 207,666	$ 2,240,774	$ (65,891)	$ 2,174,883
2	502	Steam Expense	801,103	772,908	797,101	733,177	10,850,490	(433,423)	10,417,068
3	505	Electric Expense	889,896	616,062	690,736	573,177	9,823 217	(148,139)	9,675,077
4	506	Miscellaneous	2,050,265	1,250,052	1,044,156	1,223 573	13,588,603	(1,149,702)	12,438,901
5	507	Rent	749,686	467,798	526,144	561,071	6,356,224	(545,764)	5,810,460
6	509	Allowances	93,836	-	-	-	122,490	-	122,490
7		Total Steam Power Operations	$ 4,726,728	$ 3,274,732	$ 3,207,216	$ 3,298,664	$ 42,981,798	$ (2,342,918)	$ 40,638,879
	STEAM POWER MAINTENANCE								
8	510	Supervision & Engineering	$ 88,544	$ 164,765	$ 119,532	$ 98,376	$ 1,461,134	$ (4,028)	$ 1,457,107
9	511	Structures	1,229,350	323,799	366,008	321,519	5,314,954	(488,240)	4,826,713
10	512	Boilers	2,223,130	812 278	1,122,800	2,123,436	17,538,315	297,967	17,836,282
11	513	Electric Plant	1,127,494	747 500	1,040,896	1,551 610	12,340,821	994,260	13,335,081
12	514	Miscellaneous Plant	1,256,057	892,479	1,000,479	923,480	11,098 819	71 712	11,170,531
13		Total Steam Power Maintenance	$ 5,924,575	$ 2,940,821	$ 3,649,715	$ 5,018,421	$ 47,754,043	$ 871,671	$ 48,625,714
	OTHER POWER OPERATION								
14	546	Supervision & Engineering	$ 1,828	$ 2,613	$ 2,171	$ 2,687	$ 20 806	$ 17,331	$ 38,136
15	548	Generation Expense	70,853	18,986	23,013	19,691	603,018	(291,321)	311,697
16	549	Miscellaneous	(4,365)	48,951	54,569	11,375	384,351	6,185,181	6,569,532
17	550	Rents	70 040	37,025	42 651	45,143	510,319	149,463	659,782
18		Total Other Power Operation	$ 138,356	$ 107,574	$ 122,404	$ 78,895	$ 1,518,493	$ 6,060,654	$ 7,579,147
	OTHER POWER MAINTENANCE								
19	551	Supervision & Engineering	$ 19,359	$ 24,548	$ 2,300	$ 4,247	$ 212,250	$ (32,222)	$ 180,028
20	552	Structures	65,637	30,238	8,202	27,049	403,687	(67,584)	336,104
21	553	Electric Plant	233,068	136,780	28,402	78,801	1 323,320	4,125,541	5,448,860
22	554	Miscellaneous Plant[1]	38,885	15,111	19,441	37,705	304,583	2,095	306,679
23		Total Other Power Maintenance	$ 356,949	$ 206,677	$ 58,345	$ 147,802	$ 2,243,841	$ 4,027,830	$ 6,271,670
	OTHER POWER SUPPLY								
24	556	System Control & Load Dispatch[2]	$ 70,290	$ 118,527	$ 65,946	$ 112,790	$ 1,075,506	$ (17,159)	$ 1,058,347
25	557	Other Expenditures	462,275	1,265,458	(331 695)	1,218 396	12 535 095	(8,630,951)	3,904,143
26		Total Other Power Supply	$ 532,565	$ 1,383,984	$ (265,749)	$ 1,331,186	$ 13,610,601	$ (8,648,110)	$ 4,962,491
27	**TOTALS**		$ 11,679,173	$ 7,913,788	$ 6,771,931	$ 9,874,968	$ 108,108,775	$ (30,874)	$ 108,077,902

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Sponsor: Low
2019 TX Rate Case

Southwestern Public Service Company

Summary of Actual Production O&M Expenses Incurred

Line No.	FERC Acct	Description of Account	Percent Total 2013	2013	Percent Total 2014	2014	Percent Total 2015	2015	Percent Total 2016	2016	Percent Total 2017	2017	Percent Total 2018	2018
	Steam Power Operation													
1	500	Supervision & Engineering	2.74%	$ 2,750,576	2.34%	$ 2,514,855	1.98%	$ 2,260,170	1.48%	$ 1,540,880	2.40%	$ 2,288,594	2.31%	$ 2,290,065
2	502	Steam Expense	10.13%	10,155,149	8.69%	9,357,899	8.74%	10,002,106	9.93%	10,302,279	10.63%	10,130,024	11.00%	10,894,158
3	505	Electric Expense	11.69%	11,720,251	10.00%	10,768,861	9.36%	10,711,590	9.85%	10,228,429	10.96%	10,446,776	10.30%	10,203,419
4	506	Miscellaneous	13.05%	13,079,346	12.69%	13,664,039	12.84%	14,688,044	13.93%	14,459,565	13.02%	12,407,680	13.50%	13,365,874
5	507	Rent	3.68%	3,690,286	3.51%	3,781,716	3.95%	4,516,830	4.78%	4,965,581	5.97%	5,689,240	6.62%	6,556,090
6	509	SO2 Allowances	0.00%	(42)	0.00%	3,944	0.10%	114,191	0.01%	5,337	0.01%	14,055	0.12%	122,490
7		**Total Steam Power Operations**	**41.30%**	**$ 41,395,565**	**37.22%**	**$ 40,091,314**	**36.97%**	**$ 42,292,932**	**39.98%**	**$ 41,502,071**	**43.00%**	**$ 40,976,368**	**43.85%**	**$ 43,432,097**
	Steam Power Maintenance													
8	510	Supervision & Engineering	2.09%	$ 2,093,510	2.13%	$ 2,295,200	1.88%	$ 2,145,620	1.79%	$ 1,855,859	1.51%	$ 1,441,404	1.43%	$ 1,419,933
9	511	Structures	5.10%	5,114,493	4.89%	5,270,711	4.83%	5,528,236	5.19%	5,385,087	5.47%	5,212,439	5.52%	5,469,723
10	512	Boilers	17.80%	17,842,582	18.37%	19,783,858	23.27%	26,615,550	16.97%	17,612,248	16.47%	15,694,425	16.36%	16,202,910
11	513	Electric Plant	14.04%	14,077,028	12.11%	13,047,656	9.54%	10,912,911	10.00%	10,379,896	11.31%	10,780,047	10.50%	10,402,049
12	514	Miscellaneous Plant	11.74%	11,773,065	13.30%	14,321,769	13.65%	15,619,207	14.47%	15,017,912	12.09%	11,524,959	11.19%	11,082,554
13		**Total Steam Power Maintenance**	**50.78%**	**$ 50,900,678**	**50.81%**	**$ 54,719,194**	**53.17%**	**$ 60,821,524**	**48.41%**	**$ 50,251,003**	**46.85%**	**$ 44,653,275**	**45.01%**	**$ 44,577,168**
	Other Power Operation													
14	546	Supervision & Engineering	0.01%	$ 9,109	0.00%	$ 4,145	0.01%	$ 8,987	0.01%	$ 7,642	0.14%	$ 130,914	0.03%	$ 32,100
15	548	Generation Expense	0.29%	294,630	0.36%	390,336	0.30%	348,379	0.30%	306,390	0.44%	418,920	0.58%	575,073
16	549	Miscellaneous	0.53%	531,247	0.37%	401,797	0.28%	323,942	0.34%	356,205	0.39%	369,686	0.35%	347,620
17	550	Rents	0.35%	347,510	0.38%	409,853	0.40%	457,584	0.34%	356,473	0.35%	329,361	0.50%	497,640
18		**Total Other Power Operation**	**1.18%**	**$ 1,182,496**	**1.12%**	**$ 1,206,131**	**1.00%**	**$ 1,138,891**	**0.99%**	**$ 1,026,710**	**1.31%**	**$ 1,248,881**	**1.47%**	**$ 1,452,434**
	Other Power Maintenance													
19	551	Supervision & Engineering	0.00%	$ 160	0.00%	$ 518	0.00%	$ 909	0.00%	$ 508	0.14%	$ 131,087	0.22%	$ 214,330
20	552	Structures	0.11%	108,512	0.15%	165,694	0.14%	161,509	0.10%	100,691	0.43%	406,896	0.41%	405,846
21	553	Electric Plant	1.20%	1,200,189	1.55%	1,670,346	1.08%	1,231,210	2.12%	2,204,684	2.66%	2,532,725	1.55%	1,537,201
22	554	Miscellaneous Plant	0.01%	7,480	0.02%	22,740	0.05%	52,157	0.01%	13,545	0.12%	118,627	0.25%	248,064
23		**Total Other Power Maintenance**	**1.31%**	**$ 1,316,342**	**1.73%**	**$ 1,859,297**	**1.26%**	**$ 1,445,784**	**2.23%**	**$ 2,319,428**	**3.35%**	**$ 3,189,334**	**2.43%**	**$ 2,405,441**
	Other Power Supply													
24	556	System Control & Load Dispatch [1]	0.99%	$ 989,832	1.09%	$ 1,176,245	1.06%	$ 1,207,275	1.08%	$ 1,125,033	1.35%	$ 1,285,668	1.12%	$ 1,108,043
25	557	Other Power Oth Exp	4.44%	4,454,627	8.03%	8,650,282	6.55%	7,487,121	7.29%	7,570,906	4.14%	3,949,676	6.12%	6,065,525
26		**Total Other Power Supply**	**5.43%**	**$ 5,444,458**	**9.12%**	**$ 9,826,527**	**7.60%**	**$ 8,694,396**	**8.38%**	**$ 8,695,939**	**5.49%**	**$ 5,235,344**	**7.24%**	**$ 7,173,568**
27	**Totals**		**100.00%**	**$ 100,239,540**	**100.00%**	**$ 107,702,463**	**100.00%**	**$ 114,393,527**	**100.00%**	**$ 103,795,152**	**100.00%**	**$ 95,303,202**	**100.00%**	**$ 99,040,708**

Notes: Costs not directly assigned to a plant were allocated on the basis of directly assigned plant costs in each FERC account to total directly assigned costs in each FERC account

Utility Share $ and % not applicable because SPS does not jointly own any generation facilities

[1] System Control & Load Dispatch expenses were not directly assignable to the plants

Southwestern Public Service Company

Major O&M Projects
January 2019 through December 2019

Line No.	Project Description	Unit	Estimated Cost
1	**Plant Name: Harrington**		
2	Harrington 1 Major Overhaul	1	$ 2,720,000
3	Har 2 mini Overhaul	2	280,000
4			
5	**Total**		**$ 3,000,000**
6	**Plant Name: Jones**		
7	Jones 2 Overhaul	2	$ 1,400,000
8	**Total**		**$ 1,400,000**
9	**Plant Name: Nichols**		
10	Nichols 1 Overhaul	1	$ 1,329,000
11	**Total**		**$ 1,329,000**
12	**Plant Name: Plant X**		
13	Plant X 3 Overhaul	3	$ 939,978
14	Plant X 4 boiler outage	4	700,000
15	**Total**		**$ 1,639,978**
16	**Plant Name: Tolk**		
17	Tolk 2 Mini Inspection	2	$ 340,000
18	**Total**		**$ 340,000**
19	**Grand Total**		**$ 7,708,978**

Southwestern Public Service Company

Capital Cost Methodology

Xcel Energy

CAPITAL ASSET ACCOUNTING POLICY

SUBJECT: **Capitalization Policy Overview**

EFFECTIVE DATE: **JUNE 1, 2001** *(Updated 04/11/16)*

Table of Contents

Background

"Each utility shall ***maintain a written*** property units listing for use in accounting for additions and retirements of electric plant and ***apply the listing consistently***." From the Code of Federal Regulations, Subchapter C – Accounts, Federal Power Act, Part 101 – Uniform System of Accounts Prescribed for Public Utilities and Licensees Subject to the Provisions of the Federal Power Act, Electric Plant Instruction 10., Additions and Retirements of Electric Plant, Subpart A, (emphasis added).

With Order 598, the Federal Energy Regulatory Commission (FERC) removed the long contested property unit listing in Part 116 and allowed the utility company to define the units that were appropriate for their business. The main criteria, however, was that the policy be in written form and that it be applied consistently. This change was affective for the gas utility as well and can be found in Part 201, Instruction 10. The FERC eliminated Part 216 as well with Order 598.

Xcel Energy, at the date of its creation, had written policies from NSP and NCE. The NSP policy was applicable to NSP(MN) and NSP(WI). The NCE policy was originally utilized for PSCo. After the merger to create NCE, it was utilized for SPS and Cheyenne Light and Power. After the merger, the opportunity existed to revisit the capitalization policies in order to achieve unity among the five operating companies and to incorporate any new directions set through process design by the Business Area Teams. The responsibility to maintain the corporate policy was assigned to the corporate Controller and in doing so was assigned to the Capital Asset Accounting department (CAA). Ultimately, the business units are responsible for correct application of the policy and how they manage their capital and operating dollars. CAA's involvement is to assure consistent application of the policy and to assist the business unit with correctly identifying where the dollars belong.

Policy

Unlike other policies, this document is the front end to the main source document which contains the capitalization rules for each property description. It describes the strategy behind deciding to make an item capital, explains the format for the property descriptions, outlines the process for making modifications to this policy, and defines how this policy intertwines with the creation of funding projects and work orders. In order to follow the nomenclature of the document and if one is unfamiliar with the property accounting terminology, the "Definition of Terms" section should be reviewed before continuing.

Strategy

The capital versus operating decision is a highly contentious one because of the potential size of the dollars for the corporation as a whole. Even so, it should be based on accounting and financial principles that are basic to the strategic direction of the individual business unit and not on the ongoing or current earnings per share results. Accounting rules define capital where an item lasts longer than a year **and** improves or lengthens the expected useful life of the overall unit from original expectations. Both conditions, not just one, should be met.

Lasting longer than a year is nebulous because some scheduled maintenance outages are not done annually but can be every two to three years. By saying "lasts longer than a year" implies that replacing anything every scheduled outage is appropriately capital. This is not the intent of the general statement. The statement is referring to items that are not expended or used up in the course of operating the plant. A new Statement of Position (SOP), "Accounting for Certain

Costs and Activities Related to Property, Plant, and Equipment", currently in draft, addresses the issue of major maintenance projects including overhauls and refurbishments as being expense even though some items may last longer than one year. It is easy to determine if an item lasts longer than a year and to exclude those items that are considered routine or planned maintenance, but not as easy to determine if the item improves the expected useful life of the unit.

The process begins with a definition of the capitalization unit and then an approximation of the expected useful period. Anything less than a capitalization unit or not included as a capitalization unit is a minor item. Although the process should not be made more difficult than is necessary, a business unit must choose its capitalization units wisely. The resulting document is in essence a living document in that it is constantly changing. It should be a useable and comprehensive document, but not one that is so in depth as to be impossible to use. For example, a turbine generator unit might have an expected life of 40 years. If the entire generator is the capitalization unit, any subsequent addition must improve or lengthen that time period to be considered capital. If the work maintains expected usefulness, is required to attain expected usefulness, or assures that the original life expectation will be attained, then the work is operating and maintenance (O&M).

However, the turbine generator is a large asset comprised of many parts. The asset could be subdivided further to account for some larger components that may not last the full 40 years but the replacements are not expected to be routine replacements. Either choice of capitalization unit designation is correct. The capitalization unit should not be comprised of items that are expected to be routinely replaced and are usually defined by the manufacturer as such. The expectation of a capital component that will be expended in the course of utilization, such as turbine oil, should not be designated as a capitalization unit. Thus, the choice of the unit is important because large unit size definition will push more dollars to operating during its usefulness, whereas smaller unit definitions will push the dollars to capital.

Therein lies the quandary. To summarize, it is generally recommended that if the subsequent work to be performed on a unit is unusual or not normally expected in the operation of the unit, replacement should be defined as a reconstruction or replacement for capitalization purposes. Conversely, if the work is expected or required in the normal operation of the unit, then the work should be defined as maintenance. Plant and business unit income statements take both operating and capital impacts into the financial analysis to determine the true impact each plant or business unit contributes to the bottom line. Whereas in the past, just the operating side was managed by the plant or business unit.

This brings the discussion around to the financial side of the determination and the subsequent effects of the capital choice. Obviously, the current period expenses are lowered during the construction because the costs are recorded on the balance sheet. However, the carrying costs associated with the asset must be considered. All but a few capital assets are the basis that states utilize to assess property tax. Even though it is based on a net plant basis, that net plant basis is never allowed to decrease all the way to zero. Therefore, the asset incurs an ongoing property tax expense, a reduction to income.

Another tax consideration is the effect on income taxes. An operating expense is deducted for tax purposes in the year spent. A unit placed in the capital accounts is slowly depreciated as a reduction to taxable income over very long lives for most utility property. Generation, transmission, and distribution reduce the tax burden over 15 to 20 years, whereas general property reduces the tax burden over 5 to 7 years.

Another consideration is that the asset has an expected return on as well as of the cost as defined by the state jurisdictions. If rate cases are filed routinely, this may not be an issue. But, the regulator has the purview to deny a return from the customer in the current rates or to “freeze” rates. Either way, the use of the regulatory reason for defining a unit as a capitalization unit should be done with caution. Regulatory safeguards are not reasons for choosing capitalization units that may not be an appropriate business decision. Capitalizing oil, on subsequent replacement is a prime example because it is expended in the operation of the plant. The asset really should be judged on its revenue producing ability. While this is not always applicable when discussing general property, the judgement is sound for most of the asset decisions.

Property Descriptions

The detailed property descriptions for this policy are numerous and some are quite lengthy. The descriptions have been provided in an electronic format through the intranet, separate from this document. The directory can be found in “Our Company,” “Financial Management,”“ Capital Asset Accounting,” “Capitalization Policy.” Each description may contain what is usually referred to as minor items to the capital unit. These items usually are capitalized on initial installation but are subsequently replaced on maintenance.

Also on the Capitalization Policy page you will find the Minimum Dollar Guideline General Rules. Dollar guidelines are based on material cost for all business units other than I/T. Dollar guidelines for IT are based on total direct cost before overheads, AFUDC, and other indirects.

The description section lists the common breakdown of a property, some of which may be capitalization units and others minor items. This distinction is not evident in this section, but is made clear in a later one. This list is not intended to be all encompassing but to cover the major components of the description. The next section, “Other Costs Included”, lists non-material or non-direct costs that are typically associated with a capital project. Again it is not expected to cover every instance and conversely may include items that are not always charged to the project. For instance, construction overheads are a common listing. These may not be added if the project is of short duration, say less than 30 days. Legal fees are never listed, but may be an overhead to the capital project if licensing is involved.

The main section for any description is the "Capital Installation and Retirement" section. This section has three subsections. The first is for construction of a unit that did not previously exist and as such, no removal or retirement is mentioned. The second subsection is for the retirement without replacement of a unit. The third section is for the reconstruction work. The work of replacing a unit already in-service with another capitalization unit of the same functionality. This last section assumes that there is a retirement and an installation occurring.

This entire section needs to be as detail as possible, so that there is not confusion around the meaning. For instance, "replace a section of pipe" could mean many different things, anywhere from several inches to feet to a whole run. Thus, section would need to be defined. Words like "complete set, complete row, in its entirety, greater than 200 horsepower, 500 feet, etc" help delineate the meaning.

The "Maintenance" section is as important as the previous as it defines when the work is routine and expensed in the current year. Again, this section should be as detail as possible to eliminate as much doubt as possible. Typical verbs in this section are "rebuild, replace, repair, overhaul, inspect, study, etc."

The remaining sections offer additional information that assists the Capital Asset Accounting department in recording, tracking, and eventually retiring the asset. The retirement pricing method is usually either "specific", "curve", "FIFO", or "amortization". These terms are describing the method used to remove the asset. The following is a brief overview of what these terms mean:

- **Specific** – The retirement is linked to the actual installation cost.
- **Curve** – Iowa Curves (industry standard life curves) are used to predict the age and associated installation cost for the retirement.
- **FIFO** – Is the "first in, first out" method of retiring the oldest property no matter what the actual installation date was.
- **Amortization** – No retirement is estimated with the cessation of use for an asset and a retirement is booked when both the book and tax depreciation is complete.

Future Modifications

Usually the process to make future modifications to a policy are not included in the policy, but the process surrounding the choice to make modifications is specific in this case and thus included. The general rule is that the modifications are made on a going forward basis and are not done because an entity is faced, within the current period, with an adverse income statement impact. In other words, changing the policy is unethical in order to shift operating expense to capital because earnings or bonuses are not what were expected.

However, business does change and subdividing a current capitalization unit is appropriate if done when not faced with an urgent income statement fix. New units or categories are added all the time and the line between one property unit may blur with another. These are reasons for change. The change is coordinated by Capital Asset Accounting to assure that the changes are inline with accounting rules. But the majority of the analysis is done by the business unit personnel. The actual implementation is tied to the next budget cycle and projects that are significantly underway when the policy changes follow the current or former policy. Projects in the planning or engineering phase are adapted to the new policy.

There may be gray area in the current policy and deciding on a modification to unit definitions can be a significant undertaking. Small changes to clarify the meaning can occur throughout the application and new items can be added at any time. Most gray area centers around the intent written into the description as it applies to the current project. If the application or intent is unclear, contact Capital Asset Accounting for assistance and interpretation. Internal use software, almost always, needs interpretation of how the current project should be dealt with within the description. The policy is not changed because there is gray area in applying the policy, it is changed when the business application of the policy changes, such as dollar guidelines. (Because of the complexity of the subject, internal use software is a policy in the more formal definition, but the concept is still the same.)

Accounting

Although this policy does not deal with the detail accounting surrounding a construction project, there are several policy items that need to be addressed. These topics are the forecasting, investigative work, specific tracking requirements, capitalization of minor items, and responsibilities.

Forecasting

For accounting purposes, a project begins with the budgeting or forecasting of a project in the general ledger system. The process may involve entering the project into a planning system specific for a business unit that is directly linked with the general ledger. For the sake of this discussion, the term forecasting will be used to refer to either the budgeting or the forecasting process. Refer to the Definition of Terms section for a distinction in these terms.

Before the project is accepted into the capital budget or forecast, the project is validated for capital appropriateness according to the Capitalization Policy. The validation is done by CAA for all projects before a work order or funding project is finalized in the general ledger system, SAP This is a check to assure that the project meets the capitalization rules. Many times this is done systematically by a communication link between the general ledger and the fixed asset system. The process of validating the funding projects prior to completion of the budget or any subsequent release of a forecast assures that the information provided for plant related expense forecasting is consistent with the Capitalization Policy. It also assures that the information being presented to the Board of Directors on capital budget is just that. Approval by the Board of a project thought to be capital but subsequently adjusted to be operating does not make the operating costs capital. It is the responsibility of the business unit financial areas to assure that the Capitalization Policy is being closely adhered to in the forecasting process.

A work order is necessary in order for actual charges to begin accumulating construction charges in work in progress. The work order is requested through the general ledger system and is available for use once the fixed asset system establishes the work order with its header information. Header information includes such things as the assignment of the ultimate account and the appropriate overheads. If a project, once validated, is for the future and actual costs will not be accumulated for a period of time, then the funding project is not assigned a work order.

Investigative Work

There are instances where it is uncertain if a capital project is necessary. Analysis or investigation must be done to determine if the work is necessary. This investigative work is operating until the point that a capital job is deemed necessary. Costs occurring after this trigger point may qualify for capital treatment, but all costs prior may not. The capital work begins when the decision to do a project is made and the necessary approvals have been obtained. The new SOP draft clearly identifies phases to a capital project and the investigative work is included in what the document defines as the "Preliminary Stage". The table below outlines the four phases. The term "property, plant, and equipment" is referenced by the acronym "PP&E".

	Preliminary Stage	Pre-acquisition Stage	Acquisition or Construction Stage	In-service Stage
Time line	Prior to time when acquisition of specific PP&E becomes probable.	Acquisition of specific PP&E is probable but has not yet occurred.	Acquisition has occurred or construction has commenced but PP&E is not yet substantially complete and ready for its intended use.	Subsequent to when PP&E is substantially complete and ready for its intended use.
Sample Activities	Consideration of alternatives, feasibility studies, activities occurring prior to decision to select specific PP&E	Surveying, zoning, engineering studies, design layouts, traffic studies (these all may also occur in preliminary stage)	Acquisition, construction, or installation of PP&E; engineering work, design work	Replacements, additions to existing PP&E, repairs and maintenance
Accounting for costs directly identifiable with specific PP&E	Expense	Capitalize certain costs directly related this stage	Capitalize certain costs directly related to this stage	Capitalize replacements and additions; expense repairs and maintenance

The type of work that fits this category are typically called inspections (prior to construction work), studies, investigations, testing (prior to construction or after completion of construction where the project has been turned over from the construction manager to the operations manager), upgrades (not directly associated with any capitalization units), or any routine work that would typically be associated with maintenance.

Licensing, certificate of need work, permitting, etc, usually occur after management decisions have been given for a project. However, there are projects where the pre-construction work is anticipated to occur over a very long period and the management decision is deferred until the project has passed certain hurdles. In this case the costs are operating and could be reversed to capital if a capital project results. This is most often seen in nuclear re-licensing projects.

In the forecasting process, studies or investigative work are operating but one could budget capital work that is expected. If a project is forecast to occur as a result and subsequently the investigative work does not produce the expected capital work but does produce necessary operating work, the operating costs cannot be done under the capital project just because it was forecast that way. The capital project is underrun and operating is overrun in this example.

Special Tracking Requirements

Many forecasted projects may span multiple FERC accounts and thus be given multiple work orders. The projects may use one funding project number under certain circumstances. It is easier to discuss the circumstances where a separate funding project may be required. The following are the general rules:

- **Distinct tax recovery**, such as street lighting uses a 7 year recovery and distribution uses a 20 year recovery.
- **Tax deductibility versus tax depreciable**, certain book capital items for repair in generating plants can qualify for tax deduction rather than a 15 to 20 tax depreciation.
- **Special rate treatment**, gas surcharge expansion areas need to be segregated from other areas rather than just a state jurisdictional separation.
- **Differing book and tax treatment**, such as saver switches and tax capitalized leases.
- **Distinct book depreciation recovery**, generating sites or units must be forecast separately.
- **Business Unit need for segregated information**, business unit need to track a specific asset or project.

Circumstances where one funding project number may be used to simplify the forecasting process are as follows:

- **Centralized project tracking**, such as a business unit that undertakes a project that affects all its generating sites in a region may budget one project but has, up front, determined an allocation to all the effected generating sites.
- **Internal Use Software for multiple entities**, these projects are tracked at the Service Company level with predetermined allocations that spread the costs to the associated legal entities. See "Capital Asset Accounting Policy: Service Company Assets".

Capitalizing Minor Items

As stated above, if the item being installed is a capitalization unit, it can be capitalized along with its associated costs. The usual associated costs are direct labor and various overheads. But sometimes the associated costs are items that fall below the capitalization unit criteria. For example, on installation of a new turbine, the turbine oil that is first added to the unit is capitalized. All subsequent oil changes are maintenance. The minor item can be capitalized with an associated unit if it is ***directly*** linked to the capital unit. For example, transmission fluid is not capitalized if a new air conditioning unit is added to a vehicle.

The existence of a defined capital project or capitalization unit within a larger scope of work does not give license to set costs that are outside the scope of the project to capital. For example, a capital project occurring during a plant outage should not have all the costs for that outage to capital. Items that are normally charged to operating and maintenance should continue to be charged as such. The labor and materials charged to capital actually become the exception rather than the rule. An example, replacing a single run of pipe (which meets capitalization policy rules) does not then give license to replace fittings and hangers along separate piping system sections that are not being replaced but are connected to the pipe being replaced.

There are times where a minor item is replaced that adds functionality to the capitalization unit that did not exist before and is of such a dollar magnitude that the material cost of the minor item is greater than 30% of the capitalization unit. If **both** these conditions are true, then capitalization may occur. In most cases the 30% portion applies, but the functionality existed before. Thus, the item is expensed. The classic example is with software, where a new module is being added. In this example, the existing software is a payroll system and the new module is a benefits reporting and enrollment package equal to the material cost of the payroll system. Since the functionality did not exist and the cost was greater than 30% of the original material cost, it was capitalized as part of the original payroll system.

Another example where insulators were added to distribution poles already in-service. Since the insulators did not exist on the pole, the addition would satisfy the new functionality rule. But, the material cost of the insulators added to a single pole was not greater than 30% of the material cost of the pole. Thus, the insulators were maintenance. The insulators still would be maintenance if the two conditions were reversed where the cost was greater than 30% but the functionality existed on the pole. However, if insulators were part of the dressed pole at the time it was originally installed, it would have been capitalized as a minor item at that time.

Lastly, there are times that a minor item is of such high cost that the Company decides it would like capitalization treatment. In this case, filings can be made with the associated regulating entities to request a special exception to the Capitalization Policy. This is rare and is not guaranteed. The minor item will be treated as expense until the filing is complete and assurance has been granted for the policy exception. These filings are coordinated by CAA.

Capitalized Emergency Spare Parts

Although this topic is included as a separate property description, it is mentioned here because of the confusion and potential misuse that surrounds this description. Generally, spare parts are the inventory that a plant maintains, usually as recommended by the manufacturer. As these parts are put into use in the facility, the item is either expensed or capitalized at that time depending on the capitalization policy. These items should not be capitalized even if bought as part of the initial stocking that occurs with new facilities. The only spare parts that are capitalized are those that meet all ten criteria that are listed in the definition section. Additionally, the plant manager needs to review the form and indicate approval in an email to CAA by "forwarding" the original email with the attachment. CAA will also sign this form indicating that the part has been verified for designation and the form will be "forwarded" back to the originator for retention. CAA will maintain a copy for auditing purposes. This form is often reviewed by the Internal Revenue Service (IRS) because the rules to capitalize spares for book purposes are the same as those used by the IRS. Intentional misrepresentation to the IRS can lead to penalties and prosecution with potential jail time for company officials.

Responsibilities

- **Capital Asset Accounting:** This department is responsible for the coordination, communication, and auditing to assure that the business unit personnel understand and can appropriately apply the policy. It can offer training on the policy as well as clarification of its application. The department, either through its personnel or its system, is responsible for the validation of capital funding projects and work orders. Once the budgeted or forecasted capital expenditures are entered, CAA is responsible for the calculation of associated plant related expense items such as plant balances, book and tax depreciation, deferred taxes, and other plant related balances.

- **Other Departments:** The other departments are any department that supplies, creates, or reviews the capital expenditures either in forecast mode or in association with actuals. The business unit financial areas or engineering areas are typical sources of information for any new additions or modifications to the policy. The source departments are responsible to understand and to adhere to the policy as it is contained on the intranet at all times.

- **Internal Auditing:** Plant and corporate records will be subject to internal and external audits which check compliance with corporate accounting guidelines and capitalization criteria.

Definition of Terms

Budget – The budget refers to the once a year forecasting process that determines the official, Board of Directors approved project list for the next calendar year. It includes a forecast of the projects currently in construction or to be constructed in the current year.

Capitalization unit – The smallest unit that must comprise the material component of a project in order for the work to be authorized as a capital project. Anything smaller is a minor item and usually considered maintenance when not directly linked with a capitalization unit.

Depreciation – For book purposes, depreciation is the allocation of the capitalized asset to the income statement over the useful life of the asset. It is known as the "return of" the asset. Generally, the straight line methods are utilized and the useful lives are approved by the various state and Federal commissions. For tax purposes, the depreciation is predetermined by the Tax Code. The method currently is an accelerated method over pre-described time periods.

Capitalized Emergency Spare Parts – A part or equipment held in reserve, which is essential to the continued operations of a facility. Its absence when required for use may significantly impact the operational effectiveness of the facility. If you have equipment that qualifies for capitalized emergency spare parts, you must complete the Capitalized Emergency Spare Parts Designation Form and return it to Capital Asset Accounting.

A Capitalized Emergency Spare Part is for **specific** capital equipment, major units of property not minor units. The equipment must meet all of the following conditions in order to be considered a spare part.

- **Necessary to avoid substantial operating time loss caused by emergency shutdown due to particular machine or equipment failure (unit would be offline for an extended period of time without this spare)**
- **Failure without a ready replacement would cause a substantial shutdown or a vital part of the business would suffer from prolonged delays due to shutdown**
- **Directly related to the particular machinery or piece of equipment it serves**
- **Life expectancy of eight (8) years or more (from purchase to disposal), or replacement of equipment due to condition based criteria**
- **Unit material cost of at least $50,000**
- **Located at or near the site or it can be delivered quickly to the site**
- **Equipment is a capital unit of property by itself**
- **Not subject to normal periodic replacement, which infers a minor unit of property (i.e. oil, filters, or pulverizer balls)**
- **Must be special ordered to unit specifications from the manufacturer**
- **Not acquired in quantity (generally only one on hand for each piece of machinery or equipment)**

Expected Useful Life – Period of time over which an item of PP&E is expected to provide economic benefits to an entity. In the determination of expected useful life, it is presumed that an entity will perform normal, ongoing or periodic maintenance activities on that PP&E.

Forecast – The forecast is any changes to capital expenditures that is done after the budget process is complete. It may include more years into the future than the budget. Once approved, any changes to projects are considered to be a forecast and usually are compared to the approved budget.

Funding Project – The 35 character name that is assigned to each project that is to be forecast. The name has some intelligence to it, such as for generation, it must be evident to which generating site the funding project relates.

Minimum Dollar Guideline – Dollar guidelines are based on material cost for all business units other than I/T. Dollar guidelines for IT are based on total direct cost before overheads, AFUDC, and other indirects. There are two rules underlying the basic capitalization test, the material unit must be a capitalization unit and the direct costs must be equal to or greater than the minimum dollar guideline. The amounts are determined by the financial areas within a business unit and may cause an item that qualifies as a capitalization unit to be operating or maintenance because it is small in dollar value.

Minor Item – Any item that does not qualify for capitalization and generally is a unit smaller than a capitalization unit. A minor item is usually considered maintenance when not directly linked with a capitalization unit. There are some instances where capitalization is allowed when not directly linked to a capitalization unit and these are discussed above.

Net plant – The original cost of the asset less its current balance in accumulated depreciation. Represents the amount remaining to be recovered in future depreciation.

Original Construction – The installation of a capital unit where the unit offers functionality to the business for the first time or offers new functionality in an existing location. A simple example is the construction of a new generating facility.

O&M – Operating and maintenance is normal, planned, expected, or routine work performed on an item to keep it operating efficiently and is necessary in order to achieve expected useful life.

Planned Major Maintenance Activities – Also referred to as "overhauls," "turnarounds," and "refurbishments." These and other routine activities that an entity considers necessary to perform on a recurring basis to maintain PP&E in operating condition. Examples include shutting down a generating unit at regular intervals to overhaul the equipment, or taking an airplane engine out of service at regular intervals to perform an overhaul. These functions are usually expense except for the portion directly associated with a capitalization unit.

Plant Related Expense Forecasting – The calculation of the associated costs that occur as a result of a construction expenditure forecast and includes construction work in progress balances, plant balances, annual plant activity, accumulated depreciation, depreciation expense, removal cost, salvage, tax depreciation, tax expense, other special tax deductions, gains and losses, accumulated deferred tax balances, annual deferred taxes, and investment tax credit.

Property unit – One or several capitalization units. This term is analogous to a system or functionality. An example of a property unit that is comprised of several capitalization units is a substation. A one-to-one relationship exists for conductor.

Rate Base – The basis upon which a regulated utility earns its rate of return for its invested capital. For the purpose of this policy, it consists of plant in-service less accumulated book depreciation less accumulated deferred taxes. The rate of return on the asset is known as the "return on" the asset.

Rebuild – To take an existing unit or item and replace or retool a majority of the unit. This is capital only when the unit being rebuilt is a capitalization unit.

Reconstruction / Replacement – The replacement of a unit of property that was previous installed such that the new unit replaces the established functionality of the replaced unit to either the same intent or some modification of the current intent. For example, replacing a distribution pole in an existing line or rewinding a power transformer in an existing substation to a higher capacity.

Repair – To fix a unit or a part of a unit that is no longer functioning properly. This is usually maintenance unless a capitalization unit is being replaced, then that portion may be capital.

Retirement unit – Equal to or a sum of several capitalization units. It is the lowest level that is maintained once the property is placed in-service and utilized by CAA to do retirement pricing.

References

Capital Asset Policy, Xcel Energy Intranet Site, Policies & Procedures, Corporate Policies, Accounting & Financial Policies, approved by Wayne Brunetti and Jim McIntyre on October 2, 2000. http://xpressnet/CorpP&P/2/22.asp

Code of Federal Regulations, Title 18 – Conservation of Power and Water Resources, Subchapter C – Accounts, Federal Power Act, Part 101 – Uniform System of Accounts Prescribed for Public Utilities and Licensees Subject to the Provisions of the Federal Power Act, Electric Plant Instruction 10 – Additions and Retirements of Electric Plant, Subpart A.

Code of Federal Regulations, Title 18 – Conservation of Power and Water Resources, Subchapter C – Accounts, Federal Power Act, Part 201 – Uniform System of Accounts Prescribed for Natural Gas Companies Subject to the Provisions of the Natural Gas Act, Gas Plant Instruction 10 – Additions and Retirements of Gas Plant, Subpart A.

FERC Order 598,

Accounting for Certain Costs and Activities Related to Property, Plant, and Equipment, Exposure Draft, Proposed Statement of Position (SOP), Accounting Standards

Executive Committee of the American Institute of Certified Public Accountants, April 25, 2001.

Southwestern Public Service Company

Nuclear Capital Costs Projects

Schedule H-5.2a is not applicable to Southwestern Public Service Company ("SPS") because SPS does not own or operate nuclear facilities.

Southwestern Public Service Company

Fossil Production Plant Capital Costs Projects
for the Year Ended March 31, 2019

All Plant Summary

Line No.	Plant Name	July 2017 through March 2019 Ratebase Additions in Dollars	July 2017 through June 2019 Ratebase Additions in Dollars
1	Carlsbad	$ -	$ -
2	Celanese	-	-
3	Corporate	-	-
4	Cunningham	3,350,727	12,084,508
5	Denver City	-	-
6	General Manager	983,162	1,374,849
8	Harrington	16,745,666	25,695,400
9	Jones	10,455,095	17,075,650
10	Maddox	2,835,099	3,603,339
11	Moore County	-	-
12	Nichols	3,656,099	4,796,462
13	Plant X	2,651,864	6,219,831
14	Quay County	217,269	217,269
15	Riverview	-	-
16	Tolk	21,394,838	27,853,835
17	Tucumcari	-	-
18	**Total:**	**$ 62,289,820**	**$ 98,921,143**

Note: This schedule contains estimates for the period of April 1, 2019 through June 30, 2019, referred to as the "Update Period." As discussed by Southwestern Public Service Comany ("SPS") witness William A. Grant, SPS will file actual costs for the Update Period, including an updated version of this schedule, no later than the 45th day after the date of the initial filing of this rate case, as required by PURA § 36.112.

Southwestern Public Service Company

Fossil Production Plant Capital Costs Projects
for the Year Ended March 31, 2019

Plant Name: Cunningham

Line No.	Parent Project Number	Child Project Number	Title and Description	Classification Note 1	Completion Date Actual	July 2017 through March 2019 Ratebase Additions in Dollars	July 2017 through June 2019 Ratebase Additions in Dollars	Benefit Analysis
1	N/A	N/A	Cunningham < $100,000	N/A	N/A	$ 1,202,532	$ 1,320,781	N/A
2	A 0001545.123	A 0001545 123	CHC3C-Rewind Generator	7	N/A	-	5,602,995	Yes
3	A 0001545 124	A 0001545 124	CHC3C-Rpl Compressor	7	N/A	-	2,768,221	No
4	A 0001545 500	A 0001545 500 001 009	CHC2C-HRH Piping Abate&Reins	7	Nov-2018	530,070	530,070	N/A
5	A 0001545 122	A 0001545 122 001 002	CHC2C-Upg DCS Hardware	3	Nov-2018	427,632	427,632	No
6	A 0001545 035	A 0001545.035 001.002	CHC2C-Rpl BFP Discharge vlvs	7	Nov-2018	342,703	342,703	Yes
7	A 0001545 031	A 0001545 031 001 002	CHC2C-Rpl BFP Fluid Drives	7	Nov-2018	270,951	270,951	Yes
8	A 0001639 001	A 0001639 001 001 002	CHC3C-Major-Upg all hot path	7	Sep-2017	200,043	200,043	Yes
9	A 0001545 253	A 0001545 253 001 002	CHC0C-Rpl WW Line 14-15	7	Dec-2017	171,685	171,685	No
10	A 0001545 073	A 0001545 073	CHC0C-Rpl Waterwell Pmp Mtr	7	Nov-2018	-	131,847	Yes
11	A.0001545.046	A 0001545 046	CHC0C-Refurb Plant Bathroom	9	N/A	-	112,468	Yes
12	A 0001545 254	A 0001545 254 001 002	CHC2C-Rpl Burner Tilts	7	Nov-2018	104,421	104,421	Yes
13	A 0001545 255	A 0001545.255 001.002	CHC2C-Rpl CT Suction Screens	7	Nov-2018	100,689	100,689	Yes
14					Total:	$ 3,350,727	$ 12,084,508	

Note 1: Classification Categories
[1] Immediate Personnel Safety Requirement
[2] Regulatory Safety of Operations Requirement
[3] Regulatory Commitment (Not classified in 2 above)
[4] Plant Efficiency Improvement
[5] New Building
[6] Productivity Improvement
[7] Reliability
[8] Economic
[9] Habitability
[10] Other

Southwestern Public Service Company

Fossil Production Plant Capital Costs Projects
for the Year Ended March 31, 2019

PLANT NAME: General Manager

Line No.	Parent Project Number	Child Project Number	Title and Description	Classification Note 1	Completion Date Actual	July 2017 through March 2019 Ratebase Additions in Dollars	July 2017 through June 2019 Ratebase Additions in Dollars	Benefit Analysis
1	N/A	N/A	General Manager < $100,000	N/A	N/A	$ 230,034	$ 456,514	N/A
2	A.0003000.689	A.0003000.689.001.001	GMS0C-TX Lab Instruments	7	N/A	266,420	266,420	N/A
3	A.0006056.227	A.0006056.227.001.002	GMS0C-Pur Vehicles SPS 2017	7	N/A	175,651	175,651	N/A
4	A.0006056.227	A.0006056.227.001.003	GMS0C-Pur Vehicles SPS 2018	7	N/A	173,296	173,296	N/A
5	A.0006056.227	A.0006056.227	GSMOC Purchase Vehicles	7	N/A	-	165,207	N/A
6	A.0003000.691	A.0003000.691.001.001	GMS0C-TRaC Tools	7	N/A	137,762	137,762	N/A
7					Total:	$ 983,162	$ 1,374,849	

Southwestern Public Service Company

Fossil Production Plant Capital Costs Projects
for the Year Ended March 31, 2019

Plant Name: Harrington

Line No.	Parent Project Number	Child Project Number	Title and Description	Classification Note 1	Completion Date Actual	July 2017 through March 2019 Ratebase Additions in Dollars	July 2017 through June 2019 Ratebase Additions in Dollars	Benefit Analysis
1	N/A	N/A	Harrington < $100,000	N/A	N/A	$ 1,595,628	$ 1,856,713	N/A
2	A 0001550 035	A 0001550 035 001 002	HAR3C-Rpl Boiler Economizer	7	Jan-2019	4,189,538	4,189,538	Yes
4	A 0001550 283	A 0001550 283 001 002	HAR3C-Rpl APH Baskets	4	Jan-2019	1,623,841	1,623,841	Yes
6	A 0001550 475	A 0001550 475 001 002	HAR3C-Rpl CT Bottom Structure	7	Mar-2019	1,227,170	1,227,170	No
9	A 0001550 309	A 0001550 309 001 002	HAR3C-H3 Upgrd DCS Opr stn	3	Apr-2019	776,877	776,877	Yes
10	A 0001550 454	A 0001550 454 001 001	HAR2C-Rpl HRH Piping & Hangers -205	7	Aug-2017	602,529	602,529	N/A
11	A 0001550 006	A 0001550 006 001 002	HAR2C-H2 Install Ash Silo Elev	7	Jan-2019	565,909	565,909	Yes
13	A 0001550 262	A 0001550 262 001 002	HAR1C-SBAC 1B Mjr Rebld 2017	7	Nov-2018	516,725	516,725	Yes
14	A 0001550 244	A 0001550 244 001 002	HAR0C-Rpl SBAC Controls	7	N/A	486,622	486,622	Yes
15	A 0001550 446	A 0001550 446 001 002	HAR1C-CT Fan Stacks 20850	7	Mar-2019	468,675	468,675	Yes
17	A 0001550 450	A 0001550 450 001 002	HAR2C- Rpl CT Fan Stacks -21027	7	Mar-2019	464,132	464,132	Yes
19	A 0001550 449	A 0001550 449 001 001	HAR2C-RPL Boiler Corner Tubes -2134	7	Aug-2017	399,133	399,133	Yes
20	A 0001550.250	A 0001550 250 001 002	HAR1C-Rpl CT Mechanicals Ph2	7	Nov-2018	387,719	387,719	Yes
22	A 0001550 458	A 0001550 458 001 002	HAR3C- Rpl Bghse Doors -20582	7	Mar-2019	364,027	364,027	No
24	A 0003000 668	A 0003000 668 001 001	HAR0C-Purchase Plant Tools	7	N/A	280,585	280,585	No
25	A 0001550 219	A 0001550 219 001 001	HAR2C-Replace APH Baskets	4	Aug-2017	272,999	272,999	Yes
26	A 0001550 479	A 0001550 479 001 002	HAR3C-Rpl EHC Pump Sys	7	Apr-2019	261,741	261,741	Yes
27	A 0001550 021	A 0001550 021 001 002	HAR0C-Rpl Paving Phase 5/6	7	Nov-2018	252,260	252,260	Yes
28	A 0001550 455	A 0001550 455 001 002	HAR3C- ACW Heat Exchangers	7	Jan-2019	234,268	234,268	Yes
32	A 0001550 500	A 0001550 500 001 023	HAR1C-SUBFP Motor Rewind	7	Nov-2018	211,706	211,706	No
33	A 0001550.028	A.0001550.028 001 002	HAR2C-Replace Cooling Tower Acid Ta	7	Dec-2018	210,340	210,340	Yes
34	A.0001550 034	A 0001550 034 001 002	HAR0C-Rpl Paving Phase 6/6	7	Nov-2018	180,040	180,040	Yes
36	A.0001550 500	A 0001550 500 001 028	HAR3C-3D SBAC Motor Rewind	7	Apr-2019	170,101	170,101	No
37	A.0001550 500	A 0001550 500.001 024	HAR0C-CESP BFP Element	7	Jun-2018	168,304	168,304	No
38	A 0001550 142	A 0001550.142.001 001	HAR1C-H1 Rpl CT Phase5	7	Sep-2017	163,899	163,899	Yes
39	A 0001550 083	A 0001550 083 001 002	HAR3C-Rpl Lab Analyzers 2018	7	Mar-2019	151,767	151,767	Yes
41	A 0001550 500	A 0001550 500 001 017	HAR3C-CT N Circ Pump Mtr Rewind	7	Nov-2018	136,535	136,535	No
42	A 0001550 151	A 0001550 151 001 002	HAR3C-Rebag Partial 2018	7	Apr-2019	132,478	132,478	No
43	A 0001550 500	A 0001550 500 001 025	HAR3C-Rpl Bghse Inlet Duct Exp Jnts	7	Jan-2019	131,949	131,949	Yes
44	A 0001550 500	A 0001550 500 001 031	HAR0C-Swing gates and ladder	1	Feb-2019	118,168	118,168	No
47					Total:	$ 16,745,666	$ 25,695,400	

Southwestern Public Service Company

Fossil Production Plant Capital Costs Projects
for the Year Ended March 31, 2019

Plant Name: Jones

Line No.	Parent Project Number	Child Project Number	Title and Description	Classification Note 1	Completion Date Actual	July 2017 through March 2019 Ratebase Additions in Dollars	July 2017 through June 2019 Ratebase Additions in Dollars	Benefit Analysis
1	N/A	N/A	Jones < $100,000	N/A	N/A	$ 740,543	$ 979,696	N/A
2	A 0001586 262	A.0001586.262 001 002	JON1C-Circ Water Struct Liner-19992	7	Mar-2018	2,366,078	2,366,078	No
3	A 0001586 074	A.0001586 074	JON2C-Rpl Seamed HRH Piping	7	N/A	-	1,997,089	N/A
4	A 0001586.081	A 0001586 081 001 001	JON1C-Rpl Seamed HRH Piping	7	May-2018	1,782,229	1,782,229	N/A
5	A 0001586 269	A 0001586 269	JON2C-SH Header Sealbox Rpl-21240	7	N/A	-	786,792	Yes
6	A 0001586 129	A 0001586 129 001 002	JON1C-Rpl Rosemount 1151 XMTRS	7	Feb-2018	759,209	759,209	Yes
7	A.0001586 125	A.0001586 125	JON2C-Rewind Exciter Rotor	7	N/A	-	694,160	Yes
8	A 0001586 008	A.0001586 008 001 001	JON1C-Upg Foxboro FBMs	3	Jan-2018	678,466	678,466	Yes
9	A 0001586.049	A 0001586 049 001 001	JON1C-Rpl Cold Side APH Basket	4	Feb-2018	668,717	668,717	Yes
10	A 0001586 067	A 0001586 067	JON2C-Upg Foxboro FBMs	3	N/A	-	653,123	Yes
11	A 0001586 289	A 0001586 289	JON2C-Rpl L1 Gen End Turb Blds	7	N/A	-	614,942	No
12	A 0001586 268	A 0001586 268	JON2C-3051 Transm Rpl Ph 2-20818	7	N/A	-	599,204	Yes
13	A 0001586 500	A 0001586 500 001 011	JON0C-Smart Pig Test	2	Mar-2019	472,480	472,480	No
14	A 0001586 253	A 0001586 253 001 002	JON1C-BP Elem Comp Rpl	7	Nov-2018	470,322	470,322	Yes
15	A 0001586 142	A 0001586 142 001 002	JON1C-Rpl Oil Circ Brkr JK0	7	Apr-2018	350,506	350,506	Yes
16	A 0001586 284	A 0001586 284	JON1C-Rpl CT Makeup Piping	7	N/A	-	338,969	Yes
17	A 0001586 287	A 0001586 287 001 002	JON2C-Rpl CT Makeup Piping	7	May-2019	332,687	332,687	Yes
18	A 0001586 500	A 0001586 500	JON Emergent Fund -Steam prod	7	N/A	-	282,339	N/A
19	A 0001586 270	A 0001586 270	JON2C-Rpl Oil Circ Break JK45-19705	7	N/A	-	276,190	Yes
20	A 0001586 291	A 0001586.291 001 002	JON3C-Rpl Exh Expansion Joint	7	Nov-2018	230,300	230,300	No
21	A 0001586 265	A 0001586 265 001 002	JON2C-CEM's Upgrade-19975	3	Dec-2018	216,486	216,486	Yes
22	A 0001586 294	A 0001586 294 001 002	JON4C-Rpl Exh Expansion Joint	7	Nov-2018	209,394	209,394	No
23	A 0001586 264	A.0001586 264 001 002	JON1C-CEM's Upgrade 19976	3	Nov-2018	208,087	208,087	Yes
24	A 0001586 073	A 0001586 073 001 002	JON0C-Inst Backflow Prvt on HT	2	Mar-2019	193,923	193,923	Yes
25	A 0001586 285	A 0001586 285 001 002	JON2C-Rpl Circ Pump Suc Hood	7	May-2019	170,659	170,659	Yes
26	A 0001586 501	A 0001586 501 001 004	JON4C-Rpl Turning Gear Gearbox	7	Apr-2019	142,393	142,393	No
27	A 0001586 271	A 0001586 271	JON2C-Rpl CP's-19973	7	N/A	-	138,593	Yes
28	A 0001586 141	A 0001586 141.001 002	JON1C-Rpl IPs with DVC	7	Feb-2018	132,761	132,761	Yes
29	A.0001586 500	A 0001586 500 001 006	JON2C-Rpl Economizer Exp Jnts	7	Jan-2018	117,183	117,183	No
30	A 0001586 055	A 0001586 055 001 002	JON1C-Abate & Reinsulate DA	7	Apr-2018	112,031	112,031	Yes
31	A 0001586 261	A 0001586 261 001 002	JON1C-Replace CP's-19974	7	Apr-2018	100,640	100,640	Yes
32					Total:	$ 10,455,095	$ 17,075,650	

Southwestern Public Service Company

Fossil Production Plant Capital Costs Projects
for the Year Ended March 31, 2019

Plant Name: Maddox

Line No.	Parent Project Number	Child Project Number	Title and Description	Classification Note 1	Completion Date Actual	July 2017 through March 2019 Ratebase Additions in Dollars	July 2017 through June 2019 Ratebase Additions in Dollars	Benefit Analysis
1	N/A	N/A	Maddox < $100,000	N/A	N/A	$ 527,918	$ 617,711	N/A
2	A.0001529 500	A 0001529 500 001 010	MAD1C-Rpl HRH Terminal Tubes	7	Jan-2019	601,878	601,878	Yes
3	A 0001529 067	A 0001529 067 001 002	MAD1C-Rpl #1 HP FWH-20820	7	Feb-2019	529,643	529,643	Yes
4	A 0001529 005	A 0001529 005	MAD1C-Rpl CT Fans & Gearboxes	7	N/A	-	483,396	Yes
5	A 0001529 024	A 0001529 024 001 002	MAD1C-Rpl CS APH Basket&Seals	4	Feb-2019	397,843	397,843	Yes
6	A 0001529 032	A 0001529 032 001 002	MAD1C-Rpl M1 Elevator	7	N/A	381,966	381,966	Yes
7	A 0001529 057	A 0001529 057 001 002	MAD1C-Rpl Air Prehtr Exp Joint	7	Jan-2019	243,217	243,217	No
8	A 0001529 066	A 0001529 066	MAD3C-Rpl M3 Fire Suppression-21344	1	N/A	-	195,051	No
9	A 0001529 080	A 0001529 080 001 002	MAD3C-Rpl Exhaust Stack	7	Nov-2018	152,634	152,634	No
10					**Total:**	**$ 2,835,099**	**$ 3,603,339**	

Southwestern Public Service Company

Fossil Production Plant Capital Costs Projects
for the Year Ended March 31, 2019

Plant Name: Nichols

Line No.	Parent Project Number	Child Project Number	Title and Description	Classification Note 1	Completion Date Actual	July 2017 through March 2019 Ratebase Additions in Dollars	July 2017 through June 2019 Ratebase Additions in Dollars	Benefit Analysis
1	N/A	N/A	Nichols < $100,000	N/A	N/A	$ 673,312	$ 705,979	N/A
2	A.0001560.121	A.0001560.121	NIC2C-Rpl Blowdown Piping	7	N/A	-	751,347	Yes
3	A.0001560.117	A.0001560.117.001.002	NIC0C-Rpl Roof-Turb High	7	Nov-2018	523,645	523,645	Yes
4	A.0001560.123	A.0001560.123.001.002	NIC3C-CT Mechanicals Phase 1	7	Nov-2018	461,611	461,611	Yes
5	A.0001560.118	A.0001560.118.001.002	NIC0C-Rpl Roof-Turb Low	7	Nov-2018	364,669	364,669	Yes
6	A.0001560.500	A.0001560.500.001.008	NIC0C-Replace Aux Boiler	7	Feb-2018	324,409	324,409	No
7	A.0001560.500	A.0001560.500.001.004	NIC2C-BFP Element Refurb	7	Jul-2018	273,236	273,236	No
8	A.0001560.115	A.0001560.115.001.002	NIC0C-Install Demin Wtr Supply	7	Apr-2019	260,255	260,255	Yes
9	A.0001560.099	A.0001560.099	NIC3C-N3 CEM's Upgrade	3	N/A	-	201,980	Yes
10	A.0001560.109	A.0001560.109.001.002	NIC1C-Rpl CT Suction Vault Roof	7	Feb-2018	199,617	199,617	Yes
11	A.0001560.035	A.0001560.035.001.002	NIC2C-Rpl CT Acid Tank	7	Mar-2018	192,879	192,879	Yes
12	A.0001560.500	A.0001560.500.001.006	NIC3C-Rpl CT Cell 2 Mechanicals	7	Dec-2017	167,357	167,357	No
13	A.0001560.500	A.0001560.500	NIC Emergent Fund -Steam prod	7	Dec-2017	-	154,369	N/A
14	A.0001560.079	A.0001560.079.001.002	NIC3C-Rpl Lab Analyzers	7	Mar-2019	111,612	111,612	Yes
15	A.0001560.500	A.0001560.500.001.009	NIC1C-Rpl APH Hot Gas Exp Jnts	7	Jan-2018	103,497	103,497	No
16					Total:	$ 3,656,099	$ 4,796,462	

Southwestern Public Service Company

Fossil Production Plant Capital Costs Projects
for the Year Ended March 31, 2019

Plant Name: Plant X

Line No.	Parent Project Number	Child Project Number	Title and Description	Classification Note 1	Completion Date Actual	July 2017 through March 2019 Ratebase Additions in Dollars	July 2017 through June 2019 Ratebase Additions in Dollars	Benefit Analysis
1	N/A	N/A	Plant X < $100,000	N/A	N/A	$ 655,640	$ 954,778	N/A
2	A 0001534 158	A 0001534.158	PLX4C-Rpl HE Seamed Piping-20747	7	N/A	-	2,049,234	N/A
3	A 0001534 099	A 0001534.099.001.002	PLX4C-Rpl CT Fill & DE PH3	7	Feb-2018	782,044	782,044	Yes
4	A 0001534.157	A 0001534 157 001 002	PLX0C-Rpl 50T-5T Turb Crane-20816	7	Apr-2019	668,393	668,393	Yes
5	A 0001534 164	A 0001534 164	PLX4C-Upg DCS Opr Stn and CP-19956	3	N/A	-	509,054	Yes
6	A 0001534 100	A 0001534.100 001 002	PLX4C-Rpl CT Mech PH3	7	Feb-2018	405,155	405,155	Yes
7	A 0001534 051	A 0001534 051	PLX4C-Repl Economizer Header	7	N/A	-	357,814	Yes
8	A 0001534 187	A 0001534 187	PLX4C-Generator Rewedge	7	N/A	-	352,728	Yes
9	A 0001534 172	A 0001534 172 001 002	PLX0C-Rpl Lab Analyzers	7	Mar-2019	140,631	140,631	Yes
10					**Total:**	**$ 2,651,864**	**$ 6,219,831**	

Southwestern Public Service Company

Fossil Production Plant Capital Costs Projects
for the Year Ended March 31, 2019

Plant Name: Quay County

Line No.	Parent Project Number	Child Project Number	Title and Description	Classification Note 1	Completion Date Actual	July 2017 through March 2019 Ratebase Additions in Dollars	July 2017 through June 2019 Ratebase Additions in Dollars	Benefit Analysis
1	N/A	N/A	Quay County < $100,000	N/A	N/A	$ 22,987	$ 22,987	N/A
2	A 0001554.003	A.0001554.003.001.002	QUA2C-Rpl Emergency Diesel Generat	7	Mar-2018	194,282	194,282	No
3					Total:	$ 217,269	$ 217,269	

Southwestern Public Service Company

Fossil Production Plant Capital Costs Projects
for the Year Ended March 31, 2019

Plant Name: Tolk

Line No.	Parent Project Number	Child Project Number	Title and Description	Classification Note 1	Completion Date Actual	July 2017 through March 2019 Ratebase Additions in Dollars	July 2017 through June 2019 Ratebase Additions in Dollars	Benefit Analysis
1	N/A	N/A	Harrington < $100,000	N/A	N/A	$ 1,163,572	$ 1,493,679	N/A
2	A 0001555 031	A 0001555 031	TOL0C-TolkX Water Well Ph 8	7	N/A	-	4,728,254	Yes
3	A 0001555 500	A 0001555 500 001 022	TOL2C- Rewind Generator Rotor	7	Nov-2018	2,175,648	2,175,648	No
4	A 0001555 296	A 0001555 296 001 002	TOL2C-Rpl Main Pwr Transformer	7	N/A	1,603,155	1,603,155	Yes
5	A 0001555 500	A 0001555 500 001 023	TOL1C-Rpl MillF MainVrt Shaft	7	N/A	1,374,614	1,374,614	No
6	A 0001555 088	A 0001555 088 001 002	TOL1C-Rpl Baghouse Bags 2018	7	May-2018	1,331,500	1,331,500	Yes
7	A 0001555 226	A 0001555 226 001 002	TOL2C-Rpl Mill E Gearbx & Jour	7	N/A	1,175,533	1,175,533	Yes
8	A 0001555 113	A 0001555 113 001 001	TOL0C-Rpl RR Ties PH 3 of 5	7	Nov-2018	1,123,730	1,123,730	Yes
9	A 0001555 257	A 0001555 257 001 002	TOL1C-UpgDCSOprStn&CntrlProc	3	Apr-2019	1,105,121	1,105,121	No
10	A 0001555 093	A 0001555 093 001 002	TOL0C-Rpl RR Ties PH 4 of 5	7	Nov-2018	1,036,417	1,036,417	Yes
11	A 0001555 278	A 0001555 278 001 002	TOL0C-Drill HorizontalWW Constuct	7	Mar-2018	972,807	972,807	No
12	A 0001555 223	A 0001555 223 001 002	TOL1C-Rpr MillC GearBx & Jrnls	7	Nov-2018	856,916	856,916	Yes
13	A 0001555 597	A 0001555 597 001 002	TOL1C-Rpl Coal Pipe & Elbows	7	Jan-2019	776,483	776,483	Yes
14	A 0001555 219	A 0001555.219.001 002	TOL1C-Rpr MillB GearBx & Jrnl	7	Feb-2018	761,231	761,231	Yes
15	A 0001555 213	A 0001555 213	TOL1C-Rpl Baghouse Bags 2019	7	N/A	-	684,851	Yes
16	A.0001555 222	A 0001555 222 001.001	TOL2C-Rpl MillC GearBx & Journ	7	Jan-2018	645,978	645,978	Yes
17	A 0001555 043	A 0001555.043 001 002	TOL1C-Rpl Burner Assemblies	7	Jan-2019	581,360	581,360	Yes
18	A 0001555 292	A 0001555 292 001 001	TOL1C-E-T1FMill Rpl Main VerSft	7	Feb-2018	564,292	564,292	No
19	A 0001555 090	A 0001555 090 001 002	TOL1C-Rpl Baghouse Bags 2017	7	May-2018	551,080	551,080	Yes
20	A 0001555 071	A 0001555 071	TOL0C-W SBAC Overhaul 2018	7	N/A	-	508,142	Yes
21	A 0001555 089	A 0001555 089 001 002	TOL2C-Rpl Baghouse Bags 2018	7	Nov-2018	475,735	475,735	Yes
22	A 0001555 366	A 0001555 366.001 002	TOL1C-#1 FWH Valves	7	Jan-2019	317,076	317,076	Yes
23	A 0001555 252	A 0001555 252 001 002	TOL0C-Rpl Receiving WH Roof	7	Nov-2018	273,849	273,849	Yes

Southwestern Public Service Company

Fossil Production Plant Capital Costs Projects
for the Year Ended March 31, 2019

Plant Name: Tolk

Line No.	Parent Project Number	Child Project Number	Title and Description	Classification Note 1	Completion Date Actual	July 2017 through March 2019 Ratebase Additions in Dollars	July 2017 through June 2019 Ratebase Additions in Dollars	Benefit Analysis
24	A 0001555 500	A 0001555 500 001.024	TOL2C-Gen Stator Rewedge	7	Nov-2018	271,793	271,793	No
25	A 0001555 500	A 0001555 500 001 020	TOL1C-Rpl CT Partition Walls	7	Jan-2019	238,005	238,005	No
26	A 0001555 120	A 0001555 120 001 002	TOL0C-Inst Perimet FencePonds	7	Dec-2018	232,148	232,148	No
27	A 0001555 500	A.0001555 500 001 031	TOL0C-Inst SwingGates&LadderProt	1	N/A	208,917	208,917	No
28	A 0001555 500	A 0001555 500	TOL Emergent Fund -Steam prod	7	Jan-2018	-	207,643	N/A
29	A 0001555 370	A 0001555 370 001 002	TOL2C-RPL Boiler Sump Line T2 -2058	7	Nov-2018	203,910	203,910	Yes
30	A 0001555 500	A.0001555.500 001 012	TOL1C-Rpl MDBFP DischargeVlv	7	Jan-2019	178,334	178,334	No
31	A 0001555 595	A 0001555 595 001 002	TOL1C-Cooling Tower Bypass	7	Mar-2019	173,448	173,448	No
32	A 0001555 254	A 0001555 254 001 002	TOL1C-Rpl SSC Chain 2018	7	Mar-2019	165,793	165,793	Yes
33	A 0001555 500	A 0001555 500 001 013	TOL1C-Rpl Boiler Frt Elevator	7	May-2018	155,503	155,503	No
34	A 0001555 594	A 0001555 594 001.002	TOL1C-Int Online Vib Mntr Sys	7	Mar-2019	140,414	140,414	No
35	A 0001555 599	A 0001555 599 001.002	TOL2C-Inst Online Vib Mntr Sys	7	Nov-2018	120,957	120,957	No
36	A 0003000 684	A 0003000 684 001 002	TOL0C- Tolk Tool Blanket	7	N/A	119,147	119,147	No
37	A 0001555 596	A 0001555 596 001 002	TOL1C-Rpl Lab Sample System	7	May-2018	111,895	111,895	No
38	A 0001555 358	A 0001555 358 001.002	TOL1C-RPL Boiler Sump Line -20583	7	Nov-2018	107,985	107,985	Yes
39	A 0001555 500	A 0001555 500 001 019	TOL1C-Rwd W Blr Circ Pmp Mtr	7	Nov-2018	100,489	100,489	No
40					**Total:**	**$ 21,394,838**	**$ 27,853,835**	

Southwestern Public Service Company

Nuclear Capital Expenditures (Historical, Present, Projected)

Schedule H-5.3a is not applicable to Southwestern Public Service Company ("SPS") because SPS does not own or operate nuclear facilities.

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Carlsbad **Unit:** 5

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001520 011	CCT5C-CGT Complete Demo-21293	$ -	$ -	$ -	$ -	$ -	$ 201,212	$ -	$ -	$ -	$ 201,212
2	N/A	Other Capital Projects	-	-	-	-	-	-	-	-	-	-
3		**Totals**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 201,212**	**$ -**	**$ -**	**$ -**	**$ 201,212**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Cunningham **Unit:** 0

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001545 500	CHC Emergent Fund -Steam prod	$ -	$ -	$ -	$ -	$ -	$ 730,346	$ 610,656	$ 719,662	$ 819,662	$ 2,880,326
2	A 0001545 301	CHCOC-Rpl WW Pipeline 9-10	-	-	-	-	-	-	-	-	385,000	385,000
3	A 0001545 068	CHCOC-Rpl Water Well line	-	-	274,087	-	-	-	-	-	-	274,087
4	A 0001545 064	CHCOC-Waterwell Pmp Mtr Rpl	-	-	272,044	-	-	-	-	-	-	272,044
5	A 0001545 302	CHCOC-Rpl WW Pipeline 8-16	-	-	-	-	-	-	-	257,137	-	257,137
6	A 0001545 073	CHCOC-Rpl Waterwell Pmp Mtr	-	-	-	-	208,327	16,913	-	-	-	225,240
7	A 0001545 271	CHCOC-Blowdown Line	-	-	-	-	-	-	-	-	191,328	191,328
8	A 0001545 046	CHCOC-Refurb Plant Bathroom	-	-	-	-	72,097	115,493	-	-	-	187,590
9	A 0001545 253	CHCOC-Rpl WW Line 14-15-21352	-	-	-	184,618	(4,873)	-	-	-	-	179,745
10	A 0001545 089	CHCOC-Rep Water Wells 2020	-	-	-	-	-	-	175,000	-	-	175,000
11	A 0001545 269	CHCOC-Rpl Fuel Gas Press Cntrl	-	-	-	-	-	-	174,999	-	-	174,999
12	A 0001545 091	CHCOC-Rep Water Wells 2022	-	-	-	-	-	-	-	-	165,000	165,000
13	A 0001545 090	CHCOC-Rep Water Wells 2021	-	-	-	-	-	-	-	159,996	-	159,996
14	A 0001545 085	CHCOC-Rpr Water Well Mtr 2019	-	-	-	-	-	150,000	-	-	-	150,000
15	A 0001545 258	CHCOC-Replace Batteries	-	-	-	-	-	6,000	-	-	129,669	135,669
16	A 0001545 065	CHCOC-Rpl WW Pump Meters	-	114,141	-	-	-	-	-	-	-	114,141
												-
17	N/A	Other Capital Projects	146,514	302,141	97,186	157,839	320,259	152,646	22,512	23,184	77,030	1,299,311
18		**Totals**	**$ 146,514**	**$ 416,282**	**$ 643,318**	**$ 342,457**	**$ 595,810**	**$ 1,171,398**	**$ 983,167**	**$ 1,159,979**	**$ 1,767,689**	**$ 7,226,613**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Cunningham **Unit:** 1

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	N/A	Other Capital Projects	$ 65,684	$ 77,735	$ 101,218	$ 44,408	$ 20,123	$ (6,435)	$ -	$ -	$ -	$ 302,732
2		**Totals**	**$ 65,684**	**$ 77,735**	**$ 101,218**	**$ 44,408**	**$ 20,123**	**$ (6,435)**	**$ -**	**$ -**	**$ -**	**$ 302,732**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Cunningham **Unit:** 2

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001545 500 001 009	CHC2C-HRH Piping Abate&Reins	$ -	$ -	$ -	$ -	$ 847,568	$ -	$ -	$ -	$ -	$ 847,568
2	A 0001545 043	CHC2C-Rpl CT Decking	-	-	-	-	-	-	5,000	743,506	-	748,506
3	A 0001545 020	CHC2C-Rpl CT Riser pipe	37,608	605,470	-	-	-	-	-	-	-	643,078
4	A 0001545 273	CHC2C-Replace Circ Water Return	-	-	-	-	-	-	-	529,027	-	529,027
5	A 0001545 122	CHC2C-Upg DCS Hardware	-	-	-	118,511	317,453	(14,434)	-	-	-	421,531
6	A 0001545 012	CHC2C-Rpl Econ inlet header	124,578	275,054	-	-	-	-	-	-	-	399,632
7	A 0001545 274	CHC2C-Rmv Asbestos Insulation p	-	-	-	-	-	-	-	-	368,989	368,989
8	A 0001545 035	CHC2C-Rpl BFP Discharge vlvs	-	-	-	146,167	209,256	-	-	-	-	355,423
9	A 0001545 031	CHC2C-Rpl BFP Fluid Drives	-	-	-	46,599	267,085	-	-	-	-	313,684
10	A 0001545 104	CHC2C-Upg CEMs Foxboro Sys	-	-	-	-	-	232,154	-	-	-	232,154
11	A 0001545 118	CHC2C-E Rbld Turb Cntrl Vlv	-	-	-	156,087	-	-	-	-	-	156,087
12	A 0001545 156	CHC2C-Rpl CT GB & Fans Phase5	-	151,833	-	-	-	-	-	-	-	151,833
13	A 0001545 115	CHC2C-Rpl CT Bus Duct	1,239	128,626	-	-	-	-	-	-	-	129,865
14	A 0001545 254	CHC2C-Rpl Burner Titls-21235	-	-	-	-	119,023	-	-	-	-	119,023
15	A 0001545 120	CHC2C-Repl Circ Water Exp Join	25,429	91,937	-	-	-	-	-	-	-	117,366
16	A 0001545 255	CHC2C-Rpl CT Suction Screens-21237	-	-	-	-	109,515	-	-	-	-	109,515
17	N/A	Other Capital Projects	16,693	138,285	65,256	21,381	219,889	153,232	44,595	-	128,038	787,368
18		**Totals**	**$ 205,548**	**$ 1,391,204**	**$ 65,256**	**$ 488,746**	**$ 2,089,789**	**$ 370,952**	**$ 49,595**	**$ 1,272,533**	**$ 497,027**	**$ 6,430,650**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Cunningham CT **Unit:** 3

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001639 001	CHC3C-Major-Upg all hot path	$ -	$ -	$ 3,796,978	$ 5,288,957	$ -	$ (300,000)	$ -	$ -	$ -	$ 8,785,934
2	A 0001545 123	CHC3C-Rewind Generator	-	-	-	-	386,927	5,490,851	-	-	-	5,877,777
3	A 0001545 124	CHC3C-Rpl Compressor	-	-	-	-	732,951	1,329,452	-	-	-	2,062,403
4	A 0001545 281	CHC3C-CT Control Upgrade	-	-	-	-	-	-	781,678	-	-	781,678
5	A 0001545 110	CHC3C-Upg CEMs Foxboro Sys	-	-	-	-	-	-	242,503	-	-	242,503
6	A 0001545 082	CHC3C-Rpl Exhst Baffles	-	-	-	-	-	-	-	-	222,536	222,536
7	A 0001545 277	CHC3C-Rpl FM200 Syst with C02 S	-	-	-	-	-	-	-	-	210,250	210,250
8	A 0001545 006	CHC3C-Rpl IGV, CBPV, Moog Act	-	-	28,811	121,730	-	-	-	-	-	150,541
9	A 0001545 109	CHC3C-Rpl Station Battery	-	-	-	-	-	6,000	129,000	-	-	135,000
10	A 0001545 121	CHC3C-E Rpl Rwl Cmprsr Blds	-	-	-	132,351	-	-	-	-	-	132,351
11	N/A	Other Capital Projects	10,806	-	-	177,026	116,656	49,076	-	-	52,850	406,414
12		**Totals**	**$ 10,806**	**$ -**	**$ 3,825,789**	**$ 5,720,064**	**$ 1,236,534**	**$ 6,575,378**	**$ 1,153,181**	**$ -**	**$ 485,636**	**$ 19,007,388**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Cunningham CT **Unit:** 4

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	11629443	CHC4C-Major-Upg all hot path	$ 6,053,349	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 6,053,349
2	A 0001545 129	CHC4C-Rewind Generator	-	-	-	-	-	-	5,500,000	-	-	5,500,000
3	11916467	CHC4C-Rpl Exhst Baffles	572,731	-	-	-	-	-	-	-	-	572,731
4	11937695	CHC4C Rpl R1-3 Comp Blds	282,768	-	-	-	-	-	-	-	-	282,768
5	A 0001545 112	CHC4C-Upg CEMSs Foxboro Sys	-	-	-	-	-	-	240,503	-	-	240,503
6	A 0001545 280	CHC4C-Rpl FM200 Syst with C02 S	-	-	-	-	-	-	-	-	210,250	210,250
7	A 0001545 111	CHC4C-Rpl Station Batt	-	-	-	-	-	6,000	-	129,000	-	135,000
8	11629450	CHC4C-Rpl IGV, CBPV, Moog Act	109,708	-	-	-	-	-	-	-	-	109,708
9	N/A	Other Capital Projects	21,437	-	10,387	(348)	108,694	87,978	78,000	-	52,354	358,502
10		**Totals**	**$ 7,039,993**	**$ -**	**$ 10,387**	**$ (348)**	**$ 108,694**	**$ 93,978**	**$ 5,818,503**	**$ 129,000**	**$ 262,604**	**$ 13,462,811**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Gaines **Unit:** 0

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001621.002	GMS0C-Gaines Cty Land Acq	$ 108,053	$ 4,058,052	$ 1,004	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,167,109
2	N/A	Other Capital Projects	1,335,699	2,101,854	(4,204,655)	806,681	(3,500)	-	-	-	-	36,079
3		**Totals**	**$ 1,443,751**	**$ 6,159,906**	**$ (4,203,651)**	**$ 806,681**	**$ (3,500)**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 4,203,187**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Gen Mgr, TX/NM and Corporate **Unit:** 0

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0003000 689 001 001	GMS0C-TX Lab Instruments	$ -	$ -	$ 96,168	$ 120,151	$ 216,508	$ 3,544	$ -	$ -	$ -	$ 436,371
2	11490706	GMS0C-System Lab Remodel	403,587	-	-	-	-	-	-	-	-	403,587
3	A 0003000 689	GMS0C-TX Lab Instruments	-	-	-	-	-	62,000	60,003	204,130	60,003	386,136
4	A 0003000 693	GMS0C-PMO Equipment	-	-	-	-	-	50,000	98,676	59,735	50,000	258,411
5	11806213	GMS0C-Blackhawk Sup Point Tele	245,423	(13,851)	-	-	-	-	-	-	-	231,572
6	11806219	GMS0C-Blackhawk Dlv Point Tele	243,059	(21,176)	-	-	-	-	-	-	-	221,883
7	A 0003000 692	GMS0C-MMR Instruments	-	-	-	-	-	50,000	50,004	50,004	50,004	200,012
8	A 0003000 691 001 001	GMS0C-TRaC Tools	-	-	63,316	88,403	48,856	(2,356)	-	-	-	198,219
9	A 0003000 691	GMS0C-TRaC Tools	-	-	-	-	-	47,946	45,000	45,000	45,000	182,946
10	A 0006056 051	GMS0C-Pur Vehicles SPS 2015	-	165,581	8,387	-	-	-	-	-	-	173,968
11	A 0003000 688	GMS0C-Training Tools	-	-	-	-	-	38,000	38,000	38,000	38,000	152,000
12	A 0003000 692 001 001	GMS0C-MMR Instruments	-	-	11,121	73,720	36,750	-	-	-	-	121,590
13	A 0006056 050	GMS0C-Pur Vehicles SPS 2014	100,137	1,987	-	-	-	-	-	-	-	102,123
14	N/A	Other Capital Projects	225,645	338,467	199,937	83,098	71,492	97,603	9,999	9,999	9,999	1,046,238
15		**Totals**	**$ 1,217,851**	**$ 471,006**	**$ 378,928**	**$ 365,372**	**$ 373,606**	**$ 346,737**	**$ 301,682**	**$ 406,868**	**$ 253,006**	**$ 4,115,056**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Harrington **Unit:** 0

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001550 500	HAR Emergent Fund -Steam prod	$ -	$ -	$ -	$ -	$ -	$ 1,522,283	$ 1,400,001	$ 1,400,004	$ 1,400,004	$ 5,722,292
2	A 0001605 001	HAROC- ACI - Mercury Reduction	1,592,812	460,322	-	-	-	-	-	-	-	2,053,135
3	A 0001550 243	HAROC-Rpl Control Sys Simultr	-	-	-	769,259	-	-	-	-	-	769,259
4	A 0001550 120	HAROC-H0 RR Drainage Construct	-	335,471	415,066	-	-	-	-	-	-	750,537
5	A 0001550 118	HAROC-H0 Reline Pond #16	-	-	717,900	-	-	-	-	-	-	717,900
6	A 0001550 373	HAROC-Rpl Fire Hydrants & Valves	-	-	-	-	-	635,516	-	-	-	635,516
7	A 0001550 244	HAROC-Rpl SBAC Controls	-	-	-	187,866	257,438	33,157	-	-	-	478,461
8	A 0003000 668 001 001	HAROC-Purchase Plant Tools	-	-	78,982	171,374	116,521	39,308	-	-	-	406,185
9	A 0001550 021	HAROC-Rpl Paving Phase 5/6	-	-	-	-	375,555	-	-	-	-	375,555
10	A 0001550 399	HAROC-Basement Winterization Ph	-	-	-	-	-	-	-	-	364,948	364,948
11	A 0001550 119 001 001	HAROC-Rpl Boiler Recovery HE	-	363,506	8,430	-	-	-	-	-	-	371,936
12	A 0001550 397	HAROC-Basement Winterization Ph	-	-	-	-	-	-	-	354,938	-	354,938
13	A 0001550 389	HAROC-Basement Winterization	-	-	-	-	-	-	352,851	-	-	352,851
14	A 0001550 018	HAROC-Rpl Paving Phase 4/6	-	-	-	-	-	327,884	-	-	-	327,884
15	A 0001550 034	HAROC-Rpl Paving Phase 6/6	-	-	-	-	252,748	-	-	-	-	252,748
16	A 0001550 014	HAROC-Rpl Paving Phase 3/6	-	245,412	-	-	-	-	-	-	-	245,412
17	A 0001550 398	HAROC-Inst Air Monitoring Sys	-	-	-	-	-	-	-	225,380	400	225,780
18	A 0001550 340	HAROC-E Rpl Inj Well Div Vlvs	-	-	78,597	127,880	-	-	-	-	-	206,477
19	A 0001550 080	HAROC-H0 RR Drainage Imprt Ph2	-	-	-	-	-	200,179	-	-	-	200,179
20	A 0003000 668	HAROC-Purch Plant Tools	-	-	-	-	-	16,000	57,040	58,752	60,514	192,306
21	A 0001550 500 001 024	HAROC-CESP BFP Element	-	-	-	-	167,395	-	-	-	-	167,395
22	A 0001550 435	HAROC-Wtr Drainage SprinklPiv	-	91,334	68,011	-	-	-	-	-	-	159,345
23	A 0001550 441	HAROC-Inst Cmp Rm Clean Agent S	-	-	-	-	-	-	-	139,468	-	139,468
24	A 0001550 396	HAROC-Install CEMS Compressor	-	-	-	-	-	-	136,777	-	-	136,777
25	A 0001550 500 001 031	HAROC-Swing gates and ladder	-	-	-	-	134,016	(17,438)	-	-	-	116,578
26	A 0001550 363	HAROC-Inst DCS Mgnt-Alm Shelv	-	110,797	-	-	-	-	-	-	-	110,797
27	N/A	Other Capital Projects	172,450	261,756	(193,009)	385,962	288,362	97,588	-	-	-	1,013,109
28		**Totals**	**$ 1,765,262**	**$ 1,868,599**	**$ 1,173,978**	**$ 1,642,341**	**$ 1,592,035**	**$ 2,854,477**	**$ 1,946,669**	**$ 2,178,542**	**$ 1,825,866**	**$ 16,847,768**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Harrington **Unit:** 1

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001550 142	HAR1C-Cooling Tower Structure	$ -	$ 2,302,487	$ 3,981,822	$ 2,450,876	$ 0	$ -	$ -	$ -	$ -	$ 8,735,185
2	A 0001550 427	HAR1C-Rpl HRH Piping &Hanger	-	285,313	2,828,356	4,100	-	-	-	-	-	3,117,769
3	A 0001550 315	HAR1C - ACI - Mercury Reductio	1,972,195	880,244	-	-	-	-	-	-	-	2,852,439
4	A 0001550 214	HAR1C-Rewind Exciter Rotor	-	163,657	1,800,259	4,220	-	-	-	-	-	1,968,136
5	A 0001550 177	HAR1C-H1 Replace APH Baskets		365,918	1 234,242	1,107	-	-	-	-	-	1,601,267
6	A 0001550 050	HAR1C-H1 Rpl Foxboro FBMs	-	-	-	-	740,010	850,123	-	-	-	1,590,133
7	A 0001550 231	HAR1C-Inst ESP Chem Injection	68,688	1,131,444	92	-	-	-		-	-	1,200,224
8	A 0001550 036	HAR1C-Rpl Turb Cont Sys&Soft	-	87,797	951,118	8 058	-	-	-	-	-	1,046,973
9	A 0001550 376	HAR1C-Rpl DA Heater Vessel	-	-	-	-	132,363	878,777	-	-	-	1,011,140
10	A 0001550 364	HAR1C-H1 CT Fire Damage Cells	-	931,465	6,446	-	-	-	-	-	-	937,910
11	A 0001550 101	HAR1C-H1 CT Riser Pipes	-	-	783,957	-	-	-	-	-	-	783,957
12	A 0001550 400	HAR1C-Rpl Steam Cooled Spacer T	-	-	-	-	-	-	-	-	706 405	706,405
13	A 0001550 248	HAR1C-Rbld Drag Chain CONV	-	-	-	-	-	-	-	-	703,637	703,637
14	A 0001550 262	HAR1C-SBAC 1B Mjr Rebld 2017	-	-	-	464,465	73,753	(229)	-	-		537,989
15	A 0001550 468	HAR1C-Rpl HV Gen Bushings	-	-	-	-	343,340	189,653	-	-	-	532,993
16	A 0001550 109	HAR1C-H1 Rpl Condenser Circ Pi	-	-	3 261	524,945	-	-	-	-	-	528,206
17	A 0001550 391	HAR1C-H3 Rpl Burners	-	-	-	-	-	-	-	508,488	-	508,488
18	A 0001550 390	HAR1C-H1 Rpl Burners	-	-	-	-	-	-	-	-	508,488	508,488
19	A 0001550 392	HAR1C-H2 Rpl Burners	-	-	-	-	-	-	508,488	-	-	508,488
20	A 0001550 031	HAR1C-H1 Rpl CT MCC s	-	88,083	410,319	7,267	-	-	-	-	-	505,668
21	A 0001550 466	HAR1C-Rpl ESP Wires Ph 2 of 2	-	-	-	-	-	-	-	-	498,864	498,864
22	A 0001550 249	HAR1C-Rpl CT Mechanicals Ph1	-	164,282	329,128	-	-	-	-	-	-	493,410
23	A 0001550 209	HAR1C-H1 ESP Rpl Rappers	-	-	476,447	1,398	-	-	-	-	-	477,845
24	A 0001550 446	HAR1C- C1 Fan Stacks	-	-	-		426,706	42,183	-	-	-	468,889
25	A 0001550 259	HAR1C-SBAC 1A Mjr Rebld	-	-	-		740	466,324	-	-	-	467,063
26	A 0001550 307	HAR1C-H1 Upgrd DCS Opr stn	-	-	-	-	268,379	190,380	-	-	-	458,759
27	A 0001550 447	HAR1C- Rpl ESP Wires Ph 1 of 2		-			-	428,202	-	-	-	428,202
28	A 0001550 189	HAR1C-Rpl Stack Landings	-	-	406,827	-		-		-	-	406,827
29	A 0001550 251	HAR1C-Rpl CT Mechanicals Ph3		-	-	-		396,157	-		-	396,157
30	A 0001550 250	HAR1C-Rpl CT Mechanicals Ph2	-		-		396,124	-		-	-	396 124
31	A 0001550 401	HAR1C-Inst Liner in Circ Wtr Li	-	-	-	-	-	-	-		387,173	387,173
32	A 0001550 444	HAR1C- LSP Re-build 10 TR-sets	-	-	-	-	34,385	295 274		-		329,658
33	A 0001550 500 001 037	HAR1C-Rpl Generator Breaker I K10	-	-	-	-	29,025	237,296	-	-	-	266,320
34	A 0001550 467	HAR1C-Rpl EHC Pump Sys	-	-	-	-	-	258 120	-	-	-	258,120
35	A 0001550 500 001 023	HAR1C-SUBFP Motor Rewind	-	-	-	-	241,414	129	-	-		241,543
36	A 0001550 181	HAR1C-Rpl H1 Mill A Exhauster	-	-	180,463	-	-		-	-	-	180,463
37	A 0001550 175	HAR1C-H1 Upgrade CEMs Foxboro	-	171 588	5,523		-	-		-	-	177 112
38	A 0001550 387	HAR1C-Rpl Gen Hydrogen Purity Monit	-	-		-	19 648	153,555			-	173,203
39	A 0001550 445	HAR1C-Rpl Station Batteries	-	-	-	-	-	-	-	8,165	157 585	165,750
40	A 0001550 188	HAR1C-ESP Upgrd MicroVoltg Cnt	-	-	142,886	2,700	-	-	-	-	-	145,586
41	A 0001550 465	HAR1C-Rpl CT Acid Tank	-	-	-	-	-	142,050	-	-	-	142,050
42	A 0001550 335	HAR1C-E Rbls Flyash Vac Pmps	-	-	129,543	306	-	-	-	-	-	129,849
43	A 0001550 254	HAR1C-Rpl ID Fans Inlet Exp Jn	-	-	126,584	-	-	-	-	-	-	126 584
44	A 0001550 114	HAR1C-H1 Rpl Lab Analyzers 201	-	-	122,730	-	-	-	-	-	-	122,730
45	A 0001550 252	HAR1C-Rpl Drag Chain 2019	-	-	-	-	-	112,525	-	-	-	112,525
46	A 0001550 255	HAR1C-Rpl Inverter	-	-	97,962	3,151	-	-	-	-	-	101,113
47	A 0001550 442	HAR1C-ESP Re-build TR-sets Ph1	-	-	-	100,307	-	-	-	-	-	100 307
48	N/A	Other Capital Projects	154,167	233,384	244,520	166 961	297,348	274,024	-	-	79,992	1 450,395
49		**Totals**	**$ 2,195,049**	**$ 6,805,662**	**$ 14,262,486**	**$ 3,739,859**	**$ 3,003,234**	**$ 4,914,542**	**$ 508,488**	**$ 516,653**	**$ 3,042,144**	**$ 38,988,118**

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Sponsor: Lytal
2019 TX Rate Case

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: **Harrington** **Unit:** **2**

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001550 140	HAR2C-H2 Cooling Tower Structu	$ 2,958,502	$ 4,219,294	$ 2,894,979	$ 1,193	$ -	$ -	$ -	$ -	$ -	$ 10,073,968
2	A 0001550 218	HAR2C-Rewind Generator	-	1,020,932	1,673,503	-	-	-	3,310,002	-	-	6,004,437
3	A 0001550 449	HAR2C-RPL Boiler Corner Tubes	-	-	620,068	2,087,390	-	-	-	-	-	2,707,458
4	A 0001550 454	HAR2C-Rpl HRH Piping & Hangers	-	-	479,421	2,063,687	-	-	-	-	-	2,543,107
5	A 0001550 102	HAR2C-H2 Rpl Foxboro FBMs	-	-	-	-	-	-	1,898,000	-	-	1,898,000
6	11937270	HAR2C-Rewind Rotating Exciter	1,669,081	-	-	-	-	-	-	-	-	1,669,081
7	A 0001550 219	HAR2C-Replace APH Baskets	-	-	689,817	779,233	-	-	-	-	-	1,469,050
8	11629974	HAR2C-Inst Liner Circ Wtr Line	1,438,914	-	-	-	-	-	-	-	-	1,438,914
9	A 0001550 061	HAR2C-Coal Mill Mjr Mjr OVH 14	1,172,618	36,558	-	-	-	-	-	-	-	1,209,176
10	A 0001550 230	HAR2C-H2 Mill C Mjr Mjr Overha	1,467	1,132,218	59,102	-	-	-	-	-	-	1,192,787
11	A 0001550 265	HAR2C-Mill A Major Major OH	-	-	-	-	17,859	1,063,069	-	-	-	1,080,928
12	A 0001550 213	HAR2C-CM E Major Major Overhau	-	-	-	-	-	1,051,000	-	-	-	1,051,000
13	A 0001550 185	HAR2C-H2 Rpl #3 HP FWH	-	-	236,723	739,872	-	-	-	-	-	976,594
14	A 0001550 190	HAR2C-H2 Mill B Major Major OH	-	-	194,337	731,820	-	-	-	-	-	926,157
15	A 0001550 019	HAR2C-Rpl Turbine Cont Sys&Sof	-	-	467,029	428,788	-	-	-	-	-	895,818
16	11222833	HAR2C-Rpl Ash Silo Collector	846,698	-	-	-	-	-	-	-	-	846,698
17	A 0001550 406	HAR2C-Rpl Steam Cooled Spacer T	-	-	-	-	-	-	694,482	-	-	694,482
18	A 0001550 089	HAR2C-H2 Inst Service Elevator	-	-	-	-	-	-	-	-	620,311	620,311
19	A 0001550 093	HAR2C-H2 Rpl Distribution Valv	-	-	1,938	616,604	-	-	-	-	-	618,542
20	A 0001550 006	HAR2C-H2 Install Ash Silo Elev	-	-	-	-	570,046	-	-	-	-	570,046
21	A 0001550 322	HAR2C-Rpl Cond Tube Install	436,813	-	118,069	-	-	-	-	-	-	554,882
22	11797639	HAR2C-Rpl CT Riser Pipes	549,474	-	-	-	-	-	-	-	-	549,474
23	A 0001550 186	HAR2C-H2 Rpl #6 LP FWH	-	-	-	-	-	38,000	505,000	-	-	543,000
24	A 0001550 308	HAR2C-H2 Upgrd DCS Opr stn	-	-	7,096	524,958	-	-	-	-	-	532,055
25	A 0001550 276	HAR2C-SBAC 2C Mjr Rebld	-	-	-	-	-	-	-	516,000	-	516,000
26	A 0001550 187	HAR2C-H2 Rpl #5 LP FWH	-	-	-	-	-	38,000	472,192	-	-	510,192
27	A 0001550 450	HAR2C- Rpl CT Fan Stacks	-	-	-	-	460,741	26,639	-	-	-	487,380
28	11486657	HAR2C-Inst APH Fab Expn Jnts	486,161	-	-	-	-	-	-	-	-	486,161
29	A 0001550 277	HAR2C-SBAC 2C Mjr Rebld 2016	-	100,573	329,395	-	-	-	-	-	-	429,968
30	A 0001644 001	HAR2C - ACI -Mercury Reduction	303,226	97,567	-	-	-	-	-	-	-	400,792
31	A 0001550 063	HAR2C-H2 Mercury CEMs Upgrade	317,678	29,350	-	-	-	-	-	-	-	347,028
32	A 0001550 172	HAR2C-H2 Rpl Stack Landings	-	344,611	-	-	-	-	-	-	-	344,611
33	A 0001550 453	HAR2C- Rpl Bghse Doors	-	-	9,136	328,170	-	-	-	-	-	337,306
34	11797666	HAR2C-Replace Deflation Piping	336,060	-	-	-	-	-	-	-	-	336,060
35	A 0001550 470	HAR2C-Rpl CT Riser Inlet Vlvs	-	-	-	-	-	168,300	158,968	-	-	327,268
36	A 0001550 268	HAR2C-Rpl CT Mechanicals	-	-	319,975	-	-	-	-	-	-	319,975
37	A 0001550 472	HAR2C-Rpl EHC Pump Sys	-	-	-	-	-	4,000	268,913	-	-	272,913
38	11797652	HAR2C-Rpl Condenser Circ Pipin	272,707	-	-	-	-	-	-	-	-	272,707
39	11797662	HAR2C-Rpl SH Desuperheater Pip	270,486	-	-	-	-	-	-	-	-	270,486
40	A 0001550 452	HAR2C- Rpl Bghse Inlet Exp Jnts	-	-	415	267,893	-	-	-	-	-	268,308
41	A 0001550 388	HAR2C-Rpl Gen Hydrogen Purity Monitor	-	-	-	-	-	97,500	160,000	-	-	257,500

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Harrington **Unit:** 2

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
42	A 0001550 269	HAR2C-Rpl Circ Pump Suction Ho	-	-	26,139	221,214	-	-	-	-	-	247,353
43	A 0001550 028	HAR2C-Rpl CT Acid Tank	-	-	-	-	235,780	18	-	-	-	235,798
44	A 0001550 238	HAR2C-H2 Rebag Partial 2022	-	-	-	-	-	-	-	-	234,500	234,500
45	A 0001550 236	HAR2C-H2 Rebag Partial 2021	-	-	-	-	-	-	-	231,000	-	231,000
46	A 0001550 207	HAR2C-Rebag Partial 2019	-	-	-	-	154,355	70,246	-	-	-	224,600
47	11940169	HAR2C-Rpl 10th Stg Turbine Blades	223,439	-	-	-	-	-	-	-	-	223,439
48	A 0001550 176	HAR2C-H2 Upgrade CEMs Foxboro	-	-	221,138	93	-	-	-	-	-	221,231
49	A 0001550 235	HAR2C-H2 Rebag Partial 2020	-	-	-	-	-	-	217,000	-	-	217,000
50	A 0001550 166	HAR2C-H2 Rebag Partial 2015	624	210,671	-	-	-	-	-	-	-	211,295
51	11805710	HAR2C-H2 Rebag Partial 14	205,212	-	-	-	-	-	-	-	-	205,212
52	11797667	HAR2C-H2 Coal Mill Mjr OVH 14	194,108	-	-	-	-	-	-	-	-	194,108
53	A 0001550 344	HAR2C-E Rpl C Mill Exh Fan Brg	-	-	188,323	4,101	-	-	-	-	-	192,424
54	A 0001550 471	HAR2C-Rpl CT MCCs on F-Bus	-	-	-	-	-	-	184,538	-	-	184,538
55	11966295	HAR2C-Rpl TDBFP Disch Pipe	160,581	-	-	-	-	-	-	-	-	160,581
56	A 0001550 310	HAR2C-Rpl Ctwr Motor Wiring	-	146,445	-	-	-	-	-	-	-	146,445
57	A 0001550 096	HAR2C-H2 Blr Blowdown Separato	-	-	143,179	-	-	-	-	-	-	143,179
58	A 0001550 220	HAR2C-Rpl SH Division Panels	-	-	-	-	-	-	-	-	136,750	136,750
59	A 0001550 451	HAR2C-Rpl #2 HP FWH	-	-	-	-	-	-	-	-	133,000	133,000
60	11797685	HAR2C-H2 Replace Drag Chain 20	131,605	-	-	-	-	-	-	-	-	131,605
61	A 0001550 273	HAR2C-Rpl Inverter	-	-	63,947	55,153	-	-	-	-	-	119,100
62	A 0001550 027	HAR2C-E 2C SBAC Motor Rewind	-	-	118,322	-	-	-	-	-	-	118,322
63	A 0001550 270	HAR2C-Rpl Drag Chain 2020	-	-	-	-	-	-	115,000	-	-	115,000
64	11797747	HAR2C-H2 Rpl Circ Pipe Vent Lines	113,581	-	-	-	-	-	-	-	-	113,581
65	11797679	HAR2C-H2 Rpl Ctr Blr Circ Pump 14	105,647	-	-	-	-	-	-	-	-	105,647
66	11797706	HAR2C-H2 Rpl Circ Pump Expan J	104,007	-	-	-	-	-	-	-	-	104,007
67	N/A	Other Capital Projects	238,588	171,821	196,087	343,990	229,503	42,385	202,666	-	4,000	1,429,040
68		**Totals**	**$ 12,537,276**	**$ 7,510,040**	**$ 9,058,137**	**$ 9,194,158**	**$ 1,668,284**	**$ 2,599,156**	**$ 8,186,761**	**$ 747,000**	**$ 1,128,561**	**$ 52,629,373**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Harrington **Unit:** 3

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001550 035	HAR3C-Rpl Boiler Economizer	$ -	$ -	$ -	$ 367,892	$ 4,787,789	$ 9,764	$ -	$ -	$ -	$ 5,165,446
2	A 0001550 474	HAR3C-Rpl Cooling Tower Structu	-	-	-	-	-	-	-	2,108,271	2,265,508	4,373,779
3	A 0001550 410	HAR3C-Rpl Failed Circ liner	-	-	-	-	-	-	-	3,033,678	270,081	3,303,759
4	A 0001550 023	HAR3C-Rewind H3 Generator	-	2,179,820	56,478	-	-	-	-	-	-	2,236,298
5	A 0001550 283	HAR3C-Rpl APH Baskets	-	-	-	-	1,749,224	-	-	-	-	1,749,224
6	A 0001550 457	HAR3C - Rpl CT Hot Water Deck	-	-	-	-	1,552,940	189,612	-	-	-	1,742,552
7	A 0001550 215	HAR3C-Rewind Exciter Rotor	-	1,668,285	559	-	-	-	-	-	-	1,668,844
8	A 0001550 475	HAR3C-Rpl CT Bottom Structure	-	-	-	-	1,405,610	6,699	-	-	-	1,412,310
9	A 0001550 345	HAR3C-Mill B Major Overhaul	-	-	-	59,035	29,517	1,009,639	-	-	-	1,098,191
10	A 0001550 411	HAR3C-TCS Upgrade	-	-	-	-	-	-	-	938,297	6,000	944,297
11	A 0001550 456	HAR3C- Rpl CT fan deck	-	-	-	-	675,125	258,451	-	-	-	933,576
12	A 0001550 309	HAR3C-H3 Upgrd DCS Opr stn	-	-	-	-	776,903	1,286	-	-	-	778,189
13	A 0001550 062	HAR3C-H3 Coolingtower Riser Pi	-	761,809	2,009	-	-	-	-	-	-	763,819
14	A 0001550 122	HAR3C-Rpl CT Drift Eliminators	-	705,105	580	-	-	-	-	-	-	705,685
15	A 0001550 412	HAR3C-Rpl Steam Cooled Spacer T	-	-	-	-	-	-	-	695,482	-	695,482
16	A 0001550 477	HAR3C-Rpl HPIP Turbine Blades	-	-	-	-	-	-	2,500	672,500	-	675,000
17	A 0001550 037	HAR3C-Upg Conden Tube Clean Sy	155,128	509,787	7,810	-	-	-	-	-	-	672,725
18	A 0001550 299	HAR3C-SBAC Joy Mjr Rebld 2016	-	-	55,704	476,328	-	-	-	-	-	532,031
19	A 0001550 033	HAR3C-Inst APH Fab Expn Jnts	-	486,457	984	-	-	-	-	-	-	487,442
20	A 0001550 394	HAR3C-Overhaul Stack Elevator	-	-	-	-	-	474,352	4,711	-	-	479,063
21	A 0001550 289	HAR3C-Rpl Deflation Pipe 2/2	-	-	145,078	314,802	-	-	-	-	-	459,880
22	A 0001550 288	HAR3C-Rpl Deflation Pipe 1/2	-	2,005	432,562	-	-	-	-	-	-	434,567
23	A 0001550 458	HAR3C- Rpl Bghse Doors	-	-	-	-	426,024	729	-	-	-	426,753
24	A 0001550 160	HAR3C-Coal Mill B Major OH	2,960	418,597	735	-	-	-	-	-	-	422,292
25	A 0001645 001	HAR3C - ACI -Mercury Reduction	286,689	119,314	-	-	-	-	-	-	-	406,003
26	A 0001550 429	HAR3C-Rpl MBFP Element 2015	-	265,837	133,709	0	-	-	-	-	-	399,546
27	A 0001550 285	HAR3C-Rpl CT Mechanicals Ph2	-	-	-	-	262,975	135,753	-	-	-	398,728
28	A 0001550 127	HAR3C-H3 Rpl Blr Elevator	-	393,333	-	-	-	-	-	-	-	393,333
29	A 0001550 065	HAR3C-H3 Rpl Condenser Circ Pi	-	385,946	-	-	-	-	-	-	-	385,946
30	A 0001550 479	HAR3C-Rpl EHC Pump Sys	-	-	-	-	366,472	11,663	-	-	-	378,135
31	A 0001550 066	HAR3C-H3 Rpl SH Desuperheat Pi	-	355,090	5	-	-	-	-	-	-	355,095
32	A 0001550 169	HAR3C-Rpl Circ Pump Suction Ho	-	338,478	-	-	-	-	-	-	-	338,478
33	A 0001550 121	HAR3C-H3 Rpl Stack Landings	-	332,817	114	-	-	-	-	-	-	332,931
34	A 0001550 455	HAR3C- ACW Heat Exchangers	-	-	-	-	322,753	1,209	-	-	-	323,963
35	A 0001550 075	HAR3C-H3 Install Service Eleva	-	-	-	-	-	-	323,005	-	-	323,005
36	A 0001550 123	HAR3C-H3 Install Blr CO Analyz	282,664	7,411	-	-	-	-	-	-	-	290,075
37	A 0001550 167	HAR3C-H3 Rpl Steam Drum Intern	-	277,865	-	-	-	-	-	-	-	277,865
38	A 0001550 168	HAR3C-H3 Rpl GSU Oil Coolers 2	-	275,498	1,965	-	-	-	-	-	-	277,463
39	A 0001550 064	HAR3C-H3 Mercury CEMs Upgrade	239,534	36,233	-	-	-	-	-	-	-	275,767
40	A 0001550 500 001 025	HAR3C-Rpl Bghse Inlet Duct Exp Jnts	-	-	-	-	266,833	605	-	-	-	267,438
41	A 0001550 141	HAR3C-H3 Rebag Partial 2015	624	258,114	-	-	-	-	-	-	-	258,738

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Harrington **Unit:** 3

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
42	11986588	HAR3C-Rewind W ID Fan Motor	249,901	-	-	-	-	-	-	-	-	249,901
43	A 0001550 229	HAR3C-Rpl Circ Rtrn Pipe Exp J	71,960	161,344	5,762	-	-	-	-	-	-	239,065
44	A 0001550 233	HAR3C-Rwnd E ID Fan Motor	-	235,780	2,318	-	-	-	-	-	-	238,097
45	A 0001550 284	HAR3C-Rpl CT Mechanicals Ph1	-	-	208,987	27,057	-	-	-	-	-	236,045
46	A 0001550 132	HAR3C-H3 Rpl C Blr Circ Pump	-	257,328	(41,037)	-	-	-	-	-	-	216,291
47	A 0001550 208	HAR3C-H3 Rebag Partial 2019	-	-	-	-	-	203,602	-	-	-	203,602
48	11797739	HAR3C-H3 Rpl Circ Pipe Vent Lines	201,859	-	-	-	-	-	-	-	-	201,859
49	A 0001550 239	HAR3C-H3 Rebag Partial 2022	-	-	-	-	-	-	-	-	195,000	195,000
50	A 0001550 237	HAR3C-H3 Rebag Partial 2021	-	-	-	-	-	-	-	192,000	-	192,000
51	A 0001550 241	HAR3C-H3 Rebag Partial 2020	-	-	-	-	-	-	186,000	-	-	186,000
52	A 0001550 162	HAR3C-Coal Mill C Exhauster Fa	-	184,372	-	-	-	-	-	-	-	184,372
53	A 0001550 386	HAR3C-Rpl Gen Hydrogen Purity M	-	-	-	-	-	-	4,500	175,500	-	180,000
54	A 0001550 151	HAR3C-H3 Rebag Partial 2018	-	-	-	-	176,360	1,340	-	-	-	177,700
55	A 0001550 500 001 028	HAR3C-3D SBAC Motor Rewind	-	-	-	-	170,520	-	-	-	-	170,520
56	A 0001550 116	HAR3C-H3 CEMs Foxboro Upgrade	-	164,518	-	-	-	-	-	-	-	164,518
57	A 0001550 382	HAR3-H3 Rpl CT Pumphouse Roof	-	-	-	-	-	158,420	-	-	-	158,420
58	A 0001550 500 001 017	HAR3C-CT N Circ Pump Mtr Rewind	-	-	-	-	152,560	-	-	-	-	152,560
59	A 0001550 476	HAR3C-Rpl CT Acid Tank	-	-	-	-	-	-	-	151,336	1,000	152,336
60	A 0001550 294	HAR3C-Rpl Inverter	-	-	117,599	34,737	-	-	-	-	-	152,335
61	A 0001550 146	HAR3C-H3 Rebag Partial 2017	-	-	89,070	62,298	-	-	-	-	-	151,367
62	A 0001550 083	HAR3C-H3 Rpl Lab Analyzers 201	-	-	-	-	149,713	-	-	-	-	149,713
63	A 0001550 134	HAR3C-Rpl Circ Pump Exp Joints	-	141,675	-	-	-	-	-	-	-	141,675
64	A 0001550 480	HAR3C-Inst Cmp Rm Clean Agnt Su	-	-	-	-	-	-	-	128,924	-	128,924
65	A 0001550 144	HAR3C-H3 Rebag Partial 2016	-	127,244	-	-	-	-	-	-	-	127,244
66	A 0001550 500 001 004	HAR3C-Rpl cell 7 & 11 CT Mech	-	-	-	122,875	-	-	-	-	-	122,875
67	11805715	HAR3C-H3 Rebag Partial 2014	118,888	-	-	-	-	-	-	-	-	118,888
68	A 0001550 290	HAR3C-Rpl Drag Chain	-	-	-	-	-	-	-	117,000	-	117,000
69	A 0001550 224	HAR3C-Rpl SH Spray Valves	-	112,912	-	-	-	-	-	-	-	112,912
70	N/A	Other Capital Projects	301,634	744,617	364,928	231,548	549,125	28,083	-	218,968	-	2,438,902
71		**Totals**	**$ 1,911,840**	**$ 11,907,590**	**$ 1,585,918**	**$ 1,696,571**	**$ 13,820,443**	**$ 2,491,207**	**$ 520,716**	**$ 8,431,956**	**$ 2,737,589**	**$ 45,103,830**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Jones **Unit:** 0

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001586 299	JONOC-Effluent Water Optimizati	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,500,000	$ -	$ 5,500,000
2	A 0001586 500	JON Emergent Fund -Steam prod	-	-	-	-	-	1,218,828	763,992	763,992	863,996	3,610,808
3	A 0001586 179	JONOC-Reline #3 Blowdown Pond	-	-	-	-	-	-	-	-	1,169,380	1,169,380
4	A 0001586 089	JONC-Inst CT Blwd line to pond	233,335	531,524	-	-	-	-	-	-	-	764,859
5	A 0001586 500 001 011	JONOC-Smart Pig Test	-	-	-	-	472,254	(676)	-	-	-	471,577
6	A 0001586 296	JONOC-Replace Section 13 Pivot	-	-	-	-	-	-	247,500	-	-	247,500
7	A 0001586 263	JONOC-Rpl Oil Circ Breaker JK10-210	-	-	-	-	26,118	220,353	-	-	-	246,471
8	A 0001586 073	JONOC-Inst Backflow Prvt on HT	-	-	-	13,223	158,017	23,330	-	-	-	194,570
9	A 0001586 085	JONOC-New Office Bld Retrofit	10,384	156,714	5,140	-	-	-	-	-	-	172,239
10	A 0003000 673	JONOC-Capital Tools	-	-	-	-	-	38,192	39,336	40,524	41,736	159,788
11	A 0001586 099	JONOC-Rpl Reactor Sump Pumps	-	64,613	74,645	-	-	-	-	-	-	139,258
12	A 0001586 095	JONOC-Rpl S Inst air comp	-	-	-	-	-	-	-	-	137,324	137,324
13	A 0001586 185	JONOC-Repl Aftertreater Acid T	-	-	126,644	9,272	-	-	-	-	-	135,916
14	A 0001586 280	JONOC-Rpl Steam Htr Ph 3	-	-	-	-	-	-	-	-	126,604	126,604
15	N/A	Other Capital Projects	298,962	206,116	159,816	190,350	192,384	206,256	138,268	-	78,503	1,470,655
16		**Totals**	**$ 542,681**	**$ 958,968**	**$ 366,245**	**$ 212,845**	**$ 848,774**	**$ 1,706,282**	**$ 1,189,096**	**$ 6,304,516**	**$ 2,417,543**	**$ 14,546,950**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Jones **Unit:** 1

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001586 156	JON1C-CT Rbld Cells 1,2,3	$ -	$ 1,013,642	$ 3,287,839	$ 936,796	$ -	$ -	$ -	$ -	$ -	$ 5,238,277
2	A 0001586 262	JON1C-Circ Water Struct Liner-19992	-	-	-	2,702,895	241,194	-	-	-	-	2,944,089
3	A 0001586 081	JON1C-Rpl Seamed HRH Piping	-	-	-	2,159,205	27,956	-	-	-	-	2,187,161
4	A 0001586 039	JON1C-Rpl no 1 HPSI FWH	-	-	-	-	-	-	-	1,448,500	2,500	1,451,000
5	A 0001586 126	JON1C-Rewind Exciter Rotor	-	-	-	-	-	-	-	1,267,750	-	1,267,750
6	A 0001586 129	JON1C-Rpl Rosemount 1151 XMTRS	-	-	-	822,710	11,127	104	-	-	-	833,941
7	A 0001586 049	JON1C-Rpl Cold Side APH Basket	-	-	97,800	654,364	21,022	-	-	-	-	773,186
8	A 0001586 008	JON1C-Upg Foxboro FBMs	-	-	3,030	676,565	(122)	-	-	-	-	679,473
9	A 0001586 253	JON1C-BFP Elem Comp Rpl-21019	-	-	-	180,027	298,757	-	-	-	-	478,784
10	A 0001586 083	JON1C-Rpl CWP Pmp Dischrg pipe	-	-	-	-	-	-	53,900	379,100	-	433,000
11	A 0001586 109	JON1C-Rpl Elvtr and Elvtr Cntr	-	426,688	-	-	-	-	-	-	-	426,688
12	A 0001586 075	JON1C-Rpl CT Mech Draft Ph II	-	2,213	385,365	-	-	-	-	-	-	387,578
13	A 0001586 142	JON1C-Rpl Oil Circ Brkr JK00	-	-	-	368,948	434	4,446	-	-	-	373,828
14	A 0001586 284	JON1C-Rpl CT Makeup Piping	-	-	-	-	141,174	193,864	-	-	-	335,038
15	A 0001586 282	JON1C-Rpl CT Pltfrm 10&11	-	-	-	-	-	-	-	-	318,094	318,094
16	A 0001586 094	JON1C-Rpl Emerg Diesel Gen	-	193,373	101,874	-	-	-	-	-	-	295,247
17	A 0001586 303	JON1C-Rpl Normal Source Breaker	-	-	-	-	-	-	-	-	272,500	272,500
18	A 0001586 063	JON1C-OneOk Spl pt tele	239,410	(2,661)	-	-	-	-	-	-	-	236,749
19	A 0001586 264	JON1C-CEM's Upgrade-19976	-	-	-	-	208,207	-	-	-	-	208,207
20	A 0001586 250	JON1C-Rpl W BFP Element	-	165,727	21,505	-	-	-	-	-	-	187,232
21	A 0001586 302	JON1C-Rpl #9 Fan Shroud	-	-	-	-	-	-	180,599	-	-	180,599
22	A 0001586 055	JON1C-Abate & Reinsulate DA	-	-	-	173,636	4,434	-	-	-	-	178,071
23	A 0001586 141	JON1C-Rpl IPs with DVC	-	-	-	134,643	2,932	(314)	-	-	-	137,262
24	A 0001586 064	JON1C-OneOk Delivery pt tele	238,777	(112,521)	-	-	-	-	-	-	-	126,255
25	A 0001586 088	JON1C-Rpl Station Battery	3,040	104,262	-	-	-	-	-	-	-	107,302
26	A 0001586 261	JON1C-Replace CP's-19974	-	-	-	97,474	2,962	-	-	-	-	100,436
27	N/A	Other Capital Projects	223,073	107,346	136,621	95,901	58,411	-	-	158,000	48,850	828,202
28		**Totals**	**$ 704,299**	**$ 1,898,070**	**$ 4,034,032**	**$ 9,003,164**	**$ 1,018,489**	**$ 198,100**	**$ 234,499**	**$ 3,253,350**	**$ 641,944**	**$ 20,985,948**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Jones Unit: 2

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001586 006	JON2C-E CT Rebuild	$ -	$ -	$ 3,108,644	$ 2,232,116	$ -	$ -	$ -	$ -	$ -	$ 5,340,759
2	A 0001586 074	JON2C-Rpl Seamed HRH Piping	-	-	-	-	331,060	1,629,220	-	-	-	1,960,279
3	A 0001586 058	JON2C-Automate Electrical Brd	193,281	677,835	1,870	-	-	-	-	-	-	872,985
4	A 0001586 044	JON2C-Rpl Turbine Throttle Vlv	-	808,771	41,012	-	-	-	-	-	-	849,783
5	A 0001586 269	JON2C-SH Header Sealbox Rpl-21240	-	-	-	-	139,795	642,961	-	-	-	782,756
6	A 0001586 125	JON2C-Rewind Exciter Rotor	-	-	-	-	150,896	549,933	-	-	-	700,829
7	A 0001586 067	JON2C-Upg Foxboro FBMs	-	-	-	-	362,048	285,993	-	-	-	648,042
8	A 0001586 310	JON2C-DA Heater Replacement	-	-	-	-	-	-	-	150,000	481,437	631,437
9	A 0001586 289	JON2C-Rpl L1 Gen End Turb Blds	-	-	-	-	74,899	538,106	-	-	-	613,005
10	A 0001586 268	JON2C-3051 Transm Rpl Ph 2-20818	-	-	-	-	127,139	473,167	-	-	-	600,306
11	A 0001586 026	JON2C-Rpl Cold Side APH Basket	-	542,851	894	-	-	-	-	-	-	543,745
12	A 0001586 112	JON2C-Rpl Elvr and Elvtr Cntrl	-	117,962	325,377	-	-	-	-	-	-	443,339
13	A 0001586 093	JON2C-Rpl Emerg Diesel Gen	-	356,343	6,276	-	-	-	-	-	-	362,619
14	A 0001586 500 001 018	JON2C-Rwd Normal Src Xfrmr	-	-	-	-	139,191	219,146	-	-	-	358,337
15	A 0001586 287	JON2C-Rpl CT Makeup Piping	-	-	-	-	144,267	196,213	-	-	-	340,480
16	A 0001586 065	JON2C-Rpl Rosemount 1151 XMTRS	-	290,206	(1,326)	-	-	-	-	-	-	288,880
17	A 0001586 270	JON2C-Rpl Oil Circ Break JK45-19705	-	-	-	-	141,353	137,383	-	-	-	278,737
18	A 0001586 304	JON2C-Rpl Normal Source Breaker	-	-	-	-	-	-	-	-	272,500	272,500
19	A 0001586 011	JON2C-Replace CT Distribution	-	230,550	3,074	-	-	-	-	-	-	233,624
20	A 0001586 012	JON2C-Repl APH Expansion Joint	-	228,256	5,232	-	-	-	-	-	-	233,487
21	A 0001586 265	JON2C-CEM's Upgrade-19975	-	-	-	-	217,260	920	-	-	-	218,180
22	A 0001586 122	JON2C-Rpl Turbine Stub Shft	217,132	0	-	-	-	-	-	-	-	217,133
23	A 0001586 285	JON2C-Rpl Circ Pump Suc Hood	-	-	-	-	44,469	145,821	-	-	-	190,289
24	A 0001586 014	JON2C-E Rpl Mech Draft 3&8	-	-	88,633	94,006	28	-	-	-	-	182,667
25	A 0001586 003	JON2C-E CT Mech Draft 4,6,11	-	-	180,885	-	-	-	-	-	-	180,885
26	A 0001586 271	JON2C-Rpl CP's-19973	-	-	-	-	79,613	57,572	-	-	-	137,185
27	A 0001586 500 001 006	JON2C-Rpl Economizer Exp Jnts	-	-	-	123,718	6,260	(731)	-	-	-	129,247
28	A 0001586 128	JON2C-Rpl Turb Vib Monitoring	-	144,413	(35,141)	-	-	-	-	-	-	109,272
29	A 0001586 138	JON2C-Rpl IPs with DVC	-	-	87,875	20,842	-	-	-	-	-	108,717
30	N/A	Other Capital Projects	-	85,505	134,801	166,864	167,693	284,259	-	-	1,700	840,822
31		**Totals**	**$ 410,413**	**$ 3,482,692**	**$ 3,948,104**	**$ 2,637,545**	**$ 2,125,971**	**$ 5,159,964**	**$ -**	**$ 150,000**	**$ 755,637**	**$ 18,670,326**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Jones **Unit:** 3

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001586 183	JON3C-Rpl Hot Path	$ -	$ -	$ -	$ -	$ -	$ 818,791	$ 8,478,314	$ -	$ -	$ 9,297,105
2	A 0001586 306	JON3C-NOx Controls Enhancement	-	-	-	-	-	-	600,000	-	-	600,000
3	A 0001586 291	JON3C-Rpl Exh Expansion Joint	-	-	-	-	263,838	-	-	-	-	263,838
4	N/A	Other Capital Projects	(102,844)	-	-	-	10,254	-	75,000	-	-	(17,590)
5		**Totals**	**$ (102,844)**	**$ -**	**$ -**	**$ -**	**$ 274,092**	**$ 818,791**	**$ 9,153,314**	**$ -**	**$ -**	**$ 10,143,353**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Jones **Unit:** 4

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001586 293	JON4C-Rpl Hot Path	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 818,591	$ 8,480,321	$ 9,298,912
2	A 0001586 309	JON4C-NOx Controls Enhancement	-	-	-	-	-	-	600,000	-	-	600,000
3	A 0001609 002	JON4C-Jones 4 Xmsn Const	680,797	(171,177)	-	3,064	-	-	-	-	-	512,684
4	A 0001586 308	JON4C-Exhaust Stack Silencer Ba	-	-	-	-	-	-	300,000	-	-	300,000
5	A 0001586 294	JON4C-Rpl Exh Expansion Joint	-	-	-	-	239,132	-	-	-	-	239,132
6	A 0001586 501 001 004	JON4C-Rpl Turning Gear Gearbox	-	-	-	-	146,727	(3,545)	-	-	-	143,181
7	N/A	Other Capital Projects	(119,149)	-	-	-	-	-	87,000	-	-	(32,149)
8		**Totals**	**561,648**	**(171,177)**	**-**	**3,064**	**385,859**	**(3,545)**	**987,000**	**818,591**	**8,480,321**	**11,061,760**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Maddox Unit: 0

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001529 500	MAD Emergent Fund -Steam prod	$ -	$ -	$ -	$ -	$ -	$ 675,570	$ 362,256	$ 579,876	$ 679,884	$ 2,297,586
2	A 0001529 001	MAD0C-Install Inside Fireman	-	18,518	557,212	146,678	-	-	-	-	-	722,407
3	A 0001529 086	MAD0C-Rpl Septic System	-	-	-	-	-	-	-	345,289	-	345,289
4	11840426	MAD0C-Rpl Wastewater Piping	230,664	-	-	-	-	-	-	-	-	230,664
5	A 0001529 085	MAD0C-Refurbish Plant Bathrooms	-	-	-	-	-	-	162,945	-	-	162,945
6	A 0001529 051	MAD0C-Rpl Waterwells	-	-	-	-	-	-	-	-	160,000	160,000
7	A 0001529 083	MAD0C-Rpl Waterwells 2020	-	-	-	-	-	-	160,000	-	-	160,000
8	A 0001529 023	MAD0C-Rpl Potable H20 Tank	-	-	131,766	-	-	-	-	-	-	131,766
9	A 0003000 674 001 001	MAD0C-Maddox Tools	-	-	23,592	27,118	61,144	877	-	-	-	112,731
10	A 0003000 674	MAD0C-Purchase Cap Tools	-	-	-	-	-	27,000	27,000	27,816	28,644	110,460
11	N/A	Other Capital Projects	54,531	100,356	83,141	1,979	80,254	64,855	-	87,228	-	472,343
12		**Totals**	**$ 285,194**	**$ 118,874**	**$ 795,711**	**$ 175,775**	**$ 141,397**	**$ 768,302**	**$ 712,201**	**$ 1,040,209**	**$ 868,528**	**$ 4,906,192**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Maddox Unit: 1

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001529 027	MAD1C-Rpl Cooling Twr P3	$ 136,828	$ 925,676	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,062,503
2	11747437	MAD1C-Rpl CT Structure PH1	1,018,037	-	-	-	-	-	-	-	-	1,018,037
3	A 0001529 004	MAD1C-E Rpl Sprheat and HRH	-	-	792,906	9,278	-	-	-	-	-	802,184
4	A 0001529 088	MAD1C-Rpl Overhead Crane	-	-	-	-	-	-	780,609	-	-	780,609
5	A 0001529 073	MAD1C-E Gen Rotor Rewind	-	-	723,223	(203)	-	-	-	-	-	723,020
6	A 0001529 084	MAD1C-Rpl #2 HP FWH	-	-	-	-	-	80,500	625,500	5,000	-	711,000
7	A 0001529 500 001 010	MAD1C-Rpl HRH Terminal Tubes	-	-	-	-	638,328	65,465	-	-	-	703,793
8	A 0001529 089	MAD1C-Rpl SH Term Tubes	-	-	-	-	-	-	665,000	-	-	665,000
9	A 0001529 067	MAD1C-Rpl #1 HP FWH-20820	-	-	-	71,112	530,976	841	-	-	-	602,929
10	A 0001529 005	MAD1C-Rpl CT Fans & Gearboxes	-	-	-	-	308,889	176,792	-	-	-	485,681
11	A 0001529 068	MAD1C-Upg DCS Opr Stn-19969	-	-	-	-	-	-	479,106	1,500	-	480,606
12	A 0001529 024	MAD1C-Rpl CS APH Basket&Seals	-	-	-	1,179	469,856	1,307	-	-	-	472,342
13	A 0001529 026	MAD1C-Rewedge Generator	-	-	390,696	4,691	-	-	-	-	-	395,386
14	A 0001529 032	MAD1C-Rpl M1 Elevator	-	-	-	94,736	293,373	-	-	-	-	388,109
15	A 0001529 057	MAD1C-Rpl Air Prehtr Exp Joint	-	-	-	-	336,321	605	-	-	-	336,925
16	A 0001529 081	MAD1C-Rpl Ct Fan MCC Breakers	-	-	-	-	-	272,441	-	-	-	272,441
17	A 0001529 056	MAD1C-Upg CEMs Foxboro Sys	-	-	-	-	-	-	240,179	-	-	240,179
18	A 0001529 007	MAD1C-Rpl CT Distribution Vlvs	-	-	173,455	3,578	-	-	-	-	-	177,033
19	A 0001529 037	MAD1C-Rpl CT Wiring	-	-	139,411	(138)	-	-	-	-	-	139,272
20	A 0001529 053	MAD1C-Rpl Circ Exp Joints	-	-	-	-	-	-	-	-	135,818	135,818
21	N/A	Other Capital Projects	71,779	-	199,176	149,309	65,905	56,320	48,595	-	53,150	644,234
22		**Totals**	**$ 1,226,644**	**$ 925,676**	**$ 2,418,866**	**$ 333,542**	**$ 2,643,648**	**$ 654,270**	**$ 2,838,989**	**$ 6,500**	**$ 188,968**	**$ 11,237,102**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: **Maddox CT** **Unit:** **2**

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001529 092	MAD2C-RPL OCB Gen Breaker 52G	$ -	$ -	$ -	$ -	$ -	$ -	$ 357,000	$ 277,591	$ -	$ 634,591
2	N/A	Other Capital Projects	59,396	17,247	21,343	108,895	134,578	-	-	-	53,150	394,609
3		**Totals**	**$ 59,396**	**$ 17,247**	**$ 21,343**	**$ 108,895**	**$ 134,578**	**$ -**	**$ 357,000**	**$ 277,591**	**$ 53,150**	**$ 1,029,200**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Maddox CT **Unit:** 3

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001529 094	MAD3C-Install BlackStart	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,949,324	$ 2,949,324
2	A 0001529 082	MAD3C-Rpl U940 Gen Breaker	-	-	-	-	14,418	305,744	-	-	-	320,162
3	A 0001529.066	MAD3C-Rpl M3 Fire Suppression-21344	-	-	-	-	20,944	174,724	-	-	-	195,668
4	A 0001529 080	MAD3C-Rpl Exhaust Stack	-	-	-	-	190,432	-	-	-	-	190,432
5	A 0001529 018	MAD3C-Rpl Lube Oil Cooler	-	-	164,870	1,466	-	-	-	-	-	166,336
6	N/A	Other Capital Projects	-	-	-	-	-	-	-	-	53,150	53,150
7		**Totals**	**$ -**	**$ -**	**$ 164,870**	**$ 1,466**	**$ 225,793**	**$ 480,468**	**$ -**	**$ -**	**$ 3,002,474**	**$ 3,875,072**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: **Moore County** **Unit:** **0**

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001506 002	MOR0C-Demo Moore County	$ -	$ -	$ -	$ -	$ 524,549	$ 5,232,536	$ 1,317,114	$ -	$ -	$ 7,074,199
2	N/A	Other Capital Projects	-	-	-	-	-	-	-	-	-	-
3		**Totals**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 524,549**	**$ 5,232,536**	**$ 1,317,114**	**$ -**	**$ -**	**$ 7,074,199**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: **Moore County** **Unit:** **3**

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	11955279	MOR3C-Demo Cooling Tower	$ 183,282	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 183,282
2	N/A	Other Capital Projects	-	-	-	-	-	-	-	-	-	-
3		**Totals**	**$ 183,282**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 183,282**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Nichols **Unit:** 0

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001560 126	NICOC-HW Rd WW Trtment Improv	$ -	$ -	$ -	$ 344,666	$ 215,669	$ 913,886	$ 3,388,063	$ 4,702,252	$ 2,788,057	$ 12,352,593
2	A 0001560 010	NICOC-Rpl Demineralizer	-	521,978	3,624,042	190,376	-	-	-	-	-	4,336,396
3	A 0001560 500	NIC Emergent Fund -Steam prod	-	-	-	-	-	1,361,409	627,864	870,504	970,500	3,830,277
4	A 0001553 002	NICOC-NO Lime Pond Constructio	-	-	1,393,843	483	-	-	-	-	-	1,394,326
5	A 0001560 117	NICOC-Rpl Roof-Turb High	-	-	-	-	630,173	-	-	-	-	630,173
6	A 0001560 118	NICOC-Rpl Roof-Turb Low	-	-	-	-	440,469	-	-	-	-	440,469
7	A 0001560 090	NICOC-Rpl Wtr Treatment Contro	-	148,566	260,959	819	-	-	-	-	-	410,344
8	A 0001560 500 001 008	NICOC-Replace Aux Boiler	-	-	-	332,875	4,755	-	-	-	-	337,630
9	A 0001560 115	NICOC-Install Demin Wtr Supply	-	-	-	-	66,813	192,696	-	-	-	259,509
10	A 0001560 134	NICOC-Install Sprinkler Pivot	-	-	-	-	-	-	-	-	233,000	233,000
11	12008332	NICOC-Rpl River Road Waste Wtr Ln	175,270	-	-	-	-	-	-	-	-	175,270
12	A 0001560 012	NICOC-Rpl 1&2 React Sump Pmps	-	-	145,483	11,252	-	-	-	-	-	156,736
13	A 0003000 675	NICOC-Purch Plant Tools	-	-	-	-	-	35,568	22,703	21,000	21,000	100,271
14	N/A	Other Capital Projects	247,404	207,843	112,038	68,442	325,053	9,305	-	-	10,000	980,085
15		**Totals**	**$ 422,674**	**$ 878,386**	**$ 5,536,365**	**$ 948,913**	**$ 1,682,933**	**$ 2,512,865**	**$ 4,038,630**	**$ 5,593,756**	**$ 4,022,557**	**$ 25,637,080**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Nichols Unit: 1

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001560 110	NIC1C- Upgrd DCS Opr Stn and CP	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 306,000	$ 306,000
2	A.0001560 136	NIC1C-Rpl U1 Volt Reg	-	-	-	-	-	-	291,000	-	-	291,000
3	A 0001560 109	NIC1C-Rpl CT Suction Vault Roof	-	-	-	208,055	13,666	-	-	-	-	221,721
4	A 0001560 500 001 009	NIC1C-Rpl APH Hot Gas Exp Jnts	-	-	-	121,883	277	-	-	-	-	122,160
5	N/A	Other Capital Projects	116,847	58,840	102,794	76,332	47,826	142,471	-	-	-	545,110
6		**Totals**	**$ 116,847**	**$ 58,840**	**$ 102,794**	**$ 406,269**	**$ 61,770**	**$ 142,471**	**$ 291,000**	**$ -**	**$ 306,000**	**$ 1,485,991**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Nichols **Unit:** 2

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001560 103	NIC2C-LP Turbine Blade Rpl	$ -	$ 1,995,154	$ 22,474	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,017,629
2	A 0001560 121	NIC2C-Rpl Blowdown Piping	-	-	-	-	5,897	762,806	-	-	-	768,703
3	A 0001560 004	NIC2C-Rpl HPIP 1st CNTRL STG BLDS	-	-	362,315	-	-	-	-	-	-	362,315
4	A 0001560 107	NIC2C-Rpl Voltage Regulator	-	63,423	286,939	-	-	-	-	-	-	350,361
5	A 0001560 500 001 004	NIC2C-BFP Element Refurb	-	-	-	280,569	305	-	-	-	-	280,874
6	A 0001560 111	NIC2C- Upgrd DCS Opr Stn and CP	-	-	-	-	-	-	-	-	248,000	248,000
7	A 0001560 035	NIC2C-Rpl CT Acid Tank	-	-	-	200,024	28,023	-	-	-	-	228,047
8	A 0001560 041	NIC2C-Rpl Bailey Burner Tilts	-	88,248	66,102	-	-	-	-	-	-	154,350
9	A 0001560 106	NIC2C-Rpl Hot Side APH Exp Jnt	-	-	104,593	-	-	-	-	-	-	104,593
10	N/A	Other Capital Projects	84,969	95,681	39,506	110,197	23,994	21,257	-	-	-	375,604
11		**Totals**	**$ 84,969**	**$ 2,242,506**	**$ 881,930**	**$ 590,789**	**$ 58,219**	**$ 784,064**	**$ -**	**$ -**	**$ 248,000**	**$ 4,890,476**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Nichols Unit: 3

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001560 072	NIC3C-Rewind Generator Stator	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 534,750	$ 5,882,250	$ 6,417,000
2	A 0001560 094	NIC3C-CT Structure Unit3	-	-	-	-	379,835	3,575,614	1,117,899	-	-	5,073,348
3	A 0001560 137	NIC3C-Replace Seamed HE Piping	-	-	-	-	-	-	-	925,000	1,693,000	2,618,000
4	A 0001560 129	NIC3C-Rewind Generator Rotor	-	-	-	-	-	-	-	154,875	1,703,619	1,858,494
5	A 0001560 064	NIC3C-N3 Rpl CT Plenum Structu	-	1,553	1,663,007	-	-	-	-	-	-	1,664,560
6	A 0001560 101	NIC3C-N3 Rpl Foxboror FBM's	-	-	-	-	-	-	-	268,000	487,000	755,000
7	A 0001560 124	NIC3C-Rpl Condenser Inlet Circ Pipe	-	-	-	-	-	531,704	1,000	-	-	532,704
8	A 0001560 128	NIC3C-Rpl CW Risers at CT	-	-	-	-	-	505,355	7,138	-	-	512,493
9	A 0001560 059	NIC3C-Rpl Preheater Cold Baske	257,809	244,231	-	-	-	-	-	-	-	502,039
10	A 0001560 123	NIC3C-CT Mechanicals Phase 1	-	-	-	-	476,617	-	-	-	-	476,617
11	A 0001560 127	NIC3C-Rpl Boiler Bldg Elevator	-	-	-	-	-	-	426,814	-	-	426,814
12	A 0001560 077	NIC3C-Rpl Stg1&9 Bkts HPIP rtr	-	320,476	-	-	-	-	-	-	-	320,476
13	A 0001560 133	NIC3C-Rpl FWH Lvl Transmitters	-	-	-	-	-	261,547	-	-	-	261,547
14	A 0001560 141	NIC3C-Replace Boiler Ignitors	-	-	-	-	-	-	-	97,916	137,081	234,997
15	A 0001560 099	NIC3C-N3 CEM's Upgrade	-	-	-	-	-	202,076	-	-	-	202,076
16	A 0001560 100	NIC3C-N3 Replace CP's	-	-	-	-	-	-	-	18,900	157,500	176,400
17	A 0001560 500 001 006	NIC3C-Rpl CT Cell 2 Mechanicals	-	-	-	170,561	-	-	-	-	-	170,561
18	A 0001560 075	NIC3C-Rpl Condenser Exp Joints	62,371	105,085	-	-	-	-	-	-	-	167,456
19	A 0001560 142	NIC3C-Rpl Control Transmitters	-	-	-	-	-	-	-	48,016	102,811	150,827
20	A 0001560 057	NIC3C-E Rpl Cell 1 Fan Mech	-	-	120,848	10,403	-	-	-	-	-	131,252
21	A 0001560 062	NIC3C-Rpl Stack Expansion Join	35,150	90,043	-	-	-	-	-	-	-	125,193
22	A 0001560 131	NIC3C-Rpl MS Vent Valve	-	-	-	-	-	119,001	1,500	-	-	120,501
23	A 0001560 079	NIC3C-Rpl Lab Analyzers	-	-	-	-	116,636	-	-	-	-	116,636
24	A 0001560 132	NIC3C-N3 Rpl UPS Inverter	-	-	-	-	-	116,005	-	-	-	116,005
25	N/A	Other Capital Projects	159,671	89,997	22,779	95,703	42,709	151,863	181,386	48,175	-	792,282
26		**Totals**	**$ 515,000**	**$ 851,384**	**$ 1,806,635**	**$ 276,668**	**$ 1,015,797**	**$ 5,463,165**	**$ 1,735,737**	**$ 2,095,632**	**$ 10,163,261**	**$ 23,923,279**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Plant X **Unit: 0**

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001534 500	PLX Emergent Fund -Steam prod	$ -	$ -	$ -	$ -	$ -	$ 540,559	$ 527,856	$ 807,216	$ 907,212	$ 2,782,843
2	A 0001534 040 001 001	PLX0C-Rpl HeaderGaslıne Insd	246,037	1,900,983	39,641	-	-	-	-	-	-	2,186,661
3	A 0001534 015	PLX0C-Inst Interıor Fıre Prote	-	-	-	-	-	315,250	750,000	-	-	1,065,250
4	A 0001534 086	PLX0C-Rpl CT Fıll	-	-	577,608	377,059	-	-	-	-	-	954,667
5	A 0001534 157	PLX0C-Rpl 50T-5T Turb Crane-20816	-	-	-	-	712,686	-	-	-	-	712,686
6	A 0001534 053	PLX0C-Rpl Roof Cover Brk Room	-	439,350	-	-	-	-	-	-	-	439,350
7	A 0001534 204	PLX0C-Floatıng pump w pıpıng fo	-	-	-	-	-	-	350,000	-	-	350,000
8	A 0001534 063	PLX0C-Boıler Road Pavıng	-	-	-	-	-	334,780	-	-	-	334,780
9	A 0001534 168	PLX0C-Rmv aır washer and ductwo	-	-	-	-	-	-	-	295,765	-	295,765
10	A 0001534 087	PLX0C-Rpl CT 4 Cell Mech PH1	-	-	252,706	12,227	-	-	-	-	-	264,932
11	A 0001534 058	PLX0C - Rpl CT Mech PH 1	-	254,333	-	-	-	-	-	-	-	254,333
12	A 0001534 160	PLX0C-Cmp Rm Clean Agent Fıre-21345	-	-	-	-	-	249,945	-	-	-	249,945
13	A 0001534 039	PLX0C-Rpr Road Ent Pavıng	-	205,943	678	-	-	-	-	-	-	206,621
14	A 0001534 172	PLX0C-Rpl Lab Analyzers	-	-	-	-	138,944	2,438	-	-	-	141,382
15	A 0001534 192	PLX0C-Sump pıpıng to pond ın tunnel	-	-	-	-	-	126,647	-	-	-	126,647
16	A 0001534 171	PLX0C-Roof Draıns Header	-	-	-	-	51,324	57,999	-	-	-	109,323
17	A 0003000 677	PLX0C-Purch Mısc Plant Tool	-	-	-	-	-	25,000	27,778	25,000	25,000	102,778
18	N/A	Other Capıtal Projects	77,324	325,908	93,407	31,695	128,987	90,652	171,195	650	-	919,820
19		**Totals**	**$ 323,361**	**$ 3,126,517**	**$ 964,039**	**$ 420,981**	**$ 1,031,941**	**$ 1,743,270**	**$ 1,826,829**	**$ 1,128,631**	**$ 932,212**	**$ 11,497,781**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: **Plant X** **Unit:** **1**

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001534 027	PLX1C-Rpl Emer Diesel Gen	$ 12,349	$ 288,710	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 301,059
2	N/A	Other Capital Projects	107,591	79,412	59,819	1,426	15,402	(303)	-	-	-	263,347
3		**Totals**	**$ 119,940**	**$ 368,122**	**$ 59,819**	**$ 1,426**	**$ 15,402**	**$ (303)**	**$ -**	**$ -**	**$ -**	**$ 564,406**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Plant X **Unit:** 2

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001534 071	PLX2C-Rpl 02 Analyzer Sys	$ -	$ 62,917	$ 98,374	$ -	$ -	$ -	$ -	$ -	$ -	$ 161,291
2	N/A	Other Capital Projects	33,320	46,184	139,926	47,658	48,962	1,058	-	-	-	317,107
3		**Totals**	**$ 33,320**	**$ 109,101**	**$ 238,299**	**$ 47,658**	**$ 48,962**	**$ 1,058**	**$ -**	**$ -**	**$ -**	**$ 478,398**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Plant X Unit: 3

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001534 097	PLX3C-Upgrd DCS OprStn& CP	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 659,000	$ -	$ 659,000
2	A 0001534.046	PLX3C-Rpl Boiler O2 System	-	-	-	-	-	-	-	163,000	-	163,000
3	N/A	Other Capital Projects	7,737	18,770	106,850	24,912	147,246	40,033	-	-	-	345,548
4		**Totals**	**$ 7,737**	**$ 18,770**	**$ 106,850**	**$ 24,912**	**$ 147,246**	**$ 40,033**	**$ -**	**$ 822,000**	**$ -**	**$ 1,167,548**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Plant X   Unit: 4

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001534 158	PLX4C-Rpl HE Seamed Piping-20747	$ -	$ -	$ -	$ -	$ 638,956	$ 2,207,920	$ -	$ -	$ -	$ 2,846,876
2	A 0001534 099	PLX4C-Rpl CT Fill & DE Phase 3	-	-	-	893,420	1,196	-	-	-	-	894,617
3	A 0001534 007	PLX4C-Rpl CT Fill	259,312	435,525	-	-	-	-	-	-	-	694,837
4	A 0001534 164	PLX4C-Upg DCS Opr Stn and CP-19956	-	-	-	-	-	616,585	-	-	-	616,585
5	A 0001534 051	PLX4C-Repl Economizer Header	-	-	-	-	3,853	484,422	-	-	-	488,275
6	A 0001534 098	PLX4C-Rpl CT Fill & DE PH 2	-	-	449,020	-	-	-	-	-	-	449,020
7	A 0001534 100	PLX4C-Rpl CT Mech PH3	-	-	-	399,439	16,061	-	-	-	-	415,501
8	A 0001534 101	PLX4C-Rpl CT Mech Ph 2	-	-	362,816	956	-	-	-	-	-	363,772
9	A 0001534 187	PLX4C-Generator Rewedge	-	-	-	-	24,690	331,918	-	-	-	356,608
10	A 0001534 208	PLX4C-Oil BMS Upgrade	-	-	-	-	-	-	134,203	214,000	-	348,203
11	A 0001534 200	PLX4C-X4 East BFP element rebuild	-	-	-	-	-	276,664	8,531	-	-	285,195
12	A 0001534 207	PLX4C-BMS Upgrade	-	-	-	-	-	-	98,062	157,370	-	255,432
13	A 0001534 165	PLX4C-CEMS Upgrade-17059	-	-	-	-	-	-	-	202,443	-	202,443
14	A 0001534 197	PLX4C-Repl CT north stairway	-	-	-	-	-	131,641	-	-	-	131,641
15	A 0001534 083	PLX4C-Rpl SH Spray Vlvs	-	-	121,975	476	-	-	-	-	-	122,452
16	11986610	PLX0C -Rpl CTMechCell 1E & 1 W	102,002	-	-	-	-	-	-	-	-	102,002
17	N/A	Other Capital Projects	9,062	165,501	191,863	151	217,643	183,862	42,500	-	-	810,582
18		**Totals**	**$ 370,377**	**$ 601,026**	**$ 1,125,675**	**$ 1,294,443**	**$ 902,399**	**$ 4,233,011**	**$ 283,296**	**$ 573,813**	**$ -**	**$ 9,384,039**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Quay County **Unit:** 0

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	N/A	Other Capital Projects	$ (36,810)	$ -	$ -	$ -	$ -	$ 3,000	$ -	$ -	$ -	$ (33,810)
2		Totals	$ (36,810)	$ -	$ -	$ -	$ -	$ 3,000	$ -	$ -	$ -	$ (33,810)

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Quay County **Unit:** 1

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	N/A	Other Capital Projects	$ -	$ -	$ -	$ -	$ 19,659	$ 4,278	$ -	$ -	$ -	$ 23,937
2		**Totals**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 19,659**	**$ 4,278**	**$ -**	**$ -**	**$ -**	**$ 23,937**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Quay County **Unit:** 2

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001554 003	QUA2C-Rpl Emergency Diesel Generato	$ -	$ -	$ -	$ 179,345	$ 37,861	$ -	$ -	$ -	$ -	$ 217,206
2	N/A	Other Capital Projects	-	-	-	-	-	-	-	-	-	-
3		**Totals**	**$ -**	**$ -**	**$ -**	**$ 179,345**	**$ 37,861**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 217,206**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Sagamore **Unit:** 0

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001563 001	SPS Wind - Sagamore	$ -	$ -	$ -	$ 4,386,567	$ 1,052,786	$ 172,779,874	$ 624,882,269	$ 1,200,000	$ -	$ 804,301,496
2	A 0001563 003	Sagamore-Xmsn Lines	-	-	-	-	-	31,584,000	-	-	-	31,584,000
3	A 0001563 005	Sagamore-Xmsn svng Generation	-	-	-	-	-	4,133,260	-	-	-	4,133,260
4	A 0001563 004	Sagamore-Substation	-	-	-	-	-	2,016,000	-	-	-	2,016,000
5	A 0001563 006	Sagamore-Sub svng Generation	-	-	-	-	-	1,393,956	-	-	-	1,393,956
6	A 0001563 501	SAGM Emergent Fund-Other Prod	-	-	-	-	-	-	-	504,480	509,532	1,014,012
7	A 0001563 506	SWF-2022 PCMM	-	-	-	-	-	-	-	-	300,000	300,000
8	A 0001563 505	SWF-2021 PCMM	-	-	-	-	-	-	-	300,000	-	300,000
9	A 0001563 002	Sagamore-Land & Land Rights	-	-	-	-	-	240,000	-	-	-	240,000
10	N/A	Other Capital Projects	-	-	-	-	-	-	-	-	-	-
11		**Totals**	**$ -**	**$ -**	**$ -**	**$ 4,386,567**	**$ 1,052,786**	**$ 212,147,090**	**$ 624,882,269**	**$ 2,004,480**	**$ 809,532**	**$ 845,282,724**

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Tolk | Unit: 0

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001555 500	TOL Emergent Fund -Steam prod	$ -	$ -	$ -	$ -	$ -	$ 1,748 967	$ 1,400,004	$ 1,400,004	$ 1,400,004	$ 5,948,979
2	A 0001555 191	TOL0C-Prch O Rose Water Rights	5,482,617	7,145	-	-	-	-	-	-	-	5,489,762
3	A 0001555 031	TOL0C-TolkX Water Well Ph 8	-	-	-	-	364,231	4,308 322	-	-	-	4,672,553
4	A 0001555 278	TOL0C-Drill Horizontal WaterWell	-	-	276,060	2,608,384	91,024	-	-	-	-	2,975,467
5	A 0001555 276	TOL0C-Dev Barrett H2O Rights	1,619,010	1,199,210	4,690	-	-	-	-	-	-	2,822,910
6	A 0001642 001	TOL0C-ACI Mercury Reduction	1 670,609	391,723	-	-	-	-	-	-	-	2,062,332
7	A 0001555 113	TOL0C-Rpl RR Ties PH 3 of 5	-	-	17,068	568,108	653,176	-	-	-	-	1,238,352
8	A 0001555 093	TOL0C-Rpl RR Ties PH 4 of 5	-	-	-	533,883	616,210	-	-		-	1,150,093
9	A 0001555 030	TOL 0C-TolkX Water Well Ph 7	-	-	681,507	449,021	4,195	-	-	-	-	1,134,722
10	A 0001555 317	TOL0C-Build Evap Pond 15	-	1,056,752	15,709	-	-	-	-	-	-	1,072,461
11	A 0001555 204	TOL0C-Rpl RR Ties Dump LoopPH2	1,071	984,262	31,246	-	-	-	-	-	-	1,016,578
12	A 0001555 305	TOL0C-Inst Water Well Ph 10	-	-	-	-	-	-	-	-	954,811	954,811
13	A 0001555 114	TOL0C-Rpl RR Ties PH 2 of 5	-	799,524	140,038	-	-	-	-	-	-	939,562
14	A 0001555 042	TOL0C-TolkX Water Well Ph 9	-	-	-	-	-	-	-	927,000	-	927,000
15	11806033	TOL0C-Rpl RR Ties DumperLoop	831,449	-	-	-	-	-	-	-	-	831,449
16	A 0001555 104	TOL0C-Rpl RR Ties PH 5 of 5	-	-	-	-	-	576,500	-	-	-	576,500
17	A 0001555 071	TOL0C-W SBAC Overhaul 2018	-	-	-	-	43,285	490,800	-	-	-	534,084
18	A 0001555 107	TOL0C-InstFireSuppCableCompRm	-	-	-	-	-	-	524,972	-	-	524,972
19	A 0001555 500 001 009	TOL0C-S SBAC OVH 2017-22573	-	-	-	523,554	-	(881)	-	-	-	522,673
20	A 0001555 068	TOL0C-W SBAC Overhaul 2015	-	493,873	14,065	-	-	-	-	-	-	507,938
21	A 0001555 351	TOL0C-Rpl control room bldg roof	-	-	-	489,763	-	-	-	-	-	489,763
22	A 0001555 211	TOL0C-S SBAC Overhaul	-	-	-	-	-	30,000	-	420,000	-	450,000
23	A 0001555 320	TOL0C-Ins Pig Launch-Rec Eqpt	-	410,615	9 447	-	-	-	-	-	-	420,062
24	A 0001555 069	TOL0C-N SBAC Overhaul 2016	-	-	375,124	14,643	-	-	-	-	-	389,766
25	A 0001555 148	TOL0C-Rpl Water Treatment Bldg	-	-	-	-	-	-	386,720	-	-	386,720
26	A 0001555 591	TOL0C-S SBAC	-		-	-	-	-	-		385,000	385,000
27	A 0001555 217	TOL0C-Rail Ballast & Alignmnt	-	-	-		-	158,075	217,272	-	-	375,347
28	A 0001555 413	TOL0C-Rpl TK09 oil circuit brea	-	-	-		-		355,000	-	-	355,000
29	A 0001555 252	TOL0C-Rpl Receiving WH Roof	-	-			336,461		-	-	-	336,461
30	A 0001555 415	TOL0C-Inst Secondary RO Feed Su		-	-				258,000	-		258,000
31	A 0001555 315	TOL0C-Inst MgO FeederReact1&2	-	47,225	189,550	-		-	-	-	-	236,775
32	A 0001555 314	TOL0C-Inst EhncdEvapSvcWWP13	-	232,600	2 680	-	-		-	-	-	235,280
33	A 0001555 120	TOL0C-Inst Perimet FencePonds	-	-		-	229,285			-	-	229,285
34	A 0001555 500 001 031	TOL0C-Inst SwingGates&LadderProt	-	-	-	-	148 849	58,774	-	-	-	207,623
35	A 0003000 684	TOL0C - Purch Misc Tools	-	-	-	-	-	48,801	50,266	51,773	53,327	204,167
36	A 0001555 212	TOL0C-Rpl Water Well Pmp 2019	-	-	-	-	-	191,000	-	-	-	191,000
37	A 0001555 246	TOL0C-Rpl Water Well Pmp 2021	-	-	-	-	-	-	-	190 000	-	190,000
38	A 0001555 245	TOL0C-Rpl Water Well Pmp 2020	-	-	-	-	-	-	190,000	-	-	190,000
39	A 0001555 247	TOL0C-Rpl Water Well Pmp 2022	-	-	-	-	-	-	-	-	190,000	190,000
40	11797532	TOL0C-Rpl Water Well Pmp 2014	188,562	-	-	-	-	-	-	-	-	188,562
41	A 0001555 058	TOL0C-Rpl Water Well Pmp 2016	-	-	149,137	-	-	-	-	-	-	149,137
42	A 0001555 060	TOL0C-Rpl Water Well Pmp 2018	-	-	-	-	143,842	1,714		-		145,556
43	A 0001555 133	TOL0C-Rpl Co-poly Skid and Pip	3,143	129,468	-	-	-	-	-	-	-	132,611
44	A 0003000 684 001 002	TOL0C- Tolk Tool Blanket	-	-	-	21,277	97,614	12,318	-	-	-	131,208
45	A 0001555 078	TOL0C -Rpl LimeSiloDust Cllctr	116 310	(34)	-	-	-	-	-	-	-	116,276
46	A 0001555 057	TOL0C-Rpl Water Well Pmp 2017	-	-	-	115,322	(0)	-	-	-	-	115,322
47	A 0001555 151	TOL0C-Install Tornado Shelters	62,441	48,065	-	-	-	-	-	-	-	110,506
48	11966979	TOL0C-Rp A/BStrtupXfmrTapchgmch	109,711	-	-	-	-	-	-	-	-	109,711
49	11967005	TOL0C-Rp C/DStrtupXfmrTapchgmc	104,116	-	-	-	-	-	-	-	-	104,116
50	N/A	Other Capital Projects	184,757	383,577	253 270	125,715	242,007	177,335	48,765	158,300	-	1,573,728
51		**Totals**	**$ 10,373,796**	**$ 6,184,005**	**$ 2,159,590**	**$ 5,449,671**	**$ 2,970,177**	**$ 7,801,725**	**$ 3,430,999**	**$ 3,147,077**	**$ 2,983,142**	**$ 44,500,181**

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Sponsor: Lytal
2019 TX Rate Case

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Tolk **Unit:** 1

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001598 001	TOL1C-Synchronous Condenser	$ -	$ -	$ -	$ 13,250	$ 407,133	$ 1,874,437	$ 6,191,598	$ 377,009	$ -	$ 8,863,427
2	A 0001555 012	TOL1C-Rpl RH Pendants	1,411,789	1,861,198	0	-	-	-	-	-	-	3,272,987
3	A 0001555 020	TOL1C-Install CT Film Fill	-	-	-	-	-	-	-	-	2,999,999	2,999,999
4	A 0001555 011	TOL1C-Rpl Bull Nose	857,745	1,918,136	4	-	-	-	-	-	-	2,775,884
5	A 0001555 433	TOL1C-Rpl RH Loops	-	-	-	-	-	-	1,873,523	-	-	1,873,523
6	A 0001555 088	TOL1C-Rpl Baghouse Bags 2018	-	-	-	1,110,659	355,294	-	-	-	-	1,465,953
7	A 0001555 500 001 023	TOL1C-Rpl MillF MainVrt Shaft	-	-	-	-	1,330,538	134,032	-	-	-	1,464,571
8	A 0001555 218	TOL1C-Rpr Mill1A GearbxGrind S	4,503	1,322,620	15	-	-	-	-	-	-	1,327,137
9	A 0001555 257	TOL1C-UpgDCSOprStn& CntrlProc	-	-	-	699,705	361,621	628	-	-	-	1,061,954
10	A 0001555 264	TOL1C-RbldMill FGearBx&Jrnls	-	280,140	660,673	-	-	-	-	-	-	940,813
11	A 0001555 223	TOL1C-Rpr MillC GearBx & Jrnls	-	-	-	431,140	494,739	-	-	-	-	925,879
12	A 0001555 225	TOL1C-Rpr MillE GearBx &Jrnls	-	-	-	-	-	-	823,176	67,000	-	890,176
13	A 0001555 221	TOL1C-Rpr MillD GearBx & Jrnl	-	-	-	-	209,887	680,288	-	-	-	890,175
14	A 0001555 047	TOL1C-Repl CT DE s	55,809	802,533	-	-	-	-	-	-	-	858,343
15	A 0001555 597	TOL1C-Rpl Coal Pipe & Elbows	-	-	-	431,663	405,100	21	-	-	-	836,784
16	A 0001555 219	TOL1C-Rpr MillB GearBx & Jrnl	-	-	-	794,263	8,128	(802)	-	-	-	801,589
17	A 0001555 213	TOL1C-Rpl Baghouse Bags 2019	-	-	-	-	380,183	321,492	-	-	-	701,676
18	A 0001555 043	TOL1C-Rpl Burner Assemblies	-	-	-	295,828	338,489	(5,620)	-	-	-	628,696
19	A 0001555 292	TOL1C-E-T1FMill Rpl Main VerSft	-	-	110,306	511,816	443	-	-	-	-	622,565
20	A 0001555 040	TOL1C-Rpl Cold APH Basket	101,244	486,606	-	-	-	-	-	-	-	587,850
21	A 0001555 357	TOL1C-Nozzleblock Modification	-	-	-	-	-	-	-	-	577,500	577,500
22	A 0001555 034	TOL1C -Rpl CT Mech Ph 2	-	625,633	(55,098)	-	-	-	-	-	-	570,535
23	A 0001555 090	TOL1C-Rpl Baghouse Bags 2017	-	-	-	332,142	232,272	(896)	-	-	-	563,518
24	A 0001555 500 001 020	TOL1C-Rpl CT Partition Walls	-	-	-	-	544,248	-	-	-	-	544,248
25	A 0001555 035	TOL1C -Rpl CT Mech Ph 3	-	444,020	18,188	-	-	-	-	-	-	462,208
26	A 0001555 029	TOL1C-Rpl Burner Ignitors	29,751	364,927	-	-	-	-	-	-	-	394,679
27	A 0001555 344	TOL1C-Install Mercury Monitor	302,365	40,280	-	-	-	-	-	-	-	342,644
28	A 0001555 421	TOL1C-Rpl TK02 oil circuit brea	-	-	-	-	-	-	342,000	-	-	342,000
29	A 0001555 366	TOL1C-T1 #1FWH valves	-	-	-	13,270	318,908	1,949	-	-	-	334,127
30	A 0001555 422	TOL1C-Rpl UPS Inverters	-	-	-	-	-	-	267,763	-	-	267,763
31	A 0001555 285	TOL1C- E-Rpl ACW Pipe	-	-	262,744	360	-	-	-	-	-	-
32	A 0001555 500 001 038	TOL1C-Rpl Mill C Shaft	-	-	-	-	-	256,418	-	-	-	256,418

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Tolk **Unit:** 1

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
33	A 0001555 077	TOL1C - Inst PA Fan LubOil Pkg	-	254,186	-	-	-	-	-	-	-	254,186
34	A 0001555 202	TOL1C-Rpl Main CircExp Joints	728	247,360	-	-	-	-	-	-	-	248,089
35	A 0001643 002	TOL1C-Install ACI	170,493	59,827	-	-	-	-	-	-	-	230,320
36	A 0001555 083	TOL1C -Rpl Diesel Gen Controls	103,527	126,359	-	2	-	-	-	-	-	229,888
37	A 0001555 306	TOL1C-CEMS Upgrade	-	-	-	219,208	-	-	-	-	-	219,208
38	A 0001555 274	TOL1C-Rpl ControlStg TrbBlds	-	210,654	-	-	-	-	-	-	-	210,654
39	A 0001555 189	TOL1C-Upgrade Lab Sample Sys	-	66,727	138,473	-	-	-	-	-	-	205,200
40	A 0001555 263	TOL1C-Rbld Mill D Grind Sect	-	-	-	-	-	-	-	-	200,000	200,000
41	A 0001555 500 001 012	TOL1C-Rpl MDBFP DischargeVlv	-	-	-	2,407	191,755	(1,020)	-	-	-	193,142
42	A 0001555 595	TOL1C-Cooling Tower Bypass	-	-	-	61,946	122,862	-	-	-	-	184,808
43	A 0001555 288	TOL1C-E-Rewind S Circulating WtrPmp	-	-	182,624	-	-	-	-	-	-	182,624
44	A 0001555 254	TOL1C-Rpl SSC Chain 2018	-	-	-	-	165,183	374	-	-	-	165,557
45	A 0001555 500 001 013	TOL1C-Rpl Boiler Frt Elevator	-	-	-	123,122	32,822	-	-	-	-	155,943
46	A 0001555 594	TOL1C-Int Online Vib Mntr Sys	-	-	-	60,615	71,726	2,349	-	-	-	134,689
47	A 0001555 596	TOL1C-Rpl Lab Sample System	-	-	-	104,146	20,243	-	-	-	-	124,389
48	A 0001555 272	TOL1C-Rpl Coal Flow Cntr Vlvs	-	120,816	-	-	-	-	-	-	-	120,816
49	A 0001555 500 001 017	TOL1C- Rpl West Main Stm Sfty	-	-	-	120,613	(3,768)	-	-	-	-	116,845
50	A 0001555 500 001 016	TOL1C-Rpl BlrDrm E Center Sfty	-	-	-	83,797	24,927	-	-	-	-	108,724
51	A 0001555 239	TOL1C-Replace SSC Chain	-	107,443	-	-	-	-	-	-	-	107,443
52	A 0001555 241	TOL1C-Rpl GSU XFMR HV Bushing	-	107,204	-	-	-	-	-	-	-	107,204
53	A 0001555 358	TOL1C-RPL Boiler Sump Line	-	-	-	55,967	51,547	(469)	-	-	-	107,045
54	A 0001555 199	TOL1C-Rpl TripperSmp Dsch Line	-	105,563	1,137	-	-	-	-	-	-	106,701
55	A 0001555 500 001 019	TOL1C-Rwd W Blr Circ Pmp Mtr	-	-	-	-	105,776	-	-	-	-	105,776
56	N/A	Other Capital Projects	104,968	161,871	174,720	44,332	120,519	179,188	88,200	170,734	18,500	1,063,031
57		**Totals**	$ 3,142,921	$ 9,714,103	$ 1,493,787	$ 5,510,249	$ 6,290,573	$ 3,442,370	$ 9,586,260	$ 614,743	$ 3,795,999	$ 43,327,901

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Tolk **Unit:** 2

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
1	A 0001598 002	TOL2C-Synchronous Condenser	$ -	$ -	$ -	$ -	$ 300,090	$ 1,865,062	$ 6,181,598	$ 377,009	$ -	$ 8,723,759
2	A 0001555 369	TOL2C-Nozzleblock Modification	-	-	557,785	1,979,414	-	-	-	-	-	2,537,200
3	A 0001555 500 001 022	TOL2C- Rewind Generator Rotor	-	-	-	-	2,354,222	-	-	-	-	2,354,222
4	11338487	TOL2C-Replace RH Pendants	2,322,153	-	-	-	-	-	-	-	-	2,322,153
5	11567088	TOL2C-Install NOX Reduction Pr	2,263,899	-	-	-	-	-	-	-	-	2,263,899
6	11338489	TOL2C-Replace Bull Nose	2,253,293	-	-	-	-	-	-	-	-	2,253,293
7	A 0001555 269	TOL2C-Rp RHOutletTerminalTbs	-	-	76,212	1,932,690	-	-	-	-	-	2,008,902
8	A 0001555 296	TOL2C-Rpl Main Pwr Transformer	-	-	-	-	1,996,897	(109,175)	-	-	-	1,887,722
9	A 0001555 091	TOL2C-Rpl Baghouse Bags 2017	-	-	114,257	1,357,307	-	-	-	-	-	1,471,564
10	A 0001555 226	TOL2C-Rpl Mill E Gearbx & Jour	-	-	-	-	1,056,084	213,775	-	-	-	1,269,859
11	A 0001555 261	TOL2C-UpgDCSOprStn& CntrlProc	-	-	513,616	440,603	-	-	-	-	-	954,219
12	A 0001555 224	TOL2C-Rpr MillF GearBx & Journ	-	-	-	-	-	450,000	450,000	-	-	900,000
13	A 0001555 220	TOL2C-Rpr MillA GearBx Journal	-	(75)	830,652	-	-	-	-	-	-	830,577
14	A 0001555 373	TOL2C-Rpl coal elbows mill E n F	-	-	238,800	576,049	-	-	-	-	-	814,849
15	A 0001555 258	TOL2C-Rbld T2 Mill B Gearbox	-	-	-	-	-	-	790,000	10,000	-	800,000
16	A 0001555 021	TOL2C - Repl Cold APH Bskts	-	-	265,987	449,449	-	-	-	-	-	715,436
17	A 0001555 222	TOL2C-Rpl MillC GearBx & Journ	-	-	106,083	566,593	20,876	-	-	-	-	693,552
18	A 0001555 372	TOL2C-T2 Burners 2017	-	-	1,519	666,132	-	-	-	-	-	667,651
19	A 0001555 092	TOL2C-Rpl Baghouse Bags 2016	-	-	659,430	-	-	-	-	-	-	659,430
20	A 0001555 190	TOL2C -Rpl CT Mech PH 2	-	-	655,269	-	-	-	-	-	-	655,269
21	11797588	TOL2C-Mill MajorMajor OVH 14	641,539	-	-	-	-	-	-	-	-	641,539
22	A 0001555 089	TOL2C-Rpl Baghouse Bags 2018	-	-	-	-	597,231	-	-	-	-	597,231
23	A 0001555 033	TOL2C -Rpl CT Mech PH 3	-	-	234,715	339,160	-	-	-	-	-	573,874
24	A 0001555 379	TOL2C-T2 Burners 2020	-	-	-	-	-	-	518,000	-	-	518,000
25	11958273	TOL2C-Replace SSC Trough	493,701	-	-	-	-	-	-	-	-	493,701
26	A 0001555 345	TOL2C-Install Mercury Monitor	338,776	132,059	-	-	-	-	-	-	-	470,836
27	A 0001555 232	TOL2C-Rpl W HPBP Pump	-	-	122,670	320,856	-	-	-	-	-	443,526
28	11646800	TOL2C-Inst Tubine OS Protect	405,053	-	-	-	-	-	-	-	-	405,053
29	A 0001555 136	TOL2C-Rpl Diesel Gen Controls	-	-	-	-	-	-	385,582	-	-	385,582
30	A 0001555 428	TOL2C-Rpl TK32 oil circuit brea	-	-	-	-	-	-	350,000	-	-	350,000
31	A 0001555 368	TOL2C-Rpl cntrl stg blades	-	-	33,623	309,686	-	-	-	-	-	343,309
32	A 0001555 500 001 024	TOL2C-Gen Stator Rewedge	-	-	-	-	293,947	-	-	-	-	293,947
33	A 0001555 429	TOL2C-Rpl UPS Inverters	-	-	-	-	-	-	262,175	-	-	262,175
34	11338488	TOL2C-Replace SSC Drive	241,971	-	-	-	-	-	-	-	-	241,971
35	11488946	TOL2C-Rpl Burner Ignitors	215,514	-	-	-	-	-	-	-	-	215,514
36	A 0001555 307	TOL2C-CEMS Upgrade	-	-	-	210,426	-	-	-	-	-	210,426
37	A 0001555 370	TOL2C-RPL Boiler Sump Line T2	-	-	-	105,253	97,126	16	-	-	-	202,395
38	A 0001555 260	TOL2C-Rpl SSC Chain 2017	-	-	-	201,873	-	-	-	-	-	201,873
39	A 0001555 268	TOL2C-Rbld Mill D Grind Sect	-	-	-	-	-	-	-	200,000	-	200,000
40	11797963	TOL2C -Rpl StmDrum Dist Header	195,291	-	-	-	-	-	-	-	-	195,291
41	11797952	TOL2C -Reline MC Exp Jnts	190,068	-	-	-	-	-	-	-	-	190,068
42	A 0001555 018	TOL2C-Rpl Blr H20 Sample Sys	-	39,505	149,526	-	-	-	-	-	-	189,031

Southwestern Public Service Company

Fossil Production Plant Capital Costs (Historical, Present, Projected)

Plant Name: Tolk **Unit:** 2

Line No.	Project Number	Project Title	Historical Year 5	Historical Year 4	Historical Year 3	Historical Year 2	Historical Year 1	Present Year 0	Projected Year 1	Projected Year 2	Projected Year 3	Total
43	A 0001555 194	TOL2C-Replace SSC Chain	-	-	-	-	-	-	170,000	-	-	170,000
44	A 0001555 412	TOL2C-Rpl Ash Silo Scale	-	-	-	-	-	40,061	129,491	-	-	169,552
45	11646802	TOL2C-TDBFP OS Protection	168,948	-	-	-	-	-	-	-	-	168,948
46	A 0001643 001	TOL2C-ACI	111,980	36,251	-	-	-	-	-	-	-	148,231
47	A 0001555 376	TOL2C-Rpl lab sample system	-	-	26,680	119,864	-	-	-	-	-	146,544
48	A 0001555 500 001 006	TOL2C-Rewind C CircPmp Mtr-22511	-	-	-	134,738	-	-	-	-	-	134,738
49	A 0001555 192	TOL2C-Rbld TD BFP Limitorque	-	-	123,612	-	-	-	-	-	-	123,612
50	A 0001555 599	TOL2C-Inst Online Vib Mntr Sys	-	-	-	-	119,981	-	-	-	-	119,981
51	12041260	TOL2C-Rpl Coal FlowControl Vlv	119,828	-	-	-	-	-	-	-	-	119,828
52	A 0001555 079	TOL2C -InstVFD Air FilterWall	86,713	32,875	-	-	-	-	-	-	-	119,588
53	A 0001555 242	TOL2C-Rpl 2C Coal Mill Bowl	-	118,356	-	-	-	-	-	-	-	118,356
54	A 0001555 235	TOL2C-Rpl2BBullRing ExtVaneWhl	116,689	1	-	-	-	-	-	-	-	116,690
55	A 0001555 293	TOL2C-Rpl TDBFP DischVlvInternals	-	-	1,576	111,397	-	-	-	-	-	112,973
56	A 0001555 295	TOL2C-E-Rpl HPBP Hdr 22278	-	-	-	109,633	-	-	-	-	-	109,633
57	A 0001555 500 001 005	TOL2C-Rewind W CircPmp Mtr-22512	-	-	-	107,609	-	-	-	-	-	107,609
58	A 0001555 200	TOL2C-Rpl TripperSmp Dsch Line	-	105,091	1,764	-	-	-	-	-	-	106,855
59	A 0001555 294	TOL2C-E-Rpl MDBFP Disch Vlv	-	-	-	101,155	-	-	-	-	-	101,155
60	N/A	Other Capital Projects	416,088	87,541	139,898	268,304	118,453	(39)	-	100,734	-	1,130,978
61		**Totals**	**$ 10,581,504**	**$ 551,605**	**$ 4,853,675**	**$ 10,408,189**	**$ 6,954,907**	**$ 2,459,700**	**$ 9,236,846**	**$ 687,743**	**$ -**	**$ 45,734,169**

Southwestern Public Service Company

Nuclear Unit Outage

Schedules:

H-6.1		Nuclear Unit Outage
	H-6.1a	Nuclear Unit Outage History
	H-6.1b	Nuclear Unit Outage Data
	H-6.1c	Nuclear Unit Outage Planning

The H-6.1 schedules are not applicable to Southwestern Public Service Company ("SPS") because SPS does not own or operate nuclear facilities.

Southwestern Public Service Company

Fossil Unit Forced Outage History

Line No.	Unit Name	Date Started	Date Completed	Outage Duration (Hours)	Reason For Outage	Event Type
1	Cunningham 1	7-Jul-2018	7-Jul-2018	1 12	**Deaerator (including level control)** Deaerator level went high Operator manually tripped unit for protection	U1
2	Cunningham 1	9-Aug-2018	14-Aug-2018	137 93	**Economizer** Repair economizer tube leak	U1
3	Cunningham 1	10-Sep-2018	24-Sep-2018	323 00	**Primary air flow instrumentation** Air flow pressure switch failed	SF
4	Cunningham 1	16-Dec-2018	23-Dec-2018	155 25	**Drum relief/safety valves (Single drum only)** Repair safety relief valves, replace south drum vent valves, replace north superheat cross over link vent valves	MO
5	Cunningham 1	4-Feb-2019	8-Feb-2019	103 25	**Heater drain pumps** Work on High Pressure drains pump, Air Preheater Oil, Air Preheater motor, condensate pump breaker, and other electric needs	MO
6	Cunningham 2	8-Jul-2018	8-Jul-2018	2 75	**Burner instruments and controls (except light-off)** Burner fuel pressure high	U1
7	Cunningham 2	8-Jul-2018	11-Jul-2018	71 25	**Turbine trip devices (including instruments)** Turbine did not trip after the generator tripped	U1
8	Cunningham 2	24-Jul-2018	26-Jul-2018	35 00	**Turbine trip devices (including instruments)** Inspect turbine trip mechanism	U2
9	Cunningham 2	3-Oct-2018	13-Oct-2018	242 85	**Waterwall (Furnace wall)** Water wall tube leak in furnace	U1
10	Cunningham 2	1-Dec-2018	2-Dec-2018	22 82	**Distributive Control System (DCS) - process computer** Distributive Control System computer control processor failure Replaced control processor	U1
11	Cunningham 2	6-Dec-2018	14-Dec-2018	181 25	**Waterwall (Furnace wall)** Boiler Tube Rupture that caused Cunningham 2 to come offline	U1
12	Cunningham 2	4-Jan-2019	23-Jan-2019	466 48	**Waterwall (Furnace wall)** Boiler water wall tube leak	U1
13	Cunningham 2	25-Jan-2019	25-Jan-2019	0 25	**Burner management system** High burner pressure caused unit to trip	U1
14	Cunningham 2	25-Jan-2019	25-Jan-2019	0 12	**Operating procedure error** Operator green flagged switch instead of red flagging switch	U1
15	Cunningham 2	25-Jan-2019	25-Jan-2019	0 12	**Operating procedure error** Operator green flagged switch instead of red flagging switch	U1
16	Cunningham 2	4-Feb-2019	4-Feb-2019	2 28	**Other miscellaneous boiler air and gas system problems** Broken pipe nipple on fuel gas system	U1
17	Cunningham 2	10-Feb-2019	17-Feb-2019	170 43	**Waterwall (Furnace wall)** Waterwall tube leak	U1
18	Cunningham 2	2-Mar-2019	15-Mar-2019	326 77	**Waterwall (Furnace wall)** Boiler tube leak in furnace section	U1
19	Cunningham 2	17-Mar-2019	April 8 2019	538 63	**Waterwall (Furnace wall)** Boiler Tube leak	U1
20	Cunningham 3	7-Apr-2018	7-Apr-2018	0 48	**Other exciter problems** Field Breaker did not close	SF
21	Cunningham 3	7-Apr-2018	7-Apr-2018	1 52	**Blade Path Temperature Spread B** Stopped per supervisor for slow acceleration	SF
22	Cunningham 3	7-Apr-2018	7-Apr-2018	3 00	**Blade Path Temperature Spread A** Blade path temperature tripped unit	SF
23	Cunningham 3	7-Apr-2018	7-Apr-2018	1 45	**Blade Path Temperature Spread A** Blade path temperature tripped unit	U1
24	Cunningham 3	7-Apr-2018	9-Apr-2018	50 87	**Blade Path Temperature Spread A** Blade path temperature tripped unit	U1
25	Cunningham 3	9-Apr-2018	13-Apr-2018	84 55	**Gas turbine vibration** Tripped on vibration	U1
26	Cunningham 3	13-Apr-2018	13-Apr-2018	8 38	**Inlet air vanes / nozzles** Low air flow	U1

Southwestern Public Service Company

Fossil Unit Forced Outage History

Line No.	Unit Name	Date Started	Date Completed	Outage Duration (Hours)	Reason For Outage	Event Type
27	Cunningham 3	13-Apr-2018	13-Apr-2018	3.07	**Blade Path Temperature Spread A** Blade path temperature spread high	U1
28	Cunningham 3	13-Apr-2018	16-Apr-2018	65 73	**Inlet air vanes / nozzles** Low air flow	U1
29	Cunningham 3	30-Jul-2018	1-Aug-2018	51 98	**Inlet air vanes/nozzles** Repair inlet guide vanes for better air flow	MO
30	Cunningham 3	1-Aug-2018	31-Dec-2018	3,649 02	**Other inlet air problems A** Compressor damage, requires major overhaul to repair	U1
31	Cunningham 3	1-Jan-2019	21-May-2019	3,372 70	**Other inlet air problems A** Compressor damage, requires major overhaul to repair.	U1
32	Cunningham 4	26-Jul-2018	26-Jul-2018	0 57	**Lightning** Lightning tripped unit	U1
33	Cunningham 4	28-Jul-2018	28-Jul-2018	0 33	**Generator bearings and lube oil system (including thrust bearings on hydro units)** High Lube oil cause unit to trip	U1
34	Cunningham 4	3-Aug-2018	3-Aug-2018	5.57	**Inlet air vanes / nozzles** Inspect inlet guide vanes for loose hardware	MO
35	Cunningham 4	27-Aug-2018	28-Aug-2018	30 00	**Inlet air filters A** Replace inlet air filters	MO
36	Cunningham 4	28-Aug-2018	28-Aug-2018	2.83	**Turning gear and motor C** Turning gear motor failed to start	SF
37	Cunningham 4	12-Sep-2018	14-Sep-2018	54.27	**Exciter commutator and brushes** Excitation failure, brushless exciter, two diodes need to be replaced	U1
38	Cunningham 4	20-Sep-2018	20-Sep-2018	1 30	**Lube oil coolers B** Reason is oil cooler bypass stuck open, lube oil got hot, unit was shut down to fix the bypass control valve	U1
39	Cunningham 4	3-Oct-2018	3-Oct-2018	3 60	**Switchyard circuit breakers - (not outside management control)** Shut unit to add SF6 gas in L915 breaker	U1
40	Cunningham 4	24-Oct-2018	10-Dec-2018	1,127 45	**Air cooling system** Generator Cooling fan blade broke	U1
41	Cunningham 4	10-Dec-2018	11-Dec-2018	20 52	**Other cooling system problems** Unit tripped due to stator spread high bad resistance temperature detector (RTD)	U1
42	Cunningham 4	1-Jan-2019	3-Jan-2019	53 90	**Fuel piping and valves A** Main firing valve actuator failure Replaced actuator	SF
43	Cunningham 4	11-Jan-2019	11-Jan-2019	6 10	**Other Distributive Control System problems** Distributive Control System Server Cleaning to remove dust buildup	MO
44	Cunningham 4	21-Jan-2019	21-Jan-2019	4 28	**Inlet air vanes / nozzles** Inlet guide vane actuator calibration	U1
45	Cunningham 4	23-Jan-2019	23-Jan-2019	4 18	**Fuel piping and valves A** Main Firing Valve failure	SF
46	Cunningham 4	28-Jan-2019	28-Jan-2019	4 18	**Hydraulic oil system A** Replace Hydraulic System oil filters	U1
47	Cunningham 4	7-Feb-2019	7-Feb-2019	10 83	**Station Service Power Distribution System; General** Replace Uninterruptible Power Supply power source	MO
48	Cunningham 4	29-Mar-2019	2-Apr-2019	98 52	**Lube oil system - general** #5 bearing thermocouple short causing high temperature indication	U1
49	Harrington 1	16-Jun-2018	16-Jun-2018	13 18	**Waterwall (Furnace wall)** Unit was removed from line to make repairs to a water wall tube leak	U3
50	Harrington 1	20-Jun-2018	20-Jun-2018	0 23	**Generator output breaker** Unit tripped on Reverse Power	U1
51	Harrington 1	20-Jun-2018	20-Jun-2018	0 15	**Generator output breaker** Unit tripped on Reverse Power	U1
52	Harrington 1	20-Jun-2018	20-Jun-2018	0 27	**Generator output breaker** Unit tripped on reverse power	U1

Southwestern Public Service Company

Fossil Unit Forced Outage History

Line No.	Unit Name	Date Started	Date Completed	Outage Duration (Hours)	Reason For Outage	Event Type
53	Harrington 1	18-Aug-2018	23-Aug-2018	117 58	**Waterwall (Furnace wall)** Unit was removed from service to make repairs to a water wall tube failure	U1
54	Harrington 1	28-Aug-2018	28-Aug-2018	8 82	**Other feedwater system problems** Tripped on low drum level	SF
55	Harrington 1	12-Sep-2018	12-Sep-2018	17 33	**Electrostatic precipitator problems** Unit was removed from service to determine why the electrostatic precipitator problems was not performing as designed Needed to inspect the mechanicals of the electrostatic precipitator.	U2
56	Harrington 1	13-Sep-2018	15-Sep-2018	54 75	**Electrostatic precipitator problems** Cleaning the electrostatic precipitator	U1
57	Harrington 1	3-Oct-2018	3-Oct-2018	0 30	**Operator error** Unit tripped on reverse power when the boiler fuel rejected to manual when igniters were taken out of service and the turbine rejected to turbine follow and closed the governor valves	U1
58	Harrington 1	8-Oct-2018	9-Oct-2018	2 80	**Operator error** Unit tripped due to a high level in the Feed pump seal water drain vessel The valving for the steam supply to the sump pump was not valved in	U1
59	Harrington 1	25-Oct-2018	27-Oct-2018	59 50	**First superheater** Unit was removed from service to make repairs to 3 low temperature superheated tubes in the penthouse	U2
60	Harrington 1	10-Nov-2018	14-Nov-2018	83.67	**Waterwall (Furnace wall)** Unit was in a Reserved Shutdown when operations discovered a tube leak that would not allow the unit to return online without repairs	U1
61	Harrington 1	29-Dec-2018	29-Dec-2018	11 78	**CO2 analyzer problems** Unit was removed from service due to inaccurate emissions data gathering	U3
62	Harrington 1	1-Jan-2019	2-Jan-2019	36 22	**CO2 analyzer problems** Unit was removed from line due to inaccurate emissions data.	U2
63	Harrington 1	4-Jan-2019	4-Jan-2019	10 35	**Feedwater piping and supports** While in a reserved shutdown the plant changed out a main boiler feed pump recirculation check valve and a deaerator recirculation valve that would prevent a start up	MO
64	Harrington 1	8-Jan-2019	8-Jan-2019	9 60	**Main transformer** Unit missed its scheduled start up time due to generator step-up transformer cooling pump issues	SF
65	Harrington 1	15-Jan-2019	25-Jan-2019	238 80	**Main transformer** Unit was removed from service to inspect the transformer conservator tank and assess the generator step-up transformer oil A gas was discovered in the oil when gathering an oil sample	U1
66	Harrington 1	25-Jan-2019	25-Jan-2019	0 58	**Other feedwater system problems** Turbine tripped on high drum level	U1
67	Harrington 1	25-Jan-2019	25-Jan-2019	6 67	**Switchyard circuit breakers - (not outside management control)** Generator breaker tripped from trip circuit supervision and would not reclose. There was a contactor in the breaker panel that had to be replaced	U1
68	Harrington 2	3-Apr-2018	3-Apr-2018	18 08	**Headers and caps** Repair an exterior steam leak on a blind flange on # 3 High Pressure heater	MO
69	Harrington 2	29-Aug-2018	30-Aug-2018	27 40	**Other feedwater system problems** Unit was removed from service to replace a failed valve that is used for boiler circulating pump purge	U1

Southwestern Public Service Company

Fossil Unit Forced Outage History

Line No.	Unit Name	Date Started	Date Completed	Outage Duration (Hours)	Reason For Outage	Event Type
70	Harrington 2	30-Aug-2018	30-Aug-2018	0 97	**Other miscellaneous pollution control equipment problems** The unit experienced an ash clinker falling that caused a change in furnace airflow Operations removed the air and fuel for 1 hour to prevent an opacity recordable event	SF
71	Harrington 2	2-Sep-2018	2-Sep-2018	3 97	**Instrument air dryers** Unit tripped due to low instrument air pressure Operations had an air dryer fail with the backup dryer out of service The back up instrument air compressor did not auto start due to an compressor error.	U1
72	Harrington 2	8-Sep-2018	8-Sep-2018	8 72	**Maintenance personnel error** Electrician walking down and hanging Lock Out Tag Out tags went to the automatic voltage regulator on the wrong unit and clearing the power to Field Breaker 41	U1
73	Harrington 2	22-Jan-2019	23-Jan-2019	3 52	**Induced draft fan lubrication systems** Missed Scheduled start up time because the East Induced Draft fan lube oil system pressure could not be maintained due to dirty in line filters The West Forced Draft fan had the same issues	SF
74	Harrington 2	23-Jan-2019	23-Jan-2019	20 48	**Operator error** Unit was started up with the decision to not have a main circulator being in service and ruptured the low pressure Shell Diaphragm	U1
75	Harrington 2	23-Jan-2019	23-Jan-2019	2 25	**Circulating water pump motors** Unit was unable to start up because the Center and South Main circulators would not start	U1
76	Harrington 2	17-Feb-2019	17-Feb-2019	3 95	**Generator voltage control** Unit missed on line schedule due to the AVR not operating as designed	SF
77	Harrington 2	17-Feb-2019	18-Feb-2019	10 08	**Generator voltage control** Unit tripped due to a dirty contact in the AVR not showing the AVR field breaker closed	U1
78	Harrington 2	30-Mar-2019	30-Mar-2019	8 07	**Generator voltage control** Unit tripped when the generator automatic voltage regulator failed and opened the field breaker	U1
79	Harrington 3	2-Apr-2018	2-Apr-2018	0 53	**Feedwater pump/drive lube oil system** Turbine Boiler Feedpump Tripped on low oil pressure and the Startup boiler feedpump tripped on start signal causing the unit to trip.	U1
80	Harrington 3	23-Apr-2018	26-Apr-2018	75 43	**Low Pressure Extraction steam piping** Unit was removed from service to make repairs to the failed #5 feedwater heater extraction joint at the Low Pressure Turbine	U1
81	Harrington 3	9-Jun-2018	9-Jun-2018	9.38	**Feedwater valves (not feedwater regulating valve)** Unit was removed from service to make repairs to the high pressure supply motor operated block valve to the main feedpump	U3
82	Harrington 3	1-Jul-2018	1-Jul-2018	3.28	**Maintenance personnel error** Unit tripped when changes were being made to the baghouse Distributive Control System	U1
83	Harrington 3	9-Jul-2018	10-Jul-2018	20 18	**Closed cooling water pumps** Unit tripped when the South Auxiliary Cooling Water motor went to ground and tripped E bus D Bus also tripped, so all critical 480V equipment lost power	U1
84	Harrington 3	14-Aug-2018	17-Aug-2018	79 13	**Waterwall (Furnace wall)** Unit was removed from service to make repairs to a water wall tube leak.	U1
85	Harrington 3	27-Aug-2018	27-Aug-2018	5 80	**Generator voltage control** Generator voltage regulator would not go in to service	SF

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Line No.	Unit Name	Date Started	Date Completed	Outage Duration (Hours)	Reason For Outage	Event Type
86	Harrington 3	13-Dec-2018	15-Dec-2018	61 77	**Waterwall (Furnace wall)** Unit was removed from service to make repairs to a water wall tube leak.	U3
87	Harrington 3	17-Jan-2019	23-Jan-2019	131 77	**Other slag and ash removal problems A** Unit was removed from service to clear refractory and other trash from the economizer ash hoppers Inspected the cooling tower circulation system	U2
88	Jones 1	2-May-2018	2-May-2018	4 32	**Deaerator (including level control)** Loss of deaerator level, boiler feed pumps tripped and drum level tripped	U1
89	Jones 1	30-May-2018	30-May-2018	1 65	**Automatic turbine control systems - mechanical - hydraulic** Leaking electro-hydraulic fluid on the right side governor control cylinder.	U2
90	Jones 1	27-Jun-2018	27-Jun-2018	8 82	**Reheat steam relief/safety valves** Repair to a hot reheat pipe flange on the pressure relief valve	U3
91	Jones 1	1-Jul-2018	1-Jul-2018	3 43	**Reheat steam relief/safety valves** Repair to a hot reheat pipe flange on the pressure relief valve	MO
92	Jones 1	20-Aug-2018	20-Aug-2018	15 23	**High Pressure heater head leaks** Fix leak on High Pressure feedwater heater #1	MO
93	Jones 1	28-Aug-2018	28-Aug-2018	12 62	**Feedwater pump suction screens** Unit will need to come offline to clean Boiler Feed pump suction strainers	U3
94	Jones 1	19-Oct-2018	19-Oct-2018	1 32	**Generator Voltage Supply System** Voltage regulator tripping issues	SF
95	Jones 1	10-Nov-2018	11-Nov-2018	30 17	**High Pressure heater head leaks** Repair #1 High Pressure heater leak.	MO
96	Jones 1	27-Nov-2018	29-Nov-2018	62 47	**Service water piping** Installation of backflow preventer on potable water supply.	MO
97	Jones 1	16-Jan-2019	17-Jan-2019	16 42	**Convection pass wall** Repair 7th floor backpass casing	U3
98	Jones 2	13-May-2018	16-May-2018	68.58	**Waterwall (Furnace wall)** Waterwall tube leaks in B & D corners	U1
99	Jones 2	27-Jun-2018	27-Jun-2018	2 07	**Generator output breaker** Generator breaker would not operate - could not get online	SF
100	Jones 2	8-Aug-2018	11-Aug-2018	88 42	**Light-off (igniter) systems (including fuel supply)** Gas firing valve failure	SF
101	Jones 2	15-Aug-2018	16-Aug-2018	32 37	**Gas burner piping and valves** Gas firing valve control issues	U1
102	Jones 2	30-Aug-2018	31-Aug-2018	40 25	**Circulating water piping** Leak in main circulating water piping	U3
103	Jones 2	14-Sep-2018	14-Sep-2018	5 98	**Station Service Power Distribution System; General** Loss of control power on normal source transformer breaker	U1
104	Jones 2	14-Sep-2018	14-Sep-2018	1 98	**Station Service Power Distribution System; General** Normal source transformer differential 86N relay Normal source transformer blew out oil	SF
105	Jones 2	8-Oct-2018	11-Oct-2018	84 17	**4160-volt transformers** Removal of normal source transformer	MO
106	Jones 2	26-Oct-2018	26-Oct-2018	4 45	**Other miscellaneous boiler air and gas system problems** Main gas pressure transmitter faulted, which showed low flow of gas This caused the main gas firing valve to fully open This altered fuel to air ratios which caused the unit to trip	U1
107	Jones 2	27-Nov-2018	29-Nov-2018	61 28	**Service water piping** Installation of backflow preventer on potable water supply	MO

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Line No.	Unit Name	Date Started	Date Completed	Outage Duration (Hours)	Reason For Outage	Event Type
108	Jones 2	7-Jan-2019	8-Jan-2019	28 53	**Hydraulic system pipes and valves** Left side governor valve actuator electro-hydraulic leak	U1
109	Jones 3	13-Apr-2018	13-Apr-2018	2 67	**Other miscellaneous gas turbine problems** Gas orifice plate maintenance	MO
110	Jones 3	4-May-2018	4-May-2018	6.12	**Computer** Maintenance to perform a waterwash	MO
111	Jones 3	1-Jul-2018	1-Jul-2018	0.28	**Blade Path Temperature Spread A** Startup failure due to blade path temperature spread	SF
112	Jones 3	1-Aug-2018	1-Aug-2018	5 60	**Other exciter problems** Startup failure due to no differential pressure signal on exciter blower	SF
113	Jones 3	12-Sep-2018	12-Sep-2018	3 18	**Compressor Washing** Compressor water wash	MO
114	Jones 3	24-Sep-2018	29-Sep-2018	130 75	**Lack of fuel (coal mines; gas lines; etc.) where the operator is not in control of contracts; supply lines; or delivery of fuels** Install pig launcher/receiver barrel on Red River gas line	MO
115	Jones 3	1-Oct-2018	1-Oct-2018	6 65	**Lack of fuel (coal mines; gas lines; etc.) where the operator is not in control of contracts; supply lines; or delivery of fuels** Install pig launcher/receiver barrel on Red River gas line	MO
116	Jones 3	2-Oct-2018	2-Oct-2018	3 70	**Lack of fuel (coal mines; gas lines; etc.) where the operator is not in control of contracts; supply lines; or delivery of fuels** Install pig launcher/receiver barrel on Red River gas line.	MO
117	Jones 3	4-Oct-2018	4-Oct-2018	0 30	**Other exciter problems** Auto unload due to both collector fans failing	U1
118	Jones 3	14-Jan-2019	14-Jan-2019	1 70	**Hydraulic oil system A** Replace filters in control oil system	MO
119	Jones 3	4-Feb-2019	6-Feb-2019	52 48	**Other stack or exhaust emissions testing - gas turbine** Emissions Permit Compliance	U1
120	Jones 4	8-Apr-2018	28-Apr-2018	491 00	**Fire detection and extinguishing system B** FM 200 discharged, awaiting refill to ensure fire protection	U1
121	Jones 4	1-May-2018	1-May-2018	0 33	**Inlet air vanes / nozzles** Variable guide vanes failure	U1
122	Jones 4	4-May-2018	4-May-2018	6 60	**Computer** Computer Maintenance - waterwash	MO
123	Jones 4	6-Aug-2018	7-Aug-2018	30 05	**Pilot fuel piping and valves A** Repair Gas Separator Leak	U1
124	Jones 4	12-Sep-2018	12-Sep-2018	4 53	**Compressor Washing** Compressor water wash	MO
125	Jones 4	24-Sep-2018	29-Sep-2018	130 75	**Lack of fuel (coal mines; gas lines; etc.) where the operator is not in control of contracts; supply lines; or delivery of fuels** Install pig launcher/receiver on Red River gas line	MO
126	Jones 4	16-Oct-2018	16-Oct-2018	10 50	**Starting system (including motor) A** Static frequency converter relay would not close	SF
127	Jones 4	27-Oct-2018	27-Oct-2018	0 98	**Other exciter problems** Collector blower failure #1	SF
128	Jones 4	28-Nov-2018	28-Nov-2018	2 15	**Nitrogen Oxide (NOx) stack emissions (gas turbine)** Offline due to Nitrogen Oxide (NOx) emissions	U1
129	Jones 4	3-Dec-2018	3-Dec-2018	6 02	**Nitrogen Oxide(NOx) stack emissions (gas turbine)** Offline due to Nitrogen Oxide (NOx) emissions	U1

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Line No.	Unit Name	Date Started	Date Completed	Outage Duration (Hours)	Reason For Outage	Event Type
130	Jones 4	18-Jan-2019	18-Jan-2019	2 98	**Exhaust Stack** Outage to inspect exhaust section for loose matenal.	U1
131	Jones 4	9-Feb-2019	9-Feb-2019	1 85	**Exhaust Stack** Outage to inspect exhaust section for loose matenal	U1
132	Maddox 1	16-Apr-2018	17-Apr-2018	26 15	**High pressure heater tube leaks** Hıgh Pressure feedwater heater Tube Leaks & Gas Valve Repairs	MO
133	Maddox 1	8-Sep-2018	8-Sep-2018	1 15	**Boiler drum gage glasses/level indicator** Tripped on Startup due to high drum level	U1
134	Maddox 1	21-Sep-2018	22-Dec-2018	2,205 63	**Casing** Hot Reheat header seal box skin leak	U1
135	Maddox 1	28-Jan-2019	28-Jan-2019	0.68	**Automatic turbine control systems - digital control and monitoring** Reverse Power took unit back off line	U1
136	Maddox 1	26-Feb-2019	26-Feb-2019	6 27	**Black Start testing** Black Plant 5 year and 3 year test, EOP-005	MO
137	Maddox 2	7-Apr-2018	7-Apr-2018	7 70	**Generator bearings and lube oil system (including thrust bearings on hydro units)** Online Trip, Oil cooler trouble shooting	U1
138	Maddox 2	13-Apr-2018	14-Apr-2018	16 97	**SCR Nitrogen Oxide (NOx) Injection grid piping/valves** Nitrogen Oxide (NOx) Water Injection Low Flow Alarm	U1
139	Maddox 2	16-Apr-2018	16-Apr-2018	8 85	**Gas fuel system A** Main Pinnacle Gas Valve Repairs	MO
140	Maddox 2	16-Apr-2018	18-Apr-2018	49 92	**Lube oil system - general** AC Lube Oil Pump Fails to Start	SF
141	Maddox 2	23-Apr-2018	23-Apr-2018	2 37	**Other instrument air problems** Online Trip Loss of instrument Air	U1
142	Maddox 2	29-Apr-2018	29-Apr-2018	1 05	**Starting system (including motor) A** Startup Failure	SF
143	Maddox 2	30-Apr-2018	1-May-2018	28 88	**Starting system (including motor) A** Startup Failure	SF
144	Maddox 2	3-May-2018	3-May-2018	17 28	**Starting system (including motor) A** Offline Starting Motor Failure Alarm, Trouble shooting.	U1
145	Maddox 2	23-May-2018	24-May-2018	19 78	**Gas turbine vibration** Online Trip, Vibration Hardware Failure, #1 Bring Hardware Failure	U1
146	Maddox 2	24-May-2018	26-May-2018	60 78	**Pilot fuel piping and valves A** Ignition Failure, Low Fuel Pressure at Ignition	U1
147	Maddox 2	13-Jun-2018	13-Jun-2018	1 67	**Inlet air vanes / nozzles** Inlet Guide Vane Failure	U1
148	Maddox 2	25-Jun-2018	28-Jun-2018	83 68	**4160-volt insulators** Change fuse holders and fuses	MO
149	Maddox 2	10-Jul-2018	10-Jul-2018	1 40	**Fire protection system instrumentation and controls** #5 Bearing Fire System Trip	U1
150	Maddox 2	12-Jul-2018	13-Jul-2018	16 85	**Ignition system A** Ignitor failed and was replaced with a new ignitor	U1
151	Maddox 2	14-Jul-2018	17-Jul-2018	65 63	**Generator output breaker** Generator breaker trip coil failed	U1
152	Maddox 2	30-Aug-2018	30-Aug-2018	3 83	**Powerhouse heating and ventilating systems** Replace roof exhauster motor	MO
153	Maddox 2	15-Sep-2018	15-Sep-2018	4 47	**Lube oil pumps B** Lube oil pump coupling broke. Replaced coupling	U1
154	Maddox 2	10-Nov-2018	10-Nov-2018	3 48	**Water Injection System (Gas Turbine)** Water Injection line leaking, replaced line	U1

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Line No.	Unit Name	Date Started	Date Completed	Outage Duration (Hours)	Reason For Outage	Event Type
155	Maddox 2	22-Nov-2018	6-Dec-2018	335 87	**Generator output breaker** Maddox 2 interposing relay between Distributive Control System and 52G generator breaker failed Specifically this is labeled as "Auxiliary breaker trip relay"	U1
156	Maddox 2	14-Dec-2018	14-Dec-2018	1 70	**Blade Path Temperature Spread A** Trip due to blade path temperature spread	U1
157	Maddox 2	23-Dec-2018	23-Dec-2018	0.85	**Gas turbine vibration** Vibration hardware tripped Maddox 2, reset and restarted Maddox 2	U1
158	Maddox 2	19-Feb-2019	19-Feb-2019	1 10	**High pressure compressor bleed valves** Bleed Valve issue	U1
159	Maddox 2	26-Feb-2019	26-Feb-2019	6 27	**Black Start testing** Black Plant 5 year and 3 year test, EOP-005	MO
160	Maddox 2	26-Feb-2019	28-Feb-2019	43 97	**Turning gear and motor C** After black plant testing Maddox 2 was switched back from "black" to normal power. During this time Maddox 2 was not on turning gear but was hot Maddox 2 needs 48 hours of turning gear time before it should be available again	U1
161	Maddox 2	28-Feb-2019	19-Mar-2019	455 80	**Turning gear and motor C** Turning Gear Motor failed Motor needs rewind	U1
162	Maddox 2	19-Mar-2018	19-Mar-2019	1 32	**High pressure compressor bleed valves** Bleed valve failed on startup	U1
163	Maddox 3	27-Nov-2018	28-Nov-2018	24 60	**Fuel piping and valves A** MA Constraint# 21779 replace gas valve	MO
164	Maddox 3	18-Jan-2019	18-Jan-2019	0 70	**Turning gear and motor C** Blown fuse on Turning Gear Hand/Off/Auto switch	U1
165	Maddox 3	6-Feb-2019	6-Feb-2019	1 45	**Generator voltage control** Attempt to restart for over speed testing Voltage regulator caused field breaker to trip after generator breaker opens, field breaker won't reset	SF
166	Maddox 3	6-Feb-2019	7-Feb-2019	25 13	**Generator voltage control** Voltage regulator caused field breaker to trip after generator breaker opens, field breaker won't reset	U1
167	Maddox 3	8-Feb-2019	8-Feb-2019	5 47	**Generator voltage control** Voltage regulator caused field breaker to trip after generator breaker opens, field breaker won't reset	SF
168	Maddox 3	13-Feb-2019	14-Feb-2019	32 75	**Gas Turbine Control System - logic problems** Replace Speed probe	MO
169	Maddox 3	26-Feb-2019	26-Feb-2019	6 27	**Black Start testing** 5 year and 3 year black plant testing, EOP-005	MO
170	Nichols 1	2-Apr-2018	4-Apr-2018	61 48	**Forced draft fan motors** The rewound North Forced Draft Fan motor is being reinstalled Leak on liquid level transmitter on the deaerator is being repaired	MO
171	Nichols 1	6-Sep-2018	6-Sep-2018	13 00	**Economizer** Leak in economizer header inlet tubes was repaired	MO
172	Nichols 1	14-Sep-2018	14-Sep-2018	18 37	**Other main steam valves (including vent and drain valves but not including the turbine stop valves) A** Turbine stop valves before seat drain line sprung a leak during startup operations Compromised pipe and valve were replaced	SF
173	Nichols 1	28-Sep-2018	4-Oct-2018	147.33	**Generator voltage control** Unit entered into immediate outage due to loss of Automatic Voltage Regulator and inability to manually control machine voltage	U1
174	Nichols 1	14-Nov-2018	14-Nov-2018	8 13	**Generator voltage control** Unit was in a maintenance outage to repair the voltage regulator	MO

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Line No.	Unit Name	Date Started	Date Completed	Outage Duration (Hours)	Reason For Outage	Event Type
175	Nichols 1	10-Dec-2018	12-Dec-2018	37.47	**Economizer piping** Unit was in a maintenance outage to repair an economizer tube leak	MO
176	Nichols 1	17-Dec-2018	21-Dec-2018	104.52	**12kV circuit breakers** Unit was in a maintenance outage for substation work on B903 The breaker needed to be worked to allow easier operation	MO
177	Nichols 1	27-Feb-2019	27-Feb-2019	14.07	**Economizer** Nichols 1 unit was in a maintenance outage to repair a economizer tube leak	MO
178	Nichols 2	18-Apr-2018	19-Apr-2018	24.00	**Other feedwater valves** Forced outage was taken in preparation for replacing the deaerator Drain Valve and #1 feedwater heater Air Vent Orifice.	U1
179	Nichols 2	19-Apr-2018	20-Apr-2018	39.50	**Other feedwater valves** Outage taken to replace deaerator Drain Valve and #1 feedwater heater Air Vent Orifice	MO
180	Nichols 2	15-May-2018	16-May-2018	41.00	**Economizer** Outage taken to repair an economizer tube leak The leaky tube was repaired	MO
181	Nichols 2	13-Jun-2018	14-Jun-2018	41.77	**Air ejector piping and valves** Hogging jet block and throttle valves were replaced after throttle valve failed in the closed position	MO
182	Nichols 2	11-Aug-2018	11-Aug-2018	9.48	**Other miscellaneous piping system problems** Auxiliary Cooling Water to Generator Gas Cooler sprung a leak Outage was taken to shut Auxiliary Cooling Water supply off to repair leak	U1
183	Nichols 2	3-Dec-2018	3-Dec-2018	16.00	**Boiler safety valve test** Maintenance Outage to Repair Leaking Boiler Drum Safety	MO
184	Nichols 3	1-Jun-2018	8-Jun-2018	164.88	**Gland seal system** Steam seal regulator bypass valve and actuator, and hogging jet block valve were replaced	MO
185	Nichols 3	14-Jun-2018	15-Jun-2018	36.80	**Control valves** An electro-hydraulic leak at a fitting on the upper control valve caused the unit to be taken offline to perform repairs	U1
186	Nichols 3	27-Jul-2018	27-Jul-2018	13.65	**Circulating water piping** The south cooling water line feeding into the condenser waterbox began to leak due to severe wall thinning at the waterbox inlet flange	MO
187	Nichols 3	26-Sep-2018	26-Sep-2018	16.48	**Other boiler tube leaks** Unit brought offline for water wall tube leak	MO
188	Nichols 3	27-Dec-2018	27-Dec-2018	12.00	**Boiler safety valve test** Unit in outage to repair boiler safety	MO
189	Plant X 1	15-Apr-2018	18-Apr-2018	70.97	**Bearings C** No 1 Turbine Bearing Overheat	U1
190	Plant X 1	28-Apr-2018	8-May-2018	252.48	**Condensate makeup and return (including storage tanks)** Unit is running with a tube leak causing us to lose condensate We decided to take it off tonight to help us keep Plant X3 & Plant X4 online	U3
191	Plant X 1	17-May-2018	17-May-2018	16.23	**Condenser tube leaks** Plant X3 condenser tube leak, cannot isolate Plant X3 without X1 offline	MO
192	Plant X 1	21-May-2018	21-May-2018	6.58	**Light-off (igniter) systems (including fuel supply)** Unable to keep ignitors in during startup	SF
193	Plant X 1	21-May-2018	22-May-2018	25.00	**Operator error** Oil trip test failed	U1
194	Plant X 1	21-Jun-2018	21-Jun-2018	5.12	**Light-off (igniter) systems (including fuel supply)** Loss of boiler igniters, causing boiler trip	U1

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Line No.	Unit Name	Date Started	Date Completed	Outage Duration (Hours)	Reason For Outage	Event Type
195	Plant X 1	25-Jun-2018	25-Jun-2018	1 60	**Light-off (igniter) systems (including fuel supply)** Boiler tripped due to high ignitor header pressure	U1
196	Plant X 1	3-Jul-2018	4-Jul-2018	22 83	**Other boiler instrumentation and control problems** Appears that a field bus module (FBM) failed causing loss of boiler level indication, tripping boiler	U1
197	Plant X 1	12-Aug-2018	12-Aug-2018	3 25	**Burner instruments and controls (except light-off)** Gas Firing valve control failed.	U1
198	Plant X 1	6-Sep-2018	7-Sep-2018	15 65	**Other feedwater pump problems** East Boiler feed pump recirculation pipe failed	U1
199	Plant X 1	13-Mar-2019	13-Mar-2019	3 53	**Generator synchronization equipment** Start-up failure due to synchronization issues	SF
200	Plant X 1	22-Mar-2019	29-Mar-2019	161 50	**First superheater** Superheat Tube Leak	U1
201	Plant X 2	12-Apr-2018	15-Apr-2018	60 72	**Circulating water pump motors** Main Circulator Motor Bearing Abnormal Indication Only circulating pump for this unit	U1
202	Plant X 2	16-Apr-2018	26-Apr-2018	252 75	**Other boiler tube leaks** Unable to maintain Drum level	U1
203	Plant X 2	26-Apr-2018	30-Apr-2018	97 75	**Condensate makeup and return (including storage tanks)** Unable to produce enough condensate to maintain 3 units, 1 with tube leak and another with economizer leak	SF
204	Plant X 2	17-May-2018	17-May-2018	15 85	**Condenser tube leaks** Plant X3 has a condenser tube, cannot isolate Plant X3 without Plant X2 offline	MO
205	Plant X 2	9-Jun-2018	15-Jun-2018	144 07	**Waterwall (Furnace wall)** Unable to maintain drum level	U1
206	Plant X 2	18-Jul-2018	18-Jul-2018	11 13	**Burner instruments and controls (except light-off)** Maintenance outage to repair main gas regulator	MO
207	Plant X 2	9-Aug-2018	25-Aug-2018	384 85	**Waterwall (Furnace wall)** Boiler waterwall tube leak	U1
208	Plant X 2	5-Jan-2019	10-Jan-2019	124 17	**Other boiler tube leaks** Boiler tube leak	U1
209	Plant X 2	15-Jan-2019	7-Jun-2019	3,420 47	**Brushes and brush rigging** Generator rotor collector brushes were arcing causing the voltage regulator to act erratically	U1
210	Plant X 3	18-Apr-2018	18-Apr-2018	1 17	**12kV conductors and buses** X929 Motor operated knife switch not seated properly while closed. Knife switch connects generator to the ring buss	U1
211	Plant X 3	28-Apr-2018	30-Apr-2018	47.40	**Condensate makeup and return (including storage tanks)** Reverse Osmosis make up system failure. Unable to maintain necessary condensate level	U1
212	Plant X 3	11-May-2018	18-May-2018	157 17	**Condenser tube leaks** Suspected condenser tube leak is fouling boiler chemistry	U1
213	Plant X 3	21-May-2018	21-May-2018	2 90	**Switchyard system protection devices - external** Outage required for X929 Separation according to Transmission Work Request 909194	U1
214	Plant X 3	4-Aug-2018	24-Aug-2018	487.97	**Refractory and insulation** Maintenance Outage for boiler hotspots	MO
215	Plant X 3	30-Sep-2018	30-Sep-2018	12 00	**Economizer** Repair economizer tube leak	U1
216	Plant X 3	2-Oct-2018	3-Oct-2018	20 08	**Generator voltage control** Voltage regulator auto control failure	U1

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Line No.	Unit Name	Date Started	Date Completed	Outage Duration (Hours)	Reason For Outage	Event Type
217	Plant X 3	12-Nov-2018	14-Nov-2018	60 00	**Economizer** Economizer tube leak repair	MO
218	Plant X 3	12-Dec-2018	12-Dec-2018	0 97	**Forced draft fans** Due to loss of East Forced Draft fan	SF
219	Plant X 3	18-Dec-2018	18-Dec-2018	0 90	**Switchyard circuit breakers - external** Transmission working on X931	MO
220	Plant X 3	24-Dec-2018	24-Dec-2018	8 70	**High Pressure steam turbine thrust bearings** Turbine thrust position high trip	U1
221	Plant X 3	2-Jan-2019	2-Jan-2019	1 23	**High Pressure steam turbine thrust bearings** Turbine thrust position high trip	U1
222	Plant X 3	13-Feb-2019	16-Feb-2019	67.63	**Hydrogen seals** Generator Viscous seal inspection/repair	U1
223	Plant X 3	19-Feb-2019	28-Feb-2019	223 57	**Waterwall (Furnace wall)** Forced outage due to waterwall tube leak	U1
224	Plant X 3	28-Feb-2019	6-Mar-2019	142.53	**Switchyard circuit breakers - external** Substation outage requested for substation crew	MO
225	Plant X 3	8-Mar-2019	8-Mar-2019	4 32	**Condensate makeup and return (including storage tanks)** Excessive condensate usage, unable to make up water in the condensate tanks	U1
226	Plant X 3	9-Mar-2019	21-Mar-2019	278 90	**Waterwall (Furnace wall)** Unable to maintain drum level, waterwall tube leak	U1
227	Plant X 4	1-May-2018	1-May-2018	13 98	**Other feedwater valves** Repair a leak on feedwater check valve just before the boiler economizer inlet	MO
228	Plant X 4	19-Jun-2018	19-Jun-2018	0 55	**Light-off (igniter) systems (including fuel supply)** Unable to purge boiler due to pilots not tripped indication caused by flame rod malfunction	SF
229	Plant X 4	19-Jun-2018	20-Jun-2018	27 75	**Oil and gas fires** Fire discovered on D corner of boiler	U1
230	Plant X 4	26-Jun-2018	28-Jun-2018	45 17	**Refractory and insulation** Fire in D corner due to loss of refractory	U1
231	Plant X 4	8-Jul-2018	8-Jul-2018	2 42	**Burner instruments and controls (except light-off)** Gas Firing valve malfunction caused boiler instability issues	U1
232	Plant X 4	12-Jul-2018	13-Jul-2018	18 15	**Refractory and insulation** Hot spot on D corner, 4th floor	U1
233	Plant X 4	15-Jul-2018	15-Jul-2018	3 77	**Desuperheater/attemperator valves** Drum level trip	U1
234	Plant X 4	15-Jul-2018	16-Jul-2018	3 55	**Desuperheater/attemperator valves** Drum level trip	U1
235	Plant X 4	21-Sep-2018	7-Oct-2018	407 97	**Transmission system problems other than catastrophes (do not include switchyard problems in this category; see codes 3600 to 3629)** Substation Outage	U1
236	Plant X 4	27-Oct-2018	28-Oct-2018	16 80	**Other feedwater pump problems** Offline to repair Boiler Feed Pump packing	U1
237	Plant X 4	27-Feb-2019	27-Feb-2019	19 25	**Cooling tower booster motor** Loss of Power on the 480 Volt Bus	U1
238	Quay County 1	12-Apr-2018	16-Apr-2018	90 47	**Starting system (including motor) A** Unit tripped due to starting diesel overheating and tripping on high coolant temperature brought on by insufficient cooling	SF
239	Quay County 1	20-Dec-2018	20-Dec-2018	3 00	**Closed cooling water heat exchangers** Outage taken to replace the combustion turbine starting diesel engine radiator	MO
240	Quay County 1	28-Feb-2019	1-Mar-2019	33 00	**Auxiliary generators** Maintenance outage taken to replace starting diesel radiator	MO
241	Tolk 1	22-Apr-2018	22-Apr-2018	5 82	**Generator voltage control** B phase on generator has lower voltage coming offline to check	U1

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Line No.	Unit Name	Date Started	Date Completed	Outage Duration (Hours)	Reason For Outage	Event Type
242	Tolk 1	12-Jun-2018	12-Jun-2018	7 57	**Generator voltage control** Generator over excitation relay trip, electricians investigating exciter and voltage regulator	U1
243	Tolk 1	20-Jun-2018	23-Jun-2018	82 75	**Feedwater pump** Turbine Driven Feed Pump would not isolate online and required coming offline to allow feed pump repairs	U1
244	Tolk 1	24-Nov-2018	26-Nov-2018	37 97	**Economizer** Economizer tube leak	U1
245	Tolk 1	3-Jan-2019	9-Jan-2019	147.38	**First reheater** Boiler tube leak in the Reheat section	U2
246	Tolk 1	13-Jan-2019	18-Jan-2019	122.17	**First reheater** Boiler reheat tube inspection (Stress corrosion cracking)	MO
247	Tolk 1	5-Feb-2019	6-Feb-2019	31 65	**First reheater** Reheat tube replacement	MO
248	Tolk 1	27-Feb-2019	27-Feb-2019	1 50	**Automatic turbine control systems - digital control and monitoring** Electro-hydraulic issues - Turbine Controls- Reheat Stop Valve stuck on test lowered pressure to see if it would open Ended up with low electro-hydraulic pressure taking us offline	U1
249	Tolk 1	27-Mar-2019	30-Mar-2019	76 67	**First reheater** Repair on reheat tubes.	MO
250	Tolk 2	5-Feb-2018	26-May-2018	2,641 57	**Main transformer** Main Power transformer faulted	U1
251	Tolk 2	27-May-2018	27-May-2018	4 62	**Vibration of the turbine generator unit that cannot be attributed to a specific cause such as bearings or blades (use this code for balance moves)** Balance shots.	U1
252	Tolk 2	27-May-2018	27-May-2018	2.50	**Vibration of the turbine generator unit that cannot be attributed to a specific cause such as bearings or blades (use this code for balance moves)** Balance shots	U1
253	Tolk 2	19-Oct-2018	23-Oct-2018	95 90	**First reheater** Reheat tube leak	U1
254	Tolk 2	10-Nov-2018	10-Nov-2018	1 40	**Burner instruments and controls (except light-off)** Unit trip on flame failure	U1
255	Tolk 2	10-Nov-2018	10-Nov-2018	0 37	**Burner instruments and controls (except light-off)** Unit trip on flame failure	U1
256	Tolk 2	19-Dec-2018	19-Dec-2018	22 00	**Lack of fuel (coal mines; gas lines; etc.) where the operator is not in control of contracts; supply lines; or delivery of fuels** Gas is currently unavailable The main gas RCV (remote control valve) was closed by Xcel Gas Control Center Golden by our request Qualified team member to arrive later this afternoon to open valve	U1
257	Tolk 2	18-Mar-2019	18-Mar-2019	6 02	**Maintenance personnel error** Heat Exchangers will not isolate	SF

Note: [1]Event Type from North American Electric Reliability Company's ("NERC") Generating Availability Data System defined event types

U1 - Unplanned (Forced) Outage - Immediate
U2 - Unplanned (Forced) Outage - Delayed
U3 - Unplanned (Forced) Outage - Postponed
MO - Maintenance Outage
SF - Startup Failure

Southwestern Public Service Company

Fossil Unit Planned Outage Data

Line No.	Unit Name	Scheduled Start Date	Scheduled End Date	Scheduled Length Of Outage (Days)	Actual Start Date	Actual End Date	Actual Length Of Outage (Days)	Reason for Outage	Event Type[4]
1	Maddox 3	2-Feb-18	1-Sep-18	209	2/5/2018	9/10/2018	217.22	Combustion Major Inspection Capital: Replaced Fire Suppression, Exhaust Stack.	PO
2	Cunningham 2	12-Mar-18	1-Jun-18	82	3/12/2018	5/19/2018	68.60	All Turbine Valves, Generator, Boiler Capital. Replace Boiler Feed Pump Discharge Valve, Boiler Feed Pump Fluid Drives, Vibration Monitoring System Cooling Tower Suction Screens.	PO
3	Harrington 1	9-Apr-2018	28-Apr-2018	20	8-Apr-2018	28-Apr-2018	19.33	Mini Overhaul.	PO
4	Harrington 1	N/A[3]	N/A[3]		28-Apr-2018	28-Apr-2018	0.12	Unit tripped when swapping from the piddle valve to the #3 heater using the main feed pump for start up. The feed pump issue was original scope of work.	PO
5	Jones 4	13-May-2018	23-May-2018	11	13-May-2018	24-May-2018	10 75	Planned outage for borescope inspection, preventive maintenance and quarterly gas calibration. Capital: Replaced expansion joint.	PO
6	Harrington 2	18-May-2018	25-May-2018	8	18-May-2018	23-May-2018	5.56	Mini Overhaul.	PO
7	Cunningham 2	N/A[2]	N/A[2]		19-May-2018	19-May-2018	0 06	Post Outage Testing Turbine overspeed trip testing.	PO
8	Cunningham 2	N/A[3]	N/A[3]		20-May-2018	20-May-2018	0.39	Outage due to scope related logic modification.	PO
9	Jones 3	24-May-2018	3-Jun-2018	11	24-May-2018	1-Jun-2018	7.90	Planned outage for borescope inspection, preventive maintenance and quarterly gas calibration Capital: Replaced expansion joint.	PO
10	Harrington 2	N/A[3]	N/A[3]		25-May-2018	25-May-2018	0.12	Unit tripped on a turbine rotor position out of range and a mismatch from the probe readings.	PO

Southwestern Public Service Company

Fossil Unit Planned Outage Data

Line No.	Unit Name	Scheduled Start Date	Scheduled End Date	Scheduled Length Of Outage (Days)	Actual Start Date	Actual End Date	Actual Length Of Outage (Days)	Reason for Outage	Event Type[4]
11	Harrington 3	8-Sep-2018	6-Nov-2018	60	7-Sep-2018	4-Nov-2018	57.93	All valves, boiler, MATS (Mercury, and Air Toxics Standards) inspection. Capital· Replace economizer, air preheater baskets, cooling tower bottom structure, and upgrade distributed control system operator station.	PO
12	Plant X 4	8-Sep-2018	21-Sep-2018	14	8-Sep-2018	21-Sep-2018	13 00	Repair boiler, inspect and repair balance of plant - Boiler Feed Pump and Condensate Pump	PO
13	Maddox 3	N/A[2]	N/A[2]		10-Sep-2018	10-Sep-2018	0.02	Setting up for the overspeed test.	PO
14	Jones 4	18-Sep-2018	19-Sep-2018	2	18-Sep-2018	19-Sep-2018	1.64	Preventive Maintenance and Gas Calibration.	PO
15	Jones 3	20-Sep-2018	21-Sep-2018	2	20-Sep-2018	21-Sep-2018	1.65	Preventive Maintenance and Gas Calibration.	PO
16	Tolk 1	22-Sep-2018	14-Nov-2018	54	22-Sep-2018	14-Nov-2018	53.70	Low Pressure Turbine with/bore, Throttle Valves/Intercept Valves, Boiler, Mercury, and Air Toxics Standards inspection Capital: Replace Burner Assembly, Submerged Scraper Conveyor Chain/Trough.	PO
17	Cunningham 1	24-Sep-2018	5-Oct-2018	12	24-Sep-2018	5-Oct-2018	11.72	Main Turbine Stop Valve, Air Preheater inspection and balance of plant inspection.	PO
18	Cunningham 2	15-Oct-2018	28-Oct-2018	14	13-Oct-2018	2-Nov-2018	19.68	Inspection and repair of boiler, 480V motor control centers, boiler feed pump, air preheater and feedwater heater inspections.	PO
19	Cunningham 2	N/A[3]	N/A[3]		2-Nov-2018	26-Nov-2018	24.16	Planned Outage Extension for boiler buck stay repairs.	PE
20	Jones 3	4-Nov-2018	10-Nov-2018	7	4-Nov-2018	9-Nov-2018	5.73	Preventive Maintenance and Gas Calibration.	PO
21	Harrington 3	N/A[2]	N/A[2]		5-Nov-2018	5-Nov-2018	0.03	Unit was removed from service to perform an electrical and mechanical overspeed test.	PO

Southwestern Public Service Company

Fossil Unit Planned Outage Data

Line No.	Unit Name	Scheduled Start Date	Scheduled End Date	Scheduled Length Of Outage (Days)	Actual Start Date	Actual End Date	Actual Length Of Outage (Days)	Reason for Outage	Event Type[4]
22	Harrington 3	N/A[3]	N/A[3]		8-Nov-2018	9-Nov-2018	1.10	Unit was removed from service to clean out economizer hoppers from contractor materials left in this section after major outage tube change.	PO
23	Jones 4	11-Nov-2018	17-Nov-2018		11-Nov-2018	17-Nov-2018	6.38	Preventive Maintenance and Gas Calibration.	PO
24	Tolk 1				14-Nov-2018	14-Nov-2018	0 14	Overspeed Test of Turbine	PO
25	Tolk 1				14-Nov-2018	16-Nov-2018	1 29	Circulating Water Piping - Repair.	PE
26	Harrington 3	N/A[3]	N/A[3]		18-Nov-2018	19-Nov-2018	0.90	Unit was removed from service to clean debris out of the economizer hoppers left from the economizer retube during the major outage.	PO
27	Plant X 1	26-Nov-2018	9-Dec-2018	14	26-Nov-2018	9-Dec-2018	14.00	Replaced Boiler Analyzers, Replaced Superheat/Hot Reheat Spray Block Valve, Inspected furnace, boiler tube repairs, hot spot repair.	PO
28	Plant X 2	26-Nov-2018	9-Dec-2018	14	26-Nov-2018	9-Dec-2018	14.00	Capital: Main Steam/Hot Reheat Pipe Replacement, Generator Rewedge, XK-04 Oil Circuit Breaker replacement, Mud Drum Drain Valves.	PO
29	Plant X 3	26-Nov-2016	9-Dec-2018	14	26-Nov-2018	9-Dec-2018	14.00	Inspect boiler, boiler tube repairs, and hot spot repairs. Capital. Replace boiler analyzers, replace superheat and hot reheat spray block valves	PO
30	Cunningham 2	N/A[2]	N/A[2]		27-Nov-2018	27-Nov-2018	0 06	Post outage testing to set low speed stop, high speed stop, and perform overspeed trip.	PO
31	Jones 2	21-Jan-2019	7-Apr-2019	77	19-Jan-2019	6-Apr-2019	77 04	Generator, Reheat/Intercept/Governor Valves, Boiler, Acidizing. Capital. Replace hot reheat piping, circulating water liner, rewind exciter rotor, upgrade Foxboro Fieldbus Modules.	PO
32	Harrington 2	9-Feb-2019	16-Feb-2019	8	9-Feb-2019	15-Feb-2019	6 52	Mini Overhaul.	PO

Southwestern Public Service Company

Fossil Unit Planned Outage Data

Line No.	Unit Name	Scheduled Start Date	Scheduled End Date	Scheduled Length Of Outage (Days)	Actual Start Date	Actual End Date	Actual Length Of Outage (Days)	Reason for Outage	Event Type[4]
33	Harrington 1	23-Feb-2019	26-May-2019	93	23-Feb-2019	22-May-2019	88.69	Low Pressure Turbine with/bore, boiler feedpump turbine, all valves, boiler, Boiler, Mercury, and Air Toxics Standards inspection. Capital: Replace Foxboro Fieldbus Modules, Rebuild precipitator transformer rectifier sets, upgrade distributed control system operator station, high voltage generator bushings.	PO
34	Tolk 2	3/2/2019	3/9/2019	8	3/7/2019	3/12/2019	5.72	Grit blast finishing superheat, clean auxiliary cooling water heat exchanger, and inspect reheater.	PO
35	Jones 3	3/12/2019	3/13/2019	2	3/12/2019	3/13/2019	1 74	Preventive Maintenance and Gas Calibration.	PO
36	Jones 4	3/14/2019	3/15/2019	2	3/14/2019	3/15/2019	1.96	Preventive Maintenance and Gas Calibration.	PO
37	Plant X 4	3/30/2019	6/7/2019	70	3/30/2019			Capital. Main Steam/Hot Reheat Piping Replacement, Generator Rewedge, XK-04 Oil Circuit Breaker Replacement, Mud Drum Drain Valves.	PO

Notes:

(1) Repair work developed after the final Overhaul Schedule was published.
Repair met the North American Electric Reliability Corporation ("NERC") definition of a planned outage.
(2) Testing and Balancing performed on the unit after major overhaul.
(3) Overhaul schedule extended beyond original date.
(4) Event Type from NERC Generating Availability Data System defined event types.
PO - Planned Outage
PE - Planned Outage Extension

As discussed in the testimony of William A Grant, Southwestern Public Service Company ("SPS"), has not filed a fuel reconciliation with its current base rate case in accordance with the Order in Project No. 41905 and 16 Tex. Admin. Code ("TAC") § 25 236 as revised in that project. Therefore, fuel reconciliation data is not applicable. Additionally, SPS is not proposing a new fuel factor under 16 TAC § 25.237. Therefore, rate year data is not applicable

Southwestern Public Service Company

Fossil Unit Outage Planning

Line No.	YEAR	UNIT NAME	PROJECTED START DATE	PROJECTED LENGTH OF OUTAGE (DAYS)	REASON FOR OUTAGE
	2019				
1		Cunningham 2	[redacted]	[redacted]	Spring Mini. Outage
2		Jones 1	[redacted]	[redacted]	Mini outage, boiler casing leaks, general plant maintenance activities
3		Plant X 1	[redacted]	[redacted]	Replace basement sump piping
4		Plant X 3	[redacted]	[redacted]	Replace basement sump piping
5		Maddox 1	[redacted]	[redacted]	Spring Mini Outage
6		Jones 4	[redacted]	[redacted]	Preventive Maintenance, Gas Calibration
7		Jones 3	[redacted]	[redacted]	Preventive Maintenance, Gas Calibration, Borescope Inspection
8		Nichols 3	[redacted]	[redacted]	Nichols Mini Outage Prior to Summer 2019
9		Nichols 3	[redacted]	[redacted]	Capital: Cooling Tower and Waterbox Circulating Water Riser Piping Replacement
10		Harrington 3	[redacted]	[redacted]	Mini Overhaul
11		Jones 4	[redacted]	[redacted]	Preventive Maintenance, Gas Calibration
12		Jones 3	[redacted]	[redacted]	Preventive Maintenance, Gas Calibration
13		Nichols 1	[redacted]	[redacted]	Nichols 1 High Pressure/Intermediate Pressure Valves
14		Cunningham 2	[redacted]	[redacted]	Fall Mini Outage
15		Jones 4	[redacted]	[redacted]	Preventive Maintenance, Gas Calibration, Borescope Inspection
16		Jones 3	[redacted]	[redacted]	Preventive Maintenance, Gas Calibration, Borescope Inspection
17		Maddox 1	[redacted]	[redacted]	Fall Mini Outage
18		Plant X 3	[redacted]	[redacted]	Inspect boiler, igniters, valves, pumps, motors, cooling tower
	2020				
19		Plant X 2	[redacted]	[redacted]	Inspect boiler, igniters, valves, pumps, motors, cooling tower
20		Jones 4	[redacted]	[redacted]	Capital: Replace Hot Path
21		Harrington 2	[redacted]	[redacted]	Governor/Throttle Valves, Boiler Feed Pump Turbine, Boiler, Acidizing. Capital: Rewind Generator, Replace Furnace Slope, Radiant Reheat, Air Preheater Baskets, #5/6 Low Pressure Feedwater Heater
22		Jones 4	[redacted]	[redacted]	Preventive Maintenance, Gas Calibration, Borescope Inspection
23		Jones 3	[redacted]	[redacted]	Preventive Maintenance, Gas Calibration, Borescope Inspection
24		Cunningham 2	[redacted]	[redacted]	Capital - Circulating Water Line Replacement
25		Harrington 3	[redacted]	[redacted]	Mini Overhaul
26		Nichols 3	[redacted]	[redacted]	Mini Outage prior to summer
27		Jones 4	[redacted]	[redacted]	Preventive Maintenance, Gas Calibration
28		Jones 3	[redacted]	[redacted]	Preventive Maintenance, Gas Calibration
29		Harrington 1	[redacted]	[redacted]	Mini Overhaul

Southwestern Public Service Company

Fossil Unit Outage Planning

Line No.	YEAR	UNIT NAME	PROJECTED START DATE	PROJECTED LENGTH OF OUTAGE (DAYS)	REASON FOR OUTAGE
30		Jones 4	[redacted]	[redacted]	Preventive Maintenance, Gas calibration
31		Cunningham 4	[redacted]	[redacted]	Capital: Generator Rewind
32		Tolk 1	[redacted]	[redacted]	Capital: Install Synchronous Condenser
33		Jones 3	[redacted]	[redacted]	Preventive Maintenance, Gas Calibration
34		Plant X 4	[redacted]	[redacted]	Boiler hot spot prevention/repairs; Capital: Complete installation of Plant X 4 turbine/generator fire protection system.
35		Maddox 1	[redacted]	[redacted]	Boiler, Throttle Valves
36		Jones 4	[redacted]	[redacted]	Preventive Maintenance, Gas Calibration, Borescope Inspection
37		Tolk 2	[redacted]	[redacted]	Throttle/Intercept Valves, Boiler, Acidizing. Capital: Install Synchronous Condenser , Replace Burners, Baghouse Doors, Air Preheater Cold Baskets, Rebuild Mill B Gearbox
38		Jones 3	[redacted]	[redacted]	Preventive Maintenance, Gas Calibration, Borescope Inspection
	2021		[redacted]	[redacted]	
39		Jones 3	[redacted]	[redacted]	Capital: Replace Hot Path
40		Cunningham 2	[redacted]	[redacted]	High Pressure / Intermediate Pressure Turbine and boiler repairs
41		Nichols 3	[redacted]	[redacted]	All Valves, Boiler, Acidizing. Capital: Replace Condenser Inlet Circulating Water Pipe
42		Plant X 4	[redacted]	[redacted]	All Valves, Boiler, Acidizing. Capital: Circulating Water Structure Liner, Upgrade Distributed Control System Operator Station & Control Processor, Replace Economizer Header
43		Jones 4	[redacted]	[redacted]	Preventive Maintenance, Gas Calibration, Borescope Inspection
44		Jones 3	[redacted]	[redacted]	Preventive Maintenance, Gas Calibration, Borescope Inspection
45		Harrington 1	[redacted]	[redacted]	Mini Overhaul
46		Tolk 1	[redacted]	[redacted]	Mini Overhaul
47		Harrington 2	[redacted]	[redacted]	Mini Overhaul
48		Tolk 2	[redacted]	[redacted]	Mini Overhaul
49		Jones 4	[redacted]	[redacted]	Preventive Maintenance, Gas Calibration
50		Jones 3	[redacted]	[redacted]	Preventive Maintenance, Gas Calibration
51		Maddox 2	[redacted]	[redacted]	Major Overhaul
52		Jones 4	[redacted]	[redacted]	Preventive Maintenance, Gas Calibration
53		Jones 3	[redacted]	[redacted]	Preventive Maintenance, Gas Calibration
54		Harrington 3	[redacted]	[redacted]	High Pressure/Intermediate Pressure with bore, Throttle Valves, Boiler, Acidizing, Mercury and Air Toxics Standards (MATS). Capital: Replace Coal Pipe Orifices, Cooling Tower Acid Tank, Stations Batteries

Southwestern Public Service Company

Fossil Unit Outage Planning

Line No.	YEAR	UNIT NAME	PROJECTED START DATE	PROJECTED LENGTH OF OUTAGE (DAYS)	REASON FOR OUTAGE
55		Plant X 3	[redacted]		Inspect boiler, igniters, valves, pumps, motors, cooling tower
56		Jones 4			Preventive Maintenance, Gas Calibration, Borescope Inspection
57		Quay County			Minor Combustor Inspection
58		Jones 3			Preventive Maintenance, Gas Calibration, Borescope Inspection
	2022				
59		Tolk 1			High Pressure/Intermediate Pressure, Governor/Throttle/Reheat Stop Valves, Generator, Boiler, Acidizing, Mercury and Air Toxics Standards (MATS). Capital: Cooling Tower Film Fill, Nozzle Block Modification, Submerged Scraper Conveyor
60		Plant X 4			Mini Outage - Boiler Repairs
61		Jones 4			Preventive Maintenance, Gas Calibration, Borescope Inspection
62		Jones 3			Preventive Maintenance, Gas Calibration, Borescope Inspection
63		Harrington 2			Mini Overhaul
64		Plant X 4			Inspect boiler, igniters, valves, pumps, motors, cooling tower
65		Nichols 3			Mini Outage prior to summer
66		Harrington 3			Mini Overhaul
67		Jones 4			Preventive Maintenance, Gas Calibration
68		Jones 3			Preventive Maintenance, Gas Calibration
69		Tolk 2			Mini Overhaul
70		Jones 4			Preventive Maintenance, Gas Calibration
71		Jones 3			Preventive Maintenance, Gas Calibration
72		Harrington 1			Throttle Valves, Boiler Feed Pump, Generator, Boiler, Acidizing. Capital: Rebuild Drag Chain Conveyor, Replace Station Batts, Electrostatic Precipitator Wires
73		Plant X 3			Inspect boiler, igniters, valves, pumps, motors, cooling tower
74		Jones 4			Preventive Maintenance, Gas Calibration, Borescope Inspection
75		Jones 3			Preventive Maintenance, Gas Calibration, Borescope Inspection
	2023				
76		Jones 4			Preventive Maintenance, Gas Calibration, Borescope Inspection
77		Jones 3			Preventive Maintenance, Gas Calibration, Borescope Inspection
78		Jones1			All Valves, Boiler

Southwestern Public Service Company

Fossil Unit Outage Planning

Line No.	YEAR	UNIT NAME	PROJECTED START DATE	PROJECTED LENGTH OF OUTAGE (DAYS)	REASON FOR OUTAGE
79		Plant X 4	[redacted]		Inspect boiler, igniters, valves, pumps, motors, cooling tower
80		Harrington 3			Mini Overhaul
81		Tolk 1			Mini Overhaul
82		Harrington 1			Mini Overhaul
83		Tolk 2			Mini Overhaul
84		Nichols 3			Mini Outage prior to summer
85		Jones 4			Preventive Maintenance, Gas calibration
86		Jones 3			Preventive Maintenance, Gas calibration
87		Jones 4			Preventive Maintenance, Gas calibration
88		Jones 3			Preventive Maintenance, Gas calibration
89		Harrington 2			High Pressure/Intermediate Pressure with bore, Low Pressure with bore, Throttle/Reheat Stop/Intercept Valves, Boiler Feed Pump, Generator, Boiler
90		Plant X 3			Inspect boiler, igniters, valves, pumps, motors, cooling tower
91		Jones 4			Preventive Maintenance, Gas Calibration, Borescope Inspection
92		Jones 3			Preventive Maintenance, Gas Calibration, Borescope Inspection
93		Cunningham 4			Hot Gas Path Inspection {Continued in 2024}
	2024				
94		Cunningham 4			Hot Gas Path Inspection {Continued from 2023}
95		Plant X 4			Mini Outage - Boiler Repairs
96		Harrington 1			Mini Overhaul
97		Tolk 2			Mini Overhaul
98		Harrington 2			Mini Overhaul
99		Tolk 1			Mini Overhaul
100		Nichols 3			Mini Outage prior to summer
101		Harrington 3			Low Pressure, Valves, Generator, Boiler.
102		Quay County			Minor combustor inspection
103		Plant X 3			Mini Outage - Boiler Repairs

Overhaul Schedule as of May 1, 2019

Southwestern Public Service Company

Nuclear Unit Incremental Outage Costs

Schedule H-6.3a is not applicable to Southwestern Public Service Company ("SPS") because SPS does not own or operate nuclear facilities.

Southwestern Public Service Company

Fossil Unit Incremental Outage Costs

PLANT NAME	Cunningham		
UNIT DESIGNATION	Unit 2	**OUTAGE NUMBER**	A.0001545.987.003
ACTUAL OUTAGE START DATE	3/12/2018	**ACTUAL OUTAGE END DATE**	5/19/2018
OUTAGE DURATION (DAYS)	68		

FERC ACCOUNT NUMBER	DESCRIPTION OF ACCOUNT	ACTUAL EXPENSE
	Control Reheat Stop Valves Inspection, Generator Inspection, Boiler Inspection and Repairs, Boiler Crown Seals Replacement, Cooling Tower Inspection, Seamed Pipe Inspection, FAC Inspection, HRH Piping Abatement and Inspection, Vibration Monitoring System Installation, DCS Operation Stations Upgrade, Cooling Tower Suction Screens Replacement, Burner Tilts Replacement, BFP Fluid Drives Rebuild, BFP Discharge Valves Replacement, SH Spray Replacement	
OPERATIONS		
502	Steam expenses	$ 7,682
505	Electric expenses	2,987
MAINTENANCE		
511	Maintenance of structures	15,020
512	Maintenance of boiler plant	962,003
513	Maintenance of electric plant	78,385
	TOTAL EXPENSES	**$ 1,066,077**

Note: Outages under $500,000 are not reported.

Southwestern Public Service Company

Fossil Unit Incremental Outage Costs

PLANT NAME	Harrington		
UNIT DESIGNATION	Unit 1	**OUTAGE NUMBER**	A.0001550.982.005
ACTUAL OUTAGE START DATE	2/23/2019	**ACTUAL OUTAGE END DATE**	5/26/2019
OUTAGE DURATION (DAYS)	92		

FERC ACCOUNT NUMBER	DESCRIPTION OF ACCOUNT	ACTUAL EXPENSE
	LP Turbine Inspection, Throttle, Intercept, Reheat Stop, and Governor Valve inspection and repairs, Turbine Driven Boiler Feed Pump Inspection, Boiler Inspections and Repairs, MATS Inspections, Flow Accelerated Corrosion and Seamed Piping Inspections, Stack Inspection, Condenser Wall partial replacement, DCS Operating Controls Station Upgrade, Transmitter Upgrade, FBM Migration, DA Heater Vessel Replacement, ESP Wire Replacement, TR Sets Replacement, Startup 6900v Transformer Bushing Replacement, Generator Circuit Breaker FK10 Replacement, High Voltage Generator Bushings, Replace Inverter Batteries, Hydrogen Purity Monitor, EH Pump Replacement Project.	
OPERATIONS		
506	Miscellaneous steam power expenses	$ 9,055
MAINTENANCE		
512	Maintenance of boiler plant	1,174,096
513	Maintenance of electric plant	541,862
514	Maintenance of miscellaneous steam plant	54,848
	TOTAL EXPENSES	**$ 1,779,861**

Note: Outages under $500,000 are not reported.

Southwestern Public Service Company

Fossil Unit Incremental Outage Costs

PLANT NAME	Harrington		
UNIT DESIGNATION	Unit 3	**OUTAGE NUMBER**	A.0001550.992 004
ACTUAL OUTAGE START DATE	9/8/2018	**ACTUAL OUTAGE END DATE**	11/3/2018
OUTAGE DURATION (DAYS)	56		

FERC ACCOUNT NUMBER	DESCRIPTION OF ACCOUNT	ACTUAL EXPENSE
	Turbine Throttle, Intercept, Reheat Stop, and Governor Valve inspection and repairs, Turbine Main Oil Pump Alignment, Boiler Inspections and Repairs, MATS Inspections, Flow Accelerated Corrosion and Seamed Piping Inspections, DCS Operating Controls Station Upgrade, Cooling Tower Bottom Structure and Distribution Header Replacement, APH Hot and Cold Side Basket Replacement, ACW Heat Exchanger Re-Tube Project, Baghouse Bag Replacement of 5 Compartments, Baghouse Doors Replacement Project, Baghouse Inlet Expansion Joint Replacement, Lab Analyzers Replacement, Fly ash Vacuum Pump Replacement, EH Pump Replacement Project.	
OPERATIONS		
506	Miscellaneous steam power expenses	$ 21,336
MAINTENANCE		
512	Maintenance of boiler plant	1,472,063
513	Maintenance of electric plant	441,200
514	Maintenance of miscellaneous steam plant	68,261
	TOTAL EXPENSES	**$ 2,002,860**

Note: Outages under $500,000 are not reported.

Southwestern Public Service Company

Fossil Unit Incremental Outage Costs

PLANT NAME	Jones		
UNIT DESIGNATION	Unit 2	**OUTAGE NUMBER**	A 0001586 982.004
ACTUAL OUTAGE START DATE	1/18/2019	**ACTUAL OUTAGE END DATE**	4/11/2019
OUTAGE DURATION (DAYS)	83		

FERC ACCOUNT NUMBER	DESCRIPTION OF ACCOUNT	ACTUAL EXPENSE
	Exciter Rewind, Boiler Inspection, Generator Inspection, LP Turbine Inspection, Inspection and repairs to the Governor Reheat Stop Intercept Valves, L-1 Turbine blade replacement, Generator retaining ring inspection, Replacement of both SH and RH Header Seal Boxes, Refurbishment of the Normal Source Transformer, Replacement of the HRH Seamed Piping, Upgrade of Foxboro Field Bus Modules, Replaced Oil Circuit Breakers JK45, Replaced the Control Processors, Replaced 3051 Transformer Phase 2, Replaced the Circulating Pump Suction Hood, Replaced the Reheat Block Spray Valve, and replacement of the Circulating Pump Discharge Valve	
OPERATIONS		
505	Electric expenses	$ 5,971
506	Miscellaneous steam power expenses	9,218
MAINTENANCE		
512	Maintenance of boiler plant	202,461
513	Maintenance of electric plant	841,722
514	Maintenance of miscellaneous steam plant	17,792
	TOTAL EXPENSES	**$ 1,077,165**

Note: Outages under $500,000 are not reported.

Southwestern Public Service Company

Fossil Unit Incremental Outage Costs

PLANT NAME	Tolk		
UNIT DESIGNATION	Unit 1	**OUTAGE NUMBER**	A 0001555 987 003
ACTUAL OUTAGE START DATE	9/22/2018	**ACTUAL OUTAGE END DATE**	11/14/2018
OUTAGE DURATION (DAYS)	53		

FERC ACCOUNT NUMBER	DESCRIPTION OF ACCOUNT	ACTUAL EXPENSE
	Inspections Boiler, ID Fans, APH, MATS, DA Tanks, LP Turbines, Throttle and Intercept Valves, Generator (Crawl Through), Stack, Cooling Tower, Basin (Cleaning and Inspection), Circ Line, Bag House Fans, PA Fans, PLM inspections - FAC, Main Steam Seamed Pipe, CRH Seamed Pipe, Condenser (Recoat and inspection) Capital Projects Replace CT Partition Walls, MDBFP Discharge Valves, Rewind W Boiler Circ Pump Motor, Replace rev gas expansion joints, Replace east reverse gas fan damper, Install Online Vibration Monitoring System, Replace Burner Assemblies, Replace Coal Pipe & Elbows, Replace SSC Chain, T1 #1FWH valves, Upgrade DCS Operating Station and Controls, Install Cooling Tower Bypass	
OPERATIONS		
MAINTENANCE		
512	Maintenance of boiler plant	$ 1,743,229
513	Maintenance of electric plant	2,347,701
514	Maintenance of miscellaneous steam plant	119,601
	TOTAL EXPENSES	**$ 4,210,532**

Note: Outages under $500,000 are not reported

Southwestern Public Service Company

Company-Wide Staffing Plan

Projected Headcount - Workforce Plan Through 2029

Line No.	Location	Department	Projected Headcount YE 2019	Projected Headcount YE 2020	Projected Headcount YE 2021	Projected Headcount YE 2022	Projected Headcount YE 2023	Projected Headcount YE 2024	Projected Headcount YE 2025	Projected Headcount YE 2026	Projected Headcount YE 2027	Projected Headcount YE 2028	Projected Headcount YE 2029
1	General Manager Power Gen TX/NM	General Manager Power Gen TX/NM	4	4	4	4	4	4	4	4	4	4	4
2	Cunningham/Maddox Complex	SPS Personnel	55	55	54	53	53	52	52	46	44	44	30
3		XES Personnel	5	6	6	6	6	6	6	6	6	6	5
4	Jones Station	SPS Personnel	40	39	39	38	38	38	38	38	38	38	38
5		XES Personnel	4	4	4	4	4	4	4	4	4	4	3
6	Harrington/Nichols Complex	SPS Personnel	153	153	152	150	148	143	141	140	139	137	136
7		XES Personnel	10	9	9	9	9	9	9	9	9	9	9
8	Tolk/Plant X Complex	SPS Personnel	114	109	104	100	97	93	91	89	86	85	83
9		XES Personnel	10	9	9	9	9	9	9	9	9	9	5
10	Wind Farms	Hale	2	2	2	2	2	2	2	2	2	2	2
11		Sagamore	0	2	2	2	2	2	2	2	2	2	2
12	**Total**		**397**	**392**	**385**	**377**	**372**	**362**	**358**	**349**	**343**	**340**	**317**

Employed by Southwestern Public Service Company ("SPS"):
Control Room Operator A/B
Maintenance Personnel
Instrument & Control Technicians
Plant Engineers

Employed by Xcel Energy Service Inc. ("XES"):
Safety Consultants
Material Operations
Chemical Technologists
Financial Analysts (no longer located at plant as of 2019 due to reorganization)
Environmental Specialist

Counts show a decrease due to anticipated plant retirements

Note:

Southwestern Public Service Company

Production Plant/Unit Staffing Study

Summary - Southwestern Public Service Company Personnel
Staffing Projection: All Headcounts are as of Year End

Line No.		Projected Total Year End 2019	Projected Total Year End 2020	Projected Total Year End 2021	Projected Total Year End 2022	Projected Total Year End 2023	Projected Total Year End 2024	Projected Total Year End 2025	Projected Total Year End 2026	Projected Total Year End 2027	Projected Total Year End 2028	Projected Total Year End 2029
1	**Authorized Staffing**											
2	Gen Mgr	4	4	4	4	4	4	4	4	4	4	4
3	Cunningham / Maddox	55	55	54	53	53	52	44	44	44	44	30
4	Harrington / Nichols	159	159	158	156	154	149	147	146	145	142	142
5	Jones	41	40	40	39	39	39	34	34	34	33	33
6	Tolk / Plant X	119	114	109	105	102	98	96	94	90	89	87
7	Hale Wind Farm	2	2	2	2	2	2	2	2	2	2	2
8	Sagamore Wind Farm	-	2	2	2	2	2	2	2	2	2	2
9	**Total Authorized Staffing**	**378**	**376**	**369**	**361**	**356**	**346**	**329**	**326**	**321**	**316**	**300**
10	**Projected Retirements**											
11	Cunningham / Maddox	2	1	2	2	1	3	-	-	2	-	1
12	Harrington / Nichols	5	4	3	8	5	-	5	-	-	-	6
13	Jones	1	3	1	1	-	-	-	1	1	-	1
14	Tolk / Plant X	7	4	7	4	3	4	3	4	2	2	3
15	Hale Wind Farm	-	-	-	-	-	-	-	-	-	-	-
16	Sagamore Wind Farm	-	-	-	-	-	-	-	-	-	-	-
17	**Total Projected Retirements**	**15**	**12**	**13**	**15**	**9**	**7**	**8**	**5**	**5**	**2**	**11**
18	**Budgeted and Approved Advance Hires**											
19	Cunningham / Maddox	1	1	1	1	1	1	1	-	-	-	1
20	Harrington / Nichols	-	1	-	1	-	1	-	1	-	-	2
21	Jones	1	-	-	-	-	-	-	-	-	-	-
22	Tolk / Plant X	-	-	-	-	-	-	-	-	-	-	-
23	Hale Wind Farm	-	-	-	-	-	-	-	-	-	-	-
24	Sagamore Wind Farm	-	-	-	-	-	-	-	-	-	-	-
25	**Total Budgeted and Approved Advance Hires**	**2**	**2**	**1**	**2**	**1**	**2**	**1**	**1**	**-**	**-**	**3**

Note: This headcount only includes operators, mechanics, electricians, engineers and management personnel. Please refer to Schedule H-7.4 for a complete headcount of the facilities, including chemists, logistics, technicians, environmentalists, safety, and financial personnel

Southwestern Public Service Company

Personnel Assigned for Plant/Unit

Line No.	Employee Category	Location	2013 (YE Dec 31)	2014 (YE Dec 31)	2015 (YE Dec 31)	2016 (YE Dec 31)	2017 (YE Dec 31)	2018 (YE Dec 31)	2019 (PE Mar 31)	Primary Fuel Type
1	**Regular Benefit Employees**	Harrington Station	167	161	167	127	115	110	110	Coal
2	Energy Supply	Tolk Station	138	136	136	95	88	81	81	Coal
3		Cunningham Station	58	63	63	42	37	38	37	Gas
4		Jones Station	39	42	45	44	39	38	36	Gas
5		Maddox Station	0	0	0	19	18	19	18	Gas
6		Nichols Station	2	2	5	46	46	47	46	Gas
7		Plant X	1	3	7	40	38	37	34	Gas
		Hale Wind Farm	0	0	0	0	0	0	1	Wind
8		**Regular Benefit Employees Total**	**405**	**407**	**423**	**413**	**381**	**370**	**363**	
9	**Regular Benefit Employees**	Harrington Station	8	8	8	8	8	8	7	Coal
10	Non-Energy Supply Employees	Tolk Station	6	6	7	7	7	6	6	Coal
11		Cunningham Station	1	1	1	1	1	1	1	Gas
12		Jones Station	3	3	3	3	3	3	2	Gas
13		Maddox Station	0	0	0	0	0	0	0	Gas
14		Nichols Station	0	0	0	0	0	0	0	Gas
15		Plant X	1	1	1	1	1	1	1	Gas
		Hale Wind Farm	0	0	0	0	0	0	0	Wind
16		**Regular Benefit Employees Total**	**19**	**19**	**20**	**20**	**20**	**19**	**17**	
17	**Contract Staff**	Harrington Station	100	104	105	76	78	80	78	Coal
18	Energy Supply	Tolk Station	54	52	50	44	43	47	47	Coal
19		Cunningham Station	1	1	2	5	5	5	5	Gas
20		Jones Station	3	1	1	2	2	4	4	Gas
21		Maddox Station	0	0	0	0	0	0	0	Gas
22		Nichols Station	1	1	0	0	0	1	1	Gas
23		Plant X	3	4	5	3	3	3	3	Gas
		Hale Wind Farm	0	0	0	0	0	0	1	Wind
24		**Total Energy Supply Contract Staff**	**162**	**163**	**163**	**130**	**131**	**141**	**139**	

Notes: Nichols Station was complexed with Harrington Station in 2005
Plant X Station was complexed with Tolk Station in 2005
Maddox Station was complexed with Cunningham Station in 2005
Personnel are assigned to Plant Site/Complex rather than individual units
Includes all Energy Supply employees located at the plant(s) including employees in areas such as Technical Resources
Contract staff includes both staff augmentation and outsourcing, professional services (plus engineer and executive level), and consulting categories
Year End ("YE")
Period End ("PE")

Southwestern Public Service Company

Average Personnel Assigned

Line No.	Hist Date	Energy Supply Regular Benefit Employees									Other Personnel (Primarily Interns)
		Cunningham Station	Harrington Station	Jones Station	Maddox Station	Nichols Station	Plant X	Tolk Station	Hale Wind Farm	Total	
1	3/31/2018	38	114	37	18	44	36	87	0	374	0
2	4/30/2018	38	113	36	18	44	36	87	0	372	0
3	5/31/2018	38	111	35	18	45	35	88	0	370	4
4	6/30/2018	38	111	36	19	45	35	86	0	370	4
5	7/31/2018	38	109	37	19	45	37	83	0	368	4
6	8/31/2018	38	107	38	18	44	36	83	0	364	1
7	9/30/2018	38	107	38	18	44	36	83	0	364	1
8	10/31/2018	37	109	38	18	44	36	83	0	365	1
9	11/30/2018	38	108	38	18	45	36	83	0	366	1
10	12/31/2018	38	110	38	19	47	37	81	0	370	0
11	1/31/2019	38	108	37	18	46	35	82	0	364	1
12	2/28/2019	38	107	37	18	46	35	82	0	363	1
13	3/31/2019	37	110	36	18	46	34	81	1	363	1
14	Rate Year	37	110	36	18	46	34	81	1	363	1

Southwestern Public Service Company

Average Personnel Assigned

Line No.	Hist Date	Non-Energy Supply Regular Benefit Employees									
		Cunningham Station	Harrington Station	Jones Station	Maddox Station	Nichols Station	Plant X	Tolk Station	Hale Wind Farm	Total	Other Personnel (Primarily Interns)
1	3/31/2018	1	8	3	0	0	1	7	0	20	0
2	4/30/2018	1	8	3	0	0	1	7	0	20	0
3	5/31/2018	1	8	3	0	0	1	7	0	20	0
4	6/30/2018	1	8	3	0	0	1	7	0	20	0
5	7/31/2018	0	8	4	0	0	1	6	0	19	0
6	8/31/2018	0	8	3	0	0	1	6	0	18	0
7	9/30/2018	0	8	3	0	0	1	6	0	18	0
8	10/31/2018	1	8	3	0	0	1	6	0	19	0
9	11/30/2018	1	8	3	0	0	1	6	0	19	0
10	12/31/2018	1	8	3	0	0	1	6	0	19	0
11	1/31/2019	1	8	3	0	0	1	6	0	19	0
12	2/28/2019	1	8	3	0	0	1	6	0	19	0
13	3/31/2019	1	7	2	0	0	1	6	0	17	0
14	Rate Year	1	7	2	0	0	1	6	0	17	0

Southwestern Public Service Company

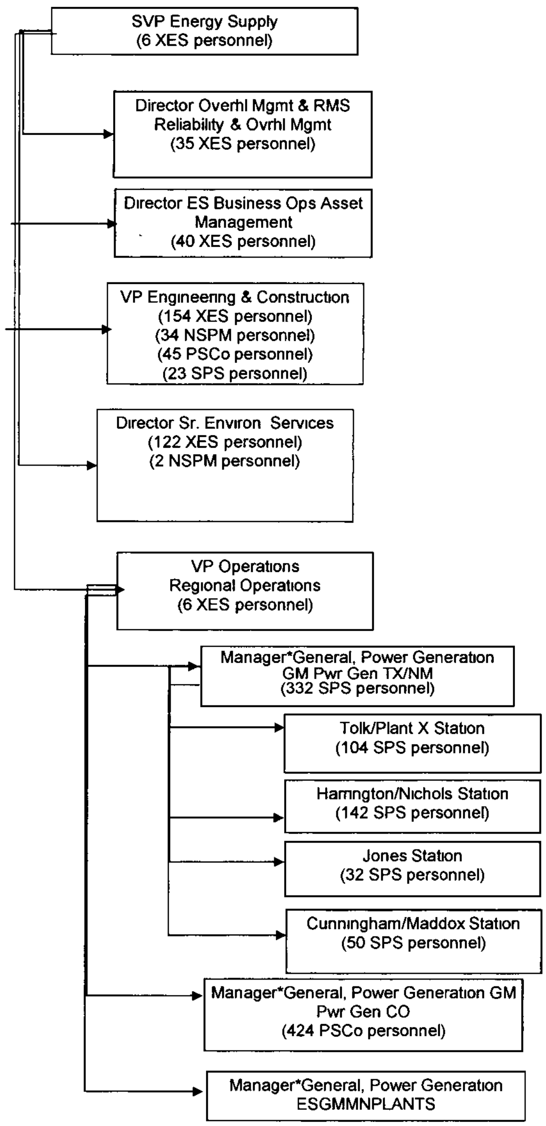
Average Personnel Assigned

Line No.	Hist Date	Energy Supply Contract Staff								
		Cunningham Station	Harrington Station	Jones Station	Maddox Station	Nichols Station	Plant X	Tolk Station	Hale Wind Farm	Total
1	3/31/2018	5	79	2	0	0	3	45	0	134
2	4/30/2018	5	79	2	0	0	3	45	0	134
3	5/31/2018	5	79	3	0	0	3	45	0	135
4	6/30/2018	4	78	3	0	0	3	45	0	133
5	7/31/2018	4	77	2	0	0	3	46	1	133
6	8/31/2018	4	78	2	0	0	3	47	1	135
7	9/30/2018	4	79	2	0	1	3	47	1	137
8	10/31/2018	4	79	2	0	1	3	47	1	137
9	11/30/2018	5	79	2	0	1	3	47	1	138
10	12/31/2018	5	80	4	0	1	3	47	1	141
11	1/31/2019	5	80	4	0	1	3	47	1	141
12	2/28/2019	5	79	4	0	1	3	47	1	140
13	3/31/2019	5	78	4	0	1	3	47	1	139
14	Rate Year	5	78	4	0	1	3	47	1	139

Notes
Nichols Station was complexed with Harrington Station in 2005
Plant X Station was complexed with Tolk Station in 2005
Maddox Station was complexed with Cunningham Station in 2005
Personnel are assigned to Plant Site/Complex rather than individual units
Includes all Energy Supply employees located at the plant(s) including employees in areas such as Technical Resources.
Contract staff includes both staff augmentation and outsourcing, professional services (plus engineer and executive level), and consulting categories
Year End ("YE")
Period End ("PE")

Southwestern Public Service Company

Production O&M Organization Charts



Acronyms:
CO - Colorado
ESGMMNPLANTS - Energy Supply General Manager Minnesota Plants
GM - General Manager
Gen - Generation
NSPM - Northern States Power Company, a Minnesota corporation
NSPW - Northern States Power Company, a Wisconsin corporation
Pwr - Power
PSCo - Public Service Company of Colorado, a Colorado corporation
SR - Senior
SPS - Southwestern Public Service Company
VP - Vice President
XES - Xcel Energy Services Inc

Southwestern Public Service Company

Production Operations Programs

Southwestern Public Service ("SPS") maintains an on-going policy of improving efficiency and determining cost-effective ways to provide savings to its customers and stockholders. Operational programs are one means of accomplishing these improvements. The following information discusses programs utilized by SPS to improve unit efficiency, operations, reliability and safety.

Safety

Safety has always been a high priority for SPS. SPS strives to supply its employees with a safe working environment and equip them with the tools and skills needed to perform their jobs safely. Formal safety meetings are held weekly, and daily safety briefs are held as needed to prepare for the day's assignments. A computerized Lockout/Tagout ("LOTO") procedure is implemented at each generating facility. This is a very structured process with checks and balances that are used to completely isolate equipment for maintenance or repair. LOTO minimizes the chances of injury to personnel or damage to equipment due to improper operation or oversight.

SPS plants have an Emergency Response Team ("ERT") that is composed of approximately 60 employees whose normal job duties are not that of the ERT. All ERT Members are trained to safely and effectively respond to five areas of discipline, including but not limited to: Medical, Fire Fighting, Rescue and Hazardous Waste Operations, Emergency Response, and Confined Space Standby.

SPS plants have a Partnership for Safety ("PFS") committee, which is dedicated to providing leadership in promoting a safe working environment for all employees at each plant facility. The PFS committees conduct activities such as:

- informing power plant personnel of safety issues and promoting safety awareness;
- assisting management in root cause analysis;
- taking part in the selection process for new and existing safety equipment;
- assisting in providing employee safety training; and
- helping resolve employee safety questions and complaints.

There is also a Regional Safety Committee ("RSC") for the SPS region. The RSC provides leadership and support in the area of safety for the Energy Supply employees at SPS. The RSC promotes and facilitates the sharing of ideas, information and best practices regarding safety at SPS using such tools as Daily Management, etc. The RSC insures that all ongoing as well as future safety initiatives across the SPS facilities are performed and implemented in a consistent and timely manner. The RSC is also responsible for two yearly safety presentations that are shared among all the SPS plant facilities and an annual safety conference that is attended by plant management and a number of maintenance/operation personnel. The SPS General

Manager and RSC chair make frequent visits to the plants to share and promote safety initiatives and provide recognition.

Technology Innovation

The installation of advanced process control systems at most of the plants has enabled innovative operational programs that surpass those of the traditional power plant. The following summarizes some of the benefits of the newer technology.

SPS has optimized its operations work force by utilizing the benefits of its advanced process control systems. Two aspects of the control system contribute to these optimizations. One is the extension of the realm of automatic control for all aspects of operations including startups, base loading and economic dispatch. This reduces menial operator tasks and allows the operator to function more in a supervisory role in the process. Therefore, an operator can operate and monitor more units than before. The second aspect is the ability to relocate the main operation interface from its original location to a more optimal location. This also applies to "satellite" control rooms for auxiliary systems such as ash collection and water treatment/monitoring.

SPS has also continued the operation of the Harrington, Nichols and Plant X control rooms with one continuously occupied control room for each plant. This has resulted in the ability of SPS to continue to operate with a reduced operational work force at these stations in comparison to the operation of multiple control rooms per plant in the past.

Operational Procedures

Standardization of best practices in plant operations has been an ongoing program in SPS for many years. Management has directed that fleet wide operational directives (policies) be written and implemented. These high-level operational policies address the following areas of operation:

- Normal operation;
- Periodic tests;
- Abnormal operation; and
- Emergency operation.

Once the policies were created, each plant was then required to develop site-specific procedures based on these policies. These procedures have been created and are posted on Xcel Energy's Intranet in a document repository for access by operations and staff.

Training

SPS has a centralized training department dedicated to developing and sustaining the skills required for efficient, safe operation of its power plants. This department develops and documents training lessons and qualification tests for both operations and maintenance personnel. They provide consistent, comprehensive instruction on all facets of the power plant. In addition to operator qualification lessons and tests, this department provides training for efficient operations and abnormal or emergency operations. Such classes include procedures for black plant, under-frequency and system upsets.

To provide operators with more effective training, SPS utilizes training simulators at its plant complexes. These simulators are close duplicates of the actual control system as viewed by the operator. With these simulators, the operators can learn and practice operator functions without endangering plant equipment or unit reliability. For example, an operator can repeatedly go through a unit startup until he/she becomes proficient with and confident of the process. Other functions include training on unit runbacks, trips and black plant scenarios. SPS has simulators at the Harrington, Nichols, Tolk, Plant X, Cunningham, Maddox and Jones stations.

Plant Operations Continuing Training is designed to conduct value-added training with all classifications of Operators. Continuing training ensures that incumbents maintain and improve job performance, while developing a broader scope and depth of job-related Knowledge (including operational fundamental), Skills and Attitudes (including Human Performance behaviors).

System training was developed to keep Operations, Maintenance, Electricians, Instrument, Engineers, and Management refreshed in water makeup (gathering), cooling water, condensate/feed water, steam cycle, turbine, fuel/air, generator & exciter, electric distribution, house and instrument air systems, ash systems, combustion turbine, transmission, black plant, start/shutdown, environmental permits, and chemistry. This training is cycled through the facilities to keep employees current on equipment and processes.

Efficient Operations

The purpose of the on-going turbine steam path analysis program is to economically optimize the performance of steam turbines through sound maintenance practices. The analysis consists of two phases: (1) pre-inspection testing and analysis and (2) post shutdown inspection and analysis.

During the pre-inspection analysis, test data is analyzed for the following turbine steam path problems: solid particle erosion, foreign object damage, deposits and steam path leakage. As problems are identified, a determination is made of the components' damage and its probable extent. The impact on fuel costs associated with these problems is calculated. With this knowledge, a determination is made as to which components may need to be replaced and the type of repair procedures needed. The pre-inspection information is then furnished to the plant maintenance department for scheduling of repairs, ordering of parts and preparing repair procedures.

With the turbine disassembled for inspection, the following extensive evaluations are performed:

1. Turbine nozzle and blade erosion and/or damage are assessed. Measurements are taken for throat and pitch dimension. The impact of these problems on heat rate is established from these measurements.
2. Measurements are made to determine deposit thickness and the degree of coverage on nozzles and blades. The impact these deposits have on heat rate is calculated from these measurements.
3. Steam seal and steam packing clearances are measured, and the alignment of the rotating and stationary components is evaluated. Their impact on heat rate is calculated from

these measurements. The measurements and resulting calculated values are used to cost-justify the repair and/or replacement of worn or damaged parts.

Controllable Parameters is a new program that was added in 2015 to monitor equipment design parameters. The operators work toward maintaining the design points of the system for optimal fuel consumption. Monitoring displays are utilized to increase the operator awareness so that appropriate actions can be taken to get each controllable parameter as close to target as achievable throughout their shift. The process includes monthly reviews of the controllable parameters and the net unit heat rate averaged by month compared to past month trends. During this process if a controllable parameter has a negative impact then the facility will determine a course of action to correct the deviation.

The Operator Rounds Policy established requirements for implementing the best practices for performing operator rounds at Xcel Energy generating plants. These requirements help optimize operator performance, unit operations, and equipment assessments.

Studies

Technical Knowledge Assessment was conducted by HDR Engineering which included Synterprise Consulting, LLC, in August 2015. The assessment evaluated plant performance data and individual staff capabilities in the SPS plant fleet in comparison to industry best practices. The characteristics evaluated included:

Plant Performance Data:
- Long range performance; and
- Recent trends and root cause events.

Individual Staff Capabilities:
- Individual knowledge of power plant technology and systems;
- Understanding of company expectations for technical knowledge required for success in job performance;
- Demonstration of technical knowledge as related to the power generation facility being managed; and
- Overall sense of commitment to professional and technical growth in the job position.

The HDR/Synterprise Team reached the following conclusions at the time of the assessment:
- The Texas and New Mexico plant management staff has strong technical skills. Some managers would benefit from refresher training.
- Most of the Texas and New Mexico plant engineers had less than the benchmark seven years of experience in their positions, and, therefore needed to develop additional power plant technical knowledge. A formalized mentoring and training program was established to benefit these engineers.
- There was a general weakness in the area of electrical and controls among many of the positions that was addressed in the formalized training program.
- The Texas and New Mexico plant personnel demonstrated a positive attitude and they wanted to improve their technical knowledge of the systems at each station.

The HDR/Synterprise Team recommended the following steps to increase the technical competency curve in the Texas and New Mexico plants:

- Continue the focus on developing standard processes and procedures. Consider third party support when an industry wide perspective is needed.
- Review and revise position descriptions to ensure appropriate technical emphasis is included in the minimum requirements.
- Develop and implement a formalized mentoring program to nurture ongoing transfer of technical knowledge and future transition of plant leadership.
- Develop and implement a formalized training in the following areas:
    - Impact of O&M decisions on the plant performance;
    - Systems and Fossil Plant Fundamentals;
    - Plant Performance and Optimization;
    - Advanced Performance Analysis and Troubleshooting; and
    - Reliability Centered Maintenance.

All training deficiencies were resolved in 2016. SPS's current training processes are geared towards training new employees and refreshing current employees on system training.

Southwestern Public Service Company

Production Maintenance Programs

Southwestern Public Service Company ("SPS") is committed to producing electricity at the lowest possible cost within acceptable safety and reliability standards, while at the same time maintaining or reducing maintenance costs. SPS employs two primary types of maintenance programs to ensure generation efficiency and control costs:

1. scheduled routine maintenance practices; and
2. predictive maintenance practices.

SPS also has maintenance support programs to analyze potential problems and repair facilities as efficiently as possible.

Maintenance Programs

Scheduled Maintenance

Much of the maintenance performed by SPS falls into the scheduled or preventative maintenance category. Preventive maintenance methods are applied wherever practical; however, some machinery failure modes are not detectable without physical inspection. A turbine, for example, may not exhibit any unusual vibration or thermal performance characteristics until a component completely fails. Therefore, turbine-generator overhauls are preventive by nature, but SPS modifies the time between overhauls based on past maintenance history, industry experience, operating hours, number of starts, component assessment and projected retirements.

SPS has developed a web-based overhaul scheduling application to schedule and display future outages, document past outages and their scopes, as well as a system for work and asset management. The system integrates: (1) maintenance requests submitted by power plant personnel; (2) maintenance progress tracking; (3) man-hour time reporting; (4) parts inventory management; (5) scheduled maintenance; and (6) maintenance history. The program enables operators, maintenance personnel, engineers and other technical staff to identify, prioritize, plan, coordinate and schedule maintenance activities for power plants.

Turbine outages are performed on a component basis so that each section of the turbine and generator are inspected during a targeted 9 to 12 equivalent year basis. Actual durations vary and may be more or less often if component history, industry information, component assessment, projected retirements and unit operations warrant an extension or reduction in the duration. Component based overhauls are used to level costs and outage time during a particular year.

During scheduled overhauls, the 4160 and 480 volt motors that are critical to operations are subjected to testing. These tests are performed for two reasons:

1. To identify weak insulation during an outage rather than during a peak load period; and
2. To predict when the motor should be scheduled for refurbishing or replacement.

Periodic maintenance functions such as lubrication and filter changes are scheduled by SPS's computerized maintenance information system.

Predictive Maintenance

SPS's predictive maintenance program analyzes equipment operations for degradation and performs maintenance at a cost-effective time, prior to failures. SPS has assembled a performance engineering group that strives to perform highly accurate periodic tests on all coal and natural gas fired units. The performance assurance program involves tests that are a valuable predictive maintenance tool. Where practical, predictive maintenance tools are applied to turbine-generator maintenance.

The Valve Wide Open Test is a performance test that is performed while a unit is online. The tests provide information about the extent of degradation that has occurred since the previous test. If significant degradation exists, plant personnel can plan for any needed upgrades or repairs. These tests are performed every two years on units larger than 200 MW and every four years on smaller units.

SPS utilizes vibration monitoring at each plant. Data collection and trending is a predictive tool that is being utilized. Changes in vibration levels are monitored and set off an alarm, and data is captured for comparison to past data. Problems have been recognized, and failures have been prevented. Turbine/Generator sets have more detailed vibration collection and analysis. Startups and shutdowns are captured as well as normal operation data.

Steam-path analysis is a tool SPS uses during scheduled turbine outages. The steam-path areas of a turbine are inspected and precise measurements are taken so that components can be evaluated for wear, deposit buildup and foreign object damage. This process allows SPS to identify components that need to be replaced and helps to prevent a forced outage, while improving the efficiency of the unit.

Lube oil and transformer oil analysis are ways to monitor equipment condition. Oil tests are performed twice per year and results are communicated to the plant. Lube oil is replaced on major equipment based on the test results. Equipment that has shown indications of problems have a complete lube oil analysis done on a more frequent basis to monitor the problem and prevent unnecessary downtime.

Dissolved gas and oil testing, a predictive maintenance tool used heavily for transformer condition assessment, enables SPS to identify localized burning in oil cooled transformers in the incipient stage so that repairs can be planned in conjunction with a scheduled outage of the unit. Early awareness of potential localized burning in the transformer can help prevent catastrophic forced outages of generating units. This testing requires oil samples to be taken from the transformer and evaluated for several gases by the SPS's analytical chemistry lab. Knowledge of the formation of the different gaseous compounds and trending analysis is required to interpret the data.

Equipment Protection

SPS is proactive in the protection of equipment from damage or major failures. Each unit has overspeed protection, temperature monitoring, vibration monitoring and trips, underfrequency relays and trips, as well as electrical protective relays and trips. The larger units also have water induction protection systems to protect from catastrophic turbine failures. These protective devices are in place and enabled to protect the units from both internal failures as well as external conditions that can damage large equipment.

Another area of equipment protection includes the high-energy high-pressure components systems. Boilers and high energy piping systems are protected by safety valves and are routinely inspected and maintained. This maintenance is performed by certified repair contractors at all of SPS's locations. Other safety valves on lower pressure or lower energy components thoughout the plants are on an inspection/replacement schedule.

Energy Supply's Monitoring and Diagnostic Center

Energy Supply's Monitoring and Diagnostic Center was established in 2014 to monitor the performance and health of SPS's generating fleet. Monitoring and diagnostic technology is intended to detect plant abnormalities before they result in equipment failures and lost generation. The diagnostic center offers the potential to improve plant reliability, optimize performance and minimize repair costs. Tolk Station and Harrington Station have been monitored since January 2014 and Jones Station Unit 1 and Unit 2 have been monitored since Sptember 2016.

Maintenance Support Programs

SPS has developed in-house analytical and repair capabilities to support the production maintenance program.

Plant Analytical Services

Plant analysts provide system-wide maintenance support by providing the following services:

1. Non-destructive examination;
    a. Magnetic particle examination;
    b. Ultrasonic testing;
    c. Dye penetrant examination;
    d. Eddy current examination;
    e. Thermal imaging;
2. Chemical analysis;
3. Oil analysis;

4. Metallurgical analysis;
5. Coating specification and analysis;
6. Boiler chemical cleaning; and
7. Generator core condition monitor sample analysis.

Life Management

SPS has developed a program to assist in the life management of the plants. The focus for the life management program is on those problems that present very large risk in terms of cost and/or safety and that may not be readily addressed through normal maintenance activities. Some of the life management program activities include:

- High-energy piping system stress analysis for evaluation of hanger support systems and inspection for creep damage in pipe seams and other high stress locations.
- Life assessment for superheater and reheater sections of the boiler.
- Examinations of areas within the feedwater piping system which may be subject to Flow Accelerated Corrosion.
- Life assessment examination of boiler heavy wall headers and steam drums.
- Life assessments for heat exchangers.
- Generator retaining ring examinations.
- Turbine rotor bore examinations.

This program has been successful in identifying areas of concern and allowing those areas to be repaired or replaced prior to the concern impacting the reliability of the unit. For example, many of SPS's gas plants are of advanced age and have superheaters/reheaters that are near end of life. Life assessments on these components have indicated the need for partial replacements of boiler tubes instead of large scale complete replacements.

Technical Field Service Support

SPS has always had a philosophy of being self sufficient whenever it is cost effective. Because of the high cost of original equipment manufacturer ("OEM") field service engineers and because SPS employees have technical knowledge equal to the OEM personnel, it became cost effective for SPS to develop in-house field service support. Technical experts in the field of turbine/generator support, welding support, controls support, performance monitoring, metallurgy, electrical support, boiler support and continuous emission support are on staff and available for use at the plants as needed. This support staff is utilized first. Additional support from outside resources is utilized during peak times as needed.

Boiler

SPS's Maintenance Resources department administers the Texas State Boiler Repair program. SPS's welders maintain certifications and make the emergency and routine repairs on the boilers. Additional external resources are utilized to deal with peak work times as well as upgrades and large repair projects. Metals and Materials Resources develop and maintain the welding procedures. SPS's Maintenance Resources Department assists the plants with welding issues and in the certification of welders. Maintenance Resources also serves to offset OEM personnel by performing in-house boiler inspections and assessments.

Electrical Testing

SPS performs its own electrical tests on generators during overhauls. Plant personnel perform the tests with technical support provided by the Maintenance Resources staff. Without having to depend on OEM technical support, outages are shortened and reduced in costs. Utility equipment experts are utilized as needed to supplement the in-house resources or when issues are encountered that are not routine in nature.

Federal Energy Regulatory Commission ("FERC")/Regional Reliability Organization ("RRO") Standards

SPS generation units are compliant with all mandated maintenance and testing standards as mandated by the FERC and the associated RRO. Maintenance requirements that have been identified in these standards have been incorporated into the Computerized Maintenance Information System program. Examples of required testing include generator protective relay tests as well as monthly, annual, and capacity tests of station batteries.

Computer and Controls Maintenance

Maintenance of plant computers is handled by plant personnel with system-wide support provided by the Maintenance Resources staff. Centralizing the technical support ensures uniform software and hardware upgrades. As computer systems age, manufacturer support decreases. Without the in-house technical expertise that SPS has developed, systems would have to be replaced much sooner than they are now.

Computerized Maintenance Information System

SPS employs a computerized routine maintenance program, project management tools, predictive maintenance practices, a performance assurance program, trained maintenance personnel, and continuing education for plant operators to ensure generation efficiency and cost control. The objective of these activities is to reduce operations and maintenance expenditures while maximizing unit availability. Improved unit availability allows system operations to take best advantage of generation through the most cost effective units.

Studies

SPS has not performed or contracted for any system-wide production maintenance studies in the past five years.

Southwestern Public Service Company

Nuclear Decommissioning Cost Studies

Schedule H-10 is not applicable to Southwestern Public Service Company ("SPS") because SPS does not own or operate nuclear facilities.

Southwestern Public Service Company

O&M Expenses per Production Plant Expenses
By Primary Fuel Type

Line No.	Plant	2013	2014	2015	2016	2017	2018	Test Year[1]	Fuel Type
1	Harrington	17%	20%	21%	22%	21%	24%	24%	Coal
2	Tolk	9%	14%	18%	17%	17%	22%	24%	Coal
3	Jones	12%	10%	19%	20%	24%	16%	19%	Gas
4	Nichols	20%	18%	42%	42%	35%	26%	26%	Gas
5	Plant X	10%	9%	25%	29%	30%	24%	24%	Gas
6	Moore County	21%	100%	100%	100%	100%	100%	100%	Gas
7	Cunningham	9%	10%	22%	17%	21%	22%	21%	Gas
8	Maddox	25%	13%	25%	37%	23%	25%	23%	Gas
9	Riverview[2]	100%	100%	100%	100%	n/a	n/a	n/a	Gas
10	Carlsbad[3]	41%	30%	75%	76%	76%	100%	100%	Gas
11	Quay County	33%	43%	72%	71%	82%	81%	78%	Other
12	Celanese[4]	100%	100%	100%	n/a	n/a	n/a	n/a	Other
13	Tucumcari[5]	100%	100%	100%	100%	100%	n/a	n/a	Other
14	Gaines County [6]	n/a	n/a	n/a	n/a	n/a	100%	100%	Other

Notes: [1] Test Year (April 1, 2018 through March 31, 2019)
[2] Riverview was retired from operation in June of 2013
[3] Carlsbad was retired from operation in December of 2017
[4] Celanese was retired from operation in June of 2011
[5] Tucumcari was retired from operation in December of 2011
[6] Gaines County includes the writeoff of Capital investment

To calculate the percentage, the Operation and Maintenance FERC accounts were divided by Total production plant expenses that include fuel FERCs 501, 503, and 547.

Historical costs have been restated to reflect current organizational structure

Southwestern Public Service Company

Maintenance Man-Hour Ratio

TOTAL SPS

Line No.	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
1	Total SPS	ALL	2013	14,472	98,219	46,564	1,517	43,842	204,613	7 07%	48 00%	21 43%
2		ALL	2014	21,030	91,653	64,317	220	83,064	260,284	8 08%	35 21%	31.91%
3		ALL	2015	28,157	76,400	42,903	775	229,650	377,885	7 45%	20 22%	60.77%
4		ALL	2016	26,609	61,607	41,621	72	119,786	249,695	10.66%	24 67%	47 97%
5		ALL	2017	13,378	72,047	-	-	92,238	177,663	7 53%	40 55%	51 92%
6		ALL	2018	14,482	73,279	-	-	115,436	203,197	7 13%	36 06%	56 81%
7		ALL	TEST YR	13,774	64,249	-	-	117,117	195,139	7 06%	32 92%	60 02%

COAL

Line No.	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
8	Harrington	Coal	2013	5,702	37,724	11,425	28	8,851	63,730	8 95%	59 19%	13.89%
9		Coal	2014	6,687	29,934	14,340	-	18,514	69,476	9 63%	43.09%	26.65%
10		Coal	2015	12,855	19,594	16,987	-	61,839	111,275	11 55%	17.61%	55 57%
11		Coal	2016	15,052	19,504	14,743	-	29,400	78,699	19 13%	24.78%	37 36%
12		Coal	2017	5,747	25,983		-	17,443	49,173	11 69%	52 84%	35.47%
13		Coal	2018	5,479	24,097	-	-	25,236	54,812	10 00%	43.96%	46 04%
14		Coal	TEST YR	4,463	19,188	-	-	24,829	48,480	9.21%	39 58%	51 22%

Line No.	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
15	Tolk	Coal	2013	1,688	23,111	9,855	873	7,283	42,810	3 94%	53 99%	17.01%
16		Coal	2014	3,082	24,388	18,395	6	23,210	69,080	4 46%	35 30%	33 60%
17		Coal	2015	5,399	27,344	10,791	54	43,324	86,912	6 21%	31 46%	49 85%
18		Coal	2016	3,249	15,514	9,389	2	19,212	47,366	6 86%	32 75%	40 56%
19		Coal	2017	2,518	13,078	-	-	14,160	29,755	8 46%	43 95%	47 59%
20		Coal	2018	3,147	15,658	-	-	16,357	35,162	8 95%	44 53%	46 52%
21		Coal	TEST YR	3,480	15,545	-	-	18,753	37,777	9.21%	41 15%	49 64%

Southwestern Public Service Company

Maintenance Man-Hour Ratio

	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
22	Total Coal	Coal	2013	7,390	60,835	21,280	901	16,134	106,540	6 94%	57 10%	15.14%
23		Coal	2014	9,769	54,322	32,735	6	41,723	138,556	7 05%	39 21%	30.11%
24		Coal	2015	18,254	46,938	27,778	54	105,163	198,187	9 21%	23 68%	53 06%
25		Coal	2016	18,301	35,018	24,132	2	48,612	126,065	14 52%	27 78%	38 56%
26		Coal	2017	8,264	39,060	-	-	31,603	78,927	10 47%	49 49%	40.04%
27		Coal	2018	8,627	39,754	-	-	41,594	89,974	9.59%	44 18%	46 23%
28		Coal	TEST YR	7,943	34,733	-	-	43,582	86,258	9 21%	40 27%	50 53%

GAS

	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
29	Cunningham 1&2	Gas	2013	634	4,555	1,664	200	3,753	10,806	5 87%	42 15%	34 73%
30		Gas	2014	1,380	6,179	1,644	95	10,516	19,815	6 97%	31 19%	53.07%
31		Gas	2015	1,397	5,655	2,586	26	33,118	42,782	3 27%	13 22%	77 41%
32		Gas	2016	825	6,232	1,188	-	15,502	23,747	3 47%	26.24%	65 28%
33		Gas	2017	1,110	5,710	-	-	15,411	22,231	4 99%	25 68%	69.32%
34		Gas	2018	266	4,108	-	-	19,442	23,816	1 12%	17 25%	81 63%
35		Gas	TEST YR	463	5,035	-	-	18,979	24,477	1.89%	20 57%	77 54%

	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
36	Jones 1&2	Gas	2013	1,510	5,783	3,068	192	3,836	14,389	10.49%	40 19%	26 66%
37		Gas	2014	747	5,845	17,339	-	5,963	29,893	2 50%	19 55%	19 95%
38		Gas	2015	1,600	3,990	2,774	-	11,067	19,431	8 23%	20 53%	56 96%
39		Gas	2016	1,003	5,124	6,652	10	9,261	22,050	4.55%	23 24%	42 00%
40		Gas	2017	1,128	8,466	-	-	3,643	13,236	8 52%	63 96%	27 52%
41		Gas	2018	1,297	12,370	-	-	3,745	17,412	7 45%	71 04%	21 51%
42		Gas	TEST YR	1,234	10,757	-	-	3,976	15,967	7 73%	67 37%	24 90%

Southwestern Public Service Company

Maintenance Man-Hour Ratio

	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
43	Maddox 1	Gas	2013	1,385	2,936	4,816	221	2,533	11,891	11 65%	24 69%	21 30%
44		Gas	2014	1,163	2,330	4,125	29	6,521	14,168	8 21%	16 45%	46 03%
45		Gas	2015	1,123	3,220	608	4	24,884	29,839	3 76%	10 79%	83 39%
46		Gas	2016	730	1,846	801	-	17,704	21,081	3 46%	8 76%	83 98%
47		Gas	2017	249	2,710	-	-	7,540	10,498	2 37%	25.81%	71 82%
48		Gas	2018	413	2,671	-	-	14,821	17,905	2 31%	14 91%	82 78%
49		Gas	TEST YR	454	2,612	-	-	13,868	16,934	2 68%	15 42%	81 90%

	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
50	Moore County	Gas	2013	83	123	43	-	19	268	30 97%	45 90%	7 09%
51		Gas	2014	-	-	46	-	6	52	0 00%	0 00%	11 54%
52		Gas	2015	-	-	-	-	-	-	0.00%	0 00%	0 00%
53		Gas	2016	-	-	-	-	-	-	0 00%	0 00%	0 00%
54		Gas	2017	-	-	-	-	-	-	0 00%	0 00%	0 00%
55		Gas	2018	-	-	-	-	-	-	0 00%	0 00%	0.00%
56		Gas	TEST YR	-	-	-	-	-	-	0 00%	0 00%	0 00%

	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
57	Nichols	Gas	2013	686	13,672	8,647	-	8,492	31,497	2 18%	43 41%	26 96%
58		Gas	2014	3,201	10,584	4,442	-	4,609	22,837	14.02%	46 35%	20 18%
59		Gas	2015	1,622	6,448	3,594	28	26,012	37,704	4.30%	17 10%	68.99%
60		Gas	2016	2,168	5,647	1,795	2	7,546	17,158	12 64%	32 91%	43 98%
61		Gas	2017	922	4,647	-	-	14,741	20,309	4 54%	22 88%	72.58%
62		Gas	2018	408	4,358	-	-	18,282	23,047	1.77%	18.91%	79 32%
63		Gas	TEST YR	365	3,164	-	-	18,634	22,163	1.65%	14 28%	84 08%

Southwestern Public Service Company

Maintenance Man-Hour Ratio

	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
64	Plant X	Gas	2013	1,736	7,501	6,285	3	6,628	22,153	7 84%	33 86%	29 92%
65		Gas	2014	3,145	8,346	2,583	90	10,179	24,343	12 92%	34 28%	41.81%
66		Gas	2015	2,579	6,359	4,441	50	16,131	29,560	8 72%	21 51%	54 57%
67		Gas	2016	2,712	4,810	6,394	50	11,541	25,507	10 63%	18 86%	45.25%
68		Gas	2017	1,147	8,844	-	-	9,139	19,130	6 00%	46 23%	47 77%
69		Gas	2018	2,077	5,883	-	-	13,418	21,378	9 72%	27.52%	62 77%
70		Gas	TEST YR	2,100	4,214	-	-	14,640	20,953	10 02%	20 11%	69 87%

	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
71	Total Gas	Gas	2013	6,034	34,570	24,523	616	25,261	91,004	6 63%	37 99%	27 76%
72		Gas	2014	9,636	33,284	30,179	214	37,793	111,106	8 67%	29 96%	34 02%
73		Gas	2015	8,321	25,672	14,003	108	111,212	159,316	5 22%	16 11%	69 81%
74		Gas	2016	7,438	23,659	16,830	62	61,554	109,543	6 79%	21 60%	56 19%
75		Gas	2017	4,555	30,375	-	-	50,473	85,403	5 33%	35 57%	59.10%
76		Gas	2018	4,461	29,390	-	-	69,708	103,559	4 31%	28 38%	67.31%
77		Gas	TEST YR	4,616	25,781	-	-	70,098	100,494	4.59%	25 65%	69 75%

COMBUSTION TURBINE

	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
78	Carlsbad	CT	2013	520	95	-	-	16	631	82 41%	15 06%	2 54%
79		CT	2014	89	-	9	-	103	201	44 28%	0 00%	51.24%
80		CT	2015	91	522	-	-	7	620	14 68%	84 19%	1 13%
81		CT	2016	-	-	-	-	16	16	0 00%	0 00%	100 00%
82		CT	2017	-	-	-	-	-	-	0 00%	0 00%	0 00%
83		CT	2018	-	29	-	-	-	29	0 00%	100 00%	0 00%
84		CT	TEST YR	-	29	-	-	-	29	0 00%	100 00%	0 00%

Southwestern Public Service Company

Maintenance Man-Hour Ratio

	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
85	Cunningham 3&4	CT	2013	81	1,040	44	-	637	1,802	4 50%	57 71%	35 35%
86		CT	2014	349	1,455	497	-	1,445	3,745	9 32%	38 86%	38 57%
87		CT	2015	329	1,007	25	-	10,869	12,230	2 69%	8 23%	88.87%
88		CT	2016	568	1,204	279	8	7,108	9,167	6 20%	13 13%	77 54%
89		CT	2017	117	506	-	-	7,440	8,063	1 45%	6.27%	92.28%
90		CT	2018	925	1,248	-	-	1,233	3,406	27 17%	36 63%	36 20%
91		CT	TEST YR	950	1,100	-	-	576	2,625	36 20%	41 88%	21 92%

	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
92	Jones 3&4	CT	2013	100	639	125	-	75	938	10 61%	68 07%	8 00%
93		CT	2014	515	1,469	265	-	906	3,155	16 33%	46 57%	28 71%
94		CT	2015	135	1,334	305	-	1,279	3,053	4 42%	43.69%	41 89%
95		CT	2016	215	1,188	289	-	1,539	3,231	6.65%	36 77%	47 63%
96		CT	2017	166	1,393	-	-	1,663	3,221	5.14%	43 24%	51 62%
97		CT	2018	235	1,642	-	-	1,491	3,368	6.96%	48 75%	44 28%
98		CT	TEST YR	113	1,325	-	-	1,530	2,967	3 81%	44 65%	51 55%

	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
99	Maddox 2&3	CT	2013	175	933	243	-	560	1,911	9 16%	48 82%	29 30%
100		CT	2014	400	563	417	-	513	1,892	21 12%	29.77%	27.10%
101		CT	2015	901	649	73	-	474	2,097	42 97%	30 95%	22.60%
102		CT	2016	87	501	42	-	553	1,183	7.35%	42 35%	46 75%
103		CT	2017	198	344	-	-	275	817	24 25%	42.07%	33 68%
104		CT	2018	138	1,108	-	-	223	1,469	9 39%	75 43%	15 18%
105		CT	TEST YR	131	1,268	-	-	465	1,863	7 01%	68 04%	24 95%

Schedule H-11.2
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Sponsor: Low
2019 TX Rate Case

Southwestern Public Service Company

Maintenance Man-Hour Ratio

	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
106	Riverview	CT	2013	-	-	-	-	917	917	0 00%	0 00%	100 00%
107		CT	2014	-	-	-	-	-	-	0 00%	0 00%	0 00%
108		CT	2015	-	-	32	613	-	645	0 00%	0 00%	0 00%
109		CT	2016	-	-	-	-	-	-	0 00%	0 00%	0 00%
110		CT	2017	-	-	-	-	-	-	0 00%	0 00%	0 00%
111		CT	2018	-	-	-	-	-	-	0 00%	0 00%	0 00%
112		CT	TEST YR	-	-	-	-	-	-	0 00%	0 00%	0 00%

	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
113	Quay Co	CT	2013	172	107	349	-	242	870	19.76%	12 30%	27 84%
114		CT	2014	273	560	217	-	582	1,630	16 72%	34 33%	35 67%
115		CT	2015	87	182	579	-	486	1,334	6 52%	13 64%	36 43%
116		CT	2016	-	37	-	-	404	441	0 00%	8 39%	91.61%
117		CT	2017	79	370	-	-	784	1,232	6 37%	30 03%	63 60%
118		CT	2018	97	109	-	-	1,187	1,393	6 96%	7.82%	85.21%
119		CT	TEST YR	21	15	-	-	867	903	2 33%	1 66%	96 01%

	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
120	Total CT	CT	2013	1,048	2,814	761	-	2,447	7,069	14 82%	39 80%	34.62%
121		CT	2014	1,625	4,047	1,404	-	3,547	10,623	15 30%	38 10%	33 39%
122		CT	2015	1,543	3,694	1,014	613	13,115	19,979	7 72%	18 49%	65 64%
123		CT	2016	870	2,930	610	8	9,620	14,038	6 20%	20 87%	68 53%
124		CT	2017	559	2,612	-	-	10,162	13,333	4 19%	19 59%	76 22%
125		CT	2018	1,395	4,135	-	-	4,134	9,664	14 43%	42 79%	42 78%
126		CT	TEST YR	1,215	3,736	-	-	3,437	8,387	14 48%	44 54%	40 98%

Southwestern Public Service Company

Maintenance Man-Hour Ratio

OTHER

	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
127	Celanese	OTH	2013	-	-	-	-	-	-	0.00%	0 00%	0 00%
128		OTH	2014	-	-	-	-	-	-	0 00%	0 00%	0 00%
129		OTH	2015	-	-	-	-	160	160	0 00%	0 00%	100 00%
130		OTH	2016	-	-	49	-	-	49	0 00%	0 00%	0 00%
131		OTH	2017	-	-	-	-	-	-	0 00%	0 00%	0.00%
132		OTH	2018	-	-	-	-	-	-	0 00%	0 00%	0 00%
133		OTH	TEST YR	-	-	-	-	-	-	0 00%	0 00%	0 00%

	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
134	Tucumcari	OTH	2013	-	-	-	-	-	-	0 00%	0 00%	0.00%
135		OTH	2014	-	-	-	-	-	-	0 00%	0 00%	0.00%
136		OTH	2015	39	96	108	-	-	243	16 05%	39 51%	0.00%
137		OTH	2016	-	-	-	-	-	-	0.00%	0.00%	0 00%
138		OTH	2017	-	-	-	-	-	-	0.00%	0.00%	0.00%
139		OTH	2018	-	-	-	-	-	-	0 00%	0 00%	0 00%
140		OTH	TEST YR	-	-	-	-	-	-	0 00%	0 00%	0 00%

	PLANT	TYPE	YEAR	BD	CM	IM	NE	PM	TOTAL	BD RATIO	CM RATIO	PM RATIO
141	Total OTH	OTH	2013	-	-	-	-	-	-	0 00%	0.00%	0 00%
142		OTH	2014	-	-	-	-	-	-	0 00%	0 00%	0.00%
143		OTH	2015	39	96	108	-	160	403	9 68%	23.82%	39.70%
144		OTH	2016	-	-	49	-	-	49	0 00%	0 00%	0.00%
145		OTH	2017	-	-	-	-	-	-	0 00%	0 00%	0.00%
146		OTH	2018	-	-	-	-	-	-	0 00%	0 00%	0 00%
147		OTH	TEST YR	-	-	-	-	-	-	0 00%	0 00%	0 00%

*In February 2017, SAP replaced Maximo as the work and asset management system

BD = "Break Down" failure of equipment or system, and equipment or system is not operational
CM = "Corrective Maintenance" failure of equipment or system, but equipment or system is still operational
CT = "Combustion Turbine"
IM = "Improvement Maintenance" improvement of equipment or system
NE = "Non-Energy" work outside of Energy Supply
OTH = "Other"
PM = "Preventative Maintenance" systematic inspection, detection, correction, and prevention of incipient failures of equipment or system, equipment or system can be in or out of service.

Southwestern Public Service Company

O&M Cost per MWh

Line No.	PLANT	TYPE	YEAR	NET GENERATION (MWh)	OPER COST	MAINT COST	O&M COST	OPER $/MWh	MAINT $/MWh	O&M $/MWh
1	**Total SPS**	ALL	2014	16,953,286	41,298,619	56,578,490	97,877,109	2 44	3 34	5 77
2		ALL	2015	16,476,374	33,761,279	57,178,236	90,939,515	2 05	3 47	5 52
3		ALL	2016	15,011,035	33,234,606	48,696,030	81,930,636	2 21	3 24	5 46
4		ALL	2017	12,862,011	34,185,604	45,366,404	79,552,008	2.66	3 53	6 19
5		ALL	2018	14,994,980	34,067,863	44,494,037	78,561,901	2 27	2.97	5 24
6		ALL	TEST YEAR	15,151,567	32,221,094	47,336,862	79,557,956	2 13	3.12	5 25

	PLANT	TYPE	YEAR	NET GENERATION (MWh)	OPER COST	MAINT COST	O&M COST	OPER $/MWh	MAINT $/MWh	O&M $/MWh
7	**Harrington**	Coal	2014	5,730,315	12,065,045	21,057,937	33,122,982	2 11	3 67	5 78
8		Coal	2015	5,753,937	10,572,647	16,144,619	26,717,266	1.84	2 81	4 64
9		Coal	2016	5,022,762	10,862,026	14,659,971	25,521,997	2.16	2 92	5 08
10		Coal	2017	4,626,294	10,795,725	13,279,590	24,075,315	2 33	2 87	5 20
11		Coal	2018	4,783,689	10,444,261	11,809,466	22,253,727	2 18	2 47	4 65
12		Coal	TEST YEAR	4,804,873	$ 9,903,497	$ 13,326,575	23,230,072	2 06	2 77	4 83
13	**Tolk**	Coal	2014	6,687,712	9,388,047	18,137,849	27,525,896	1 40	2 71	4.12
14		Coal	2015	6,488,120	7,866,542	18,507,986	26,374,528	1 21	2 85	4 07
15		Coal	2016	5,689,191	7,617,155	11,425,589	19,042,744	1 34	2 01	3 35
16		Coal	2017	5,157,961	7,073,949	13,838,275	20,912,224	1 37	2 68	4 05
17		Coal	2018	3,810,060	6,452,124	14,891,834	21,343,958	1 69	3 91	5 60
18		Coal	TEST YEAR	3,570,218	$ 6,000,424	$ 15,039,461	21,039,885	1 68	4 21	5 89
19	**Total Coal**	Coal	2014	12,418,027	21,453,092	39,195,786	60,648,878	1 73	3 16	4 88
20		Coal	2015	12,242,057	18,439,189	34,652,605	53,091,794	1 51	2 83	4 34
21		Coal	2016	10,711,953	18,479,181	26,085,560	44,564,741	1 73	2 44	4 16
22		Coal	2017	9,784,255	17,869,674	27,117,865	44,987,539	1 83	2 77	4.60
23		Coal	2018	8,593,749	16,896,385	26,701,300	43,597,685	1 97	3 11	5 07
24		Coal	TEST YEAR	8,375,091	$ 15,903,921	$ 28,366,036	$ 44,269,957	$ 1 90	$ 3 39	$ 5.29

Southwestern Public Service Company

O&M Cost per MWh

	PLANT	TYPE	YEAR	NET GENERATION (MWh)	OPER COST	MAINT COST	O&M COST	OPER $/MWh	MAINT $/MWh	O&M $/MWh
25	**Cunningham 1&2**	Gas	2014	768,836	2,349,009	2,971,806	5,320,815	3.06	3.87	6.92
26		Gas	2015	682,804	2,083,164	4,394,985	6,478,149	3.05	6.44	9.49
27		Gas	2016	938,739	2,079,456	2,537,562	4,617,018	2.22	2.70	4.92
28		Gas	2017	647,311	2,386,158	2,533,331	4,919,489	3.69	3.91	7.60
29		Gas	2018	778,882	2,789,717	3,446,505	6,236,222	3.58	4.42	8.01
30		Gas	TEST YEAR	866,127	$ 2,706,235	$ 3,385,250	6,091,485	3.12	3.91	7.03
31	**Jones 1&2**	Gas	2014	1,253,728	5,319,294	3,946,165	9,265,459	4.24	3.15	7.39
32		Gas	2015	1,423,162	4,477,861	4,833,795	9,311,656	3.15	3.40	6.54
33		Gas	2016	1,056,906	4,117,770	4,646,667	8,764,437	3.90	4.40	8.29
34		Gas	2017	751,939	4,306,110	4,228,975	8,535,085	5.73	5.62	11.35
35		Gas	2018	1,682,886	4,825,734	2,815,386	7,641,120	2.87	1.67	4.54
36		Gas	TEST YEAR	1,678,836	$ 4,662,811	$ 4,293,732	8,956,543	2.78	2.56	5.33
37	**Maddox 1**	Gas	2014	392,253	2,005,245	1,506,602	3,511,847	5.11	3.84	8.95
38		Gas	2015	360,588	1,186,439	1,968,712	3,155,151	3.29	5.46	8.75
39		Gas	2016	263,403	1,093,987	3,361,920	4,455,907	4.15	12.76	16.92
40		Gas	2017	370,918	1,803,731	1,392,419	3,196,150	4.86	3.75	8.62
41		Gas	2018	362,093	1,378,103	1,663,298	3,041,402	3.81	4.59	8.40
42		Gas	TEST YEAR	414,310	$ 1,281,809	$ 1,610,601	2,892,410	3.09	3.89	6.98
43	**Moore County**	Gas	2014	-	21,338	6,283	27,621	-	-	-
44		Gas	2015	-	9,429	16,151	25,580	-	-	-
45		Gas	2016	-	10,894	-	10,894	-	-	-
46		Gas	2017	-	3,084	759	3,843	-	-	-
47		Gas	2018	-	2,702	-	2,702	-	-	-
48		Gas	TEST YEAR	-	$ 2,102	$ -	2,102	-	-	-
49	**Nichols**	Gas	2014	476,760	5,181,882	3,176,062	8,357,944	10.87	6.66	17.53
50		Gas	2015	419,405	4,195,814	6,086,130	10,281,944	10.00	14.51	24.52
51		Gas	2016	451,286	4,293,419	5,635,108	9,928,527	9.51	12.49	22.00
52		Gas	2017	401,830	4,191,039	3,461,900	7,652,939	10.43	8.62	19.05
53		Gas	2018	869,806	4,321,988	3,395,928	7,717,916	4.97	3.90	8.87
54		Gas	TEST YEAR	938,836	$ 4,045,150	$ 3,321,259	7,366,409	4.31	3.54	7.85
55	**Plant X**	Gas	2014	1,160,700	3,761,451	3,916,490	7,677,941	3.24	3.37	6.61
56		Gas	2015	778,114	2,816,089	3,819,974	6,636,064	3.62	4.91	8.53
57		Gas	2016	626,281	2,582,377	4,118,819	6,701,196	4.12	6.58	10.70
58		Gas	2017	452,898	2,782,227	3,443,295	6,225,522	6.14	7.60	13.75
59		Gas	2018	1,221,177	2,877,390	4,193,253	7,070,643	2.36	3.43	5.79
60		Gas	TEST YEAR	1,277,537	$ 2,661,417	$ 4,289,993	6,951,410	2.08	3.36	5.44
61	**Total Gas**	Gas	2014	4,052,277	18,638,219	15,523,408	34,161,627	4.60	3.83	8.43
62		Gas	2015	3,664,073	14,768,797	21,119,748	35,888,544	4.03	5.76	9.79
63		Gas	2016	3,336,615	14,177,903	20,300,076	34,477,979	4.25	6.08	10.33
64		Gas	2017	2,624,896	15,472,349	15,060,679	30,533,028	5.89	5.74	11.63
65		Gas	2018	4,914,844	16,195,634	15,514,370	31,710,005	3.30	3.16	6.45
66		Gas	TEST YEAR	5,175,646	$ 15,359,524	$ 16,900,835	$ 32,260,359	$ 2.97	$ 3.27	$ 6.23

Southwestern Public Service Company

O&M Cost per MWh

	PLANT	TYPE	YEAR	NET GENERATION (MWh)	OPER COST	MAINT COST	O&M COST	OPER $/MWh	MAINT $/MWh	O&M $/MWh
67	**Carlsbad**	CT	2014	272	23,505	13,217	36,722	86 42	48 59	135 01
68		CT	2015	145	3,739	48,468	52,207	25 79	334.26	360.05
69		CT	2016	-	1,259	2,304	3,563	-	-	-
70		CT	2017	-	327	211	538	-	-	-
71		CT	2018	-	952	6,964	7,916	-	-	-
72		CT	TEST YEAR	-	$ 981	$ 4,565	$ 5,546	$ -	$ -	$ -
73	**Cunningham 3&4**	CT	2014	285,584	566,386	1,013,926	1,580,312	1 98	3 55	5 53
74		CT	2015	255,087	341,964	542,763	884,727	1 34	2 13	3 47
75		CT	2016	402,111	363,621	1,794,571	2,158,192	0 90	4 46	5 37
76		CT	2017	230,366	482,906	2,263,827	2,746,733	2 10	9 83	11 92
77		CT	2018	575,417	358,356	1,210,568	1,568,924	0 62	2 10	2 73
78		CT	TEST YEAR	596,156	$ 338,199	$ 1,048,632	$ 1,386,831	$ 0 57	$ 1 76	$ 2 33
79	**Jones 3&4**	CT	2014	169,437	38,723	445,956	484,679	0 23	2 63	2 86
80		CT	2015	290,874	14,773	395,124	409,897	0 05	1 36	1 41
81		CT	2016	502,716	12,860	354,044	366,904	0 03	0 70	0 73
82		CT	2017	211,409	192,392	475,196	667,588	0 91	2 25	3 16
83		CT	2018	718,099	186,383	445,221	631,604	0 26	0 62	0.88
84		CT	TEST YEAR	772,680	$ 182,274	$ 450,736	$ 633,010	$ 0 24	$ 0 58	$ 0 82
85	**Maddox 2&3**	CT	2014	26,983	193,336	238,406	431,742	7 17	8 84	16 00
86		CT	2015	23,741	96,630	319,688	416,318	4 07	13 47	17 54
87		CT	2016	57,304	74,944	119,484	194,428	1 31	2 09	3 39
88		CT	2017	10,889	84,275	220,435	304,710	7 74	20 24	27 98
89		CT	2018	192,702	373,612	475,238	848,850	1 94	2 47	4 40
90		CT	TEST YEAR	231,844	$ 388,077	$ 465,879	$ 853,956	$ 1 67	$ 2 01	$ 3 68
91	**Quay Co**	CT	2014	706	335,624	139,919	475,543	475 59	198 27	673 86
92		CT	2015	397	91,792	99,149	190,941	231 21	249 75	480 96
93		CT	2016	337	119,157	39,991	159,148	353 87	118 76	472 63
94		CT	2017	196	$83,135	$228,191	$311,326	424 42	1,164 95	1,589 37
95		CT	2018	169	56,541	140,376	196,917	334 11	829 50	1,163 61
96		CT	TEST YEAR	151	$ 48,118	$ 100,179	$ 148,297	$ 319.02	$ 664 18	$ 983 21
97	**Riverview**(1)	CT	2014	-	38,907	-	38,907	-	-	-
98		CT	2015	-	-	-	-	-	-	-
99		CT	2016	-	-	-	-	-	-	-
100		CT	2017	-	-	-	-	-	-	-
101		CT	2018	-	-	-	-	-	-	-
102		CT	TEST YEAR	-	$ -	$ -	$ -	$ -	$ -	$ -
103	**Total CT**	CT	2014	482,982	1,196,481	1,851,424	3,047,905	2 48	3 83	6 31
104		CT	2015	570,244	548,898	1,405,193	1,954,090	0 96	2 46	3 43
105		CT	2016	962,468	571,841	2,310,394	2,882,235	0 59	2 40	2 99
106		CT	2017	452,859	843,035	3,187,860	4,030,895	1 86	7 04	8 90
107		CT	2018	1,486,387	975,844	2,278,367	3,254,211	0 66	1 53	2 19
108		CT	TEST YEAR	1,600,831	957,649	2,069,991	3,027,640	0 60	1.29	1 89

Southwestern Public Service Company

O&M Cost per MWh

	PLANT	TYPE	YEAR	NET GENERATION (MWh)	OPER COST	MAINT COST	O&M COST	OPER $/MWh	MAINT $/MWh	O&M $/MWh
109	**Celanese**[2]	OTH	2014	-	-	-	-	-	-	-
110		OTH	2015	-	-	743	743	-	-	-
111		OTH	2016	-	-	-	-	-	-	-
112		OTH	2017	-	-	-	-	-	-	-
113		OTH	2018	-	-	-	-	-	-	-
114		OTH	TEST YEAR	-	$ -	$ -	$ -	$ -	$ -	$ -
115	**Tucumcari**[3]	OTH	2014	-	10,827	7,872	18,699	-	-	-
116		OTH	2015	-	4,395	(52)	4,343	-	-	-
117		OTH	2016	-	5,681	-	5,681	-	-	-
118		OTH	2017	-	546	-	546	-	-	-
119		OTH	2018	-	-	-	-	-	-	-
120		OTH	TEST YEAR	-	$ -	$ -	$ -	$ -	$ -	$ -
121	**Total OTH**	OTH	2014	-	10,827	7,872	18,699	-	-	-
122		OTH	2015	-	4,395	691	5,086	-	-	-
123		OTH	2016	-	5,681	-	5,681	-	-	-
124		OTH	2017	-	546	-	546	-	-	-
125		OTH	2018	-	-	-	-	-	-	-
126		OTH	TEST YEAR	-	$ -	$ -	$ -	$ -	$ -	$ -

Notes:

CT = "Combustion Turbine"
OTH = "Other"
OPER = "Operation"
MAINT = "Maintenance"
O&M = "Operations & Maintenance"

[1] Riverview was retired from operation in June 2013

[2] Celanese was retired from operation in June 2011

[3] Tucumcari was retired from operation in December 2011

Southwestern Public Service Company

O&M Cost per MWh

Line No.	TOTAL O&M $/MWh PLANT	TYPE	Apr-2018	May-2018	Jun-2018	Jul-2018	Aug-2018	Sep-2018	Oct-2018	Nov-2018	Dec-2018	Jan-2019	Feb-2019	Mar-2019	TOTAL TEST YEAR[1]
1	Harrington	Coal	$ 5.99	$ 2.99	$ 3.70	$ 3.06	$ 4.14	$ 7.54	$ 7.77	$ 5.17	$ 3.96	$ 4.36	$ 4.78	$ 8.76	$ 4.83
2	Tolk	Coal	7.19	3.81	3.73	3.34	3.31	3.91	14.92	8.35	8.88	5.97	5.40	6.98	5.89
3	Subtotal	Coal	$ 6.48	$ 3.28	$ 3.71	$ 3.18	$ 3.73	$ 5.48	$ 10.78	$ 6.62	$ 5.98	$ 4.99	$ 5.00	$ 8.06	$ 5.29
4	Cunningham 1&2	Gas	$ 30.10	$ 9.08	$ 5.53	$ 6.08	$ 3.83	$ 4.21	$ 12.82	$ 8.06	$ 5.66	$ 5.63	$ 5.00	$ 8.98	$ 7.03
5	Jones 1&2	Gas	4.18	3.23	3.79	3.67	4.99	3.69	3.15	4.94	8.30	5.73	18.45	9.07	5.33
6	Maddox 1	Gas	9.30	0.46	7.32	5.22	5.22	7.29	-	-	22.25	3.82	5.62	2.88	6.98
7	Moore County	Gas	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Nichols	Gas	9.20	6.60	11.33	5.92	6.69	7.17	6.96	8.96	13.51	9.21	8.99	5.29	7.85
9	Plant X	Gas	4.05	2.88	6.71	3.97	5.40	6.89	4.26	5.13	16.06	4.58	11.02	4.29	5.44
10	Subtotal	Gas	$ 7.64	$ 4.25	$ 6.21	$ 4.69	$ 5.18	$ 5.23	$ 5.72	$ 6.76	$ 10.43	$ 5.68	$ 10.21	$ 6.20	$ 6.23
11	Carlsbad	CT	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	Cunningham 3&4	CT	0.77	0.77	1.81	1.19	2.57	2.42	3.64	-	22.10	11.00	3.07	1.13	2.33
13	Jones 3&4	CT	13.06	0.76	0.64	0.32	0.03	0.60	0.67	6.69	11.99	7.71	0.19	0.26	0.82
14	Maddox 2&3	CT	4.77	0.63	17.60	9.67	10.22	2.48	0.64	0.99	1.72	1.11	1.61	4.09	3.68
15	Quay Co	CT	1,396.20	-	-	-	-	657.91	691.78	451.85	3,236.81	219.56	407.41	163.18	983.21
16	Riverview	CT	-	-	-	-	-	-	-	-	-	-	-	-	-
17	Subtotal	CT	$ 2.11	$ 0.77	$ 2.44	$ 1.00	$ 1.20	$ 1.63	$ 1.80	$ 7.50	$ 10.62	$ 6.48	$ 1.28	$ 1.24	$ 1.89
18	Celanese	OTH	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
19	Tucumcari	OTH	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Subtotal	OTH	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
21	SPS Total		$ 6.41	$ 3.25	$ 4.29	$ 3.29	$ 3.86	$ 5.05	$ 7.82	$ 6.70	$ 7.43	$ 5.28	$ 6.37	$ 6.50	$ 5.25

Southwestern Public Service Company

O&M Cost per MWh

	TOTAL O&M COST PLANT	TYPE	Apr-2018	May-2018	Jun-2018	Jul-2018	Aug-2018	Sep-2018	Oct-2018	Nov-2018	Dec-2018	Jan-2019	Feb-2019	Mar-2019	TOTAL TEST YEAR
22	Harrington	Coal	$ 1,572,985	$ 1,428,930	$ 1,737,419	$ 1,892,839	$ 1,904,767	$ 2,251,846	$ 2,524,538	$ 2,038,784	$ 1,869,057	$ 1,625,401	$ 1,633,831	$ 2,749,675	$ 23,230,072
23	Tolk	Coal	1,303,358	1,016,895	1,258,925	1,388,415	1,511,741	1,526,160	3,521,320	2,743,814	2,925,804	1,431,588	1,000,137	1,411,728	21,039,885
24	Subtotal	Coal	$ 2,876,343	$ 2,445,825	$ 2,996,344	$ 3,281,254	$ 3,416,508	$ 3,778,006	$ 6,045,858	$ 4,782,598	$ 4,794,861	$ 3,056,989	$ 2,633,968	$ 4,161,403	$ 44,269,957
25	Cunningham 1&2	Gas	$ 957,400	$ 642,413	$ 486,316	$ 588,815	$ 437,535	$ 409,582	$ 464,095	$ 413,264	$ 577,506	$ 297,048	$ 381,022	$ 436,489	$ 6,091,485
26	Jones 1&2	Gas	609,340	480,735	554,966	705,031	651,475	600,738	568,634	796,555	915,488	557,264	1,332,558	1,183,759	8,956,543
27	Maddox 1	Gas	424,378	23,700	292,749	247,156	240,328	208,442	269,735	289,269	352,130	167,371	208,163	168,989	2,892,410
28	Moore County[2]	Gas	488	3,263	(2,977)	493	-	148	137	67	156	145	99	83	2,102
29	Nichols	Gas	612,452	563,274	735,402	721,228	680,657	542,738	706,037	636,943	736,825	457,242	485,807	487,804	7,366,409
30	Plant X	Gas	440,265	417,965	554,945	625,310	612,938	606,205	554,854	695,827	1,042,056	398,549	484,736	517,760	6,951,410
31	Subtotal	Gas	$ 3,044,323	$ 2,131,350	$ 2,621,401	$ 2,888,033	$ 2,622,933	$ 2,367,853	$ 2,563,492	$ 2,831,925	$ 3,624,161	$ 1,877,619	$ 2,892,385	$ 2,794,884	$ 32,260,359
32	Carlsbad[2]	CT	$ 16	$ 32	$ 1,149	$ 1,189	$ 951	$ 1,177	$ 822	$ 48	$ 58	$ 7	$ 29	$ 68	$ 5,546
33	Cunningham 3&4	CT	74,518	91,621	103,962	120,257	100,451	92,033	147,277	145,035	233,588	153,646	54,149	70,294	1,386,831
34	Jones 3&4	CT	59,093	43,025	74,387	67,709	4,889	33,655	31,310	101,365	128,898	68,485	7,710	12,484	633,010
35	Maddox 2&3	CT	90,998	25,315	265,433	120,256	132,169	38,668	20,920	21,708	29,210	16,001	21,883	71,395	853,956
36	Quay Co	CT	29,362	4,797	18,834	15,783	9,057	13,882	15,565	9,760	15,213	3,491	8,963	3,590	148,297
37	Riverview	CT	-	-	-	-	-	-	-	-	-	-	-	-	-
38	Subtotal	CT	$ 253,987	$ 164,790	$ 463,765	$ 325,194	$ 247,517	$ 179,415	$ 215,894	$ 277,916	$ 406,967	$ 241,630	$ 92,734	$ 157,831	$ 3,027,640
39	Celanese	OTH	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
40	Tucumcari	OTH	-	-	-	-	-	-	-	-	-	-	-	-	-
41	Subtotal	OTH	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
42	SPS Total		$ 6,174,653	$ 4,741,965	$ 6,081,510	$ 6,494,481	$ 6,286,958	$ 6,325,274	$ 8,825,244	$ 7,892,439	$ 8,825,989	$ 5,176,238	$ 5,619,087	$ 7,114,118	$ 79,557,956

	NET GENERATION (MWh) PLANT	TYPE	Apr-2018	May-2018	Jun-2018	Jul-2018	Aug-2018	Sep-2018	Oct-2018	Nov-2018	Dec-2018	Jan-2019	Feb-2019	Mar-2019	TOTAL TEST YEAR
43	Harrington	Coal	262,630	477,448	469,630	618,275	459,592	298,846	324,811	394,042	471,617	372,406	341,550	314,026	4,804,873
44	Tolk	Coal	181,373	267,180	337,724	415,182	456,229	390,726	235,988	328,695	329,643	239,962	185,193	202,323	3,570,218
45	Subtotal	Coal	444,003	744,628	807,354	1,033,457	915,821	689,572	560,799	722,737	801,260	612,368	526,743	516,349	8,375,091
46	Cunningham 1&2	Gas	31,804	70,789	88,009	96,884	114,381	97,250	36,200	51,296	101,971	52,769	76,145	48,629	866,127
47	Jones 1&2	Gas	145,785	148,874	146,373	192,015	130,664	162,941	180,707	161,115	110,341	97,329	72,225	130,467	1,678,836
48	Maddox 1	Gas	45,624	51,710	40,011	47,329	46,004	28,605	(184)	(217)	15,826	43,784	37,041	58,777	414,310
49	Moore County	Gas	-	-	-	-	-	-	-	-	-	-	-	-	-
50	Nichols	Gas	66,582	85,285	64,887	121,776	101,684	75,699	101,419	71,119	54,551	49,622	54,035	92,177	938,836
51	Plant X	Gas	108,627	144,881	82,702	157,426	113,461	88,017	130,162	135,621	64,866	86,996	43,979	120,799	1,277,537
52	Subtotal	Gas	398,422	501,539	421,982	615,431	506,194	452,512	448,304	418,934	347,555	330,500	283,425	450,849	5,175,646
53	Carlsbad	CT	-	-	-	-	-	-	-	-	-	-	-	-	-
54	Cunningham 3&4	CT	96,981	118,280	57,576	101,273	39,160	38,038	40,407	-	10,569	13,962	17,666	62,244	596,156
55	Jones 3&4	CT	4,526	56,622	117 124	212,069	155,031	56,553	47,028	15,157	10,746	8,886	41,181	47,757	772,680
56	Maddox 2&3	CT	19,086	39,894	15,080	12,438	12,929	15,590	32,470	21,894	17,012	14,402	13,572	17,477	231,844
57	Quay Co	CT	21	-	-	-	-	21	23	22	5	16	22	22	151
58	Riverview	CT	-	-	-	-	-	-	-	-	-	-	-	-	-
59	Subtotal	CT	120,614	214,796	189,780	325,780	207,120	110,202	119,928	37,073	38,332	37,266	72,441	127,500	1,600,831
60	Celanese	OTH	-	-	-	-	-	-	-	-	-	-	-	-	-
61	Tucumcari	OTH	-	-	-	-	-	-	-	-	-	-	-	-	-
62	Subtotal	OTH	-	-	-	-	-	-	-	-	-	-	-	-	-
63	SPS Total		963,039	1,460,963	1,419,116	1,974,668	1,629,135	1,252,286	1,129,031	1,178,743	1,187,147	980,134	882,609	1,094,698	15,151,567

Southwestern Public Service Company

O&M Cost per MWh

	MAINTENANCE $/MWh PLANT	TYPE	Apr-2018	May-2018	Jun-2018	Jul-2018	Aug-2018	Sep-2018	Oct-2018	Nov-2018	Dec-2018	Jan-2019	Feb-2019	Mar-2019	TOTAL TEST YEAR
64	Harrington	Coal	$ 2.95	$ 1.99	$ 1.66	$ 1.49	$ 2.23	$ 4.67	$ 4.93	$ 2.81	$ 1.80	$ 2.18	$ 2.79	$ 6.88	$ 2.77
65	Tolk	Coal	4.50	3.19	1.99	1.99	1.90	2.40	11.65	6.39	8.09	4.14	3.42	4.56	4.21
66	Subtotal	Coal	$ 3.58	$ 2.42	$ 1.80	$ 1.69	$ 2.07	$ 3.38	$ 7.76	$ 4.44	$ 4.39	$ 2.95	$ 3.01	$ 5.97	$ 3.39
67	Cunningham 1&2	Gas	$ 12.60	$ 10.26	$ 3.12	$ 4.01	$ 1.65	$ 1.64	$ 7.44	$ 3.80	$ 2.84	$ 1.98	$ 2.49	$ 4.09	$ 3.91
68	Jones 1&2	Gas	1.65	1.56	1.18	1.08	1.54	1.35	1.18	0.80	4.81	3.05	14.01	6.43	2.56
69	Maddox 1	Gas	2.94	1.85	4.74	2.66	2.91	2.95	-	-	13.95	1.67	3.03	1.54	3.89
70	Moore County	Gas	-	-	-	-	-	-	-	-	-	-	-	-	-
71	Nichols	Gas	3.86	3.22	5.28	2.53	2.70	2.98	3.32	3.32	6.95	4.39	4.28	2.57	3.54
72	Plant X	Gas	1.97	1.94	3.68	2.40	3.23	4.32	2.08	3.22	12.17	2.55	7.02	2.80	3.36
73	Subtotal	Gas	$ 3.13	$ 3.21	$ 3.04	$ 2.29	$ 2.30	$ 2.36	$ 2.83	$ 2.79	$ 6.36	$ 2.77	$ 6.54	$ 3.78	$ 3.27
74	Carlsbad	CT	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
75	Cunningham 3&4	CT	0.50	0.54	1.22	0.80	2.03	1.61	2.86	-	22.49	8.36	1.43	0.81	1.76
76	Jones 3&4	CT	12.26	0.73	0.19	0.07	0.12	0.54	0.62	5.02	6.99	7.67	0.17	0.26	0.58
77	Maddox 2&3	CT	1.12	0.79	3.40	8.85	9.81	2.10	0.18	0.18	0.36	0.35	0.80	3.45	2.01
78	Quay Co	CT	698.81	-	-	-	-	416.68	412.49	377.73	2,617.02	165.91	205.14	120.27	664.18
79	Riverview	CT	-	-	-	-	-	-	-	-	-	-	-	-	-
80	Subtotal	CT	$ 1.16	$ 0.69	$ 0.83	$ 0.66	$ 1.11	$ 1.22	$ 1.34	$ 5.04	$ 8.64	$ 5.17	$ 0.66	$ 0.99	$ 1.29
81	Celanese	OTH	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
82	Tucumcari	OTH	-	-	-	-	-	-	-	-	-	-	-	-	-
83	Subtotal	OTH	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
84	SPS Total		$ 3.09	$ 2.44	$ 2.04	$ 1.71	$ 2.02	$ 2.82	$ 5.12	$ 3.87	$ 5.10	$ 2.97	$ 3.95	$ 4.49	$ 3.12

	MAINTENANCE COST PLANT	TYPE	Apr-2018	May-2018	Jun-2018	Jul-2018	Aug-2018	Sep-2018	Oct-2018	Nov-2018	Dec-2018	Jan-2019	Feb-2019	Mar-2019	TOTAL TEST YEAR
85	Harrington	Coal	$ 775,311	$ 951,100	$ 779,458	$ 919,765	$ 1,024,566	$ 1,394,302	$ 1,601,685	$ 1,107,323	$ 849,029	$ 811,518	$ 951,318	$ 2,161,200	$ 13,326,575
86	Tolk	Coal	815,518	851,212	671,324	825,632	867,527	939,688	2,748,598	2,101,249	2,668,241	993,444	634,025	923,003	15,039,461
87	Subtotal	Coal	$ 1,590,829	$ 1,802,312	$ 1,450,782	$ 1,745,397	$ 1,892,093	$ 2,333,990	$ 4,350,283	$ 3,208,572	$ 3,517,270	$ 1,804,962	$ 1,585,343	$ 3,084,203	$ 28,366,036
88	Cunningham 1&2	Gas	$ 400,755	$ 726,331	$ 274,761	$ 388,439	$ 189,052	$ 159,031	$ 269,405	$ 195,048	$ 289,428	$ 104,705	$ 189,609	$ 198,686	$ 3,385,250
89	Jones 1&2	Gas	240,332	231,761	172,433	206,711	201,191	219,633	213,532	129,426	530,669	297,311	1,011,692	839,041	4,293,732
90	Maddox 1	Gas	134,154	95,865	189,597	125,939	133,918	84,458	178,193	171,932	220,766	72,968	112,091	90,720	1,610,601
91	Moore County	Gas	-	-	-	-	-	-	-	-	-	-	-	-	-
92	Nichols	Gas	256,851	274,973	342,592	308,436	274,302	225,568	337,218	236,360	378,875	218,000	231,014	237,070	3,321,259
93	Plant X	Gas	213,538	281,777	304,755	378,077	366,232	379,934	270,516	436,831	789,502	221,889	308,553	338,389	4,289,993
94	Subtotal	Gas	$ 1,245,630	$ 1,610,707	$ 1,284,138	$ 1,407,602	$ 1,164,695	$ 1,068,624	$ 1,268,864	$ 1,169,597	$ 2,209,240	$ 914,873	$ 1,852,959	$ 1,703,906	$ 16,900,835
95	Carlsbad[(2)]	CT	$ -	$ -	$ 1,120	$ 950	$ 720	$ 916	$ 784	$ -	$ -	7	$	$ 68	$ 4,565
96	Cunningham 3&4	CT	48,706	64,030	70,094	80,909	79,480	61,077	115,725	98,567	237,653	116,688	25,266	50,437	1,048,632
97	Jones 3&4	CT	55,499	41,232	22,438	14,925	18,323	30,546	28,995	76,105	75,153	68,190	7,141	12,189	450,736
98	Maddox 2&3	CT	21,332	31,629	51,218	110,016	126,842	32,757	5,768	3,970	6,079	5,089	10,846	60,333	465,879
99	Quay Co	CT	14,696	10,284	13,157	8,666	5,047	8,792	9,281	8,159	12,300	2,638	4,513	2,646	100,179
100	Riverview	CT	-	-	-	-	-	-	-	-	-	-	-	-	-
101	Subtotal	CT	$ 140,233	$ 147,175	$ 158,027	$ 215,466	$ 230,412	$ 134,088	$ 160,553	$ 186,801	$ 331,185	$ 192,612	$ 47,766	$ 125,673	$ 2,069,991
102	Celanese	OTH	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
103	Tucumcari	OTH	-	-	-	-	-	-	-	-	-	-	-	-	-
104	Subtotal	OTH	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
105	SPS Total		$ 2,976,692	$ 3,560,194	$ 2,892,947	$ 3,368,465	$ 3,287,200	$ 3,536,702	$ 5,779,700	$ 4,564,970	$ 6,057,695	$ 2,912,447	$ 3,486,068	$ 4,913,782	$ 47,336,862

Southwestern Public Service Company

O&M Cost per MWh

OPERATIONS $/MWh

	PLANT	TYPE	Apr-2018	May-2018	Jun-2018	Jul-2018	Aug-2018	Sep-2018	Oct-2018	Nov-2018	Dec-2018	Jan-2019	Feb-2019	Mar-2019	TOTAL TEST YEAR
106	Harrington	Coal	$ 3.04	$ 1.00	$ 2.04	$ 1.57	$ 1.92	$ 2.87	$ 2.84	$ 2.36	$ 2.16	$ 2.19	$ 2.00	$ 1.87	$ 2.06
107	Tolk	Coal	2.69	0.62	1.74	1.36	1.41	1.50	3.27	1.95	0.78	1.83	1.98	2.42	1.68
108	Subtotal	Coal	$ 2.90	$ 0.86	$ 1.91	$ 1.49	$ 1.66	$ 2.09	$ 3.02	$ 2.18	$ 1.59	$ 2.04	$ 1.99	$ 2.09	$ 1.90
109	Cunningham 1&2	Gas	$ 17.50	$ (1.19)	$ 2.40	$ 2.07	$ 2.17	$ 2.58	$ 5.38	$ 4.25	$ 2.83	$ 3.64	$ 2.51	$ 4.89	$ 3.12
110	Jones 1&2	Gas	2.53	1.67	2.61	2.60	3.45	2.34	1.97	4.14	3.49	2.67	4.44	2.64	2.78
111	Maddox 1	Gas	6.36	(1.40)	2.58	2.56	2.31	4.33	-	-	8.30	2.16	2.59	1.33	3.09
112	Moore County	Gas	-	-	-	-	-	-	-	-	-	-	-	-	-
113	Nichols	Gas	5.34	3.38	6.05	3.39	4.00	4.19	3.64	5.63	6.56	4.82	4.72	2.72	4.31
114	Plant X	Gas	2.09	0.94	3.03	1.57	2.17	2.57	2.18	1.91	3.89	2.03	4.01	1.48	2.08
115	Subtotal	Gas	$ 4.51	$ 1.04	$ 3.17	$ 2.41	$ 2.88	$ 2.87	$ 2.89	$ 3.97	$ 4.07	$ 2.91	$ 3.67	$ 2.42	$ 2.97
116	Carlsbad	CT	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
117	Cunningham 3&4	CT	0.27	0.23	0.59	0.39	0.54	0.81	0.78	-	(0.38)	2.65	1.63	0.32	0.57
118	Jones 3&4	CT	0.79	0.03	0.44	0.25	(0.09)	0.05	0.05	1.67	5.00	0.03	0.01	0.01	0.24
119	Maddox 2&3	CT	3.65	(0.16)	14.21	0.82	0.41	0.38	0.47	0.81	1.36	0.76	0.81	0.63	1.67
120	Quay Co	CT	697.38	-	-	-	-	241.23	279.29	74.12	619.79	53.65	202.27	42.91	319.02
121	Riverview	CT	-	-	-	-	-	-	-	-	-	-	-	-	-
122	Subtotal	CT	$ 0.94	$ 0.08	$ 1.61	$ 0.34	$ 0.08	$ 0.41	$ 0.46	$ 2.46	$ 1.98	$ 1.32	$ 0.62	$ 0.25	$ 0.60
123	Celanese	OTH	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
124	Tucumcari	OTH	-	-	-	-	-	-	-	-	-	-	-	-	-
125	Subtotal	OTH	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
126	**SPS Total**		**$ 3.32**	**$ 0.81**	**$ 2.25**	**$ 1.58**	**$ 1.84**	**$ 2.23**	**$ 2.70**	**$ 2.82**	**$ 2.33**	**$ 2.31**	**$ 2.42**	**$ 2.01**	**$ 2.13**

OPERATIONS COST

	PLANT	TYPE	Apr-2018	May-2018	Jun-2018	Jul-2018	Aug-2018	Sep-2018	Oct-2018	Nov-2018	Dec-2018	Jan-2019	Feb-2019	Mar-2019	TOTAL TEST YEAR
127	Harrington	Coal	$ 797,674	$ 477,830	$ 957,961	$ 973,074	$ 880,201	$ 857,544	$ 922,853	$ 931,461	$ 1,020,028	$ 813,883	$ 682,513	$ 588,475	$ 9,903,497
128	Tolk	Coal	487,840	165,683	587,601	562,783	644,214	586,472	772,722	642,565	257,563	438,144	366,112	488,725	6,000,424
129	Subtotal	Coal	$ 1,285,514	$ 643,513	$ 1,545,562	$ 1,535,857	$ 1,524,415	$ 1,444,016	$ 1,695,575	$ 1,574,026	$ 1,277,591	$ 1,252,027	$ 1,048,625	$ 1,077,200	$ 15,903,921
130	Cunningham 1&2	Gas	$ 556,645	$ (83,918)	$ 211,555	$ 200,376	$ 248,483	$ 250,551	$ 194,690	$ 218,216	$ 288,078	$ 192,343	$ 191,413	$ 237,803	$ 2,706,235
131	Jones 1&2	Gas	369,008	248,974	382,533	498,320	450,284	381,105	355,102	667,129	384,819	259,953	320,866	344,718	4,662,811
132	Maddox 1	Gas	290,224	(72,165)	103,152	121,217	106,410	123,984	91,542	117,337	131,364	94,403	96,072	78,269	1,281,809
133	Moore County[2]	Gas	488	3,263	(2,977)	493	-	148	137	67	156	145	99	83	2,102
134	Nichols	Gas	355,601	288,301	392,810	412,792	406,355	317,170	368,819	400,583	357,950	239,242	254,793	250,734	4,045,150
135	Plant X	Gas	226,727	136,188	250,190	247,233	246,706	226,271	284,338	258,996	252,554	176,660	176,183	179,371	2,661,417
136	Subtotal	Gas	$ 1,798,693	$ 520,643	$ 1,337,263	$ 1,480,431	$ 1,458,238	$ 1,299,229	$ 1,294,628	$ 1,662,328	$ 1,414,921	$ 962,746	$ 1,039,426	$ 1,090,978	$ 15,359,524
137	Carlsbad[2]	CT	$ 16	$ 32	$ 29	$ 239	$ 231	$ 261	$ 38	$ 48	58	$	29		$ 981
138	Cunningham 3&4	CT	25,812	27,591	33,868	39,348	20,971	30,956	31,552	46,468	(4,065)	36,958	28,883	19,857	338,199
139	Jones 3&4	CT	3,594	1,793	51,949	52,784	(13,434)	3,109	2,315	25,260	53,745	295	569	295	182,274
140	Maddox 2&3	CT	69,666	(6,314)	214,215	10,240	5,327	5,911	15,152	17,738	23,131	10,912	11,037	11,062	388,077
141	Quay Co	CT	14,666	(5,487)	5,677	7,117	4,010	5,090	6,284	1,601	2,913	853	4,450	944	48,118
142	Riverview	CT	-	-	-	-	-	-	-	-	-	-	-	-	-
143	Subtotal	CT	$ 113,754	$ 17,615	$ 305,738	$ 109,728	$ 17,105	$ 45,327	$ 55,341	$ 91,115	$ 75,782	$ 49,018	$ 44,968	$ 32,158	$ 957,649
144	Celanese	OTH	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
145	Tucumcari	OTH	-	-	-	-	-	-	-	-	-	-	-	-	-
146	Subtotal	OTH	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
147	**SPS Total**	**ALL**	**$ 3,197,961**	**$ 1,181,771**	**$ 3,188,563**	**$ 3,126,016**	**$ 2,999,758**	**$ 2,788,572**	**$ 3,045,544**	**$ 3,327,469**	**$ 2,768,294**	**$ 2,263,791**	**$ 2,133,019**	**$ 2,200,336**	**$ 32,221,094**

1 The total amounts for the year may not precisely match with the5 Year Plan because of rounding of the individual months

2 Straggling costs due to site and security inspections

Southwestern Public Service Company

Supply and Load Data (MWh)

Line No.		PRODUCTION							PURCHASED POWER							
		NUCLEAR	LIGNITE	COAL	GAS/OIL	HYDRO	OTHER[3]	SUB TOTAL	QF FIRM	QF NON-FIRM	OTHER FIRM	OTHER NON-FIRM	SUB TOTAL	NET INTER-CHANGE	PRIOR ADJUST	TOTAL SUPPLY
	TEST YEAR															
1	April 2018	N/A	N/A	444,003	519,036	N/A	N/A	963,039	116,161	21,014	424,050	1,226,105	1,787,329	-		2,750,368
2	May 2018	N/A	N/A	744,628	716,335	N/A	N/A	1,460,963	131,597	22,303	419,335	623,169	1,196,403	-		2,657,366
3	June 2018	N/A	N/A	807,354	611,762	N/A	N/A	1,419,116	125,614	20,892	468,253	792,917	1,407,677	-		2,826,793
4	July 2018	N/A	N/A	1,033,457	941,211	N/A	N/A	1,974,668	140,818	12,058	520,949	659,842	1,333,667	-		3,308,335
5	August 2018	N/A	N/A	915,821	713,314	N/A	N/A	1,629,135	139,570	15,152	423,352	712,894	1,290,968	-		2,920,102
6	September 2018	N/A	N/A	689,572	562,714	N/A	N/A	1,252,286	130,355	12,473	410,031	722,767	1,275,626	-		2,527,912
7	October 2018	N/A	N/A	560,799	568,232	N/A	N/A	1,129,031	145,083	15,296	397,956	616,590	1,174,924	-		2,303,955
8	November 2018	N/A	N/A	722,737	456,006	N/A	N/A	1,178,743	136,295	17,406	407,346	628,776	1,189,823	-		2,368,566
9	December 2018	N/A	N/A	801,260	385,887	N/A	N/A	1,187,147	144,299	17,584	412,240	875,662	1,449,785	-		2,636,932
10	January 2019	N/A	N/A	612,368	367,766	N/A	N/A	980,134	145,106	21,709	378,402	919,418	1,464,634	-		2,444,768
11	February 2019	N/A	N/A	526,743	355,866	N/A	392	883,001	126,154	22,232	345,132	847,335	1,340,853	-		2,223,854
12	March 2019	N/A	N/A	516,349	578,349	N/A	20,486	1,115,184	137,675	16,060	372,347	803,062	1,329,144	-		2,444,328
13	**TEST YEAR TOTAL[1]**			**8,375,091**	**6,776,476**		**20,878**	**15,172,445**	**1,618,725**	**214,178**	**4,979,394**	**9,428,537**	**16,240,835**	**-**		**31,413,280**
	UPDATE PERIOD															
14	April 2019	N/A	N/A	304,184	519,700	N/A	68,856	892,740	106,912	19,129	345,072	866,798	1,337,911	-		2,230,651
15	May 2019	N/A	N/A	391,962	727,384	N/A	135,144	1,254,490	129,411	15,132	83,763	803,329	1,031,635	-		2,286,125
16	June 2019	N/A	N/A	544,733	789,865	N/A	151,466	1,486,064	124,222	16,741	(150)	794,792	935,605	-		2,421,669
17	**UPDATED TEST YEAR TOTAL[2]**			**7,619,985**	**6,966,293**		**376,344**	**14,962,622**	**1,605,899**	**200,971**	**4,096,441**	**9,251,266**	**15,154,576**	**-**		**30,117,198**

Notes: [1]The Test Year is April 1, 2018 through March 31, 2019

[2]The Updated Test Year is July 1, 2018 through June 30, 2019

[3]Hale Wind Project test energy through June 28, 2019 (Commercial Operation Date)

This schedule contains estimates for the period of April 1, 2019 through June 30, 2019, referred to as the "Update Period " As discussed by Southwestern Public Service Company ("SPS") witness William A Grant, SPS will file actual costs for the Update Period, including an updated version of this schedule, no later than the 45th day after the date of the initial filing of this rate case, as required by PURA § 36 112

As discussed in the testimony of William A Grant, Southwestern Public Service Company ("SPS") has not filed a fuel reconciliation with its current base rate case in accordance with the Order in Project No 41905 and 16 Tex Admin Code ("TAC") § 25 236 as revised in that project Therefore, fuel reconciliation data is not applicable Additionally, SPS is not proposing a new fuel factor under 16 TAC § 25 237

The owned energy production figures shown do not include the de minimus owned solar production

Southwestern Public Service Company

Supply and Load Data (MWh)

Line No.		TOTAL LOAD	BOOK LOSSES LESS SYSTEM'S OWN USE	SYSTEM'S OWN USE	SALES: OFF-SYSTEM NONFIRM	SALES: OFF-SYSTEM FIRM	SALES: ON-SYSTEM WHOLESALE SALES	SALES: RETAIL	SALES: TOTAL SALES
	TEST YEAR								
1	April 2018	2,750,368	357,438	1,768	483,219	-	360,749	1,547,195	2,391,163
2	May 2018	2,657,366	(99,928)	1,081	557,362	-	451,980	1,746,871	2,756,213
3	June 2018	2,826,793	2,506	1,376	518,911	-	485,230	1,818,770	2,822,911
4	July 2018	3,308,335	131,390	1,272	730,035	-	513,862	1,931,776	3,175,673
5	August 2018	2,920,102	88,348	1,217	423,637	-	508,546	1,898,355	2,830,538
6	September 2018	2,527,912	94,349	1,968	345,717	-	407,718	1,678,160	2,431,596
7	October 2018	2,303,955	(90,803)	1,430	372,401	-	372,233	1,648,693	2,393,327
8	November 2018	2,368,566	(57,710)	1,106	412,097	-	373,117	1,639,956	2,425,170
9	December 2018	2,636,932	175,623	1,228	294,482	-	409,980	1,755,619	2,460,081
10	January 2019	2,444,768	78,534	1,640	209,700	-	403,107	1,751,786	2,364,593
11	February 2019	2,223,854	44,113	1,854	257,866	-	359,488	1,560,533	2,177,887
12	March 2019	2,444,328	68,090	1,755	327,542	-	383,936	1,663,005	2,374,483
13	**TEST YEAR TOTAL [(1)]**	**31,413,280**	**791,950**	**17,694**	**4,932,969**	**-**	**5,029,947**	**20,640,719**	**30,603,636**
					H-12.5b	**H-12.5b**	**H-12.5f**	**H-12.5f**	
	UPDATE PERIOD								
14	April 2019	2,230,651	66,043	1,459	224,495	-	359,418	1,579,236	2,163,149
15	May 2019	2,286,125	40,760	1,254	199,964	-	379,486	1,664,661	2,244,111
16	June 2019	2,421,669	153,874	1,146	170,307	-	241,574	1,854,769	2,266,650
17	**UPDATED TEST YEAR TOTAL [(2)]**	**30,117,198**	**792,610**	**17,329**	**3,968,243**	**-**	**4,712,467**	**20,626,548**	**29,307,258**

Southwestern Public Service Company

Summary of Net MWh Production by Unit (Lignite, Nuclear, & Coal)

Line No.		LIGNITE-FIRED UNIT 1	NUCLEAR PRODUCTION UNIT 1	COAL-FIRED PRODUCTION (NET MWh) HARRINGTON 1	HARRINGTON 2	HARRINGTON 3	TOLK 1	TOLK 2	TOTAL
	TEST YEAR (TY)								
1	April 2018	N/A	N/A	9,027	141,365	112,238	181,707	(334)	444,003
2	May 2018			176,460	133,201	167,787	220,172	47,008	744,628
3	June 2018			141,291	170,454	157,885	154,470	183,254	807,354
4	July 2018			196,220	212,172	209,883	216,719	198,463	1,033,457
5	August 2018			121,614	179,632	158,346	233,668	222,561	915,821
6	September 2018			93,612	161,717	43,517	165,416	225,310	689,572
7	October 2018			137,606	187,603	(398)	(1,345)	237,333	560,799
8	November 2018			107,233	175,548	111,261	99,862	228,833	722,737
9	December 2018			141,314	175,691	154,612	177,861	151,782	801,260
10	January 2019			65,684	162,807	143,915	64,571	175,391	612,368
11	February 2019			91,402	102,705	147,443	23,804	161,389	526,743
12	March 2019			(1,255)	164,348	150,933	142,477	59,846	516,349
13	**TOTAL TY**	**N/A**	**N/A**	**1,280,208**	**1,967,243**	**1,557,422**	**1,679,382**	**1,890,836**	**8,375,091**

Note: As discussed in the testimony of William A. Grant, Southwestern Public Service Company ("SPS") has not filed a fuel reconciliation with its current base rate case in accordance with the Order in Project No. 41905 and 16 Tex. Admin. Code § 25.236 as revised in that project. Therefore, fuel reconciliation data is not applicable. Additionally, SPS is not proposing a new fuel factor under 16 TAC § 25.237. Therefore, rate year data is not applicable.

Southwestern Public Service Company

Summary of Net MWh Production by Unit (Lignite, Nuclear, Coal), for Previous Five (5) Years

Line No.		LIGNITE-FIRED UNIT 1	NUCLEAR PRODUCTION UNIT 1	COAL-FIRED PRODUCTION NET MWh HARRINGTON 1	HARRINGTON 2	HARRINGTON 3	TOLK 1	TOLK 2	TOTAL
	PREVIOUS YEAR ("PY") 0								
1	January 2018	N/A	N/A	119,215	146,568	107,740	245,411	190,972	809,906
2	February 2018			94,001	147,503	81,368	181,060	36,113	540,045
3	March 2018			33,558	163,898	112,948	214,155	(391)	524,168
4	April 2018			9,027	141,365	112,238	181,707	(334)	444,003
5	May 2018			176,460	133,201	167,787	220,172	47,008	744,628
6	June 2018			141,291	170,454	157,885	154,470	183,254	807,354
7	July 2018			196,220	212,172	209,883	216,719	198,463	1,033,457
8	August 2018			121,614	179,632	158,346	233,668	222,561	915,821
9	September 2018			93,612	161,717	43,517	165,416	225,310	689,572
10	October 2018			137,606	187,603	(398)	(1,345)	237,333	560,799
11	November 2018			107,233	175,548	111,261	99,862	228,833	722,737
12	December 2018			141,314	175,691	154,612	177,861	151,782	801,260
13	**TOTAL PY 0**			**1,371,151**	**1,995,351**	**1,417,187**	**2,089,156**	**1,720,904**	**8,593,749**
	PREVIOUS YEAR 1								
14	January 2017	N/A	N/A	113,312	147,255	82,819	135,228	262,333	740,947
15	February 2017			78,539	134,885	144,519	201,447	65,066	624,456
16	March 2017			66,803	156,984	111,192	248,923	-	583,902
17	April 2017			68,596	103,507	102,500	230,631	92,092	597,326
18	May 2017			116,987	(821)	180,131	244,103	255,564	795,964
19	June 2017			163,540	123,281	182,682	279,711	254,937	1,004,151
20	July 2017			170,532	199,247	209,032	320,001	321,337	1,220,149
21	August 2017			183,244	202,365	170,196	312,878	310,208	1,178,891
22	September 2017			124,734	120,611	134,645	211,091	235,573	826,654
23	October 2017			38,202	160,715	72,674	139,352	230,349	641,292
24	November 2017			55,000	166,163	90,593	142,173	241,720	695,649
25	December 2017			106,721	168,694	176,216	176,782	246,462	874,875
26	**TOTAL PY 1**			**1,286,210**	**1,682,885**	**1,657,199**	**2,642,320**	**2,515,641**	**9,784,255**

Southwestern Public Service Company

Summary of Net MWh Production by Unit (Lignite, Nuclear, Coal), for Previous Five (5) Years

Line No.		LIGNITE-FIRED UNIT 1	NUCLEAR PRODUCTION UNIT 1	COAL-FIRED PRODUCTION NET MWh HARRINGTON 1	HARRINGTON 2	HARRINGTON 3	TOLK 1	TOLK 2	TOTAL
	PREVIOUS YEAR 2								
27	January 2016	N/A	N/A	92,569	86,673	171,436	278,690	247,893	877,261
28	February 2016			75,947	81,384	140,300	194,722	151,503	643,856
29	March 2016			128,373	112,123	145,334	195,263	146,171	727,264
30	April 2016			154,198	135,090	169,660	164,415	249,566	872,929
31	May 2016			163,128	163,431	76,699	245,903	245,757	894,918
32	June 2016			183,498	184,515	134,161	302,198	305,701	1,110,073
33	July 2016			202,206	195,006	163,698	330,718	330,661	1,222,289
34	August 2016			182,237	198,595	208,599	302,107	291,479	1,183,017
35	September 2016			62,026	112,958	115,538	138,348	271,203	700,073
36	October 2016			(538)	156,788	169,560	143,081	284,361	753,252
37	November 2016			110,234	148,861	130,660	249,322	212,289	851,366
39	December 2016			116,847	171,278	179,690	214,745	193,095	875,655
40	**TOTAL PY 2**			**1,470,725**	**1,746,702**	**1,805,335**	**2,759,512**	**2,929,679**	**10,711,953**
	PREVIOUS YEAR 3								
41	January 2015	N/A	N/A	181,839	200,065	152,606	337,700	341,645	1,213,855
42	February 2015			157,679	163,376	145,454	267,669	167,164	901,342
43	March 2015			185,207	190,348	198,913	19,999	327,616	922,083
44	April 2015			140,635	166,894	186,162	(1,460)	366,047	858,278
45	May 2015			165,250	113,654	189,578	169,421	322,798	960,701
46	June 2015			187,460	183,454	190,214	280,493	330,659	1,172,280
47	July 2015			170,702	202,565	215,859	260,214	374,454	1,223,794
48	August 2015			154,601	179,128	214,400	364,915	376,189	1,289,233
49	September 2015			185,885	177,906	83,960	306,050	332,206	1,086,007
50	October 2015			171,861	171,018	(370)	300,723	276,244	919,476
51	November 2015			151,046	141,798	15,774	275,572	245,820	830,010
52	December 2015			154,688	127,876	136,452	232,565	213,417	864,998
53	**TOTAL PY 3**			**2,006,853**	**2,018,082**	**1,729,002**	**2,813,861**	**3,674,259**	**12,242,057**

Southwestern Public Service Company

Summary of Net MWh Production by Unit (Lignite, Nuclear, Coal), for Previous Five (5) Years

Line No.		LIGNITE-FIRED UNIT 1	NUCLEAR PRODUCTION UNIT 1	COAL-FIRED PRODUCTION NET MWh HARRINGTON 1	HARRINGTON 2	HARRINGTON 3	TOLK 1	TOLK 2	TOTAL
	PREVIOUS YEAR 4								
54	January 2014	N/A	N/A	193,805	16,413	151,540	316,362	351,993	1,030,113
55	February 2014			194,598	(584)	195,023	319,554	323,290	1,031,881
56	March 2014			183,507	(1,149)	185,271	365,432	166,150	899,211
57	April 2014			178,773	6,633	132,415	370,338	-	688,159
58	May 2014			208,870	128,068	81,270	369,422	-	787,630
59	June 2014			178,247	176,360	183,566	361,421	71,426	971,020
60	July 2014			212,538	213,930	213,330	299,899	373,297	1,312,994
61	August 2014			212,414	218,961	218,698	335,740	283,032	1,268,845
62	September 2014			196,157	188,429	180,556	318,437	343,813	1,227,392
63	October 2014			108,271	182,594	196,592	289,439	351,571	1,128,467
64	November 2014			148,918	159,104	161,945	258,322	279,446	1,007,735
65	December 2014			168,247	178,079	178,926	248,783	290,545	1,064,580
66	TOTAL PY 4			2,184,345	1,466,838	2,079,132	3,853,149	2,834,563	12,418,027
	PREVIOUS YEAR 5								
67	January 2013	N/A	N/A	88,838	173,510	178,654	357,437	354,234	1,152,673
68	February 2013			(687)	198,944	195,704	330,081	337,558	1,061,600
69	March 2013			144,956	137,982	205,552	375,677	385,340	1,249,507
70	April 2013			145,013	94,419	174,122	116,524	371,379	901,457
71	May 2013			172,052	75,901	34,888	377,990	378,478	1,039,309
72	June 2013			94,926	193,020	186,528	349,312	354,308	1,178,094
73	July 2013			195,069	200,786	200,486	376,375	376,617	1,349,333
74	August 2013			192,990	197,328	198,537	380,177	368,809	1,337,841
75	September 2013			178,008	68,817	186,161	242,593	354,768	1,030,347
76	October 2013			191,925	130,857	97,703	292,471	366,475	1,079,431
77	November 2013			69,541	189,336	164,872	342,287	352,049	1,118,085
78	December 2013			188,948	187,811	189,955	367,170	370,873	1,304,757
79	TOTAL PY 5			1,661,579	1,848,711	2,013,162	3,908,094	4,370,888	13,802,434

Southwestern Public Service Company

Summary of Net MWh Production by Unit (Natural Gas/Oil Fired)

		STEAM TURBINES (NET MWh)														
Line No.	TEST YEAR (TY)	CELANESE 2 [1]	CUNNINGHAM 1	CUNNINGHAM 2	JONES 1	JONES 2	MADDOX 1	MOORE COUNTY 3 [2]	NICHOLS 1	NICHOLS 2	NICHOLS 3	PLANT X 1	PLANT X 2	PLANT X 3	PLANT X 4	SUB TOTAL
1	April 2018	-	31,804	-	67,289	78,496	45,624	-	14,721	16,870	34,991	4,699	9,097	27,341	67,490	398,422
2	May 2018	-	31,790	38,999	71,613	77,261	51,710	-	23,425	21,775	40,085	5,502	31,520	25,348	82,511	501,539
3	June 2018	-	18,419	69,590	64,749	81,624	40,011	-	20,888	21,000	22,999	5,687	17,059	23,238	36,718	421,982
4	July 2018	-	29,004	67,880	88,113	103,902	47,329	-	30,296	33,842	57,638	9,017	32,996	38,596	76,817	615,431
5	August 2018	-	21,246	93,135	63,668	66,996	46,004	-	25,380	26,432	49,871	8,095	13,088	12,997	79,281	506,194
6	September 2018	-	6,098	91,152	80,780	82,161	28,605	-	12,049	25,686	37,964	8,034	24,913	33,914	21,156	452,512
7	October 2018	-	28,253	7,947	99,843	80,864	(184)	-	22,418	29,162	49,840	9,193	28,445	36,400	56,124	448,304
8	November 2018	-	37,395	13,901	75,599	85,516	(217)	-	14,966	19,532	36,621	7,737	20,947	26,033	80,904	418,934
9	December 2018	-	29,741	72,230	47,802	62,539	15,826	-	13,337	14,638	26,576	(181)	3,174	9,264	52,609	347,555
10	January 2019	-	26,862	25,907	59,652	37,677	43,784	-	16,432	12,602	20,588	1,380	6,255	23,218	56,143	330,500
11	February 2019	-	17,448	58,697	72,225	-	37,041	-	11,697	14,352	27,985	4,455	(134)	7,072	32,586	283,425
12	March 2019	-	41,225	7,404	130,467	-	58,777	-	25,477	25,251	41,449	12,509	(146)	18,494	89,942	450,849
13	TOTAL TY	-	319,285	546,842	921,800	757,036	414,310	-	231,087	261,143	446,606	76,127	187,214	281,915	732,281	5,175,646

Notes: (1) Celanese 2 was removed from service in June of 2011
(2) Moore County 3 was removed from service in October of 2013

As discussed in the testimony of William A Grant, Southwestern Public Service Company ("SPS") has not filed a fuel reconciliation with its current base rate case in accordance with the Order in Project No 41905 and 16 Tex Admin Code § 25 236 as revised in that project Therefore, fuel reconciliation data is not applicable Additionally, SPS is not proposing a new fuel factor under 16 TAC § 25 237 Therefore, rate year data is not applicable

Southwestern Public Service Company

Summary of Net MWh Production by Unit (Natural Gas/Oil Fired)

Line No.		COMBUSTION TURBINES (NET MWh)												
		CARLSBAD 5 [3]	CELANESE 1 [4]	CUNNINGHAM 3	CUNNINGHAM 4	JONES 3	JONES 4	MADDOX 2	MADDOX 3	QUAY COUNTY	RIVERVIEW 6 [5]	TUCUMCARI DIESEL [6]	SUB TOTAL	COMBINED TOTAL
	TEST YEAR (TY)													
1	April 2018	-	-	35,629	61,353	4,262	264	19,086	-	21	-	-	120,614	519,036
2	May 2018	-	-	57,543	60,738	23,747	32,875	39,894	-	-	-	-	214,796	716,335
3	June 2018	-	-	25,570	32,006	54,017	63,107	15,080	-	-	-	-	189,780	611,762
4	July 2018	-	-	42,122	59,151	106,809	105,260	12,438	-	-	-	-	325,780	941,211
5	August 2018	-	-	-	39,160	76,825	78,206	12,929	-	-	-	-	207,120	713,314
6	September 2018	-	-	-	38,038	28,114	28,439	15,579	11	21	-	-	110,202	562,714
7	October 2018	-	-	-	40,407	20,114	26,914	32,379	91	23	-	-	119,928	568,232
8	November 2018	-	-	-	-	6,703	8,454	21,894	-	22	-	-	37,073	456,006
9	December 2018	-	-	-	10,569	7,145	3,601	16,999	13	5	-	-	38,332	385,887
10	January 2019	-	-	-	13,962	4,453	4,433	14,385	17	16	-	-	37,266	367,766
11	February 2019	-	-	-	17,666	21,533	19,648	13,554	18	22	-	-	72,441	355,866
12	March 2019	-	-	-	62,244	17,327	30,430	17,477	-	22	-	-	127,500	578,349
13	TOTAL TY	-	-	160,863	435,293	371,049	401,631	231,694	150	151	-	-	1,600,831	6,776,476

Notes: [3]Carlsbad 5 was removed from service in December 2017
[4]Celanese 1 was removed from service in June of 2011
[5]Riverview 6 was removed from service in June of 2013
[6]Tucumcari Diesel was removed from service in December of 2011

Southwestern Public Service Company

Summary of Net MWh Production by Unit (Natural Gas/Oil Fired), for Previous Five (5) Years

Line No.		STEAM TURBINES														
		CELANESE 2[1]	CUNNINGHAM 1	CUNNINGHAM 2	JONES 1	JONES 2	MADDOX 1	MOORE COUNTY 3[2]	NICHOLS 1	NICHOLS 2	NICHOLS 3	PLANT X 1	PLANT X 2	PLANT X 3	PLANT X 4	SUB TOTAL
	PREVIOUS YEAR ("PY") 0															
1	January 2018	-	3,645	34,495	44,462	56,465	20,681	-	3,895	9,047	22,291	1,386	7,607	9,396	25,329	238,699
2	February 2018	-	11,454	18,432	31,369	62,662	33,629	-	6,383	9,091	19,358	(196)	8,042	15,220	38,467	253,910
3	March 2018	-	12,537	9,735	44,871	64,242	33,075	-	11,198	21,325	24,216	2,791	23,296	11,342	52,734	311,362
4	April 2018	-	31,804	-	67,289	78,496	45,624	-	14,721	16,870	34,991	4,699	9,097	27,341	67,490	398,422
5	May 2018	-	31,790	38,999	71,613	77,261	51,710	-	23,425	21,775	40,085	5,502	31,520	25,348	82,511	501,539
6	June 2018	-	18,419	69,590	64,749	81,624	40,011	-	20,888	21,000	22,999	5,687	17,059	23,238	36,718	421,982
7	July 2018	-	29,004	67,880	88,113	103,902	47,329	-	30,296	33,842	57,638	9,017	32,996	38,596	76,817	615,431
8	August 2018	-	21,246	93,135	63,668	66,996	46,004	-	25,380	26,432	49,871	8,095	13,088	12,997	79,281	506,194
9	September 2018	-	6,098	91,152	80,780	82,161	28,605	-	12,049	25,686	37,964	8,034	24,913	33,914	21,156	452,512
10	October 2018	-	28,253	7,947	99,843	80,864	(184)	-	22,418	29,162	49,840	9,193	28,445	36,400	56,124	448,304
11	November 2018	-	37,395	13,901	75,599	85,516	(217)	-	14,966	19,532	36,621	7,737	20,947	26,033	80,904	418,934
12	December 2018	-	29,741	72,230	47,802	62,539	15,826	-	13,337	14,638	26,576	(181)	3,174	9,264	52,609	347,555
13	**TOTAL PY 0**	-	**261,386**	**517,496**	**780,158**	**902,728**	**362,093**	-	**198,956**	**248,401**	**422,448**	**61,764**	**220,184**	**269,089**	**670,140**	**4,914,844**
	PREVIOUS YEAR 1															
14	January 2017	-	20,826	39,228	32,803	(129)	22,028	-	21,327	6,428	16,433	(312)	(150)	4,073	26,384	188,939
15	February 2017	-	2,885	32,680	13,139	(157)	32,468	-	(313)	450	6,641	(253)	3,719	(152)	7,649	98,756
16	March 2017	-	8,940	40,408	10,729	28,964	37,562	-	5,650	1,038	12,136	(201)	7,930	8,766	24,591	186,513
17	April 2017	-	5,041	41,234	13,705	33,000	16,384	-	2,611	7,217	4,238	(167)	(131)	6,308	10,323	139,763
18	May 2017	-	5,961	16,900	24,926	40,805	29,262	-	8,186	(242)	13,220	(411)	1,708	1,850	14,042	156,207
19	June 2017	-	20,834	59,998	52,331	64,041	36,683	-	18,705	6,685	19,824	116	7,298	4,794	40,471	331,780
20	July 2017	-	26,762	62,013	69,936	88,929	43,439	-	28,278	21,922	37,895	1,321	18,576	16,791	64,751	480,613
21	August 2017	-	8,081	60,406	45,268	67,812	29,033	-	20,498	17,412	19,059	(259)	7,008	8,451	40,717	323,486
22	September 2017	-	14,084	35,925	15,676	30,795	34,439	-	8,189	10,238	12,807	(152)	(150)	8,079	33,670	203,600
23	October 2017	-	11,990	59,444	(269)	35,679	37,564	-	(284)	4,541	14,979	(154)	7,288	4,079	8,180	183,037
24	November 2017	-	6,377	21,674	(410)	17,840	27,110	-	1,655	3,767	8,634	(120)	(137)	4,339	12,159	102,888
25	December 2017	-	4,313	41,307	30,631	35,895	24,946	-	7,971	6,276	27,759	(195)	7,522	10,393	32,496	229,314
26	**TOTAL PY 1**	-	**136,094**	**511,217**	**308,465**	**443,474**	**370,918**	-	**122,473**	**85,732**	**193,625**	**(787)**	**60,481**	**77,771**	**315,433**	**2,624,896**
	PREVIOUS YEAR 2															
27	January 2016	-	(268)	61,092	31,441	73,547	30,735	-	(406)	(275)	4,740	(120)	2,579	(149)	(184)	202,732
28	February 2016	-	(231)	29,984	(345)	78,584	16,350	-	11,812	(265)	11,407	(123)	(133)	5,914	13,568	166,522
29	March 2016	-	5,368	74,482	(356)	77,095	32,404	-	23,363	(243)	1,375	(119)	(105)	(125)	42,211	255,350
30	April 2016	-	21,645	72,362	43,692	69,137	28,612	-	11,590	(251)	19,204	2,639	5,241	9,182	56,344	339,397
31	May 2016	-	11,326	64,134	46,561	54,593	31,178	-	8,290	697	14,069	(217)	6,381	11,066	15,022	263,100
32	June 2016	-	12,583	60,213	72,204	56,179	24,999	-	16,068	6,566	39,903	(327)	23,677	10,371	40,908	363,344
33	July 2016	-	7,245	72,068	78,961	82,454	42,231	-	8,542	16,479	40,343	4,670	17,360	13,921	62,618	446,892
34	August 2016	-	15,594	69,970	81,957	9,288	42,769	-	18,961	21,513	27,251	4,923	18,627	13,726	61,200	385,779
35	September 2016	-	11,059	37,629	55,381	(131)	14,125	-	10,448	17,345	13,746	1,202	9,504	5,577	18,389	194,274
36	October 2016	-	30,530	76,832	56,508	(112)	-	-	13,958	11,773	18,779	(285)	6,860	6,977	32,935	254,755
37	November 2016	-	31,789	92,487	62,650	(111)	-	-	10,562	10,782	5,873	1,149	15,877	8,783	37,346	277,187
38	December 2016	-	16,700	64,146	27,844	(115)	-	-	12,464	12,738	12,085	3,845	3,503	10,495	23,578	187,283
39	**TOTAL PY 2**	-	**163,340**	**775,399**	**556,498**	**500,408**	**263,403**	-	**145,652**	**96,859**	**208,775**	**17,237**	**109,371**	**95,738**	**403,935**	**3,336,615**

Southwestern Public Service Company

Summary of Net MWh Production by Unit (Natural Gas/Oil Fired), for Previous Five (5) Years

Line No.		STEAM TURBINES														
		CELANESE 2[(1)]	CUNNINGHAM 1	CUNNINGHAM 2	JONES 1	JONES 2	MADDOX 1	MOORE COUNTY 3[(2)]	NICHOLS 1	NICHOLS 2	NICHOLS 3	PLANT X 1	PLANT X 2	PLANT X 3	PLANT X 4	SUB TOTAL
	PREVIOUS YEAR 3															
40	January 2015	-	5,976	5,664	44,891	29,983	38,094	-	17,872	7,373	1,112	(138)	4,179	23,243	17,372	195,621
41	February 2015	-	5,874	16,777	33,633	25,003	25,128	-	2,107	11,705	-	(144)	11,477	16,235	25,826	173,621
42	March 2015	-	10,701	49,708	63,989	61,389	29,064	-	12,490	5,437	119	(134)	13,451	10,228	64,559	321,001
43	April 2015	-	11,673	80,374	59,096	61,592	32,317	-	2,488	5,355	8,530	1,608	15,583	33,914	54,371	366,901
44	May 2015	-	2,300	29,047	23,478	45,405	32,952	-	3,186	2,069	12,963	(207)	11,419	9,094	24,488	196,194
45	June 2015	-	4,905	58,471	46,099	39,022	37,563	-	5,338	5,677	23,942	(156)	7,500	6,826	41,941	277,128
46	July 2015	-	19,488	48,903	84,019	92,005	39,793	-	26,359	6,222	52,340	3,540	24,961	26,126	75,391	499,147
47	August 2015	-	11,386	72,770	108,452	90,147	42,543	-	27,408	(254)	51,099	94	20,973	27,064	76,632	528,314
48	September 2015	-	7,938	64,093	89,417	42,794	30,512	-	15,361	(187)	27,651	(186)	7,545	3,567	44,214	332,719
49	October 2015	-	13,467	47,355	95,918	(131)	17,631	-	13,277	(181)	20,991	(193)	8,701	7,735	18,195	242,765
50	November 2015	-	9,970	36,857	106,327	25,210	13,368	-	12,503	(219)	16,881	(108)	(85)	(132)	11,575	232,147
51	December 2015	-	-	69,107	62,588	92,836	21,623	-	13,029	(309)	9,671	(104)	4,444	(170)	25,800	298,515
52	**TOTAL PY 3**	-	103,678	579,126	817,907	605,255	360,588	-	151,418	42,688	225,299	3,872	130,148	163,730	480,364	3,664,073
	PREVIOUS YEAR 4															
53	January 2014	-	-	53,019	40,945	54,731	29,742	-	568	744	683	(289)	18,250	21,196	49,167	268,755
54	February 2014	-	17,675	49,343	36,665	54,371	26,411	-	304	672	672	3,703	11,493	18,530	48,095	267,933
55	March 2014	-	5,785	58,396	58,660	48,638	27,209	-	252	294	173	(218)	11,892	25,032	53,806	289,920
56	April 2014	-	14,781	51,221	50,168	60,096	25,643	-	314	410	324	2,451	25,439	40,118	89,641	360,606
57	May 2014	-	11,164	48,382	39,870	47,188	18,663	-	78	218	485	677	14,465	32,499	65,896	279,585
58	June 2014	-	-	41,953	46,750	49,922	34,457	-	84	85	121	(289)	5,979	21,156	56,716	256,934
59	July 2014	-	7,443	39,879	80,556	59,342	29,883	-	161	167	282	1,649	11,310	32,128	62,697	325,497
60	August 2014	-	12,007	80,523	107,755	92,553	48,533	-	402	574	449	3,708	28,136	33,534	95,515	503,689
61	September 2014	-	2,698	11,490	32,559	38,805	17,522	-	184	110	173	(144)	4,011	2,498	23,117	133,023
62	October 2014	-	5,437	55,456	36,752	31,532	39,661	-	157	423	379	(228)	17,288	(289)	48,210	234,777
63	November 2014	-	33,018	84,954	47,558	47,417	59,543	-	196	119	87	(227)	18,491	24,426	55,541	371,124
64	December 2014	-	1,206	83,006	36,777	54,118	34,987	-	179	187	428	(129)	8,887	14,358	60,808	294,813
65	**TOTAL PY 4**	-	111,214	657,622	615,015	638,713	392,253	-	2,880	4,003	4,257	10,664	175,641	265,186	709,209	3,586,657
	PREVIOUS YEAR 5															
66	January 2013	-	23,042	45,269	48,783	32,652	21,420	(91)	17,195	10,874	22,678	3,777	12,390	5,648	45,727	289,364
67	February 2013	-	20,946	42,973	52,151	50,072	4,560	(179)	3,242	8,128	22,547	3,417	14,808	15,357	37,374	275,396
68	March 2013	-	26,554	43,941	95,009	81,734	-	(133)	4,999	21,224	29,512	15,853	20,991	26,770	(159)	366,295
69	April 2013	-	29,815	86,364	106,253	97,659	-	(103)	11,658	22,348	33,589	16,340	38,330	41,433	66,725	550,411
70	May 2013	-	23,005	58,158	33,625	63,914	34,011	6,071	27,089	25,731	31,294	12,533	19,354	26,207	64,714	425,706
71	June 2013	-	25,137	63,455	72,699	61,387	35,559	12,515	25,031	22,937	28,935	15,304	19,289	26,794	62,493	471,535
72	July 2013	-	25,669	68,031	84,780	12,337	39,434	13,130	29,805	28,449	37,395	15,801	24,685	34,544	71,789	485,849
73	August 2013	-	26,584	72,354	92,674	86,638	41,753	13,003	32,272	31,800	43,216	15,926	28,390	40,726	84,069	609,405
74	September 2013	-	25,605	30,917	72,122	67,016	38,262	6,240	25,397	23,388	20,223	16,406	22,293	34,384	74,637	456,890
75	October 2013	-	24,780	48,470	46,416	53,485	19,577	(40)	2,931	14,955	1,664	1,290	18,532	25,607	53,814	311,481
76	November 2013	-	24,746	53,881	(267)	47,041	22,143	(40)	-	13,832	29,794	(285)	18,183	20,257	57,680	286,965
77	December 2013	-	15,281	51,769	16,578	67,901	31,067	(40)	10,152	20,436	26,637	(234)	18,702	24,678	60,459	343,386
78	**TOTAL PY 5**	-	291,164	665,582	720,823	721,836	287,787	50,333	189,771	244,102	327,484	116,128	255,947	322,405	679,322	4,872,684

Notes: [(1)] Celanese 2 was removed from service in June of 2011

[(2)] Moore County 3 was removed from service in October of 2013

Southwestern Public Service Company

Summary of Net MWh Production by Unit (Natural Gas/Oil Fired), for Previous Five (5) Years

Line No.		COMBUSTION TURBINES												COMBINED TOTAL
		CARLSBAD 5 [3]	CELANESE 1 [4]	CUNNINGHAM 3	CUNNINGHAM 4	JONES 3	JONES 4	MADDOX 2	MADDOX 3	QUAY COUNTY	RIVERVIEW 6 [5]	TUCUMCARI DIESEL [6]	SUB TOTAL	
	PREVIOUS YEAR ("PY") 0													
1	January 2018	-	-	7,718	887	11,029	12,287	1,580	12	20	-	-	33,533	272,233
2	February 2018	-	-	8,012	15,433	4,884	3,891	1,389	-	24	-	-	33,633	287,543
3	March 2018	-	-	17,746	23,338	5,518	5,634	3,328	-	34	-	-	55,597	366,959
4	April 2018	-	-	35,629	61,353	4,262	264	19,086	-	21	-	-	120,614	519,036
5	May 2018	-	-	57,543	60,738	23,747	32,875	39,894	-	-	-	-	214,796	716,335
6	June 2018	-	-	25,570	32,006	54,017	63,107	15,080	-	-	-	-	189,780	611,762
7	July 2018	-	-	42,122	59,151	106,809	105,260	12,438	-	-	-	-	325,780	941,211
8	August 2018	-	-	-	39,160	76,825	78,206	12,929	-	-	-	-	207,120	713,314
9	September 2018	-	-	-	38,038	28,114	28,439	15,579	11	21	-	-	110,202	562,714
10	October 2018	-	-	-	40,407	20,114	26,914	32,379	91	23	-	-	119,928	568,232
11	November 2018	-	-	-	-	6,703	8,454	21,894	-	22	-	-	37,073	456,006
12	December 2018	-	-	-	10,569	7,145	3,601	16,999	13	5	-	-	38,332	385,887
13	**TOTAL PY 0**	-	-	194,339	381,079	349,167		192,575	127		-	-	1,486,387	6,401,231
	PREVIOUS YEAR 1													
14	January 2017	-	-	-	26,205	17,640	13,030	5,575	13	18	-	-	62,481	251,420
15	February 2017	-	-	-	8,489	(174)	(134)	236	12	18	-	-	8,447	107,203
16	March 2017	-	-	1,579	4,438	(182)	(138)	2,098	14	17	-	-	7,826	194,339
17	April 2017	-	-	1,471	707	4,642	213	-	-	16	-	-	7,048	146,811
18	May 2017	-	-	3,221	6,451	26	(117)	2,883	11	12	-	-	12,487	168,694
19	June 2017	-	-	11,167	18,815	10,017	13,469	-	-	15	-	-	53,482	385,262
20	July 2017	-	-	29,870	35,710	38,315	44,166	-	-	11	-	-	148,072	628,685
21	August 2017	-	-	10,310	12,450	10,510	11,718	-	-	17	-	-	45,005	368,491
22	September 2017	-	-	14,368	12,452	9,649	13,361	-	12	31	-	-	49,872	253,472
23	October 2017	-	-	13,113	16,999	5,598	4,328	-	11	-	-	-	40,049	223,086
24	November 2017	-	-	976	-	5,701	6,572	-	12	20	-	-	13,281	116,169
25	December 2017	-	-	1,578	-	2,025	1,174	-	12	24	-	-	4,813	234,127
26	**TOTAL PY 1**	-	-	87,652	142,714	103,767	107,642	10,792	97	196	-	-	452,859	3,077,755
	PREVIOUS YEAR 2													
27	January 2016	-	-	-	16,202	1,377	2,309	3,147	2	17	-	-	23,053	225,785
28	February 2016	-	-	-	6,294	(153)	3,973	21	2	14	-	-	10,151	176,673
29	March 2016	-	-	471	8,738	3,980	8,027	523	12	17	-	-	21,768	277,118
30	April 2016	-	-	8,584	21,273	5,306	2,617	6,842	48	19	-	-	44,689	384,086
31	May 2016	-	-	11,198	6,237	14,195	12,213	2,262	11	16	-	-	46,131	309,231
32	June 2016	-	-	25,476	30,588	36,184	51,456	6,758	-	18	-	-	150,480	513,823
33	July 2016	-	-	25,710	26,501	41,401	47,358	4,825	10	17	-	-	145,821	592,713
34	August 2016	-	-	13,358	19,063	46,312	46,474	2,640	13	16	-	-	127,876	513,655
35	September 2016	-	-	13,144	7,525	27,338	24,144	2,005	-	104	-	-	74,260	268,534
36	October 2016	-	-	21,233	36,945	16,835	26,459	1,276	-	18	-	-	102,765	357,520
37	November 2016	-	-	24,481	60,761	30,830	22,255	21,628	-	51	-	-	160,005	437,192
38	December 2016	-	-	-	18,332	11,038	20,788	5,279	-	31	-	-	55,468	242,751
39	**TOTAL PY 2**	-	-	143,653	258,458	234,643	268,073	57,206	98	337	-	-	962,467	4,299,082

Southwestern Public Service Company

Summary of Net MWh Production by Unit (Natural Gas/Oil Fired), for Previous Five (5) Years

Line No.		COMBUSTION TURBINES												
		CARLSBAD 5 (3)	CELANESE 1 (4)	CUNNINGHAM 3	CUNNINGHAM 4	JONES 3	JONES 4	MADDOX 2	MADDOX 3	QUAY COUNTY	RIVERVIEW 6 (5)	TUCUMCARI DIESEL (6)	SUB TOTAL	COMBINED TOTAL
	PREVIOUS YEAR 3													
40	January 2015	13	-	18,801	22,799	5,662	4,034	3,292	18	103	-	-	54,722	250,343
41	February 2015	19	-	14,313	7,951	8,757	9,386	2,205	-	21	-	-	42,651	216,272
42	March 2015	16	-	11,966	8,371	7,546	7,905	1,167	12	21	-	-	37,004	358,005
43	April 2015	-	-	4,341	4,682	7,684	9,984	279	14	20	-	-	27,003	393,904
44	May 2015	-	-	2,068	4,225	5,987	9,782	181	-	15	-	-	22,257	218,451
45	June 2015	15	-	7,270	9,342	17,599	16,389	863	-	20	-	-	51,497	328,625
46	July 2015	31	-	22,041	18,846	22,623	29,767	3,807	-	97	-	-	97,211	596,358
47	August 2015	-	-	18,076	17,051	17,703	29,579	1,326	-	23	-	-	83,757	612,071
48	September 2015	10	-	766	1,280	11,169	21,246	1,142	5	18	-	-	35,636	368,355
49	October 2015	21	-	5,103	22,958	9,696	18,161	2,859	-	20	-	-	58,818	301,583
50	November 2015	20	-	1,647	4,528	11,745	1,707	2,879	35	21	-	-	22,581	254,728
51	December 2015	-	-	9,391	17,278	6,306	457	3,645	12	20	-	-	37,108	335,623
52	**TOTAL PY 3**	**145**	**-**	**115,779**	**139,308**	**132,477**	**158,397**	**23,645**	**96**	**397**	**-**	**-**	**570,244**	**4,234,317**
	PREVIOUS YEAR 4													
53	January 2014	24	-	107	-	3,427	1,920	(36)	-	247	-	-	5,689	274,444
54	February 2014	22	-	(15)	-	(209)	2,826	133	-	51	-	-	2,808	270,741
55	March 2014	22	-	359	-	576	7,632	2,371	16	41	-	-	11,017	300,937
56	April 2014	20	-	7,607	399	2,391	8,995	339	33	22	-	-	19,806	380,412
57	May 2014	19	-	6,689	6,987	9,017	7,799	1,322	-	17	-	-	31,850	311,435
58	June 2014	43	-	10,193	3,023	8,795	8,444	847	41	20	-	-	31,405	288,340
59	July 2014	20	-	11,874	7,804	16,122	4,658	2,033	16	84	-	-	42,610	368,107
60	August 2014	21	-	17,909	13,434	38,929	5,714	1,838	15	18	-	-	77,878	581,567
61	September 2014	20	-	2,936	2,575	7,989	195	383	39	119	-	-	14,256	147,279
62	October 2014	16	-	6,974	11,217	2,576	1,297	2,248	-	31	-	-	24,359	259,136
63	November 2014	23	-	20,424	50,611	11,008	6,135	7,733	11	36	-	-	95,980	467,104
64	December 2014	22	-	45,312	59,168	9,833	3,368	7,584	17	21	-	-	125,325	420,138
65	**TOTAL PY 4**	**272**	**-**	**130,368**	**155,217**	**110,454**		**26,795**	**188**		**-**	**-**	**482,982**	**4,069,639**
	PREVIOUS YEAR 5													
66	January 2013	23	-	215	284	(198)	-	119	17	-	-	-	459	289,823
67	February 2013	24	-	(66)	(66)	(184)	-	(41)	16	-	-	-	(317)	275,079
68	March 2013	25	-	18,092	1,088	1,323	-	6,717	-	-	-	-	27,245	393,540
69	April 2013	22	-	560	-	2,181	12,875	279	17	-	-	-	15,934	566,345
70	May 2013	20	-	(62)	781	9,626	18,894	388	15	18	-	-	29,680	455,386
71	June 2013	22	-	4,227	1,897	5,716	2,173	419	15	20	-	-	14,489	486,024
72	July 2013	66	-	4,109	3,168	9,142	3,972	473	15	247	-	-	21,191	507,039
73	August 2013	17	-	3,621	409	11,691	2,301	516	13	51	-	-	18,619	628,024
74	September 2013	19	-	3,638	1,331	9,524	858	(30)	15	41	-	-	15,396	472,286
75	October 2013	19	-	789	-	3,328	(167)	(29)	19	22	-	-	3,981	315,462
76	November 2013	19	-	514	-	296	2,669	(32)	5	17	-	-	3,488	290,453
77	December 2013	17	-	-	-	1,563	208	(37)	-	20	-	-	1,771	345,158
78	**TOTAL PY 5**	**294**	**-**	**35,637**	**8,891**	**54,008**		**8,742**	**147**		**-**	**-**	**151,936**	**5,024,620**

Notes: (3)Carlsbad 5 was removed from service in December of 2017
(4)Celanese 1 was removed from service in June of 2011
(5)Riverview 6 was removed from service in June of 2013
(6)Tucumcari Diesel was removed from service in December of 2011

Southwestern Public Service Company

Summary of Net MWh Production by Unit (Hydro & Other)

Line No.	TEST YEAR ("TY")	OTHER PRODUCTION SOURCES	HYDRO	TOTAL
1	April 2018	N/A	N/A	N/A
2	May 2018			
3	June 2018			
4	July 2018			
5	August 2018			
6	September 2018			
7	October 2018			
8	November 2018			
9	December 2018			
10	January 2019			
11	February 2019			
12	March 2019			
13	**TOTAL TY**	**N/A**	**N/A**	**N/A**

Notes: As discussed in the testimony of William A. Grant, Southwestern Public Service Company ("SPS") has not filed a fuel reconciliation with its current base rate case in accordance with the Order in Project No. 41905 and 16 Tex. Admin. Code § 25.236 ("TAC") as revised in that project. Therefore, fuel reconciliation data is not applicable. Additionally, SPS is not proposing a new fuel factor under 16 TAC § 25.237. Therefore, rate year data is not applicable.

SPS did not own or operate any hydro or other production facilities during the test year.

Southwestern Public Service Company

Summary of Net MWh Production by Unit (Hydro & Other), for Previous Five (5) Years

Line No.	PREVIOUS YEAR ("PY") 0	OTHER PRODUCTION SOURCES	HYDRO	TOTAL
1	January 2018	N/A	N/A	N/A
2	February 2018			
3	March 2018			
4	April 2018			
5	May 2018			
6	June 2018			
7	July 2018			
8	August 2018			
9	September 2018			
10	October 2018			
11	November 2018			
12	December 2018			
13	**TOTAL PY 0**	N/A	N/A	N/A

Line No.	PREVIOUS YEAR 1	OTHER PRODUCTION SOURCES	HYDRO	TOTAL
14	January 2017	N/A	N/A	N/A
15	February 2017			
16	March 2017			
17	April 2017			
18	May 2017			
19	June 2017			
20	July 2017			
21	August 2017			
22	September 2017			
23	October 2017			
24	November 2017			
25	December 2017			
26	**TOTAL PY 1**	N/A	N/A	N/A

Southwestern Public Service Company

Summary of Net MWh Production by Unit (Hydro & Other), for Previous Five (5) Years

Line No.	PREVIOUS YEAR 2	OTHER PRODUCTION SOURCES	HYDRO	TOTAL
27	January 2016	N/A	N/A	N/A
28	February 2016			
29	March 2016			
30	April 2016			
31	May 2016			
32	June 2016			
33	July 2016			
34	August 2016			
35	September 2016			
36	October 2016			
37	November 2016			
38	December 2016			
39	**TOTAL PY 2**	**N/A**	**N/A**	**N/A**

Line No.	PREVIOUS YEAR 3	OTHER PRODUCTION SOURCES	HYDRO	TOTAL
40	January 2015	N/A	N/A	N/A
41	February 2015			
42	March 2015			
43	April 2015			
44	May 2015			
45	June 2015			
46	July 2015			
47	August 2015			
48	September 2015			
49	October 2015			
50	November 2015			
51	December 2015			
52	**TOTAL PY 3**	**N/A**	**N/A**	**N/A**

Southwestern Public Service Company

Summary of Net MWh Production by Unit (Hydro & Other), for Previous Five (5) Years

Line No.	PREVIOUS YEAR 4	OTHER PRODUCTION SOURCES	HYDRO	TOTAL
53	January 2014	N/A	N/A	N/A
54	February 2014			
55	March 2014			
56	April 2014			
57	May 2014			
58	June 2014			
59	July 2014			
60	August 2014			
61	September 2014			
62	October 2014			
63	November 2014			
64	December 2014			
65	**TOTAL PY 4**	**N/A**	**N/A**	**N/A**

Line No.	PREVIOUS YEAR 5	OTHER PRODUCTION SOURCES	HYDRO	TOTAL
66	January 2013	N/A	N/A	N/A
67	February 2013			
68	March 2013			
69	April 2013			
70	May 2013			
71	June 2013			
72	July 2013			
73	August 2013			
74	September 2013			
75	October 2013			
76	November 2013			
77	December 2013			
78	**TOTAL PY 5**	**N/A**	**N/A**	**N/A**

Notes: As discussed in the testimony of William A. Grant, Southwestern Public Service Company ("SPS") has not filed a fuel reconciliation with its current base rate case in accordance with the Order in Project No 41905 and 16 Tex Admin Code § 25 236 ("TAC") as revised in that project Therefore, fuel reconciliation data is not applicable Additionally, SPS is not proposing a new fuel factor under 16 TAC § 25 237 Therefore, rate year data is not applicable

SPS did not own any hydro or other production facilities during the historical five year period represented on this schedule

Southwestern Public Service Company

Generating Unit Data

Line No.	MONTH	UNIT NAME	PRODUCTION MWh GROSS UNIT OUTPUT	PRODUCTION MWh STATION SERVICE	PRODUCTION MWh NET UNIT OUTPUT	OPERATING STATISTICS (%) EQUIV. AVAIL. FACTOR	FORCED OUTAGE RATE	SCHED. OUTAGE FACTOR	NET CAPACITY FACTOR	TIME ON AGC	# OF COLD STARTS	# OF HOT STARTS	HOURS CONNECTED TO LOAD	FUEL CONSUMPTION MILLION Btu COLD START	HOT START	OPERATIONS	TOTAL	NET HEAT RATE Btu/kWh
	TEST YEAR (TY)					%	%	%	%	%								
1	April 2018	Carlsbad 5	-	-	-	-	-	-	-		-	N/A	-	N/A	N/A	-	-	-
2	May 2018	Carlsbad 5	-	-	-	-	-	-	-		-	N/A	-	N/A	N/A	-	-	-
3	June 2018	Carlsbad 5	-	-	-	-	-	-	-		-	N/A	-	N/A	N/A	-	-	-
4	July 2018	Carlsbad 5	-	-	-	-	-	-	-		-	N/A	-	N/A	N/A	-	-	-
5	August 2018	Carlsbad 5	-	-	-	-	-	-	-		-	N/A	-	N/A	N/A	-	-	-
6	September 2018	Carlsbad 5	-	-	-	-	-	-	-		-	N/A	-	N/A	N/A	-	-	-
7	October 2018	Carlsbad 5	-	-	-	-	-	-	-		-	N/A	-	N/A	N/A	-	-	-
8	November 2018	Carlsbad 5	-	-	-	-	-	-	-		-	N/A	-	N/A	N/A	-	-	-
9	December 2018	Carlsbad 5	-	-	-	-	-	-	-		-	N/A	-	N/A	N/A	-	-	-
10	January 2019	Carlsbad 5	-	-	-	-	-	-	-		-	N/A	-	N/A	N/A	-	-	-
11	February 2019	Carlsbad 5	-	-	-	-	-	-	-		-	N/A	-	N/A	N/A	-	-	-
12	March 2019	Carlsbad 5	-	-	-	-	-	-	-		-	N/A	-	N/A	N/A	-	-	-
13	Total TY		-	-	-	-	-	-	-		-	N/A	-	N/A	N/A	-	-	-
14	April 2018	Cunningham 1	33,976	2,172	31,804	100.00	-	-	62.21		1	N/A	705.20	N/A	N/A	367,303	367,303	11,548.96
15	May 2018	Cunningham 1	34,197	2,407	31,790	100.00	-	-	60.18		3	N/A	705.83	N/A	N/A	344,618	344,618	10,840.45
16	June 2018	Cunningham 1	20,159	1,740	18,419	100.00	-	-	36.03		4	N/A	463.58	N/A	N/A	240,600	240,600	13,062.59
17	July 2018	Cunningham 1	31,544	2,540	29,004	99.85	0.16	-	54.91		5	N/A	702.90	N/A	N/A	365,398	365,398	12,598.21
18	August 2018	Cunningham 1	23,228	1,982	21,246	81.46	21.20	-	40.22		4	N/A	512.67	N/A	N/A	273,521	273,521	12,873.98
19	September 2018	Cunningham 1	6,815	717	6,098	31.81	69.76	23.33	11.93		-	N/A	140.00	N/A	N/A	76,477	76,477	12,541.30
20	October 2018	Cunningham 1	30,401	2,148	28,253	84.76	-	15.24	53.49		3	N/A	591.02	N/A	N/A	300,529	300,529	10,637.06
21	November 2018	Cunningham 1	39,852	2,457	37,395	100.00	-	-	73.05		1	N/A	704.00	N/A	N/A	432,602	432,602	11,568.44
22	December 2018	Cunningham 1	31,767	2,026	29,741	79.13	-	20.87	56.30		2	N/A	568.80	N/A	N/A	336,653	336,653	11,319.50
23	January 2019	Cunningham 1	28,822	1,960	26,862	100.00	-	-	53.10		3	N/A	583.72	N/A	N/A	306,323	306,323	11,403.57
24	February 2019	Cunningham 1	18,880	1,432	17,448	84.64	-	15.36	38.18		3	N/A	420.43	N/A	N/A	204,981	204,981	11,748.09
25	March 2019	Cunningham 1	43,902	2,677	41,225	95.98	-	-	81.59		-	N/A	743.00	N/A	N/A	460,476	460,476	11,169.82
26	Total TY		343,543	24,258	319,285	88.14	7.59	6.23	51.77		29	N/A	6,841.15	N/A	N/A	3,709,480	3,709,480	11,618.08
27	April 2018	Cunningham 2	-	-	-	-	-	100.00	-		-	N/A	-	N/A	N/A	-	-	-
28	May 2018	Cunningham 2	41,272	2,273	38,999	37.68	-	62.32	28.64		3	N/A	286.88	N/A	N/A	400,001	400,001	10,256.69
29	June 2018	Cunningham 2	73,642	4,052	69,590	100.00	-	-	52.82		4	N/A	586.38	N/A	N/A	714,050	714,050	10,260.81
30	July 2018	Cunningham 2	71,809	3,929	67,880	85.35	16.51	-	49.86		5	N/A	551.10	N/A	N/A	683,216	683,216	10,065.06
31	August 2018	Cunningham 2	98,184	5,049	93,135	99.82	-	0.18	68.41		2	N/A	725.80	N/A	N/A	940,763	940,763	10,101.07
32	September 2018	Cunningham 2	96,063	4,911	91,152	100.00	-	-	69.18		3	N/A	667.87	N/A	N/A	939,998	939,998	10,312.42
33	October 2018	Cunningham 2	8,663	716	7,947	8.20	79.93	59.16	5.84		-	N/A	60.98	N/A	N/A	106,760	106,760	13,434.04
34	November 2018	Cunningham 2	14,806	905	13,901	14.90	-	85.10	10.54		2	N/A	107.45	N/A	N/A	142,385	142,385	10,242.80
35	December 2018	Cunningham 2	75,951	3,721	72,230	72.57	27.74	-	53.05		3	N/A	531.55	N/A	N/A	752,950	752,950	10,424.34
36	January 2019	Cunningham 2	27,426	1,519	25,907	36.97	67.12	-	19.03		5	N/A	228.73	N/A	N/A	273,736	273,736	10,566.08
37	February 2019	Cunningham 2	61,765	3,068	58,697	74.30	27.08	-	47.73		3	N/A	465.16	N/A	N/A	620,266	620,266	10,567.26
38	March 2019	Cunningham 2	7,996	592	7,404	7.89	93.79	-	5.45		1	N/A	45.28	N/A	N/A	61,838	61,838	8,351.98
39	Total TY		577,577	30,735	546,842	53.14	26.01	25.56	34.21		31	N/A	4,257.18	N/A	N/A	5,635,964	5,635,964	10,306.38

Southwestern Public Service Company

Generating Unit Data

Line No.	MONTH	UNIT NAME	PRODUCTION MWh GROSS UNIT OUTPUT	STATION SERVICE	NET UNIT OUTPUT	OPERATING STATISTICS (%) EQUIV. AVAIL. FACTOR	FORCED OUTAGE RATE	SCHED. OUTAGE FACTOR	NET CAPACITY FACTOR	TIME ON AGC	# OF COLD STARTS	# OF HOT STARTS	HOURS CONNECTED TO LOAD	FUEL CONSUMPTION MILLION Btu COLD START	HOT START	OPERATIONS	TOTAL	NET HEAT RATE Btu/kWh
	TEST YEAR (TY)					%	%	%	%	%								
40	April 2018	Cunningham 3	35,728	100	35,629	69.58	36.96	-	46.68		11	N/A	373.57	N/A	N/A	412,820	412,820	11,586.79
41	May 2018	Cunningham 3	57,657	115	57,543	100.00	-	-	72.96		9	N/A	612.77	N/A	N/A	654,916	654,916	11,381.43
42	June 2018	Cunningham 3	25,672	102	25,570	100.00	-	-	33.50		13	N/A	294.42	N/A	N/A	303,336	303,336	11,862.96
43	July 2018	Cunningham 3	42,237	115	42,122	79.47	-	3.76	53.41		8	N/A	536.80	N/A	N/A	531,087	531,087	12,608.31
44	August 2018	Cunningham 3	-	-	-	-	100.00	3.22	-		-	N/A	-	N/A	N/A	-	-	-
45	September 2018	Cunningham 3	-	-	-	-	100.00	-	-		-	N/A	-	N/A	N/A	-	-	-
46	October 2018	Cunningham 3	-	-	-	-	100.00	-	-		-	N/A	-	N/A	N/A	-	-	-
47	November 2018	Cunningham 3	-	-	-	-	100.00	-	-		-	N/A	-	N/A	N/A	-	-	-
48	December 2018	Cunningham 3	-	-	-	-	100.00	-	-		-	N/A	-	N/A	N/A	-	-	-
49	January 2019	Cunningham 3	-	-	-	-	100.00	-	-		-	N/A	-	N/A	N/A	-	-	-
50	February 2019	Cunningham 3	-	-	-	-	100.00	-	-		-	N/A	-	N/A	N/A	-	-	-
51	March 2019	Cunningham 3	-	-	-	-	100.00	-	-		-	N/A	-	N/A	N/A	-	-	-
52	Total TY		161,294	431	160,863	29.09	69.75	0.58	17.21		41	N/A	1,817.56	N/A	N/A	1,902,159	1,902,159	11,824.72
53	April 2018	Cunningham 4	61,452	100	61,353	100.00	-	-	80.39		3	N/A	668.23	N/A	N/A	704,932	704,932	11,489.87
54	May 2018	Cunningham 4	60,852	115	60,738	100.00	-	-	77.02		6	N/A	654.55	N/A	N/A	718,552	718,552	11,830.45
55	June 2018	Cunningham 4	32,109	103	32,006	100.00	-	-	41.94		11	N/A	399.50	N/A	N/A	386,005	386,005	12,060.40
56	July 2018	Cunningham 4	59,267	116	59,151	99.88	0.13	-	75.00		8	N/A	666.82	N/A	N/A	708,561	708,561	11,978.85
57	August 2018	Cunningham 4	39,330	170	39,160	94.84	0.64	4.78	49.66		4	N/A	442.35	N/A	N/A	468,123	468,123	11,954.12
58	September 2018	Cunningham 4	38,200	162	38,038	92.28	11.67	-	49.84		9	N/A	420.75	N/A	N/A	453,706	453,706	11,927.71
59	October 2018	Cunningham 4	40,528	121	40,407	70.29	31.00	-	51.24		9	N/A	397.00	N/A	N/A	493,721	493,721	12,218.71
60	November 2018	Cunningham 4	-	-	-	-	100.00	-	-		-	N/A	-	N/A	N/A	-	-	-
61	December 2018	Cunningham 4	10,677	108	10,569	61.11	69.24	-	13.40		6	N/A	112.07	N/A	N/A	124,535	124,535	11,783.09
62	January 2019	Cunningham 4	14,084	122	13,962	85.85	31.65	0.82	18.22		6	N/A	143.75	N/A	N/A	163,710	163,710	11,725.39
63	February 2019	Cunningham 4	17,771	105	17,666	93.61	-	1.61	25.52		3	N/A	205.35	N/A	N/A	215,115	215,115	12,176.76
64	March 2019	Cunningham 4	62,375	131	62,244	86.84	9.05	-	81.33		2	N/A	651.93	N/A	N/A	716,744	716,744	11,515.06
65	Total TY		436,645	1,352	435,293	82.06	21.11	0.60	46.96		67	N/A	4,762.30	N/A	N/A	5,153,704	5,153,704	11,839.62
66	April 2018	Harrington 1	11,064	2,037	9,027	35.14	-	64.86	3.70		2	N/A	62.02	N/A	N/A	104,980	115,208	12,762.58
67	May 2018	Harrington 1	190,547	14,087	176,460	99.90	-	-	69.96		-	N/A	744.00	N/A	N/A	1,861,687	1,861,694	10,550.23
68	June 2018	Harrington 1	153,433	12,142	141,291	98.08	2.17	-	57.89		1	N/A	624.02	N/A	N/A	1,504,407	1,511,337	10,696.62
69	July 2018	Harrington 1	210,633	14,413	196,220	99.82	-	-	77.80		-	N/A	744.00	N/A	N/A	2,057,794	2,057,794	10,487.18
70	August 2018	Harrington 1	132,791	11,177	121,614	83.01	19.95	-	48.22		1	N/A	507.08	N/A	N/A	1,310,433	1,316,931	10,828.78
71	September 2018	Harrington 1	103,520	9,908	93,612	89.95	13.41	-	38.35		2	N/A	465.50	N/A	N/A	1,034,893	1,046,600	11,180.19
72	October 2018	Harrington 1	149,725	12,119	137,606	89.72	9.80	-	54.56		5	N/A	576.40	N/A	N/A	1,495,449	1,509,846	10,972.24
73	November 2018	Harrington 1	118,067	10,834	107,233	87.43	15.45	-	43.87		3	N/A	458.03	N/A	N/A	1,154,871	1,171,937	10,928.89
74	December 2018	Harrington 1	153,454	12,140	141,314	95.89	1.79	-	56.03		5	N/A	647.79	N/A	N/A	1,482,845	1,507,400	10,667.03
75	January 2019	Harrington 1	73,515	7,831	65,684	59.03	48.27	1.39	26.04		4	N/A	312.78	N/A	N/A	733,087	733,087	11,160.81
76	February 2019	Harrington 1	98,912	7,510	91,402	77.78	-	21.43	40.12		1	N/A	433.52	N/A	N/A	994,952	994,952	10,885.45
77	March 2019	Harrington 1	-	1,255	(1,255)	-	-	100.00	(0.50)		-	N/A	-	N/A	N/A	-	-	-
78	Total TY		1,395,661	115,453	1,280,208	76.31	9.24	15.64	43.00		24	N/A	5,575.14	N/A	N/A	13,735,398	13,826,786	10,800.42

Southwestern Public Service Company

Generating Unit Data

Line No.	MONTH	UNIT NAME	PRODUCTION MWh GROSS UNIT OUTPUT	STATION SERVICE	NET UNIT OUTPUT	OPERATING STATISTICS (%) EQUIV. AVAIL. FACTOR	FORCED OUTAGE RATE	SCHED. OUTAGE FACTOR	NET CAPACITY FACTOR	TIME ON AGC	# OF COLD STARTS	# OF HOT STARTS	HOURS CONNECTED TO LOAD	FUEL CONSUMPTION MILLION Btu COLD START	HOT START	OPERATIONS	TOTAL	NET HEAT RATE Btu/kWh
	TEST YEAR (TY)					%	%	%	%	%								
79	April 2018	Harrington 2	151,217	9,852	141,365	97.40	-	2.51	57.92		1	N/A	672.74	N/A	N/A	1,504,032	1,508,309	10,669.64
80	May 2018	Harrington 2	141,992	8,791	133,201	81.51	-	18.34	52.81		2	N/A	572.15	N/A	N/A	1,400,942	1,409,585	10,582.39
81	June 2018	Harrington 2	180,475	10,021	170,454	99.90	-	-	69.84		-	N/A	720.00	N/A	N/A	1,774,014	1,774,016	10,407.60
82	July 2018	Harrington 2	223,967	11,795	212,172	98.59	-	-	84.12		-	N/A	744.00	N/A	N/A	2,186,705	2,186,705	10,306.29
83	August 2018	Harrington 2	190,596	10,964	179,632	96.05	3.89	-	71.22		1	N/A	700.40	N/A	N/A	1,876,725	1,880,909	10,470.90
84	September 2018	Harrington 2	171,645	9,928	161,717	97.86	1.76	-	66.26		2	N/A	707.32	N/A	N/A	1,691,887	1,697,908	10,499.26
85	October 2018	Harrington 2	198,295	10,692	187,603	99.94	-	-	74.38		1	N/A	722.23	N/A	N/A	1,939,937	1,943,279	10,358.47
86	November 2018	Harrington 2	186,540	10,992	175,548	98.91	-	-	71.82		-	N/A	721.00	N/A	N/A	1,818,947	1,818,952	10,361.57
87	December 2018	Harrington 2	187,804	12,113	175,691	99.43	-	-	69.66		1	N/A	732.82	N/A	N/A	1,846,292	1,849,391	10,526.39
88	January 2019	Harrington 2	174,688	11,881	162,807	96.24	3.75	-	64.55		1	N/A	673.93	N/A	N/A	1,715,145	1,715,145	10,534.83
89	February 2019	Harrington 2	111,908	9,203	102,705	72.70	2.91	23.30	45.08		2	N/A	467.84	N/A	N/A	1,124,089	1,124,089	10,944.83
90	March 2019	Harrington 2	176,449	12,101	164,348	98.79	1.13	-	65.25		3	N/A	703.26	N/A	N/A	1,756,810	1,756,810	10,689.57
91	**Total TY**		**2,095,576**	**128,333**	**1,967,243**	**94.78**	**1.12**	**3.68**	**66.08**		**14**	**N/A**	**8,137.69**	**N/A**	**N/A**	**20,635,526**	**20,665,100**	**10,504.60**
92	April 2018	Harrington 3	122,571	10,333	112,238	89.13	12.35	-	45.85		1	N/A	538.95	N/A	N/A	1,202,075	1,203,453	10,722.33
93	May 2018	Harrington 3	179,983	12,196	167,787	100.00	-	-	66.33		2	N/A	650.78	N/A	N/A	1,708,979	1,719,622	10,248.84
94	June 2018	Harrington 3	169,759	11,874	157,885	98.66	1.42	-	64.50		2	N/A	651.62	N/A	N/A	1,657,529	1,673,249	10,597.90
95	July 2018	Harrington 3	223,873	13,990	209,883	96.46	3.15	-	82.97		2	N/A	720.53	N/A	N/A	2,180,376	2,187,279	10,421.42
96	August 2018	Harrington 3	170,278	11,932	158,346	88.58	12.31	-	62.60		3	N/A	605.05	N/A	N/A	1,663,296	1,678,336	10,599.17
97	September 2018	Harrington 3	47,267	3,750	43,517	23.08	-	76.92	17.78		-	N/A	166.17	N/A	N/A	465,084	465,497	10,696.89
98	October 2018	Harrington 3	-	398	(398)	-	-	100.00	(0.16)		-	N/A	-	N/A	N/A	-	-	-
99	November 2018	Harrington 3	119,373	8,112	111,261	80.39	-	19.61	45.39		4	N/A	481.78	N/A	N/A	1,139,290	1,181,068	10,615.29
100	December 2018	Harrington 3	166,526	11,914	154,612	91.70	8.92	-	61.12		2	N/A	630.38	N/A	N/A	1,619,578	1,635,310	10,576.87
101	January 2019	Harrington 3	154,311	10,396	143,915	82.19	18.81	-	56.89		1	N/A	568.78	N/A	N/A	1,511,416	1,511,416	10,502.14
102	February 2019	Harrington 3	158,892	11,449	147,443	99.77	-	-	64.53		1	N/A	658.32	N/A	N/A	1,554,006	1,554,006	10,539.70
103	March 2019	Harrington 3	163,119	12,186	150,933	100.00	-	-	59.75		4	N/A	623.28	N/A	N/A	1,611,283	1,611,283	10,675.48
104	**Total TY**		**1,675,952**	**118,530**	**1,557,422**	**79.16**	**4.75**	**16.38**	**52.30**		**22**	**N/A**	**6,295.64**	**N/A**	**N/A**	**16,312,911**	**16,420,519**	**10,543.40**
105	April 2018	Jones 1	71,142	3,853	67,289	99.79	-	-	38.46		3	N/A	561.03	N/A	N/A	693,395	693,395	10,304.72
106	May 2018	Jones 1	76,728	5,115	71,613	98.92	0.94	-	39.61		7	N/A	625.83	N/A	N/A	817,575	817,575	11,416.58
107	June 2018	Jones 1	69,886	5,137	64,749	98.00	1.38	-	37.01		7	N/A	631.40	N/A	N/A	751,031	751,031	11,599.12
108	July 2018	Jones 1	94,162	6,049	88,113	99.44	-	0.46	48.74		8	N/A	688.22	N/A	N/A	1,065,564	1,065,564	12,093.16
109	August 2018	Jones 1	68,344	4,676	63,668	90.71	2.22	2.05	35.22		7	N/A	556.10	N/A	N/A	736,526	736,526	11,568.23
110	September 2018	Jones 1	86,075	5,295	80,780	97.69	-	-	46.17		3	N/A	615.02	N/A	N/A	885,498	885,498	10,961.85
111	October 2018	Jones 1	106,027	6,184	99,843	99.70	0.18	-	55.23		4	N/A	717.50	N/A	N/A	1,106,766	1,106,766	11,085.06
112	November 2018	Jones 1	80,335	4,736	75,599	86.15	-	12.85	43.15		5	N/A	529.20	N/A	N/A	812,793	812,793	10,751.37
113	December 2018	Jones 1	51,389	3,587	47,802	97.58	-	-	26.44		4	N/A	471.57	N/A	N/A	541,218	541,365	11,325.15
114	January 2019	Jones 1	63,800	4,148	59,652	97.79	2.87	-	32.99		5	N/A	556.40	N/A	N/A	669,555	669,555	11,224.34
115	February 2019	Jones 1	76,790	4,565	72,225	100.00	-	-	44.23		5	N/A	522.27	N/A	N/A	796,212	796,212	11,024.04
116	March 2019	Jones 1	137,554	7,087	130,467	100.00	-	-	72.26		3	N/A	699.78	N/A	N/A	1,416,402	1,416,402	10,856.40
117	**Total TY**		**982,232**	**60,432**	**921,800**	**97.15**	**0.63**	**1.28**	**43.29**		**61**	**N/A**	**7,174.32**	**N/A**	**N/A**	**10,292,534**	**10,292,681**	**11,165.85**

Southwestern Public Service Company

Generating Unit Data

Line No.	MONTH	UNIT NAME	PRODUCTION MWh GROSS UNIT OUTPUT	STATION SERVICE	NET UNIT OUTPUT	OPERATING STATISTICS (%) EQUIV. AVAIL. FACTOR	FORCED OUTAGE RATE	SCHED. OUTAGE FACTOR	NET CAPACITY FACTOR	TIME ON AGC	# OF COLD STARTS	# OF HOT STARTS	HOURS CONNECTED TO LOAD	FUEL CONSUMPTION MILLION Btu COLD START	HOT START	OPERATIONS	TOTAL	NET HEAT RATE Btu/kWh
	TEST YEAR (TY)					%	%	%	%	%								
118	April 2018	Jones 2	83,606	5,110	78,496	98.53	-	0.22	44.87		4	N/A	554.52	N/A	N/A	814,877	814,877	10,381.13
119	May 2018	Jones 2	82,498	5,237	77,261	90.78	10.74	-	42.73		6	N/A	569.94	N/A	N/A	879,057	879,057	11,377.76
120	June 2018	Jones 2	87,486	5,862	81,624	99.35	0.31	-	46.65		7	N/A	663.66	N/A	N/A	940,171	940,171	11,518.31
121	July 2018	Jones 2	110,712	6,810	103,902	99.94	-	-	57.47		6	N/A	721.05	N/A	N/A	1,252,849	1,252,849	12,057.98
122	August 2018	Jones 2	71,728	4,732	66,996	78.11	24.32	-	37.06		5	N/A	501.07	N/A	N/A	772,995	772,995	11,537.93
123	September 2018	Jones 2	87,635	5,474	82,161	96.06	1.36	-	46.96		6	N/A	576.48	N/A	N/A	901,546	901,546	10,972.92
124	October 2018	Jones 2	86,067	5,203	80,864	88.09	0.81	11.31	44.73		4	N/A	544.13	N/A	N/A	898,413	898,413	11,110.17
125	November 2018	Jones 2	90,825	5,309	85,516	90.78	-	8.50	48.81		5	N/A	591.42	N/A	N/A	918,926	918,926	10,745.67
126	December 2018	Jones 2	66,841	4,302	62,539	98.87	-	-	34.59		5	N/A	573.40	N/A	N/A	703,955	704,137	11,259.17
127	January 2019	Jones 2	40,191	2,514	37,677	54.23	7.99	41.94	20.84		2	N/A	328.62	N/A	N/A	421,789	421,789	11,194.86
128	February 2019	Jones 2	-	-	-	-	-	100.00	-		-	N/A	-	N/A	N/A	-	-	-
129	March 2019	Jones 2	-	-	-	-	-	100.00	-		-	N/A	-	N/A	N/A	-	-	-
130	Total TY		807,589	50,553	757,036	74.56	3.79	21.83	35.39		50	N/A	5,624.29	N/A	N/A	8,504,578	8,504,760	11,234.29
131	April 2018	Jones 3	4,437	175	4,262	91.46	-	0.37	3.23		5	N/A	26.95	N/A	N/A	46,471	46,471	10,903.53
132	May 2018	Jones 3	23,956	209	23,747	69.45	-	24.34	17.44		13	N/A	131.96	N/A	N/A	249,894	249,894	10,523.18
133	June 2018	Jones 3	54,313	296	54,017	89.94	-	2.03	41.00		8	N/A	327.62	N/A	N/A	569,665	569,665	10,546.03
134	July 2018	Jones 3	107,238	429	106,809	91.77	0.04	-	78.45		7	N/A	640.72	N/A	N/A	1,123,050	1,123,050	10,514.56
135	August 2018	Jones 3	77,182	357	76,825	91.11	1.13	-	56.43		8	N/A	490.88	N/A	N/A	811,099	811,099	10,557.75
136	September 2018	Jones 3	28,348	234	28,114	69.69	-	24.09	21.34		4	N/A	219.46	N/A	N/A	295,800	295,800	10,521.45
137	October 2018	Jones 3	20,365	251	20,114	98.57	0.24	1.39	14.77		19	N/A	122.75	N/A	N/A	213,620	213,620	10,620.46
138	November 2018	Jones 3	6,923	220	6,703	80.93	-	19.07	5.08		7	N/A	41.10	N/A	N/A	72,187	72,187	10,769.35
139	December 2018	Jones 3	7,386	241	7,145	100.00	-	-	5.25		4	N/A	41.88	N/A	N/A	75,958	75,958	10,630.93
140	January 2019	Jones 3	4,683	230	4,453	99.77	-	0.23	3.27		4	N/A	26.38	N/A	N/A	48,149	48,149	10,812.71
141	February 2019	Jones 3	21,775	242	21,533	92.19	29.99	-	17.51		10	N/A	122.54	N/A	N/A	222,651	222,651	10,340.00
142	March 2019	Jones 3	17,570	243	17,327	94.39	-	5.61	12.74		7	N/A	97.46	N/A	N/A	181,513	181,513	10,475.70
143	Total TY		374,176	3,127	371,049	89.11	2.62	6.43	23.04		96	N/A	2,289.70	N/A	N/A	3,910,056	3,910,056	10,537.84
144	April 2018	Jones 4	386	122	264	29.20	99.51	-	0.20		1	N/A	2.43	N/A	N/A	3,521	3,521	13,336.86
145	May 2018	Jones 4	33,109	234	32,875	59.11	0.17	35.56	24.15		5	N/A	191.10	N/A	N/A	306,607	306,607	9,326.45
146	June 2018	Jones 4	63,397	290	63,107	91.80	-	-	47.90		8	N/A	372.88	N/A	N/A	574,755	574,755	9,107.63
147	July 2018	Jones 4	105,661	401	105,260	91.80	-	-	77.31		9	N/A	602.42	N/A	N/A	956,988	956,988	9,091.66
148	August 2018	Jones 4	78,538	332	78,206	88.10	6.10	-	57.44		9	N/A	462.58	N/A	N/A	713,383	713,383	9,121.84
149	September 2018	Jones 4	28,627	188	28,439	69.54	-	24.25	21.58		3	N/A	169.15	N/A	N/A	258,861	258,861	9,102.32
150	October 2018	Jones 4	27,125	211	26,914	98.46	6.70	-	19.77		17	N/A	159.94	N/A	N/A	245,291	245,291	9,113.88
151	November 2018	Jones 4	8,636	182	8,454	78.48	4.00	21.22	6.41		8	N/A	51.56	N/A	N/A	78,504	78,504	9,286.02
152	December 2018	Jones 4	3,753	152	3,601	99.19	21.95	-	2.64		3	N/A	21.40	N/A	N/A	33,580	33,580	9,325.19
153	January 2019	Jones 4	4,591	158	4,433	99.60	10.42	-	3.26		5	N/A	25.65	N/A	N/A	40,985	40,985	9,245.44
154	February 2019	Jones 4	19,827	179	19,648	99.72	1.65	-	15.98		10	N/A	110.32	N/A	N/A	176,852	176,852	9,001.00
155	March 2019	Jones 4	30,635	205	30,430	93.68	-	6.32	22.38		7	N/A	165.52	N/A	N/A	273,446	273,446	8,986.06
156	Total TY		404,285	2,654	401,631	83.22	12.54	7.28	24.92		85	N/A	2,334.95	N/A	N/A	3,662,773	3,662,773	9,119.75

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	TEST YEAR (TY)					%	%	%	%	%								
157	April 2018	Maddox 1	47,789	2,165	45,624	95.02	-	3.63	56.58		2	N/A	648.52	N/A	N/A	481,163	481,163	10,546.28
158	May 2018	Maddox 1	54,281	2,571	51,710	100.00	-	-	62.06		2	N/A	722.03	N/A	N/A	599,562	599,562	11,594.70
159	June 2018	Maddox 1	42,108	2,097	40,011	100.00	-	-	49.62		7	N/A	656.50	N/A	N/A	439,584	439,584	10,986.58
160	July 2018	Maddox 1	49,758	2,429	47,329	100.00	-	-	56.80		5	N/A	705.53	N/A	N/A	506,860	506,860	10,709.27
161	August 2018	Maddox 1	48,397	2,393	46,004	100.00	-	-	55.21		6	N/A	690.25	N/A	N/A	495,419	495,419	10,769.08
162	September 2018	Maddox 1	30,115	1,510	28,605	67.94	33.44	-	35.47		5	N/A	453.34	N/A	N/A	305,653	305,653	10,685.31
163	October 2018	Maddox 1	-	184	(184)	-	100.00	-	(0.22)		-	N/A	-	N/A	N/A	-	-	-
164	November 2018	Maddox 1	-	217	(217)	-	100.00	-	(0.27)		-	N/A	-	N/A	N/A	-	-	-
165	December 2018	Maddox 1	16,680	854	15,826	26.22	69.09	4.69	18.99		1	N/A	229.95	N/A	N/A	175,073	175,073	11,062.37
166	January 2019	Maddox 1	45,707	1,923	43,784	83.82	0.10	-	52.54		3	N/A	678.82	N/A	N/A	477,623	477,623	10,908.62
167	February 2019	Maddox 1	38,689	1,648	37,041	81.44	-	0.93	49.21		4	N/A	607.05	N/A	N/A	401,500	401,500	10,839.35
168	March 2019	Maddox 1	61,358	2,581	58,777	84.18	-	-	70.63		-	N/A	743.00	N/A	N/A	619,069	619,069	10,532.50
169	Total TY		434,882	20,572	414,310	69.88	25.22	0.77	42.22		35	N/A	6,134.99	N/A	N/A	4,501,508	4,501,508	10,865.07
170	April 2018	Maddox 2	19,310	224	19,086	81.67	25.01	1.23	42.08		15	N/A	311.32	N/A	N/A	229,578	229,578	12,028.63
171	May 2018	Maddox 2	40,207	313	39,894	81.87	15.65	-	85.11		4	N/A	619.47	N/A	N/A	476,588	476,588	11,946.35
172	June 2018	Maddox 2	15,324	244	15,080	85.35	0.67	11.62	33.25		6	N/A	247.87	N/A	N/A	190,008	190,008	12,600.00
173	July 2018	Maddox 2	12,694	256	12,438	85.91	28.79	-	26.54		25	N/A	207.45	N/A	N/A	165,644	165,644	13,317.59
174	August 2018	Maddox 2	13,185	256	12,929	96.33	-	0.52	27.58		19	N/A	186.09	N/A	N/A	167,951	167,951	12,990.27
175	September 2018	Maddox 2	15,803	224	15,579	96.22	1.77	-	34.35		11	N/A	247.36	N/A	N/A	205,996	205,996	13,222.66
176	October 2018	Maddox 2	32,634	255	32,379	100.00	-	-	69.08		10	N/A	508.05	N/A	N/A	411,645	411,645	12,713.33
177	November 2018	Maddox 2	22,089	195	21,894	70.90	39.39	-	48.20		7	N/A	322.90	N/A	N/A	262,405	262,405	11,985.26
178	December 2018	Maddox 2	17,219	220	16,999	82.25	30.87	-	36.27		12	N/A	295.72	N/A	N/A	241,246	241,246	14,191.78
179	January 2019	Maddox 2	14,620	235	14,385	100.00	-	-	30.69		8	N/A	210.97	N/A	N/A	189,327	189,327	13,161.45
180	February 2019	Maddox 2	13,783	229	13,554	90.46	24.15	0.93	32.02		9	N/A	181.76	N/A	N/A	147,315	147,315	10,868.78
181	March 2019	Maddox 2	17,596	119	17,477	40.19	59.95	-	37.34		1	N/A	296.93	N/A	N/A	248,083	248,083	14,194.83
182	Total TY		234,464	2,770	231,694	84.26	18.85	1.19	41.87		127	N/A	3,635.89	N/A	N/A	2,935,787	2,935,787	12,670.97
183	April 2018	Maddox 3	-	-	-	-	-	100.00	-		-	N/A	-	N/A	N/A	-	-	-
184	May 2018	Maddox 3	-	-	-	-	-	100.00	-		-	N/A	-	N/A	N/A	-	-	-
185	June 2018	Maddox 3	-	-	-	-	-	100.00	-		-	N/A	-	N/A	N/A	-	-	-
186	July 2018	Maddox 3	-	-	-	-	-	100.00	-		-	N/A	-	N/A	N/A	-	-	-
187	August 2018	Maddox 3	-	-	-	-	-	100.00	-		-	N/A	-	N/A	N/A	-	-	-
188	September 2018	Maddox 3	11	-	11	66.35	-	32.04	0.15		1	N/A	23.11	N/A	N/A	335	335	30,454.60
189	October 2018	Maddox 3	91	-	91	100.00	-	-	1.22		2	N/A	10.13	N/A	N/A	1,526	1,526	16,772.57
190	November 2018	Maddox 3	-	-	-	96.59	-	3.41	-		-	N/A	-	N/A	N/A	-	-	-
191	December 2018	Maddox 3	13	-	13	100.00	-	-	0.17		1	N/A	2.13	N/A	N/A	269	269	20,669.33
192	January 2019	Maddox 3	17	-	17	99.91	19.55	-	0.23		1	N/A	2.88	N/A	N/A	429	429	25,223.12
193	February 2019	Maddox 3	18	-	18	89.42	93.09	5.81	0.27		2	N/A	2.38	N/A	N/A	644	644	35,772.30
194	March 2019	Maddox 3	-	-	-	100.00	-	-	-		-	N/A	-	N/A	N/A	-	-	-
195	Total TY		150	-	150	54.36	9.39	45.11	0.17		7	N/A	40.63	N/A	N/A	3,203	3,203	21,351.33

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Sponsor: Low
2019 TX Rate Case

Southwestern Public Service Company

Generating Unit Data

Line No.	MONTH TEST YEAR (TY)	UNIT NAME	PRODUCTION MWh GROSS UNIT OUTPUT	STATION SERVICE	NET UNIT OUTPUT	OPERATING STATISTICS (%) EQUIV. AVAIL. FACTOR %	FORCED OUTAGE RATE %	SCHED. OUTAGE FACTOR %	NET CAPACITY FACTOR %	TIME ON AGC %	# OF COLD STARTS	# OF HOT STARTS	HOURS CONNECTED TO LOAD	FUEL CONSUMPTION MILLION Btu COLD START	HOT START	OPERATIONS	TOTAL	NET HEAT RATE Btu/kWh
196	April 2018	Nichols 1	16,426	1,705	14,721	90.00	-	8.54	19.11		4	N/A	394.17	N/A	N/A	178,251	178,251	12,108.63
197	May 2018	Nichols 1	25,769	2,344	23,425	100.00	-	-	29.43		7	N/A	595.45	N/A	N/A	280,541	280,541	11,976.20
198	June 2018	Nichols 1	23,136	2,247	20,888	100.00	-	-	27.11		6	N/A	547.63	N/A	N/A	255,907	255,907	12,251.19
199	July 2018	Nichols 1	32,966	2,670	30,296	100.00	-	-	38.06		8	N/A	673.78	N/A	N/A	350,825	350,825	11,579.75
200	August 2018	Nichols 1	27,920	2,540	25,380	100.00	-	-	31.88		7	N/A	590.32	N/A	N/A	294,326	294,326	11,596.75
201	September 2018	Nichols 1	13,616	1,567	12,049	86.70	22.76	1.81	15.64		3	N/A	280.89	N/A	N/A	144,218	144,218	11,968.82
202	October 2018	Nichols 1	24,699	2,281	22,418	88.85	12.58	-	28.16		6	N/A	576.45	N/A	N/A	271,231	271,231	12,099.04
203	November 2018	Nichols 1	16,767	1,801	14,966	98.87	-	1.13	19.40		4	N/A	351.75	N/A	N/A	179,433	179,433	11,989.25
204	December 2018	Nichols 1	14,817	1,480	13,337	80.92	-	19.08	16.75		4	N/A	329.10	N/A	N/A	167,258	167,258	12,541.34
205	January 2019	Nichols 1	18,196	1,764	16,432	100.00	-	-	20.64		4	N/A	413.52	N/A	N/A	205,468	205,468	12,504.26
206	February 2019	Nichols 1	13,021	1,323	11,697	97.91	-	2.09	16.27		4	N/A	272.73	N/A	N/A	147,597	147,597	12,617.98
207	March 2019	Nichols 1	27,843	2,366	25,477	100.00	-	-	32.05		5	N/A	610.82	N/A	N/A	311,828	311,828	12,239.61
208	Total TY		255,176	24,089	231,087	95.27	2.94	2.72	24.54		62	N/A	5,636.61	N/A	N/A	2,786,883	2,786,883	12,059.91
209	April 2018	Nichols 2	18,616	1,746	16,870	91.18	5.39	5.49	22.10		5	N/A	421.68	N/A	N/A	197,547	197,547	11,709.72
210	May 2018	Nichols 2	23,914	2,139	21,775	94.49	-	5.51	27.61		5	N/A	497.13	N/A	N/A	254,387	254,387	11,682.56
211	June 2018	Nichols 2	23,186	2,186	21,000	94.20	-	5.80	27.52		4	N/A	544.38	N/A	N/A	255,907	255,907	12,186.30
212	July 2018	Nichols 2	36,498	2,655	33,842	99.91	-	-	42.91		8	N/A	680.73	N/A	N/A	380,107	380,107	11,231.73
213	August 2018	Nichols 2	28,837	2,405	26,432	98.73	1.63	-	33.52		9	N/A	573.57	N/A	N/A	302,070	302,070	11,428.06
214	September 2018	Nichols 2	27,986	2,299	25,686	100.00	-	-	33.66		4	N/A	602.93	N/A	N/A	296,903	296,903	11,558.94
215	October 2018	Nichols 2	31,628	2,466	29,162	100.00	-	-	36.98		7	N/A	672.07	N/A	N/A	338,114	338,114	11,594.30
216	November 2018	Nichols 2	21,425	1,893	19,532	100.00	-	-	25.56		4	N/A	446.17	N/A	N/A	226,549	226,549	11,598.81
217	December 2018	Nichols 2	16,323	1,684	14,638	97.85	-	2.15	18.56		5	N/A	393.50	N/A	N/A	193,367	193,367	13,209.52
218	January 2019	Nichols 2	13,980	1,379	12,602	100.00	-	-	15.98		2	N/A	277.02	N/A	N/A	156,425	156,425	12,413.08
219	February 2019	Nichols 2	15,520	1,167	14,352	100.00	-	-	20.15		3	N/A	248.92	N/A	N/A	174,221	174,221	12,138.99
220	March 2019	Nichols 2	27,466	2,215	25,251	100.00	-	-	32.06		5	N/A	588.05	N/A	N/A	311,006	311,006	12,316.40
221	Total TY		285,378	24,235	261,143	98.03	0.58	1.58	28.05		61	N/A	5,946.15	N/A	N/A	3,086,604	3,086,604	11,819.58
222	April 2018	Nichols 3	38,190	3,199	34,991	100.00	-	-	19.92		9	N/A	413.52	N/A	N/A	396,068	396,068	11,319.23
223	May 2018	Nichols 3	43,563	3,478	40,085	100.00	-	-	22.08		10	N/A	516.90	N/A	N/A	460,505	460,505	11,488.31
224	June 2018	Nichols 3	25,154	2,155	22,999	71.99	11.09	22.90	13.09		8	N/A	295.02	N/A	N/A	271,129	271,129	11,788.66
225	July 2018	Nichols 3	62,020	4,382	57,638	98.17	-	1.83	31.75		15	N/A	591.35	N/A	N/A	637,039	637,039	11,052.48
226	August 2018	Nichols 3	53,892	4,021	49,871	100.00	-	-	27.47		12	N/A	578.23	N/A	N/A	544,248	544,248	10,913.01
227	September 2018	Nichols 3	41,156	3,192	37,964	97.64	-	2.29	21.61		9	N/A	412.05	N/A	N/A	429,863	429,863	11,322.95
228	October 2018	Nichols 3	53,698	3,859	49,840	100.00	-	-	27.45		9	N/A	572.40	N/A	N/A	563,351	563,351	11,303.30
229	November 2018	Nichols 3	39,335	2,715	36,621	100.00	-	-	20.82		5	N/A	472.42	N/A	N/A	399,436	399,436	10,907.41
230	December 2018	Nichols 3	28,609	2,033	26,576	98.39	-	1.61	14.64		8	N/A	385.22	N/A	N/A	319,419	319,419	12,019.03
231	January 2019	Nichols 3	22,138	1,550	20,588	96.06	-	-	11.34		4	N/A	258.38	N/A	N/A	232,852	232,852	11,309.95
232	February 2019	Nichols 3	29,700	1,715	27,985	100.00	-	-	17.07		6	N/A	240.97	N/A	N/A	314,217	314,217	11,227.98
233	March 2019	Nichols 3	44,400	2,952	41,449	100.00	-	-	22.86		8	N/A	499.07	N/A	N/A	478,671	478,671	11,548.56
234	Total TY		481,857	35,251	446,606	96.85	0.92	2.39	20.84		103	N/A	5,235.53	N/A	N/A	5,046,797	5,046,797	11,300.34

Southwestern Public Service Company

Generating Unit Data

Line No.	MONTH	UNIT NAME	PRODUCTION MWh GROSS UNIT OUTPUT	PRODUCTION MWh STATION SERVICE	PRODUCTION MWh NET UNIT OUTPUT	OPERATING STATISTICS (%) EQUIV. AVAIL. FACTOR %	FORCED OUTAGE RATE %	SCHED. OUTAGE FACTOR %	NET CAPACITY FACTOR %	TIME ON AGC %	# OF COLD STARTS	# OF HOT STARTS	HOURS CONNECTED TO LOAD	FUEL CONSUMPTION MILLION Btu COLD START	HOT START	OPERATIONS	TOTAL	NET HEAT RATE Btu/kWh
	TEST YEAR (TY)																	
235	April 2018	Plant X 1	5,390	691	4,699	80.22	38.81	-	17.17		4	N/A	224.62	N/A	N/A	84,926	84,926	18,073.15
236	May 2018	Plant X 1	6,304	802	5,502	69.25	47.42	2.18	19.46		3	N/A	235.74	N/A	N/A	98,810	98,810	17,958.84
237	June 2018	Plant X 1	6,506	819	5,687	99.07	2.36	-	20.79		5	N/A	277.95	N/A	N/A	98,220	98,220	17,270.98
238	July 2018	Plant X 1	10,190	1,173	9,017	96.93	5.16	-	31.89		7	N/A	420.10	N/A	N/A	149,964	149,964	16,631.27
239	August 2018	Plant X 1	8,959	864	8,095	99.56	0.89	-	28.63		4	N/A	361.73	N/A	N/A	128,819	128,819	15,913.43
240	September 2018	Plant X 1	8,973	939	8,034	97.83	3.60	-	29.36		4	N/A	418.82	N/A	N/A	138,477	138,477	17,236.35
241	October 2018	Plant X 1	10,196	1,003	9,193	100.00	-	-	32.52		6	N/A	437.65	N/A	N/A	162,493	162,493	17,675.71
242	November 2018	Plant X 1	8,507	770	7,737	83.36	-	16.64	28.24		3	N/A	339.30	N/A	N/A	123,313	123,313	15,938.13
243	December 2018	Plant X 1	-	181	(181)	70.97	-	29.03	(0.64)		-	N/A	-	N/A	N/A	-	-	-
244	January 2019	Plant X 1	1,721	341	1,380	100.00	-	-	4.88		1	N/A	75.40	N/A	N/A	25,566	25,566	18,525.86
245	February 2019	Plant X 1	4,921	466	4,455	100.00	-	-	17.45		3	N/A	208.48	N/A	N/A	84,479	84,479	18,962.84
246	March 2019	Plant X 1	13,503	994	12,509	77.79	25.76	-	44.30		3	N/A	475.65	N/A	N/A	201,870	201,870	16,138.02
247	Total TY		85,170	9,043	76,127	89.58	10.33	3.99	22.84		43	N/A	3,475.44	N/A	N/A	1,296,937	1,296,937	17,036.49
248	April 2018	Plant X 2	10,080	983	9,097	42.89	66.59	-	14.04		2	N/A	206.33	N/A	N/A	113,131	113,131	12,436.10
249	May 2018	Plant X 2	33,975	2,455	31,520	80.30	-	2.13	47.07		3	N/A	601.95	N/A	N/A	397,022	397,022	12,595.88
250	June 2018	Plant X 2	18,746	1,687	17,059	79.99	28.20	-	26.33		3	N/A	366.73	N/A	N/A	228,751	228,751	13,409.40
251	July 2018	Plant X 2	35,670	2,674	32,996	97.64	-	1.50	49.28		3	N/A	646.40	N/A	N/A	420,997	420,997	12,759.04
252	August 2018	Plant X 2	14,375	1,287	13,088	48.27	59.98	-	19.55		2	N/A	256.78	N/A	N/A	166,184	166,184	12,697.47
253	September 2018	Plant X 2	26,971	2,058	24,913	100.00	-	-	38.45		4	N/A	470.13	N/A	N/A	322,485	322,485	12,944.46
254	October 2018	Plant X 2	30,725	2,280	28,445	100.00	-	-	42.48		4	N/A	533.87	N/A	N/A	368,342	368,342	12,949.28
255	November 2018	Plant X 2	22,635	1,688	20,947	83.36	-	16.64	32.28		2	N/A	398.42	N/A	N/A	246,420	246,420	11,763.98
256	December 2018	Plant X 2	3,646	472	3,174	70.97	-	29.03	4.74		1	N/A	77.17	N/A	N/A	46,273	46,273	14,578.68
257	January 2019	Plant X 2	6,934	679	6,255	30.96	79.35	-	9.34		2	N/A	133.70	N/A	N/A	84,634	84,634	13,530.63
258	February 2019	Plant X 2	-	134	(134)	-	100.00	-	(0.22)		-	N/A	-	N/A	N/A	44	44	-
259	March 2019	Plant X 2	-	146	(146)	-	100.00	-	(0.22)		-	N/A	-	N/A	N/A	79	79	-
260	Total TY		203,757	16,543	187,214	61.20	36.18	4.11	23.59		26	N/A	3,691.48	N/A	N/A	2,394,364	2,394,364	12,789.45
261	April 2018	Plant X 3	29,349	2,008	27,341	93.25	9.24	-	40.83		3	N/A	477.30	N/A	N/A	274,073	274,073	10,024.27
262	May 2018	Plant X 3	27,402	2,054	25,348	78.27	26.07	-	36.63		3	N/A	454.00	N/A	N/A	262,218	262,218	10,344.71
263	June 2018	Plant X 3	25,351	2,113	23,238	100.00	-	-	34.70		5	N/A	451.82	N/A	N/A	244,502	244,502	10,521.65
264	July 2018	Plant X 3	41,675	3,079	38,596	100.00	-	-	55.78		7	N/A	679.00	N/A	N/A	410,206	410,206	10,628.21
265	August 2018	Plant X 3	14,329	1,332	12,997	34.41	-	65.59	18.78		3	N/A	235.36	N/A	N/A	139,778	139,778	10,754.66
266	September 2018	Plant X 3	36,539	2,625	33,914	98.33	2.03	-	50.65		4	N/A	579.08	N/A	N/A	365,269	365,269	10,770.44
267	October 2018	Plant X 3	39,296	2,896	36,400	97.30	2.83	-	52.61		2	N/A	689.52	N/A	N/A	392,785	392,785	10,790.80
268	November 2018	Plant X 3	28,235	2,202	26,033	75.03	-	24.97	38.82		2	N/A	435.17	N/A	N/A	258,366	258,366	9,924.55
269	December 2018	Plant X 3	10,289	1,025	9,264	54.24	3.69	29.15	13.39		5	N/A	252.28	N/A	N/A	95,089	95,089	10,264.33
270	January 2019	Plant X 3	25,314	2,096	23,218	93.01	0.24	-	33.56		7	N/A	515.22	N/A	N/A	259,357	259,357	11,170.51
271	February 2019	Plant X 3	7,801	729	7,072	55.84	69.07	0.82	11.32		3	N/A	130.39	N/A	N/A	77,608	77,608	10,973.94
272	March 2019	Plant X 3	19,902	1,408	18,494	43.44	52.20	18.44	26.76		4	N/A	259.31	N/A	N/A	212,341	212,341	11,481.64
273	Total TY		305,482	23,567	281,915	76.93	13.78	11.58	34.49		48	N/A	5,158.45	N/A	N/A	2,991,593	2,991,593	10,611.68

Southwestern Public Service Company

Generating Unit Data

Line No.	MONTH TEST YEAR (TY)	UNIT NAME	PRODUCTION MWh GROSS UNIT OUTPUT	STATION SERVICE	NET UNIT OUTPUT	OPERATING STATISTICS (%) EQUIV. AVAIL. FACTOR %	FORCED OUTAGE RATE %	SCHED. OUTAGE FACTOR %	NET CAPACITY FACTOR %	TIME ON AGC %	# OF COLD STARTS	# OF HOT STARTS	HOURS CONNECTED TO LOAD	FUEL CONSUMPTION MILLION Btu COLD START	HOT START	OPERATIONS	TOTAL	NET HEAT RATE Btu/kWh
274	April 2018	Plant X 4	71,797	4,307	67,490	94.78	-	-	49.33		2	N/A	608.02	N/A	N/A	724,707	724,707	10,737.99
275	May 2018	Plant X 4	87,844	5,333	82,511	98.09	-	1.88	58.37		7	N/A	662.79	N/A	N/A	900,872	900,872	10,918.21
276	June 2018	Plant X 4	39,802	3,084	36,718	89.72	15.58	-	26.84		7	N/A	398.06	N/A	N/A	422,613	422,613	11,509.71
277	July 2018	Plant X 4	91,998	15,181	76,817	95.74	4.19	-	54.34		9	N/A	636.85	N/A	N/A	854,051	854,051	11,117.99
278	August 2018	Plant X 4	84,708	5,427	79,281	100.00	-	-	56.08		7	N/A	697.35	N/A	N/A	855,526	855,526	10,791.06
279	September 2018	Plant X 4	22,525	1,369	21,156	23.34	60.22	43.33	15.46		1	N/A	158.55	N/A	N/A	231,121	231,121	10,924.63
280	October 2018	Plant X 4	59,886	3,762	56,124	74.92	27.61	-	39.70		6	N/A	484.55	N/A	N/A	652,979	652,979	11,634.57
281	November 2018	Plant X 4	85,902	4,998	80,904	100.00	-	-	59.06		4	N/A	638.48	N/A	N/A	846,225	846,225	10,459.62
282	December 2018	Plant X 4	56,493	3,884	52,609	100.00	-	-	37.22		6	N/A	572.23	N/A	N/A	614,747	614,747	11,685.21
283	January 2019	Plant X 4	60,181	4,038	56,143	100.00	-	-	39.72		6	N/A	584.87	N/A	N/A	654,393	654,393	11,655.82
284	February 2019	Plant X 4	35,007	2,421	32,586	96.40	5.32	-	25.52		3	N/A	342.78	N/A	N/A	363,600	363,600	11,158.18
285	March 2019	Plant X 4	95,260	5,318	89,942	93.54	-	6.46	63.71		4	N/A	634.02	N/A	N/A	936,870	936,870	10,416.37
286	Total TY		791,403	59,122	732,281	88.88	9.41	4.31	43.78		62	N/A	6,418.55	N/A	N/A	8,057,705	8,057,705	11,003.57
287	April 2018	Quay County	21	-	21	64.63	98.85	-	0.13		1	N/A	1.05	N/A	N/A	369	369	17,558.70
288	May 2018	Quay County	-	-	-	73.91	-	-	-			N/A	-	N/A	N/A	-	-	-
289	June 2018	Quay County	-	-	-	73.91	-	-	-		-	N/A	-	N/A	N/A	-	-	-
290	July 2018	Quay County	-	-	-	73.91	-	-	-		-	N/A	-	N/A	N/A	25	25	-
291	August 2018	Quay County	-	-	-	73.91	-	-	-		-	N/A	-	N/A	N/A	-	-	-
292	September 2018	Quay County	21	-	21	73.91	-	-	0.13		1	N/A	1.05	N/A	N/A	378	378	17,899.22
293	October 2018	Quay County	23	-	23	100.00	-	-	0.13		1	N/A	1.07	N/A	N/A	395	395	17,576.87
294	November 2018	Quay County	22	-	22	100.00	-	-	0.13		1	N/A	1.05	N/A	N/A	372	372	17,214.93
295	December 2018	Quay County	5	-	5	99.60	-	0.40	0.03		1	N/A	0.27	N/A	N/A	115	115	24,528.28
296	January 2019	Quay County	16	-	16	100.00	-	-	0.09		1	N/A	0.77	N/A	N/A	290	290	18,226.49
297	February 2019	Quay County	22	-	22	97.77	-	2.23	0.14		1	N/A	1.07	N/A	N/A	393	393	17,853.11
298	March 2019	Quay County	22	-	22	97.58	-	2.42	0.13		1	N/A	1.05	N/A	N/A	391	391	17,778.80
299	Total TY		151	-	151	85.76	8.24	0.42	0.08		8	N/A	7.38	N/A	N/A	2,728	2,728	18,087.10
300	April 2018	Tolk 1	191,324	9,617	181,707	99.19	0.81	-	47.44		1	N/A	714.18	N/A	N/A	1,925,358	1,948,236	10,721.85
301	May 2018	Tolk 1	232,198	12,026	220,172	100.00	-	-	55.63		-	N/A	744.00	N/A	N/A	2,321,671	2,323,664	10,553.86
302	June 2018	Tolk 1	165,113	10,643	154,470	86.44	12.54	1.02	40.33		2	N/A	629.68	N/A	N/A	1,691,600	1,700,798	11,010.54
303	July 2018	Tolk 1	228,951	12,232	216,719	100.00	-	-	54.75		-	N/A	744.00	N/A	N/A	2,312,789	2,313,104	10,673.29
304	August 2018	Tolk 1	246,378	12,710	233,668	99.60	-	-	59.04		-	N/A	744.00	N/A	N/A	2,480,772	2,481,391	10,619.30
305	September 2018	Tolk 1	173,972	8,556	165,416	70.00	-	30.00	43.19		-	N/A	504.02	N/A	N/A	1,740,647	1,741,742	10,529.47
306	October 2018	Tolk 1	-	1,345	(1,345)	-	-	100.00	(0.34)		-	N/A	-	N/A	N/A	-	-	-
307	November 2018	Tolk 1	106,556	6,694	99,862	44.31	10.61	50.37	26.03		3	N/A	319.89	N/A	N/A	1,067,944	1,098,566	11,000.84
308	December 2018	Tolk 1	187,492	9,631	177,861	95.13	-	-	44.94		1	N/A	579.12	N/A	N/A	1,854,369	1,862,121	10,469.53
309	January 2019	Tolk 1	70,427	5,856	64,571	63.77	33.04	16.42	16.31		2	N/A	298.68	N/A	N/A	716,067	716,067	11,089.61
310	February 2019	Tolk 1	26,344	2,540	23,804	95.07	2.08	4.71	6.66		2	N/A	70.48	N/A	N/A	271,305	271,305	11,397.44
311	March 2019	Tolk 1	151,728	9,251	142,477	89.45	-	10.32	36.04		1	N/A	580.61	N/A	N/A	1,561,720	1,561,720	10,961.21
312	Total TY		1,780,483	101,101	1,679,382	78.58	4.92	17.74	35.83		12	N/A	5,928.66	N/A	N/A	17,944,240	18,018,714	10,729.37

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Sponsor: Low
2019 TX Rate Case

Southwestern Public Service Company

Generating Unit Data

Line No.	MONTH TEST YEAR (TY)	UNIT NAME	PRODUCTION MWh GROSS UNIT OUTPUT	STATION SERVICE	NET UNIT OUTPUT	OPERATING STATISTICS (%) EQUIV. AVAIL. FACTOR %	FORCED OUTAGE RATE %	SCHED. OUTAGE FACTOR %	NET CAPACITY FACTOR %	TIME ON AGC %	# OF COLD STARTS	# OF HOT STARTS	HOURS CONNECTED TO LOAD	FUEL CONSUMPTION MILLION Btu COLD START	HOT START	OPERATIONS	TOTAL	NET HEAT RATE Btu/kWh
313	April 2018	Tolk 2	-	334	(334)	-	100.00	-	(0.09)		-	N/A	-	N/A	N/A	-	-	-
314	May 2018	Tolk 2	50,009	3,001	47,008	15.70	84.30	-	11.81		3	N/A	116.78	N/A	N/A	488,057	507,683	10,799.92
315	June 2018	Tolk 2	193,114	9,860	183,254	100.00	-	-	47.57		-	N/A	720.00	N/A	N/A	1,902,954	1,903,528	10,387.38
316	July 2018	Tolk 2	208,909	10,446	198,463	100.00	-	-	49.86		-	N/A	744.00	N/A	N/A	2,035,561	2,035,835	10,258.01
317	August 2018	Tolk 2	233,738	11,177	222,561	99.90	-	-	55.91		-	N/A	744.00	N/A	N/A	2,257,027	2,257,422	10,142.94
318	September 2018	Tolk 2	238,084	12,774	225,310	99.12	-	-	58.49		-	N/A	720.00	N/A	N/A	2,302,046	2,303,188	10,222.31
319	October 2018	Tolk 2	250,931	13,598	237,333	87.11	12.89	-	59.63		1	N/A	648.10	N/A	N/A	2,400,798	2,406,693	10,140.57
320	November 2018	Tolk 2	241,116	12,283	228,833	99.70	0.25	-	59.32		2	N/A	719.23	N/A	N/A	2,332,945	2,337,474	10,214.76
321	December 2018	Tolk 2	160,848	9,066	151,782	97.04	3.66	-	38.13		1	N/A	578.92	N/A	N/A	1,580,456	1,590,704	10,480.19
322	January 2019	Tolk 2	186,134	10,743	175,391	100.00	-	-	44.06		-	N/A	744.00	N/A	N/A	1,858,047	1,858,047	10,593.74
323	February 2019	Tolk 2	171,323	9,934	161,389	99.85	-	-	44.89		-	N/A	672.00	N/A	N/A	1,718,524	1,718,524	10,648.34
324	March 2019	Tolk 2	63,753	3,907	59,846	80.72	3.45	18.47	15.06		1	N/A	168.40	N/A	N/A	637,802	637,802	10,657.38
325	Total TY		1,997,959	107,123	1,890,836	81.59	17.05	1.54	40.39		8	N/A	6,575.43	N/A	N/A	19,514,217	19,556,899	10,342.99

Notes: Carlsband 5 was removed from service in December of 2017

As discussed in the testimony of William A Grant, Southwestern Public Service Company ("SPS") has not filed a fuel reconciliation with its current base rate case in accordance with the Order in Project No 41905 and 16 Tex Admin Code § 25 236 ("TAC") as revised in that project Therefore, fuel reconciliation data is not applicable Additionally, SPS is not proposing a new fuel factor under 16 TAC § 25 237 Therefore, rate year data is not applicable

Southwestern Public Service Company

Cunningham Unit 1 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	General Electric
2. TURBINE DESCRIPTION	Tandem-compound double flow
3 INLET TEMPERATURES / PRESSURES	950°F / 1250 per square inch gauge ("psig")
4 NUMBER OF FEEDWATER HEATERS	Four closed heaters, One open deaerating heater
5 LAST ROW OF BLADING SIZE / RPMs	20" / 3600 RPM
6 GENERATOR MANUFACTURER	General Electric
7 NAMEPLATE RATINGS	13 8 kV, 88 2 MVA, 3600 RPM, 0 85 power factor
8. NOMINAL GROSS MW OUTPUT	76,000 kW
9. TYPE OF COOLING	Hydrogen
10 TYPE OF EXCITATION	Rotating
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Natural Gas
2 DESCRIPTION OF ALTERNATE FUEL	None
3 MW DERATING - ALTER FUEL USE	N/A
4 STARTUP FUEL	Natural Gas
5 BOILER MANUFACTURER	Combustion Engineering
6 TYPE OF BOILER	Single furnace - pressurized, natural circulation
7 TYPE OF FUEL FIRING	Tangential Firing
8 DESCRIPTION OF BURNER LAYOUT	Three burner levels, primary & secondary air nozzles adjacent to each corner
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	20 2 1 NMAC – 20 2.350 NMAC, NM AQC Permit PSD-NM-622-M4, 40 Code of Federal Regulations ("C F R.") § 75, N M. Title V Permit P080-R3M1, 40 C F R § 98
2 MANUFACTURER OF PART. CONTROL	N/A
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	Combustion Engineering
5 TYPE OF PARTICULATE CONTROL	N/A
6 TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Combustion control
8 CURRENT LEVEL OF PARTICULATES	0 003 lb/MMBtu (Natural Gas EPA publication AP 42)
9 CURRENT LEVEL OF SOx	0 0006 lb/MMBtu (Natural Gas EPA publication AP 42)
10. CURRENT LEVEL OF NOx	0 148 lb/MMBtu Continuous Emission Monitoring System ("CEMS")
11 PEAK MW LOAD OF PART SYSTEM	No limitation on unit
12 PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13 PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14 APPLICABLE WATER POLLUTION REG	N M Water Quality Control Regulations
15 APPLICABLE WASTE DISPOSAL REG	N M. EIB/SWMR-2
16 MANUF OF WASTE WATER SYSTEM	Various
17 TYPE OF WASTE WATER SYSTEM	Irrigation of crops
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21 PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Well water makeup, forced draft cooling tower
2 MANUFACTURER OF COOLING WATER SYS	Cooling tower Pritchard
3. PEAK MW LOAD OF COOLING WATER SYS	No limitation on unit
4. DESCRIPTION OF BOILER FEEDPUMP SYS	Motor driven, variable speed, multistage, barrel type centrifugal pump
5. MANUFACTURER OF BOILER FEEDPUMP SYS	Worthington
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	No limitation on unit
7 DESCRIPTION OF COMBUSTION AIR SYS	Constant speed centrifugal forced draft fans, vane control
8 MANUFACTURER OF COMBUSTION AIR SYS	Sturtevant
9 PEAK MW LOAD OF COMBUSTION AIR SYS	No limitation on unit
10 DESCRIPTION OF AIR PREHEATER	Regenerative corrugated plate Ljungstrom
11. MANUFACTURER OF AIR PREHEATER	Combustion Engineering Air Preheater
12. PEAK MW LOAD OF AIR PREHEATER	No limitation on unit
13 DESCRIPTION OF FUEL FEED SYS	N/A
14 MANUFACTURER OF FUEL FEED SYS	N/A
15 PEAK MW LOAD OF FUEL FEED SYS	N/A

Southwestern Public Service Company

Cunningham Unit 2 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	General Electric
2. TURBINE DESCRIPTION	Tandem compound double flow
3 INLET TEMPERATURES / PRESSURES	Throttle - 1000°F / 1800 psig, Hot Reheat - 1000°F
4 NUMBER OF FEEDWATER HEATERS	Five closed heaters, One open deaerating heater
5 LAST ROW OF BLADING SIZE / RPMs	26" / 3600 RPM
6 GENERATOR MANUFACTURER	General Electric
7 NAMEPLATE RATINGS	20 0 kV, 224 MVA, 3600 RPM, 0 85 power factor
8 NOMINAL GROSS MW OUTPUT	205,000 kW
9 TYPE OF COOLING	Hydrogen
10 TYPE OF EXCITATION	Main - static, spare - rotating
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Natural Gas
2 DESCRIPTION OF ALTERNATE FUEL	None
3 MW DERATING - ALTER FUEL USE	N/A
4 STARTUP FUEL	Natural Gas
5 BOILER MANUFACTURER	Combustion Engineering
6 TYPE OF BOILER	Single furnace - pressurized, natural circulation
7 TYPE OF FUEL FIRING	Tangential firing
8 DESCRIPTION OF BURNER LAYOUT	Five burner levels, primary & secondary air nozzles adjacent to each burner
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	20 2 1 NMAC – 20 2 350 NMAC, NM AQC Permit NM-PSD-622-M4, 40 C F R. § 75; N M Title V Permit P080-R3M1, 40 C F R § 98
2 MANUFACTURER OF PART CONTROL	N/A
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	Combustion Engineering
5 TYPE OF PARTICULATE CONTROL	N/A
6 TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Combustion control
8 CURRENT LEVEL OF PARTICULATES	0 003 lb/MMBtu (Natural Gas EPA publication AP 42)
9 CURRENT LEVEL OF SOx	0 0006 lb/MMBtu (Natural Gas EPA publication AP 42)
10 CURRENT LEVEL OF NOx	0 127 lb/MMBtu (CEMS)
11 PEAK MW LOAD OF PART SYSTEM	No limitation on unit
12 PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13 PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14 APPLICABLE WATER POLLUTION REG	N M Water Quality Control Regulations
15 APPLICABLE WASTE DISPOSAL REG	N M EIB/SWMR-2
16 MANUF OF WASTE WATER SYSTEM	Various
17 TYPE OF WASTE WATER SYSTEM	Irrigation of crops
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21 PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Well water makeup, forced draft cooling tower
2 MANUFACTURER OF COOLING WATER SYS	Cooling tower Fluor-Daniel
3 PEAK MW LOAD OF COOLING WATER SYS	No limitation on unit
4 DESCRIPTION OF BOILER FEEDPUMP SYS	Motor driven, variable speed, multistage, barrel type centrifugal pump
5. MANUFACTURER OF BOILER FEEDPUMP SYS	Worthington
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	No limitation on unit
7 DESCRIPTION OF COMBUSTION AIR SYS	Variable speed centrifugal forced draft fans
8 MANUFACTURER OF COMBUSTION AIR SYS	Sturtevant
9 PEAK MW LOAD OF COMBUSTION AIR SYS	No limitation on unit
10 DESCRIPTION OF AIR PREHEATER	Regenerative corrugated plate Ljungstrom
11 MANUFACTURER OF AIR PREHEATER	Combustion Engineering Air Preheater
12 PEAK MW LOAD OF AIR PREHEATER	No limitation on unit
13 DESCRIPTION OF FUEL FEED SYS	N/A
14 MANUFACTURER OF FUEL FEED SYS	N/A
15 PEAK MW LOAD OF FUEL FEED SYS	N/A

Southwestern Public Service Company

Cunningham Unit 3 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	Westinghouse
2. TURBINE DESCRIPTION	501D5A combustion turbine
3 INLET TEMPERATURES / PRESSURES	N/A
4 NUMBER OF FEEDWATER HEATERS	N/A
5 LAST ROW OF BLADING SIZE / RPMs	N/A
6 GENERATOR MANUFACTURER	Westinghouse
7 NAMEPLATE RATINGS	13.8 kV, 141 MVA, 3600 RPM, 0 90 power factor
8 NOMINAL GROSS MW OUTPUT	122,000 kW
9 TYPE OF COOLING	Air
10 TYPE OF EXCITATION	Brushless
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	N/A
2. DESCRIPTION OF ALTERNATE FUEL	N/A
3. MW DERATING - ALTER FUEL USE	N/A
4 STARTUP FUEL	N/A
5 BOILER MANUFACTURER	N/A
6 TYPE OF BOILER	N/A
7 TYPE OF FUEL FIRING	N/A
8. DESCRIPTION OF BURNER LAYOUT	N/A
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	20 2 1 NMAC – 20 2 350 NMAC, PSD-NM-622-M4, 40 C F R § 75; 40 C F R § 60 subpart GG, N M Title V Permit P080-R3M1, 40 C F R § 98
2 MANUFACTURER OF PART CONTROL	N/A
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	N/A
5 TYPE OF PARTICULATE CONTROL	N/A
6 TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Dry low NOx burners
8 CURRENT LEVEL OF PARTICULATES	0 004 lb/MMBtu
9 CURRENT LEVEL OF SOx	0 0006 lb/MMBtu (Natural Gas EPA publication AP 42)
10 CURRENT LEVEL OF NOx	0 067 lb/MMBtu (CEMS)
11 PEAK MW LOAD OF PART. SYSTEM	No limitation on unit
12 PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13 PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14. APPLICABLE WATER POLLUTION REG	N M Water Quality Control Regulations
15 APPLICABLE WASTE DISPOSAL REG	N M EIB/SWMR-2
16 MANUF. OF WASTE WATER SYSTEM	Various
17 TYPE OF WASTE WATER SYSTEM	Irrigation of crops
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21 PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1. DESCRIPTION OF COOLING WATER SYS	N/A
2 MANUFACTURER OF COOLING WATER SYS	N/A
3 PEAK MW LOAD OF COOLING WATER SYS	N/A
4 DESCRIPTION OF BOILER FEEDPUMP SYS	N/A
5 MANUFACTURER OF BOILER FEEDPUMP SYS	N/A
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	N/A
7 DESCRIPTION OF COMBUSTION AIR SYS	N/A
8 MANUFACTURER OF COMBUSTION AIR SYS	N/A
9 PEAK MW LOAD OF COMBUSTION AIR SYS	N/A
10. DESCRIPTION OF AIR PREHEATER	N/A
11. MANUFACTURER OF AIR PREHEATER	N/A
12 PEAK MW LOAD OF AIR PREHEATER	N/A
13 DESCRIPTION OF FUEL FEED SYS	N/A
14 MANUFACTURER OF FUEL FEED SYS	N/A
15 PEAK MW LOAD OF FUEL FEED SYS	N/A

Southwestern Public Service Company

Cunningham Unit 4 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	Westinghouse
2 TURBINE DESCRIPTION	501D5A combustion turbine
3 INLET TEMPERATURES / PRESSURES	N/A
4 NUMBER OF FEEDWATER HEATERS	N/A
5. LAST ROW OF BLADING SIZE / RPMs	N/A
6 GENERATOR MANUFACTURER	Westinghouse
7 NAMEPLATE RATINGS	13 8 kV, 141 MVA, 3600 RPM, 0 90 power factor
8 NOMINAL GROSS MW OUTPUT	122,000 kW
9 TYPE OF COOLING	Air
10 TYPE OF EXCITATION	Brushless
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	N/A
2 DESCRIPTION OF ALTERNATE FUEL	N/A
3 MW DERATING - ALTER FUEL USE	N/A
4 STARTUP FUEL	N/A
5. BOILER MANUFACTURER	N/A
6 TYPE OF BOILER	N/A
7 TYPE OF FUEL FIRING	N/A
8 DESCRIPTION OF BURNER LAYOUT	N/A
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	20 2 1 NMAC – 20 2 350 NMAC, PSD-NM-622-M4, 40 C F R § 75, 40 C F R § 60 subpart GG, N M Title V Permit P080-R3M1, 40 C F R § 98
2 MANUFACTURER OF PART CONTROL	N/A
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	N/A
5. TYPE OF PARTICULATE CONTROL	N/A
6 TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Dry low NOx burners
8 CURRENT LEVEL OF PARTICULATES	0 004 lb/MMBtu
9 CURRENT LEVEL OF SOx	0 0006 lb/MMBtu (Natural Gas EPA publication AP 42)
10 CURRENT LEVEL OF NOx	0 055 lb/MMBtu (CEMS)
11 PEAK MW LOAD OF PART SYSTEM	No limitation on unit
12 PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13. PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14 APPLICABLE WATER POLLUTION REG	N M Water Quality Control Regulations
15 APPLICABLE WASTE DISPOSAL REG	N M EIB/SWMR-2
16 MANUF OF WASTE WATER SYSTEM	Various
17 TYPE OF WASTE WATER SYSTEM	Irrigation of crops
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21 PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	N/A
2. MANUFACTURER OF COOLING WATER SYS	N/A
3 PEAK MW LOAD OF COOLING WATER SYS	N/A
4. DESCRIPTION OF BOILER FEEDPUMP SYS	N/A
5. MANUFACTURER OF BOILER FEEDPUMP SYS	N/A
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	N/A
7 DESCRIPTION OF COMBUSTION AIR SYS	N/A
8 MANUFACTURER OF COMBUSTION AIR SYS	N/A
9 PEAK MW LOAD OF COMBUSTION AIR SYS	N/A
10 DESCRIPTION OF AIR PREHEATER	N/A
11 MANUFACTURER OF AIR PREHEATER	N/A
12 PEAK MW LOAD OF AIR PREHEATER	N/A
13 DESCRIPTION OF FUEL FEED SYS	N/A
14 MANUFACTURER OF FUEL FEED SYS	N/A
15 PEAK MW LOAD OF FUEL FEED SYS	N/A

Harrington Station Unit 1 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	Westinghouse

Southwestern Public Service Company

2 TURBINE DESCRIPTION	Tandem compound double flow
3 INLET TEMPERATURES / PRESSURES	Throttle - 1000°F / 2400 psig, Hot Reheat - 1000°F
4 NUMBER OF FEEDWATER HEATERS	Seven closed heaters, one open deaerating heater
5 LAST ROW OF BLADING SIZE / RPMs	29 25" / 3600 RPM
6 GENERATOR MANUFACTURER	Westinghouse
7 NAMEPLATE RATINGS	24 0 kV, 400 MVA, 3600 RPM, 0 90 power factor
8 NOMINAL GROSS MW OUTPUT	369,000 kW
9 TYPE OF COOLING	Hydrogen
10 TYPE OF EXCITATION	Rotating brushless
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Coal, low sulfur, sub-bituminous
2. DESCRIPTION OF ALTERNATE FUEL	None
3 MW DERATING - ALTER FUEL USE	N/A
4 STARTUP FUEL	Natural gas
5 BOILER MANUFACTURER	Combustion Engineering
6 TYPE OF BOILER	Single furnace, controlled circulation, balanced draft
7. TYPE OF FUEL FIRING	Tangential firing
8 DESCRIPTION OF BURNER LAYOUT	Five burner levels, aux & sec air above and below each burner
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	40 C F.R §60 subpart D, 30 Texas Administrative Code ("TAC") § 101-122, Texas Air Permit 1388, 40 C F R § 75, TX Title V O-15, 40 C F R § 63 UUUUU; PSD Permit PSDTX631M1, 40 C F R § 97, 40 C F R § 98, TX Std Pmt 93027, TX Std Pmt 108024, TX Std Pmt 114029
2 MANUFACTURER OF PART CONTROL	Research Cottrell
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	Combustion Engineering
5. TYPE OF PARTICULATE CONTROL	Cold side electrostatic precipitator
6 TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Combustion control – Low NOx Burner/Separated Over-Fire Air ("LNB / SOFA")
8 CURRENT LEVEL OF PARTICULATES	0.0436 lb/MMBtu (Stack Test)
9 CURRENT LEVEL OF SOx	0 504 lb/MMBtu (CEMS)
10 CURRENT LEVEL OF NOx	0.176 lb/MMBtu (CEMS)
11 PEAK MW LOAD OF PART SYSTEM	No limitation on unit
12 PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13 PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14 APPLICABLE WATER POLLUTION REG	30 TAC §§ 285, 305, 40 C F R § 122 26
15 APPLICABLE WASTE DISPOSAL REG	30 TAC § 335
16 MANUF OF WASTE WATER SYSTEM	Various
17 TYPE OF WASTE WATER SYSTEM	Irrigation of crops
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle (Sales)/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21 PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Treated sewage effluent circulated through forced draft cooling tower
2 MANUFACTURER OF COOLING WATER SYS	Cooling tower· Marley
3 PEAK MW LOAD OF COOLING WATER SYS	No limitation on unit
4 DESCRIPTION OF BOILER FEEDPUMP SYS	Steam turbine driven multistage barrel-type centrifugal pump
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Westinghouse turbine / Worthington feedpump
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	No limitation on unit
7 DESCRIPTION OF COMBUSTION AIR SYS	Variable speed centrifugal forced draft and induced draft fans
8 MANUFACTURER OF COMBUSTION AIR SYS	Westinghouse Sturtevant
9 PEAK MW LOAD OF COMBUSTION AIR SYS	No limitation on unit
10 DESCRIPTION OF AIR PREHEATER	Two vertical regenerative Ljungstrom wheels
11 MANUFACTURER OF AIR PREHEATER	C-E Air preheater
12 PEAK MW LOAD OF AIR PREHEATER	No limitation on unit
13 DESCRIPTION OF FUEL FEED SYS	Gravimetric belt feeders
14 MANUFACTURER OF FUEL FEED SYS	Stock Equipment Company
15 PEAK MW LOAD OF FUEL FEED SYS	No limitation on unit

Southwestern Public Service Company

Harrington Station Unit 2 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	Westinghouse
2 TURBINE DESCRIPTION	Tandem compound double flow
3 INLET TEMPERATURES / PRESSURES	Throttle - 1000°F / 2400 psig, Hot Reheat - 1000°F
4 NUMBER OF FEEDWATER HEATERS	7 closed heaters, 1 open deaerating heater
5 LAST ROW OF BLADING SIZE / RPMs	29.25" / 3600 RPM
6 GENERATOR MANUFACTURER	Westinghouse
7 NAMEPLATE RATINGS	24 0 kV, 400 MVA, 3600 RPM, 0 90 power factor
8 NOMINAL GROSS MW OUTPUT	384,000 kW
9 TYPE OF COOLING	Hydrogen
10. TYPE OF EXCITATION	Rotating brushless
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Coal, low sulfur, sub-bituminous
2 DESCRIPTION OF ALTERNATE FUEL	none
3 MW DERATING - ALTER FUEL USE	N/A
4 STARTUP FUEL	Natural gas
5 BOILER MANUFACTURER	Combustion Engineering
6 TYPE OF BOILER	Single furnace, controlled circulation, balanced draft
7 TYPE OF FUEL FIRING	Tangential firing
8 DESCRIPTION OF BURNER LAYOUT	Five burner levels, aux & sec air above and below each burner
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	40 C F R § 60 subpart D, 30 TAC §§ 101-122, Texas Air Permit 5129, 40 C F R. § 75, TX Title V O-15, 40 C F R § 63 UUUUU, PSD Permit PSDTX017M2, 40 C F R 97, 40 C F R § 98, TX Std Pmt 108023, TX Std Pmt 113945
2 MANUFACTURER OF PART CONTROL	Wheelabrator-Frye
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	Combustion Engineering
5 TYPE OF PARTICULATE CONTROL	Shake/deflate baghouse
6 TYPE OF SOx CONTROL	Fuel quality
7. TYPE OF NOx CONTROL	Combustion control – LNB / SOFA
8 CURRENT LEVEL OF PARTICULATES	0 0215 lb/MMBtu (CEMS)
9 CURRENT LEVEL OF SOx	0 491 lb/MMBtu (CEMS)
10 CURRENT LEVEL OF NOx	0 139 lb/MMBtu (CEMS)
11 PEAK MW LOAD OF PART SYSTEM	No limitation on unit
12 PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13 PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14 APPLICABLE WATER POLLUTION REG	30 TAC §§ 285, 305
15 APPLICABLE WASTE DISPOSAL REG	30 TAC § 335
16 MANUF OF WASTE WATER SYSTEM	Various
17 TYPE OF WASTE WATER SYSTEM	Irrigation of crops
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle (Sales)/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21 PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Treated sewage effluent circulated through forced draft cooling tower
2 MANUFACTURER OF COOLING WATER SYS	Cooling tower Ecodyne
3 PEAK MW LOAD OF COOLING WATER SYS	No limitation on unit
4 DESCRIPTION OF BOILER FEEDPUMP SYS	Steam turbine driven multistage barrel-type centrifugal pump
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Westinghouse turbine / Worthington feedpump
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	No limitation on unit
7 DESCRIPTION OF COMBUSTION AIR SYS	Variable speed centrifugal forced draft and induced draft fans
8 MANUFACTURER OF COMBUSTION AIR SYS	Westinghouse Sturtevant
9 PEAK MW LOAD OF COMBUSTION AIR SYS	No limitation on unit
10 DESCRIPTION OF AIR PREHEATER	Single vertical regenerative Ljungstrom wheel
11 MANUFACTURER OF AIR PREHEATER	C-E Air preheater
12 PEAK MW LOAD OF AIR PREHEATER	No limitation on unit
13 DESCRIPTION OF FUEL FEED SYS	Gravimetric belt feeders
14 MANUFACTURER OF FUEL FEED SYS	Merrick
15 PEAK MW LOAD OF FUEL FEED SYS	No limitation on unit

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Harrington Station Unit 3 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	Westinghouse
2 TURBINE DESCRIPTION	Tandem compound double flow
3. INLET TEMPERATURES / PRESSURES	Throttle - 1000°F / 2400 psig, Hot Reheat - 1000°F
4 NUMBER OF FEEDWATER HEATERS	Seven closed heaters, One open deaerating heater
5 LAST ROW OF BLADING SIZE / RPMs	30 75" / 3600 RPM
6 GENERATOR MANUFACTURER	Westinghouse
7. NAMEPLATE RATINGS	24 0 kV, 400 MVA, 3600 RPM, 0 90 power factor
8 NOMINAL GROSS MW OUTPUT	384,000 kW
9 TYPE OF COOLING	Hydrogen
10 TYPE OF EXCITATION	Rotating brushless
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Coal, low sulfur, sub-bituminous
2 DESCRIPTION OF ALTERNATE FUEL	none
3 MW DERATING - ALTER FUEL USE	N/A
4 STARTUP FUEL	Natural gas
5 BOILER MANUFACTURER	Combustion Engineering
6 TYPE OF BOILER	Single furnace, controlled circulation, balanced draft
7 TYPE OF FUEL FIRING	Tangential firing
8 DESCRIPTION OF BURNER LAYOUT	Five burner levels, aux & sec air above and below each burner
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	40 C F R 60 subpart D, 30 TAC §§ 101-122, Texas Air Permit 5129, 40 C F R 75, TX Title V O-15, 40 C F R. § 63 UUUUU, PSD Permit PSDTX017M2, 40 C F R 97, 40 C F R 98, TX Std Pmt 108023, TX Std Pmt 113945
2 MANUFACTURER OF PART CONTROL	Wheelabrator-Frye
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	Combustion Engineering
5 TYPE OF PARTICULATE CONTROL	Shake/deflate baghouse
6 TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Combustion control – LNB / SOFA
8 CURRENT LEVEL OF PARTICULATES	0 0117 lb/MMBtu
9. CURRENT LEVEL OF SOx	0 457 lb/MMBtu
10 CURRENT LEVEL OF NOx	0 141 lb/MMBtu
11 PEAK MW LOAD OF PART SYSTEM	No limitation on unit
12 PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13 PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14 APPLICABLE WATER POLLUTION REG	30 TAC §§ 285, 305
15 APPLICABLE WASTE DISPOSAL REG	30 TAC § 335
16 MANUF OF WASTE WATER SYSTEM	Various
17 TYPE OF WASTE WATER SYSTEM	Irrigation of crops
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle (Sales)/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21 PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Treated sewage effluent circulated through forced draft cooling tower
2 MANUFACTURER OF COOLING WATER SYS	Cooling tower. SPS
3 PEAK MW LOAD OF COOLING WATER SYS	No limitation on unit
4 DESCRIPTION OF BOILER FEEDPUMP SYS	Steam turbine driven multistage barrel-type centrifugal pump
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Westinghouse turbine / Worthington feedpump
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	No limitation on unit
7 DESCRIPTION OF COMBUSTION AIR SYS	Variable speed centrifugal forced draft and induced draft fans
8 MANUFACTURER OF COMBUSTION AIR SYS	Westinghouse Sturtevant
9 PEAK MW LOAD OF COMBUSTION AIR SYS	No limitation on unit
10 DESCRIPTION OF AIR PREHEATER	Regenerative corrugated plate Ljungstrom
11 MANUFACTURER OF AIR PREHEATER	Combustion Engineering Air preheater
12 PEAK MW LOAD OF AIR PREHEATER	No limitation on unit
13 DESCRIPTION OF FUEL FEED SYS	Gravimetric belt feeders
14 MANUFACTURER OF FUEL FEED SYS	Stock Equipment Company
15 PEAK MW LOAD OF FUEL FEED SYS	No limitation on unit

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Jones Unit 1 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	Westinghouse
2 TURBINE DESCRIPTION	Tandem compound double flow
3 INLET TEMPERATURES / PRESSURES	Throttle - 1000°F / 1800 psig, Hot Reheat - 1000°F
4. NUMBER OF FEEDWATER HEATERS	Five closed heaters, One open deaerating heater
5. LAST ROW OF BLADING SIZE / RPMs	25" / 3600 RPM
6 GENERATOR MANUFACTURER	Westinghouse
7 NAMEPLATE RATINGS	22 0 kV, 275 MVA, 3600 RPM, 0 90 power factor
8 NOMINAL GROSS MW OUTPUT	256,000 kW
9 TYPE OF COOLING	Hydrogen
10 TYPE OF EXCITATION	Rotating brushless
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Natural gas
2 DESCRIPTION OF ALTERNATE FUEL	No 2 fuel oil
3 MW DERATING - ALTER FUEL USE	81,000 kW
4 STARTUP FUEL	Natural gas
5 BOILER MANUFACTURER	Combustion Engineering
6 TYPE OF BOILER	Single furnace - pressurized, natural circulation
7 TYPE OF FUEL FIRING	Tangential firing
8 DESCRIPTION OF BURNER LAYOUT	Four burner levels, primary & secondary air nozzles adjacent to each burner
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	40 C F R § 60 subpart D, 30 TAC §§101-122, Texas Air Permit 1945, 40 C F R § 75, TX Electric Generating Facility ("EGF") Permit 45590 (NOx budget), 40 C F R § 97, 40 C F R § 98; Title V Permit O-14
2 MANUFACTURER OF PART CONTROL	N/A
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	Combustion Engineering
5 TYPE OF PARTICULATE CONTROL	N/A
6 TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Combustion control
8 CURRENT LEVEL OF PARTICULATES	0 0076 lb/MMBtu (Natural Gas EPA publication AP 42)
9 CURRENT LEVEL OF SOx	0 0006 lb/MMBtu (Natural Gas EPA publication AP 42)
10 CURRENT LEVEL OF NOx	0 111 lb/MMBtu
11 PEAK MW LOAD OF PART SYSTEM	No limitation on unit
12 PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13 PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14 APPLICABLE WATER POLLUTION REG	30 TAC §§ 285, 305
15 APPLICABLE WASTE DISPOSAL REG	30 TAC § 335
16 MANUF. OF WASTE WATER SYSTEM	Various
17 TYPE OF WASTE WATER SYSTEM	Irrigation of crops
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21 PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Treated sewage effluent, cooling tower
2 MANUFACTURER OF COOLING WATER SYS	Cooling tower SPS
3 PEAK MW LOAD OF COOLING WATER SYS	No limitation on unit
4 DESCRIPTION OF BOILER FEEDPUMP SYS	Motor driven, variable speed, multistage, barrel type centrifugal pump
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Worthington
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	No limitation on unit
7 DESCRIPTION OF COMBUSTION AIR SYS	Variable speed centrifugal forced draft fans
8 MANUFACTURER OF COMBUSTION AIR SYS	Howden-Apco
9 PEAK MW LOAD OF COMBUSTION AIR SYS	No limitation on unit
10 DESCRIPTION OF AIR PREHEATER	Regenerative corrugated plate Ljungstrom
11 MANUFACTURER OF AIR PREHEATER	Combustion Engineering Air Preheater
12. PEAK MW LOAD OF AIR PREHEATER	No limitation on unit
13 DESCRIPTION OF FUEL FEED SYS	N/A
14. MANUFACTURER OF FUEL FEED SYS	N/A
15 PEAK MW LOAD OF FUEL FEED SYS	N/A

Jones Unit 2 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	

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1. TURBINE MANUFACTURER	Westinghouse
2 TURBINE DESCRIPTION	Tandem compound double flow
3. INLET TEMPERATURES / PRESSURES	Throttle - 1000°F / 1800 psig, Hot Reheat - 1000°F
4 NUMBER OF FEEDWATER HEATERS	Five closed heaters, one open deaerating heater
5 LAST ROW OF BLADING SIZE / RPMs	25" / 3600 RPM
6 GENERATOR MANUFACTURER	Westinghouse
7 NAMEPLATE RATINGS	22 0 kV, 275 MVA, 3600 RPM, 0 90 power factor
8 NOMINAL GROSS MW OUTPUT	256,000 kW
9 TYPE OF COOLING	Hydrogen
10. TYPE OF EXCITATION	Rotating brushless
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Natural gas
2 DESCRIPTION OF ALTERNATE FUEL	No 2 fuel oil
3. MW DERATING - ALTER FUEL USE	56,000 kW
4 STARTUP FUEL	Natural gas
5. BOILER MANUFACTURER	Combustion Engineering
6 TYPE OF BOILER	Single furnace - pressurized, natural circulation
7 TYPE OF FUEL FIRING	Tangential firing
8 DESCRIPTION OF BURNER LAYOUT	Four burner levels, primary & secondary air nozzles adjacent to each burner
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	30 TAC §§ 101-122, 40 C F R § 75, TX EGF Permit 45590 (NOx budget), Title V Permit O-14, 40 C F R §97, 40 C F R § 98
2 MANUFACTURER OF PART CONTROL	N/A
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	Combustion Engineering
5 TYPE OF PARTICULATE CONTROL	N/A
6 TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Combustion control
8 CURRENT LEVEL OF PARTICULATES	0 0076 lb/MMBtu (Natural Gas EPA publication AP 42)
9 CURRENT LEVEL OF SOx	0 0006 lb/MMBtu (Natural Gas EPA publication AP 42)
10 CURRENT LEVEL OF NOx	0 085 lb/MMBtu (CEMS)
11 PEAK MW LOAD OF PART SYSTEM	No limitation on unit
12 PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13 PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14 APPLICABLE WATER POLLUTION REG	30 TAC §§ 285, 305
15 APPLICABLE WASTE DISPOSAL REG	30 TAC § 335
16 MANUF OF WASTE WATER SYSTEM	Various
17 TYPE OF WASTE WATER SYSTEM	Irrigation of crops
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21 PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Treated sewage effluent, cooling tower
2 MANUFACTURER OF COOLING WATER SYS	Cooling tower Ecodyne
3 PEAK MW LOAD OF COOLING WATER SYS	No limitation on unit
4 DESCRIPTION OF BOILER FEEDPUMP SYS	Motor driven, variable speed, multistage, barrel type centrifugal pump
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Worthington
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	No limitation on unit
7. DESCRIPTION OF COMBUSTION AIR SYS	Variable speed centrifugal forced draft fans
8 MANUFACTURER OF COMBUSTION AIR SYS	Howden-Apco
9 PEAK MW LOAD OF COMBUSTION AIR SYS	No limitation on unit
10 DESCRIPTION OF AIR PREHEATER	Regenerative corrugated plate Ljungstrom
11 MANUFACTURER OF AIR PREHEATER	Combustion Engineering Air Preheater
12 PEAK MW LOAD OF AIR PREHEATER	No limitation on unit
13 DESCRIPTION OF FUEL FEED SYS	N/A
14 MANUFACTURER OF FUEL FEED SYS	N/A
15. PEAK MW LOAD OF FUEL FEED SYS	N/A

Jones Unit 3 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	Seimens/Westinghouse
2 TURBINE DESCRIPTION	SGT6–5000F Gas Turbine
3 INLET TEMPERATURES / PRESSURES	N/A
4 NUMBER OF FEEDWATER HEATERS	N/A

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5 LAST ROW OF BLADING SIZE / RPMs	3600 RPM
6 GENERATOR MANUFACTURER	Seimens/Westinghouse
7 NAMEPLATE RATINGS	16 5 kV, 203 MVA, 3600 RPM, 0 90 power factor
8 NOMINAL GROSS MW OUTPUT	184,000 kW
9 TYPE OF COOLING	Hydrogen
10 TYPE OF EXCITATION	Rotating brushless
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	N/A
2 DESCRIPTION OF ALTERNATE FUEL	N/A
3 MW DERATING - ALTER FUEL USE	N/A
4 STARTUP FUEL	N/A
5 BOILER MANUFACTURER	N/A
6 TYPE OF BOILER	N/A
7. TYPE OF FUEL FIRING	N/A
8. DESCRIPTION OF BURNER LAYOUT	N/A
POLLUTION CONTROL	
1. APPLICABLE AIR POLLUTION REG	30 TAC §§ 101-122, 40 C F R. § 60 Subpart KKKK, TX Permit 92156, 40 C F R. § 75, TX Title V Permit O-14, 40 C F.R § 97; 40 C F R § 98
2. MANUFACTURER OF PART CONTROL	N/A
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	Siemens
5 TYPE OF PARTICULATE CONTROL	N/A
6 TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Dry Low NOx Burners
8 CURRENT LEVEL OF PARTICULATES	0 0026 lb/MMBtu
9 CURRENT LEVEL OF SOx	0 0006 lb/MMBtu (Natural Gas EPA AP42)
10. CURRENT LEVEL OF NOx	0 032 lb/MMBtu
11 PEAK MW LOAD OF PART SYSTEM	No Limit
12 PEAK MW LOAD OF SOx SYSTEM	No Limit
13 PEAK MW LOAD OF NOx SYSTEM	No Limit
14 APPLICABLE WATER POLLUTION REG	N/A
15 APPLICABLE WASTE DISPOSAL REG	30 TAC § 335
16 MANUF. OF WASTE WATER SYSTEM	N/A
17 TYPE OF WASTE WATER SYSTEM	N/A
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	N/A
21 PEAK MW LOAD OF WASTE DISP SYS	No Limit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	N/A
2 MANUFACTURER OF COOLING WATER SYS	N/A
3 PEAK MW LOAD OF COOLING WATER SYS	N/A
4 DESCRIPTION OF BOILER FEEDPUMP SYS	N/A
5 MANUFACTURER OF BOILER FEEDPUMP SYS	N/A
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	N/A
7 DESCRIPTION OF COMBUSTION AIR SYS	N/A
8 MANUFACTURER OF COMBUSTION AIR SYS	N/A
9 PEAK MW LOAD OF COMBUSTION AIR SYS	N/A
10 DESCRIPTION OF AIR PREHEATER	N/A
11. MANUFACTURER OF AIR PREHEATER	N/A
12 PEAK MW LOAD OF AIR PREHEATER	N/A
13 DESCRIPTION OF FUEL FEED SYS	N/A
14 MANUFACTURER OF FUEL FEED SYS	N/A
15 PEAK MW LOAD OF FUEL FEED SYS	N/A

Jones Unit 4 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	Seimens/Westinghouse
2 TURBINE DESCRIPTION	SGT6–5000F Gas Turbine
3 INLET TEMPERATURES / PRESSURES	N/A
4 NUMBER OF FEEDWATER HEATERS	N/A
5 LAST ROW OF BLADING SIZE / RPMs	3600 RPM
6 GENERATOR MANUFACTURER	Seimens/Westinghouse
7 NAMEPLATE RATINGS	16 5 kV, 203 MVA, 3600 RPM, 0 90 power factor
8 NOMINAL GROSS MW OUTPUT	184,000 kW

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9 TYPE OF COOLING	Hydrogen
10. TYPE OF EXCITATION	Rotating brushless
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	N/A
2 DESCRIPTION OF ALTERNATE FUEL	N/A
3 MW DERATING - ALTER FUEL USE	N/A
4 STARTUP FUEL	N/A
5. BOILER MANUFACTURER	N/A
6. TYPE OF BOILER	N/A
7. TYPE OF FUEL FIRING	N/A
8 DESCRIPTION OF BURNER LAYOUT	N/A
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	30 TAC §§ 101-122, 40 C F R § 60 Subpart KKKK, TX Permit 98073, 40 C F R. § 75; TX Title V Permit O-14, 40 C F R § 97, 40 C F R. § 98
2 MANUFACTURER OF PART. CONTROL	N/A
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	Siemens
5 TYPE OF PARTICULATE CONTROL	N/A
6 TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Dry Low NOx Burners
8 CURRENT LEVEL OF PARTICULATES	0 001 lb/MMBtu (Stack Test)
9 CURRENT LEVEL OF SOx	0 0006 lb/MMBtu (N G EPA AP42)
10 CURRENT LEVEL OF NOx	0 031 lb/MMBtu (Stack Test)
11 PEAK MW LOAD OF PART SYSTEM	No Limit
12 PEAK MW LOAD OF SOx SYSTEM	No Limit
13 PEAK MW LOAD OF NOx SYSTEM	No Limit
14 APPLICABLE WATER POLLUTION REG	N/A
15 APPLICABLE WASTE DISPOSAL REG	30 TAC § 335
16 MANUF OF WASTE WATER SYSTEM	N/A
17 TYPE OF WASTE WATER SYSTEM	N/A
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	N/A
21 PEAK MW LOAD OF WASTE DISP SYS	No Limit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	N/A
2 MANUFACTURER OF COOLING WATER SYS	N/A
3 PEAK MW LOAD OF COOLING WATER SYS	N/A
4 DESCRIPTION OF BOILER FEEDPUMP SYS	N/A
5 MANUFACTURER OF BOILER FEEDPUMP SYS	N/A
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	N/A
7 DESCRIPTION OF COMBUSTION AIR SYS	N/A
8 MANUFACTURER OF COMBUSTION AIR SYS	N/A
9 PEAK MW LOAD OF COMBUSTION AIR SYS	N/A
10 DESCRIPTION OF AIR PREHEATER	N/A
11 MANUFACTURER OF AIR PREHEATER	N/A
12 PEAK MW LOAD OF AIR PREHEATER	N/A
13 DESCRIPTION OF FUEL FEED SYS	N/A
14 MANUFACTURER OF FUEL FEED SYS	N/A
15 PEAK MW LOAD OF FUEL FEED SYS	N/A

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Maddox Unit 1 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	Westinghouse
2 TURBINE DESCRIPTION	Tandem-compound, double flow
3 INLET TEMPERATURES / PRESSURES	Throttle - 1000°F / 1450 psig, Hot Reheat - 1000°F
4 NUMBER OF FEEDWATER HEATERS	Four closed heaters, one open deaerating heater
5 LAST ROW OF BLADING SIZE / RPMs	23" / 3600 RPM
6 GENERATOR MANUFACTURER	Westinghouse
7 NAMEPLATE RATINGS	13 8 kV, 133 7 MVA, 3600 RPM, 0 85 power factor
8 NOMINAL GROSS MW OUTPUT	123,000 kW
9 TYPE OF COOLING	Hydrogen
10 TYPE OF EXCITATION	Rotating
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Natural gas
2 DESCRIPTION OF ALTERNATE FUEL	none
3. MW DERATING - ALTER FUEL USE	N/A
4 STARTUP FUEL	Natural gas
5 BOILER MANUFACTURER	Combustion Engineering
6 TYPE OF BOILER	Single furnace - pressurized, natural circulation
7 TYPE OF FUEL FIRING	Tangentially fired
8 DESCRIPTION OF BURNER LAYOUT	Four burner levels, primary & secondary air nozzles adjacent to each burner
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	20 2 1 NMAC – 20 2 350 NMAC, N M AQC Permit 747M1, 40 C F R § 75, 40 C F R § 98, Title V Permit P008-R3M1
2 MANUFACTURER OF PART CONTROL	N/A
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	Combustion Engineering
5 TYPE OF PARTICULATE CONTROL	N/A
6 TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Combustion control
8 CURRENT LEVEL OF PARTICULATES	0 003 lb/MMBtu (Natural Gas EPA publication AP 42)
9 CURRENT LEVEL OF SOx	0 0006 lb/MMBtu (Natural Gas EPA publication AP 42)
10 CURRENT LEVEL OF NOx	0 131 lb/MMBtu (CEMS)
11. PEAK MW LOAD OF PART SYSTEM	No limitation on unit
12 PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13 PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14 APPLICABLE WATER POLLUTION REG	N.M Water Quality Control Regulations
15 APPLICABLE WASTE DISPOSAL REG	N M EIB/SWMR-2
16 MANUF OF WASTE WATER SYSTEM	Various
17 TYPE OF WASTE WATER SYSTEM	Recreational lake
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21 PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Well water makeup, forced draft cooling tower
2 MANUFACTURER OF COOLING WATER SYS	Cooling tower Fluor
3 PEAK MW LOAD OF COOLING WATER SYS	No limitation on unit
4 DESCRIPTION OF BOILER FEEDPUMP SYS	Motor driven, variable speed, multistage, horizontally split centrifugal pump
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Pacific
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	No limitation on unit
7 DESCRIPTION OF COMBUSTION AIR SYS	Variable speed centrifugal forced draft fan
8 MANUFACTURER OF COMBUSTION AIR SYS	Howden-Apco
9 PEAK MW LOAD OF COMBUSTION AIR SYS	No limitation on unit
10 DESCRIPTION OF AIR PREHEATER	Regenerative corrugated plate Ljungstrom
11 MANUFACTURER OF AIR PREHEATER	Combustion Engineering Air Preheater
12 PEAK MW LOAD OF AIR PREHEATER	No limitation on unit
13 DESCRIPTION OF FUEL FEED SYS	N/A
14 MANUFACTURER OF FUEL FEED SYS	N/A
15 PEAK MW LOAD OF FUEL FEED SYS	N/A

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Maddox Unit 2 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	Westinghouse
2 TURBINE DESCRIPTION	W-501B4 combustion turbine
3 INLET TEMPERATURES / PRESSURES	N/A
4. NUMBER OF FEEDWATER HEATERS	N/A
5 LAST ROW OF BLADING SIZE / RPMs	N/A
6 GENERATOR MANUFACTURER	Westinghouse
7 NAMEPLATE RATINGS	13 8 kV, 89 5 MVA, 3600 RPM, 0 90 power factor
8 NOMINAL GROSS MW OUTPUT	65,000 kW
9 TYPE OF COOLING	Air
10 TYPE OF EXCITATION	Brushless
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	N/A
2. DESCRIPTION OF ALTERNATE FUEL	N/A
3 MW DERATING - ALTER FUEL USE	N/A
4 STARTUP FUEL	N/A
5 BOILER MANUFACTURER	N/A
6. TYPE OF BOILER	N/A
7 TYPE OF FUEL FIRING	N/A
8 DESCRIPTION OF BURNER LAYOUT	N/A
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	20 2 1 NMAC – 20 2.350 NMAC, N M AQC Permit 747M1, 40 C F R § 98, Title V Permit P008-R3M1
2 MANUFACTURER OF PART CONTROL	N/A
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	N/A
5 TYPE OF PARTICULATE CONTROL	N/A
6 TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Water injection
8 CURRENT LEVEL OF PARTICULATES	0 014 lb/MMBtu (EPA publication AP 42)
9 CURRENT LEVEL OF SOx	0 0006 lb/MMBtu (Natural Gas EPA publication AP 42)
10 CURRENT LEVEL OF NOx	0 291 lb/MMBtu (Stack Test)
11 PEAK MW LOAD OF PART SYSTEM	No limitation on unit
12 PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13 PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14 APPLICABLE WATER POLLUTION REG	N M Water Quality Control Regulations
15 APPLICABLE WASTE DISPOSAL REG	N M EIB/SWMR-2
16 MANUF OF WASTE WATER SYSTEM	Various
17 TYPE OF WASTE WATER SYSTEM	Recreational lake
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21 PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	N/A
2 MANUFACTURER OF COOLING WATER SYS	N/A
3 PEAK MW LOAD OF COOLING WATER SYS	N/A
4 DESCRIPTION OF BOILER FEEDPUMP SYS	N/A
5. MANUFACTURER OF BOILER FEEDPUMP SYS	N/A
6. PEAK MW LOAD OF BOILER FEEDPUMP SYS	N/A
7 DESCRIPTION OF COMBUSTION AIR SYS	N/A
8 MANUFACTURER OF COMBUSTION AIR SYS	N/A
9 PEAK MW LOAD OF COMBUSTION AIR SYS	N/A
10 DESCRIPTION OF AIR PREHEATER	N/A
11 MANUFACTURER OF AIR PREHEATER	N/A
12 PEAK MW LOAD OF AIR PREHEATER	N/A
13 DESCRIPTION OF FUEL FEED SYS	N/A
14 MANUFACTURER OF FUEL FEED SYS	N/A
15 PEAK MW LOAD OF FUEL FEED SYS	N/A

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Maddox Unit 3 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	General Electric
2 TURBINE DESCRIPTION	5001E combustion turbine
3 INLET TEMPERATURES / PRESSURES	N/A
4. NUMBER OF FEEDWATER HEATERS	N/A
5 LAST ROW OF BLADING SIZE / RPMs	N/A
6 GENERATOR MANUFACTURER	General Electric
7 NAMEPLATE RATINGS	13 8 kV, 13 5 MVA, 3600 RPM, 0 85 power factor
8 NOMINAL GROSS MW OUTPUT	11,500 kW
9 TYPE OF COOLING	Air
10 TYPE OF EXCITATION	Brushless
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	N/A
2 DESCRIPTION OF ALTERNATE FUEL	N/A
3 MW DERATING - ALTER FUEL USE	N/A
4 STARTUP FUEL	N/A
5 BOILER MANUFACTURER	N/A
6 TYPE OF BOILER	N/A
7 TYPE OF FUEL FIRING	N/A
8 DESCRIPTION OF BURNER LAYOUT	N/A
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	20 2 1 NMAC – 20.2 350 NMAC, N M AQC Permit 747M1, 40 C F R § 98, Title V Permit P008-R3M1
2 MANUFACTURER OF PART CONTROL	N/A
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	N/A
5. TYPE OF PARTICULATE CONTROL	N/A
6 TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Water injection
8 CURRENT LEVEL OF PARTICULATES	0 014 lb/MMBtu (EPA publication AP 42)
9 CURRENT LEVEL OF SOx	0 0006 lb/MMBtu (Natural Gas EPA publication AP 42)
10 CURRENT LEVEL OF NOx	0 321 lb/MMBtu (Stack Test)
11 PEAK MW LOAD OF PART SYSTEM	No limitation on unit
12 PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13 PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14 APPLICABLE WATER POLLUTION REG	N M. Water Quality Control Regulations
15 APPLICABLE WASTE DISPOSAL REG	N M EIB/SWMR-2
16 MANUF OF WASTE WATER SYSTEM	Various
17. TYPE OF WASTE WATER SYSTEM	Recreational lake
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21 PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	N/A
2 MANUFACTURER OF COOLING WATER SYS	N/A
3 PEAK MW LOAD OF COOLING WATER SYS	N/A
4 DESCRIPTION OF BOILER FEEDPUMP SYS	N/A
5 MANUFACTURER OF BOILER FEEDPUMP SYS	N/A
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	N/A
7 DESCRIPTION OF COMBUSTION AIR SYS	N/A
8 MANUFACTURER OF COMBUSTION AIR SYS	N/A
9 PEAK MW LOAD OF COMBUSTION AIR SYS	N/A
10 DESCRIPTION OF AIR PREHEATER	N/A
11 MANUFACTURER OF AIR PREHEATER	N/A
12 PEAK MW LOAD OF AIR PREHEATER	N/A
13 DESCRIPTION OF FUEL FEED SYS	N/A
14 MANUFACTURER OF FUEL FEED SYS	N/A
15 PEAK MW LOAD OF FUEL FEED SYS	N/A

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Nichols Unit 1 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	General Electric
2. TURBINE DESCRIPTION	Tandem compound double flow
3. INLET TEMPERATURES / PRESSURES	Throttle - 1000°F / 1450 psig, Hot Reheat - 1000°F
4 NUMBER OF FEEDWATER HEATERS	Four closed heaters, one open deaerating heater
5. LAST ROW OF BLADING SIZE / RPMs	23" / 3600 RPM
6 GENERATOR MANUFACTURER	General Electric
7 NAMEPLATE RATINGS	13 8 kV, 133 7 MVA, 3600 RPM, 0 85 power factor
8 NOMINAL GROSS MW OUTPUT	112,000 kW
9. TYPE OF COOLING	Hydrogen
10 TYPE OF EXCITATION	Rotating
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Natural Gas
2 DESCRIPTION OF ALTERNATE FUEL	none
3 MW DERATING - ALTER FUEL USE	N/A
4 STARTUP FUEL	Natural Gas
5. BOILER MANUFACTURER	Combustion Engineering
6 TYPE OF BOILER	Single furnace - pressurized, natural circulation
7 TYPE OF FUEL FIRING	Tangential firing
8 DESCRIPTION OF BURNER LAYOUT	Four burner levels, primary & secondary air nozzles adjacent to each burner
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	30 TAC §§ 101-122, 40 C F R § 75, TX EGF Permit 45589 (NOx budget), TX Title V O-13, 40 C F R § 97, 40 C F R § 98
2 MANUFACTURER OF PART CONTROL	N/A
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	Combustion Engineering
5 TYPE OF PARTICULATE CONTROL	N/A
6 TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Combustion control
8 CURRENT LEVEL OF PARTICULATES	0 00753 lb/MMBtu (Natural Gas EPA publication AP 42)
9. CURRENT LEVEL OF SOx	0 0006 lb/MMBtu (Natural Gas EPA publication AP 42)
10 CURRENT LEVEL OF NOx	0 094 lb/MMBtu (CEMS)
11. PEAK MW LOAD OF PART SYSTEM	No limitation on unit
12 PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13 PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14 APPLICABLE WATER POLLUTION REG	30 TAC §§ 285, 305
15 APPLICABLE WASTE DISPOSAL REG	30 TAC § 335
16 MANUF OF WASTE WATER SYSTEM	Various
17 TYPE OF WASTE WATER SYSTEM	Irrigation of crops
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21 PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Treated sewage effluent, cooling tower
2 MANUFACTURER OF COOLING WATER SYS	Cooling tower Fluor
3 PEAK MW LOAD OF COOLING WATER SYS	No limitation on unit
4 DESCRIPTION OF BOILER FEEDPUMP SYS	Motor driven, variable speed, multistage, barrel type centrifugal pump
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Worthington
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	No limitation on unit
7 DESCRIPTION OF COMBUSTION AIR SYS	Constant speed centrifugal forced draft fans, vane control
8 MANUFACTURER OF COMBUSTION AIR SYS	Westinghouse Sturtevant
9 PEAK MW LOAD OF COMBUSTION AIR SYS	No limitation on unit
10 DESCRIPTION OF AIR PREHEATER	Regenerative corrugated plate Ljungstrom
11 MANUFACTURER OF AIR PREHEATER	Combustion Engineering Air Preheater
12 PEAK MW LOAD OF AIR PREHEATER	No limitation on unit
13 DESCRIPTION OF FUEL FEED SYS	N/A
14 MANUFACTURER OF FUEL FEED SYS	N/A
15 PEAK MW LOAD OF FUEL FEED SYS	N/A

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Nichols Unit 2 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	Westinghouse
2 TURBINE DESCRIPTION	Tandem compound double flow
3 INLET TEMPERATURES / PRESSURES	Throttle - 1000°F / 1450 psig, Hot Reheat - 1000°F
4 NUMBER OF FEEDWATER HEATERS	Four closed heaters, one open deaerating heater
5. LAST ROW OF BLADING SIZE / RPMs	23" / 3600 RPM
6. GENERATOR MANUFACTURER	Westinghouse
7 NAMEPLATE RATINGS	13 8 kV, 133.7 MVA, 3600 RPM, 0 85 power factor
8. NOMINAL GROSS MW OUTPUT	111,000 kW
9 TYPE OF COOLING	Hydrogen
10 TYPE OF EXCITATION	Rotating
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Natural Gas
2 DESCRIPTION OF ALTERNATE FUEL	none
3 MW DERATING - ALTER FUEL USE	N/A
4 STARTUP FUEL	Natural Gas
5 BOILER MANUFACTURER	Combustion Engineering
6 TYPE OF BOILER	Single furnace - pressurized, natural circulation
7 TYPE OF FUEL FIRING	Tangential firing
8. DESCRIPTION OF BURNER LAYOUT	Four burner levels, primary & secondary air nozzles adjacent to each burner
POLLUTION CONTROL	
1. APPLICABLE AIR POLLUTION REG	30 TAC §§ 101-122, 40 C F R § 75, TX EGF Permit 45589 (NOx budget), TX Title V O-13; 40 C F R § 97; 40 C F R § 98
2. MANUFACTURER OF PART CONTROL	N/A
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	Combustion Engineering
5. TYPE OF PARTICULATE CONTROL	N/A
6. TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Combustion control
8. CURRENT LEVEL OF PARTICULATES	0 00753 lb/MMBtu (Natural Gas EPA publication AP 42)
9. CURRENT LEVEL OF SOx	0 0006 lb/MMBtu (Natural Gas EPA publication AP 42)
10 CURRENT LEVEL OF NOx	0 103 lb/MMBtu (CEMS)
11 PEAK MW LOAD OF PART SYSTEM	No limitation on unit
12 PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13 PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14 APPLICABLE WATER POLLUTION REG	30 TAC §§ 285, 305
15 APPLICABLE WASTE DISPOSAL REG	30 TAC § 335
16 MANUF OF WASTE WATER SYSTEM	Various
17 TYPE OF WASTE WATER SYSTEM	Irrigation of crops
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21 PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Treated sewage effluent, cooling tower
2 MANUFACTURER OF COOLING WATER SYS	Cooling tower Fluor
3 PEAK MW LOAD OF COOLING WATER SYS	No limitation on unit
4 DESCRIPTION OF BOILER FEEDPUMP SYS	Motor driven, variable speed, multistage, barrel type centrifugal pump
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Worthington
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	No limitation on unit
7 DESCRIPTION OF COMBUSTION AIR SYS	Constant speed centrifugal forced draft fans, vane control
8. MANUFACTURER OF COMBUSTION AIR SYS	Westinghouse Sturtevant
9 PEAK MW LOAD OF COMBUSTION AIR SYS	No limitation on unit
10 DESCRIPTION OF AIR PREHEATER	Regenerative corrugated plate Ljungstrom
11 MANUFACTURER OF AIR PREHEATER	Combustion Engineering Air Preheater
12 PEAK MW LOAD OF AIR PREHEATER	No limitation on unit
13 DESCRIPTION OF FUEL FEED SYS	N/A
14 MANUFACTURER OF FUEL FEED SYS	N/A
15 PEAK MW LOAD OF FUEL FEED SYS	N/A

Nichols Unit 3 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	General Electric

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2 TURBINE DESCRIPTION	Tandem compound double flow
3 INLET TEMPERATURES / PRESSURES	Throttle - 1000°F / 1800 psig, Hot Reheat - 1000°F
4 NUMBER OF FEEDWATER HEATERS	Five closed heaters, one open deaerating heater
5 LAST ROW OF BLADING SIZE / RPMs	26" / 3600 RPM
6 GENERATOR MANUFACTURER	General Electric
7 NAMEPLATE RATINGS	22 0 kV, 275 MVA, 3600 RPM, 0 90 power factor
8 NOMINAL GROSS MW OUTPUT	256,000 kW
9. TYPE OF COOLING	Hydrogen
10 TYPE OF EXCITATION	Rotating
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Natural Gas
2 DESCRIPTION OF ALTERNATE FUEL	none
3 MW DERATING - ALTER FUEL USE	N/A
4. STARTUP FUEL	Natural Gas
5 BOILER MANUFACTURER	Combustion Engineering
6 TYPE OF BOILER	Single furnace - pressurized, natural circulation
7 TYPE OF FUEL FIRING	Tangential firing
8. DESCRIPTION OF BURNER LAYOUT	Four burner levels, primary & secondary air nozzles adjacent to each burner
POLLUTION CONTROL	
1. APPLICABLE AIR POLLUTION REG	30 TAC §§ 101-122, 40 C F R § 75, TX EGF Permit 45589 (NOx budget); TX Title V O-13, 40 C F R § 97, 40 C F R. § 98
2 MANUFACTURER OF PART CONTROL	N/A
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	Combustion Engineering
5 TYPE OF PARTICULATE CONTROL	N/A
6 TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Combustion control
8 CURRENT LEVEL OF PARTICULATES	0 00753 lb/MMBtu (Natural Gas EPA publication AP 42)
9 CURRENT LEVEL OF SOx	0 0006 lb/MMBtu (Natural Gas EPA publication AP 42)
10 CURRENT LEVEL OF NOx	0 129 lb/MMBtu (CEMS)
11 PEAK MW LOAD OF PART. SYSTEM	No limitation on unit
12 PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13 PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14 APPLICABLE WATER POLLUTION REG	30 TAC §§ 285, 305
15 APPLICABLE WASTE DISPOSAL REG	30 TAC § 335
16 MANUF OF WASTE WATER SYSTEM	Various
17 TYPE OF WASTE WATER SYSTEM	Irrigation of crops
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19. TYPE OF WASTE DISPOSAL SYSTEM	Recycle/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21 PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Treated sewage effluent, cooling tower
2 MANUFACTURER OF COOLING WATER SYS	Cooling tower Fluor
3 PEAK MW LOAD OF COOLING WATER SYS	No limitation on unit
4 DESCRIPTION OF BOILER FEEDPUMP SYS	Motor driven, variable speed, multistage, barrel type centrifugal pump
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Worthington
6. PEAK MW LOAD OF BOILER FEEDPUMP SYS	No limitation on unit
7 DESCRIPTION OF COMBUSTION AIR SYS	Variable speed centrifugal forced draft fans
8 MANUFACTURER OF COMBUSTION AIR SYS	Green
9 PEAK MW LOAD OF COMBUSTION AIR SYS	No limitation on unit
10 DESCRIPTION OF AIR PREHEATER	Regenerative corrugated plate Ljungstrom
11 MANUFACTURER OF AIR PREHEATER	Combustion Engineering Air Preheater
12 PEAK MW LOAD OF AIR PREHEATER	No limitation on unit
13 DESCRIPTION OF FUEL FEED SYS	N/A
14 MANUFACTURER OF FUEL FEED SYS	N/A
15 PEAK MW LOAD OF FUEL FEED SYS	N/A

Quay County Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	Siemens/Westinghouse
2 TURBINE DESCRIPTION	W – 251G
3 INLET TEMPERATURES / PRESSURES	N/A
4. NUMBER OF FEEDWATER HEATERS	N/A
5 LAST ROW OF BLADING SIZE / RPMs	3600 RPM

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6 GENERATOR MANUFACTURER	Siemens/Westinghouse
7 NAMEPLATE RATINGS	13 8 KV, 39 22 MVA, 0 9 PF
8 NOMINAL GROSS MW OUTPUT	32,990 kW
9 TYPE OF COOLING	Open Air Cooled
10 TYPE OF EXCITATION	Brushless
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	N/A
2 DESCRIPTION OF ALTERNATE FUEL	N/A
3 MW DERATING - ALTER FUEL USE	N/A
4 STARTUP FUEL	N/A
5 BOILER MANUFACTURER	N/A
6. TYPE OF BOILER	N/A
7 TYPE OF FUEL FIRING	N/A
8. DESCRIPTION OF BURNER LAYOUT	N/A
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	20 2 1 NMAC – 20 2 350 NMAC , N M Air Permit 4561-R1, Title V Permit P265
2 MANUFACTURER OF PART CONTROL	N/A
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	N/A
5 TYPE OF PARTICULATE CONTROL	N/A
6 TYPE OF SOx CONTROL	N/A
7 TYPE OF NOx CONTROL	N/A
8 CURRENT LEVEL OF PARTICULATES	< 4.4 PPH (NSR Permit No 4561)
9 CURRENT LEVEL OF SOx	< 0.0015% (NSR Permit No 4561)
10 CURRENT LEVEL OF NOx	< 521 PPH (NSR Permit No 4561)
11 PEAK MW LOAD OF PART SYSTEM	N/A
12 PEAK MW LOAD OF SOx SYSTEM	N/A
13 PEAK MW LOAD OF NOx SYSTEM	N/A
14 APPLICABLE WATER POLLUTION REG	N/A
15 APPLICABLE WASTE DISPOSAL REG	N/A
16 MANUF OF WASTE WATER SYSTEM	N/A
17 TYPE OF WASTE WATER SYSTEM	N/A
18 MANUF OF WASTE DISPOSAL SYSTEM	N/A
19 TYPE OF WASTE DISPOSAL SYSTEM	N/A
20. PEAK MW LOAD OF WASTE WATER SYS	N/A
21. PEAK MW LOAD OF WASTE DISP SYS	N/A
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	N/A
2 MANUFACTURER OF COOLING WATER SYS	N/A
3 PEAK MW LOAD OF COOLING WATER SYS	N/A
4 DESCRIPTION OF BOILER FEEDPUMP SYS	N/A
5 MANUFACTURER OF BOILER FEEDPUMP SYS	N/A
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	N/A
7 DESCRIPTION OF COMBUSTION AIR SYS	N/A
8 MANUFACTURER OF COMBUSTION AIR SYS	N/A
9 PEAK MW LOAD OF COMBUSTION AIR SYS	N/A
10 DESCRIPTION OF AIR PREHEATER	N/A
11 MANUFACTURER OF AIR PREHEATER	N/A
12 PEAK MW LOAD OF AIR PREHEATER	N/A
13 DESCRIPTION OF FUEL FEED SYS	N/A
14 MANUFACTURER OF FUEL FEED SYS	N/A
15 PEAK MW LOAD OF FUEL FEED SYS	N/A

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Tolk Station Unit 1 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	Westinghouse
2 TURBINE DESCRIPTION	Tandem compound quadruple flow
3 INLET TEMPERATURES / PRESSURES	Throttle - 1000°F / 2400 psig; Hot Reheat - 1000°F
4 NUMBER OF FEEDWATER HEATERS	Six closed heaters, one open deaerating heater
5 LAST ROW OF BLADING SIZE / RPMs	29 25" / 3600 RPM
6 GENERATOR MANUFACTURER	Westinghouse
7. NAMEPLATE RATINGS	24 0 kV, 631 MVA, 3600 RPM, 0 90 power factor
8 NOMINAL GROSS MW OUTPUT	565,000 kW
9. TYPE OF COOLING	Hydrogen
10 TYPE OF EXCITATION	Rotating brushless
BOILER	
1. DESCRIPTION OF PRIMARY FUEL	Coal, low sulfur, sub-bituminous
2 DESCRIPTION OF ALTERNATE FUEL	none
3 MW DERATING - ALTER FUEL USE	N/A
4 STARTUP FUEL	Natural gas
5 BOILER MANUFACTURER	Combustion Engineering
6 TYPE OF BOILER	Single furnace, controlled circulation, balanced draft
7 TYPE OF FUEL FIRING	Tangential firing
8 DESCRIPTION OF BURNER LAYOUT	Six burner levels, aux & sec air above and below each burner
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	40 C F.R § 60 subpart D, 30 TAC §§ 101-122, Texas Air Permit 6029, 40 C.F.R. § 75, TX Title V O-12, 40 C F R § 97, PSD Permit PSDTX50M2, TX Std Pmt 113913, 40 C.F.R § 98, 40 C F R § 63 Subpart UUUUU
2 MANUFACTURER OF PART CONTROL	Ecolaire (CAE)
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	Combustion Engineering
5 TYPE OF PARTICULATE CONTROL	Reverse air baghouse
6 TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Combustion control – LNB / SOFA
8 CURRENT LEVEL OF PARTICULATES	0 00053 lb/MMBtu (Stack Test)
9 CURRENT LEVEL OF SOx	0 552 lb/MMBtu (CEMS)
10 CURRENT LEVEL OF NOx	0 131 lb/MMBtu (CEMS)
11 PEAK MW LOAD OF PART SYSTEM	No limitation on unit
12 PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13 PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14. APPLICABLE WATER POLLUTION REG	30 TAC §§ 285, 305
15 APPLICABLE WASTE DISPOSAL REG	30 TAC § 335
16 MANUF OF WASTE WATER SYSTEM	Various
17 TYPE OF WASTE WATER SYSTEM	Evaporation ponds
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle (Sales)/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21 PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Well water makeup, forced draft cooling tower
2 MANUFACTURER OF COOLING WATER SYS	Cooling tower SPS
3 PEAK MW LOAD OF COOLING WATER SYS	No limitation on unit
4 DESCRIPTION OF BOILER FEEDPUMP SYS	100% capacity steam turbine driven variable speed multistage barrel-type centrifugal pump 50% capacity motor driven boiler feed pump
5. MANUFACTURER OF BOILER FEEDPUMP SYS	Westinghouse turbine / Worthington feedpump
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	No limitation on unit
7 DESCRIPTION OF COMBUSTION AIR SYS	Variable speed centrifugal FD and ID fans
8 MANUFACTURER OF COMBUSTION AIR SYS	Westinghouse Sturtevant
9 PEAK MW LOAD OF COMBUSTION AIR SYS	No limitation on unit
10 DESCRIPTION OF AIR PREHEATER	Two vertical regenerative Ljungstrom wheel
11 MANUFACTURER OF AIR PREHEATER	C-E Air preheater
12 PEAK MW LOAD OF AIR PREHEATER	No limitation on unit
13 DESCRIPTION OF FUEL FEED SYS	Gravimetric belt feeders
14 MANUFACTURER OF FUEL FEED SYS	Stock Equipment Company
15 PEAK MW LOAD OF FUEL FEED SYS	No limitation on unit

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Tolk Station Unit 2 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	Westinghouse
2 TURBINE DESCRIPTION	Tandem compound quadruple flow
3 INLET TEMPERATURES / PRESSURES	Throttle - 1000°F / 2400 psig, Hot Reheat - 1000°F
4 NUMBER OF FEEDWATER HEATERS	Six closed heaters, one open deaerating heater
5 LAST ROW OF BLADING SIZE / RPMs	29.25" / 3600 RPM
6 GENERATOR MANUFACTURER	Westinghouse
7 NAMEPLATE RATINGS	24 0 kV, 631 MVA, 3600 rpm, 0 90 power factor
8 NOMINAL GROSS MW OUTPUT	565,000 kW
9 TYPE OF COOLING	Hydrogen
10 TYPE OF EXCITATION	Rotating brushless
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Coal, low sulfur, sub-bituminous
2 DESCRIPTION OF ALTERNATE FUEL	none
3 MW DERATING - ALTER FUEL USE	N/A
4 STARTUP FUEL	Natural gas
5 BOILER MANUFACTURER	Combustion Engineering
6 TYPE OF BOILER	Single furnace, balanced draft
7 TYPE OF FUEL FIRING	Tangential firing
8 DESCRIPTION OF BURNER LAYOUT	Six burner levels, aux & sec. air above and below each burner
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	40 C F R § 60 subpart D, 30 TAC §§ 101-122, Texas Air Permit 6030, 40 C F R § 75, TX Title V O-12, 40 C F R § 97, PSD Permit PSDTX50M2, TX Std Pmt 113913, 40 C F R § 98, 40 C F R § 63 Subpart UUUUU
2 MANUFACTURER OF PART CONTROL	Utility Engineering Corp
3. MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	Combustion Engineering
5 TYPE OF PARTICULATE CONTROL	Reverse air baghouse
6 TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Combustion control – LNB / SOFA
8 CURRENT LEVEL OF PARTICULATES	0 00048 lb/MMBtu (Stack Test)
9 CURRENT LEVEL OF SOx	0 491 lb/MMBtu (CEMS)
10. CURRENT LEVEL OF NOx	0 131 lb/MMBtu (CEMS)
11. PEAK MW LOAD OF PART. SYSTEM	No limitation on unit
12. PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13. PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14 APPLICABLE WATER POLLUTION REG	30 TAC §§ 285, 305
15 APPLICABLE WASTE DISPOSAL REG	30 TAC § 335
16 MANUF OF WASTE WATER SYSTEM	Various
17 TYPE OF WASTE WATER SYSTEM	Evaporation ponds
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle (Sales)/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21 PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Well water makeup, forced draft cooling tower
2 MANUFACTURER OF COOLING WATER SYS	Cooling tower SPS
3. PEAK MW LOAD OF COOLING WATER SYS	No limitation on unit
4 DESCRIPTION OF BOILER FEEDPUMP SYS	100% capacity steam turbine driven variable speed multistage barrel-type centrifugal pump 50% capacity motor driven boiler feed pump
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Westinghouse turbine / Worthington feedpump
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	No limitation on unit
7 DESCRIPTION OF COMBUSTION AIR SYS	Variable speed centrifugal FD and ID fans
8 MANUFACTURER OF COMBUSTION AIR SYS	Westinghouse Sturtevant
9 PEAK MW LOAD OF COMBUSTION AIR SYS	No limitation on unit
10 DESCRIPTION OF AIR PREHEATER	Two vertical regenerative Ljungstrom wheels
11 MANUFACTURER OF AIR PREHEATER	C-E Air preheater
12 PEAK MW LOAD OF AIR PREHEATER	No limitation on unit
13 DESCRIPTION OF FUEL FEED SYS	Gravimetric belt feeders
14 MANUFACTURER OF FUEL FEED SYS	Stock Equipment Company
15 PEAK MW LOAD OF FUEL FEED SYS	No limitation on unit

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Plant X Unit 1 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	General Electric
2 TURBINE DESCRIPTION	Non-reheat double flow
3 INLET TEMPERATURES / PRESSURES	900°F / 850 psi
4 NUMBER OF FEEDWATER HEATERS	Four closed heaters, one open deaerating heater
5 LAST ROW OF BLADING SIZE / RPMs	unknown / 3600 RPM
6 GENERATOR MANUFACTURER	General Electric
7 NAMEPLATE RATINGS	13 8 kV, 50 MVA, 3600 RPM, 0 80 power factor
8. NOMINAL GROSS MW OUTPUT	50,000 kW
9 TYPE OF COOLING	Hydrogen
10 TYPE OF EXCITATION	Rotating
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Natural gas
2 DESCRIPTION OF ALTERNATE FUEL	No 2 fuel oil
3 MW DERATING - ALTER FUEL USE	none
4 STARTUP FUEL	Natural gas
5 BOILER MANUFACTURER	Combustion Engineering
6 TYPE OF BOILER	Single furnace, balanced draft, natural circulation
7 TYPE OF FUEL FIRING	Wall firing
8 DESCRIPTION OF BURNER LAYOUT	12 burners (three levels of four burners) on wall
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	30 TAC §§ 101-122, 40 C F R § 75, TX EGF Permit 45592 (NOx budget), TX Title V Permit O-11, 40 C F R § 97, 40 C F R § 98
2 MANUFACTURER OF PART CONTROL	N/A
3 MANUFACTURER OF SOx CONTROL	N/A
4. MANUFACTURER OF NOx CONTROL	Combustion Engineering
5. TYPE OF PARTICULATE CONTROL	N/A
6. TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Combustion control
8 CURRENT LEVEL OF PARTICULATES	0 00753 lb/MMBtu (Natural Gas EPA publication AP 42)
9 CURRENT LEVEL OF SOx	0 0006 lb/MMBtu (Natural Gas EPA publication AP 42)
10 CURRENT LEVEL OF NOx	0 358 lb/MMBtu (CEMS)
11 PEAK MW LOAD OF PART SYSTEM	No limitation on unit
12 PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13. PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14 APPLICABLE WATER POLLUTION REG	30 TAC §§ 285, 305
15 APPLICABLE WASTE DISPOSAL REG	30 TAC § 335
16 MANUF OF WASTE WATER SYSTEM	Various
17 TYPE OF WASTE WATER SYSTEM	Irrigation of crops
18. MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21 PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Well water makeup, forced draft cooling tower
2 MANUFACTURER OF COOLING WATER SYS	Cooling tower Utility Services, common for Units 1, 2, and 3
3 PEAK MW LOAD OF COOLING WATER SYS	No limitation on unit
4 DESCRIPTION OF BOILER FEEDPUMP SYS	Motor driven, variable speed, multistage, barrel type centrifugal pump
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Worthington
6. PEAK MW LOAD OF BOILER FEEDPUMP SYS	No limitation on unit
7 DESCRIPTION OF COMBUSTION AIR SYS	Constant speed centrifugal forced and induced draft fans, vane control
8 MANUFACTURER OF COMBUSTION AIR SYS	Sturtevant
9 PEAK MW LOAD OF COMBUSTION AIR SYS	No limitation on unit
10 DESCRIPTION OF AIR PREHEATER	Regenerative corrugated plate Ljungstrom
11 MANUFACTURER OF AIR PREHEATER	Combustion Engineering Air Preheater
12 PEAK MW LOAD OF AIR PREHEATER	No limitation on unit
13 DESCRIPTION OF FUEL FEED SYS	N/A
14 MANUFACTURER OF FUEL FEED SYS	N/A
15 PEAK MW LOAD OF FUEL FEED SYS	N/A

Plant X Unit 2 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	General Electric

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2. TURBINE DESCRIPTION	Non reheat double flow
3 INLET TEMPERATURES / PRESSURES	950°F / 1250 psi
4 NUMBER OF FEEDWATER HEATERS	4 closed heaters, 1 open deaerating heater
5 LAST ROW OF BLADING SIZE / RPMs	23" / 3600 RPM
6 GENERATOR MANUFACTURER	General Electric
7 NAMEPLATE RATINGS	13 8 kV, 122 MVA, 3600 RPM, 0 80 power factor
8 NOMINAL GROSS MW OUTPUT	107,000 kW
9 TYPE OF COOLING	Hydrogen
10 TYPE OF EXCITATION	Rotating
BOILER	
1. DESCRIPTION OF PRIMARY FUEL	Natural gas
2 DESCRIPTION OF ALTERNATE FUEL	No 2 fuel oil
3 MW DERATING - ALTER FUEL USE	none
4 STARTUP FUEL	Natural gas
5 BOILER MANUFACTURER	Combustion Engineering
6 TYPE OF BOILER	Single furnace, balanced draft, natural circulation
7 TYPE OF FUEL FIRING	Tangential firing
8 DESCRIPTION OF BURNER LAYOUT	Four burner levels, primary & secondary air nozzles adjacent to each burner
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	30 TAC §§ 101-122, 40 C F R § 75, TX EGF Permit 45592 (NOx budget), TX Title V Permit O-11, 40 C F R § 97, 40 C F R § 98
2 MANUFACTURER OF PART CONTROL	N/A
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	Combustion Engineering
5 TYPE OF PARTICULATE CONTROL	N/A
6 TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Combustion control
8 CURRENT LEVEL OF PARTICULATES	0 00753 lb/MMBtu (Natural Gas EPA publication AP 42)
9 CURRENT LEVEL OF SOx	0 0006 lb/MMBtu (Natural Gas EPA publication AP 42)
10 CURRENT LEVEL OF NOx	0 067 lb/MMBtu (CEMS)
11. PEAK MW LOAD OF PART SYSTEM	No limitation on unit
12 PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13 PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14 APPLICABLE WATER POLLUTION REG	30 TAC §§ 285, 305
15 APPLICABLE WASTE DISPOSAL REG	30 TAC § 335
16 MANUF. OF WASTE WATER SYSTEM	Various
17 TYPE OF WASTE WATER SYSTEM	Irrigation of crops
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21 PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Well water makeup, forced draft cooling tower
2 MANUFACTURER OF COOLING WATER SYS	Cooling tower Utility Services, common for Units 1, 2, and 3
3 PEAK MW LOAD OF COOLING WATER SYS	No limitation on unit
4 DESCRIPTION OF BOILER FEEDPUMP SYS	Motor driven, variable speed, multistage, barrel type centrifugal pump
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Worthington
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	No limitation on unit
7 DESCRIPTION OF COMBUSTION AIR SYS	Constant speed centrifugal forced and induced draft fans, vane control
8. MANUFACTURER OF COMBUSTION AIR SYS	Sturtevant
9. PEAK MW LOAD OF COMBUSTION AIR SYS	No limitation on unit
10 DESCRIPTION OF AIR PREHEATER	Regenerative corrugated plate Ljungstrom
11 MANUFACTURER OF AIR PREHEATER	Combustion Engineering Air Preheater
12 PEAK MW LOAD OF AIR PREHEATER	No limitation on unit
13 DESCRIPTION OF FUEL FEED SYS	N/A
14 MANUFACTURER OF FUEL FEED SYS	N/A
15 PEAK MW LOAD OF FUEL FEED SYS	N/A

Plant X Unit 3 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	General Electric
2 TURBINE DESCRIPTION	Tandem compound double flow
3 INLET TEMPERATURES / PRESSURES	Throttle - 1000°F / 1450 psig, Hot Reheat - 1000°F
4 NUMBER OF FEEDWATER HEATERS	Four closed heaters, one open deaerating heater
5 LAST ROW OF BLADING SIZE / RPMs	23" / 3600 RPM

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6 GENERATOR MANUFACTURER	General Electric
7 NAMEPLATE RATINGS	13 8 kV, 122 MVA, 3600 RPM, 0 80 power factor
8. NOMINAL GROSS MW OUTPUT	108,000 kW
9 TYPE OF COOLING	Hydrogen
10 TYPE OF EXCITATION	Rotating
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Natural gas
2. DESCRIPTION OF ALTERNATE FUEL	No 2 fuel oil
3 MW DERATING - ALTER FUEL USE	none
4. STARTUP FUEL	Natural gas
5 BOILER MANUFACTURER	Combustion Engineering
6 TYPE OF BOILER	Single furnace - pressurized, natural circulation
7. TYPE OF FUEL FIRING	Tangentially fired
8 DESCRIPTION OF BURNER LAYOUT	Four burner levels, primary & secondary air nozzles adjacent to each burner
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	30 TAC §§ 101-122, 40 C F R § 75, TX EGF Permit 45592 (NOx budget), TX Title V Permit O-11, 40 C F.R § 97, 40 C F R § 98
2 MANUFACTURER OF PART. CONTROL	N/A
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	Combustion Engineering
5. TYPE OF PARTICULATE CONTROL	N/A
6 TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Combustion control
8 CURRENT LEVEL OF PARTICULATES	0 00753 lb/MMBtu (Natural Gas EPA publication AP 42)
9 CURRENT LEVEL OF SOx	0 0006 lb/MMBtu (Natural Gas EPA publication AP 42)
10 CURRENT LEVEL OF NOx	0 133 lb/MMBtu (CEMS)
11 PEAK MW LOAD OF PART SYSTEM	No limitation on unit
12 PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13 PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14 APPLICABLE WATER POLLUTION REG	30 TAC §§ 285, 305
15 APPLICABLE WASTE DISPOSAL REG	30 TAC § 335
16 MANUF OF WASTE WATER SYSTEM	Various
17. TYPE OF WASTE WATER SYSTEM	Irrigation of crops
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21. PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Well water makeup, forced draft cooling tower
2 MANUFACTURER OF COOLING WATER SYS	Cooling tower Utility Services; common for Units 1, 2, and 3
3. PEAK MW LOAD OF COOLING WATER SYS	N/A
4 DESCRIPTION OF BOILER FEEDPUMP SYS	Motor driven, variable speed, multistage, barrel type centrifugal pump
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Worthington
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	N/A
7 DESCRIPTION OF COMBUSTION AIR SYS	Constant speed centrifugal forced draft fans, vane control
8 MANUFACTURER OF COMBUSTION AIR SYS	Sturtevant
9 PEAK MW LOAD OF COMBUSTION AIR SYS	N/A
10 DESCRIPTION OF AIR PREHEATER	Regenerative corrugated plate Ljungstrom
11 MANUFACTURER OF AIR PREHEATER	Combustion Engineering Air Preheater
12 PEAK MW LOAD OF AIR PREHEATER	N/A
13. DESCRIPTION OF FUEL FEED SYS	N/A
14 MANUFACTURER OF FUEL FEED SYS	N/A
15. PEAK MW LOAD OF FUEL FEED SYS	N/A

Plant X Unit 4 Generating Unit Characteristics

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	General Electric
2 TURBINE DESCRIPTION	Tandem compound double flow
3 INLET TEMPERATURES / PRESSURES	Throttle - 1000°F / 1800 psig, Hot Reheat - 1000°F
4 NUMBER OF FEEDWATER HEATERS	Five closed heaters, one open deaerating heater
5 LAST ROW OF BLADING SIZE / RPMs	26" / 3600 RPM
6 GENERATOR MANUFACTURER	General Electric
7 NAMEPLATE RATINGS	20 0 kV, 224 MVA, 3600 RPM, 0 85 power factor
8 NOMINAL GROSS MW OUTPUT	198,000 kW
9 TYPE OF COOLING	Hydrogen
10 TYPE OF EXCITATION	Main exciter - static, spare - rotating

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BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Natural gas
2 DESCRIPTION OF ALTERNATE FUEL	No. 2 fuel oil
3 MW DERATING - ALTER FUEL USE	none
4. STARTUP FUEL	Natural gas
5 BOILER MANUFACTURER	Combustion Engineering
6. TYPE OF BOILER	Single furnace - pressurized, natural circulation
7. TYPE OF FUEL FIRING	Tangential firing
8 DESCRIPTION OF BURNER LAYOUT	Four burner levels, primary & secondary air nozzles adjacent to each burner
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	30 TAC §§ 101-122, 40 C F R § 75; TX EGF Permit 45592 (NOx budget), TX Title V Permit O-11; 40 C F R. § 97, 40 C F R § 98
2. MANUFACTURER OF PART CONTROL	N/A
3 MANUFACTURER OF SOx CONTROL	N/A
4 MANUFACTURER OF NOx CONTROL	Combustion Engineering
5 TYPE OF PARTICULATE CONTROL	N/A
6 TYPE OF SOx CONTROL	Fuel quality
7 TYPE OF NOx CONTROL	Combustion control
8 CURRENT LEVEL OF PARTICULATES	0 00753 lb/MMBtu (Natural Gas EPA publication AP 42)
9 CURRENT LEVEL OF SOx	0 0006 lb/MMBtu (Natural Gas EPA publication AP 42)
10 CURRENT LEVEL OF NOx	0 108 lb/MMBtu (CEMS)
11 PEAK MW LOAD OF PART. SYSTEM	No limitation on unit
12 PEAK MW LOAD OF SOx SYSTEM	No limitation on unit
13 PEAK MW LOAD OF NOx SYSTEM	No limitation on unit
14 APPLICABLE WATER POLLUTION REG	30 TAC §§ 285, 305
15 APPLICABLE WASTE DISPOSAL REG	30 TAC § 335
16 MANUF. OF WASTE WATER SYSTEM	Various
17 TYPE OF WASTE WATER SYSTEM	Irrigation of crops
18 MANUF OF WASTE DISPOSAL SYSTEM	Various
19 TYPE OF WASTE DISPOSAL SYSTEM	Recycle/Storage/Disposal
20 PEAK MW LOAD OF WASTE WATER SYS	No limitation on unit
21 PEAK MW LOAD OF WASTE DISP SYS	No limitation on unit
AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Well water makeup, forced draft cooling tower
2 MANUFACTURER OF COOLING WATER SYS	Cooling tower Fluor
3 PEAK MW LOAD OF COOLING WATER SYS	N/A
4 DESCRIPTION OF BOILER FEEDPUMP SYS	Motor driven, variable speed, multistage, barrel type centrifugal pump
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Worthington
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	N/A
7 DESCRIPTION OF COMBUSTION AIR SYS	Constant speed centrifugal forced draft fans, vane control
8 MANUFACTURER OF COMBUSTION AIR SYS	Sturtevant
9 PEAK MW LOAD OF COMBUSTION AIR SYS	N/A
10 DESCRIPTION OF AIR PREHEATER	Regenerative corrugated plate Ljungstrom
11 MANUFACTURER OF AIR PREHEATER	Combustion Engineering Air Preheater
12 PEAK MW LOAD OF AIR PREHEATER	N/A
13 DESCRIPTION OF FUEL FEED SYS	N/A
14. MANUFACTURER OF FUEL FEED SYS	N/A
15 PEAK MW LOAD OF FUEL FEED SYS	N/A

Hale Wind

CATEGORY	DESCRIPTION / RESPONSE
GENERATOR	
1 GENERATOR MANUFACTURER	Vestus
2 2MW	23 V110 units
3 2MW	216 V116 units
4 TOTAL NUMBER OF UNITS	239 Wind Turbine Units
5 HEIGHT FOR V110	23 V110 @ 80 Meters
6 HEIGHT FOR V116	166 V116 @ 94 Meters/50 V116 @ 80 Meters
7 BLADE SIZE	V110 equals 110 meter rotor diameter
	V116 equals 116 meter rotor diameter
8. COLECTOR VOLTAGE	34 KV
9 TRANSMISSION VOLTAGE	230 KV
10 TOTAL GENERATION	478 MW

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Note: SPS identified solar facilities in H-12.3a, however they are not listed due to the unique characteristics of solar facilities.

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Generating Unit Efficiency and Control Systems

HARRINGTON UNIT #1

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY / STEAM CONDITIONS	1 MCR-84 89% / 1005F, 2620PSIG throttle, 1005F Hot Reheat Control - 85 20% / 1005F, 2430PSIG Throttle, 1005F Hot Reheat
2 TURBINE EFFICIENCY / STEAM CONDITIONS	2 HP-84 88%, IP-88 82%, LP-85 17% / 1000, 2400PSIG Throttle, 1000F HRH
3 GENERATOR EFFICIENCY / MW MVAR	3 Mech loss-2 104 MW, Elec loss-3 968 MW/360MW 174MVAR
4 CONDENSER CONDITIONS / COOLING WATER	4 2"mercury absolute / 80F cooling water inlet
5 GROSS HEAT RATE (1)	5 9255 BTU/KWH
6 ORIGINAL STATION LOAD	6 17 2 MW
7 NET HEAT RATE (2)	7 9741 BTU/KWH
8 HEAT RATE CURVE / EQUATION	8 Gross MW/Gross HR 85 8/10799, 171 6/9613, 257 4/9315, 343 2/9255, 356 6/9268
"PROMOD" TYPE DATA	
1 STARTUP Btus	2930 MMBTU
2 MINIMUM MW / TOTAL Btus	163 0 / 1781
3 MINIMUM MW / INCREMENTAL Btus PER MWh	163 0 / 9 728
4 1ST STEP MW / INCREMENTAL Btus PER MWh	192 3 / 10 049
5 2ND STEP MW / INCREMENTAL Btus PER MWh	221 7 / 10 370
6 3RD STEP MW / INCREMENTAL Btus PER MWh	251 0 / 10 691
7 4TH STEP MW / INCREMENTAL Btus PER MWh	280 3 / 11 012
8 5TH STEP MW / INCREMENTAL Btus PER MWh	309 7 / 11 333
9 6TH STEP MW / INCREMENTAL Btus PER MWh	339 0 / 11 654

THREE MOST RECENT HEAT RATE TESTS

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
1 TEST 1 NET MW OUTPUT	May-17	163	227	261	304	341
NET HEAT RATE		10,715	10,540	10,554	10,666	10,713
NET INCREMENTAL HEAT RATE		9,835	10,486	10,834	11,274	11,652

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
2 TEST 2 NET MW OUTPUT	Sep-15	164	228	262	305	342	342
NET HEAT RATE		10,906	10,726	10,658	10,714	10,822	10,810
NET INCREMENTAL HEAT RATE		9,736	10,435	10,813	11,283	11,683	11,684

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7
3 TEST 3 NET MW OUTPUT	Feb-11	152	180	208	239	270	305	340
NET HEAT RATE		11,291	14,687	10,428	14,687	10,386	14,687	10,323
NET INCREMENTAL HEAT RATE		8,274	8,676	9,077	9,524	9,971	10,473	10,976

CATEGORY	DESCRIPTION / RESPONSE
CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS	1 Digital Electro-Hydraulic Control
2 MANUFACTURER OF TURBINE CONTROL SYS	2 Woodward/Foxboro
3 DATE & COST OF INSTALLATION	3 1999 - $944,955
4 DESCRIPTION OF BOILER CONTROL SYS	4 Digital
5 MANUFACTURER OF BOILER CONTROL SYS	5 Foxboro
6 DATE & COST OF INSTALLATION	6 1999 - $1,367,475
7 TYPE OF FAN CONTROL SYSTEM	7 variable speed motor drive/digital control
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 variable speed turbine/analog hydraulic control
9 TYPE OF SOOT BLOWER CONTROL SYS	9 microprocessor based control system shared by all 3 units
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 calcs performed by PC interfaced with data acquisition systen
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (MMBtu)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

HARRINGTON UNIT #2

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY / STEAM CONDITIONS	1 MCR-84 89% / 1005F, 2620PSIG throttle, 1005F Hot Reheat Control - 85 20% / 1005F, 2430PSIG Throttle, 1005F Hot Reheat
2 TURBINE EFFICIENCY / STEAM CONDITIONS	2 HP-84 88%, IP-88 82% ,LP-85 17% / 1000F,2400PSIG Throttle, 1000F HRH
3 GENERATOR EFFICIENCY / MW MVAR	3 Mech loss-2 104 MW, Elec loss-3 968 MW/360MW 174MVAR
4 CONDENSER CONDITIONS / COOLING WATER	4 2" mercury absolute/80F inlet
5 GROSS HEAT RATE (1)	5 9255 BTU/KWH
6 ORIGINAL STATION LOAD	6 17 2 MW
7 NET HEAT RATE (2)	7 9741 BTU/KWH

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Generating Unit Efficiency and Control Systems

8 HEAT RATE CURVE / EQUATION	8 Gross MW/Gross HR 85 8/10799, 171 6/9613, 257 4/9315, 343 2/9255, 356 6/9268

"PROMOD" TYPE DATA

1 STARTUP Btus	2930 MMBTU
2 MINIMUM MW / TOTAL Btus	163 0 / 1736
3 MINIMUM MW / INCREMENTAL Btus PER MWh	163 0 / 8 663
4 1ST STEP MW / INCREMENTAL Btus PER MWh	192 3 / 9 146
5 2ND STEP MW / INCREMENTAL Btus PER MWh	221 7 / 9 628
6 3RD STEP MW / INCREMENTAL Btus PER MWh	251 0 / 10 110
7 4TH STEP MW / INCREMENTAL Btus PER MWh	280 3 / 10 592
8 5TH STEP MW / INCREMENTAL Btus PER MWh	309 7 / 11 075
9 6TH STEP MW / INCREMENTAL Btus PER MWh	339 0 / 11 557

THREE MOST RECENT HEAT RATE TESTS

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
1 TEST 1 NET MW OUTPUT	Jun-18	159	207	252	294	335
NET HEAT RATE		10,750	10,458	10,324	10,327	10,348
NET INCREMENTAL HEAT RATE		9,231	9,645	10,026	10,386	10,739

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
2 TEST 2 NET MW OUTPUT	Mar-16	169	232	266	310	357
NET HEAT RATE		10,474	10,041	10,143	10,193	10,233
NET INCREMENTAL HEAT RATE		8,955	9,722	10,128	10,656	11,231

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
3 TEST 3 NET MW OUTPUT	Jun-14	164	243	261	304	357	359
NET HEAT RATE		10,652	10,167	10,225	10,289	10,479	10,395
NET INCREMENTAL HEAT RATE		8,680	9,972	10,274	10,979	11,853	11,878

CONTROL SYSTEMS

1 DESCRIPTION OF TURBINE CONTROL SYS	1 Digital Electro-Hydraulic Control
2 MANUFACTURER OF TURBINE CONTROL SYS	2 Woodward/Foxboro
3 DATE & COST OF INSTALLATION	3 1998 - $921,907
4 DESCRIPTION OF BOILER CONTROL SYS	4 Digital
5 MANUFACTURER OF BOILER CONTROL SYS	5 Foxboro
6 DATE & COST OF INSTALLATION	6 1998 - $1,620,772
7 TYPE OF FAN CONTROL SYSTEM	7 Variable speed fluid coupling/analog mechanical contro
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 Variable speed drive turbine/analog hydraulic contro
9 TYPE OF SOOT BLOWER CONTROL SYS	9 microprocessor based control system shared by all 3 unit:
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 calcs performed by PC interfaced with data acquisition systen
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu) / GROSS ELECTRICAL OUTPUT

(2) NET HEAT RATE = TOTAL FUEL CONSUMED (MMBtu) / GROSS ELECTRICAL OUTPUT - STATION SERVICE

Indicate whether Station Service includes consumption for Common Facilitie:

HARRINGTON UNIT #3

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY / STEAM CONDITIONS	1 MCR-84 89% / 1005F, 2620PSIG throttle, 1005F Hot Reheat Control - 85 20% / 1005F, 2430PSIG Throttle, 1005F Hot Reheat
2 TURBINE EFFICIENCY / STEAM CONDITIONS	2 HP-84 24%, IP-89 37%, LP-87 21% / 1000F, 2400PSIG Throttle, 1000F HRH
3 GENERATOR EFFICIENCY / MW MVAR	3 Mech loss-1 961 MW, Elec loss-4 334 MW/360MW 174MVAR
4 CONDENSER CONDITIONS / COOLING WATER	4 2" mercury absolute/80 F inlet cooling water
5 GROSS HEAT RATE (1)	5 9189 BTU/KWH
6 ORIGINAL STATION LOAD	6 17 3 MW
7 NET HEAT RATE (2)	7 9673 BTU/KWH
8 HEAT RATE CURVE / EQUATION	8 Gross MW/Gross HR 86 7/11006, 173 4/9680, 259 5/9270, 346 7/9192, 360 3/9196

"PROMOD" TYPE DATA

1 STARTUP Btus	2930 MMBTU
2 MINIMUM MW / TOTAL Btus	163 0 / 1739
3 MINIMUM MW / INCREMENTAL Btus PER MWh	163 0 / 8 874
4 1ST STEP MW / INCREMENTAL Btus PER MWh	192 3 / 9 090
5 2ND STEP MW / INCREMENTAL Btus PER MWh	221 7 / 9 306
6 3RD STEP MW / INCREMENTAL Btus PER MWh	251 0 / 9 522
7 4TH STEP MW / INCREMENTAL Btus PER MWh	280 3 / 9 738
8 5TH STEP MW / INCREMENTAL Btus PER MWh	309 7 / 9 954
9 6TH STEP MW / INCREMENTAL Btus PER MWh	340 0 / 10 178

THREE MOST RECENT HEAT RATE TESTS

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	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
1 TEST 1 NET MW OUTPUT	Jun-16	164	230	254	302	339
NET HEAT RATE		10,350	10,109	10,016	10,039	10,116
NET INCREMENTAL HEAT RATE		9,012	9,660	9,896	10,359	10,728

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
2 TEST 2 NET MW OUTPUT	Sep-14	162	228	252	345	346
NET HEAT RATE		10,685	10,208	10,168	10,041	10,109
NET INCREMENTAL HEAT RATE		8,865	9,351	9,526	10,215	10,221

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7
3 TEST 3 NET MW OUTPUT	Sep-09	155	188	220	252	284	316	348
NET HEAT RATE		10,618	10,238	9,973	9,816	9,766	9,824	9,989
NET INCREMENTAL HEAT RATE		7,660	8,270	8,869	9,469	10,068	10,667	11,266

CONTROL SYSTEMS

1 DESCRIPTION OF TURBINE CONTROL SYS	1 Digital Electro-Hydraulic Control
2 MANUFACTURER OF TURBINE CONTROL SYS	2 Woodward/Foxboro
3 DATE & COST OF INSTALLATION	3 2000 - $1,488,452
4 DESCRIPTION OF BOILER CONTROL SYS	4 Digital
5 MANUFACTURER OF BOILER CONTROL SYS	5 Foxboro
6 DATE & COST OF INSTALLATION	6 2000 - $1,654,221
7 TYPE OF FAN CONTROL SYSTEM	7 variable speed fluid coupling/digital mechanical contrc
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 variable speed drive turbine/mechanical electro hydraulic contrc
9 TYPE OF SOOT BLOWER CONTROL SYS	9 microprocessor based system shared by all 3 unit
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 calcs performed on the data acquisition system
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (MMBtu)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

TOLK UNIT #1

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY / STEAM CONDITIONS	1 MCR-86 10% / 1005F, 2620PSIG throttle, 1005F Hot Reheat Control - 86 39% / 1005F, 2436PSIG Throttle, 1005F Hot Reheat
2 TURBINE EFFICIENCY / STEAM CONDITIONS	2 HP-86 20%, IP-89 31%,LP-87 26% / 1000F, 2400 PSIG Throttle, 1000F HRH
3 GENERATOR EFFICIENCY / MW MVAR	3 Mech loss-3 300 MW, Elec loss-6 582 MW/567MW 275MVAR
4 CONDENSER CONDITIONS / COOLING WATER	4 2" mercury absolute / 80F inlet cooling water
5 GROSS HEAT RATE (1)	5 9096 BTU/KWH
6 ORIGINAL STATION LOAD	6 26 1 MW
7 NET HEAT RATE (2)	7 9575 BTU/KWH
8 HEAT RATE CURVE / EQUATION	8 Gross MW/Gross HR. 130 4/10480, 261 0/9538, 395 8/9163, 521 4/9096, 543 0/9100
"PROMOD" TYPE DATA	
1 STARTUP Btus	4690 MMBTU
2 MINIMUM MW / TOTAL Btus	185 0 / 2029
3 MINIMUM MW / INCREMENTAL Btus PER MWh	185 0 / 8 508
4 1ST STEP MW / INCREMENTAL Btus PER MWh	241 0 / 8 870
5 2ND STEP MW / INCREMENTAL Btus PER MWh	297 0 / 9 233
6 3RD STEP MW / INCREMENTAL Btus PER MWh	353 0 / 9 595
7 4TH STEP MW / INCREMENTAL Btus PER MWh	409 0 / 9 957
8 5TH STEP MW / INCREMENTAL Btus PER MWh	465 0 / 10 320
9 6TH STEP MW / INCREMENTAL Btus PER MWh	521 0 / 10 682

THREE MOST RECENT HEAT RATE TESTS

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
1 TEST 1 NET MW OUTPUT	Aug-15	180	283	393	459	517
NET HEAT RATE		11,016	10,249	10,046	9,969	10,104
NET INCREMENTAL HEAT RATE		8,473	9,144	9,851	10,280	10,656

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
2 TEST 2 NET MW OUTPUT	Jul-12	195	330	415	525	530	537
NET HEAT RATE		11,289	10,055	10,045	9,898	9,982	10,037
NET INCREMENTAL HEAT RATE		8,019	8,999	9,618	10,412	10,451	10,502

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
3 TEST 3 NET MW OUTPUT	Oct-09	280	350	420	490	570

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NET HEAT RATE	10,166	9,607	9,462	9,508	9,681
NET INCREMENTAL HEAT RATE	6,991	8,068	9,160	10,243	11,484

CONTROL SYSTEMS

1 DESCRIPTION OF TURBINE CONTROL SYS	1 Digital Electro-Hydraulic Control
2 MANUFACTURER OF TURBINE CONTROL SYS	2 Woodward/Foxboro
3 DATE & COST OF INSTALLATION	3 2006 - $2,026,904
4 DESCRIPTION OF BOILER CONTROL SYS	4 Digital
5 MANUFACTURER OF BOILER CONTROL SYS	5 Foxboro
6 DATE & COST OF INSTALLATION	6 2006 - $1,651,129
7 TYPE OF FAN CONTROL SYSTEM	7 variable speed motor drive - digital control
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 variable speed turbine drive - mechanical electro hydraulic contro
9 TYPE OF SOOT BLOWER CONTROL SYS	9 microprocessor control system
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 calcs performed automatically on data acquisition systen
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (MMBtu)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

TOLK UNIT #2

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY / STEAM CONDITIONS	1 MCR-86 10% / 1005F, 2620PSIG throttle, 1005F Hot Reheat Control - 86 39% / 1005F, 2436PSIG Throttle, 1005F Hot Reheat
2 TURBINE EFFICIENCY / STEAM CONDITIONS	2 HP-85 95%, IP-88 94%, LP-88 31% / 1000F, 2400 PSIG Throttle, 1000F HRH
3 GENERATOR EFFICIENCY / MW MVAR	3 Mech loss-3 300 MW, Elec loss-6 622 MW/567MW 275MVAR
4 CONDENSER CONDITIONS / COOLING WATER	4 2" mercury absolute / 80F inlet cooling water
5 GROSS HEAT RATE (1)	5 9045 BTU/KWH
6 ORIGINAL STATION LOAD	6 26 2 MW
7 NET HEAT RATE (2)	7 9521 BTU/KWH
8 HEAT RATE CURVE / EQUATION	8 Gross MW/Gross HR 131 0/10478, 263 0/9524, 394 0/9122, 523 6/9045, 545 8/9042

"PROMOD" TYPE DATA

1 STARTUP Btus	4690 MMBTU		
2 MINIMUM MW / TOTAL Btus	185 0	/	1994
3 MINIMUM MW / INCREMENTAL Btus PER MWh	185 0	/	8 579
4 1ST STEP MW / INCREMENTAL Btus PER MWh	241 5	/	8 909
5 2ND STEP MW / INCREMENTAL Btus PER MWh	298 0	/	9 239
6 3RD STEP MW / INCREMENTAL Btus PER MWh	354 5	/	9 570
7 4TH STEP MW / INCREMENTAL Btus PER MWh	411 0	/	9 900
8 5TH STEP MW / INCREMENTAL Btus PER MWh	467 5	/	10 230
9 6TH STEP MW / INCREMENTAL Btus PER MWh	524 0	/	10 560

THREE MOST RECENT HEAT RATE TESTS

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
1 TEST 1 NET MW OUTPUT	Sep-17	187	284	380	477	524	525 6
NET HEAT RATE		10,540	10,096	9,820	9,817	9,863	9849
NET INCREMENTAL HEAT RATE		8,766	9,155	9,543	9,931	10,119	10127

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
2 TEST 2 NET MW OUTPUT	Oct-16	183	286	398	462	523
NET HEAT RATE		10,760	10,201	9,942	9,924	10,063
NET INCREMENTAL HEAT RATE		8,581	9,209	9,882	10,275	10,641

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
3 TEST 3 NET MW OUTPUT	Feb-15	181	289	400	464	526	537
NET HEAT RATE		10,808	10,131	9,899	9,959	10,012	9,999
NET INCREMENTAL HEAT RATE		8,557	9,189	9,835	10,211	10,573	10,635

CONTROL SYSTEMS

1 DESCRIPTION OF TURBINE CONTROL SYS	1 Digital Electro-Hydraulic Control
2 MANUFACTURER OF TURBINE CONTROL SYS	2 Woodward/Foxboro
3 DATE & COST OF INSTALLATION	3 2005 - $2,097,797
4 DESCRIPTION OF BOILER CONTROL SYS	4 Digital
5 MANUFACTURER OF BOILER CONTROL SYS	5 Foxboro
6 DATE & COST OF INSTALLATION	6 2005 - $1,921,290
7 TYPE OF FAN CONTROL SYSTEM	7 variable speed motor drive - digital control
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 variable speed turbine drive - mechanical electro hydraulic contro
9 TYPE OF SOOT BLOWER CONTROL SYS	9 microprocessor control system
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1

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11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 calcs performed automatically on data acquisition systen
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu) / GROSS ELECTRICAL OUTPUT

(2) NET HEAT RATE = TOTAL FUEL CONSUMED (MMBtu) / GROSS ELECTRICAL OUTPUT - STATION SERVICE

Indicate whether Station Service includes consumption for Common Facilities

NICHOLS UNIT #1

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY / STEAM CONDITIONS	1 MCR-84 40% / 1000F, 1450PSIG throttle, 1000F Hot Reheat Control - 85 20% / 1000F, 1450PSIG Throttle, 1000F Hot Reheat
2 TURBINE EFFICIENCY / STEAM CONDITIONS	2 HP-80 28%, IPthruLP-88 36% / 1000F, 1450 PSIG Throttle, 1000F HRH
3 GENERATOR EFFICIENCY / MW MVAR	3 Mech loss-0 550MW, Elec loss-1 265MW/114MW 70MVAR
4 CONDENSER CONDITIONS / COOLING WATER	4 1 5" mercury absolute / 80F inlet cooling water
5 GROSS HEAT RATE (1)	5 9550 BTU/KWH
6 ORIGINAL STATION LOAD	6 5 0 MW
7 NET HEAT RATE (2)	7 10052 BTU/KWH
8 HEAT RATE CURVE / EQUATION	8 Gross MW/Gross HR 25 0/11407, 50 0/10090, 74 9/9630, 100 1/9549,
"PROMOD" TYPE DATA	
1 STARTUP Btus	584 MMBTU
2 MINIMUM MW / TOTAL Btus	25 0 / 300
3 MINIMUM MW / INCREMENTAL Btus PER MWh	25 0 / 8 173
4 1ST STEP MW / INCREMENTAL Btus PER MWh	38 7 / 8 624
5 2ND STEP MW / INCREMENTAL Btus PER MWh	52 3 / 9 074
6 3RD STEP MW / INCREMENTAL Btus PER MWh	66 0 / 9 525
7 4TH STEP MW / INCREMENTAL Btus PER MWh	79 7 / 9 975
8 5TH STEP MW / INCREMENTAL Btus PER MWh	93 3 / 10 426
9 6TH STEP MW / INCREMENTAL Btus PER MWh	107 0 / 10 876

THREE MOST RECENT HEAT RATE TESTS

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
1 TEST 1 NET MW OUTPUT	Jul-06	43	51	65	81	110	111
NET HEAT RATE		11,246	10,693	10,215	10,001	10,083	10,093
NET INCREMENTAL HEAT RATE		7,640	8,062	8,749	9,593	11,038	11,099

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
2 TEST 2 NET MW OUTPUT	Aug-02	43	51	65	81	110	111
NET HEAT RATE		11,306	10,971	10,261	10,063	10,059	10,038
NET INCREMENTAL HEAT RATE		8,171	8,396	8,791	9,372	10,732	10,811

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
3 TEST 3 NET MW OUTPUT	Feb-91	39	46	54	63	72	80
NET HEAT RATE		11,330	10,860	10,408	10,138	9,934	9,835
NET INCREMENTAL HEAT RATE		7,963	8,100	8,310	8,518	8,783	9,004

	DATE	LEVEL 7	LEVEL 8	LEVEL 9	LEVEL 10
TEST 3 CONTINUED NET MW OUTPUT	Feb-91	92	101	109	115
NET HEAT RATE		9,750	9,733	9,748	9,777
NET INCREMENTAL HEAT RATE		9,403	9,749	10,094	10,352

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS	1 Analog/mechanical
2 MANUFACTURER OF TURBINE CONTROL SYS	2 REXA
3 DATE & COST OF INSTALLATION	3 2006 - $41,011
4 DESCRIPTION OF BOILER CONTROL SYS	4 Digital
5 MANUFACTURER OF BOILER CONTROL SYS	5 Foxboro
6 DATE & COST OF INSTALLATION	6 2006 - $381,182
7 TYPE OF FAN CONTROL SYSTEM	7 inlet air vanes/mechanical controlle
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 variable speed fluid coupling/mechanical controlle
9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 deviation calcs performed by PC interfaced with data acquisition systen
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu) / GROSS ELECTRICAL OUTPUT

(2) NET HEAT RATE = TOTAL FUEL CONSUMED (MMBtu) / GROSS ELECTRICAL OUTPUT - STATION SERVICE

Indicate whether Station Service includes consumption for Common Facilities

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NICHOLS UNIT #2

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY / STEAM CONDITIONS	1 MCR-84 40% / 1000F, 1450PSIG throttle, 1000F Hot Reheat Control - 85 20% / 1000F, 1450PSIG Throttle, 1000F Hot Reheat
2 TURBINE EFFICIENCY / STEAM CONDITIONS	2 HP-78 93%, IP-90 54%, LP-80 05% / 1000F, 1450 PSIG Throttle, 1000F HRH
3 GENERATOR EFFICIENCY / MW MVAR	3 Mech loss-0 660 MW, Elec loss-1 500 MW/114MW 70MVAR
4 CONDENSER CONDITIONS / COOLING WATER	4 1 5" mercury absolute / 80F cooling water inlet
5 GROSS HEAT RATE (1)	5 9534 BTU/KWH
6 ORIGINAL STATION LOAD	6 5 0 MW
7 NET HEAT RATE (2)	7 10036 BTU/KWH
8 HEAT RATE CURVE / EQUATION	8 Gross MW/Gross HR 25 0/11590, 50 0/10055, 74 9/9588, 100 1/9518, 109 7/9592
"PROMOD" TYPE DATA	
1 STARTUP Btus	901 MMBTU
2 MINIMUM MW / TOTAL Btus	18 0 / 253
3 MINIMUM MW / INCREMENTAL Btus PER MWh	18 0 / 8 242
4 1ST STEP MW / INCREMENTAL Btus PER MWh	32 7 / 8 561
5 2ND STEP MW / INCREMENTAL Btus PER MWh	47 3 / 8 881
6 3RD STEP MW / INCREMENTAL Btus PER MWh	62 0 / 9 200
7 4TH STEP MW / INCREMENTAL Btus PER MWh	76 7 / 9 519
8 5TH STEP MW / INCREMENTAL Btus PER MWh	91 3 / 9 838
9 6TH STEP MW / INCREMENTAL Btus PER MWh	106 0 / 10 157

THREE MOST RECENT HEAT RATE TESTS

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7
1 TEST 1 NET MW OUTPUT	Jan-05	45	54	63	77	89	103	114
NET HEAT RATE		10,737	10,435	10,248	10,089	10,031	10,018	10,037
NET INCREMENTAL HEAT RATE		8,830	9,026	9,221	9,526	9,787	10,092	10,331

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7
2 TEST 2 NET MW OUTPUT	Sep-93	45	55	63	77	89	103	114
NET HEAT RATE		10,924	10,489	10,247	10,021	9,919	9,870	9,866
NET INCREMENTAL HEAT RATE		8,468	8,677	8,863	9,156	9,417	9,719	9,947

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
3 TEST 3 NET MW OUTPUT	1986	40	59	81	92	101	107
NET HEAT RATE		11,223	10,367	9,980	9,903	9,872	9,866
NET INCREMENTAL HEAT RATE		8,447	8,774	9,219	9,462	9,681	9,835

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS	1 Analog/mechanical
2 MANUFACTURER OF TURBINE CONTROL SYS	2 REXA
3 DATE & COST OF INSTALLATION	3 2005 - $40,011
4 DESCRIPTION OF BOILER CONTROL SYS	4 Digital
5 MANUFACTURER OF BOILER CONTROL SYS	5 Foxboro
6 DATE & COST OF INSTALLATION	6 2005 - $416,850
7 TYPE OF FAN CONTROL SYSTEM	7 inlet air vanes/mechanical controlle
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 variable speed fluid coupling/mechanical controlle
9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 deviation calcs performed by PC interfaced with data acquisition systen
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (MMBtu)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

NICHOLS UNIT #3

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY/STEAM CONDITIONS	1 MCR-85 44% / 1005F, 1940PSIG throttle, 1005F Hot Reheat Control - 85 47% / 1005F, 1845PSIG Throttle, 1005F Hot Reheat
2 TURBINE EFFICIENCY/STEAM CONDITIONS	2 HP-83 75%, IP-86 49%, LP-84 41% / 1000F, 1800 PSIG Throttle, 1000F HRH
3 GENERATOR EFFICIENCY/MW MVAR	3 Mech loss-0 677 MW, Elec loss-3 485 MW/248MW,118MVAR
4 CONDENSER CONDITIONS/COOLING WTR	4 2" mercury absolute / 80F cooling water inlet
5 GROSS HEAT RATE (1)	5 9406 BTU/KWH

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6 ORIGINAL STATION LOAD	6 11 8 MW
7 NET HEAT RATE (2)	7 9901 BTU/KWH
8 HEAT RATE CURVE/EQUATION	8 Gross MW/Gross HR 59 7/10535, 124 8/9603, 235 2/9406, 244 5/9423,

"PROMOD" TYPE DATA

1 STARTUP Btus	1550 MMBTU
2 MINIMUM MW / TOTAL Btus	25 0 / 349
3 MINIMUM MW / INCREMENTAL Btus PER MWh	25 0 / 8 850
4 1ST STEP MW / INCREMENTAL Btus PER MWh	61 5 / 9 166
5 2ND STEP MW / INCREMENTAL Btus PER MWh	98 0 / 9 482
6 3RD STEP MW / INCREMENTAL Btus PER MWh	134 5 / 9 798
7 4TH STEP MW / INCREMENTAL Btus PER MWh	171 0 / 10 114
8 5TH STEP MW / INCREMENTAL Btus PER MWh	207 5 / 10 430
9 6TH STEP MW / INCREMENTAL Btus PER MWh	244 0 / 10 746

THREE MOST RECENT HEAT RATE TESTS (3)

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
1 TEST 1 NET MW OUTPUT	Nov-15	23	60	113	180	243	246 7
NET HEAT RATE		17,209	11,478	10,535	10,375	10,143	10128
NET INCREMENTAL HEAT RATE		8,822	9,043	9,364	9,768	10,151	10173

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
2 TEST 2 NET MW OUTPUT	Mar-10	60	121	181	210	239
NET HEAT RATE		11,065	10,416	10,136	10,132	10,213
NET INCREMENTAL HEAT RATE		9,152	9,677	10,202	10,454	10,706

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7
3 TEST 3 NET MW OUTPUT	Jun-05	74	109	133	150	182	221	245
NET HEAT RATE		10,829	10,315	10,164	10,105	10,061	10,079	10,110
NET INCREMENTAL HEAT RATE		9,102	9,388	9,585	9,726	9,998	10,322	10,509

CONTROL SYSTEMS

1 DESCRIPTION OF TURBINE CONTROL SYS	1 Digital Electro-Hydraulic Control
2 MANUFACTURER OF TURBINE CONTROL SYS	2 Woodward/Foxboro
3 DATE & COST OF INSTALLATION	3 2013 - $426,328
4 DESCRIPTION OF BOILER CONTROL SYS	4 Digital
5 MANUFACTURER OF BOILER CONTROL SYS	5 Foxboro
6 DATE & COST OF INSTALLATION	6 2013 - $446,055
7 TYPE OF FAN CONTROL SYSTEM	7 variable frequency drive/digital controlle
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 variable speed fluid coupling/mechanical controlle
9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 calcs performed by plant computer
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (MMBtu)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

(3) Nichols 3 can be operated at 25 MW gross load off of LFC and EDC control
The unit is not dispatched between 25 MW and 62 MW The fuel input at
25 MW gross load is 316 MMBTU/hr, and the station load is 3 36 MW

PLANT X UNIT #1

CATEGORY	DESCRIPTION / RESPONSE

INITIAL DESIGN EFFICIENCIES

1 BOILER EFFICIENCY/STEAM CONDITIONS	1 MCR-83 40% / 900F, 900PSIG throttle Control - 83 40% / 1000F, 1450PSIG Throttle
2 TURBINE EFFICIENCY/STEAM CONDITIONS	2 Turbine - 83 47% / 900F, 850 PSIG Throttle
3 GENERATOR EFFICIENCY/MW MVAR	3 Mech loss-0 284 MW, Elec loss-0 595 MW/48MW,36MVAR
4 CONDENSER CONDITIONS/COOLING WTR	4 2" mercury absolute / 80F cooling water inlet
5 GROSS HEAT RATE (1)	5 11749 BTU/KWH
6 ORIGINAL STATION LOAD	6 2 8 MW
7 NET HEAT RATE (2)	7 12633 BTU/KWH
8 HEAT RATE CURVE/EQUATION	8 Gross MW/Gross HR 20 0/12266, 29 7/11963, 39 6/11749, 48 5/11933

"PROMOD" TYPE DATA

1 STARTUP Btus	63 MMBTU
2 MINIMUM MW / TOTAL Btus	21 0 / 300
3 MINIMUM MW / INCREMENTAL Btus PER MWh	21 0 / 12 055
4 1ST STEP MW / INCREMENTAL Btus PER MWh	23 8 / 12 313
5 2ND STEP MW / INCREMENTAL Btus PER MWh	26 7 / 12 571
6 3RD STEP MW / INCREMENTAL Btus PER MWh	29 5 / 12 829
7 4TH STEP MW / INCREMENTAL Btus PER MWh	32 3 / 13 087
8 5TH STEP MW / INCREMENTAL Btus PER MWh	35 2 / 13 345
9 6TH STEP MW / INCREMENTAL Btus PER MWh	38 0 / 13 603

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THREE MOST RECENT HEAT RATE TESTS

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7
1 TEST 1 NET MW OUTPUT	Jul-09	23	26	29	31	34	37	41
NET HEAT RATE		14,176	13,926	13,742	13,642	13,576	13,574	13,660
NET INCREMENTAL HEAT RATE		7,537	7,801	8,065	8,274	8,538	8,802	9,120

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7
2 TEST 2 NET MW OUTPUT	Jul-06	18	22	27	32	40	48	50
NET HEAT RATE		14,682	14,192	13,862	13,709	13,667	13,765	13,803
NET INCREMENTAL HEAT RATE		11,794	12,173	12,646	13,120	13,877	14,635	14,824

Only two full heat blance tests are availabl

CONTROL SYSTEMS

1 DESCRIPTION OF TURBINE CONTROL SYS	1 Analog/mechanical
2 MANUFACTURER OF TURBINE CONTROL SYS	2 REXA
3 DATE & COST OF INSTALLATION	3 1998 - $33,660
4 DESCRIPTION OF BOILER CONTROL SYS	4 Digital
5 MANUFACTURER OF BOILER CONTROL SYS	5 Foxboro
6 DATE & COST OF INSTALLATION	6 1998 - $230,064
7 TYPE OF FAN CONTROL SYSTEM	7 inlet air vanes/mechanical controlle
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 variable speed fluid coupling/mechanical controlle
9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 none
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (MMBtu)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

PLANT X UNIT #2

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY/STEAM CONDITIONS	1 MCR- 83 62% / 950F, 1350 PSIG throttle Control - 83 77% / 950F, 1350 PSIG throttle
2 TURBINE EFFICIENCY/STEAM CONDITIONS	2 Turbine - 84 51% / 950F, 1250 PSIG Throttle
3 GENERATOR EFFICIENCY/MW MVAR	3 Mech loss-0 527MW, Elec loss-1 520MW/98MW,74 MVAR
4 CONDENSER CONDITIONS/COOLING WTR	4 2" mercury absolute / 80F cooling water inlet
5 GROSS HEAT RATE (1)	5 10690 BTU/KWH
6 ORIGINAL STATION LOAD	6 6 9 MW
7 NET HEAT RATE (2)	7 11495 BTU/KWH
8 HEAT RATE CURVE/EQUATION	8 Gross MW/Gross HR 39 0/11517, 79 7/10717, 103 9/10743, 117 2/10785
"PROMOD" TYPE DATA	
1 STARTUP Btus	245 MMBTU
2 MINIMUM MW / TOTAL Btus	21 0 / 309
3 MINIMUM MW / INCREMENTAL Btus PER MWh	21 0 / 9 602
4 1ST STEP MW / INCREMENTAL Btus PER MWh	31 8 / 9 967
5 2ND STEP MW / INCREMENTAL Btus PER MWh	42 7 / 10 332
6 3RD STEP MW / INCREMENTAL Btus PER MWh	53 5 / 10 697
7 4TH STEP MW / INCREMENTAL Btus PER MWh	64 3 / 11 062
8 5TH STEP MW / INCREMENTAL Btus PER MWh	75 2 / 11 427
9 6TH STEP MW / INCREMENTAL Btus PER MWh	86 0 / 11 793

THREE MOST RECENT HEAT RATE TESTS

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
1 TEST 1 NET MW OUTPUT	Jul-14	22	39	57	74	92
NET HEAT RATE		14,560	12,415	11,965	11,630	11,708
NET INCREMENTAL HEAT RATE		9,625	10,223	10,802	11,398	12,000

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7
2 TEST 2 NET MW OUTPUT	Jul-09	23	32	42	56	71	82	93
NET HEAT RATE		14,446	13,447	12,463	11,852	11,589	11,278	11,323
NET INCREMENTAL HEAT RATE		10,064	10,136	10,208	10,317	10,426	10,513	10,599

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7
3 TEST 3 NET MW OUTPUT	Jul-06	36	44	54	65	79	96	107
NET HEAT RATE		12,442	12,053	11,744	11,529	11,362	11,248	11,207
NET INCREMENTAL HEAT RATE		10,270	10,340	10,427	10,524	10,646	10,795	10,892

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CONTROL SYSTEMS

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS	1 Analog/mechanical
2 MANUFACTURER OF TURBINE CONTROL SYS	2 REXA
3 DATE & COST OF INSTALLATION	3 1997 - $32,839
4 DESCRIPTION OF BOILER CONTROL SYS	4 Digital
5 MANUFACTURER OF BOILER CONTROL SYS	5 Foxboro
6 DATE & COST OF INSTALLATION	6 1997 - $381,886
7 TYPE OF FAN CONTROL SYSTEM	7 inlet air vanes/mechanical controlle
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 variable speed fluid coupling/mechanical controlle
9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 none
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu) / GROSS ELECTRICAL OUTPUT

(2) NET HEAT RATE = TOTAL FUEL CONSUMED (MMBtu) / GROSS ELECTRICAL OUTPUT - STATION SERVICE

Indicate whether Station Service includes consumption for Common Facilities

PLANT X UNIT #3

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY/STEAM CONDITIONS	1 MCR-83 50% / 1000F, 1525PSIG throttle, 1000F Hot Reheat Control - 84 60% / 1000F, 1525PSIG Throttle, 1000F Hot Reheat
2 TURBINE EFFICIENCY/STEAM CONDITIONS	2 HP-80 24%, IP&LP-87 68% / 1000F, 1450 PSIG Throttle, 1000F HRH
3 GENERATOR EFFICIENCY/MW MVAR	3 Mech loss-0 527MW,Elec loss-1 520MW/98MW, 74MVAR
4 CONDENSER CONDITIONS/COOLING WTR	4 1 5" mercury absolute / 80F cooling water inlet
5 GROSS HEAT RATE (1)	5 9699 BTU/KWH
6 ORIGINAL STATION LOAD	6 5 0 MW
7 NET HEAT RATE (2)	7 10209 BTU/KWH
8 HEAT RATE CURVE/EQUATION	8 Gross MW/Gross HR 40 2/10412, 60 2/10012, 80 2/ 9857, 99 7/9856,
"PROMOD" TYPE DATA	
1 STARTUP Btus	242 MMBTU
2 MINIMUM MW / TOTAL Btus	35 0 / 398
3 MINIMUM MW / INCREMENTAL Btus PER MWh	35 0 / 9 591
4 1ST STEP MW / INCREMENTAL Btus PER MWh	44 7 / 9 664
5 2ND STEP MW / INCREMENTAL Btus PER MWh	54 3 / 9 737
6 3RD STEP MW / INCREMENTAL Btus PER MWh	64 0 / 9 810
7 4TH STEP MW / INCREMENTAL Btus PER MWh	73 7 / 9 882
8 5TH STEP MW / INCREMENTAL Btus PER MWh	83 3 / 9 955
9 6TH STEP MW / INCREMENTAL Btus PER MWh	93 0 / 10 028

THREE MOST RECENT HEAT RATE TESTS (3)

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
1 TEST 1 NET MW OUTPUT	Feb-12	25	43	62	80	104
NET HEAT RATE		12,201	11,089	10,568	10,333	10,284
NET INCREMENTAL HEAT RATE		9,397	9,539	9,690	9,832	10,022

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7
2 TEST 2 NET MW OUTPUT	Jul-08	32	39	46	58	70	85	100
NET HEAT RATE		11,673	11,405	11,088	11,010	10,958	10,801	10,822
NET INCREMENTAL HEAT RATE		10,194	10,253	10,311	10,408	10,504	10,623	10,741

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7
3 TEST 3 NET MW OUTPUT	Aug-06	20	30	40	50	60	70	80
NET HEAT RATE		14,249	12,527	11,736	11,318	11,087	10,962	10,903
NET INCREMENTAL HEAT RATE		8,940	9,223	9,505	9,788	10,070	10,352	10,635

	DATE	LEVEL 8	LEVEL 9	LEVEL 10
TEST 3 CONTINUED NET MW OUTPUT	Aug-06	90	100	110
NET HEAT RATE		10,889	10,906	10,945
NET INCREMENTAL HEAT RATE		10,917	11,199	11,482

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS	1 Analog/mechanical
2 MANUFACTURER OF TURBINE CONTROL SYS	2 REXA
3 DATE & COST OF INSTALLATION	3 1996 - $32,038
4 DESCRIPTION OF BOILER CONTROL SYS	4 Digital
5 MANUFACTURER OF BOILER CONTROL SYS	5 Foxboro
6 DATE & COST OF INSTALLATION	6 1995 - $480,835
7 TYPE OF FAN CONTROL SYSTEM	7 inlet air vanes/mechanical controlle
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 variable speed fluid coupling/mechanical controlle

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9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 none
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu) / GROSS ELECTRICAL OUTPUT

(2) NET HEAT RATE = TOTAL FUEL CONSUMED (MMBtu) / GROSS ELECTRICAL OUTPUT - STATION SERVICE

Indicate whether Station Service includes consumption for Common Facilities

(3) Heat Rate data for Unit 3 when Units 1 & 2 are offline

PLANT X UNIT #4

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY/STEAM CONDITIONS	1 MCR-84 48% / 1000F, 1965PSIG throttle, 1000F Hot Reheat Control - 85 28% /1000F, 1850PSIG Throttle, 1000F Hot Reheat
2 TURBINE EFFICIENCY/STEAM CONDITIONS	2 HP-82 24%, IP-87 16%,LP-85 61% / 1000F, 1800 PSIG Throttle,
3 GENERATOR EFFICIENCY/MW MVAR	3 Mech loss-0 750 MW, Elec loss-1 973 MW/190MW 118MVAR
4 CONDENSER CONDITIONS/COOLING WTR	4 2" mercury absolute / 80F cooling water inlet
5 GROSS HEAT RATE (1)	5 9441 BTU/KWH
6 ORIGINAL STATION LOAD	6 9 0 MW
7 NET HEAT RATE (2)	7 9938 BTU/KWH
8 HEAT RATE CURVE/EQUATION	8 Gross MW/Gross HR 45 0/10874, 90 0/ 9859, 135 0/9524, 180 0/ 9441,
"PROMOD" TYPE DATA	
1 STARTUP Btus	726 MMBTU
2 MINIMUM MW / TOTAL Btus	55 0 / 614
3 MINIMUM MW / INCREMENTAL Btus PER MWh	55 0 / 8 744
4 1ST STEP MW / INCREMENTAL Btus PER MWh	77 5 / 9 026
5 2ND STEP MW / INCREMENTAL Btus PER MWh	100 0 / 9 307
6 3RD STEP MW / INCREMENTAL Btus PER MWh	122 5 / 9 589
7 4TH STEP MW / INCREMENTAL Btus PER MWh	145 0 / 9 871
8 5TH STEP MW / INCREMENTAL Btus PER MWh	167 5 / 10 153
9 6TH STEP MW / INCREMENTAL Btus PER MWh	190 0 / 10 435

THREE MOST RECENT HEAT RATE TESTS

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
1 TEST 1 NET MW OUTPUT	Jun-11	54	81	127	171	191	192
NET HEAT RATE		11,123	10,540	10,014	9,989	10,078	10,001
NET INCREMENTAL HEAT RATE		8,755	9,080	9,619	10,140	10,382	10,389

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
2 TEST 2 NET MW OUTPUT	Oct-08	61	85	119	152	184
NET HEAT RATE		10,863	10,243	10,214	10,077	10,043
NET INCREMENTAL HEAT RATE		9,343	9,483	9,673	9,862	10,049

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7
3 TEST 3 NET MW OUTPUT	Apr-02	60	136	150	171	188	200	201
NET HEAT RATE		12,450	10,063	9,991	9,941	9,920	9,858	9,921
NET INCREMENTAL HEAT RATE		7,438	8,948	9,244	9,674	10,011	10,240	10,269

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS	1 Analog/mechanical
2 MANUFACTURER OF TURBINE CONTROL SYS	2 REXA
3 DATE & COST OF INSTALLATION	3 2006 - 41,011
4 DESCRIPTION OF BOILER CONTROL SYS	4 Digital
5 MANUFACTURER OF BOILER CONTROL SYS	5 Foxboro
6 DATE & COST OF INSTALLATION	6 2007 - $741,363
7 TYPE OF FAN CONTROL SYSTEM	7 inlet air vanes/mechanical controlle
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 variable speed fluid coupling/mechanical controlle
9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 none
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu) / GROSS ELECTRICAL OUTPUT

(2) NET HEAT RATE = TOTAL FUEL CONSUMED (MMBtu) / GROSS ELECTRICAL OUTPUT - STATION SERVICE

Indicate whether Station Service includes consumption for Common Facilities

CUNNINGHAM UNIT #1

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CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY/STEAM CONDITIONS	1 Control - 84 10% / 950F, 1250PSIG Throttle
2 TURBINE EFFICIENCY/STEAM CONDITIONS	2 Turbine - 82 90% / 950F, 1250PSIG Throttle
3 GENERATOR EFFICIENCY/MW MVAR	3 Mech loss-0 350 MW, Elec loss-0 730 MW/75MW, 46MVAR
4 CONDENSER CONDITIONS/COOLING WTR	4 1 5" mercury absolute / 80F cooling water inlet
5 GROSS HEAT RATE (1)	5 10491 BTU/KWH
6 ORIGINAL STATION LOAD	6 3 5 MW
7 NET HEAT RATE (2)	7 10928 BTU/KWH
8 HEAT RATE CURVE/EQUATION	8 Gross MW/Gross HR 20 0/12128, 38 7/10938, 54 7/10612, 70 4/10491
"PROMOD" TYPE DATA	
1 STARTUP Btus	190 MMBTU
2 MINIMUM MW / TOTAL Btus	31 0 / 371
3 MINIMUM MW / INCREMENTAL Btus PER MWh	31 0 / 10 004
4 1ST STEP MW / INCREMENTAL Btus PER MWh	37 7 / 10 274
5 2ND STEP MW / INCREMENTAL Btus PER MWh	44 3 / 10 543
6 3RD STEP MW / INCREMENTAL Btus PER MWh	51 0 / 10 813
7 4TH STEP MW / INCREMENTAL Btus PER MWh	57 7 / 11 082
8 5TH STEP MW / INCREMENTAL Btus PER MWh	64 3 / 11 351
9 6TH STEP MW / INCREMENTAL Btus PER MWh	71 0 / 11 621

THREE MOST RECENT HEAT RATE TESTS

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
1 TEST 1 NET MW OUTPUT	Oct-14	27	36	45	55	72
NET HEAT RATE		12,225	11,748	11,472	11,248	11,331
NET INCREMENTAL HEAT RATE		9,829	10,222	10,582	10,973	11,681

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
2 TEST 2 NET MW OUTPUT	Apr-10	28	38	47	57	72
NET HEAT RATE		12,193	11,536	11,409	11,268	11,450
NET INCREMENTAL HEAT RATE		9,475	10,135	10,795	11,471	12,468

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7
3 TEST 3 NET MW OUTPUT	Feb-04	25	34	44	55	59	72	79
NET HEAT RATE		12,091	11,601	11,322	11,149	11,106	11,020	10,995
NET INCREMENTAL HEAT RATE		10,261	10,344	10,434	10,535	10,574	10,692	10,752

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS	1 Analog/mechanical
2 MANUFACTURER OF TURBINE CONTROL SYS	2 REXA
3 DATE & COST OF INSTALLATION	3 2010 - $45,269
4 DESCRIPTION OF BOILER CONTROL SYS	4 Digital
5 MANUFACTURER OF BOILER CONTROL SYS	5 Foxboro
6 DATE & COST OF INSTALLATION	6 2010 - $367,425
7 TYPE OF FAN CONTROL SYSTEM	7 inlet air vanes/mechanical controlle
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 variable speed fluid coupling/mechanical controlle
9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 deviation calcs performed automatically by data acquisition syster
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (MMBtu)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

CUNNINGHAM UNIT #2

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY/STEAM CONDITIONS	1 MCR-84 51% / 1000F, 1965PSIG throttle, 1000F Hot Reheat Control - 85 28% / 1000F, 1850PSIG Throttle, 1000F Hot Reheat
2 TURBINE EFFICIENCY/STEAM CONDITIONS	2 HP-83 21%, IP-86 72%, LP-86 75% / 1000F, 1800 PSIG Throttle, 1000F HRH
3 GENERATOR EFFICIENCY/MW MVAR	3 Mech loss-0 630 MW, Elec loss-2 098 MW/190MW, 118MVAR
4 CONDENSER CONDITIONS/COOLING WTR	4 2" mercury absolute / 80F cooling water inlet
5 GROSS HEAT RATE (1)	5 9395 BTU/KWH
6 ORIGINAL STATION LOAD	6 7 2 MW
7 NET HEAT RATE (2)	7 9786 BTU/KWH
8 HEAT RATE CURVE/EQUATION	8 Gross MW/Gross HR 45 0/10895, 90 0/ 9846, 135 0/9478, 180 0/9386,
"PROMOD" TYPE DATA	
1 STARTUP Btus	550 MMBTU
2 MINIMUM MW / TOTAL Btus	59 0 / 655
3 MINIMUM MW / INCREMENTAL Btus PER MWh	59 0 / 9 394
4 1ST STEP MW / INCREMENTAL Btus PER MWh	79 7 / 9 511

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5 2ND STEP MW / INCREMENTAL Btus PER MWh	100 3 / 9 629
6 3RD STEP MW / INCREMENTAL Btus PER MWh	121 0 / 9 746
7 4TH STEP MW / INCREMENTAL Btus PER MWh	141 7 / 9 863
8 5TH STEP MW / INCREMENTAL Btus PER MWh	162 3 / 9 981
9 6TH STEP MW / INCREMENTAL Btus PER MWh	183 0 / 10 098

THREE MOST RECENT HEAT RATE TESTS

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
1 TEST 1 NET MW OUTPUT	Apr-12	64	93	121	158	192
NET HEAT RATE		11,029	10,457	10,305	10,259	10,164
NET INCREMENTAL HEAT RATE		9,422	9,587	9,743	9,955	10,147

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
2 TEST 2 NET MW OUTPUT	Jan-04	66	95	121	164	199
NET HEAT RATE		10,828	10,264	10,063	9,973	10,008
NET INCREMENTAL HEAT RATE		8,830	9,170	9,471	9,976	10,378

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7
3 TEST 3 NET MW OUTPUT	Dec-83	101	112	123	135	142	152	163
NET HEAT RATE		10,413	10,306	10,227	10,167	10,137	10,107	10,085
NET INCREMENTAL HEAT RATE		9,287	9,378	9,471	9,571	9,638	9,730	9,833

	DATE	LEVEL 8	LEVEL 9	LEVEL 10
TEST 3 CONTINUED NET MW OUTPUT	Dec-83	171	182	191
NET HEAT RATE		10,074	10,068	10,069
NET INCREMENTAL HEAT RATE		9,920	10,027	10,121

CONTROL SYSTEMS

1 DESCRIPTION OF TURBINE CONTROL SYS	1 Analog/mechanical
2 MANUFACTURER OF TURBINE CONTROL SYS	2 REXA
3 DATE & COST OF INSTALLATION	3 2007 - $42,037
4 DESCRIPTION OF BOILER CONTROL SYS	4 Digital
5 MANUFACTURER OF BOILER CONTROL SYS	5 Foxboro
6 DATE & COST OF INSTALLATION	6 2007 - $529,431
7 TYPE OF FAN CONTROL SYSTEM	7 inlet air vanes/mechanical controlle
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 variable speed fluid coupling/mechanical controlle
9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 deviation calcs performed automatically by data acquisition syster
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu) / GROSS ELECTRICAL OUTPUT

(2) NET HEAT RATE = TOTAL FUEL CONSUMED (MMBtu) / GROSS ELECTRICAL OUTPUT - STATION SERVICE

Indicate whether Station Service includes consumption for Common Facilities

CUNNINGHAM UNIT #3

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY/STEAM CONDITIONS	1 N/A
2 TURBINE EFFICIENCY/STEAM CONDITIONS	2 N/A
3 GENERATOR EFFICIENCY/MW MVAR	3 Mech loss-0 089 MW, Elec loss-2 28 MW/127MW, 61MVAR
4 CONDENSER CONDITIONS/COOLING WTR	4 N/A
5 GROSS HEAT RATE (1)	5 11261 BTU/KWH HHV
6 ORIGINAL STATION LOAD	6 0 166 MW
7 NET HEAT RATE (2)	7 11280 BTU/KWH
8 HEAT RATE CURVE/EQUATION	8 Gross MW/Gross HR 99 3 / 11261
"PROMOD" TYPE DATA	
1 STARTUP Btus	111 MMBTU
2 MINIMUM MW / TOTAL Btus	87 0 / 1014
3 MINIMUM MW / INCREMENTAL Btus PER MWh	87 0 / 9 571
4 1ST STEP MW / INCREMENTAL Btus PER MWh	90 2 / 9 761
5 2ND STEP MW / INCREMENTAL Btus PER MWh	93 3 / 9 951
6 3RD STEP MW / INCREMENTAL Btus PER MWh	96 5 / 10 141
7 4TH STEP MW / INCREMENTAL Btus PER MWh	99 7 / 10 331
8 5TH STEP MW / INCREMENTAL Btus PER MWh	102 8 / 10 521
9 6TH STEP MW / INCREMENTAL Btus PER MWh	106 0 / 10 711

THREE MOST RECENT HEAT RATE TESTS

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
1 TEST 1 (Summer) NET MW OUTPUT	Jun-17	77	88	96	93	103
NET HEAT RATE		12,348	11,948	11,709	11,764	11546

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	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7
NET INCREMENTAL HEAT RATE		9,036	9,094	9,133	9,120	9168		
2 TEST 2 NET MW OUTPUT	Jun-11	71	75	85	91			
NET HEAT RATE		12,279	12,026	11,736	11,567			
NET INCREMENTAL HEAT RATE		8,588	8,831	9,449	9,790			
3 TEST 3 NET MW OUTPUT	Aug-03	70	76	82	90	96	98	100
NET HEAT RATE		12,609	12,287	12,029	11,761	11,606	11,561	11,520
NET INCREMENTAL HEAT RATE		8,429	8,650	8,871	9,166	9,387	9,460	9,534

CONTROL SYSTEMS

1 DESCRIPTION OF TURBINE CONTROL SYS	1 Digital electro hydraulic
2 MANUFACTURER OF TURBINE CONTROL SYS	2 Siemens T3000
3 DATE & COST OF INSTALLATION	3 2010 - $441,708
4 DESCRIPTION OF BOILER CONTROL SYS	4 N/A
5 MANUFACTURER OF BOILER CONTROL SYS	5 N/A
6 DATE & COST OF INSTALLATION	6 N/A
7 TYPE OF FAN CONTROL SYSTEM	7 N/A
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 N/A
9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 N/A
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (MMBtu)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

CUNNINGHAM UNIT #4

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY/STEAM CONDITIONS	1 N/A
2 TURBINE EFFICIENCY/STEAM CONDITIONS	2 N/A
3 GENERATOR EFFICIENCY/MW MVAR	3 Mech loss-0 089 MW, Elec loss-2 28 MW/127MW, 61MVAR
4 CONDENSER CONDITIONS/COOLING WTR	4 N/A
5 GROSS HEAT RATE (1)	5 11261 BTU/KWH HHV
6 ORIGINAL STATION LOAD	6 0 166 MW
7 NET HEAT RATE (2)	7 11280 BTU/KWH
8 HEAT RATE CURVE/EQUATION	8 Gross MW/Gross HR 99 3 / 11261
"PROMOD" TYPE DATA	
1 STARTUP Btus	111 MMBTU
2 MINIMUM MW / TOTAL Btus	87 0 / 1007
3 MINIMUM MW / INCREMENTAL Btus PER MWh	87 0 / 9 792
4 1ST STEP MW / INCREMENTAL Btus PER MWh	90 2 / 9 966
5 2ND STEP MW / INCREMENTAL Btus PER MWh	93 3 / 10 139
6 3RD STEP MW / INCREMENTAL Btus PER MWh	96 5 / 10 313
7 4TH STEP MW / INCREMENTAL Btus PER MWh	99 7 / 10 486
8 5TH STEP MW / INCREMENTAL Btus PER MWh	102 8 / 10 660
9 6TH STEP MW / INCREMENTAL Btus PER MWh	106 0 / 10 833

THREE MOST RECENT HEAT RATE TESTS

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7
1 TEST 1 (Summer) NET MW OUTPUT	Jul-14	65	75	83	91			
NET HEAT RATE		12,400	11,898	11,704	11,493			
NET INCREMENTAL HEAT RATE		8,586	9,111	9,575	10,014			
2 TEST 2 NET MW OUTPUT	Jun-11	71	76	81	88			
NET HEAT RATE		12,313	12,130	11,947	11,812			
NET INCREMENTAL HEAT RATE		9,266	9,540	9,801	10,146			
3 TEST 3 NET MW OUTPUT	Aug-03	70	78	86	88	96	98	100
NET HEAT RATE		12,489	12,166	11,912	11,857	11,664	11,621	11,581
NET INCREMENTAL HEAT RATE		9,306	9,391	9,477	9,498	9,583	9,605	9,626

CONTROL SYSTEMS

1 DESCRIPTION OF TURBINE CONTROL SYS	1 Digital electro hydraulic
2 MANUFACTURER OF TURBINE CONTROL SYS	2 Siemens T3000
3 DATE & COST OF INSTALLATION	3 2010 - $403,806

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4 DESCRIPTION OF BOILER CONTROL SYS	4 N/A
5 MANUFACTURER OF BOILER CONTROL SYS	5 N/A
6 DATE & COST OF INSTALLATION	6 N/A
7 TYPE OF FAN CONTROL SYSTEM	7 N/A
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 N/A
9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 N/A
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu) / GROSS ELECTRICAL OUTPUT

(2) NET HEAT RATE = TOTAL FUEL CONSUMED (MMBtu) / GROSS ELECTRICAL OUTPUT - STATION SERVICE

Indicate whether Station Service includes consumption for Common Facilities

JONES UNIT #1

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY/STEAM CONDITIONS	1 MCR-85 44% / 1005F, 1940PSIG throttle, 1005F Hot Reheat
2 TURBINE EFFICIENCY/STEAM CONDITIONS	2 HP-83 63%, IP-90 05%, LP-82 97% / 1000F, 1800 PSIG Throttle,
3 GENERATOR EFFICIENCY/MW MVAR	3 Mech loss-0 833 MW, Elec loss-2 848 MW/248MW, 120MVAR
4 CONDENSER CONDITIONS/COOLING WTR	4 2" mercury absolute / 80F cooling water inlet
5 GROSS HEAT RATE (1)	5 9418 BTU/KWH
6 ORIGINAL STATION LOAD	6 11 8 MW
7 NET HEAT RATE (2)	7 9914 BTU/KWH
8 HEAT RATE CURVE/EQUATION	8 Gross MW/Gross HR 58 9/10527, 117 8/ 9631, 235 2/ 9418, 244 6/9434,
"PROMOD" TYPE DATA	
1 STARTUP Btus	1550 MMBTU
2 MINIMUM MW / TOTAL Btus	56 0 / 667
3 MINIMUM MW / INCREMENTAL Btus PER MWh	56 0 / 8 848
4 1ST STEP MW / INCREMENTAL Btus PER MWh	87 2 / 9 253
5 2ND STEP MW / INCREMENTAL Btus PER MWh	118 3 / 9 659
6 3RD STEP MW / INCREMENTAL Btus PER MWh	149 5 / 10 065
7 4TH STEP MW / INCREMENTAL Btus PER MWh	180 7 / 10 470
8 5TH STEP MW / INCREMENTAL Btus PER MWh	211 8 / 10 876
9 6TH STEP MW / INCREMENTAL Btus PER MWh	243 0 / 11 282

THREE MOST RECENT HEAT RATE TESTS (3)

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
1 TEST 1	NET MW OUTPUT	Oct-18	56	110	167	223	231	243
	NET HEAT RATE		11,782	10,530	10,385	10,336	10,401	10,412
	NET INCREMENTAL HEAT RATE		9,091	9,616	10,175	10,722	10,806	10,919

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
2 TEST 2	NET MW OUTPUT	Jul-16	56	110	168	226	243
	NET HEAT RATE		12,245	11,066	11,040	11,062	11,051
	NET INCREMENTAL HEAT RATE		9,894	10,392	10,923	11,449	11,603

			LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5		
3 TEST 3	NET MW OUTPUT	Apr-14	53	74	111	167	243		
	NET HEAT RATE		11,844	11,356	10,650	10,280	10,506		
	NET INCREMENTAL HEAT RATE		8,813	9,082	9,565	10,295	11,285		

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS	1 Digital Electro-Hydraulic Control
2 MANUFACTURER OF TURBINE CONTROL SYS	2 Woodward/Foxboro
3 DATE & COST OF INSTALLATION	3 2013 - $728,429
4 DESCRIPTION OF BOILER CONTROL SYS	4 Digital
5 MANUFACTURER OF BOILER CONTROL SYS	5 Foxboro
6 DATE & COST OF INSTALLATION	6 2013 - $386,306
7 TYPE OF FAN CONTROL SYSTEM	7 variable frequency drive/digital controlle
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 variable speed fluid coupling/mechanical controlle
9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 calcs performed by plant computer
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu) / GROSS ELECTRICAL OUTPUT

(2) NET HEAT RATE = TOTAL FUEL CONSUMED (MMBtu) / GROSS ELECTRICAL OUTPUT - STATION SERVICE

Indicate whether Station Service includes consumption for Common Facilities

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(3) Jones 1 can be operated at 25 MW gross load off of LFC and EDC control
The unit is not dispatched between 25 MW and 54 MW The fuel input at
25 MW gross load is 306 MMBTU/hr, and the station load is 3 67 MW

JONES UNIT #2

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY/STEAM CONDITIONS	1 MCR-85 44% / 1005F, 1940PSIG throttle, 1005F Hot Reheat
2 TURBINE EFFICIENCY/STEAM CONDITIONS	2 HP-83 63%, IP-90 05%, LP-82 97% / 1000F, 1800 PSIG Throttle, 1000F HRH
3 GENERATOR EFFICIENCY/MW MVAR	3 Mech loss-0 833 MW, Elec loss-2 848 MW/248MW, 120MVAR
4 CONDENSER CONDITIONS/COOLING WTR	4 2" mercury absolute / 80F cooling water inlet
5 GROSS HEAT RATE (1)	5 9418 BTU/KWH
6 ORIGINAL STATION LOAD	6 11 8 MW
7 NET HEAT RATE (2)	7 9914 BTU/KWH
8 HEAT RATE CURVE/EQUATION	8 Gross MW/Gross HR 56 4/11665, 79 764/10935, 110 52/10495, 180 11/10280, 242 69/10486
"PROMOD" TYPE DATA	
1 STARTUP Btus	1550 MMBTU
2 MINIMUM MW / TOTAL Btus	56 0 / 657
3 MINIMUM MW / INCREMENTAL Btus PER MWh	56 0 / 8 771
4 1ST STEP MW / INCREMENTAL Btus PER MWh	87 0 / 9 213
5 2ND STEP MW / INCREMENTAL Btus PER MWh	118 0 / 9 655
6 3RD STEP MW / INCREMENTAL Btus PER MWh	149 0 / 10 097
7 4TH STEP MW / INCREMENTAL Btus PER MWh	180 0 / 10 539
8 5TH STEP MW / INCREMENTAL Btus PER MWh	211 0 / 10 981
9 6TH STEP MW / INCREMENTAL Btus PER MWh	242 0 / 11 423

THREE MOST RECENT HEAT RATE TESTS	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
1 TEST 1 NET MW OUTPUT	May-15	56	80	111	180	243
NET HEAT RATE		11,665	10,935	10,495	10,280	10,486
NET INCREMENTAL HEAT RATE		8,776	9,109	9,548	10,540	11,433
	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
2 TEST 2 NET MW OUTPUT	Feb-13	53	111	180	243	243
NET HEAT RATE		11,943	10,469	10,214	10,386	10,349
NET INCREMENTAL HEAT RATE		8,685	9,439	10,342	11,164	11,164
	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
3 TEST 3 NET MW OUTPUT	Feb-05	55	111	180	244	244
NET HEAT RATE		11,943	10,469	10,214	10,386	10,349
NET INCREMENTAL HEAT RATE		8,602	9,376	10,336	11,212	11,212

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS	1 Digital Electro-Hydraulic Control
2 MANUFACTURER OF TURBINE CONTROL SYS	2 Woodward/Foxboro
3 DATE & COST OF INSTALLATION	3 2012 - $736,230
4 DESCRIPTION OF BOILER CONTROL SYS	4 Digital
5 MANUFACTURER OF BOILER CONTROL SYS	5 Foxboro
6 DATE & COST OF INSTALLATION	6 2012 - $436,220
7 TYPE OF FAN CONTROL SYSTEM	7 variable frequency drive/digital controlle
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 variable speed fluid coupling/mechanical controlle
9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 calcs performed by plant computer
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu) / GROSS ELECTRICAL OUTPUT

(2) NET HEAT RATE = TOTAL FUEL CONSUMED (MMBtu) / GROSS ELECTRICAL OUTPUT - STATION SERVICE
Indicate whether Station Service includes consumption for Common Facilities

JONES UNIT #3

CATEGORY	DESCRIPTION/RESPONSE
INITIAL DESIGN EFFICIENCIES (based on 96 deg F amb w/o evap cooler)	
1 BOILER EFFICIENCY/STEAM CONDITIONS	1 N/A
2 TURBINE EFFICIENCY/STEAM CONDITIONS	2 N/A
3 GENERATOR EFFICIENCY/MW MVAR	3 Gen Loss 2200 KW, Exciter and Stator Loss 229 KW, 183 MW, 88MVAR
4 CONDENSER CONDITIONS/COOLING WTR	4 N/A
5 GROSS HEAT RATE (1)	5 10006 BTU/KWH
6 ORIGINAL STATION LOAD	6 164 MW
7 NET HEAT RATE (2)	7 9963 BTU/KWH

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8 HEAT RATE CURVE/EQUATION	8 Gross MW/Gross HR 114/11626, 133/11450, 150/11041, 167/10999
"PROMOD" TYPE DATA	
1 STARTUP Btus	141 MMBTU
2 MINIMUM MW / TOTAL Btus	114 0 / 1267
3 MINIMUM MW / INCREMENTAL Btus PER MWh	114 0 / 11 334
4 1ST STEP MW / INCREMENTAL Btus PER MWh	123 0 / 10 999
5 2ND STEP MW / INCREMENTAL Btus PER MWh	132 0 / 10 795
6 3RD STEP MW / INCREMENTAL Btus PER MWh	141 0 / 10 641
7 4TH STEP MW / INCREMENTAL Btus PER MWh	150 0 / 10 539
8 5TH STEP MW / INCREMENTAL Btus PER MWh	159 0 / 10 981
9 6TH STEP MW / INCREMENTAL Btus PER MWh	168 0 / 11 423

THREE MOST RECENT HEAT RATE TESTS	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
1 TEST 1 NET MW OUTPUT	Aug-13	112	131	148	165
NET HEAT RATE		11,336	10,993	10,800	10,639
NET INCREMENTAL HEAT RATE		8,969	9,121	9,252	9,388

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
2 TEST 2 NET MW OUTPUT	May-11	101	121	132	151	169
NET HEAT RATE		12,713	11,949	11,592	11,263	10,979
NET INCREMENTAL HEAT RATE		7,740	8,138	8,346	8,725	9,095

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS	1 Digital electro hydraulic
2 MANUFACTURER OF TURBINE CONTROL SYS	2 Siemens T3000
3 DATE & COST OF INSTALLATION	3 2011 - $433,326
4 DESCRIPTION OF BOILER CONTROL SYS	4 N/A
5 MANUFACTURER OF BOILER CONTROL SYS	5 N/A
6 DATE & COST OF INSTALLATION	6 N/A
7 TYPE OF FAN CONTROL SYSTEM	7 N/A
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 N/A
9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 N/A
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (MMBtu)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

JONES UNIT #4

CATEGORY	DESCRIPTION/RESPONSE
INITIAL DESIGN EFFICIENCIES (based on 96 deg F amb w/o evap cooler)	
1 BOILER EFFICIENCY/STEAM CONDITIONS	1 N/A
2 TURBINE EFFICIENCY/STEAM CONDITIONS	2 N/A
3 GENERATOR EFFICIENCY/MW MVAR	3 Gen Loss 2200 KW, Exciter and Stator Loss 229 KW, 183MW, 88MVA
4 CONDENSER CONDITIONS/COOLING WTR	4 N/A
5 GROSS HEAT RATE (1)	5 9,975 BTU/KWH
6 ORIGINAL STATION LOAD	6 177 MW
7 NET HEAT RATE (2)	7 9,547 BTU/KWH
8 HEAT RATE CURVE/EQUATION	8 Gross MW/Gross HR 118/11104, 135/10941, 149/10631, 167/11035
"PROMOD" TYPE DATA	
1 STARTUP Btus	141 MMBTU
2 MINIMUM MW / TOTAL Btus	116 0 / 1303
3 MINIMUM MW / INCREMENTAL Btus PER MWh	116 0 / 9 459
4 1ST STEP MW / INCREMENTAL Btus PER MWh	125 0 / 9 519
5 2ND STEP MW / INCREMENTAL Btus PER MWh	134 0 / 9 579
6 3RD STEP MW / INCREMENTAL Btus PER MWh	143 0 / 9 639
7 4TH STEP MW / INCREMENTAL Btus PER MWh	152 0 / 9 699
8 5TH STEP MW / INCREMENTAL Btus PER MWh	161 0 / 9 758
9 6TH STEP MW / INCREMENTAL Btus PER MWh	170 0 / 9 818

THREE MOST RECENT HEAT RATE TESTS	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
1 TEST 1 NET MW OUTPUT	Jan-15	116	136	153	171
NET HEAT RATE		11,201	11,081	10,751	10,749
NET INCREMENTAL HEAT RATE		9,460	9,589	9,704	9,823

	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
2 TEST 2 NET MW OUTPUT	Aug-13	122	140	156	173
NET HEAT RATE		11,222	11,047	11,132	10,718
NET INCREMENTAL HEAT RATE		9,100	9,341	9,548	9,771

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS	1 Digital electro hydraulic

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2 MANUFACTURER OF TURBINE CONTROL SYS	2 Siemens T3000
3 DATE & COST OF INSTALLATION	3 2013 - $455,263
4 DESCRIPTION OF BOILER CONTROL SYS	4 N/A
5 MANUFACTURER OF BOILER CONTROL SYS	5 N/A
6 DATE & COST OF INSTALLATION	6 N/A
7 TYPE OF FAN CONTROL SYSTEM	7 N/A
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 N/A
9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 N/A
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu) / GROSS ELECTRICAL OUTPUT

(2) NET HEAT RATE = TOTAL FUEL CONSUMED (MMBtu) / GROSS ELECTRICAL OUTPUT - STATION SERVICE

Indicate whether Station Service includes consumption for Common Facilities

MADDOX UNIT #1

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY/STEAM CONDITIONS	1 MCR-85 90% / 1005F, 1525PSIG throttle, 1005F Hot Reheat Control - 86 21% / 1005F, 1525PSIG Throttle, 1005F Hot Reheat
2 TURBINE EFFICIENCY/STEAM CONDITIONS	2 HP-78 51%, IP-91 09%, LP-86 44% / 1000F, 1450 PSIG Throttle, 1000F HRH
3 GENERATOR EFFICIENCY/MW MVAR	3 Mech loss-0 787 MW, Elec loss-1 550 MW/114MW, 70MVAR
4 CONDENSER CONDITIONS/COOLING WTR	4 2" mercury absolute / 80F cooling water inlet
5 GROSS HEAT RATE (1)	5 9579 BTU/KWH
6 ORIGINAL STATION LOAD	6 4 6 MW
7 NET HEAT RATE (2)	7 9978 BTU/KWH
8 HEAT RATE CURVE/EQUATION	8 Gross MW/Gross HR 40 0/10474, 60 0/9931, 80 0/9639, 100 0/9519,
"PROMOD" TYPE DATA	
1 STARTUP Btus	930 MMBTU
2 MINIMUM MW / TOTAL Btus	35 0 / 414
3 MINIMUM MW / INCREMENTAL Btus PER MWh	35 0 / 8 887
4 1ST STEP MW / INCREMENTAL Btus PER MWh	47 8 / 9 189
5 2ND STEP MW / INCREMENTAL Btus PER MWh	60 7 / 9 490
6 3RD STEP MW / INCREMENTAL Btus PER MWh	73 5 / 9 792
7 4TH STEP MW / INCREMENTAL Btus PER MWh	86 3 / 10 094
8 5TH STEP MW / INCREMENTAL Btus PER MWh	99 2 / 10 395
9 6TH STEP MW / INCREMENTAL Btus PER MWh	112 0 / 10 697

THREE MOST RECENT HEAT RATE TESTS

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
1 TEST 1	NET MW OUTPUT	May-16	36	51	72	108	115	121
	NET HEAT RATE		11,184	10,541	10,292	10,190	10,231	10,300
	NET INCREMENTAL HEAT RATE		8,915	9,260	9,745	10,566	10,723	10,862

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
2 TEST 2	NET MW OUTPUT	Apr-09	42	56	70	99	117	119
	NET HEAT RATE		11,226	10,957	10,575	10,346	10,436	10,483
	NET INCREMENTAL HEAT RATE		9,055	9,369	9,715	10,400	10,822	10,854

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
3 TEST 3	NET MW OUTPUT	Mar-07	42	57	71	85	99	120
	NET HEAT RATE		10,907	10,398	10,156	9,906	10,104	10,212
	NET INCREMENTAL HEAT RATE		8,221	8,818	9,369	9,957	10,516	11,389

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS	1 Digital Electro-Hydraulic Control
2 MANUFACTURER OF TURBINE CONTROL SYS	2 Woodward/Foxboro
3 DATE & COST OF INSTALLATION	3 2013 - $1,197,148
4 DESCRIPTION OF BOILER CONTROL SYS	4 Digital
5 MANUFACTURER OF BOILER CONTROL SYS	5 Foxboro
6 DATE & COST OF INSTALLATION	6 2008 - $1,473,806
7 TYPE OF FAN CONTROL SYSTEM	7 variable frequency drive/digital controlle
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 variable speed fluid coupling/mechanical controlle
9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 calcs performed by plant computer
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu) / GROSS ELECTRICAL OUTPUT

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(2) NET HEAT RATE = TOTAL FUEL CONSUMED (MMBtu) / GROSS ELECTRICAL OUTPUT - STATION SERVICE
Indicate whether Station Service includes consumption for Common Facilities

MADDOX UNIT #2

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY/STEAM CONDITIONS	1 N/A
2 TURBINE EFFICIENCY/STEAM CONDITIONS	2 N/A/ N/A
3 GENERATOR EFFICIENCY/MW MVAR	3 N/A/87MW 42MVAR
4 CONDENSER CONDITIONS/COOLING WTR	4 N/A
5 GROSS HEAT RATE (1)	5 12710 BTU/KWH
6 ORIGINAL STATION LOAD	6 0
7 NET HEAT RATE (2)	7 12710 BTU/KWH
8 HEAT RATE CURVE/EQUATION	8 Gross MW/Gross HR 62 9/12870, 67 9/12760, 70 2/12710
"PROMOD" TYPE DATA	
1 STARTUP Btus	235 MMBTU
2 MINIMUM MW / TOTAL Btus	60 0 / 809
3 MINIMUM MW / INCREMENTAL Btus PER MWh	60 0 / 11 594
4 1ST STEP MW / INCREMENTAL Btus PER MWh	60 2 / 11 601
5 2ND STEP MW / INCREMENTAL Btus PER MWh	60 3 / 11 609
6 3RD STEP MW / INCREMENTAL Btus PER MWh	60 5 / 11 616
7 4TH STEP MW / INCREMENTAL Btus PER MWh	60 7 / 11 623
8 5TH STEP MW / INCREMENTAL Btus PER MWh	60 8 / 11 630
9 6TH STEP MW / INCREMENTAL Btus PER MWh	61 0 / 11 637

THREE MOST RECENT HEAT RATE TESTS		DATE	LEVEL 1	LEVEL 2	LEVEL 3
1 TEST 1	MW OUTPUT (Summer)	Jun-06	30	44	59
	HEAT RATE		16,122	14,281	13,519
	INCREMENTAL HEAT RATE		10,281	10,916	11,551

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS	1 Analog electro motor
2 MANUFACTURER OF TURBINE CONTROL SYS	2 GE Fanuc 9070
3 DATE & COST OF INSTALLATION	3 2007 - $93,076
4 DESCRIPTION OF BOILER CONTROL SYS	4 N/A
5 MANUFACTURER OF BOILER CONTROL SYS	5 N/A
6 DATE & COST OF INSTALLATION	6 N/A
7 TYPE OF FAN CONTROL SYSTEM	7 N/A
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 N/A
9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 2
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 N/A
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu) / GROSS ELECTRICAL OUTPUT

(2) NET HEAT RATE = TOTAL FUEL CONSUMED (MMBtu) / GROSS ELECTRICAL OUTPUT - STATION SERVICE
Indicate whether Station Service includes consumption for Common Facilities

MADDOX UNIT #3

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY/STEAM CONDITIONS	1 N/A
2 TURBINE EFFICIENCY/STEAM CONDITIONS	2 N/A/N/A
3 GENERATOR EFFICIENCY/MW MVAR	3 N/A/11 5MW 7 1MVAR
4 CONDENSER CONDITIONS/COOLING WTR	4 N/A
5 GROSS HEAT RATE (1)	5 N/A
6 ORIGINAL STATION LOAD	6 N/A
7 NET HEAT RATE (2)	7 N/A
8 HEAT RATE CURVE/EQUATION	8 N/A
"PROMOD" TYPE DATA	
1 STARTUP Btus	NOT DISPATCHED
2 MINIMUM MW / TOTAL Btus	
3 MINIMUM MW / INCREMENTAL Btus PER MWh	
4 1ST STEP MW / INCREMENTAL Btus PER MWh	
5 2ND STEP MW / INCREMENTAL Btus PER MWh	
6 3RD STEP MW / INCREMENTAL Btus PER MWh	
7 4TH STEP MW / INCREMENTAL Btus PER MWh	
8 5TH STEP MW / INCREMENTAL Btus PER MWh	

Southwestern Public Service Company

Generating Unit Efficiency and Control Systems

THREE MOST RECENT HEAT RATE TESTS		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
1 TEST 1	MW OUTPUT						
	HEAT RATE		NOT DISPATCHED				
	INCREMENTAL HEAT RATE						
2 TEST 2	MW OUTPUT						
	HEAT RATE						
	INCREMENTAL HEAT RATE						
3 TEST 3	MW OUTPUT						
	HEAT RATE						
	INCREMENTAL HEAT RATE						

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS	1 Analog electro motor
2 MANUFACTURER OF TURBINE CONTROL SYS	2 GE Fanuc 9070
3 DATE & COST OF INSTALLATION	3 2007 - $79,627
4 DESCRIPTION OF BOILER CONTROL SYS	4 N/A
5 MANUFACTURER OF BOILER CONTROL SYS	5 N/A
6 DATE & COST OF INSTALLATION	6 N/A
7 TYPE OF FAN CONTROL SYSTEM	7 N/A
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 N/A
9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 2
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 N/A
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu) / GROSS ELECTRICAL OUTPUT

(2) NET HEAT RATE = TOTAL FUEL CONSUMED (MMBtu) / GROSS ELECTRICAL OUTPUT - STATION SERVICE
Indicate whether Station Service includes consumption for Common Facilities

CARLSBAD GT

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY/STEAM CONDITIONS	1 N/A
2 TURBINE EFFICIENCY/STEAM CONDITIONS	2 N/A/ N/A
3 GENERATOR EFFICIENCY/MW MVAR	3 N/A/16 3 MW 10 1MVAR
4 CONDENSER CONDITIONS/COOLING WTR	4 N/A
5 GROSS HEAT RATE (1)	5 13460 BTU/KWH
6 ORIGINAL STATION LOAD	6 0
7 NET HEAT RATE (2)	7 13460 BTU/KWH
8 HEAT RATE CURVE/EQUATION	8 Gross MW/Gross HR 14 1/13710, 15 1/13460
"PROMOD" TYPE DATA	
1 STARTUP Btus	NOT DISPATCHED
2 MINIMUM MW / TOTAL Btus	
3 MINIMUM MW / INCREMENTAL Btus PER MWh	
4 1ST STEP MW / INCREMENTAL Btus PER MWh	
5 2ND STEP MW / INCREMENTAL Btus PER MWh	
6 3RD STEP MW / INCREMENTAL Btus PER MWh	
7 4TH STEP MW / INCREMENTAL Btus PER MWh	
8 5TH STEP MW / INCREMENTAL Btus PER MWh	

THREE MOST RECENT HEAT RATE TESTS		DATE	LEVEL 1	LEVEL 2	LEVEL 3
1 TEST 1	MW OUTPUT	Jun-06	5	8	11
	HEAT RATE		22,483	18,730	17,028
	INCREMENTAL HEAT RATE		10,873	11,572	12,272

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS	1 Digital (installed for remote start capability
2 MANUFACTURER OF TURBINE CONTROL SYS	2 Allen Bradley
3 DATE & COST OF INSTALLATION	3 Original - NA
4 DESCRIPTION OF BOILER CONTROL SYS	4 N/A
5 MANUFACTURER OF BOILER CONTROL SYS	5 N/A
6 DATE & COST OF INSTALLATION	6 N/A
7 TYPE OF FAN CONTROL SYSTEM	7 N/A
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 N/A
9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 2
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 none
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu) / GROSS ELECTRICAL OUTPUT

Southwestern Public Service Company

Generating Unit Efficiency and Control Systems

(2) NET HEAT RATE = TOTAL FUEL CONSUMED (MMBtu) / GROSS ELECTRICAL OUTPUT - STATION SERVICE
Indicate whether Station Service includes consumption for Common Facilities

QUAY COUNTY

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY/STEAM CONDITIONS	1 N/A
2 CT ENGINE EFFICIENCY	2 N/A
3 GENERATOR EFFICIENCY/MW MVAR	3 N/A/27MW 16 7MVARS
4 CONDENSER CONDITIONS/COOLING WTR	4 N/A
5 GROSS HEAT RATE (1)	5 14,080 BTU/KWH on gas HHV 59F
6 ORIGINAL STATION LOAD	6 0
7 NET HEAT RATE (2)	5 14,080 BTU/KWH on gas HHV 59F
8 HEAT RATE CURVE/EQUATION	8 N/A
"PROMOD" TYPE DATA	
1 STARTUP Btus	28 MMBTU
2 MINIMUM MW / TOTAL Btus	10 0 / 254
3 MINIMUM MW / INCREMENTAL Btus PER MWh	10 0 / 9,425
4 1ST STEP MW / INCREMENTAL Btus PER MWh	11 5 / 9,468
5 2ND STEP MW / INCREMENTAL Btus PER MWh	13 0 / 9,511
6 3RD STEP MW / INCREMENTAL Btus PER MWh	14 5 / 9,554
7 4TH STEP MW / INCREMENTAL Btus PER MWh	16 0 / 9,597
8 5TH STEP MW / INCREMENTAL Btus PER MWh	17 5 / 9,640
9 6TH STEP MW / INCREMENTAL Btus PER MWh	22 0 / 9,769

THREE MOST RECENT HEAT RATE TESTS	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
1 TEST 1 NET MW OUTPUT	Aug-13	10	14	15	18	20	22
NET HEAT RATE		24,991	21,130	19,150	19,059	17,870	16,624
INCREMENTAL HEAT RATE		9,436	9,537	9,569	9,640	9,770	9,757

CONTROL SYSTEMS	
1 DESCRIPTION OF CT ENGINE CONTROL SYS	1 Analog electro motor
2 MANUFACTURER OF CT ENGINE CONTROL SYS	2 GE Fanuc 9070
3 DATE & COST OF INSTALLATION	3 1995 - $64,207
4 DESCRIPTION OF BOILER CONTROL SYS	4 N/A
5 MANUFACTURER OF BOILER CONTROL SYS	5 N/A
6 DATE & COST OF INSTALLATION	6 N/A
7 TYPE OF FAN CONTROL SYSTEM	7 N/A
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 N/A
9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 2
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 N/A
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu) / GROSS ELECTRICAL OUTPUT

(2) NET HEAT RATE = TOTAL FUEL CONSUMED (MMBtu) / GROSS ELECTRICAL OUTPUT - STATION SERVICE
Indicate whether Station Service includes consumption for Common Facilities

MOORE COUNTY

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY/STEAM CONDITIONS	1 83 7% /Not Available
2 TURBINE EFFICIENCY/STEAM CONDITIONS	2 HP-85 92%, LP-82 78% / 900 F, 850 PSIG Throttle
3 GENERATOR EFFICIENCY/MW MVAR	3 Gen Loss-0 58 MW, Exciter loss-0 02 MW/40 MW, 50 MVAR
4 CONDENSER CONDITIONS/COOLING WTR	4 2" mercury absolute / Not Available
5 GROSS HEAT RATE (1)	5 11880 BTU/KWH
6 ORIGINAL STATION LOAD	6 50 MW
7 NET HEAT RATE (2)	5 11819 BTU/KWH
8 HEAT RATE CURVE/EQUATION	8 Gross MW/ Gross HR 50 1/11229
"PROMOD" TYPE DATA	
1 STARTUP Btus	N/A
2 MINIMUM MW / TOTAL Btus	16 9 / 289
3 MINIMUM MW / INCREMENTAL Btus PER MWh	16 9 / 10 339
4 1ST STEP MW / INCREMENTAL Btus PER MWh	28 7 / 11 986
5 2ND STEP MW / INCREMENTAL Btus PER MWh	38 7 / 13 367
6 3RD STEP MW / INCREMENTAL Btus PER MWh	46 5 / 14 458

Southwestern Public Service Company

Generating Unit Efficiency and Control Systems

THREE MOST RECENT HEAT RATE TESTS	DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
1 TEST 1 NET MW OUTPUT	Aug-06	17	29	39	47
NET HEAT RATE		17,110	14,019	13,615	13,364
INCREMENTAL HEAT RATE		10,339	11,986	13,367	14,458

CONTROL SYSTEMS

1 DESCRIPTION OF TURBINE CONTROL SYS	1 Analog/mechanical
2 MANUFACTURER OF TURBINE CONTROL SYS	2 GE
3 DATE & COST OF INSTALLATION	3 Origional - NA
4 DESCRIPTION OF BOILER CONTROL SYS	4 Digital
5 MANUFACTURER OF BOILER CONTROL SYS	5 Foxboro
6 DATE & COST OF INSTALLATION	6 2012 - $731,233
7 TYPE OF FAN CONTROL SYSTEM	7 inlet air vanes/mechanical controlle
8 TYPE OF FEEDWATER PUMP CONTROL SYS	8 variable speed fluid coupling/mechanical controlle
9 TYPE OF SOOT BLOWER CONTROL SYS	9 N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	10 1
11 DESCRIPTION OF HEATRATE DEVIATION SYS	11 deviation calcs performed automatically by data acquisition syster
12 TYPE OF SCRUBBER CONTROL SYS	12 N/A

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start-up) (in MMBtu)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (MMBtu)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

Southwestern Public Service Company

Summary of Firm Purchased Power (Net MWh)

Line No.		QUALIFYING FACILITIES, BY COMPANY						OTHERS, BY COMPANY					FIRM
		BEA	**ORN**	**SID**[1]	**TOKAI**[1]	**Losses**	**Sub Total**	**ONETA**	**LPL**	**LPP**	**Losses**	**Sub Total**	**Total**
	TEST YEAR (TY)												
1	April 2018	112,886	-	3,274	-	-	116,161	81,750	255	342,045	-	424,050	540,211
2	May 2018	129,405	-	2,192	-	-	131,597	153,200	326	265,809	-	419,335	550,932
3	June 2018	122,608	1,053	1,952	-	-	125,614	115,500	3,493	349,260	-	468,253	593,867
4	July 2018	130,480	8,060	2,278	-	-	140,818	126,300	463	394,186	-	520,949	661,767
5	August 2018	128,282	9,136	2,152	-	-	139,570	75,700	2,958	344,694	-	423,352	562,922
6	September 2018	120,322	6,646	3,387	-	-	130,355	42,550	-	367,481	-	410,031	540,386
7	October 2018	134,954	8,716	1,413	-	-	145,083	54,000	-	343,956	-	397,956	543,038
8	November 2018	125,212	9,175	1,908	-	-	136,295	54,600	-	352,746	-	407,346	543,641
9	December 2018	132,781	9,865	1,653	-	-	144,299	25,000	-	387,240	-	412,240	556,539
10	January 2019	134,233	8,929	-	1,944	-	145,106	-	-	378,402	-	378,402	523,507
11	February 2019	116,167	7,566	-	2,421	-	126,154	150	-	344,982	-	345,132	471,286
12	March 2019	126,470	8,784	-	2,421	-	137,675	150	-	372,197	-	372,347	510,022
13	**Total TY**	**1,513,801**	**77,929**	**20,210**	**6,786**	**-**	**1,618,725**	**728,900**	**7,495**	**4,242,998**	**-**	**4,979,394**	**6,598,119**
	Update Period												
14	April 2019	95,352	8,523	-	3,037	-	106,912	1,050	-	344,022	-	345,072	451,984
15	May 2019	121,963	6,248	-	1,200	-	129,411	2,405	-	81,358	-	83,763	213,174
16	June 2019	121,963	6,248	-	1,200	-	129,411	2,405	-	81,358	-	83,763	213,174
17	**Total Update Period**	**339,279**	**21,019**	**-**	**5,437**	**-**	**365,734**	**5,860**	**-**	**506,738**	**-**	**512,598**	**878,332**

Notes: As discussed in the testimony of William A Grant, Southwestern Public Service Company ("SPS"), has not filed a fuel reconciliation with its current base rate case in accordance with the Order in Project No 41905 and 16 Tex Admin Code § 25 236 ("TAC") as revised in that project Therefore, fuel reconciliation data is not applicable Additionally, SPS is not proposing a new fuel factor under 16 TAC § 25 237 Therefore, rate year data is not applicable

This schedule contains estimates for the period of April 1, 2019 through June 30, 2019, referred to as the "Update Period" As discussed by Southwestern Public Service Company ("SPS") witness William A Grant, SPS will file actual costs for the Update Period, including an updated version of this schedule, no later than the 45th day after the date of the initial filing of this rate case, as required by PURA § 36 112

(1) Tokai took over ownership of SID January of 2019

April 1, 2018 through March 31, 2019 represents the Test Year

Acronyms: BEA - Borger Energy Associates, L P
LPL - Lubbock Power & Light (City of Lubbock)
LPP - Lea Power Partners, LLC
ONETA - Oneta Power, LLC (formerly Calpine Energy Services, L P)
ORN - Orion Carbon Black
SID - Sid Richardson
TOKAI - Tokai Carbon

Southwestern Public Service Company

Firm Purchased Power Energy Costs

This schedule is not applicable. As discussed in the testimony of William A. Grant, Southwestern Public Service Company ("SPS") has not filed a fuel reconciliation with its current base rate case in accordance with the Order in Project No. 41905 and 16 Tex. Admin. Code § 25.236 ("TAC") as revised in that project. Additionally, SPS is not proposing a new fuel factor under 16 TAC § 25.237.

Southwestern Public Service Company

Summary of Firm Purchased Power Fixed Charges

		QUALIFYING FACILITIES, BY COMPANY					OTHERS, BY COMPANY				FIRM FIXED
Line No.		BEA	ORN	SID[1]	TOKAI[1]	Sub Total	ONETA[2]	LPL	LPP	Sub Total	Total
	TEST YEAR (TY)										
1	April 2018	$ 1,869,221	$ -	$ 18,645	$ -	$ 1,887,866	$ 2,296,180	$ 33,920	$ 4,214,655	$ 6,544,755	$ 8,432,621
2	May 2018	1,868,878	-	12,082	-	1,880,960	2,296,180	33,920	4,209,433	6,539,533	8,420,493
3	June 2018	1,890,126	-	11,118	-	1,901,244	4,653,400	33,920	4,207,628	8,894,948	10,796,192
4	July 2018	1,903,609	-	12,554	-	1,916,162	4,653,400	33,920	4,210,078	8,897,398	10,813,560
5	August 2018	1,903,609	-	11,858	-	1,915,467	4,653,400	33,920	4,209,530	8,896,850	10,812,317
6	September 2018	1,903,609	-	19,289	-	1,922,897	4,653,400	16,322	4,320,038	8,989,759	10,912,657
7	October 2018	1,903,609	-	7,784	-	1,911,393	1,571,380	-	4,279,175	5,850,555	7,761,948
8	November 2018	1,903,609	-	10,848	-	1,914,457	1,571,380	-	4,276,935	5,848,315	7,762,772
9	December 2018	1,903,609	-	9,109	-	1,912,718	1,566,790	-	4,278,904	5,845,694	7,758,412
10	January 2019	1,903,609	-	-	10,714	1,914,323	595,950	-	4,282,820	4,878,770	6,793,092
11	February 2019	1,903,609	-	-	14,768	1,918,377	595,950	-	4,282,283	4,878,233	6,796,609
12	March 2019	1,903,609	-	-	13,362	1,916,970	595,500	-	4,268,532	4,864,032	6,781,002
13	**Total TY**	**$ 22,760,702**	**$ -**	**$ 113,288**	**$ 38,844**	**$ 22,912,834**	**$ 29,702,910**	**$ 185,922**	**$ 51,040,010**	**$ 80,928,842**	**$ 103,841,676**
	Update Period										
14	April 2019	$ 1,903,609	$ -	$ -	$ 17,294	$ 1,920,902	$ 600,000	$ (69,960)	$ 4,273,108	$ 4,803,148	$ 6,724,050
15	May 2019	1,903,609	-	-	6,612	1,910,220	600,000		4,285,578	4,885,578	6,795,798
16	June 2019	1,903,609	-	-	6,612	1,910,221	600,000		4,285,578	4,885,578	6,795,799
17	**Total Update Period**	**$ 5,710,826**	**$ -**	**$ -**	**$ 30,517**	**$ 5,741,343**	**$ 1,800,000**	**$ (69,960)**	**$ 12,844,264**	**$ 14,574,304**	**$ 20,315,647**

Notes: As discussed in the testimony of William A Grant, Southwestern Public Service Company ("SPS"), has not filed a fuel reconciliation with its current base rate case in accordance with the Order in Project No 41905 and 16 Tex Admin Code § 25 236 ("TAC") as revised in that project Therefore, fuel reconciliation data is not applicable Additionally, SPS is not proposing a new fuel factor under 16 TAC § 25 237 Therefore, rate year data is not applicable

This schedule contains estimates for the period of April 1, 2019 through June 30, 2019, referred to as the "Update Period" As discussed by Southwestern Public Service Company ("SPS") witness William A Grant, SPS will file actual costs for the Update Period, including an updated version of this schedule, no later than the 45th day after the date of the initial filing of this rate case, as required by PURA § 36 112

[1] Tokai took over ownership of SID January of 2019

[2] Oneta I and Oneta II

April 1, 2018 through March 31, 2019 represents the Test Year

This schedule reflects a subset of capacity-related charges and may not reconcile to testimony attachments For all companies, this schedule reflects capacity charges For LPP, this schedule includes capacity and dispatchability charges but includes no other capacity-related charges

Acronyms: BEA - Borger Energy Associates, L P
LPL - Lubbock Power & Light (City of Lubbock)
LPP - Lea Power Partners, LLC
ONETA - Oneta Power, LLC (formerly Calpine Energy Services, L P)
ORN - Orion Carbon Black
SID - Sid Richardson
TOKAI - Tokai Carbon CB

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2019 TX Rate Case

Southwestern Public Service Company

Firm Purchased Power Energy Costs Per MWh

This schedule is not applicable. As discussed in the testimony of Southwestern Public Service Company ("SPS") witness William A. Grant, SPS has not filed a fuel reconciliation with its current base rate case in accordance with the Order in Project No. 41905 and 16 Tex. Admin. Code § 25.236 ("TAC") as revised in that project. Additionally, SPS is not proposing a new fuel factor under 16 TAC § 25.237.

Southwestern Public Service Company

Non-Firm Purchased Power

This schedule is not applicable. As discussed in the testimony of Southwestern Public Service Company ("SPS") witness William A. Grant, SPS has not filed a fuel reconciliation with its current base rate case in accordance with the Order in Project No. 41905 and 16 Tex. Admin. Code § 25.236 ("TAC") as revised in that project. Additionally, SPS is not proposing a new fuel factor under 16 TAC § 25.237.

Southwestern Public Service Company

Non-Firm Purchased Power Energy Costs

This schedule is not applicable. As discussed in the testimony of William A. Grant, Southwestern Public Service Company ("SPS") has not filed a fuel reconciliation with its current base rate case in accordance with the Order in Project No. 41905 and 16 Tex. Admin. Code § 25.236 ("TAC") as revised in that project. Additionally, SPS is not proposing a new fuel factor under 16 TAC § 25.237.

Southwestern Public Service Company

Non-Firm Purchased Power Energy Costs per MWh

This schedule is not applicable. As discussed in the testimony of Southwestern Public Service Company ("SPS") witness William A. Grant, SPS has not filed a fuel reconciliation with its current base rate case in accordance with the Order in Project No. 41905 and 16 Tex. Admin. Code § 25.236 ("TAC") as revised in that project. Additionally, SPS is not proposing a new fuel factor under 16 TAC § 25.237.

Southwestern Public Service Company

Summary of Line Losses and System's Own Use

Line No.		SYSTEM LOSSES (MWh) (*) UNIT MAIN XFMRS	345 KV LINES	230 KV LINES	115 KV LINES	69 KV LINES	345/230 KV XFMRS	230/115 KV XFMRS	115/69 KV XFMRS	DIST. SUB XFMRS	DIST. PRIMARY LINES	DIST. LINE XFMRS	DIST. SECONDARY & SERVICES	SUB TOTAL	SYSTEM'S OWN USE (MWh) TOTAL SYSTEM USE
1	April 2018														1,323
2	May 2018														1,087
3	June 2018														847
4	July 2018														1,083
5	August 2018														1,429
6	September 2018														976
7	October 2018														1,191
8	November 2018														792
9	December 2018														1,098
10	January 2019														1,328
11	February 2019														1,489
12	March 2019														1,436
13	TOTAL	N/A	98,780	377,293	362,499	63,451	11,192	64,000	39,802	93,653	663,738	127,775	12,362	1,914,545	14,079

Notes: As discussed in the testimony of William A Grant, Southwestern Public Service Company ("SPS"), has not filed a fuel reconciliation with its current base rate case in accordance with the Order in Project No 41905 and 16 Tex Admin Code § 25 236 ("TAC") as revised in that project Therefore, fuel reconciliation data is not applicable Additionally, SPS is not proposing a new fuel factor under 16 TAC § 25 237 Therefore, rate year data is not applicable

Total TY values represent system losses by elements based on the Loss Evaluation Study for January through December 2016 Please refer to Schedule O-6.3

* Monthly values were not available

Southwestern Public Service Company

Summary of Off-System Sales (Non-Firm & Firm Power)

OFF-SYSTEM NON-FIRM POWER SALES (MWh)

Test Year (TY)

Line No.	Month	SPP	Total TY
1	April 2018	483,219	483,219
2	May 2018	557,362	557,362
3	June 2018	518,911	518,911
4	July 2018	730,035	730,035
5	August 2018	423,637	423,637
6	September 2018	345,717	345,717
7	October 2018	372,401	372,401
8	November 2018	412,097	412,097
9	December 2018	294,482	294,482
10	January 2019	209,700	209,700
11	February 2019	257,866	257,866
12	March 2019	327,542	327,542
13	**Total TY**	**4,932,969**	**4,932,969**

Notes: As discussed in the testimony of William A. Grant, Southwestern Public Service Company ("SPS") has not filed a fuel reconciliation with its current base rate case in accordance with the Order in Project No. 41905 and 16 Tex. Admin. Code § 25.236 ("TAC") as revised in that project. Therefore, fuel reconciliation data is not applicable. Additionally, SPS is not proposing a new fuel factor under 16 TAC § 25.237. Therefore, rate year data is not applicable.

April 1, 2018 through March 31, 2019 represents the Test Year.

Acronym: SPP - Southwest Power Pool

Southwestern Public Service Company

Summary of Off-System Sales (Non-Firm & Firm Power)

OFF-SYSTEM FIRM POWER SALES (MWh)

Line No.	Test Year (TY) Month		Total TY
1	April 2018	-	-
2	May 2018	-	-
3	June 2018	-	-
4	July 2018	-	-
5	August 2018	-	-
6	September 2018	-	-
7	October 2018	-	-
8	November 2018	-	-
9	December 2018	-	-
10	January 2019	-	-
11	February 2019	-	-
12	March 2019	-	-
13	**Total TY**	-	-

Notes: SPS did not have any off-system firm sales during the Test Year.

Southwestern Public Service Company

Off-System Sales Revenue (Energy Charge Component)

OFF-SYSTEM NON-FIRM SALES

TEST YEAR (TY)

Line No.	Month	SPP	Total TY
1	April 2018	$ (12,222,745)	$ (12,222,745)
2	May 2018	(15,411,415)	(15,411,415)
3	June 2018	(15,051,955)	(15,051,955)
4	July 2018	(23,263,032)	(23,263,032)
5	August 2018	(13,165,664)	(13,165,664)
6	September 2018	(8,334,985)	(8,334,985)
7	October 2018	(11,914,956)	(11,914,956)
8	November 2018	(15,331,898)	(15,331,898)
9	December 2018	(10,077,875)	(10,077,875)
10	January 2019	(6,208,184)	(6,208,184)
11	February 2019	(6,026,473)	(6,026,473)
12	March 2019	(9,552,766)	(9,552,766)
13	**Total TY**	**$ (146,561,947)**	**$ (146,561,947)**

Notes: As discussed in the testimony of William A. Grant, Southwestern Public Service Company ("SPS") has not filed a fuel reconciliation with its current base rate case in accordance with the Order in Project No. 41905 and 16 Tex. Admin. Code § 25 236 ("TAC") as revised in that project. Therefore, fuel reconciliation data is not applicable. Additionally, SPS is not proposing a new fuel factor under 16 TAC § 25.237. Therefore, rate year data is not applicable.

The twelve months ended March 31, 2019 represent the Test Year.

Acronym: SPP - Southwest Power Pool (Integrated Market)

Southwestern Public Service Company

Off-System Sales Revenue (Energy Charge Component)

OFF-SYSTEM FIRM SALES ($)

Line No.	TEST YEAR (TY) Month		Grand Total
1	April 2018	$ -	$ -
2	May 2018	-	-
3	June 2018	-	-
4	July 2018	-	-
5	August 2018	-	-
6	September 2018	-	-
7	October 2018	-	-
8	November 2018	-	-
9	December 2018	-	-
10	January 2019	-	-
11	February 2019	-	-
12	March 2019	-	-
13	**Total TY**	$ -	$ -

Note: SPS did not have any off-system firm sales durng the Test Year.

Southwestern Public Service Company

Summary of Off-System Sales Revenue (Fixed Charged Component)

As discussed in the testimony of William A. Grant, Southwestern Public Service Company ("SPS") has not filed a fuel reconciliation with its current base rate case in accordance with the Order in Project No. 41905 and 16 Tex. Admin. Code § 25.236 ("TAC") as revised in that project. Additionally, SPS is not proposing a new fuel factor under 16 TAC § 25.237. Therefore, rate year data is not applicable.

SPS had no off-system sales with a fixed charge component during the Test Year (April 1, 2018 through March 31, 2019) or Update Period (April 1, 2019 through June 30, 2019).

Southwestern Public Service Company

Summary of Off-System Sales Revenue (Energy Charge Per MWh)

OFF-SYSTEM NON-FIRM SALES ($0.00/ MWh)

Line No.	TEST YEAR (TY)	SPP	Average TY
1	April 2018	$ 23.86	$ 23.86
2	May 2018	26.41	26.41
3	June 2018	27.35	27.35
4	July 2018	30.24	30.24
5	August 2018	29.07	29.07
6	September 2018	22.12	22.12
7	October 2018	29.32	29.32
8	November 2018	34.60	34.60
9	December 2018	30.77	30.77
10	January 2019	25.98	25.98
11	February 2019	21.38	21.38
12	March 2019	26.45	26.45
13	**Total TY**	**$ 27.64**	**$ 27.64**

Energy only (excludes Ancillary Services)

Notes: As discussed in the testimony of William A. Grant, Southwestern Public Service Company ("SPS"), has not filed a fuel reconciliation with its current base rate case in accordance with the Order in Project No. 41905 and 16 Tex. Admin. Code § 25.236 ("TAC") as revised in that project. Therefore, fuel reconciliation data is not applicable.

April 1, 2018 through March 31, 2019 represents the Test Year.

Acronym: SPP - Southwest Power Pool

Southwestern Public Service Company

Summary of Off-System Sales Revenue (Energy Charge Per MWh)

Line No.	OFF-SYSTEM FIRM POWER SALES ($0.00/MWh)	
		Average TY
	TEST YEAR (TY)	
1	April-18	$ -
2	May-18	-
3	June-18	-
4	July-18	-
5	August-18	-
6	September-18	-
7	October-18	-
8	November-18	-
9	December-18	-
10	January-19	-
11	February-19	-
12	March-19	-
13	**Total TY**	**$ -**

Note: SPS had no off-system firm power sales during the test year.

Southwestern Public Service Company

Summary of On-System Sales (Wholesale & Retail)

Line No.	Test Year	On-System Wholesale Sales (Net MWh) Partial Service	Full Service	Total Wholesale	On-System Retail Sales (Net MWh) Texas Secondary	Texas Primary	Texas Sub-Trans	Texas Transmission	Total Texas	Total New Mexico	Total System
1	April 2018	-	360,749	360,749	374,057	177,326	85,606	439,972	1,076,960	470,235	1,907,944
2	May 2018	-	451,980	451,980	469,850	194,305	99,186	462,666	1,226,008	520,863	2,198,851
3	June 2018	-	485,230	485,230	534,158	189,565	96,196	455,642	1,275,561	543,209	2,304,000
4	July 2018	-	513,862	513,862	586,101	195,565	98,872	476,434	1,356,972	574,804	2,445,638
5	August 2018	-	508,546	508,546	551,286	196,078	102,273	478,945	1,328,581	569,773	2,406,901
6	September 2018	-	407,718	407,718	436,333	183,563	95,427	452,268	1,167,591	510,569	2,085,879
7	October 2018	-	372,233	372,233	372,633	183,447	97,452	484,799	1,138,331	510,362	2,020,926
8	November 2018	-	373,117	373,117	408,342	175,431	94,768	448,724	1,127,265	512,691	2,013,073
9	December 2018	-	409,980	409,980	455,190	179,599	97,067	458,549	1,190,404	565,215	2,165,599
10	January 2019	-	403,107	403,107	444,807	177,799	99,279	459,412	1,181,297	570,489	2,154,893
11	February 2019	-	359,488	359,488	384,984	160,720	87,853	410,829	1,044,387	516,146	1,920,021
12	March 2019	-	383,936	383,936	385,132	173,339	95,424	456,694	1,110,590	552,415	2,046,941
13	**Total Test Year**	**0**	**5,029,947**	**5,029,947**	**5,402,875**	**2,186,736**	**1,149,404**	**5,484,933**	**14,223,949**	**6,416,770**	**25,670,666**
	Update Period										
14	April 2019	-	359,418	359,418	340,176	172,837	91,632	444,445	1,049,089	530,147	1,938,655
15	May 2019	-	379,424	379,424	366,805	171,380	101,283	465,465	1,104,934	559,727	2,044,085
16	June 2019	-	241,574	241,574	477,880	196,167	99,101	460,026	1,233,173	621,596	2,096,342
17	**Update Period Total**	**0**	**980,416**	**980,416**	**1,184,861**	**540,384**	**292,016**	**1,369,936**	**3,387,196**	**1,711,470**	**6,079,082**

Notes: Both Wholesale and Retail sales are presented in the production month at the meter.

The Update Period for "On-System Wholesale Sales" has actual sales for all months.

The Update Period for "On-System Retail Sales" contains estimate for the third month sales in May 2019.

The Update Period for "On-System Retail Sales" contains forecasted sales from the February 2019 release for June 2019.

April 1, 2018 through March 31, 2019 represents the Test Year.

Southwestern Public Service Company

Monthly Minimum and Peak Demand

Line No.	Month	2015 Minimum Load (MW)	2015 Peak Load (MW)	2016 Minimum Load (MW)	2016 Peak Load (MW)	2017 Minimum Load (MW)	2017 Peak Load (MW)	2018 Minimum Load (MW)	2018 Peak Load (MW)	2019 Minimum Load (MW)	2019 Peak Load (MW)
1	January	2,517	4,140	2,460	3,693	2,538	3,884	2,641	3,705	2,730	3,614
2	February	2,391	4,027	2,356	3,678	2,378	3,660	2,477	3,443	2,665	3,638
3	March	2,381	4,015	2,364	3,161	2,367	3,553	2,441	3,187	2,507	3,727
4	April	2,385	3,552	2,310	3,447	2,381	3,430	2,499	3,394		3,471
5	May	2,308	3,501	2,316	3,606	2,415	3,999	2,553	4,344		3,974
6	June	2,266	4,323	2,342	4,593	2,415	4,350	2,517	4,447		3,964
7	July	2,499	4,717	2,749	4,836	2,567	4,374	2,753	4,648		
8	August	2,632	4,733	2,476	4,663	2,519	3,976	2,730	4,391		
9	September	2,458	4,421	2,333	4,167	2,370	4,121	2,467	3,950		
10	October	2,302	3,746	2,350	3,690	2,303	3,337	2,447	3,863		
11	November	2,395	3,679	2,342	3,487	2,450	3,195	2,621	3,571		
12	December	2,313	3,584	2,413	3,837	2,576	3,613	2,699	3,650		
13	**Annual Min/Max**	**2,266**	**4,733**	**2,310**	**4,836**	**2,303**	**4,374**	**2,441**	**4,648**	**2,507**	**3,974**

(1) Annual total amount reported for 2019 is only January 1, 2019 through March 31, 2019.

(2) April-June 2019 reflect forecast peak information. SPS does not forecast minimum load.

(3) This schedule contains estimates for the period of April 1, 2019 through June 30, 2019, referred to as the "Update Period." As discussed by Southwestern Public Service Company ("SPS") witness William A. Grant, SPS will file actual costs for the Update Period, including an updated version of this schedule, no later than the 45th day after the date of the initial filing of this rate case, as required by PURA § 36.112.

Southwestern Public Service Company

Monthly Load Duration Curves

2019 TX Rate Case

**APPLICATION OF
SOUTHWESTERN PUBLIC SERVICE COMPANY
FOR AUTHORITY TO CHANGE RATES**

H-12.6b(V)

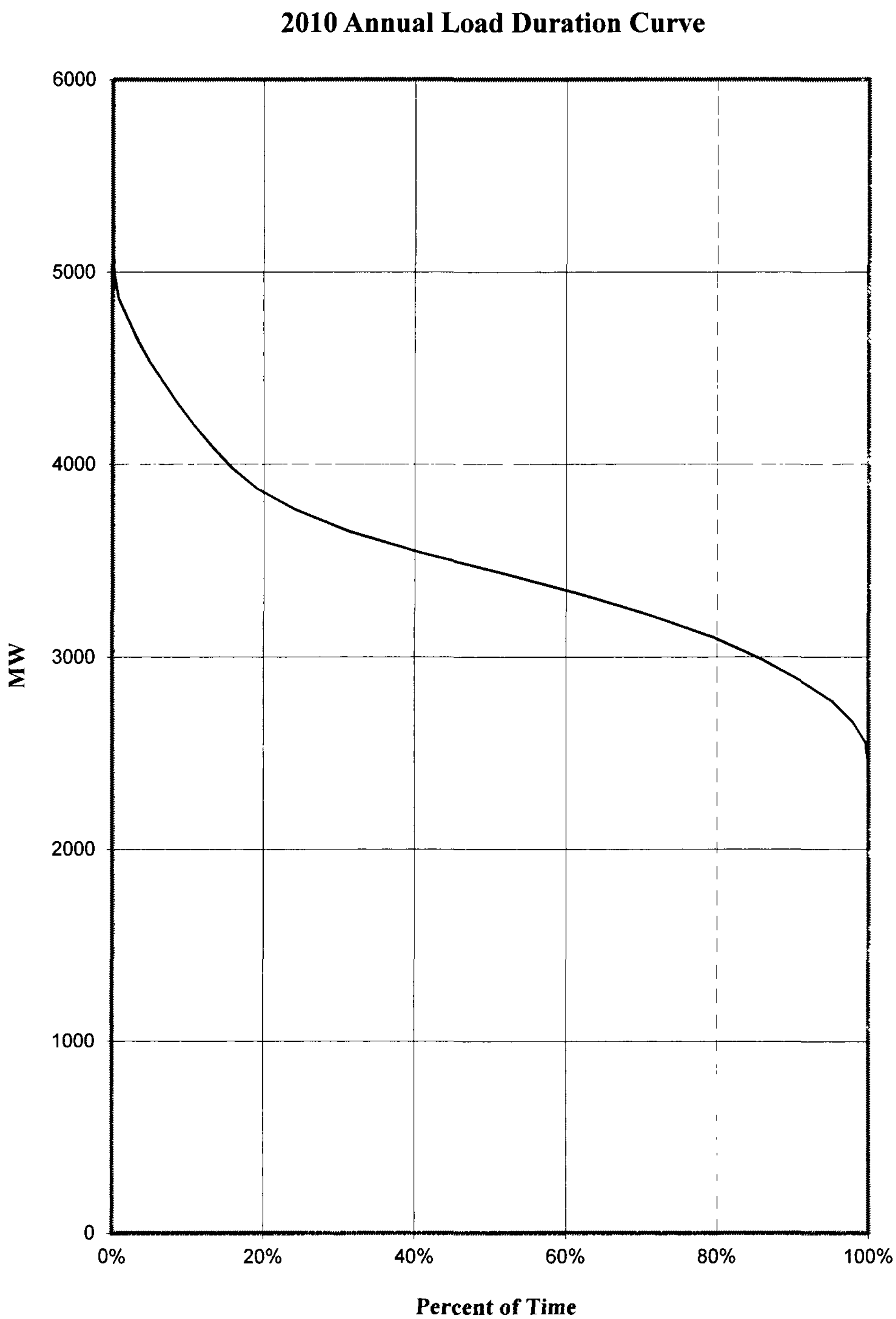
Southwestern Public Service Company

Annual Load Duration Curve

2010 Annual Load Duration

Line No.							
1	**Total MWH =**	**30,238,461**	**Max = 5084.815**	**Interval =**	**110.1**		
2	**Hours =**	**8760**	**Min = 2331.953**	**Load Fact =**	**67.89%**		
	Y Load	**Count Hrs**	**Hrs Times Load**	**Accum Load**	**% Total Load**	**X % Time**	
3	5084.8	4	20339.3	20339.3	0.07%	0.05%	
4	4974.7	24	119393.2	139732.4	0.46%	0.32%	
5	4864.6	44	214043.1	353775.5	1.17%	0.82%	
6	4754.5	106	503978.6	857754.1	2.84%	2.03%	
7	4644.4	119	552685.4	1410439.5	4.66%	3.39%	
8	4534.3	135	612132.5	2022572.0	6.69%	4.93%	
9	4424.2	163	721147.1	2743719.1	9.07%	6.79%	
10	4314.1	165	711829.0	3455548.1	11.43%	8.68%	
11	4204.0	183	769334.8	4224882.9	13.97%	10.76%	
12	4093.9	208	851534.4	5076417.2	16.79%	13.14%	
13	3983.8	228	908309.9	5984727.1	19.79%	15.74%	
14	3873.7	302	1169862.0	7154589.1	23.66%	19.19%	
15	3763.6	450	1693626.8	8848215.9	29.26%	24.33%	
16	3653.5	614	2243258.3	11091474.2	36.68%	31.34%	
17	3543.4	823	2916230.7	14007704.9	46.32%	40.73%	
18	3433.3	960	3295982.5	17303687.4	57.22%	51.69%	
19	3323.2	927	3080620.4	20384307.9	67.41%	62.27%	
20	3213.1	814	2615475.7	22999783.6	76.06%	71.56%	
21	3103.0	702	2178316.6	25178100.2	83.27%	79.58%	
22	2992.9	544	1628145.8	26806246.1	88.65%	85.79%	
23	2882.8	444	1279969.9	28086216.0	92.88%	90.86%	
24	2772.7	381	1056404.5	29142620.5	96.38%	95.21%	
25	2662.6	241	641690.3	29784310.7	98.50%	97.96%	
26	2552.5	146	372667.2	30156977.9	99.73%	99.62%	
27	2442.4	26	63502.8	30220480.7	99.94%	99.92%	
28	2332.3	7	16326.2	30236806.9	99.99%	100.00%	
29	2222.2	0	0.0	30236806.9	99.99%	100.00%	

Southwestern Public Service Company



Southwestern Public Service Company

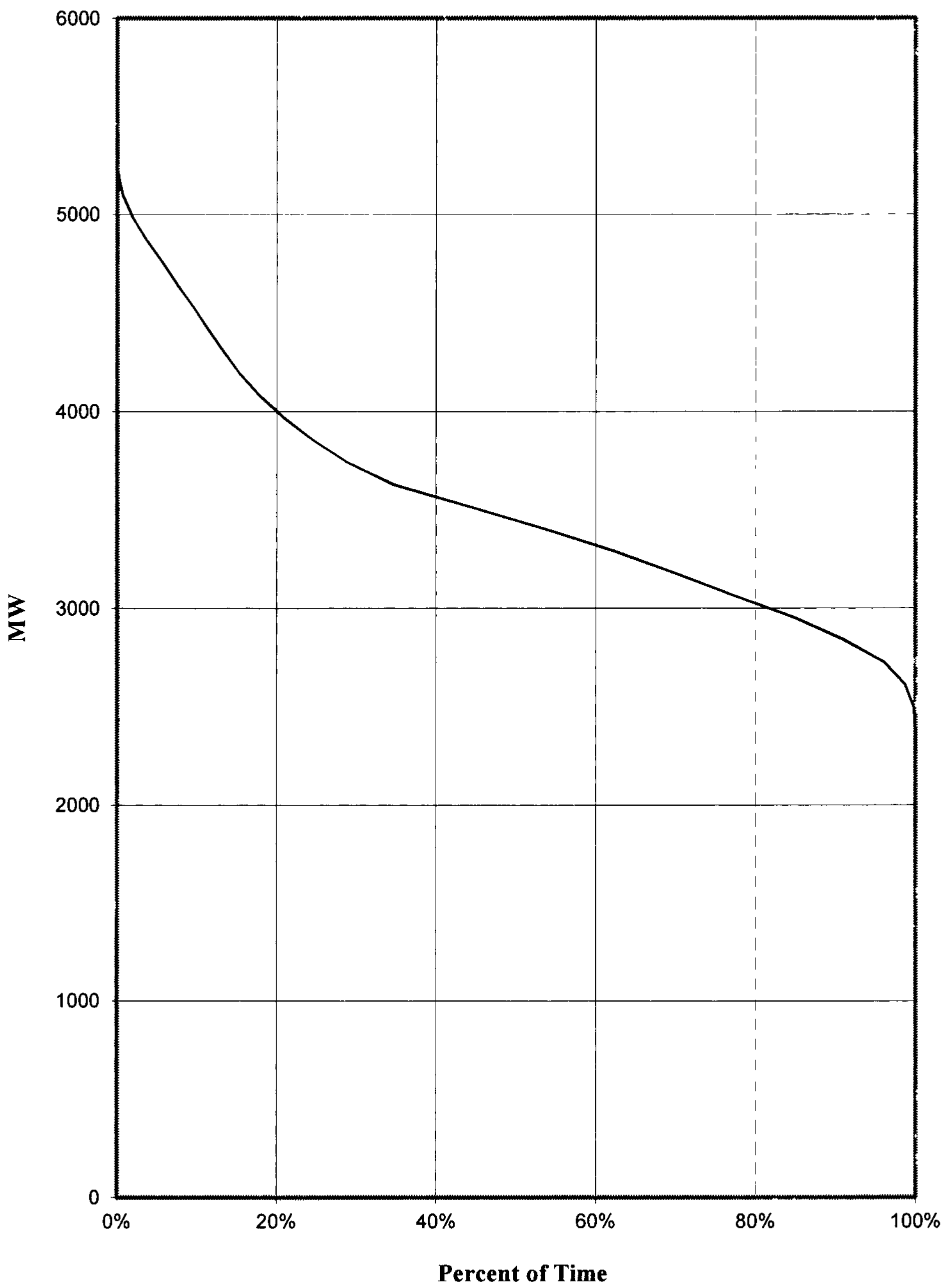
Annual Load Duration Curve

2011 Annual Load Duration

Line No.						
1	**Total MWh =**	**30,549,716**	**Max = 5210.493**	**Interval =**	**112.9**	
2	**Hours =**	**8760**	**Min = 2387.916**	**Load Factor =**	**66.93%**	
	Y Load	**Count Hrs**	**Hrs Times Load**	**Accum Load**	**% Total Load**	**X % Time**
3	5210.5	9	46894.4	46894.4	0.15%	0 10%
4	5097.6	52	265074.9	311969.3	1.02%	0 70%
5	4984.7	108	538346.9	850316.2	2.78%	1.93%
6	4871.8	153	745384.4	1595700.6	5.22%	3.68%
7	4758.9	174	828047.5	2423748.0	7.93%	5.66%
8	4646.0	162	752650.9	3176399 0	10.40%	7.51%
9	4533.1	178	806890.6	3983289 6	13.04%	9.54%
10	4420.2	159	702810.8	4686100.4	15.34%	11.36%
11	4307.3	169	727932.6	5414033.0	17 72%	13 29%
12	4194.4	178	746602.0	6160635.0	20 17%	15 32%
13	4081.5	221	902010.1	7062645.1	23.12%	17.84%
14	3968.6	271	1075488.8	8138133.9	26 64%	20 94%
15	3855.7	322	1241533.3	9379667.2	30.70%	24.61%
16	3742 8	374	1399804.7	10779471.9	35.29%	28.88%
17	3629 9	512	1858505.4	12637977.4	41.37%	34.73%
18	3517.0	830	2919104.6	15557081.9	50.92%	44.20%
19	3404.1	822	2798164.8	18355246.7	60.08%	53.58%
20	3291 2	758	2494724.6	20849971.4	68.25%	62.24%
21	3178 3	676	2148526.4	22998497.7	75.28%	69.95%
22	3065.4	642	1967982.6	24966480.3	81.72%	77.28%
23	2952.5	667	1969313 1	26935793.4	88.17%	84.90%
24	2839.6	542	1539059.6	28474853.1	93.21%	91.08%
25	2726.7	439	1197018.4	29671871.5	97.13%	96.10%
26	2613.8	227	593331.1	30265202.6	99.07%	98 69%
27	2500.9	95	237584.9	30502787.5	99.85%	99 77%
28	2388.0	20	47759.9	30550547.4	100.00%	100.00%
29	2275.1	0	0.0	30550547 4	100.00%	100.00%

Southwestern Public Service Company

2011 Load Duration Curve



Southwestern Public Service Company

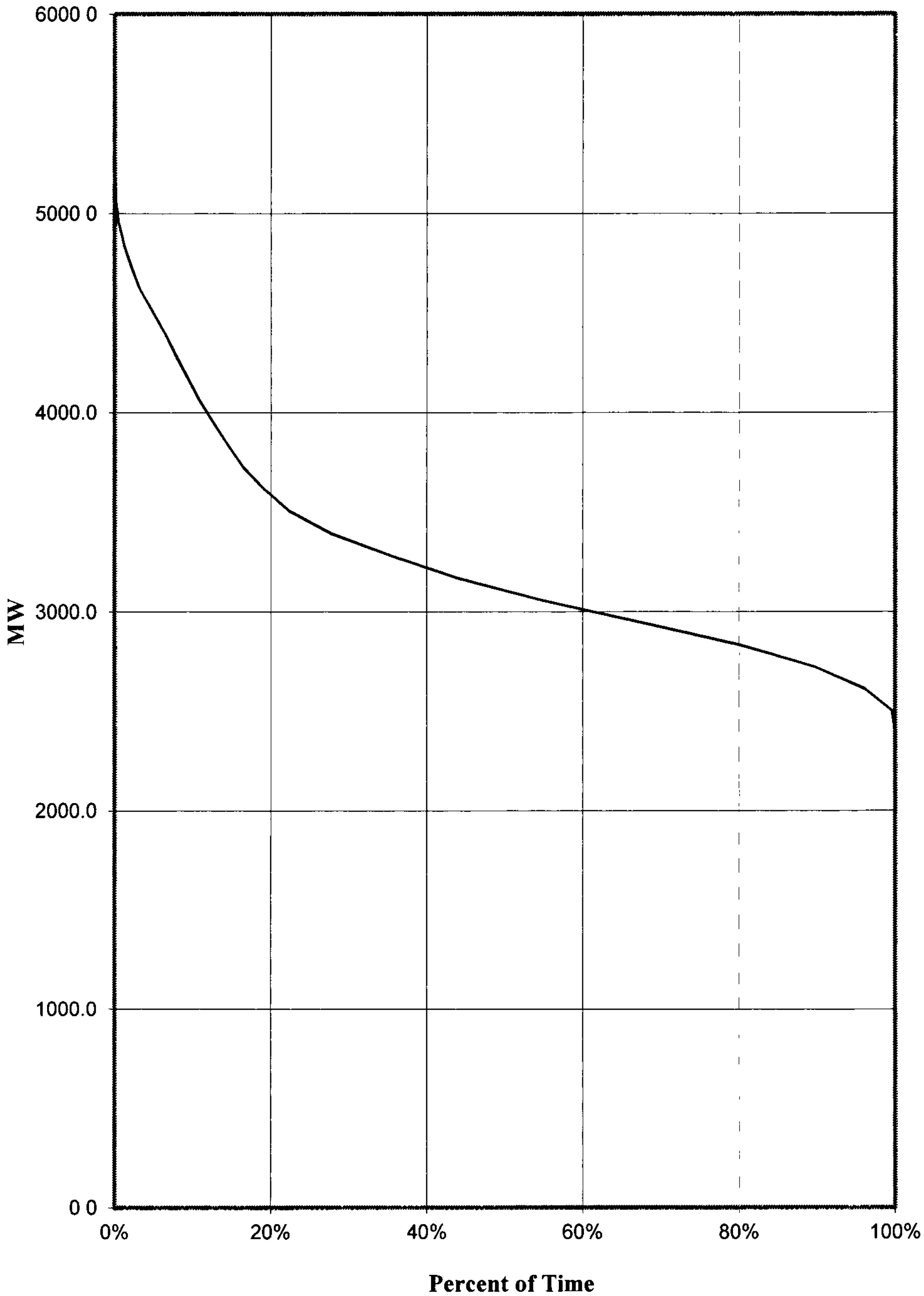
Annual Load Duration Curve

Annual 2012 Load Duration

Line No.						
1	**Total MWh =**	**28,120,436**	**Max = 5178.332**	**Interval =**	**111.5**	
2	**Hours =**	**8784**	**Min = 2389.842**	**Load Factor =**	**61.82%**	
	Y					**X**
	Load	**Count Hrs**	**Hrs Times Load**	**Accum Load**	**% Total Load**	**% Time**
3	5178 3	3	15535.0	15535.0	0.06%	0.03%
4	5066 8	13	65868.8	81403 8	0 29%	0.18%
5	4955.3	30	148660 0	230063 8	0 82%	0.52%
6	4843.8	61	295473.8	525537.5	1.87%	1.22%
7	4732 3	83	392783 6	918321.1	3 27%	2.16%
8	4620.8	95	438979.0	1357300.1	4 83%	3.24%
9	4509.3	143	644834.5	2002134.6	7.12%	4.87%
10	4397.8	142	624492.1	2626626.7	9.34%	6.49%
11	4286 3	122	522932.5	3149559.2	11.20%	7.88%
12	4174.8	133	555252.7	3704811.9	13 17%	9.39%
13	4063.3	129	524169.8	4228981 7	15.04%	10.86%
14	3951.8	156	616485.8	4845467 5	17 23%	12.64%
15	3840 3	161	618293.5	5463761.0	19.43%	14.47%
16	3728.8	172	641359.1	6105120.1	21.71%	16.43%
17	3617.3	237	857307.7	6962427.8	24 76%	19.13%
18	3505.8	291	1020197.1	7982624.9	28.39%	22 44%
19	3394.3	469	1591941.7	9574566.6	34 05%	27.78%
20	3282.8	683	2242174.3	11816740 8	42.02%	35.55%
21	3171.3	743	2356299.7	14173040.5	50 40%	44.01%
22	3059.8	947	2897660.9	17070701 4	60 71%	54.79%
23	2948.3	1104	3254958 5	20325659.9	72 28%	67.36%
24	2836 8	1106	3137536 2	23463196.1	83.44%	79.95%
25	2725.3	850	2316532.2	25779728 3	91 68%	89.63%
26	2613 8	570	1489884.2	27269612.6	96.97%	96.12%
27	2502.3	303	758206.6	28027819 2	99.67%	99.57%
28	2390.8	38	90851.6	28118670.8	99.99%	100.00%
29	2279.3	0	0 0	28118670 8	99.99%	100.00%

Southwestern Public Service Company

2012 Annual Load Duration Curve



Southwestern Public Service Company

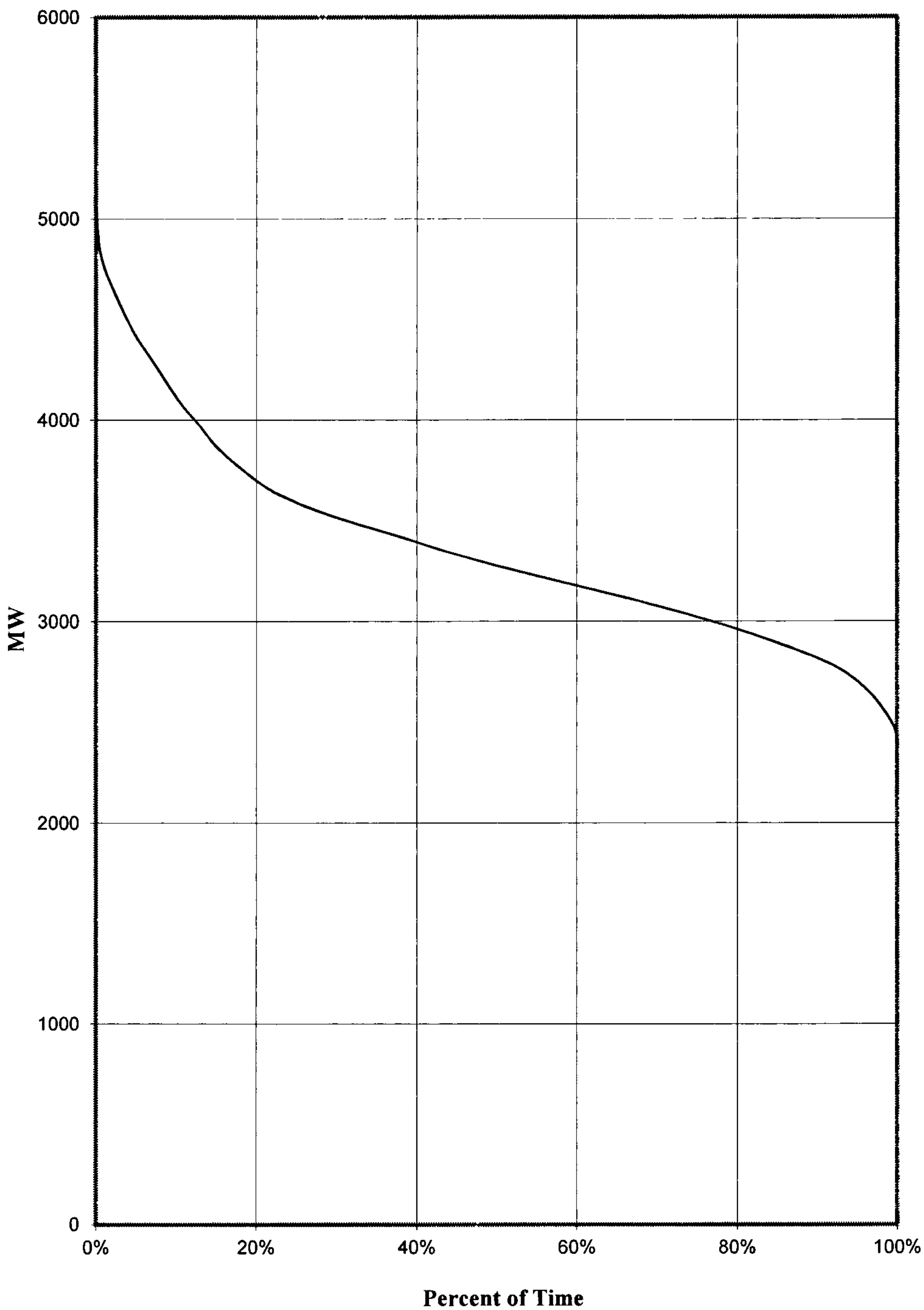
Annual Load Duration Curve

Annual 2013 Load Duration

Line No.						
1	**Total MWh =**	**29,025,910**	**Max = 5055.796**	**Interval =**	**108.5**	
2	**Hours =**	**8760**	**Min = 2342.420**	**Load Factor =**	**65.54%**	
	Y					**X**
	Load	**Count Hrs**	**Hrs Times Load**	**Accum Load**	**% Total Load**	**% Time**
3	5055 8	4	20223 2	20223.2	0 07%	0.05%
4	4947 3	14	69262.1	89485.3	0 31%	0.21%
5	4838.8	26	125808.7	215294.0	0.74%	0.50%
6	4730.3	69	326390.4	541684.4	1.87%	1.29%
7	4621.8	104	480666.8	1022351.2	3.52%	2 48%
8	4513 3	109	491949.2	1514300.4	5.22%	3.72%
9	4404.8	130	572623.4	2086923.8	7.19%	5.21%
10	4296.3	161	691703.6	2778627.4	9.57%	7 04%
11	4187 8	156	653296.1	3431923.6	11 82%	8.82%
12	4079.3	161	656766.6	4088690.2	14.09%	10.66%
13	3970.8	203	806071.5	4894761.7	16.86%	12.98%
14	3862.3	195	753147.7	5647909.3	19.46%	15.21%
15	3753.8	273	1024786.2	6672695 6	22.99%	18.32%
16	3645.3	335	1221174.1	7893869.6	27.20%	22.15%
17	3536.8	552	1952311.2	9846180.8	33.92%	28.45%
18	3428.3	778	2667214.0	12513394.9	43.11%	37.33%
19	3319.8	774	2569521.9	15082916.7	51.96%	46.16%
20	3211.3	926	2973659.8	18056576.5	62.21%	56 74%
21	3102.8	963	2987992.2	21044568.8	72 50%	67 73%
22	2994.3	850	2545151.3	23589720.1	81 27%	77 43%
23	2885.8	723	2086430.3	25676150.4	88 46%	85.68%
24	2777.3	577	1602499 6	27278650.0	93 98%	92.27%
25	2668.8	327	872696.2	28151346.1	96 99%	96.00%
26	2560.3	203	519740.0	28671086.2	98 78%	98.32%
27	2451.8	132	323637.0	28994723.2	99 89%	99.83%
28	2343.3	15	35149 4	29029872.6	100 01%	100.00%
29	2234.8	0	0 0	29029872.6	100 01%	100.00%

Southwestern Public Service Company

Annual 2013 Load Duration Curve



Southwestern Public Service Company

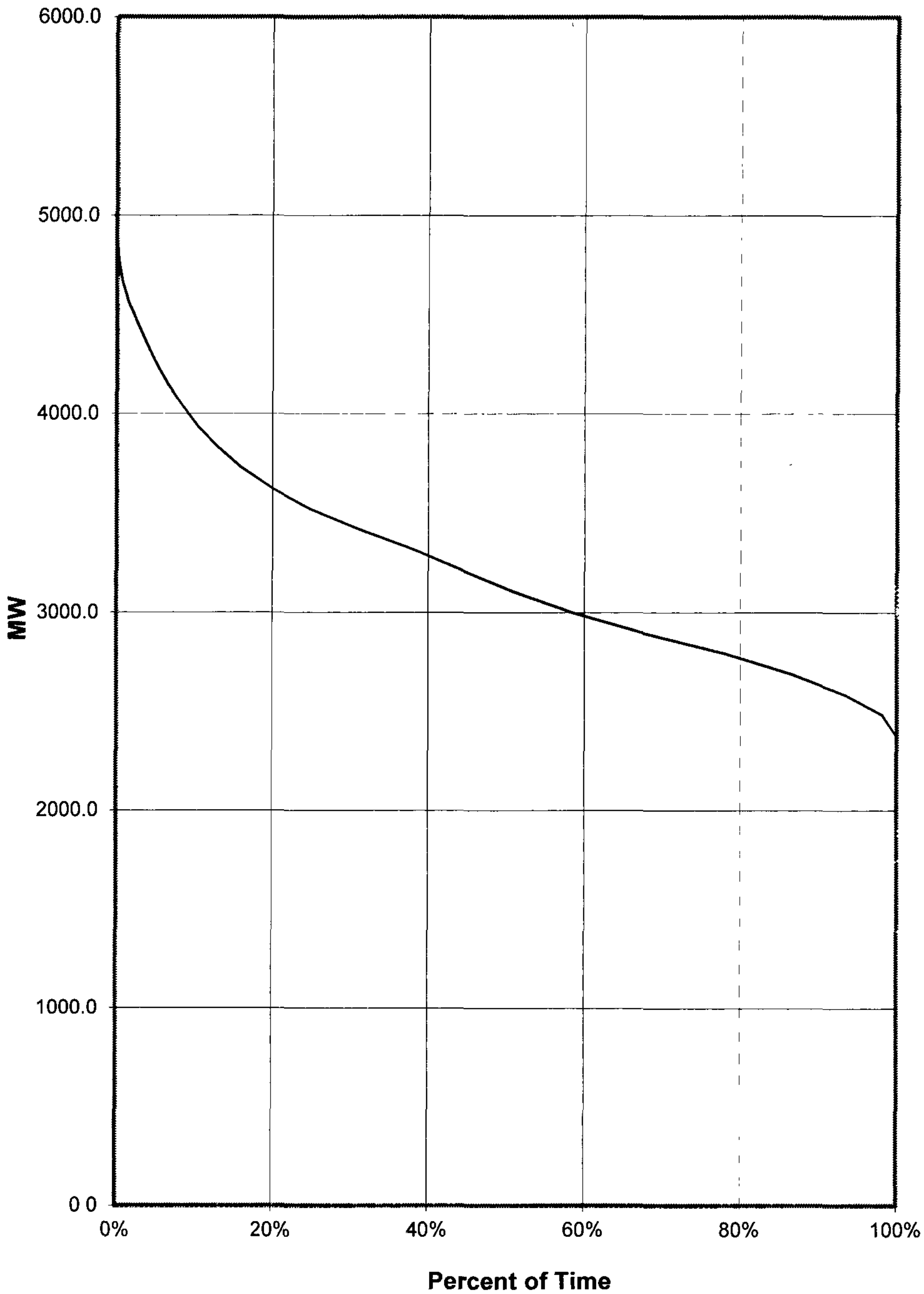
Annual Load Duration Curve

Annual 2014 Load Duration

Line No						
1	**Total MWh =**	**27,767,852**	**Max = 4874.4791**	**Interval =**	**104.0**	
2	**Hours =**	**8760**	**Min = 2274.7755**	**Load Factor =**	**65.03%**	
	Y Load	**Count Hrs**	**Hrs Times Load**	**Accum Load**	**% Total Load**	**X % Time**
3	4874 5	2	9749 0	9749.0	0 04%	0 02%
4	4770 5	21	100180 1	109929 0	0 40%	0 26%
5	4666 5	40	186659 2	296588 2	1.07%	0 72%
6	4562 5	69	314811.1	611399 2	2.20%	1 51%
7	4458 5	104	463681.8	1075081 1	3.87%	2 69%
8	4354 5	101	439802 4	1514883 5	5 46%	3 85%
9	4250 5	110	467552 7	1982436 2	7 14%	5 10%
10	4146 5	133	551481 7	2533917 9	9 13%	6 62%
11	4042 5	160	646796 7	3180714 5	11 45%	8 45%
12	3938 5	171	673479 9	3854194 5	13 88%	10 40%
13	3834 5	222	851254 4	4705448 8	16 95%	12 93%
14	3730 5	265	988577 0	5694025 8	20 51%	15 96%
15	3626 5	346	1254761 8	6948787 6	25 02%	19 91%
16	3522 5	430	1514666 0	8463453 6	30 48%	24 82%
17	3418 5	557	1904092 9	10367546 4	37 34%	31 18%
18	3314 5	624	2068235 0	12435781 4	44.78%	38 30%
19	3210 5	550	1765763 5	14201544 9	51 14%	44 58%
20	3106 5	560	1739628 3	15941173 2	57 41%	50 97%
21	3002 5	656	1969626.3	17910799 5	64 50%	58 46%
22	2898 5	796	2307189 4	20217988.8	72 81%	67 55%
23	2794 5	927	2590482 1	22808471 0	82 14%	78 13%
24	2690 5	747	2009787 9	24818258 9	89 38%	86 66%
25	2586 5	592	1531195 6	26349454 5	94 89%	93 41%
26	2482 5	418	1037676 3	27387130 8	98 63%	98 18%
27	2378 5	148	352014 9	27739145 7	99 90%	99 87%
28	2274 5	11	25019 3	27764164 9	99 99%	100 00%
29	2170 5	0	0 0	27764164 9	99 99%	100 00%

Southwestern Public Service Company

Annual 2014
Load Duration Curve



Southwestern Public Service Company

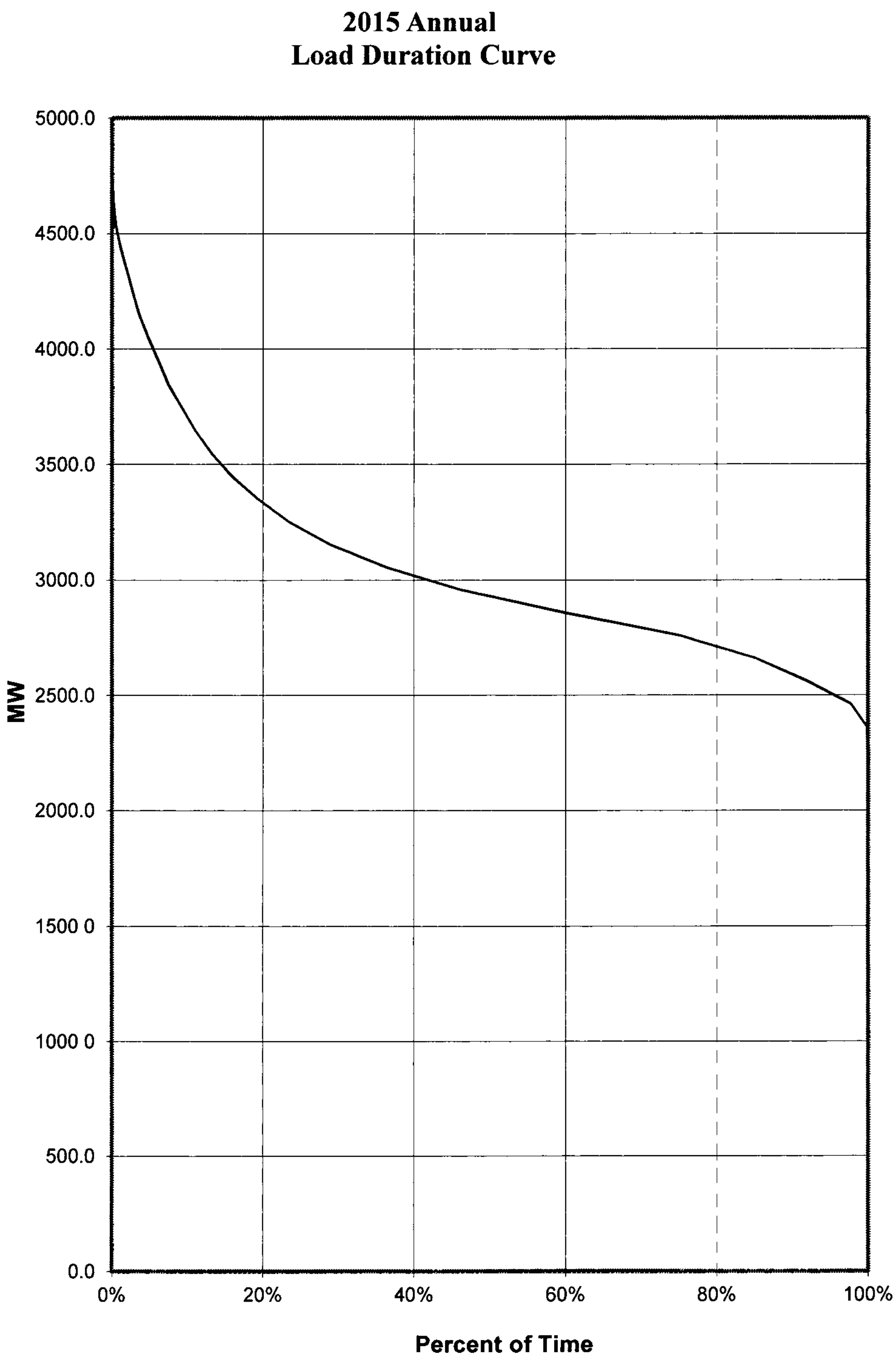
Annual Load Duration Curve

2015 Annual Load Duration

Line No						
1	**Total MWh =**	**26,274,271**	**Max = 4733.493**	**Interval =**	**98.7**	
2	**Hours =**	**8760**	**Min = 2265.597**	**Load Factor =**	**63.36%**	

Line No	Y Load	Count Hrs	Hrs Times Load	Accum Load	% Total Load	X % Time
3	4733 5	5	23667 5	23667 5	0 09%	0 06%
4	4634 8	12	55617 5	79285 0	0 30%	0.19%
5	4536.1	31	140618 9	219903 9	0 84%	0 55%
6	4437.4	52	230744 4	450648 3	1 72%	1 14%
7	4338 7	72	312385 9	763034 2	2 90%	1 96%
8	4240 0	72	305279 5	1068313 7	4 07%	2 79%
9	4141 3	82	339586 0	1407899 7	5 36%	3 72%
10	4042 6	103	416387 1	1824286 8	6 94%	4 90%
11	3943 9	115	453547 7	2277834 5	8 67%	6 21%
12	3845.2	112	430661 6	2708496 1	10 31%	7 49%
13	3746 5	156	584452 9	3292949 0	12 53%	9 27%
14	3647 8	156	569055 7	3862004 7	14 70%	11 05%
15	3549 1	188	667229 5	4529234 2	17 24%	13 20%
16	3450 4	234	807392 0	5336626 2	20 31%	15 87%
17	3351 7	302	1012211 3	6348837 5	24 16%	19 32%
18	3253 0	368	1197101 4	7545938 9	28 72%	23 52%
19	3154 3	471	1485672 0	9031610 9	34 37%	28 89%
20	3055 6	661	2019747 0	11051357 9	42.06%	36 44%
21	2956 9	864	2554755 6	13606113 4	51 78%	46 30%
22	2858 2	1212	3464129 9	17070243 3	64 97%	60 14%
23	2759 5	1316	3631492 8	20701736 1	78 79%	75 16%
24	2660 8	877	2333515 5	23035251 6	87 67%	85 17%
25	2562 1	589	1509072 8	24544324 4	93 42%	91 89%
26	2463 4	507	1248940 3	25793264 6	98 17%	97 68%
27	2364 7	186	439832 9	26233097.5	99 84%	99 81%
28	2266 0	17	38521.9	26271619 4	99 99%	100 00%
29	2167 3	0	0 0	26271619 4	99 99%	100 00%

Southwestern Public Service Company



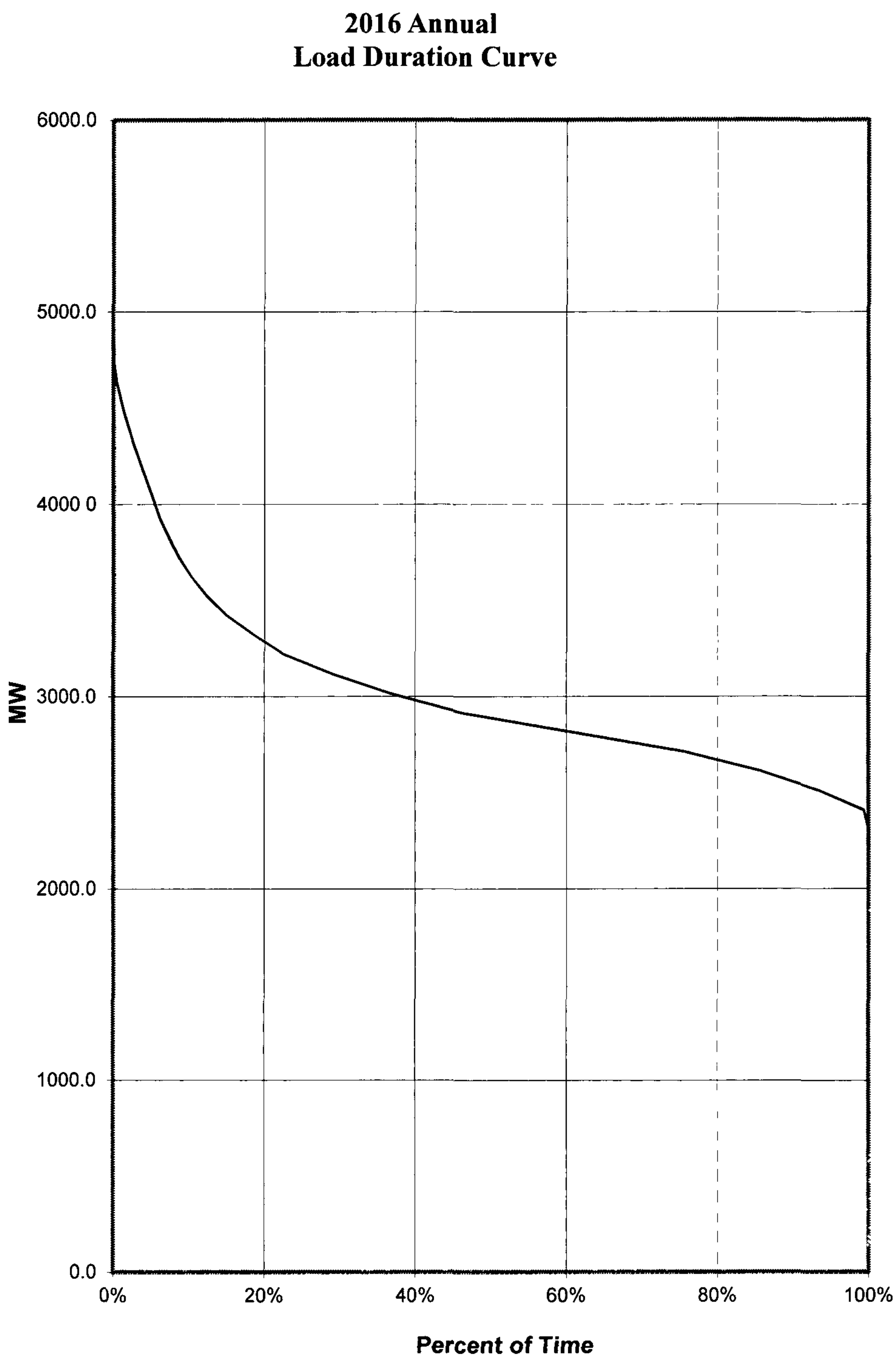
Southwestern Public Service Company

Annual Load Duration Curve

2016 Annual Load Duration

Line No							
1	**Total MWh =**	**26,046,054**	**Max = 4835.606**	**Interval =**	**101.0**		
2	**Hours =**	**8784**	**Min = 2310.2855**	**Load Factor =**	**61.32%**		
	Y Load	**Count Hrs**	**Hrs Times Load**	**Accum Load**	**% Total Load**	**X % Time**	
3	4835.6	5	24178 0	24178 0	0 09%	0 06%	
4	4734.6	4	18938 4	43116 5	0 17%	0 10%	
5	4633 6	31	143641 8	186758 2	0 72%	0 46%	
6	4532 6	49	222097 7	408855 9	1 57%	1 01%	
7	4431 6	66	292486 0	701341.9	2 69%	1 76%	
8	4330 6	74	320464 8	1021806 8	3 92%	2 61%	
9	4229 6	77	325679 7	1347486.4	5 17%	3 48%	
10	4128 6	79	326159 9	1673646 3	6 43%	4 38%	
11	4027 6	81	326236 1	1999882 4	7 68%	5 31%	
12	3926 6	79	310201 9	2310084 3	8 87%	6 20%	
13	3825 6	103	394037 4	2704121 7	10 38%	7 38%	
14	3724 6	117	435778 9	3139900 6	12 06%	8 71%	
15	3623 6	145	525422 9	3665323 5	14 07%	10 36%	
16	3522 6	184	648159 5	4313483 0	16 56%	12 45%	
17	3421 6	231	790391 0	5103874 0	19 60%	15 08%	
18	3320 6	315	1045990 9	6149864 8	23 61%	18 67%	
19	3219 6	354	1139740 5	7289605 4	27 99%	22 70%	
20	3118 6	561	1749538 0	9039143 3	34 70%	29 09%	
21	3017 6	667	2012743 2	11051886 5	42 43%	36 68%	
22	2916 6	840	2449949 0	13501835 6	51 84%	46 24%	
23	2815 6	1292	3637763.0	17139598.5	65 80%	60 95%	
24	2714 6	1302	3534417 0	20674015 5	79 37%	75 77%	
25	2613 6	877	2292132 5	22966148 0	88 18%	85 76%	
26	2512 6	673	1690983 8	24657131 8	94 67%	93 42%	
27	2411 6	521	1256446 7	25913578 6	99 49%	99.35%	
28	2310 6	57	131704 5	26045283 1	100 00%	100 00%	
29	2209 6	0	0 0	26045283 1	100 00%	100 00%	

Southwestern Public Service Company



Southwestern Public Service Company

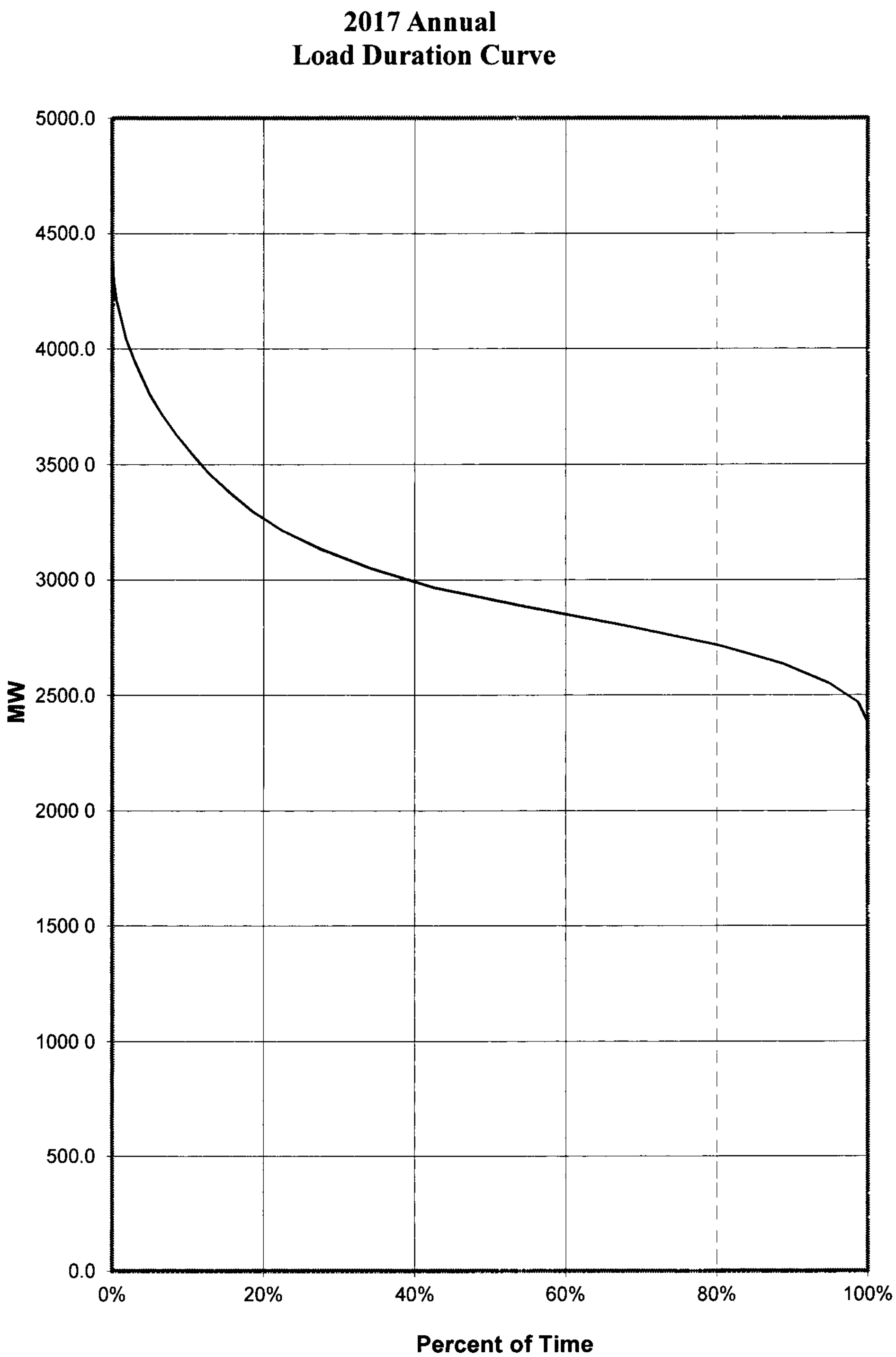
Annual Load Duration Curve

2017 Annual Load Duration

Line No						
1	**Total MWh =**	**25,988,025**	**Max =**	**4374**	**Interval =**	**82.8**
2	**Hours =**	**8760**	**Min =**	**2303**	**Load Factor =**	**67.83%**

Line No	Y Load	Count Hrs	Hrs Times Load	Accum Load	% Total Load	X % Time
3	4374 0	5	21870 0	21870 0	0 08%	0 06%
4	4291 2	14	60076 8	81946.8	0 32%	0 22%
5	4208 4	31	130460.4	212407.2	0 82%	0 57%
6	4125 6	56	231033 6	443440 8	1 71%	1 21%
7	4042 8	53	214268 4	657709 2	2 53%	1 82%
8	3960 0	87	344520 0	1002229 2	3 86%	2 81%
9	3877 2	97	376088 4	1378317 6	5 30%	3 92%
10	3794 4	108	409795 2	1788112 8	6 88%	5 15%
11	3711 6	137	508489 2	2296602 0	8 84%	6 71%
12	3628 8	159	576979 2	2873581 2	11 06%	8 53%
13	3546 0	182	645372 0	3518953 2	13.54%	10 61%
14	3463 2	190	658008 0	4176961.2	16 07%	12 77%
15	3380 4	241	814676 4	4991637 6	19 21%	15 53%
16	3297 6	264	870566 4	5862204 0	22 56%	18 54%
17	3214 8	346	1112320 8	6974524 8	26 84%	22 49%
18	3132 0	454	1421928 0	8396452 8	32 31%	27 67%
19	3049 2	573	1747191 6	10143644 4	39 03%	34 21%
20	2966 4	738	2189203 2	12332847 6	47 46%	42 64%
21	2883 6	1048	3022012 8	15354860 4	59 08%	54 60%
22	2800 8	1176	3293740 8	18648601 2	71 76%	68 03%
23	2718 0	1063	2889234 0	21537835 2	82 88%	80 16%
24	2635 2	755	1989576 0	23527411 2	90.53%	88 78%
25	2552 4	532	1357876 8	24885288 0	95 76%	94 85%
26	2469 6	340	839664 0	25724952 0	98 99%	98 73%
27	2386 8	103	245840 4	25970792 4	99 93%	99 91%
28	2304 0	8	18432 0	25989224 4	100 00%	100 00%
29	2221 2	0	0 0	25989224 4	100 00%	100 00%

Southwestern Public Service Company



Southwestern Public Service Company

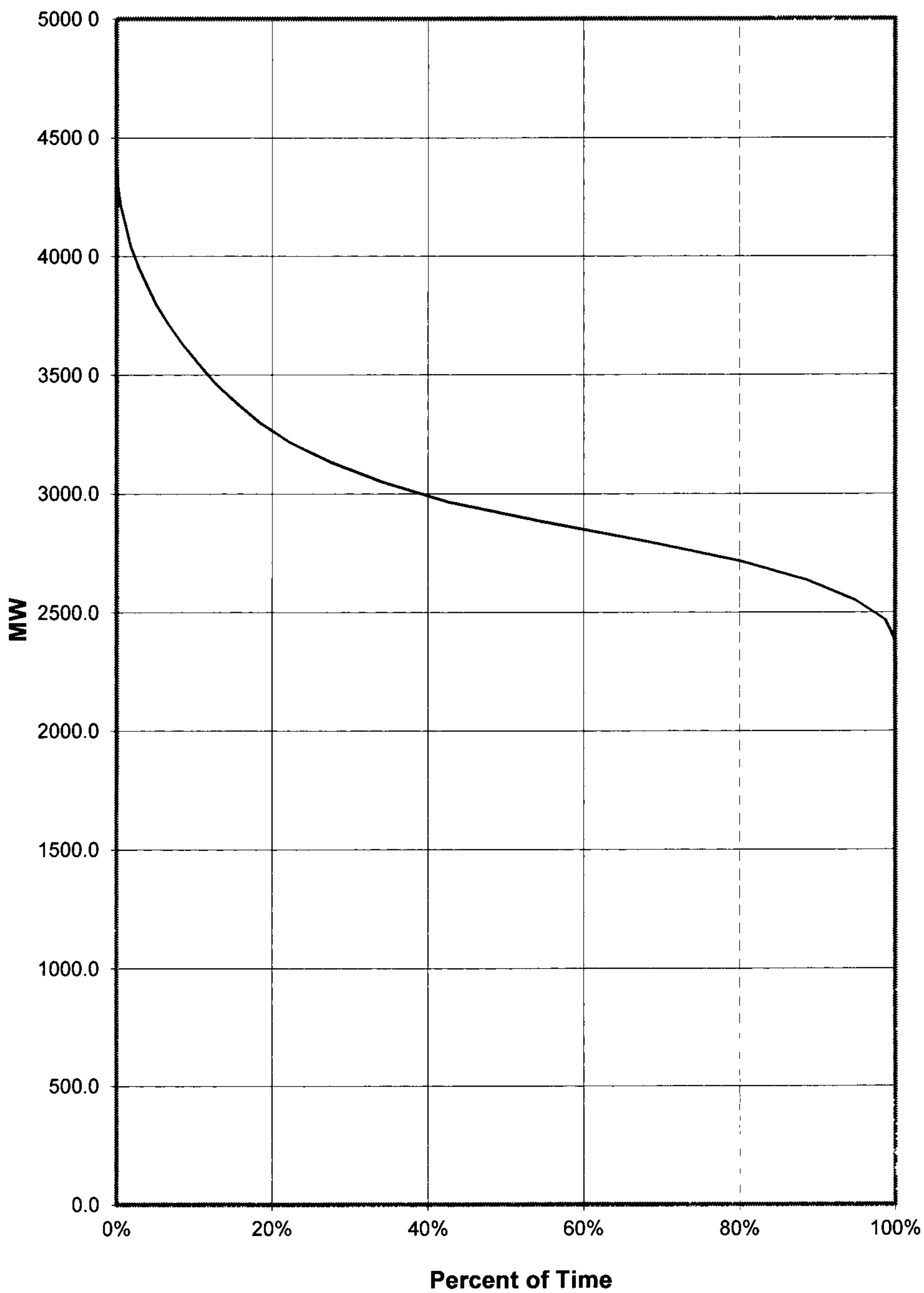
Annual Load Duration Curve

2018 Annual Load Duration

Line No							
1	**Total MWh =**	**25,988,025**	**Max =**	**4374**	**Interval =**	**82.8**	
2	**Hours =**	**8760**	**Min =**	**2303**	**Load Factor =**	**67.83%**	
	Y Load	**Count Hrs**	**Hrs Times Load**		**Accum Load**	**% Total Load**	**X % Time**
3	4374 0	5	21870 0		21870 0	0 08%	0 06%
4	4291 2	14	60076 8		81946 8	0 32%	0 22%
5	4208 4	31	130460.4		212407 2	0 82%	0 57%
6	4125 6	56	231033 6		443440 8	1 71%	1.21%
7	4042 8	53	214268 4		657709 2	2 53%	1 82%
8	3960 0	87	344520 0		1002229.2	3 86%	2 81%
9	3877 2	97	376088 4		1378317 6	5 30%	3 92%
10	3794.4	108	409795 2		1788112 8	6.88%	5 15%
11	3711 6	137	508489 2		2296602 0	8 84%	6 71%
12	3628 8	159	576979 2		2873581 2	11 06%	8 53%
13	3546 0	182	645372 0		3518953 2	13 54%	10 61%
14	3463 2	190	658008 0		4176961 2	16 07%	12 77%
15	3380 4	241	814676 4		4991637 6	19 21%	15 53%
16	3297 6	264	870566 4		5862204 0	22 56%	18 54%
17	3214 8	346	1112320 8		6974524 8	26 84%	22.49%
18	3132 0	454	1421928 0		8396452 8	32 31%	27 67%
19	3049 2	573	1747191 6		10143644 4	39 03%	34 21%
20	2966 4	738	2189203 2		12332847 6	47 46%	42 64%
21	2883 6	1048	3022012 8		15354860 4	59 08%	54 60%
22	2800 8	1176	3293740 8		18648601 2	71.76%	68 03%
23	2718 0	1063	2889234 0		21537835 2	82 88%	80 16%
24	2635 2	755	1989576 0		23527411 2	90 53%	88 78%
25	2552 4	532	1357876 8		24885288 0	95 76%	94 85%
26	2469 6	340	839664 0		25724952 0	98 99%	98 73%
27	2386 8	103	245840 4		25970792 4	99 93%	99 91%
28	2304 0	8	18432 0		25989224 4	100 00%	100 00%
29	2221 2	0	0 0		25989224 4	100 00%	100.00%

Southwestern Public Service Company

2018 Annual
Load Duration Curve



Southwestern Public Service Company

Annual Load Duration Curve

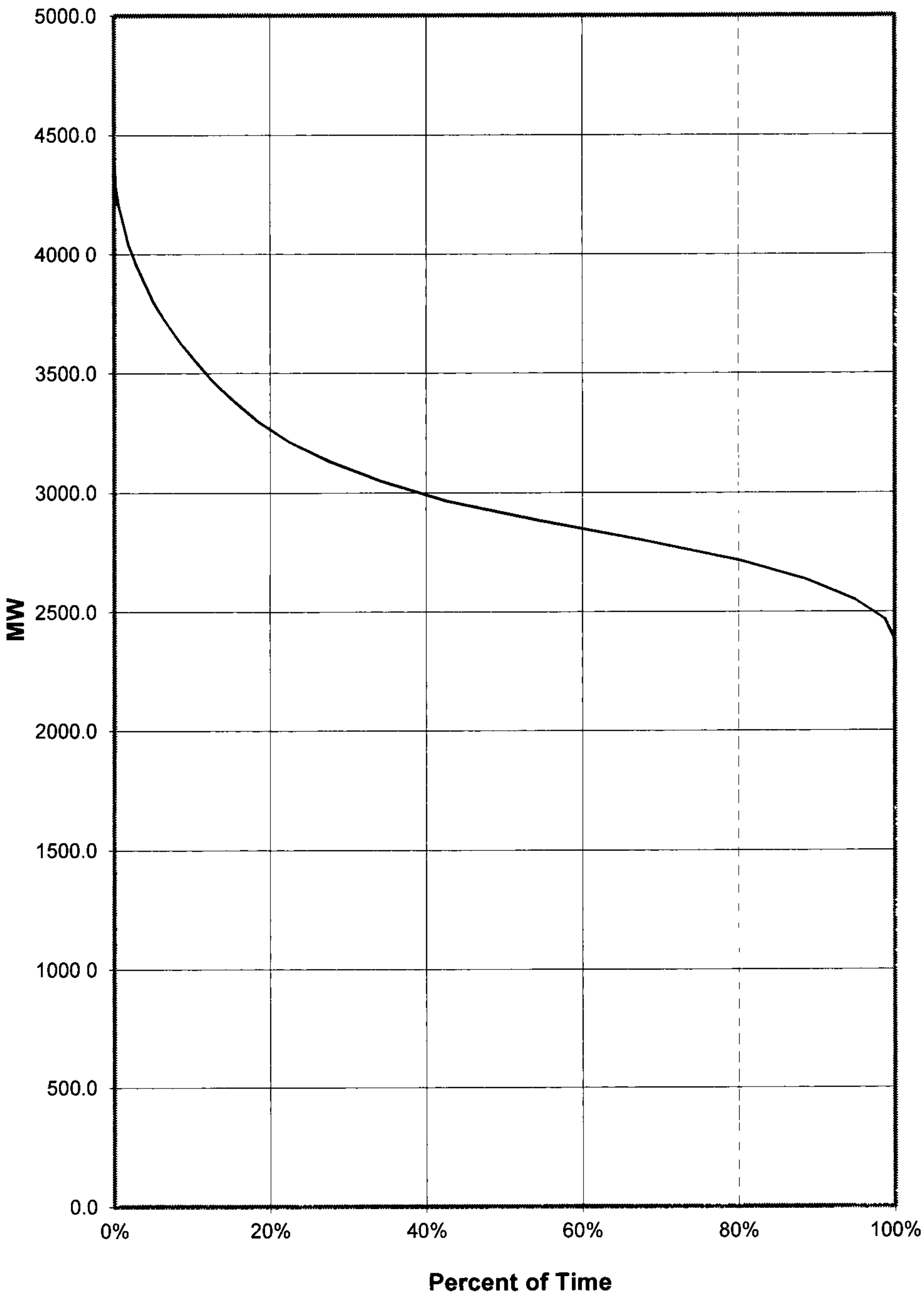
2019 Year to Date Load Duration

Line No								
1	**Total MWh =**	**25,988,025**	**Max =**	**4374**	**Interval =**	**82.8**		
2	**Hours =**	**8760**	**Min =**	**2303**	**Load Factor =**	**67.83%**		

Line No	Y Load	Count Hrs	Hrs Times Load	Accum Load	% Total Load	X % Time
3	4374 0	5	21870 0	21870.0	0 08%	0 06%
4	4291 2	14	60076 8	81946 8	0 32%	0 22%
5	4208 4	31	130460 4	212407 2	0 82%	0 57%
6	4125 6	56	231033 6	443440 8	1 71%	1 21%
7	4042 8	53	214268 4	657709 2	2 53%	1 82%
8	3960 0	87	344520 0	1002229 2	3 86%	2 81%
9	3877 2	97	376088 4	1378317 6	5 30%	3 92%
10	3794 4	108	409795 2	1788112 8	6 88%	5 15%
11	3711 6	137	508489 2	2296602 0	8 84%	6 71%
12	3628 8	159	576979 2	2873581 2	11 06%	8 53%
13	3546 0	182	645372 0	3518953 2	13 54%	10 61%
14	3463 2	190	658008 0	4176961 2	16 07%	12 77%
15	3380 4	241	814676 4	4991637 6	19 21%	15 53%
16	3297 6	264	870566 4	5862204 0	22 56%	18 54%
17	3214 8	346	1112320 8	6974524 8	26 84%	22 49%
18	3132 0	454	1421928 0	8396452 8	32 31%	27 67%
19	3049 2	573	1747191 6	10143644 4	39 03%	34 21%
20	2966 4	738	2189203 2	12332847 6	47 46%	42 64%
21	2883 6	1048	3022012 8	15354860 4	59 08%	54 60%
22	2800 8	1176	3293740 8	18648601 2	71 76%	68.03%
23	2718 0	1063	2889234 0	21537835 2	82 88%	80 16%
24	2635 2	755	1989576 0	23527411 2	90 53%	88 78%
25	2552 4	532	1357876 8	24885288 0	95 76%	94 85%
26	2469 6	340	839664 0	25724952 0	98 99%	98 73%
27	2386 8	103	245840 4	25970792 4	99.93%	99 91%
28	2304 0	8	18432 0	25989224 4	100 00%	100 00%
29	2221 2	0	0 0	25989224 4	100 00%	100 00%

Southwestern Public Service Company

2019 Year to Date
Load Duration Curve



Southwestern Public Service Company

Quality of Service Information

Southwestern Public Service Company ("SPS") strives to provide the highest quality of service at the lowest reasonable price to its customers. By continuing to improve operating procedures, maintenance practices, planning, engineering design and construction, SPS ensures the most economical operation of SPS's generation, transmission and distribution systems.

SPS sets aggressive reliability goals yearly to maintain quality of service and customer satisfaction. System Average Interruption Frequency Index ("SAIFI"), Customer Average Interruption Duration Index and System Average Interruption Duration Index ("SAIDI") are used to gauge SPS's quality of service.

During the Test Year (April 1, 2018 through March 31, 2019), SPS's SAIDI metric was 116.42, meaning that the average total amount of outage time per customer was less than 117 minutes during the Test Year. This equates to the electrical system serving customers 99.98% of the minutes in a year. Also during the Test Year, SPS's SAIFI metric was 0.89. This means that the average number of service interruptions per customer was less than one time per year.

To maintain these goals, SPS must be responsive to customers' needs. SPS staffs a Customer Care Center in Amarillo to provide responsive customer service. Call center agents take customer calls 24 hours a day, 7 days a week for emergency and outage orders. SPS's customers have the option to use the Interactive Voice Response system to quickly report an outage.

There are two Control Centers in the SPS service territory which include the Transmission Control Center in Amarillo, Texas and the Distribution Control Center in Lubbock, Texas. Both Control Centers operate 24 hours a day, 7 days a week to continuously monitor and respond to normal and emergency operating conditions. The Control Centers use a Supervisory Control and Data Acquisition system for real-time system monitoring. The Distribution Control Center uses a Network Management System to handle customer outages more efficiently. Each Control Center has a separate performance group that analyzes system performance and recommends corrective actions supported by budgetary recommendations.

Overall customer satisfaction has been tracked in the Electric Utility Residential Customer Satisfaction Study performed by J.D. Power and Associates ("J.D. Power Study"). In the 2018 J.D. Power Study, SPS ranks in the 2nd quartile for overall satisfaction among residential customers nationally.

Details on SPS's efforts to maintain and improve quality of service are discussed further in Schedules H-13.1a, H-13.1b, H-13.1c, H-13.1d and H-13.1e.

Southwestern Public Service Company

Voltage Surveys

Voltage on Southwestern Public Service Company's ("SPS") system is monitored and recorded continuously at the Distribution and Transmission Control Centers by electronic means via the Supervisory Control and Data Acquisition ("SCADA") system. SPS's SCADA system monitors 100% of the transmission interchanges and 65% of the distribution substations. Many of the distribution substations have fixed voltage recorders in the substations. Onsite voltage checks are performed as a standard response to customer complaints and can include high precision voltage recorders temporarily installed to detect voltage excursions happening at times when field personnel are not on site to measure it.

Southwestern Public Service Company

Circuit Breaker Operations

Substation personnel compile records of circuit breaker operations monthly. Known fault operations are recorded in distribution and transmission interruption databases. During the Test Year (April 1, 2018 through March 31, 2019) the following operations were recorded:

Planned Operations (non-outage)	16,228
Fault Operations	1,157

The following page summarizes the primary causes of breaker operations resulting in an outage event caused by a fault on the system for Transmission, Substation and Distribution.

The sample records by outage event include all days and are categorized by:

- Transmission, which includes the Transmission Line & Transmission Substation levels;
- Distribution Substation, which includes the Distribution Substation level; and
- Distribution, which includes the Feeder (Mainline) level.

Transmission Level Outages		
Cause	Count By Event	% Total
Animal	4	8.7%
Arrester	1	2 2%
Breaker	1	2.2%
Conduct Contact	2	4.3%
Conduct Fatigue	1	2.2%
Connector	3	6.5%
Pole	14	30.4%
Public Damage	4	8 7%
Transformer	2	4 3%
Unknown	13	28.3%
Xcel Planned	1	2.2%
Total	46	100.0%

Distribution Substation		
Cause	Count By Event	% Total
Animal	6	21.4%
Arrester	1	3.6%
Breaker	1	3.6%
Bushing	2	7.1%
Conduct Contact	1	3.6%
Crossarm	1	3 6%
Debris In Line	1	3.6%
Fused Cutout	2	7.1%
Insulator	3	10.7%
Relay	5	17.9%
Transformer	2	7.1%
Unknown	3	10.7%
Total	28	100.0%

Distribution(Mainline)		
Cause	Count By Event	% Total
Accidental	3	1.3%
Animal	2	0.9%
Arrester	4	1.7%
Breaker	2	0.9%
Bushing	1	0.4%
Cable	4	1.7%
Capacitor Bank	3	1.3%
Clear for	2	0.9%
Conduct Contact	23	9.9%
Conduct Fatigue	23	9.9%
Connector	2	0.9%
Crossarm	17	7.3%
Debris In Line	2	0.9%
Fuse Link	1	0.4%
Fused Cutout	2	0.9%
Insulator	10	4.3%
Lightning	20	8.6%
Pole	39	16.8%
Public Damage	24	10.3%
Recloser	5	2.2%
Unknown	29	12.5%
Veg Tree	1	0 4%
Xcel Planned	13	5.6%
Total	232	100.0%

Note: Percentages may be slightly off due to rounding.

Sample Records:

Distribution(Mainline)					
Area Office	**Begin Time**	**Cause**	**City**	**Completion Time**	**Customers**
Amarillo	4/7/18 4:15 AM	Public Damage Broken Pole	AMARILLO	4/7/18 5:15 AM	1,206
Pampa	4/13/18 9:01 PM	Xcel Planned Construction Outage	(blank)	4/13/18 9:11 PM	39
Amarillo	4/14/18 11:52 AM	Conductor Fatigue Aluminum	AMARILLO	4/14/18 12:34 PM	1,206
Amarillo	4/14/18 11:02 PM	Public Damage Broken Pole	AMARILLO	4/15/18 12:06 AM	708
Amarillo	4/15/18 12:24 AM	Accidental Switch Error by Xcel	AMARILLO	4/15/18 12:45 AM	1,930
Pampa	4/20/18 11:49 AM	Conductor Fatigue Aluminum	PAMPA	4/20/18 12:12 PM	1,526
Pampa	4/21/18 12:57 AM	Crossarm Arm Broken	MCLEAN	4/21/18 5:54 AM	540
Hereford	4/24/18 5:59 PM	Conductor Contact - Floating	BOVINA	4/24/18 7:09 PM	42
Borger	4/25/18 1:19 PM	Public Damage Broken Pole	SPEARMAN	4/25/18 1:57 PM	585
Levelland	4/29/18 9:24 PM	Lightning Arrester Polymer	LEVELLAND	4/29/18 11:02 PM	240
Levelland	5/8/18 5:33 PM	Pole Fire	LEVELLAND	5/8/18 6:24 PM	11
Amarillo	5/12/18 9:22 PM	Crossarm Arm Broken	AMARILLO	5/12/18 11:30 PM	590
Plainview	5/15/18 9:04 PM	Conductor Fatigue Aluminum	PLAINVIEW	5/16/18 1:21 AM	96
Borger	5/15/18 9:37 PM	Pole Broken / Good condition	STINNETT	5/16/18 12:47 AM	289
Seminole	5/18/18 7:40 AM	Insulator Flash	SEMINOLE	5/18/18 10:33 AM	157
Pampa	5/24/18 1:31 AM	Lightning Strike	PAMPA	5/24/18 2:47 AM	183
Amarillo	5/27/18 4:28 AM	Public Damage Broken Pole	AMARILLO	5/27/18 6:26 AM	1,220
Lubbock	6/2/18 10:54 AM	Xcel Planned Construction Outage	RALLS	6/2/18 11:00 AM	1,147
Seminole	6/4/18 5:35 PM	Pole Broken / Good condition	SEMINOLE	6/4/18 5:46 PM	1,304
Levelland	6/5/18 11:39 AM	Public Damage Other/Unknown	EARTH	6/5/18 12:43 PM	604
Dumas	6/11/18 6:00 PM	Public Damage Non-Xcel Tree Trim	DUMAS	6/11/18 6:42 PM	2,245
Dumas	6/16/18 5:33 PM	Lightning Arrester Porcelain	DUMAS	6/16/18 7:09 PM	2,246
Plainview	6/22/18 9:21 AM	Public Damage Broken Pole	ABERNATHY	6/22/18 10:03 AM	737
Borger	6/22/18 9:28 PM	Insulator Glass/Porc Line	PANHANDLE	6/23/18 3:19 AM	103
Levelland	6/29/18 7:59 PM	Conductor Contact - Floating	(blank)	6/29/18 10:28 PM	289
Seminole	7/2/18 9:34 PM	Crossarm Arm Broken	SEMINOLE	7/2/18 10:55 PM	862
Pampa	7/6/18 7:11 PM	Veg Tree Inside Maint Corridor	CANADIAN	7/6/18 9:49 PM	313
Plainview	7/12/18 11:37 PM	Lightning Strike	SOUTH PLAINS	7/13/18 1:27 AM	22
Pampa	7/30/18 8:14 AM	Conductor Fatigue Aluminum	MIAMI	7/30/18 9:14 AM	470
Amarillo	8/4/18 12:22 AM	Unknown Cause Not Determined	AMARILLO	8/4/18 2:39 AM	607
Seminole	8/9/18 12:35 AM	Insulator Flash	SEMINOLE	8/9/18 1:23 AM	1,294
Hereford	8/15/18 10:22 PM	Pole Broken / Good condition	FRIONA	8/16/18 12:03 AM	1,548
Plainview	8/16/18 3:23 PM	Pole Rotten	KRESS	8/16/18 3:55 PM	94
Pampa	9/1/18 11:45 AM	Conductor Fatigue Aluminum	MIAMI	9/1/18 1:09 PM	469
Seminole	9/1/18 6:47 PM	Cable Failure Primary LC	SEMINOLE	9/1/18 9:30 PM	1,292
Seminole	9/3/18 10:24 PM	Crossarm Arm Broken	SEMINOLE	9/3/18 11:46 PM	1,465
Lubbock	10/5/18 8:50 PM	Insulator Glass/Porc Deadend	RALLS	10/5/18 11:20 PM	1,051
Amarillo	10/9/18 11:52 AM	Public Damage Broken Pole	AMARILLO	10/9/18 1:16 PM	1,932
Lubbock	11/25/18 9:12 AM	Pole Rotten	SLATON	11/25/18 11:29 AM	579
Seminole	12/7/18 9:07 PM	Conductor Contact - Floating	SEMINOLE	12/7/18 9:43 PM	1,154
Levelland	12/13/18 5:26 PM	Crossarm Arm Broken	EARTH	12/13/18 6:27 PM	610
Amarillo	12/26/18 8:20 AM	Pole Fire	AMARILLO	12/26/18 9:16 AM	814
Dumas	12/27/18 3:28 AM	Conductor Fatigue Aluminum	DALHART	12/27/18 3:58 AM	1,501
Plainview	12/29/18 5:39 PM	Breaker Failure Oil Circuit Bkr	FLOYDADA	12/29/18 7:08 PM	90
Amarillo	1/9/19 10:59 PM	Public Damage Broken Pole	AMARILLO	1/10/19 12:07 AM	986
Levelland	1/12/19 10:40 PM	Unknown Cause Not Determined	LEVELLAND	1/12/19 11:13 PM	240
Hereford	1/21/19 2:51 PM	Pole Rotten	(blank)	1/21/19 5:57 PM	3
Clovis	2/22/19 10:47 PM	Lightning Strike	TEXICO	2/23/19 2:44 AM	337
Pampa	2/23/19 2:06 AM	Capacitor Bank Failure OH	PERRYTON	2/23/19 4:49 AM	1,256
Levelland	2/23/19 10:38 AM	Unknown Cause Not Determined	(blank)	2/23/19 11:55 AM	604
Pampa	3/11/19 10:35 PM	Capacitor Bank Failure OH	PERRYTON	3/11/19 11:51 PM	962
Amarillo	3/13/19 10:36 AM	Pole Rotten	AMARILLO	3/14/19 12:57 PM	1,832
Dumas	3/13/19 11:30 AM	Conductor Contact - Galloping	CACTUS	3/13/19 3:55 PM	760
Borger	3/13/19 5:23 PM	Bushing Failure Dist Transf	BORGER	3/14/19 11:47 AM	1,205
Clovis	3/13/19 5:39 PM	Conductor Contact - Floating	TEXICO	3/14/19 8:32 AM	388
Dumas	3/14/19 6:40 PM	Unknown Cause Not Determined	DUMAS	3/14/19 6:47 PM	2,066
Levelland	3/19/19 7:52 AM	Xcel Planned Construction Outage	ANTON	3/19/19 5:01 PM	14
Dumas	3/24/19 12:49 PM	Conductor Fatigue Aluminum	CACTUS	3/24/19 3:15 PM	408
Plainview	3/31/19 3:42 AM	Cable Failure Pri Jacketed	PLAINVIEW	3/31/19 5:27 AM	1,500

Distribution Substation					
Area Office	**Begin Time**	**Cause**	**City**	**Completion Time**	**Customers**
Hereford	4/6/18 7:09 AM	Insulator Glass/Porc Deadend	FRIONA	4/6/18 7:58 AM	1,690
Pampa	5/7/18 10:19 PM	Relay Failure	PERRYTON	5/7/18 10:50 PM	1,675
Borger	5/14/18 7:52 AM	Animal Contact Other	FRITCH	5/14/18 9:53 AM	1,810
Lubbock	5/28/18 9:25 AM	Animal Contact Other	POST	5/28/18 10:59 AM	728
Pampa	6/22/18 10:07 PM	Animal Contact Other	MCLEAN	6/23/18 2:03 AM	817
Pampa	6/27/18 12:12 PM	Insulator Flash	PAMPA	6/27/18 2:35 PM	8
Plainview	7/16/18 7:59 PM	Fused Cutout Failure	LOCKNEY	7/16/18 10:54 PM	19
Amarillo	7/30/18 2:47 AM	Unknown Cause Not Determined	AMARILLO	7/30/18 3:57 AM	964
Pampa	9/27/18 8:51 AM	Insulator Flash	PAMPA	9/27/18 9:28 AM	1,253
Seminole	10/5/18 11:47 PM	Transformer Sub Non-LTC	SEAGRAVES	10/6/18 5:56 AM	242
Borger	12/26/18 9:54 AM	Lightning Arrester Porcelain	(blank)	12/26/18 11:34 AM	829
Amarillo	2/8/19 1:27 AM	Transformer Dist Non-CSP	AMARILLO	2/8/19 2:40 AM	1,001
Lubbock	3/9/19 12:05 PM	Fused Cutout Failure	POST	3/9/19 7:13 PM	62
Borger	3/13/19 10:21 AM	Bushing Failure Sub Transf	BORGER	3/14/19 2:58 PM	1,282
Plainview	3/28/19 3:48 AM	Animal Contact Other	FLOYDADA	3/28/19 5:18 AM	107

Transmission					
Area Office	**Begin Time**	**Cause**	**City**	**Completion Time**	**Customers**
Seminole	4/15/18 3:05 AM	Animal Contact Other	SEAGRAVES	4/15/18 4:08 AM	26
Levelland	4/29/18 11:20 PM	Connector Failure Crimped	(blank)	4/30/18 12:28 AM	240
Levelland	4/30/18 12:08 AM	Connector Failure Crimped	(blank)	4/30/18 12:29 AM	1
Plainview	4/30/18 1:36 AM	Animal Contact Other	LOCKNEY	4/30/18 2:27 AM	1,096
Levelland	4/30/18 2:55 AM	Unknown Cause Not Determined	(blank)	4/30/18 3:05 AM	448
Levelland	4/30/18 3:10 AM	Connector Failure Crimped	LEVELLAND	4/30/18 3:46 AM	240
Plainview	5/10/18 3:05 PM	Transformer Sub Non-LTC	LOCKNEY	5/10/18 4:33 PM	930
Lubbock	5/15/18 6:03 PM	Pole Broken / Good condition	SLATON	5/15/18 7:00 PM	3,023
Plainview	5/17/18 6:00 PM	Conductor Fatigue Aluminum	SILVERTON	5/17/18 8:22 PM	294
Pampa	5/30/18 8:53 PM	Pole Broken / Good condition	PERRYTON	5/30/18 9:50 PM	206
Lubbock	6/1/18 5:36 PM	Pole Broken / Good condition	LORENZO	6/2/18 7:41 AM	1,146
Amarillo	6/5/18 2:03 AM	Public Damage OH Line Contact	AMARILLO	6/5/18 2:09 AM	323
Borger	6/22/18 9:22 PM	Unknown Cause Not Determined	BORGER	6/23/18 1:22 AM	426
Pampa	6/22/18 9:34 PM	Unknown Cause Not Determined	CANADIAN	6/22/18 11:49 PM	1,428
Amarillo	6/24/18 11:50 PM	Pole Broken / Good condition	BUSHLAND	6/25/18 2:51 AM	349
Amarillo	6/24/18 11:50 PM	Public Damage Broken Pole	AMARILLO	6/25/18 2:57 AM	34
Amarillo	6/25/18 12:52 AM	Pole Broken / Good condition	AMARILLO	6/25/18 2:51 AM	130
Amarillo	6/25/18 12:52 AM	Public Damage Broken Pole	AMARILLO	6/25/18 3:55 AM	142
Lubbock	6/29/18 7:57 PM	Unknown Cause Not Determined	SOUTHLAND	6/29/18 11:17 PM	99
Plainview	7/14/18 1:11 PM	Unknown Cause Not Determined	HALE CENTER	7/14/18 2:24 PM	1,130
Borger	7/29/18 9:55 AM	Pole Fire	BORGER	7/29/18 10:46 AM	341
Plainview	8/17/18 3:21 PM	Pole Broken / Good condition	HALE CENTER	8/17/18 3:53 PM	629
Seminole	8/17/18 11:40 PM	Breaker Failure Oil Circuit Bkr	SEMINOLE	8/18/18 1:11 AM	307
Seminole	9/1/18 5:45 PM	Lightning Arrester Transmission	SEMINOLE	9/1/18 7:36 PM	179
Levelland	10/29/18 4:13 PM	Animal Contact Other	(blank)	10/29/18 5:00 PM	14
Borger	11/3/18 7:00 AM	Xcel Planned Construction Outage	GRUVER	11/3/18 8:44 AM	979
Levelland	12/26/18 4:39 PM	Public Damage Broken Pole	ANTON	12/26/18 5:25 PM	620
Dumas	12/27/18 2:39 AM	Unknown Cause Not Determined	STRATFORD	12/27/18 5:23 AM	1,126
Clovis	2/22/19 10:09 PM	Unknown Cause Not Determined	FARWELL	2/23/19 12:05 AM	307
Plainview	3/9/19 2:31 AM	Unknown Cause Not Determined	SILVERTON	3/9/19 5:40 AM	492
Plainview	3/9/19 2:16 AM	Pole Broken / Good condition	HALE CENTER	3/9/19 3:48 AM	1,134
Hereford	3/12/19 11:33 PM	Pole Broken / Good condition	DIMMITT	3/13/19 2:06 AM	1,320
Levelland	3/13/19 1:23 AM	Unknown Cause Not Determined	(blank)	3/13/19 3:49 AM	14
Borger	3/13/19 10:28 AM	Transformer Sub Non-LTC	BORGER	3/13/19 2:41 PM	97
Pampa	3/13/19 1:58 PM	Conductor Contact - Galloping	CANADIAN	3/13/19 6:56 PM	252
Plainview	3/29/19 9:21 PM	Animal Contact Other	LOCKNEY	3/29/19 10:20 PM	1,215

Southwestern Public Service Company

Quality of Service Complaints

Southwestern Public Service Company ("SPS") receives inquiries concerning quality of service impacts to customer equipment. Certain electronic equipment is more sensitive to voltage fluctuations, voltage or impedance imbalance, and other issues than other loads. Inquiries concerning this type of equipment are handled by SPS in a different way than other service complaints.

Calls from customers concerning sensitive equipment are routed to the Area Engineers for review. If the inquiry merits further investigation, such investigation is carried out under the direction of the Area Engineers. The goal of the investigations is to help the customer determine the cause of the problem and its resolution. The source of power disturbances can be the SPS system or, most frequently, the customer's equipment. In many cases, the disturbance is intermittent and it is very difficult to determine the cause.

If site investigation is necessary, it is performed by engineers who specialize in power quality problems. The investigation will include checks of physical condition, quality of connections, equipment and conductor limitations, system conditions and conversations with the affected customers. If, during the site investigation, it is determined that voltage and/or current monitoring is necessary, SPS will configure and install recording equipment at the customer's point of interconnection. This information is used to specify relevant upgrades to the SPS system if evidence shows a utility problem and, conversely, if it is concluded that the problem is not on SPS's system, the information is shared with the customer to assist the customer in contacting a qualified electrician.

From April 1, 2018 to March 31, 2019, the SPS Customer Care Center received the following quality of service type requests:

Type	Description	Requests
ELECTRIC OUT-PARTIAL	N/A[1]	2,541
ELECTRIC OUT-PARTIAL	BRANCH ON WIRE	14
ELECTRIC OUT-PARTIAL	CUT CABLE	8
ELECTRIC OUT-PARTIAL	LOW WIRE POLE/HOUSE	45
ELECTRIC OUT-PARTIAL	LOW WIRE POLE/POLE	13
ELECTRIC OUT-PARTIAL	CUSTOMER REPORTS SPARK	72
INVESTIGATE SERVICE	RADIO INTERFERENCE	3
INVESTIGATE SERVICE	CUSTOMER GETS SHOCK	14
VOLTAGE	FLICKERING LIGHTS	559
VOLTAGE	VOLTAGE HIGH/LOW	584
VOLTAGE	STRAY VOLTAGE INVEST.	0

(1) No description was provided for this group of service requests.

Southwestern Public Service Company

Vegetation Management (Tree Trimming) Program

Southwestern Public Service Company ("SPS") has a vegetation management program to maintain its electric system in accordance with the National Electric Safety Code ("NESC"), and improve quality of service. Trees and brush are maintained at an adequate distance from SPS's transmission and distribution overhead system to help ensure public safety and prevent interruptions of electric service. SPS has a vegetation management supervisor located in Amarillo, Texas that oversees work activities. More information regarding SPS's tree trimming program can be found in SPS's attached Annual Report on Vegetation Management that was filed on May 1, 2019 under Project No. 41381.

Transmission and Distribution Vegetation Management

Transmission lines and distribution circuits are inspected and maintained by a qualified vegetation management contractor based on local tree growth rates, specific to individual trees on specific circuits. SPS assigns the vegetation management contractor selected transmission lines and distribution circuits to work each year based on the schedule, tree conditions, and reliability performance. The contractor makes a reasonable attempt to notify landowners to make them aware of the necessary work. Types of work performed are tree pruning, tree removal, brush mowing, and herbicide applications. SPS also responds to landowner requests and maintains trees as necessary.

Contractor Performance

SPS has established and issued vegetation management guidelines to its contractors. SPS monitors contractor performance by conducting quarterly field audits, inspecting completed work, and tracking results indicators. SPS conducts quarterly and yearly reviews with its contractors to ensure performance and quality of work.

Customer Information

SPS uses various customer information brochures, booklets, and door hangers to communicate tree and power line issues. The brochure "Tree Pruning near Power Lines" describes SPS's tree maintenance program. The booklet "Plant a Better Future" promotes responsible tree planting around power lines by selecting low growing trees. Various door hangers are used to notify customers of inspections and scheduled work.

SPS also keeps safety and education information online at the following website:

https://www.xcelenergy.com/customer_support/vegetation_management

Project No. 41381

Southwestern Public Service Company (SPS) d/b/a Xcel Energy

Annual Report on Vegetation Management As Required by 16 Tex. Admin. Code §25.96 To the Public Utility Commission of Texas (PUCT)

April 30, 2019

Contact Information

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SOUTHWESTERN PUBLIC SERVICE COMPANY

VEGETATION MANAGEMENT REPORT - 2019

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Vegetation Management Plan Summary for 2019

Overview

Southwestern Public Service Company's ("SPS") Vegetation Management department performs functions associated with regulatory compliance, electric service reliability and safety of SPS's electric distribution and transmission overhead lines, substations, and other facilities through the management of vegetation[1]. SPS's Vegetation Management Program includes the services of distribution and transmission line clearance, overhead safety inspection program, landscape maintenance and bare-ground weed control.

This Vegetation Management Report ("Report") summarizes SPS's Vegetation Management Plan ("Plan") for 2019 and the Vegetation Management Implementation Summary for 2018 as prescribed in the Public Utility Commission of Texas ("PUCT") Electric Rules, SUBST. R. 25.96. Pursuant to §25.96(f).

Background

SPS implemented a formal transmission and distribution vegetation management program in 1999. The objective of SPS's Vegetation Management Program is to keep conductors clear of all incompatible vegetation. Aside from inspections by non-vegetation management SPS personnel, this is accomplished by outside contractors performing routine maintenance. Maintenance activities include tree and brush mitigation/removal, tree pruning, mowing, and herbicide applications. Maintenance objectives include:

- Public and worker safety
- Compliance with regulatory requirements
- Reliable electric service
- Integrated vegetation management practices
- Environmental stewardship and habitat enhancement

A professional vegetation manager is employed to oversee the program. The current SPS Vegetation Management Program Manager is a licensed Texas pesticide applicator as well as an ISA Certified Arborist. Continuing Education Units (CEUs) are required to maintain each of these certifications.

Contractors perform most field work. Each year, contractors are assigned a list of circuits/maintenance maps to be worked. After the contractor completes a circuit or map, SPS inspects the work for compliance in accordance with Xcel Energy's Vegetation Management Guidelines, attached to this report as Appendix A.

Customer Education

SPS continues to be recognized by the National Arbor Day Foundation as a "Tree Line USA" utility and has several publications related to vegetation management that are shared with customers. These include practical manuals on topics like tree pruning and planting as well as several types of door hangers for

[1] SPS is an electric utility subsidiary of Xcel Energy Inc. ("Xcel Energy"). Xcel Energy is the parent company of the following four wholly owned utility operating companies: Northern States Power Company, a Minnesota corporation ("NSPM"); Northern States Power Company, a Wisconsin corporation ("NSPW"), Public Service Company of Colorado, a Colorado corporation ("PSCo"), and SPS.

customer identification and acknowledgement. Customers are notified of scheduled or unscheduled work by an outbound call recording, door hanger or personal visit. Additionally, all customer materials are available on Xcel Energy's website at: https://www.xcelenergy.com/trees

A. VEGETATION MANAGEMENT GOALS

The overall goal of SPS's Vegetation Management Program is to develop site-specific, environmentally sensitive, cost-effective and socially responsible solutions to vegetation control near electric facilities. SPS's Distribution Vegetation Management Program's goal is to maintain an approximate five-year cyclic interval of vegetation maintenance.

Due to the wide range of vegetation types and densities found throughout the service territory in Texas, the number of miles of distribution facilities that need to be addressed varies greatly from year to year as does the corresponding level of expenditures.

SPS tracks the following information on a monthly basis: (1) number of distribution miles completed; (2) cost per mile completed; (3) expense amount; (4) number of sustained customer interruptions due to vegetation (normalized and non-normalized); (5) contractor completed work evaluations; and (6) contractor safety-related incidents.

More information related to SPS's Vegetation Management Program goals can be found in Section 1 and 2 of Xcel Energy's Vegetation Management Guidelines (Appendix A).

B. VEGETATION CLEARANCES AND SCHEDULING APPROACH

As detailed in Section 3 of Xcel Energy's Vegetation Management Guidelines (Appendix A), SPS distribution clearance guidelines are based on local tree growth rates, specific to individual trees on specific circuits. Each individual tree is assessed to determine adequate clearance required from the conductor to better prevent service interruption, damage to SPS facilities and threats to public safety. Specific clearances are determined based on species growth rates, as well as line voltage, construction of facilities, electric reliability performance and other factors.

C. REMEDIATION PLAN

Consideration of Vegetation-Caused Outages

As part of SPS's Vegetation Management Program, vegetation-caused, primary level voltage outages that impact more than 25 customers are investigated soon after the event to determine if the event was preventable or non-preventable. An example of a preventable vegetation-caused event would be re-growth of a tree from the last maintenance cycle breaking and falling across a line causing an outage. An example of a non-preventable vegetation-caused outage would be a tree uprooting from outside the right-of-way that had no obvious defects. These investigations prove very helpful in determining the effectiveness of SPS's Vegetation Management Program and help SPS personnel customize the program to meet specific vegetation management risks by area.

2018 Top Ten Percent SAIDI and SAIFI Feeders

Appendix B includes the 2019 Remediation plan for the 2018 top ten percent System Average Interruption Duration Index ("SAIDI") and System Average Interruption Frequency Index ("SAIFI") feeders, affected by vegetation-caused events only. The top ten percent represents twenty five distribution feeders for both SAIDI and SAIFI. Eleven of the feeders are on both the SAIDI and SAIFI lists. Appendix B indicates the SAIDI and SAIFI values, number of events, customer minutes out ("CMO") and sustained customer interruptions ("SCI") count, the number of SCI's investigated by the vegetation management department, the number of preventable and non-preventable SCIs as determined by the vegetation management department, the last year vegetation maintenance was performed, the year vegetation maintenance is scheduled, and the remediation plan for each feeder.

Analysis

- One of the feeders is scheduled for maintenance in 2019.
- Fourteen of the feeders are scheduled for inspection in 2019 for critical tree issues.
- Seven of the feeders had scheduled maintenance performed in 2018. No remediation is needed.

Conclusions

The 2018 top ten percent SAIDI and SAIFI feeder list, affected by vegetation-caused events only, does not indicate any feeders that are having significant, repeated, preventable vegetation events. This is largely due to the fact that approximately 79% of the SPS distribution line miles are currently on a five-year vegetation maintenance cycle. The reasons for relatively low vegetation impacts include program oversight that promotes proper pruning techniques, adequate clearance at the time of pruning, pursuance of tree removals and brush control, and the inspection of completed work.

D. TREE RISK MANAGEMENT PROGRAM

Trees are a major contributor of electric service interruptions nationwide. Trees cause outages in two ways, mechanical and electrical. Mechanical damage refers to entire trees or portions of trees failing and physically damaging facilities (knocking down wires, poles, etc.). Because trees can be conductive, electrical outages can also occur. These interruptions are caused when a portion of a tree becomes a short-circuit path for electricity to flow causing a protective device to operate and stop the flow of electricity. Section 2 of Xcel Energy's Vegetation Management Guidelines (Appendix A) details SPS's tree risk management program.

Hazard Tree Mitigation

Any tree on or off the right-of-way with the potential to contact an electric supply line is considered a "danger tree". A "hazard tree" is a tree that has an unacceptable risk of failing before the next maintenance cycle. Hazard trees are topped or cleared below line height or removed.

Conditions that indicate the presence of a "hazard tree" could include but are not limited to the following:

- Biological Factors
    - Decay/deadwood/dead trees

- Cracks
- Weak branch unions
- Cankers/fungal bodies

- Environmental Factors
  - Root damage, restrictions
  - Changes in exposure
  - Poor architecture (leaning, structural overloading, imbalance due to wounding, etc.)

Work Guidelines

The American National Standard Institute's A-300 standard presents performance standards for the care and maintenance of trees, shrubs, and other woody plants. The standard is intended as a guide for federal, state, municipal, and private authorities including property owners, property managers, and utilities.

Tree pruning is the selective removal of branches that are not an adequate distance from the primary line, or that will grow too close to the power line before the next maintenance cycle. Secondary, street light and service wires are not routinely pruned for clearance unless overbuilt primary exists. In addition, secondary or streetlight wires may be cleared of vegetation if major interference, such as a broken limb, exists.

Tree pruning is done to provide adequate clearance from SPS facilities while making proper cuts. If practical, pruning methods will be based on procedures and examples set forth by ANSI A300. As a general rule, trees are pruned to improve or re-establish the clearance provided from previous tree maintenance performed.

Dangerous limbs, such as those overhanging wires that have a high potential for breaking or bending into SPS conductors due to ice, snow or wind loading are removed or shortened.

Tree Removal

Tree removal is the selective mitigation of entire trees and brush at ground level. Generally, SPS will mitigate (or in the case of brush, remove):

- Tall-growing trees that fit the mitigation criteria for the geographic region
- Tall-growing brush that has the potential to grow into the conductor
- All second growth from stumps cut on previous pruning cycles

All trees and brush are cut as close to the ground as practical and attempts are made to treat all deciduous stumps with herbicide to prevent resprouting. Trees are not routinely removed from the vicinity of secondary, streetlight and service wires. Customers that want to have trees removed near these conductors on their own may request that the conductor be de-energized by SPS for private tree mitigation.

E. ADVERSE ENVIRONMENTAL CONDITIONS

SPS monitors adverse environmental conditions, such as drought and wildfire danger, through news reports, local and regional weather warnings, the Texas Forest Service and from internal field inspections. In the event of such adverse environmental conditions, SPS employees, crews and contractors are prepared to respond quickly to such conditions to maintain the reliability of the system and safely restore power if an outage occurs while minimizing the impact on vegetation on the electric distribution system. Finally, SPS vegetation management personnel and contractors are trained to identify trees that have become or are becoming hazard trees due to drought conditions.

F. OVERHEAD DISTRIBUTION MILES

Table 1 below shows SPS's total overhead distribution miles in its Texas system, excluding service drops as of January 1, 2019.

Table 1 – Total Overhead Circuit Primary Miles

Texas System	13,399

G. ELECTRIC POINTS OF DELIVERY

Table 2 below shows SPS's total number of distribution electric points of delivery on its Texas system as of January 1, 2019.

Table 2 - Total Number of Electric Points of Delivery

Texas System	266,948

VEGETATION MANAGEMENT REPORT - 2019

H. AMOUNT OF VEGETATION-RELATED WORK

In 2019, approximately 1,049 distribution line miles are scheduled for maintenance. As of March 31, 2019, SPS has completed 518 miles of vegetation-related work. The focus of the vegetation contractor is to complete the remaining miles from 2018. SPS's goal for the 2019 program year is to have approximately 79% of the distribution system on a five year vegetation maintenance cycle by year end.

I. BUDGET

Table 3 summarizes SPS's 2019 Vegetation Management budget. This budget covers calendar year 2019.

Table 3 – SPS's 2019 Vegetation Management Budget

Categories	TX Contractor Amount
Scheduled Vegetation Maintenance	$ 848,501
Unscheduled Vegetation Maintenance	$ 177,351
Tree Risk Management*	$ 0
Minor Emergency and Post-storm Activities*	$ 0
Total	**$ 1,025,852**

**Note:* Budgeted Tree Risk Management expenses are included in the Scheduled and Unscheduled Vegetation Management budget categories for 2019. Similarly, Minor Emergency and Post-storm Activity expenses are included in the Unscheduled Maintenance budget categories for 2019. Major Emergency and Post-storm Activity expenses that include facility damage are typically capitalized and included in the blanket distribution plant capital budget.

Vegetation Management - Implementation Summary For 2018

A. VEGETATION MANAGEMENT GOALS

The following is a summary of the 2018 goals & results:

A. Contractor successfully met all safety related goals.
B. Production levels in 2018 did not meet our original target and completed miles were approximately 1,350
C. Seventy-nine percent of distribution line miles were on a five year maintenance cycle at year end.

The vegetation management goals have changed for 2019 based on the number of distribution miles that are scheduled. The goals change each year based on the specific distribution maps that are scheduled.

B. SUCCESSES AND CHALLENGES

In 2018, we did not have any property owner interference issues. In situations where a property owner initially refuses access to perform the necessary vegetation clearing, our policy is to send the property owner a certified letter stating the need to maintain their trees from our facilities along with a date that the work has been scheduled.

C. PROGRESS AND OBSTACLES

In 2018, the remediation plan for all fifteen feeders was completed. Refer to the "2018 Texas Remediation Plan for 2017 Top 10% SAIFI & SAIDI Feeders" report (Appendix D). There were no obstacles.

D. CONTINUING EDUCATION HOURS

In 2018, the new SPS Vegetation Management Program Manager became certified by the Texas Department of Agriculture and received zero CEUs for the ISA Certified Arborists certification. ISA CEUs for 2018 were received in 2017 and are not due until 2019.

E. VEGETATION MANAGEMENT WORK ACCOMPLISHED

In 2018, 1,350 distribution miles were completed. The goal was 1,600. The remaining miles are being prioritized for completion in 2019. 79% of circuits at SPS are on a five year cycle due to production levels not meeting targets. SPS vendors have experienced high turnover due to strong competition from other local industries. These industries are "booming" right now and are offering higher than normal wages. This competition for labor is very challenging for SPS contractors and is affecting their ability to back fill positions. This has led to a lesser experienced contracted vegetation management work force and thus a reduction in overall productivity.

F. SAIDI AND SAIFI SCORES

The separate SAIDI and SAIFI scores for vegetation-caused interruptions for each month by feeder are detailed in the 2018 TX Vegetation Annual Filing Feeder SAIDI SAIFI report (Appendix C1 & C2).

G. 2018 VEGETATION MANAGEMENT BUDGET VS ACTUAL

	2018 Budget (Contractor Only)	2018 Actual Expenditures (Contractor Only)	2018 Percentage of Actual Expenditures vs. Budget	Actual Expenditures for Preceding Year (2017) (Contractor Only)
Scheduled Work	$1,384,000	**$1,300,797**	-6.01%	$1,452,166
Unscheduled Work	$110,000	**$136,747**	+24.32%	$148,094
TOTAL	$1,494,000	**$1,437,544**	-3.78%	$1,600,260

The Scheduled Work budget is created by putting together a list of distribution maps that are scheduled for that year. The budget for each map is estimated based on the past expense, inflation, and productivity gains. The actual expenditures for the 2018 scheduled work were $56,456 below budget because the actual costs were lower than the estimated costs.

TX 2018 Actual Expenditures Divided by Distribution Electric Points of Delivery (266,948)	$5.39
TX 2018 Actual Expenditures including Storm Reserve ($27,355) Divided by the Number of Customers (262,505)	$5.58
SPS Distribution Vegetation Management Budget from Last Base-Rate Case, April 1, 2016 through March 31, 2017 (Texas & New Mexico)	$2,397,565

The Unscheduled Work budget is created by evaluating the past year expenses along with anticipating the current year expenses. The actual expenditures for the 2018 un-scheduled work were $26,747 over budget due to an increase in minor storm events. Additional expenses of $27,355 were charged to the company's storm reserve.

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Xcel Energy | RESPONSIBLE BY NATURE

Appendix A – Xcel Energy's Vegetation Management Guidelines

Xcel Energy®

January 2019

Vegetation Management Program

January 2019

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SECTION 1: GENERAL

1.1 INTRODUCTION

Xcel Energy provides, safe, clean and reliable services to its customers at a competitive price. Xcel Energy has developed these vegetation maintenance guidelines (Guidelines) for Xcel Energy employees and contractors to use when performing vegetation maintenance services on electric distribution and transmission, and natural gas facilities These Guidelines are designed to help ensure that vegetation near our transmission and distribution facilities is maintained in a consistent manner that minimizes the risk of interference with the safe operation of the electric facilities. Vegetation management includes the services of electric distribution and transmission line clearance, overhead safety inspection program, landscape maintenance and bare-ground weed abatement.

These Guidelines are available in English and Spanish. Any interpretation of these Guidelines shall be based on the English version.

Vegetation Management & Ancillary Programs has standardized distribution and transmission business process maps. Contractors are required to comply with the most current versions.

Required documentation: Contractors who are performing vegetation management services are required to maintain and provide to their employees and keep on each truck or work location at all times

- Current copy of the Guidelines.
- The booklet "Best Management Practices for Utility Pruning of Trees" by the International Society of Arboriculture
- **Minimum approach distance tables.**

**This information supersedes all previous manuals and guidelines for line clearance and vegetation management work for Xcel Energy operating companies including Northern States Power Minnesota, Northern States Power Wisconsin, Public Service Company of Colorado, and Southwestern Public Service Company

1.2 SAFETY POLICY

Safety Statement
There is no job we do not service we perform so urgent that we cannot take time and use the necessary equipment to do it safely

1.2.1 General

All personnel performing vegetation management work on or near Xcel Energy facilities or rights of way shall follow approved safety guidelines and procedures. All contractors performing work for Xcel Energy shall comply with all applicable governmental safety and health regulations, and the safety and health provisions of their contracts Unless superseded by Xcel Energy safety policy, contractors are responsible for developing and following their own safety procedures and complying with all laws and regulations.

Note: This information addresses reliability for Xcel Energy operating companies and is not intended for use as personal safety guidelines. Regardless of the service performed, every work site has its own safety and work requirements

1.2.2 Safety Intervention Stop Work Responsibility (SISWR)

The SISWR policy at Xcel Energy establishes each worker's authority and responsibility to perform a Safety Intervention or Stop Work when an unsafe condition or situation develops at their worksite. The simple message is, "If you see something unsafe, speak up and intervene If the situation remains unsafe, stop the work." Everyone should feel confident to question and stop any at-risk behavior by Xcel Energy employees, contractors, vendors, visitors or the general public, who may be in or around Xcel Energy work sites

Safety Intervention applies if there is no imminent danger or hazard to people. It should be utilized to resolve safety concerns or issues that can improve work practices, tools and equipment, or to advance safety at Xcel Energy. To intervene, approach the individual and let the individual know you are concerned about the individual's safety. Take action to address or correct the unsafe situation Then, get a commitment from the individual to work safely. If the issue is not resolved in a short period of time or if feedback provided is not acted upon, discuss the concern with the supervisor or manager. Safety interventions do not necessarily result in stopping work, but may elevate to stopping work if the issue is not quickly resolved

Stop Work Responsibility Every Xcel Energy employee and contractor has both the authority and responsibility to stop work. Stop Work Responsibility is used to prevent injury, harm, or damage to Xcel Energy employees, contractors, visitors, vendors, the general public, Xcel Energy property and equipment, or the environment To exercise Stop Work, safely stop the work, equipment or process. Gather all personnel in the area and help identify the safety issues. Contact the person in charge, or a supervisor or manager, and let them know the work has been stopped and the resolution of an immediate safety concern is necessary

1.2.3 Industry Standards

There are two important standards for tree worker safety in the United States, OSHA 1910 269[1] and ANSI Z133 Tree workers must meet the requirements of these standards as well as any other applicable federal, state or local laws, codes or regulations.

OSHA Standard 1910 269 is the Occupational Safety and Health Administration's vertical standard pertaining to work relating to the generation, transmission and distribution of electricity A specific section of OSHA 1910 269 requires that everyone performing tree work in proximity to electric hazards must be qualified and that their training is documented.

ANSI Z133 is the American National Standard for Arboricultural Operations – Pruning, Repairing, Maintaining, and Removing Trees, and Cutting Brush – Safety Requirements. ANSI Z133 provides information that can be helpful in understanding and complying with the requirements contained in OSHA Standard 1910 269.

ANSI Z133 defines an electric hazard to exist any time a tree worker, tool, tree or any other conductive object is closer than 10 feet from an energized conductor with a voltage of 50,000 volts or LESS, these clearance distances increase as voltages increase ANSI Z133 provides tables that outline minimum approach distances for both qualified and non-qualified tree workers based on voltage and elevation. Contractors may elect to provide and train with minimum approach distance tables that have greater distances than outlined in ANSI Z133 [1]

1.2.4 State Requirements

In the service territories of Public Service Company of Colorado and Southwestern Public Service Company, there are additional standards that apply.

Colorado: Colorado Revised Statutes Title 9 Safety – Industrial and Commercial, Article 2 5 - High Voltage Power lines – Safety Requirements. Only qualified employees of an electric utility can perform any activity that may bring an individual or equipment within 10 feet of high voltage (lines in excess of 600 volts) overhead lines. Contractors working directly for the utility are considered qualified. Non-qualified employees or individuals must contact the appropriate utility to make arrangements for safe activity.

Texas: Texas Statutes Chapter 752 – High Voltage Power lines. Only qualified employees of an electric utility can perform any activity that may bring an individual or equipment within 6 feet of high voltage (lines in excess of 600 volts) overhead lines Contractors working directly for the utility are considered qualified. Non-qualified individuals must contact the appropriate utility to make arrangements for actions to be taken to mitigate the hazard

1.2.5 Additional Safety Considerations

The following safety procedures shall be followed by contractors performing vegetation management work for Xcel Energy

- The contractors must be aware at all times of the nature and characteristics of the Xcel Energy electric and/or gas facilities to be worked before any work begins Contractors need to understand that electric facilities must remain energized during the performance of work unless special arrangements are made with an authorized Xcel Energy representative
- The contractor shall comply with Xcel Energy's Contractor Safety Program
- The contractor shall comply with the terms of its contract with Xcel Energy
- The contractor shall obtain full information as to the voltage of its circuits and minimum approach distances before starting the work
- The contractor shall at all times conduct work in a manner to safeguard the public from injury and property from damage

1 All references to standards in these Guidelines refer to the most current published version of the standards at the time the Guidelines are being applied

- The contractor must use all necessary protection for its employees and the public, and guard against interference with normal operation of the circuits If, in the judgment of the contractor's general foreman/supervisor, it is too hazardous to prune or remove trees with the circuits energized, the contractor must contact an authorized Xcel Energy representative(s). If appropriate, Xcel Energy will provide the necessary protective materials or de-energize circuits to ensure the safe pruning or removal of the tree(s). Should the contractor knock down or come into contact with Xcel Energy conductors (power lines), the contractor must notify Xcel Energy immediately and take the necessary protective measures. All contractor-caused electric service interruptions are subject to repair at the contractor's expense.
- In the event a contractor becomes aware of any dangerous, broken, loose or faulty Xcel Energy facilities in the normal course of its line clearance performance, the contractor shall promptly advise Xcel Energy as to the exact equipment location(s) and nature of the condition found in accordance with the Overhead Safety Inspection Program. (See Section 5)
- Any contractor personnel entering substation equipment yards must be qualified employees (OSHA 1910.269) and must have completed Xcel Energy sponsored substation hazard awareness training. When instructed to do so, the contractor shall notify dispatch/area control prior to entering any substation and when leaving the substation Contractors shall close the gate upon entering a substation, and lock it upon exiting Substation gates are to remain secured at all times in accordance with Xcel Energy's Substation Access Program. Parking in substations is not allowed unless pre-approved by the Xcel Energy Vegetation Management representative

1.3 WHY ELECTRIC UTILITIES ARE REQUIRED TO PERFORM VEGETATION MANAGEMENT

Trees are a major contributor of electric service interruptions nationwide. Trees cause outages in two ways; mechanical and electrical. Mechanical damage refers to entire trees or portions of trees failing and physically damaging facilities (knocking down wires, poles, etc.) Because trees can be conductive, electrical outages can also occur. These interruptions are caused when a portion of a tree becomes a short-circuit path for electricity. This often causes a protective device to operate and stop the flow of electricity. Vegetation management is necessary to ensure the safe and reliable operation of electric transmission and distribution facilities and, at the time of work, adequate vegetation clearance must be achieved from the conductors and mitigation of applicable hazard trees in an attempt to prevent interruptions of electric service for the duration of the prescribed maintenance cycle.

Xcel Energy's vegetation management practices must comply with state and federal laws. These laws include requirements by state regulatory entities such as public utility commissions and public service commissions that require electric utilities to maintain their electrical systems in accordance with the National Electric Safety Code (NESC). The NESC generally requires the pruning or removal of interfering trees near overhead facilities In addition, the NESC, Vegetation Management Section 218.A 1 addressed underground facilities:

Vegetation that may damage ungrounded supply conductors should be pruned or removed. Vegetation management should be performed as experience has shown to be necessary.

Note: Factors to consider in determining the extent of vegetation management required include, but are not limited to line voltage class, species' growth rates and failure characteristics, the vegetation's location in relation to the conductors, the potential combined movement of vegetation and conductors during routine winds, and sagging of conductors due to elevated temperatures or icing

Federal law, through the North American Electric Reliability Corporation (NERC), imposes additional requirements on overhead transmission lines of 200kV or higher. See section 4 3.

SECTION 2: SUSTAINABILITY – INTEGRATED VEGETATION MANAGEMENT (IVM)

2.1 GENERAL VISION

IVM is a data-driven, progressive system of information gathering utilized to best plan and complete work, including follow-up auditing, to better ensure the desired results are achieved. It involves the use of various types of vegetation management techniques including the removing, pruning and mowing of vegetation and the treatment of vegetation with herbicides The overall goal of a utility IVM program is to develop compliant, site-specific, environmentally sensitive, cost-effective and socially responsible solutions to vegetation control near electric and natural gas facilities

2.2 TREE RISK ASSESSMENT AND MITIGATION

The contractor will perform a limited visual tree risk assessment associated with assigned capital or maintenance projects on company facilities. Company facilities include but are not limited to electric and gas substations, electric distribution and transmission infrastructure (including poles, wires, and associated hardware), communication sites, office and warehouse buildings and other company facilities designated by Xcel Energy's vegetation management representative.
A limited visual tree risk assessment is defined as a visual assessment from a defined perspective (such as, one-sided, ground based, vehicular, or from an aircraft) of an individual tree or population of trees, to assess the risk to specific targets from obvious defects or specified conditions (ANSI A300, Part 9 Tree Risk Assessment & Tree Failure) Tree(s) identified having a moderate to high probability of failure which pose an unacceptable risk will be mitigated Xcel Energy defines a tree that poses an unacceptable risk of failing onto Xcel Energy facilities as a hazard tree. The contractor is also expected to report trees identified that pose an unacceptable risk to company facilities outside assigned capital or maintenance projects to Xcel Energy's vegetation management representative.

Tree conditions to consider during a visual tree risk assessment are not limited to the following

Biological Factors

- Decay/deadwood/dead trees
- Cracks
- Weak branch unions
- Cankers/fungal bodies
- Poor architecture

Environmental Factors

- Root damage, restrictions
- Changes in exposure (e g newly exposed trees along the edge of the right of way)
- Slope/Grade

2.3 ANSI A-300

The American National Standard Institute's A-300 standard presents performance standards for the care and maintenance of trees, shrubs, and other woody plants The standard is intended as a guide for federal, state, municipal, and private authorities including property owners, property managers and utilities

Whenever practicable, contractor tree workers are expected to adhere to this standard when managing vegetation near electric facilities.

2.4 WORK DESCRIPTIONS

2.4.1 Pruning

Tree pruning is the selective removal of branches that pose an unacceptable safety or reliability risk to the conductors or equipment currently, based on evidence of prior tree contact, or that may pose an unacceptable safety or reliability risk before the next routine maintenance.

Maintenance cycles are established for each individual maintenance area. A maintenance area is a geographical area maintained by Vegetation Management, regardless of electrical connectivity. In most cases, the initial area was defined by the circuit schema that existed when the maintenance area was created and the maintenance area name is derived from this circuit name. If the maintenance cycle for the maintenance area being worked is not known, please contact the appropriate Xcel Energy Vegetation Management representative.

Pruning methods will be based on procedures and examples set forth by ANSI A-300 Trees should be pruned to improve or re-establish the clearance provided from previous tree maintenance performed.

For more information regarding distribution pruning clearances, please see Section 3.2; for more information regarding transmission pruning clearances, please see Section 4.2

2.4.2 Removal
Tree removal is the selective clearing of an entire tree at ground level.

For more information regarding distribution removal criteria, please see Section 3 2; for more information regarding transmission removal criteria, please see Section 4.2.

2.4.3 Pole Clearing
Clear vines from poles, generally this means cutting at both ground level and at least 6 feet up the pole. Treat base of vine with herbicide when possible. Leave remaining vines on conductors as they will quickly die and fall off. Never pull vines in proximity to energized conductor.

Clearing vegetation around distribution primary voltage poles and down guys to provide operational access should be performed during routine maintenance work whenever possible, especially poles with devices that need to be accessed by utility first responders.

2.4.4 Debris Disposal
Routine Maintenance – pruning and removing green trees – 95% of VM work
Distribution: Generally, brush is removed, the site is cleaned up and the large logs are cut into manageable-sized pieces and left on the property for the owner. Wood chips are sometimes blown on site in rural/wooded settings.

Transmission: Generally wood and brush are left on the right-of-way, either in whole pieces or mechanically masticated, especially in rural areas. Consult with Vegetation Management representative for additional information

Reasoning. Trees are being worked solely because of the presence of power lines

Storm/Emergency Response – clearing damaged trees in order to restore service – 1%-2% of VM work
Debris created for emergency response work is left on site in a reasonably safe manner, and not hauled away

Reasoning: The tree owner would be faced with the same clean-up if the power lines were not present, and is benefitting from Xcel Energy's assistance

New Construction/Rebuilds – clearing of vegetation for construction or facility upgrades or rebuilds associated with a capital job – 1%-2% of VM work

Debris disposed of in accordance with negotiations with property owner

Make Ready Work – typically private tree company requested work to clear trees a distance from the power line, so they can do more work – 1%-2% of VM work.

Xcel Energy shall provide this service at its expense. Debris created is left on site in a reasonably safe manner, and not hauled away.

Reasoning: The customer's decision to work the tree is often independent of the presence of power lines. The tree is worked only to clear Xcel Energy facilities so the customer can have their project completed.

Hazard Tree Mitigation – usually initiated by Xcel Energy during routine maintenance, but sometimes initiated by private property owners as they attempt to comply with municipal ordinances regarding dead, dying or diseased trees – 1%-2% of VM work (higher in areas dealing with epidemics/infestations)

Debris created is left on site in a reasonably safe manner, and not hauled away

Reasoning: The tree owner would be faced with the same clean-up if the power lines were not present and is benefitting from Xcel Energy's assistance by controlling the inevitable failure of the tree.

2.4.5 Other Methods Used

- Mechanical pruning
- Mechanical mowing
- Foliar herbicide spraying
- Cut-stubble herbicide spraying
- Pellet or granular herbicide applications
- Low volume basal herbicide applications
- Tree growth regulators (generally used only in a targeted fashion, most often on rural transmission and three-phase distribution, cycle-busting trees specifically. See Xcel Energy Vegetation Management representative for more information).

2.5 HERBICIDE GUIDELINES

All herbicide and treatment methods used by the contractor shall have prior approval by an Xcel Energy Vegetation Management representative and shall comply with all easements, laws and regulations Product labels and Safety Data Sheets (SDS) shall be provided upon request to the appropriate Xcel Energy Vegetation Management representative.

2.5.1 Precautions

- Do not apply herbicides outside of right of way boundaries except in cases where landowner's written acknowledgement has been obtained.
- In Wisconsin, no herbicide will be used within or outside of the right-of-way for a transmission line designed for operation at 100 kV or above without the written consent of the landowner.
- If a property owner objects to any of the herbicide treatments, the operation shall immediately be discontinued on that property until any issues are resolved

2.5.2 Spills or Accidents

Any spill, leak, fire or other accident involving herbicides **must be reported immediately** to the Xcel Energy Vegetation Management representative

SECTION 3: DISTRIBUTION VEGETATION MANAGEMENT

3.1 GENERAL GUIDELINES

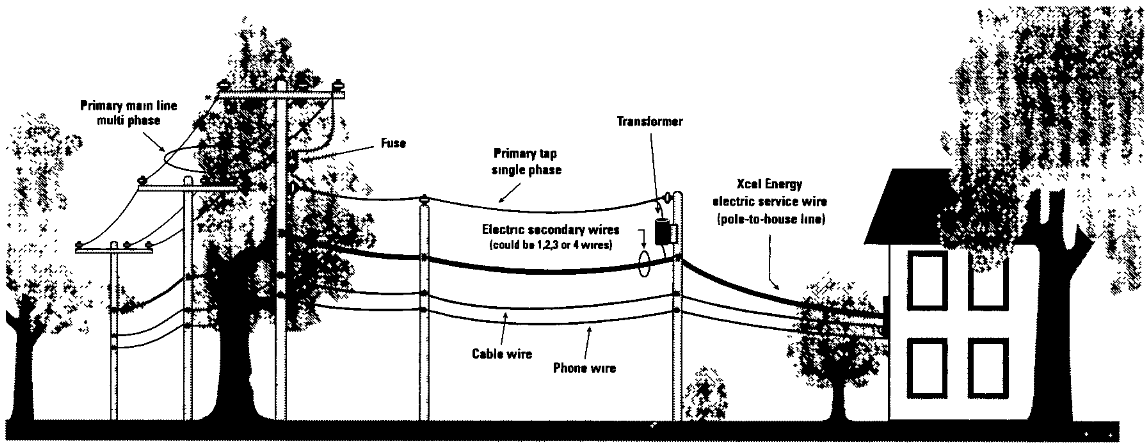
Xcel Energy's clearance guidelines are based on local tree growth rates, specific to individual trees on specific maintenance areas. Specific clearances are determined based on species growth rates, as well as line voltage, construction of facilities, electric reliability performance and other factors.

Therefore, each individual tree needs to be assessed to determine adequate clearance required from the conductor to prevent service interruption, damage to Xcel Energy facilities and threats to public safety. Xcel Energy expects qualified line-clearance contractors to use their professional judgment to determine what these clearances will be in each situation, based on the established maintenance cycle for the maintenance area on which they are working and the particular circumstances in the geographic area to minimize the risk that vegetation will interfere with the safe operation of the electric lines prior to the next maintenance cycle. Work will be completed in such a way that volume of work is maintained or reduced over multiple cycles on each maintenance area through pruning clearance and removal decisions. Contractor will submit to Xcel Energy any written interpretations of these distribution clearances the contractor has prepared

Contractors shall not rely on the accuracy of the distribution circuit or maintenance area maps. Instead, contractors are responsible for obtaining the appropriate clearances on all facilities existing in the field. Xcel Energy does not purposely clear non-company conductors including cable and phone wires

3.1.1 Clearance Guidelines by Type of Construction

An understanding of the basic distribution system, voltage gradients and tree selection criteria is necessary to determine clearances



Voltage gradient (Vg) is a function of how electric facilities are constructed and can be a major factor in tree-caused outage risk. The higher the Vg, the greater the risk of an outage occurring when trees interfere with electric facilities. The Vg will vary based on construction types and operating voltage and can quickly be calculated in the field.

In multiphase situations, take the phase to phase voltage (kV) and divide it by the spacing between phases (feet). See Examples A, B & E.

$$V_g \text{ for multi-phase} = \frac{\text{phase to phase kV}}{\text{distance ft}}$$

In single phase and multiphase situations where a branch might contact the phase and neutral, use the phase to ground voltage (kV) and divide by the distance between the phase and neutral (feet) See Examples C & D.

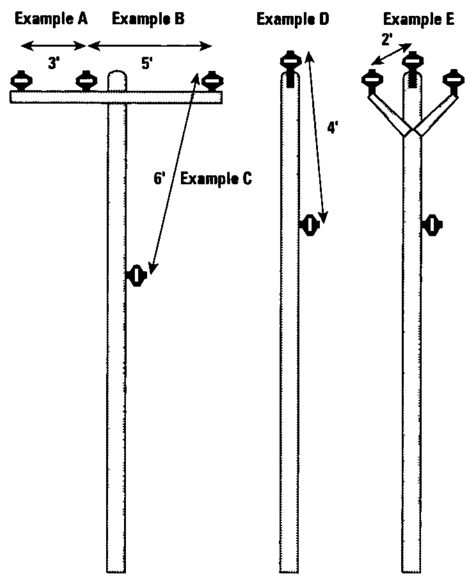
$$V_g \text{ for single phase} = \frac{\text{phase to ground kV}}{\text{distance ft}}$$

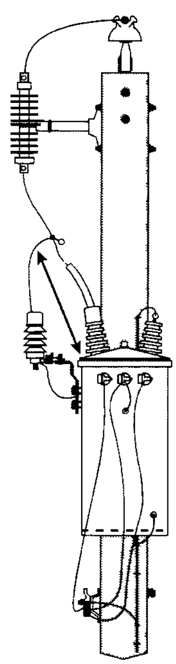
Bottom line: as voltage gradient increases, outage risk increases, higher operating voltage and/or shorter distance for a branch to bridge to cause a fault, the greater the risk Work with your Xcel Energy Vegetation Management representative to determine what Vg criteria to consider in your area

SECTION 3 | DISTRIBUTION VEGETATION MANAGEMENT

3.1.2
Voltage Gradient (V_g) Examples

Phase to Phase kV/ Phase to Ground kV	Voltage Gradient (kV/foot)	Risk
34.5 / 19.9		
Example A	12	High
Example B	7	High
Example C	3	Moderate
Example D	5	High
Example E	17	High
13.8 / 8		
Example A	5	High
Example B	3	Moderate
Example C	1	Low
Example D	2	Low
Example E	4	High
12.5 / 7.2		
Example A	4	High
Example B	3	Moderate
Example C	1	Low
Example D	2	Low
Example E	4	High
4 / 2.3		
Example A	1	Low
Example B	1	Low
Example C	0.4	Low
Example D	1	Low
Example E	1	Low





Be mindful of extremely high Vg conditions where a branch may ground out between energized equipment and neutral or equipment housing (transformers, potheads, capacitor banks, etc).

3.2 WORK CRITERIA

3.2.1 Multi-Phase Primary:
In general, multiphase primary facilities are more sensitive to tree-caused electrical outages due to high voltage gradients and serve the most customers When a tree is selected for pruning, branches will be pruned if portions of the tree above, below and adjacent to the conductor could grow into, beyond or break across the conductors before the next routine maintenance. Remove overhanging branches, roll-back the tops of trees to prevent overhang, and removal of incompatible species as described below is a preferred practice

3.2.2 Single-Phase Primary:
In general, single-phase facilities are less sensitive to tree-caused electrical outages due to lower voltage gradients. When a tree is selected for pruning, branches will be pruned if there is a significant risk that portions of the tree above, below and adjacent to the conductor could break into the line before the next routine maintenance or if the tree appears to have made contact with the conductor Removal of incompatible species as described below is a preferred practice

3.2.3 Other Pruning Considerations:
Contracted tree crews must be able to identify the species of tree and evaluate its growth rate in relation to the line Please keep in mind that trees that have never been pruned grow at a slower rate than those that have been pruned Therefore, many trees which have never been pruned and still have adequate distance from the conductor, by considering Vg and factors listed below, can be skipped and re-evaluated for pruning as part of the next routine maintenance

Once a tree is selected for pruning, achieve maximum clearance for the designated cycle length to minimize the risk of vegetation interfering with existing electric facilities prior to the next maintenance cycle Prune all questionable trees in a given "set-up" as a significant portion of tree pruning cost is setting up for the work (set-up for bucket is boom reach, set-up for manual crew would include questionable trees within reach of the climbed tree), taking into consideration.

- The need to remove branches located a significant distance below the conductors, i.e. "a shelf," as the reliability benefit may be minimal and removal of these branches may result in accelerated growth of branches and water sprouts near the conductors.
- Branch strength and flexibility - remove or shorten limbs overhanging wires that have a high potential for breaking or bending into Xcel Energy conductors due to ice, snow or wind loading, which can cause both mechanical and electrical outages (see Section 1 3)
- Tree species
  - Growth rates (how fast the branches grow back)
  - Wood strength (the chance of the branch breaking under the load of strong wind, snow or ice)
- Branch size (larger-diameter branches failing and coming in contact with conductors create the greatest risk for tree-related interruptions)
- Branch connection or union (be aware of the possibility of included bark at the branch bark ridge)
- Voltage conducted by the line (the higher the voltage, the greater the clearance required)
- Type of construction and spacing between phases of multi-phase, (compact design and multi-phase lines pose higher risk to tree-related interruptions due to voltage gradient correlation)
- Location of the tree in relationship to protective devices (tree outages closer to the substation breaker will affect higher numbers of customers)
- Critical customers on the circuit (hospitals, etc)
- General public safety (existence of tree houses, climbable trees, public places, etc)
- Risk of wildfire ignition
- Also, when there is company-owned distribution underbuilt on transmission structures, vegetation selected for work shall also be maintained according to transmission specifications. Please contact your Xcel Energy Vegetation Management representative for further direction

Regardless of facility construction type, easily climbed trees (conifers in particular) shall be pruned to provide ground clearance and/or primary conductor clearance so that a person cannot easily access the primary conductor. Barriers to performing this work should be immediately reported to an Xcel Energy Vegetation Management representative.

SECTION 3 | DISTRIBUTION VEGETATION MANAGEMENT

3.2.4 Other Removal Considerations:

- Remove tall-growing trees that pose a significant threat to public safety such as climbable trees that could allow direct contact with primary conductors by a person.
- Remove "cycle-busting" trees – i e., remove any trees that may interfere with the safe operation of the line before the next routine maintenance.
- Remove tall-growing brush that has the potential to grow into the conductor.
- All trees and brush should be cut as close to the ground as practical.
- Remove all second growth from stumps cut on previous work projects
- Whenever possible and authorized by state law, all deciduous stumps should be treated with herbicide to prevent re-sprouting.
- Prune or remove all trees that present an unacceptable risk to Xcel Energy facilities (see Section 2.2). The identification and mitigation of hazard trees should be a priority as mitigating these situations will greatly reduce the risk of preventable mechanical outages.
- Contractors will consult their Xcel Energy Vegetation Management representative for specific removal criteria for the area in which they are working

3.2.5 Secondary (service/loop drops, street light wires)
If practical, ground personnel should prune trees interfering with secondary and service lines within the immediate area of the work site

Trees by secondary, street light and service wires are not routinely pruned for clearance unless overbuilt primary exists. **However, secondary, service lines, or streetlight wires should be pruned if major interference, such as a broken limb or deflection, exists.**

Trees are generally not removed from the vicinity of secondary, streetlight and service wires Customers that want to have trees cleared from these conductors on their own may request that the conductor be de-energized by Xcel Energy for private removal by calling 800.895.4999

3.3 TYPES OF DISTRIBUTION PROJECTS

3.3.1 Routine Maintenance / Scheduled Work
Routine Maintenance is proactive, scheduled work performed on a maintenance area basis. In general, all debris is removed, while logs are cut into manageable-sized pieces and left on the property for the customer.

3.3.2 Mid-Cycle / Supplemental Inspection
Inspections that may be scheduled on selected maintenance areas for the purpose of identifying and mitigating as needed, vegetation conditions which in the judgement of the inspector, should be addressed prior to the next routine maintenance work. Projects will be assigned by the Program Manager

3.3.3 External and Make Ready Clearance Requests
Only qualified line-clearance contractors, as defined by federal, state or local regulations or laws, can work on trees that have grown closer to power lines than certain distances as outlined in the applicable laws/regulations. Therefore, when requested, Xcel Energy (through its contractors) will provide preliminary clearance to help reduce the potential for electrical contact by third-party non-qualified workers. Requests for these clearances are known as "make ready" clearance requests.

It is important that contractor personnel respond to these requests in a prompt and timely manner and in accordance with any laws and regulations. Contractor personnel must also determine the most cost effective course of action to provide make ready clearance Examples include:

- Pruning the portion of the tree away from the conductor
- Dropping the tree on the ground
- Requesting that the conductor be de-energized
- If the request pertains to a service line, street light wire or other secondary line, advise the requesting party to call Xcel Energy Customer Service at 800.895 4999 and request a "line drop" to temporarily remove the wire from the work zone.

As of the publication date, Xcel Energy does not currently charge a fee for the pruning or dropping of trees related to make ready clearance requests, but it is important that the contractor clearly communicate to the requesting party that all debris will be left on site. Xcel Energy may collect fees in the future

Note that a service fee may apply to the de-energizing of conductors and for line drops The requesting party should consult Xcel Energy Customer Service for more information by calling 800 895 4999.

3.3.4 Internal Requests
Various entities within Xcel Energy may request assistance from tree crews to mitigate tree issues The majority of these requests are due to service reliability problems or to clear trees for the installation of new facilities and the upgrade of existing facilities

3.3.5 Service Reliability Related Requests
It is important that contractors respond to these requests in a timely manner and in accordance with any instructions provided with the request We expect contractors to make a judgment call as to the necessity of pruning. Contractors need to consider all factors, including the likelihood of the tree to cause an outage in its current condition, risk to public safety, and when the tree is due for routine maintenance, when making this decision.

3.3.6 Construction / Cross Charge
These requests pertain to the installation of new facilities and the upgrade of existing facilities In many cases contractor personnel will be asked to identify trees requiring clearance and to provide information that will be used to estimate the cost of tree clearing It is important that contractor personnel respond to these requests in a prompt and timely manner and in accordance with any instructions provided with the request

3.3.7 Emergency / Storm Response
Contractor personnel are required to respond to storm situations in accordance with the regional storm response process Contact the Vegetation Management representative to confirm applicable regional processes. Only work necessary for the restoration of power will be performed A reasonable attempt should be made to notify customers No debris disposal will be attempted for any tree work performed

SECTION 4: TRANSMISSION VEGETATION MANAGEMENT

4.1 GENERAL GUIDELINES AND PROGRAM PHILOSOPHY

The primary objective of the transmission line clearance program is to keep transmission facilities clear of all incompatible trees, brush and other vegetation that could grow too close to conductors or otherwise interfere with the safe operation and maintenance of the facility. Incompatible vegetation is defined as vegetation that at maximum mature height could encroach within maintained clearance distances. This is accomplished by performing routine maintenance on each transmission maintenance area including tree felling, pruning, mowing and herbicide application

4.2 ACHIEVING CLEARANCE AT THE TIME OF INITIAL CLEARING AND MAINTENANCE

4.2.1 Bramble and Byrnes

Wherever practical, the Wire Zone/Border Zone concept (Bramble and Byrnes) shall be integrated into the vegetation management program to allow for different types and heights of vegetation in the ROW. The International Society of Arboriculture's booklet titled "Best Management Practices – Integrated Vegetation Management" (a companion publication of ANSI A300, Part 7) provides a good working summary of this concept. This concept differentiates between the wire zone directly under the conductors and the remaining border zone.

Generally, this concept allows for different, yet compatible vegetation types in separate zones.

Wire Zone: Area directly underneath the conductor(s), including potential conductor sway. Vegetation in the wire zone consists of low-growing forbs and grasses

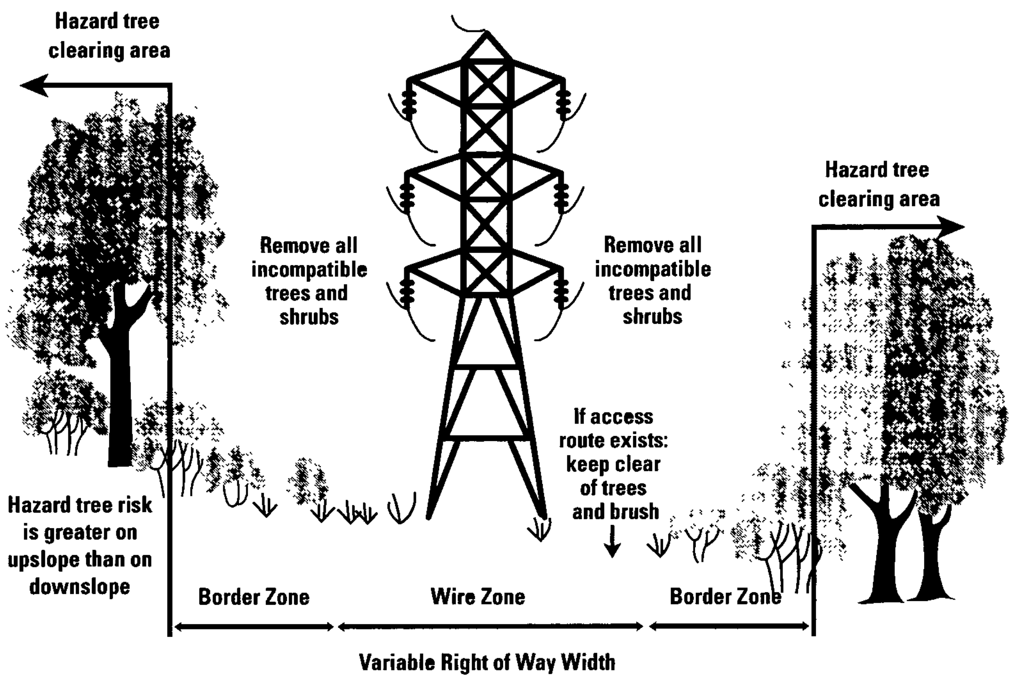
Border Zone: Area that begins at the outside edge of the wire zone and extends to the edge of the maintained ROW, easement or other right of way. The border zone may contain additional low-growing woody plants and trees Trees that originate outside of the easement bounds, yet have growth that has extends within the plane of the easement bounds should be evaluated for side pruning.

Areas outside the border zone must be patrolled for hazard trees (see Section 2.2)

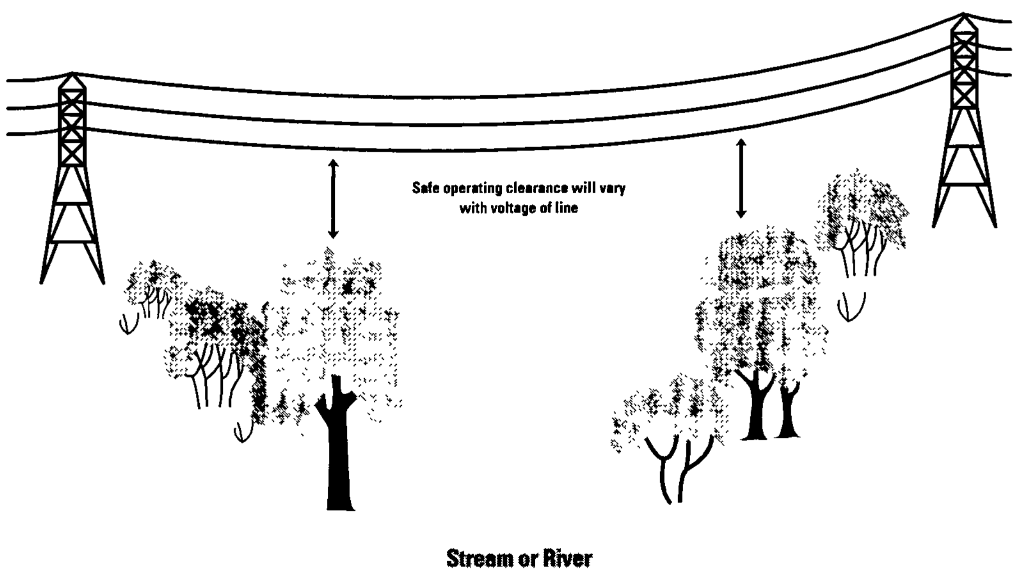
4.2.2 Other Considerations:

- Remove tall-growing brush that has the potential to grow into the conductor.
- All trees and brush should be cut as close to the ground as practical.
- Remove all second growth from stumps cut on previous work projects.
- Whenever possible, all deciduous stumps should be treated with herbicide to prevent re-sprouting.
- Mitigate all trees that present an unacceptable risk to Xcel Energy facilities (see Section 2.2). The identification and mitigation of hazard trees should be a priority as mitigating these situations will greatly reduce the risk of preventable mechanical outages.
- Keep switch grates clear of all vegetation Apply bare ground herbicide to switch grates whenever feasible.

Transmission wire zone / border zone ROW



Special Considerations for Leaving Trees on the ROW at Valley Crossings



4.2.3 Maintained Clearances for Trees

Table A - Maintained Vegetation Clearances at Structure or Lowest Sag Point/Greatest Sway Point (ft) - All states, all elevations

Voltage(kV)	At Structure		Up to 400 Ft Span		Up to 800 Ft Span		Up to 1200 Ft Span	
	H ↔	V ↕	H ↔	V ↕	H ↔	V ↕	H ↔	V ↕
69	11	11	11	14	18	18	28	22
88	12	12	12	15	19	19	29	23
115	13	13	13	16	20	20	30	24
161	14	14	14	17	21	21	31	25
230	18	17	18	20	25	24	35	28
345	22	20	22	23	29	27	39	31
500	27	23	27	26	34	30	44	34

The following maintained vegetation guidelines clearances in Table A[2] are to be maintained at all times, where easement rights allow.

2 **Please note** that clearances are provided at two points along the span for both horizontal and vertical clearance These tables indicate clearances at the structure and at the low point of the conductor (belly of the line) The differences in the clearance values in Table A are due to the sag/sway factor for varying span lengths Depending on where the tree is located, determine the best number to use utilizing these numbers as a guideline

4.2.4 Anticipated Tree Re-Growth

In order to maintain these clearances at all times, contractors performing tree work must consider multiple factors including the tree species, growing environment, re-growth rate, and maintenance cycle length to determine the amount of clearance required at the time of pruning

The following tables are provided as a guideline only and the contractor is responsible for evaluating each situation Each tree requires the evaluation of the above factors in order to determine specific re-growth rates.[3]

Table 1 – Operating Area: NSPM & NSPW

Common Tree Species	Average re-growth after pruning (ft)	
	4 Year Cycle	5 Year Cycle
American Elm	13	15
Ash	10	12
Black Locust	14	16
Box-Elder	14	16
Cottonwood / Willow	20	24
Linden	10	12
Pine / Spruce	6	7
Red Oak	10	12
Silver Maple	12	14
Sugar Maple	10	12

Table 2 – Operating Area: PSCo, Less than 6,000 ft

Common Tree Species	Average re-growth after pruning (ft): 3 Year Cycle
Aspen	5
Cottonwood	20
Pine	5
Poplar	20
Russian Olive	11
Siberian Elm	20
Silver Maple	12
Spruce / Douglas Fir	5
Tree of Heaven	9
Willow	20

Table 3 – Operating Area: PSCo, Greater than 6,000 ft

Common Tree Species	Average re-growth after pruning (ft): 5 Year Cycle
Aspen	5
Blue Spruce	5
Cottonwood	20
Douglas Fir	5
Engleman Spruce	5
Lodgepole Pine	5
Ponderosa Pine	5
Poplar	20
Siberian Elm	20
Willow	20

Table 4 – Operating Area: SPS

Common Tree Species	Average re-growth after pruning (ft)	
	3 Year Cycle	4 Year Cycle
American Elm	10	12
Cottonwood	12	14
Locust	10	12
Mulberry	10	12
Pecan	10	12
Pine	6	7
Poplar	12	14
Red Oak	8	10
Tree of Heaven (Ailanthus)	10	12
Willow	12	14

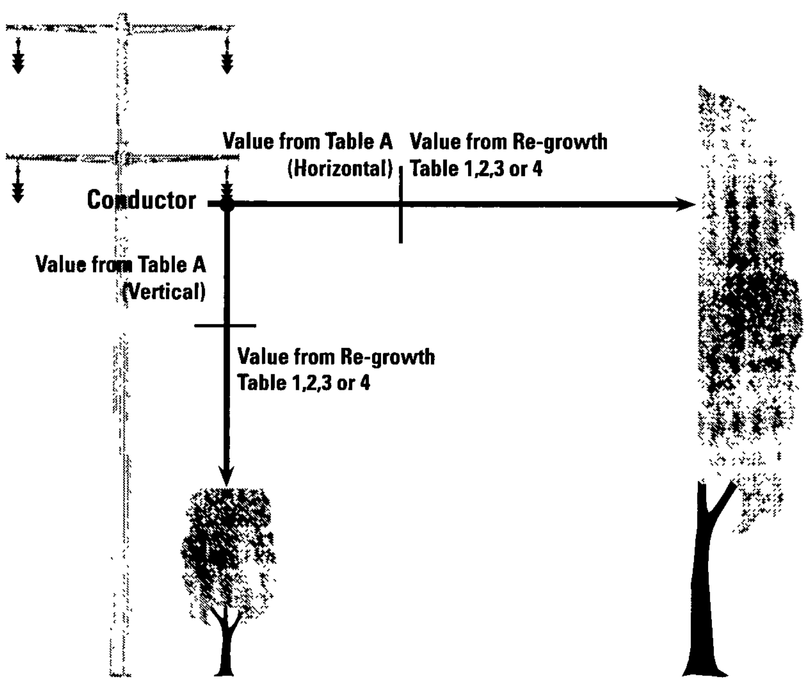
3 **Choose table** based on which Operating Area you are working in as well as species and established maintenance cycle This table is intended as a guideline only and the ultimate growth estimates must be determined by the contractor For species and maintenance cycles not listed, determine appropriate clearance from twig growth increment

SECTION 4 | TRANSMISSION VEGETATION MANAGEMENT

The clearance obtained at time of initial clearing and maintenance shall be based on the "Maintained Clearances for Trees" (Table A) and the "Anticipated Tree Re-Growth" (Tables 1, 2, 3, or 4).

The following calculations must be performed to determine clearances necessary at time of maintenance:
Horizontal & Vertical Clearance at time of pruning =
(Value from Table A) + (Value from Table 1, 2, 3 or 4)

Illustration of Horizontal and Vertical Clearance Obtained at Time of Maintenance



4.3 TRANSMISSION LINES THAT FALL WITHIN THE AMBIT OF FAC-003

Priority 1 (P1) clearance distances and the corresponding imminent threat process have been established to best ensure compliance with Requirement 4 (R4):

Voltage	Priority 1 Clearance
< 200kV*	≤5 feet
230 kV	≤10 feet
345 kV	≤15 feet
500 kV	≤20 feet

If, at any time, vegetation is observed closer than these priority clearances, an Xcel Energy Vegetation Management Program Manager shall be notified immediately.

*Only subject to FAC-003 if specifically designated in those requirements

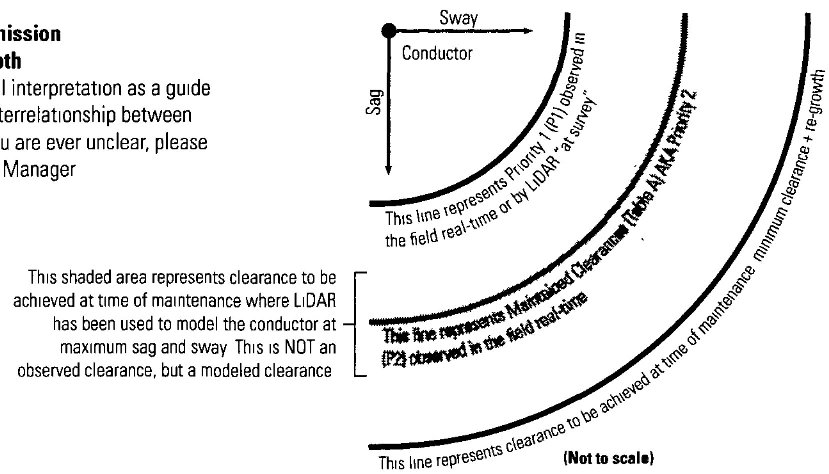
Priority 2 (P2) are clearances greater than Priority 1, but less than those outlined in Tables A .

4.3.1 LiDAR-Modeled Clearance

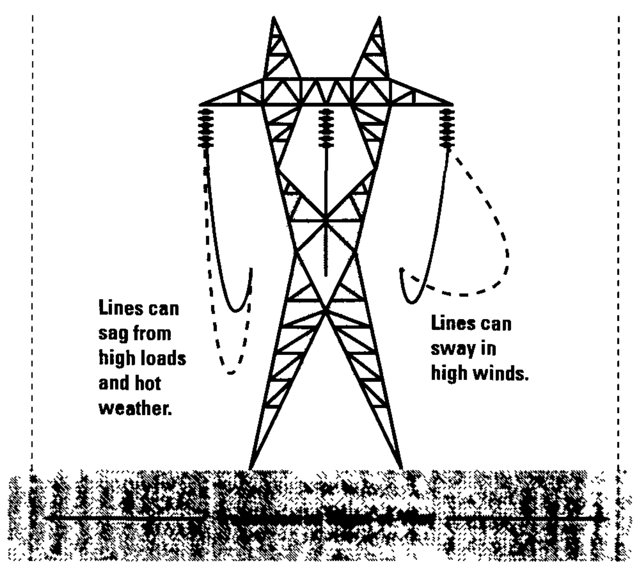
Where LiDAR analysis has been performed for routine maintenance purposes and conductor location modeled to maximum sag and sway, the Maintained Clearances for Trees (Table A) are replaced with the Priority 1 (P1) clearance distances to generate the vegetation condition polygons on the maps developed for routine maintenance purposes The expected re-growth of vegetation for the applicable cycle must be added to the Priority 1 Clearance threshold to determine the minimum amount of clearance that needs to be achieved at the time of vegetation management work. Workers may also need to factor in vegetation growth which has occurred since the date of LiDAR acquisition

4.3.2 Interrelationship of Transmission VM Clearances Defense-in-Depth

Xcel Energy has provided this visual interpretation as a guide to assist with understanding the interrelationship between multiple clearance definitions. If you are ever unclear, please contact your supervisor or Program Manager



Additionally, here is a diagram that illustrates sag and sway of conductors



4.4 TYPES OF TRANSMISSION PROJECTS

4.4.1 Routine Maintenance / Scheduled Work

Routine Maintenance is proactive scheduled work performed on a maintenance area basis.

- Contractors are expected to determine the most cost-effective method of safely completing all work performed.
- Before entering any easement tract or private property for the purpose of right of way clearing, as a courtesy, an effort shall be made to contact the property owner
- If contact is successful, the property owner shall be informed of the work to be done Be aware that a landowner's easement may contain specific language pertaining to vegetation issues
- If the contractor is unable to contact/locate the owner of any property where work is required, report the situation to an Xcel Energy Vegetation Management representative
- If it is necessary to enter the property owner's land to gain access to the right of way, an agreement should be reached on the best route. If an agreement cannot be reached or in the case of an absentee owner, the contractor shall notify their Xcel Energy Vegetation Management representative.
- If any damage to property or crops results, the contractor is responsible for the related claims unless other provisions are made with Xcel Energy.
- If a property owner submits a claim, the contractor should contact the owner immediately.

The contractor shall obtain a signed, written acknowledgement for any removal or herbicide work done beyond the bounds of the Xcel Energy easement or right of way

4.4.2 Mid-Cycle / Supplemental Inspection

Inspections that may be scheduled on selected maintenance areas for the purpose of identifying and mitigating as needed, vegetation conditions which in the judgement of the inspector, should be addressed prior to the next routine maintenance work. Projects will be assigned by the Program Manager.

4.4.3 Transmission Wildfire Protection Program

Transmission structures that are subject to wildfire in remote and mountainous areas require vegetation clearing to help protect the facility. Refer to the Transmission Wildfire Protection Guidelines for the Colorado and Texas and New Mexico service areas For the Minnesota, North Dakota and South Dakota, and Wisconsin and Michigan service areas, clearing of all woody vegetation within a 10 foot radius of transmission structures is required.

4.4.4 External and Make Ready Requests

Only qualified line-clearance contractors, as defined by federal, state or local regulations or laws, can work on trees that have grown closer to power lines than certain distances as outlined in the applicable laws/regulations. Therefore, when requested, Xcel Energy (through its contractors) will provide preliminary clearance to help reduce the potential for electrical contact by third-party non-qualified workers. Requests for these clearances are known as "make ready" requests.

It is important that contractor personnel respond to these requests in a prompt and timely manner and in accordance with any laws and regulations Contractor personnel must also determine the most cost effective course of action to provide adequate clearance. Examples include:

- Prune the portion of the tree back an adequate distance
- Drop the tree on the ground

As of the publication date, Xcel Energy does not currently charge a fee for the pruning or dropping of trees related to make ready requests, but it is important that the contractor clearly communicate to the requesting party that all debris will be left on site and Xcel Energy will not dispose of the same

4.4.5 Internal Requests

Various entities within Xcel Energy may request assistance from Vegetation Management to mitigate vegetation issues. The majority of these requests are due to service reliability problems, results of patrol process, or for the installation or refurbishment of facilities.

4.4.6 Service Reliability Related Requests

It is important that contractors respond to these requests in a prompt and timely manner and in accordance with any instructions provided with the request and in accordance with any laws and regulations In many cases we expect contractors to make a judgment call as to the required scope of work Contractors need to consider all factors including the likelihood of vegetation to cause an outage in its current condition, risk to public safety and when the maintenance area map/corridor is due for routine maintenance when making this decision.

4.4.7 Construction / Cross Charge

These requests pertain to the installation of, refurbishment, or work on facilities that are jointly owned. In many cases contractor personnel will be asked to identify the required scope of work and to provide information that will be used to estimate the associated costs It is important that contractor personnel respond to these requests in a prompt and timely manner and in accordance with any instructions provided with the request and in accordance with any laws and regulations

4.4.8 Emergency / Storm Response

Contractor personnel are required to respond to storm situations in accordance with the regional storm response process Only work necessary for the restoration of power will be performed. A reasonable attempt should be made to notify customers. No debris disposal will be attempted for any work performed.

Contractors shall report hazards found as part of the overhead safety inspection program, which is performed in concert with transmission and distribution line clearance operations.

SECTION 5: OVERHEAD SAFETY INSPECTION PROGRAM

5.1 DESCRIPTION

Contractors shall perform overhead safety inspections as part of their routine vegetation management operations which includes inspection of the following, regardless of the presence of vegetation:

- Distribution primary conductor
- Distribution secondary and service conductors on the job site
- Transmission facilities
- Other facilities

Contractors are to identify obvious safety hazards on Xcel Energy's distribution and transmission overhead facilities that could pose a threat to the general public as well as our employees and contracted workers. Hazards that present an imminent threat to personal or public safety must be resolved immediately; in an emergency, call local Dispatch or Area Control. Depending upon the urgency of the situation, it may be necessary for the inspector to stay on site until a utility representative arrives at the scene

When a hazard is identified, follow the Overhead Safety Inspection Process.

Following the completion of the maintenance area, the contractor shall indicate on the Work Completion Evaluation form whether the overhead safety inspection has been completed.

5.2 SAMPLE LIST OF HAZARDS

The following is a sample list of safety hazards that contractors should be able to recognize. Please note that all situations cannot be listed and good judgment must be used when inspecting.

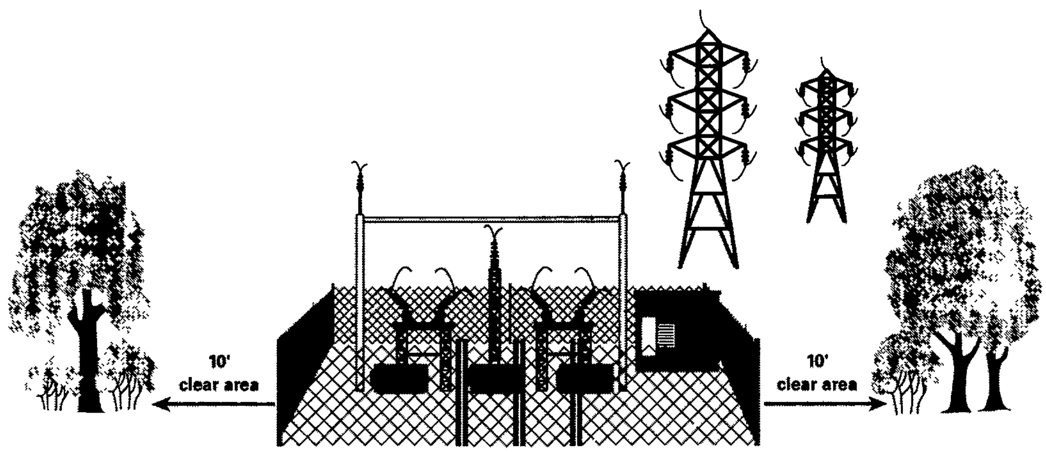
- Cracked or broken cross arms
- Missing cross arm braces
- Guy wires missing or damaged
- Tripping hazards, such as ground wire sticking out from pole
- Oil-filled equipment leaks
- Equipment ready to fall down
- Transmission right of way encroachment
- Clearances of conductors – from buildings, tree houses, ladders, transmission, etc.
- Leaning pole, tower or footing
- Rotted or eroding pole, tower or footing
- Bird nest on a structure
- Significant woodpecker damage to a pole or tower
- Wires down or broken
- Severely frayed conductor or neutral / static wires
- Wires off insulator or pin
- Ground clearances
- Damage to insulator
- Damage to pole top pin
- Damage to pole steps
- Accessible objects hanging from lines
- Meter housing loose from structure
- Mast or riser pulling from housing
- Wires exposed
- Doors to underground equipment and vaults unlocked or open

SECTION 6: ELECTRIC SUBSTATION, NATURAL GAS, AND OTHER FACILITY WORK

6.1 GENERAL DESCRIPTION

Xcel Energy's vegetation management group is also responsible for maintaining vegetation at electric substations and at selected high- and low-pressure gas facilities In some areas, Xcel Energy Vegetation Management is also responsible to provide vegetation control services at generating stations (also known as "power plants") and at facilities such as offices and service centers, telecommunication sites, and other corporate-owned property

Facilities located on federal lands and some private properties require special notification and treatment types. Contractors are required to contact the appropriate Xcel Energy Vegetation Management representative



6.2 SUBSTATION FENCE CLEARANCE

Trees and shrubs growing too close (10 feet or less) to perimeter fences can allow animal access, which can lead to substation transformer outages affecting large numbers of customers. Vegetation can conceal unauthorized human access which creates safety and security concerns and problems with theft

At the time of distribution and transmission maintenance area work, the contractor shall inspect the perimeter of the substation fence where the circuit originates and clear vegetation which is closer than 10 feet from the fence

If any newly planted vegetation is identified, the contractor should consult with the appropriate Xcel Energy Vegetation Management representative prior to removal

6.3 SUBSTATION SECURITY AND ACCESS

Any contractor personnel entering substation equipment yards must be qualified employees (OSHA 1910.269) and must have completed Xcel Energy-sponsored substation hazard awareness training When instructed to do so, the contractor shall notify dispatch/area control prior to entering any substation and when leaving the substation Contractors shall close the gate upon entering a substation, and lock it upon exiting Substation gates are to remain secured at all times in accordance with Xcel Energy's Substation Access Program. Parking in substations is not allowed unless pre-approved by the Xcel Energy Vegetation Management representative

Contractors need to be aware that there are special conditions that may apply to each region

SECTION 7: MISCELLANEOUS VEGETATION MANAGEMENT

7.1 ACTIVITY REPORTING

Xcel Energy will provide contractors with a method for reporting their crew activity. Contractors shall record their time and activity, according to each type of activity performed.

7.2 AVIAN PROTECTION

Xcel Energy's long-term Avian Protection Plan details the company's efforts to protect facilities and to reduce risks to birds from interactions with company facilities This plan is part of an agreement outlined in a Memorandum of Understanding with the U.S Fish and Wildlife Service. The following items in the Avian Protection Plan relate to tree maintenance activity:

- An inactive bird nest is defined as not having eggs or young. If birds are building a nest that does not have eggs or young, it is also inactive.
- If vegetation management crews encounter an inactive nest in a part of the tree which requires pruning, they can remove the nest. There are only two exceptions.
  - Eagle Nest: An inactive eagle nest **CANNOT** be removed Before beginning work in proximity to an eagle nest, contact the Xcel Energy Vegetation Management representative
  - Osprey Nest: An Xcel Energy Vegetation Management representative must be contacted prior to the removal of an osprey nest.
- If vegetation management crews encounter an active nest (eggs or young present), in part of a tree requiring work, the nest cannot be removed until it becomes inactive. The tree may be cleared from the wires, as long as the nest and birds are not disturbed. It is possible that the crew may need to return to complete the tree work once the nest becomes inactive These situations must be reported to the Xcel Energy Vegetation Management representative
- If vegetation management crews find a dead or injured bird that had come into contact with a line, they must contact their general foreman. The general foreman will then contact the assigned Xcel Energy Vegetation Management representative, who will contact the appropriate Xcel Energy Avian Protection Specialist
- Contract general foremen are responsible for keeping the avian protection U S. Fish & Wildlife Service Special Purpose Permit, on their trucks at all times

7.3 GLOSSARY FOR TREE WORKERS

Brush – any woody-stemmed plant having <4" diameter at breast height (DBH).

Corridor – see TMA

Distribution Circuit – is the entire electrical circuit from a substation to a meter including multi-phase and single-phase primary as well as all secondary conductors At Xcel Energy, distribution circuits typically have operating voltages from 4kV to 34 5kV.

Distribution Feeder/Mainline – facilities are multiphase conductors between the substation breaker and the next protective device

Distribution Tap / Lateral – portion of a distribution voltage circuit that branches off a mainline or feeder Taps can be single-phase, two-phase, or three-phase

DMA – a Distribution Maintenance Area is a defined geographical area containing distribution primary and secondary voltages, regardless of the existing electrical configuration.

Hazard Tree – a tree that Xcel Energy or its contractor has determined poses an unacceptable risk of failing onto Xcel Energy facilities

Hold Site – a temporary suspension of work at a location

LiDAR (Light Detection And Ranging) – a detection system that works on the principle of radar, but uses light from a laser. For the purposes of utility vegetation management, the laser device is most commonly mounted on the underside aerial platform.

SECTION 7 | MISCELLANEOUS VEGETATION MANAGEMENT

Maintenance Area – a defined geographical area for the purpose of vegetation management, regardless of the existing electrical configuration. In most cases, the initial area was defined by the circuit schema that existed when the maintenance area was created and the name was derived from the circuit name Also referred to as Distribution Maintenance Areas (DMA) and Transmission Maintenance Areas (TMA).

Maintenance cycle – Each maintenance area has a prescribed cycle length for line clearance activity, intended to repeat after a designated number of years (3, 4, or 5, for example)

Make Ready Clearance Requests – clearance based on non-qualified workers' minimum approach distances to help reduce the potential for electrical contact. Formerly referred to as a Safety Zone clearance

Primary – distribution voltage facilities (e g conductor) generally over 600 volts and up to 34,500 volts (34 5kV)

Secondary – facilities are lower voltage conductors from the low voltage side of a transformer, generally less than 600 volts These include street light wires

Service – the low-voltage facilities between a customer's house and the pole. Sometimes referred to as the "loop drop "

TMA – a Transmission Maintenance Area is a corridor of maintained right of way usually between two or more substations which may contain multiple transmission lines or portions of transmission lines

Transmission Circuit – an entire line, including all conductors, as defined by Xcel Energy Transmission Engineering. At Xcel Energy, transmission circuits typically have operating voltages from 34.5kV to 500kV

Tree – any woody-stemmed plant having ≥4" diameter at breast height (DBH). Count multi-stemmed trees individually if there's any soil between the stems at ground level

SECTION 8: CUSTOMER INTERACTIONS & LAND RIGHTS

8.1 GENERAL

Interaction with landowners, i.e. "customers", occurs in almost all aspects of the vegetation management program, whether in relation to maintenance area work, external requests, storm restoration, etc. It is important for all personnel to work towards ensuring a positive customer experience as we interact with landowners. In addition to providing safe, reliable, and cost-efficient energy to our customers, keep in mind some basic guiding principles – we will.

- Listen to our customers
- Be easy to do business with
- Meet our customer commitments
- Set realistic expectations
- Take ownership in finding solutions
- Provide clear, timely and proactive communications
- Ensure public and customer safety

A positive customer experience is dependent upon ownership, cooperation and collaboration.

8.2 NOTIFICATION

Contractors must make reasonable attempts to notify property owners regarding work to be performed. Contractors need to be aware that there are special conditions that may apply to each region

Distribution Contractors should obtain written acknowledgement from the landowner for all tree and brush removal, and the application of herbicide.

Transmission: The contractor shall obtain a signed, written acknowledgement for any removal or herbicide work done beyond the bounds of the Xcel Energy easement or right of way

8.2.1 Public Utilities Commission (PUC) and Public Service Commission (PSC)

Tariffs and agreements with various state regulatory entities may give utility companies and their contractors the ability to enter private property for maintenance purposes regardless of the existence of an easement or prescriptive rights

Specific tariffs provisions[4] include:
COLORADO: Rules and Regulations, General, R86 Access For Company's Employees
MICHIGAN: Rules and Regulations Part 2, Sheet C-2 0, Access To Premises
MINNESOTA: Minnesota Electric Rate Book, Rules and Regulations, Section 1.3, Sheet 6-4, Access To Customer's Premises
NEW MEXICO: New Mexico Rules and Regulations, Original Rule 10, Access To Premises
NORTH DAKOTA: General Rules and Regulations, Section 1 3, Sheet 6-1.1, Access To Customer's Premises
SOUTH DAKOTA: General Rules and Regulations, Section 1 3, Sheet 6-3 1, Access To Customer's Premises
TEXAS: Rules, Regulations, and Conditions of Service, Section V, Rule No. 10, Sheet V-11, Access To Premises
WISCONSIN: Rules and Regulations, Sheet E 90, Schedule Ex-22, Access To Customer's Premises

Copies of tariffs applicable to each state within Xcel Energy's service territory can be found in their entirety at xcelenergy.com Search: Tariffs, select the specific state's Energy Rates link, select Entire Electric Tariff Book under Electric Rate Books. If you have any problems with the Xcel Energy website, you can also look at the local public utilities commission website or contact the company for a copy of its tariffs.

8.2.2 CUSTOMER / LANDOWNER REFUSALS

If contractor access to company facilities and/or required scope of work is denied by a customer or landowner, notify contractor supervision to attempt a resolution If the contract supervisor is unable to reach an agreement, notify the appropriate Xcel Energy Vegetation Management representative. Additionally, any threatening behavior shall be reported to Xcel Energy's Security Operations Center (SOC).

4 Note the tariff references are as of July 2018

8.2.3 Land Rights, Rights of Way / Easements / Special Use Permits
Contractors need to be aware that transmission and distribution lines may be constructed where legal easements or other land use agreements/rights exist, e g., a permit, lease or license Special conditions may apply regarding vegetation management activities pursuant to the terms of these agreements If questions arise, contact the appropriate Xcel Energy Vegetation Management representative

8.2.4 Fee-Owned Rights of Way
Xcel Energy fee-owned rights of way or land is property owned by Xcel Energy Xcel Energy may have total control of this property subject to conditions, reservations and encumbrances, license or lease agreements Adjacent property owner acknowledgement may be required for access. If questions arise, contact the appropriate Xcel Energy Vegetation Management representative

8.2.5 Work on Federal Lands
When working on federal lands, contractors shall be aware that Xcel Energy owns and operates many electric distribution, electric transmission, and gas facilities situated on federal lands (U S. Forest Service, Bureau of Land Management, etc.) These facilities are authorized by specific grants or permits from the federal land manager to Xcel Energy. In all cases, tree removal on federal lands can only occur after prior permission has been granted by the federal land manager. Therefore, all tree removal on federal lands requires prior consultation with and approval from the appropriate federal land manager The responsibility for this consultation and approval process rests with Xcel Energy, unless otherwise agreed to in writing

Procedure for vegetation clearance operations on transmission, distribution, gas, and facilities on federal land, after Xcel Energy has obtained approval from the appropriate land manager

- Contractor general foreman will meet with appropriate land manager or designated representative before crew start-up at which time specific concerns or requests can be addressed or referred to appropriate Xcel Energy personnel.
- Crew operations on federal lands will strictly adhere to any special requests by the federal agency agreed to by Xcel Energy
- Such special requests can involve, but are not limited to fire prevention plan procedures and equipment, slash disposal and bucking requirements for merchantable timber, weekly check in by general foreman regarding crew location and fire danger level
- Contractor will obtain any necessary permits for extended overnight stays on federal lands
- Contractor will obtain approval from the appropriate land manager before use of ATV or off-road equipment unless specifically authorized All access to right of way corridor, if not accessible by road or trail, must meet approval of appropriate federal land manager
- Crew operations and access will obey all road closures on federal lands The opening of closed roads may at times be obtained at the discretion of the appropriate land manager
- Crew staging areas and campsites as well as all work areas will be maintained free of litter and in compliance with standards imposed by the federal agency

It is the contractor's responsibility to ensure that all operations on federal lands are in accordance with conditions set forth within the special use permit and any other applicable requirements which may apply to line clearance operations.

The use of chemical herbicides and pesticides is also regulated on federal lands Prior written approval from the federal land manager is required before the application of any herbicide or pesticide. Only those materials registered by the U S. Environmental Protection Agency for the specific purpose planned will be considered for use on federal lands.

8.3 RESOURCES FOR OUR CUSTOMERS
Useful information for our customers can be found on our website **xcelenergy.com/trees** This includes frequently asked questions that customers have about our vegetation management program

Xcel Energy's Plant a Better Future booklet is available on the website, providing customers detailed information regarding potential power line compatible tree planting It comes in three versions to correspond with the hardiness zones for Xcel Energy's service territory

NOTES

NOTES

[redacted]

Xcel Energy® | RESPONSIBLE BY NATURE®

Enero de 2019

Xcel Energy®

Lineamientos del Programa de Gestión de la Vegetación

Enero de 2019

ÍNDICE

ÍNDICE

SECCIÓN 1: GENERAL

1.1 INTRODUCCIÓN

Xcel Energy ofrece servicios seguros, limpios y confiables a sus clientes a un precio competitivo. Xcel Energy desarrolló estos lineamientos para el mantenimiento de la vegetación (Lineamientos) para el uso por parte de sus empleados y contratistas a la hora de realizar servicios de mantenimiento de la vegetación en las instalaciones de distribución y transmisión eléctrica y de gas natural. Estos Lineamientos están diseñados para ayudar a garantizar que la vegetación cerca de nuestras instalaciones de transmisión y distribución se mantenga de una forma consistente que minimice el riesgo de interferencia con la operación segura de las instalaciones eléctricas. La gestión de la vegetación incluye los servicios de despeje de la línea de transmisión y distribución eléctrica, el programa de inspección de seguridad en tendidos eléctricos, el mantenimiento del paisaje y la eliminación total de malezas.

Estos Lineamientos están disponibles en inglés y español. Toda interpretación de estos Lineamientos deberá basarse en la versión redactada en inglés.

El Programa de Gestión de la Vegetación y los programas complementarios cuentan con mapas de procesos empresariales de distribución y transmisión estandarizados. Los contratistas deben cumplir con las versiones más actuales.

Documentación necesaria: Los contratistas que desempeñan servicios de gestión de la vegetación deben mantener, brindarles a sus empleados y conservar en cada camión o lugar de trabajo, en todo momento, lo siguiente:

- Una copia actual de los Lineamientos
- El folleto titulado "Best Management Practices for Utility Pruning of Trees" ("Mejores prácticas de gestión para la poda de árboles orientada a los servicios públicos"), emitido por la Sociedad Internacional de Arboricultura (International Society of Arboriculture)
- **Las tablas de la normativa Z133 del ANSI que incluye las distancias mínimas de abordaje.**

**Esta información reemplaza todos los manuales y lineamientos anteriores para el trabajo de despeje de la línea y gestión de la vegetación para las empresas operativas de Xcel Energy, incluidas Northern States Power Minnesota, Northern States Power Wisconsin, Public Service Company of Colorado y Southwestern Public Service Company

1.2 POLÍTICA DE SEGURIDAD

1.2.1. General

DECLARACIÓN DE SEGURIDAD
Ningún trabajo o servicio que prestemos es tan urgente que no podemos tomarnos el tiempo y usar los equipos necesarios para llevarlo a cabo de forma segura

Todo el personal que realice trabajos de gestión de la vegetación en las instalaciones o derechos de vía de Xcel Energy o cerca de ellas deben respetar los lineamientos y procedimientos de seguridad aprobados. Todos los contratistas que realicen trabajos para Xcel Energy deben cumplir todas las regulaciones gubernamentales de salud y seguridad correspondientes, y las disposiciones de salud y seguridad de sus contratos. Los contratistas son responsables de desarrollar y seguir sus propios procedimientos de seguridad, a menos que sean reemplazados por la política de seguridad de Xcel Energy, y de cumplir todas las leyes y regulaciones.

Nota: Esta información aborda la confiabilidad de las empresas operativas de Xcel Energy y no tiene por objeto ser utilizada como lineamiento de seguridad personal. Independientemente del servicio prestado, todo sitio de trabajo tiene sus propios requisitos laborales y de seguridad.

1.2.2. Responsabilidad de efectuar una intervención de seguridad o detener el trabajo

La política de Responsabilidad de efectuar una intervención de seguridad o detener el trabajo (Safety Intervention Stop Work Responsibility, SISWR) de Xcel Energy establece la autoridad y responsabilidad de cada trabajador de efectuar una intervención de seguridad o detener el trabajo cuando se produce una condición o situación no segura en el lugar de trabajo. El mensaje es el siguiente: "Si usted ve algo que no es seguro, dígalo e intervenga. Si la situación continúa siendo insegura, detenga el trabajo". Todos deben sentirse seguros a la hora de cuestionar y detener una conducta de riesgo por parte de los empleados, contratistas, proveedores o visitantes de Xcel Energy o el público general, que estén dentro o alrededor de los lugares de trabajo de Xcel Energy.

La intervención de seguridad rige en los casos en los que no existen peligros inminentes o riesgos para las personas Se debe utilizar para resolver inquietudes de seguridad o problemas, a fin de mejorar las prácticas laborales, herramientas y equipos o para aumentar la seguridad en Xcel Energy Para intervenir, acérquese a la persona e infórmele que le preocupa su seguridad. Tome medidas para abordar o corregir la situación insegura. Luego, pídale a la persona que se comprometa a trabajar de forma segura. Si el problema no se resuelve en un plazo breve o si no se actúa en relación con estos comentarios, converse sobre la inquietud con el supervisor o gerente. Las intervenciones de seguridad no necesariamente implican que se detenga el trabajo, pero esto puede suceder si el problema no se resuelve rápidamente.

Autoridad para detener el trabajo: Todos los empleados y contratistas de Xcel Energy están autorizados para detener el trabajo La autoridad para detener el trabajo se ejerce para prevenir lesiones o daños de los empleados, contratistas, visitantes o proveedores de Xcel Energy o del público en general, de los bienes y equipos de Xcel Energy o del medio ambiente. Para ejercer dicha autoridad, detenga el trabajo, equipo o proceso de forma segura Reúna a todo el personal en el área y ayude a identificar los problemas de seguridad. Comuníquese con la persona a cargo, con un supervisor o gerente, e infórmele que el trabajo se detuvo y que es necesario resolver un problema de seguridad de inmediato.

1.2.3 Normativas de la industria
Hay dos normativas importantes para la seguridad de las personas que trabajan con árboles en los Estados Unidos la normativa 1910 269 de la OSHA y la normativa Z133 del ANSI. Las personas que trabajan con árboles deben cumplir los requisitos de estas normativas y otras leyes, códigos o regulaciones locales, estatales o federales que correspondan.

La normativa 1910.269 de la OSHA es una normativa específica de la industria implementada por la Administración de Salud y Seguridad Ocupacional (Occupational Safety and Health Administration), que corresponde al trabajo relacionado con la generación, transmisión y distribución de electricidad. Una sección específica de la normativa 1910.269 de la OSHA establece que todas las personas que realicen trabajos con árboles cerca de peligros eléctricos deben estar calificadas y sus capacitaciones deben estar registradas.

La normativa Z133 del Instituto Nacional de Normalización Estadounidense (American National Standards Institute, ANSI) es la normativa nacional de requisitos de seguridad para las operaciones de arboricultura: poda, reparación, mantenimiento y eliminación de árboles y poda de malezas La normativa Z133 del ANSI ofrece información que puede ser útil para comprender y cumplir los requisitos incluidos en la normativa 1910.269 de la OSHA

La normativa Z133 del ANSI indica que existe peligro eléctrico siempre que una persona que trabaja con árboles, herramienta, árbol u otro objeto conductor está a menos de 10 pies (3 metros) de un conductor electrificado con una tensión de 50,000 voltios o MENOS. Estas distancias aumentan a medida que aumenta la tensión. **La normativa Z133 del ANSI incluye tablas que establecen las distancias mínimas de abordaje para personas calificadas y no calificadas que trabajan con árboles, según la tensión y la altura.**

1.2.4. Requisitos estatales
En los territorios donde brindan servicios Public Service Company of Colorado y Southwestern Public Service Company, rigen normativas adicionales.

Colorado: Artículo 2.5: Líneas de electricidad de alta tensión; requisitos de seguridad, del Título 9: Seguridad industrial y comercial, de los Estatutos Revisados de Colorado (Colorado Revised Statutes). Solo los empleados calificados de servicios eléctricos pueden llevar a cabo actividades en las cuales una persona o equipo está a menos de 10 pies (3 metros) de distancia de los tendidos eléctricos de alta tensión (líneas que exceden los 600 voltios). Los contratistas que trabajan directamente en el área de servicios públicos se consideran calificados Los empleados o personas no calificados deben ponerse en contacto con el servicio público adecuado para programar la realización segura de la actividad.

Texas: Capítulo 752: Líneas de electricidad de alta tensión, de los Estatutos de Texas (Texas Statutes). Solo los empleados calificados de un servicio público de electricidad pueden llevar a cabo actividades en las cuales una persona o equipo está a menos de 6 pies (1.8 metros) de tendidos eléctricos de alta tensión (líneas que exceden los 600 voltios). Los contratistas que trabajan directamente en el área de servicios públicos se consideran calificados. Las personas no calificadas deben ponerse en contacto con el servicio público adecuado para programar las medidas para mitigar el peligro

SECCIÓN 1: GENERAL

1.2.5. Consideraciones adicionales de seguridad

Los contratistas que realizan trabajos de gestión de la vegetación para Xcel Energy deben respetar los siguientes procedimientos de seguridad.

- Los contratistas deben conocer, en todo momento, la naturaleza y las características de las instalaciones eléctricas o de gas de Xcel Energy en las que trabajarán, antes de comenzar el trabajo. Además, los contratistas deben entender que las instalaciones eléctricas deben permanecer electrificadas durante la realización del trabajo, a menos que se tomen decisiones especiales con un representante autorizado de Xcel Energy.
- El contratista deberá cumplir con el Programa de Seguridad para Contratistas de Xcel Energy
- También deberá respetar los términos de su contrato con Xcel Energy.
- El contratista debe obtener toda la información con respecto a la tensión de sus circuitos y las distancias mínimas de abordaje antes de comenzar el trabajo.
- El contratista deberá llevar a cabo el trabajo, en todo momento, de forma tal de proteger al público de lesiones y a los bienes de daños.
- Deberá usar la protección necesaria para sus empleados y el público y evitar la interferencia con el funcionamiento normal de los circuitos. Si, a criterio del supervisor o encargado general del contratista, es muy peligroso podar o eliminar árboles con los circuitos electrificados, el contratista deberá comunicarse con un representante autorizado de Xcel Energy. Si corresponde, Xcel Energy brindará los materiales de protección necesarios o quitará la electricidad de los circuitos para garantizar la poda o eliminación segura de los árboles. Si el contratista cae o entra en contacto con los conductores (líneas de electricidad) de Xcel Energy, deberá informar a Xcel Energy de inmediato y tomar todas las medidas de protección necesarias Todas las interrupciones en el servicio eléctrico provocadas por contratistas están sujetas a la reparación, que estará a cargo de este último.
- En caso de que un contratista adquiera conocimiento de instalaciones peligrosas, rotas, sueltas o defectuosas de Xcel Energy, en el curso normal de su tarea de despeje de la línea, deberá informar a Xcel Energy de forma oportuna acerca de la ubicación exacta del equipo y la naturaleza del problema identificado, de acuerdo con el Programa de Inspección de la Seguridad en Tendidos Eléctricos (Consulte la Sección 5)
- Todo personal contratado que ingrese a los depósitos de equipos de subestaciones debe estar calificado (normativa 1910.269 de la OSHA) y debe haber completado la capacitación de concienciación de peligros en subestaciones patrocinada por Xcel Energy Cuando se le ordene que lo haga, el contratista debe informar al área de control o de despacho, antes de ingresar a una subestación y antes de retirarse de ella Los contratistas deben cerrar la puerta al ingresar a la subestación y asegurarla al salir. Las puertas de la subestación deben permanecer aseguradas en todo momento, de acuerdo con el Programa de Acceso a Subestaciones de Xcel Energy. No está permitido estacionar en subestaciones, a menos que cuente con la autorización previa del representante de Gestión de la Vegetación de Xcel Energy

1.3 ¿POR QUÉ EL SERVICIO PÚBLICO ELÉCTRICO REQUIERE QUE SE LLEVE A CABO LA GESTIÓN DE LA VEGETACIÓN?

Los árboles son causantes importantes de las interrupciones del servicio público eléctrico en todo el país Los árboles provocan cortes de dos formas. mecánica y eléctrica El daño mecánico hace referencia a la caída de árboles enteros o partes de árboles que daña físicamente las instalaciones (derriban cables, postes, etc.). Dado que los árboles pueden ser conductores, pueden producirse cortes de electricidad Estas interrupciones se producen cuando una parte de un árbol interrumpe el circuito de la electricidad Por lo general, esto hace que un dispositivo protector entre en funcionamiento y detenga el flujo de electricidad La gestión de la vegetación es necesaria para garantizar la operación segura y confiable de las instalaciones de transmisión y distribución eléctrica En el momento de trabajo, se debe despejar adecuadamente la vegetación de los conductores y se deben eliminar los árboles que representan peligros, a fin de evitar las interrupciones del servicio eléctrico, a lo largo del ciclo de mantenimiento prescrito

Las prácticas de gestión de la vegetación de Xcel Energy deben cumplir con las leyes estatales y federales. Estas leyes incluyen los requisitos establecidos por las entidades estatales regulatorias, como las comisiones de bienes públicos y las comisiones de servicios públicos que requieren que los servicios eléctricos mantengan sus sistemas eléctricos de acuerdo con el Código Nacional de Seguridad Eléctrica (National Electric Safety Code, NESC). El NESC, por lo general, requiere la poda o eliminación de árboles que producen interferencia y están cerca de los tendidos eléctricos Además, la sección 218.A.1 de Gestión de la vegetación del NESC hace referencia a las instalaciones subterráneas

La vegetación que puede dañar los conductores de suministro subterráneo debe ser podada o eliminada. Se debe llevar a cabo la gestión de la vegetación, dado que la experiencia demostró que es necesaria

Nota: Los factores que se deben tener en cuenta a la hora de determinar el alcance necesario de la gestión de la vegetación incluyen, entre otras cosas, la clase de tensión de la línea, las tasas de crecimiento de las especies y sus características de fallas, la ubicación de la vegetación en relación con los conductores, la posible combinación del movimiento de la vegetación y los conductores durante vientos rutinarios, y el debilitamiento de los conductores debido a las temperaturas o las heladas en la altura

La ley federal, a través de la Corporación Norteamericana de Confiabilidad Eléctrica (North American Electric Reliability Corporation, NERC), impone requisitos adicionales para los tendidos eléctricos de 200 kV o más. *Consulte, a modo de ejemplo, la* norma FAC-003 de Gestión de vegetación para la transmisión

SECCIÓN 2: SOSTENIBILIDAD: GESTIÓN INTEGRADA DE LA VEGETACIÓN

2.1 VISIÓN GENERAL

La Gestión Integrada de la Vegetación (Integrated Vegetation Management, IVM) es un sistema de recopilación de información progresivo e impulsado por datos, utilizado para planificar el trabajo y llevarlo a cabo de mejor manera, incluidas las auditorías de seguimiento, para garantizar de forma más eficiente el logro de los resultados deseados. Implica el uso de varios tipos de técnicas de gestión de la vegetación, incluida la eliminación, poda y siega de la vegetación y el tratamiento de esta con herbicidas El objetivo general de un programa de IVM orientada a los servicios públicos consiste en desarrollar soluciones reglamentarias, específicas para el sitio, consistentes con el medio ambiente, rentables y responsables en términos sociales, para controlar la vegetación cerca de instalaciones eléctricas y de gas natural.

2.2 EVALUACIÓN Y MITIGACIÓN DEL RIESGO QUE PRESENTAN LOS ÁRBOLES

El contratista realizará una evaluación visual limitada del riesgo que presentan los árboles, en consistencia con el capital asignado o los proyectos de mantenimiento de las instalaciones de la empresa. Las instalaciones de la empresa incluyen, entre otras cosas, subestaciones de electricidad y gas, infraestructura de distribución y transmisión de electricidad (incluidos los postes, cables y estructuras asociadas), sitios de comunicación, oficinas y edificios de depósitos y otras instalaciones de la empresa designadas por el representante de Gestión de la vegetación de Xcel Energy

Una evaluación visual limitada del riesgo que presentan los árboles se define como una evaluación visual desde una perspectiva definida (por ejemplo, unilateral, basada en el suelo, vehicular o desde una aeronave) de un árbol individual o un conjunto de árboles, para evaluar el riesgo de condiciones especificadas o defectos obvios en relación con objetivos específicos (normativa A300 del ANSI, parte 9: Evaluación de los riesgos que presentan los árboles y fallas causadas por árboles). Si se identifican árboles que presentan una posibilidad moderada o elevada de provocar fallas que representan un riesgo inaceptable, dicho riesgo será mitigado. Según Xcel Energy, un árbol que presenta un riesgo inaceptable de fallas en las instalaciones de Xcel Energy se define como un árbol peligroso El contratista debe informar al representante de la Gestión de la vegetación de Xcel Energy acerca de los árboles identificados que presentan un riesgo inaceptable para las instalaciones de la empresa, fuera del capital asignado o de los proyectos de mantenimiento

Las condiciones de los árboles que se deben tener en cuenta durante una evaluación visual del riesgo que presentan los árboles incluyen, entre otras cosas, lo siguiente:

Factores biológicos

- descomposición o muerte de la madera o de los árboles,
- rajaduras,
- uniones débiles de las ramas,
- gangrena u hongos,
- estructura deficiente

Factores ambientales

- raíces dañadas o restringidas,
- cambios en la exposición (por ejemplo, árboles nuevos expuestos en los bordes de derechos de vías),
- pendientes o laderas.

2.3 Normativa A-300 del ANSI
La normativa A-300 del Instituto Nacional de Normalización Estadounidense presenta normas de desempeño para el cuidado y mantenimiento de árboles, arbustos y otras plantas leñosas. La normativa está diseñada a modo de guía para las autoridades federales, estatales, municipales y privadas, incluidos los dueños y gerentes de propiedades y servicios públicos.

Cuando sea posible, los contratistas que trabajan con árboles deben cumplir esta normativa al gestionar la vegetación cercana a las instalaciones eléctricas

2.4 DESCRIPCIONES DEL TRABAJO

2.4.1 Poda
La poda de árboles consiste en la eliminación selectiva de ramas que constituyen un riesgo inaceptable para la seguridad o confiabilidad de conductores o equipos en la actualidad, basado en contactos anteriores con árboles, o que pueden constituir un riesgo inaceptable para la seguridad o confiabilidad antes del próximo mantenimiento de rutina.

Se establecen ciclos de mantenimiento para cada área de mantenimiento individual Un área de mantenimiento es un área geográfica mantenida por la Gestión de la vegetación, independientemente de que existan conexiones eléctricas En la mayoría de los casos, el área inicial se definía por el esquema de circuitos que existía en el momento de la creación del área de mantenimiento, y el nombre de dicha área se deriva del nombre de este circuito. Si no conoce el ciclo de mantenimiento del área de mantenimiento en el que está trabajando, comuníquese con el representante correspondiente de la Gestión de la vegetación de Xcel Energy.

Los métodos de poda se basarán en los procedimientos y ejemplos establecidos por la normativa A-300 del ANSI Los árboles se deben podar para mejorar o restablecer el espacio logrado por medio del mantenimiento de árboles realizado anteriormente

Para obtener más información con respecto a la distribución de espacios de poda, consulte la sección 3 2. Para obtener más información con respecto a los espacios de poda para la transmisión, consulte la sección 4 2.

2.4.2. Eliminación
La eliminación de árboles consiste en sacar un árbol entero, desde el nivel del suelo, de forma selectiva

Para obtener más información con respecto a los criterios de distribución de la eliminación de árboles, consulte la sección 3.2 Para obtener *más información con respecto a los criterios de eliminación de árboles para la transmisión, consulte la sección 4.2*

2.4.3. Despeje de postes
Consiste en eliminar las enredaderas de los postes; por lo general, implica cortar las plantas desde el nivel del suelo y hasta los 6 pies (1 8 metros) de altura. Se debe tratar la base de las enredaderas con herbicidas, siempre que sea posible. Deje el resto de las enredaderas que se encuentran en los conductores, dado que morirán rápidamente y se desprenderán Nunca tire de las enredaderas cercanas a un conductor electrificado

La eliminación de la vegetación que rodea los postes de distribución primaria de tensión y los cables de sujeción para ofrecer acceso operacional debe realizarse durante el mantenimiento de rutina, siempre que sea posible; en especial en el caso de postes con dispositivos a los que deben tener acceso los primeros intervinientes de servicios públicos.

2.4.4. Eliminación de residuos

Mantenimiento de rutina: Poda y eliminación de árboles verdes; 95 % del trabajo de la Gestión de la vegetación (Vegetation Management, VM)

Distribución: Por lo general, la maleza se elimina, el sitio se limpia y las ramas grandes se cortan en piezas de tamaños manipulables y se dejan en la propiedad, a cargo de su dueño. Las virutas de madera, a veces, se dispersan en los sitios ubicados en entornos rurales o forestales.

Transmisión: Por lo general, la madera y la maleza se dejan en el derecho de vía, ya sea las piezas enteras o las piezas degradadas de forma mecánica, en especial, en áreas rurales. Consulte con el representante de la Gestión de la vegetación para obtener información adicional.

Razonamiento: Se realiza este trabajo con los árboles únicamente debido a la presencia de líneas eléctricas

Respuesta en caso de tormentas o emergencias: Eliminación de árboles dañados para restaurar el servicio, entre el 1 y el 2 % del trabajo de la VM Los residuos creados por el trabajo de respuesta en caso de emergencias no son transportados, sino que se dejan en el sitio, de forma segura y razonable

Razonamiento. El dueño del árbol tendría que realizar el mismo trabajo de limpieza si las líneas eléctricas no estuviesen presentes, y se beneficia con la asistencia de Xcel Energy

Nuevas construcciones o reconstrucciones: Eliminación de la vegetación para construcciones, mejoras en instalaciones o reconstrucciones relacionadas con un trabajo de capital; entre el 1 % y el 2 % del trabajo de la VM

Los residuos se desechan según lo negociado con el dueño de la propiedad.

Trabajo de preparación: Por lo general, se le solicita a una empresa privada que elimine los árboles a determinada distancia de la línea eléctrica, para poder hacer más trabajos; entre el 1 % y el 2 % del trabajo de la VM.

Xcel Energy debe ofrecer este servicio y enfrentar los costos. Los residuos creados no se transportan, sino que se dejan en el sitio, de forma segura y razonable.

Razonamiento: La decisión del cliente de trabajar con los árboles a veces es independiente de la presencia de líneas eléctricas. Solo se trabaja con los árboles a fin de despejar las instalaciones de Xcel Energy para que se pueda completar el proyecto del cliente.

Mitigación de árboles peligrosos: Por lo general la inicia Xcel Energy durante el mantenimiento de rutina, pero, en algunos casos, es iniciada por los dueños de propiedades privadas al intentar cumplir las ordenanzas municipales con respecto a árboles muertos, enfermos o que están por morir; entre el 1 y el 2 % del trabajo de la VM (este porcentaje es mayor en áreas con epidemias o plagas)

Los residuos creados no se transportan, sino que se dejan en el sitio, de forma segura y razonable.

Razonamiento: El dueño del árbol tendría que realizar el mismo trabajo de limpieza si las líneas eléctricas no estuviesen presentes, y se beneficia con la asistencia de Xcel Energy para controlar la falla inevitable que provoca el árbol

2.4.5. Otros métodos utilizados

- poda mecánica,
- siega mecánica,
- rociado con herbicidas foliares,
- rociado con herbicidas para rastrojo,
- uso de herbicidas granulados o pellets,
- aplicación basal de bajo volumen de herbicidas,
- reguladores del crecimiento de árboles (por lo general utilizados solo de formas específicas, con más frecuencia en la transmisión y distribución trifásica rural, para talar árboles en ciclos de forma específica. Consulte a un representante de la Gestión de la vegetación de Xcel Energy para obtener más información).

2.5 LINEAMIENTOS PARA EL USO DE HERBICIDAS

Todos los herbicidas y métodos de tratamiento utilizados por el contratista deben ser aprobados previamente por un representante de la Gestión de la vegetación de Xcel Energy y deben cumplir con todos los derechos de acceso, leyes y regulaciones Se deben proporcionar etiquetas de productos y fichas de datos de seguridad tras la solicitud al representante de la Gestión de la vegetación de Xcel Energy

2.5.1. Precauciones

- No aplique herbicidas fuera de los límites de los derechos de vía, excepto en los casos en los que el propietario de las tierras proporcionó una autorización por escrito
- En Wisconsin, no se pueden usar herbicidas dentro o fuera del derecho de vía para una línea de transmisión diseñada para funcionar a 100 kV o más, sin el consentimiento escrito del propietario de las tierras
- Si el dueño de una propiedad rechaza el tratamiento con herbicidas, la operación se deberá interrumpir de inmediato en su propiedad hasta que se resuelvan los inconvenientes.

2.5.2. Derrames o accidentes

Todo derrame, fuga, incendio u otro accidente relacionado con herbicidas **se debe reportar de inmediato** ante el representante de la Gestión de la vegetación de Xcel Energy.

SECCIÓN 3: GESTIÓN DE LA VEGETACIÓN PARA LA DISTRIBUCIÓN

3.1 LINEAMIENTOS GENERALES

Los lineamientos de despeje de Xcel Energy se basan en las tasas de crecimiento de los árboles locales, que son específicas de árboles individuales en áreas de mantenimiento determinadas. Las tareas de despeje específicas se determinan según las tasas de crecimiento de las especies, la tensión de las líneas, la construcción de instalaciones, la seguridad eléctrica y otros factores

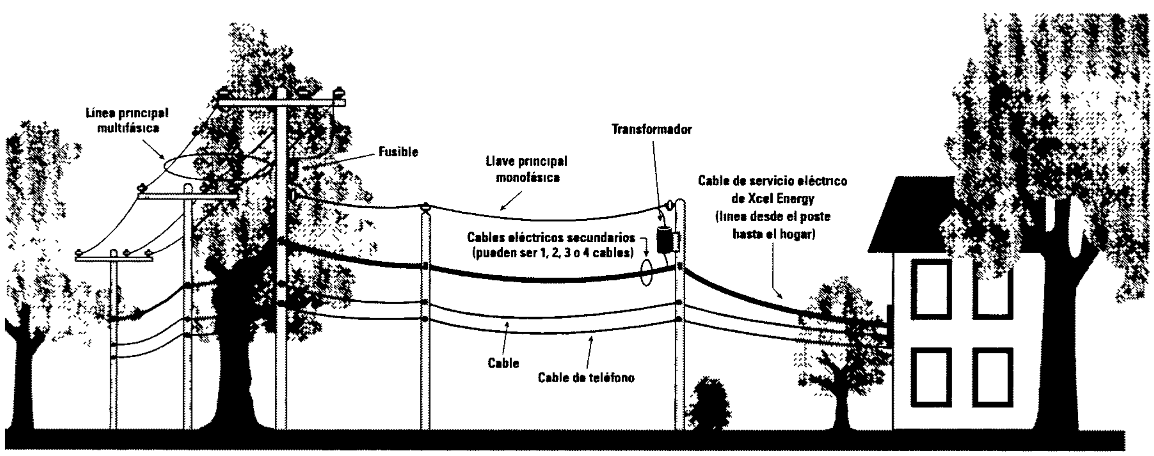
Por lo tanto, se debe evaluar cada árbol individual para determinar el despeje adecuado necesario con respecto al conductor, a fin de evitar la interrupción del servicio, los daños en las instalaciones de Xcel Energy y las amenazas a la seguridad pública Xcel Energy espera que los contratistas calificados para despejar las líneas usen su criterio profesional para determinar cuál será el despeje necesario en cada situación, de acuerdo con el ciclo de mantenimiento establecido para el área de mantenimiento en la que trabajarán y las circunstancias particulares en el área geográfica, a fin de minimizar el riesgo de que la vegetación interfiera en la operación segura de las líneas eléctricas antes del siguiente ciclo de mantenimiento. El trabajo se completará de forma tal que se mantenga o reduzca el volumen de trabajo a lo largo de múltiples ciclos en cada área de mantenimiento a través de las decisiones de podar, despejar y eliminar vegetación El contratista presentará ante Xcel Energy las interpretaciones escritas que haya elaborado con respecto a las tareas de despeje en las líneas de distribución.

Los contratistas no se fiarán de la precisión de los mapas de circuitos de distribución o áreas de mantenimiento. Por el contrario, son responsables de lograr el despeje adecuado en todas las instalaciones del campo. Xcel Energy no despejará conductores ajenos a la empresa de forma intencional, incluidos los cables de teléfono y televisión por cable.

3.1.1 Lineamientos para el despeje según el tipo de construcción

Es necesario tener un conocimiento básico de los sistemas de distribución, los gradientes de tensión y los criterios de selección de árboles para determinar las tareas de despeje

Los gradientes de tensión (Voltage gradient, VG) son una función del modo en que se construyen las instalaciones eléctricas y pueden ser un factor importante en el riesgo de cortes de electricidad causados por árboles. Cuanto mayor sea el VG, mayor será el riesgo de que se produzca un corte cuando los árboles interfieren en las instalaciones eléctricas. El VG variará según el tipo de construcción y la tensión operativa, y se puede calcular rápidamente en el campo



En entornos multifásicos, tome la tensión fase a fase (kV) y divídala por el espacio entre fases (en pies)
Consulte los ejemplos A, B y E.

$$V_G \text{ en entornos multifásicos} = \frac{\text{kV fase a fase}}{\text{distancia en pies}}$$

En entornos monofásicos y multifásicos en los que una rama puede entrar en contacto con la fase y el neutro, use la tensión de la fase al suelo (kV) y divídala por la distancia entre la fase y el neutro (pies). Consulte los ejemplos C y D.

$$V_G \text{ en entornos monofásicos} = \frac{\text{kV fase a fase}}{\text{distancia en pies}}$$

Conclusión: A medida que aumenta el gradiente de tensión, aumenta el riesgo de corte de electricidad. Cuanto mayor es la tensión operativa y menor es la distancia de una rama para causar una falla, mayor es el riesgo. Trabaje con su representante de la Gestión de la vegetación de Xcel Energy para determinar qué criterio de VG considerar en su área

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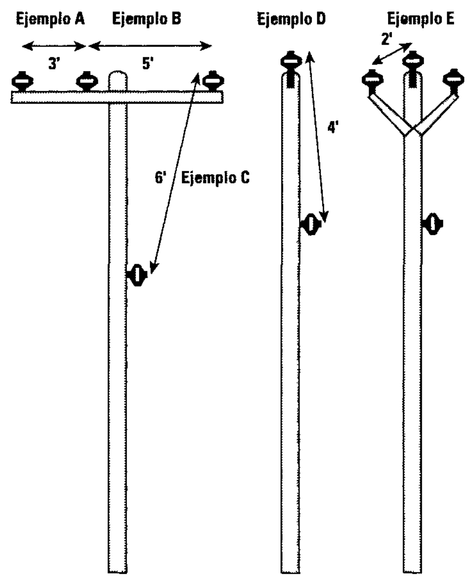
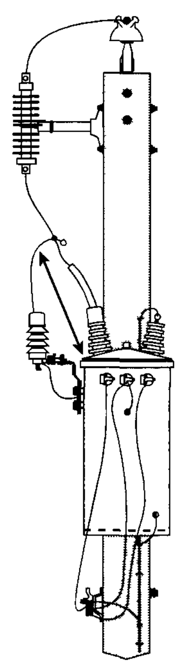
3.1.2
Ejemplos del gradiente de tensión (VG)

Fase a fase kV/fase a tierra kV	Gradiente de tensión (kV/pie)	Riesgo
34.5 / 19.9		
Ejemplo A	12	Alto
Ejemplo B	7	Alto
Ejemplo C	3	Moderado
Ejemplo D	5	Alto
Ejemplo E	17	Alto
13.8 / 8		
Ejemplo A	5	Alto
Ejemplo B	3	Moderado
Ejemplo C	1	Bajo
Ejemplo D	2	Bajo
Ejemplo E	4	Alto
12.5 / 7.2		
Ejemplo A	4	Alto
Ejemplo B	3	Moderado
Ejemplo C	1	Bajo
Ejemplo D	2	Bajo
Ejemplo E	4	Alto
4 / 2.3		
Ejemplo A	1	Bajo
Ejemplo B	1	Bajo
Ejemplo C	0 4	Bajo
Ejemplo D	1	Bajo
Ejemplo E	1	Bajo





Tenga cuidado con los VG extremadamente elevados y las situaciones en las que una rama puede caer entre equipos electrificados y el neutron u otros equipos (transformadores, empalmes de cables subterráneos a aéreos, bancos de capacitores, etc.)

3.2 CRITERIOS DE TRABAJO

3.2.1. Línea primaria multifásica:
En general, las instalaciones multifásicas primarias son más sensibles a los cortes eléctricos causados por árboles, debido a los gradientes de tensión elevados, y abarcan a la mayoría de los clientes Cuando se selecciona un árbol para la poda, se podarán ramas si partes del árbol que se encuentran por encima o por debajo del conductor o adyacentes a él pueden crecer e interferir con los conductores o romperlos antes del siguiente mantenimiento de rutina Eliminar las ramas caídas, reducir las copas de los árboles para prevenir su proyección excesiva, y eliminar las especies incompatibles como se describe a continuación, constituye una práctica preferida

3.2.2 Línea primaria monofásica:
En general, las instalaciones monofásicas son menos sensibles a los cortes eléctricos provocados por árboles, debido a los gradientes de tensión menores. Cuando se selecciona un árbol para la poda, se podarán ramas si existe un riesgo significativo de que partes del árbol que se encuentran por encima o por debajo del conductor o adyacentes a él rompan la línea antes del siguiente mantenimiento de rutina, o si parece que el árbol entró en contacto con el conductor La eliminación de especies incompatibles que se describe a continuación constituye una práctica preferida

3.2.3. Otras consideraciones para la poda:
Los equipos contratados para trabajar con árboles deben ser capaces de identificar las especies de árboles y evaluar la tasa de crecimiento en relación con la línea Tenga en cuenta que los árboles que nunca fueron podados crecen a una velocidad mucho menor que aquellos que fueron podados. Por lo tanto, muchos árboles que nunca fueron podados aún tienen una distancia adecuada en relación con el conductor Si se tienen en cuenta el VG y los factores enumerados a continuación se puede omitir la poda y reevaluarla como parte del próximo mantenimiento de rutina

Una vez que un árbol es seleccionado para la poda, se debe lograr el despeje máximo para la duración del ciclo designado, a fin de minimizar el riesgo de que la vegetación interfiera con las instalaciones eléctricas existentes antes del próximo ciclo de mantenimiento Se deben podar los árboles dudosos tras una preparación determinada, dado que una parte significativa del costo de la poda de árboles consiste en la preparación para el trabajo (la preparación con plataformas aéreas incluye brazos telescópicos de alcance, la preparación para el trabajo manual incluye los árboles dudosos dentro del alcance del árbol escalado) Se debe tener en cuenta lo siguiente.

- La necesidad de eliminar ramas ubicadas a una distancia significativa por debajo de los conductores, la posibilidad de que el beneficio de confiabilidad sea mínimo, y la posibilidad de que la eliminación de estas ramas acelere el crecimiento de ramas y brotes de agua cerca de los conductores
- Fortaleza y flexibilidad de las ramas Se deben eliminar o cortar las ramas que cuelgan sobre los cables que tienen una gran posibilidad de quebrarse o doblarse en los conductores de Xcel Energy, debido al peso del hielo, la nieve y el viento, lo cual puede causar cortes eléctricos y mecánicos (consulte la sección 1 3)
- Especies de árboles
  - o Tasas de crecimiento (velocidad a la que volverán a crecer las ramas)
  - o Fuerza de la madera (posibilidad de que la rama se quiebre debido al peso del hielo, la nieve o vientos fuertes)
- Tamaño de la rama (las ramas con diámetros mayores que caen y entran en contacto con conductores crean el mayor riesgo de cortes de electricidad relacionados con los árboles)
- Conexión o uniones de ramas (esté al tanto de la posibilidad de que haya corteza incluida en los bordes de las ramas)
- Tensión que conduce la línea (cuanto mayor es la tensión, mayor es el despeje necesario)
- Tipo de construcción y espacios entre las fases de entornos multifásicos (el diseño compacto y las líneas multifásicas generan un riesgo mayor de cortes de electricidad causados por árboles debido a la correlación del gradiente de tensión) La ubicación del árbol en relación con los dispositivos protectores (los cortes eléctricos causados por árboles más cercanos a los disyuntores de subestaciones afectarán a una mayor cantidad de clientes)
- Clientes importantes en el circuito (hospitales, etc.)
- Seguridad del público general (casas de árboles, árboles escalables, lugares públicos, etc)
- Riesgo de incendios forestales

SECCIÓN 3: GESTIÓN DE LA VEGETACIÓN PARA LA DISTRIBUCIÓN

- Además, cuando existe una distribución de la empresa insuficiente en las estructuras de transmisión, la vegetación seleccionada para los trabajos se debe mantener de acuerdo con las especificaciones de la transmisión. Comuníquese con su representante de la Gestión de la vegetación de Xcel Energy para obtener más asesoramiento.

Independientemente del tipo de construcción de las instalaciones, los árboles que se pueden trepar con facilidad (en particular, las coníferas) se deben podar para despejar los suelos, o se debe despejar el conductor primario para que una persona no pueda acceder fácilmente a él. Se debe informar al representante de la Gestión de la Vegetación de Xcel Energy acerca de las barreras que impiden la realización de este trabajo.

3.2.4. Otras consideraciones para la eliminación de la vegetación

- Se deben eliminar todos los árboles de gran crecimiento que constituyen una amenaza significativa para la seguridad pública, tales como aquellos que se pueden trepar y permiten el contacto directo entre una persona y un conductor primario
- Se deben eliminar los árboles que interrumpen el ciclo, es decir, aquellos que interfieren con la operación segura de la línea, antes del siguiente mantenimiento de rutina.
- Se deben eliminar las malezas de gran crecimiento que al crecer pueden interferir en el conductor.
- Todos los árboles y malezas se deben cortar de modo que estén lo más cerca del suelo posible.
- Se debe eliminar el nuevo crecimiento del tocón de los árboles podados en proyectos anteriores
- Cuando sea posible y esté permitido por la ley estatal, los tocones caducifolios se deben tratar con herbicidas para evitar los nuevos brotes
- Se deben podar o eliminar los árboles que presentan un riesgo inaceptable para las instalaciones de Xcel Energy (consulte la sección 2.2). La identificación y mitigación de árboles peligrosos debe ser una prioridad, dado que mitigar estas situaciones reducirá en gran medida el riesgo de que se produzcan cortes mecánicos evitables
- Los contratistas deberán consultar al representante de la Gestión de la vegetación de Xcel Energy cuáles son los criterios específicos de eliminación de la vegetación en las áreas en las que están trabajando.

3.2.5 Línea secundaria (distribución del servicio a los hogares/acometida, cables de luz de las calles)

Si resulta práctico, el personal debe talar los árboles que interfieren con las líneas secundarias y de servicio dentro del área adyacente al sitio de trabajo

Los árboles cercanos a las líneas secundarias, las luces de las calles y los cables de servicio no se talan de forma rutinaria, a menos que también existan líneas primarias. **Sin embargo, se deben podar los árboles cercanos a líneas secundarias, líneas de servicio o cables de luz de las calles si existen interferencias importantes, como ramas desviadas o rotas.**

Por lo general, no se eliminan los árboles cercanos a líneas secundarias o cables de servicios o de luz de las calles Los clientes que deseen eliminar los árboles cercanos a estos conductores por sus propios medios pueden solicitarle a Xcel Energy que quite la electricidad de los conductores para eliminar los árboles de forma privada, llamando al **800.895.4999**.

3.3 TIPOS DE PROYECTOS DE DISTRIBUCIÓN

3.3.1 Mantenimiento de rutina/trabajo programado

El mantenimiento de rutina consiste en trabajo proactivo y programado que se realiza en un área de mantenimiento Por lo general, se eliminan todos los residuos y las ramas se cortan en piezas de tamaños manipulables y se dejan en la propiedad para que se encargue de ellas el cliente.

3.3.2 Ciclo intermedio/inspección complementaria

Las inspecciones que se programan en áreas de mantenimiento seleccionadas con el fin de identificar y mitigar, según sea necesario, las condiciones de la vegetación que el inspector considera que se deben abordar antes del siguiente trabajo de mantenimiento Los proyectos serán asignados por el gerente del programa

3.3.3 Solicitudes externas y de preparación para las tareas de despeje

Solo los contratistas calificados para el despeje de líneas, según los define las regulaciones o leyes locales, estatales o federales, pueden trabajar en árboles que están a distancias menores a las establecidas en las leyes o regulaciones correspondientes con respecto a las líneas de electricidad Por lo tanto, cuando se solicite, Xcel Energy (a través de sus contratistas) ofrecerá el despeje preliminar para ayudar a reducir el riesgo de contacto eléctrico por parte de trabajadores externos no calificados. Las solicitudes de estos despejes se conocen como solicitudes de "preparación" para el despeje.

Es importante que el personal contratado responda a estas solicitudes de forma oportuna y puntual, y de acuerdo con las leyes y regulaciones El personal contratado, además, debe determinar cuál es la medida más rentable para ofrecer la preparación para el despeje. Estos son algunos ejemplos:

- Podar la parte del árbol para que quede lejos del conductor
- Talar el árbol
- Solicitar que se interrumpa la electricidad del conductor
- Si la solicitud corresponde a una línea de servicio, un cable de luz de las calles u otras líneas secundarias, recomiéndele al solicitante que llame al Servicio de atención al cliente de Xcel Energy, al **800.895.4999** y solicite la interrupción de la línea para eliminar el cable temporalmente de la zona de trabajo

A partir de la fecha de publicación, Xcel Energy no cobra una tarifa por podar o talar árboles en respuesta a solicitudes de preparación para el despeje, pero es importante que el contratista le comunique claramente al solicitante que los residuos se dejarán en el sitio. Es posible que Xcel Energy cobre tarifas en el futuro.

Tenga en cuenta que es posible que se cobre una tarifa por la interrupción de electricidad en los conductores y la interrupción de las líneas El solicitante debe comunicarse con el Servicio de atención al cliente de Xcel Energy para obtener más información, llamando al 80 895 4999.

3.3.4 Solicitudes internas

Muchas entidades dentro de Xcel Energy pueden solicitar asistencia de los equipos que trabajan con árboles para mitigar los problemas relacionados con estos últimos La mayoría de estas solicitudes se deben a problemas de confianza en el servicio o al despeje de árboles para colocar nuevas instalaciones o mejorar las existentes

3.3.5 Solicitudes relacionadas con la confianza en el servicio

Es importante que los contratistas respondan estas solicitudes de forma oportuna y de acuerdo con las instrucciones incluidas en la solicitud Los contratistas deben utilizar su criterio al tomar una decisión con respecto a la necesidad de la poda. Al tomar esta decisión deben tener en cuenta todos los factores, incluida la posibilidad de que un árbol provoque un corte de electricidad en su condición actual, el riesgo para la seguridad pública y cuándo se debe hacer el mantenimiento de rutina del árbol.

3.3.6 Costo de la construcción y los cruces

Estas solicitudes corresponden a la colocación de nuevas instalaciones y la mejora de las existentes. En muchos casos, al personal del contratista se le solicitará que identifique los árboles que se deben despejar y que brinde información que se utilizará para calcular el costo del despeje. Es importante que el personal del contratista responda estas solicitudes de forma rápida y oportuna, de acuerdo con las instrucciones incluidas en la solicitud

3.3.7 Respuesta ante emergencias o tormentas

El personal del contratista debe responder ante situaciones de tormentas, de acuerdo con el proceso regional de respuesta ante tormentas. Comuníquese con un representante de la Gestión de la vegetación para confirmar los procesos regionales correspondientes. Solo se realizará el trabajo necesario para restaurar la electricidad Se debe hacer un intento razonable
de informar a los clientes. No se intentará desechar los residuos generados por los trabajos realizados

SECCIÓN 4: GESTIÓN DE LA VEGETACIÓN PARA LA TRANSMISIÓN

4.1 LINEAMIENTOS GENERALES Y FILOSOFÍA DEL PROGRAMA

El objetivo principal del programa de despeje de la línea de transmisión es mantener las instalaciones destinadas a la transmisión libres de árboles, malezas y otros tipos de vegetación incompatibles, que podrían crecer cerca de los conductores o interferir, de otra manera, con la operación y el mantenimiento seguros de las instalaciones La vegetación incompatible se define como las plantas cuya altura máxima podría interferir con las distancias de despeje mantenidas. Esto se logra realizando mantenimientos de rutina en cada área de mantenimiento de transmisión, lo cual incluye la tala, poda y siega de árboles y el uso de herbicidas

4.2 LOGRO DEL DESPEJE EN EL MOMENTO DEL DESPEJE Y MANTENIMIENTO INICIALES

4.2.1 Bramble y Byrnes

Cuando resulte práctico, se debe integrar el concepto de zona de transmisión eléctrica/zona límite (Bramble y Byrnes) en el Programa de Gestión de la Vegetación para permitir diferentes tipos y alturas de vegetación en el derecho de vía El folleto de la Sociedad Internacional de Arboricultura titulado "Best Management Practices – Integrated Vegetation Management" ("Mejores prácticas de gestión; Gestión Integrada de la Vegetación"; una publicación en compañía de la normativa A300 del ANSI, parte 7) ofrece un buen resumen funcional de este concepto Este concepto se diferencia de la zona de transmisión eléctrica que está directamente debajo de los conductores y de la zona límite restante.

En términos generales, este concepto permite que existan diferentes tipos de vegetación compatibles en zonas separadas

Zona de transmisión eléctrica: Es el área que está inmediatamente debajo de los conductores, incluido el posible balanceo de los conductores La vegetación en la zona de transmisión eléctrica consiste en forbes y pastos de poca altura.

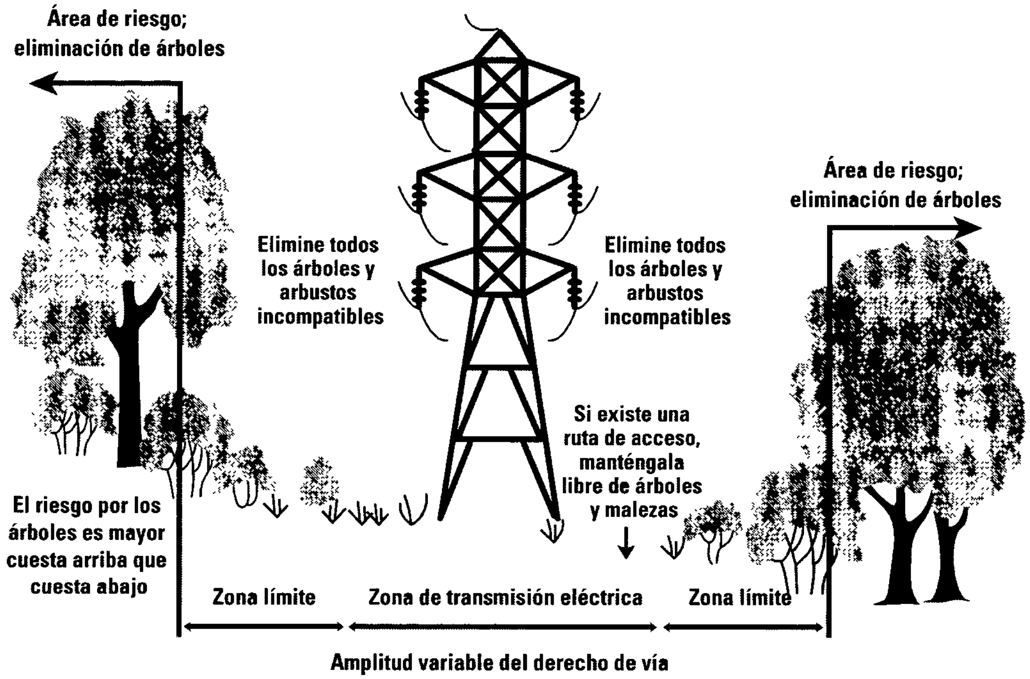
Zona límite: Área que comienza en el borde exterior de la zona de transmisión eléctrica y se extiende hasta el borde del derecho de vía (ROW) mantenido, del derecho de acceso o de otros derechos de vía. La zona límite puede incluir plantas leñosas y árboles adicionales de baja altura Los árboles que están fuera de los límites del derecho de acceso, pero su crecimiento ingresa a dichos límites, se deben evaluar para la poda

Las áreas que están fuera de la zona límite se deben vigilar para identificar árboles peligrosos (consulte la sección 2.2).

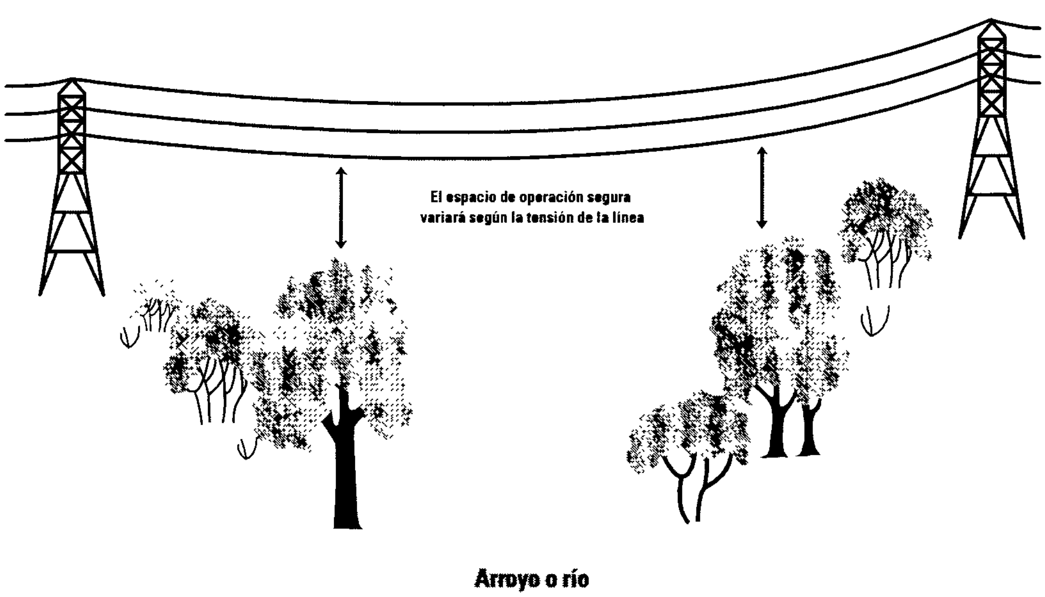
4.2.2 Otras consideraciones:

- Se deben eliminar las malezas de gran crecimiento que al crecer pueden interferir en el conductor
- Todos los árboles y malezas se deben cortar de modo que estén lo más cerca del suelo posible
- Se debe eliminar el nuevo crecimiento del tocón de los árboles podados en proyectos anteriores.
- Cuando sea posible, se deben tratar todos los tocones caducifolios con herbicidas para evitar que vuelvan a crecer
- Se deben mitigar todos los árboles que presentan un riesgo inaceptable para las instalaciones de Xcel Energy (consulte la sección 2.2). La identificación y mitigación de árboles peligrosos debe ser una prioridad, dado que mitigar estas situaciones reducirá en gran medida el riesgo de que se produzcan cortes mecánicos evitables
- Mantenga las rejillas de interruptores libres de vegetación Coloque herbicidas esterilizadores de suelos en las rejillas de interruptores cuando sea posible

Diagramas de derechos de vía (ROW)



Consideraciones especiales para dejar árboles en el ROW en cruces de valles



4.2.3 Mantenimiento de espacios despejados de árboles

Los siguientes lineamientos para el mantenimiento de espacios despejados de vegetación incluidos en la Tabla A se deben respetar en todo momento, cuando los derechos de acceso lo permitan.

Tabla A: Mantenimiento de espacios de vegetación en la estructura o punto de debilitamiento menor/balanceo mayor

Punto (pies): todos los estados y todas las elevaciones

Tensión (kV)	En la estructura		Rango de hasta 400 pies		Rango de hasta 800 pies		Rango de hasta 1200 pies	
	A ⟷	T ↕	A ⟷	T ↕	A ⟷	T ↕	A ⟷	T ↕
69	11	11	11	14	18	18	28	22
88	12	12	12	15	19	19	29	23
115	13	13	13	16	20	20	30	24
161	14	14	14	17	21	21	31	25
230	18	17	18	20	25	24	35	28
345	22	20	22	23	29	27	39	31
500	27	23	27	26	34	30	44	34

2 **Tenga en cuenta** que los espacios se deben proveer en dos puntos a lo largo de la extension, para el despeje horizontal y vertical Estas tablas indican despejes en la estructura y en el punto bajo del conductor (en la parte intermedia de la línea) Las diferencias en los valores de despeje indicados en la Tabla A se deben al factor de debilitamiento y balanceo en distintas longitudes de extensión Dependiendo de la ubicación del árbol, se debe determinar el numero quese debe usar, considerando que estos valores son orientativos

4.2.4 Nuevo crecimiento previsto de los árboles

A fin de mantener estos espacios en todo momento, los contratistas que realizan trabajos con árboles deben tener en cuenta varios factores que incluyen las especies de árboles, el entorno del crecimiento, la tasa de nuevo crecimiento y la duración del ciclo de mantenimiento para determinar el despeje necesario en el momento de la poda

Las siguientes tablas se ofrecen únicamente a modo de orientación; el contratista es responsable de evaluar cada situación Cada árbol requiere la evaluación de los factores anteriores, a fin de determinar las tasas específicas del nuevo crecimiento [3]

Tabla 1: área operativa: NSPM y NSPW

Especies comunes de árboles	Nuevo crecimiento promedio luego de la poda (pies)	
	Ciclo de 4 años	Ciclo de 5 años
Olmo americano	13	15
Fresno	10	12
Acacia	14	16
Acer negundo	14	16
Álamo (Populus fremontii)/sauce	20	24
Tilo	10	12
Pino / Pícea	6	7
Red Oak	10	12
Arce plateado	12	14
Sugar Maple	10	12

Tabla 2: área operativa: Comisión de Servicios Públicos (PSC), menos de 6000 pies

Especies comunes de árboles	Nuevo crecimiento promedio luego de la poda (pies)
	Ciclo de 3 años
Álamo temblón	5
Álamo (Populus fremontii)	20
Pino	5
Álamo (Poplar)	20
Elaeagnus angustifolia	11
Olmo de Siberia	20
Arce plateado	12
Pícea/Douglas de Oregón	5
Árbol del cielo (Ailanthus)	9
Sauce	20

Tabla 3: área operativa Comisión de Servicios Públicos (PSC), más de 6000 pies

Especies comunes de árboles	Nuevo crecimiento promedio luego de la poda (pies)
	Ciclo de 5 años
Álamo temblón	5
Pícea azul	5
Álamo (Populus fremontii)	20
Douglas de Oregón	5
Pícea de Englemann	5
Pinus contorta	5
Pino ponderosa	5
Álamo (Poplar)	20
Olmo de Siberia	20
Sauce	20

Tabla 4: área operativa: SPS

Especies comunes de árboles	Nuevo crecimiento promedio luego de la poda (pies)	
	Ciclo de 3 años	Ciclo de 4 años
Olmo americano	10	12
Álamo (Populus fremontii)	12	14
Falsa acacia	10	12
Morera	10	12
Pecán	10	12
Pino	6	7
Álamo (Poplar)	12	14
Roble rojo	8	10
Árbol del cielo (Ailanthus)	10	12
Sauce	12	14

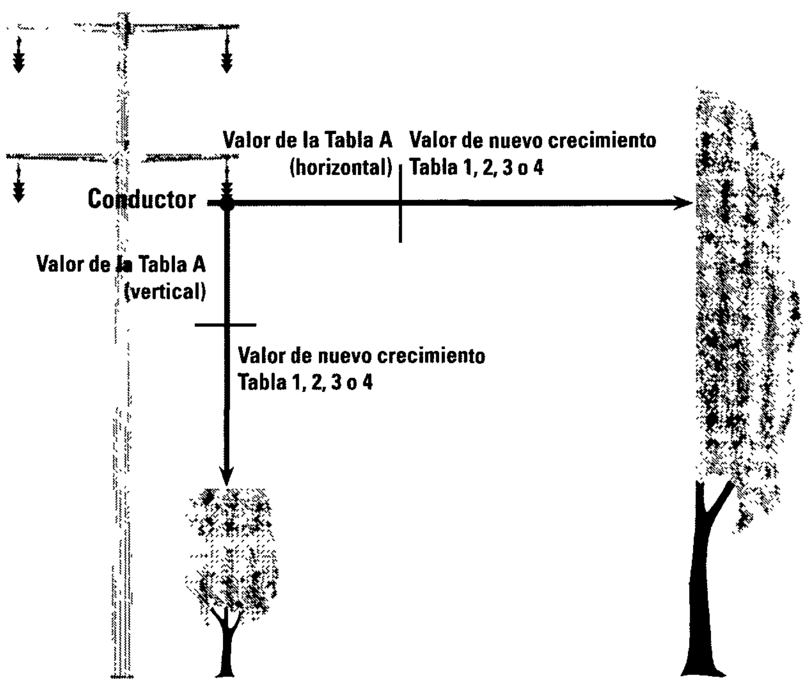
3 **Elija la tabla** según el área operativa en la que está trabajando, y segun las especies y el ciclo de mantenimiento establecido Esta tabla se incluye solo a modo orientativo, los cálculos de crecimiento definitivos deben ser establecidos por el contratista En el caso de especies y ciclos de mantenimiento no incluidos en la lista, determine el despeje adecuado a partir del incremento de crecimiento de las ramas

Sección 4: GESTIÓN DE LA VEGETACIÓN PARA LA TRANSMISIÓN

El espacio logrado en el despeje y mantenimiento iniciales se debe basar en "Mantenimiento de espacios despejados de árboles" (Tabla A) y "Nuevo crecimiento previsto de los árboles" (Tablas 1, 2, 3 o 4).

Se deben realizar los siguientes cálculos para determinar el despeje necesario en el momento del mantenimiento:
Espacio horizontal y vertical en el momento de la poda =
(Valor de la Tabla A) + (Valor de las Tablas 1, 2, 3 o 4)

Ilustración del espacio horizontal y vertical obtenido en el momento del mantenimiento



4.3 LÍNEAS DE TRANSMISIÓN DENTRO DEL ÁMBITO DE LA NORMA FAC-003

Las distancias de despeje de la **Prioridad 1 (P1)** y el proceso correspondiente de amenazas inminentes se establecieron para garantizar el cumplimiento del Requisito 4 (R4):

Tensión	Despeje de la Prioridad 1
< 200kV*	≤ 5 pies (1.5 metros)
230 kV	≤ 10 pies (3 metros)
345 kV	≤ 15 pies (4.5 metros)
500 kV	≤ 20 pies (6 metros)

Si en algún momento se observa que la vegetación está más cerca que las distancias de despeje de esta prioridad, se deberá informar a un gerente del Programa de Gestión de la Vegetación de Xcel Energy de inmediato.

*Únicamente sujeto a la norma FAC-003 si se designó específicamente en los requisitos

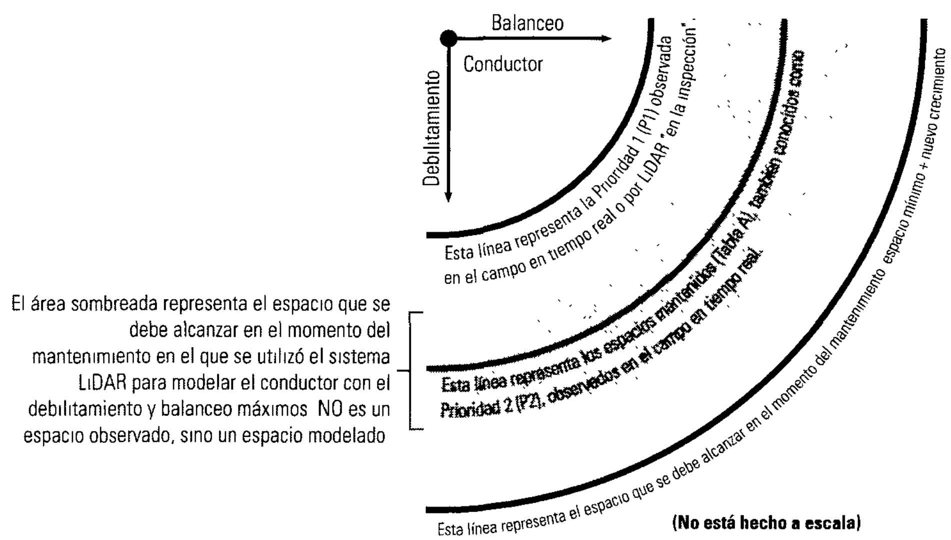
La **Prioridad 2 (P2)** consiste en distancias mayores que las de la Prioridad 1, pero menores a las indicadas en la Tabla A .

4.3.1. Despeje modelado por LiDAR

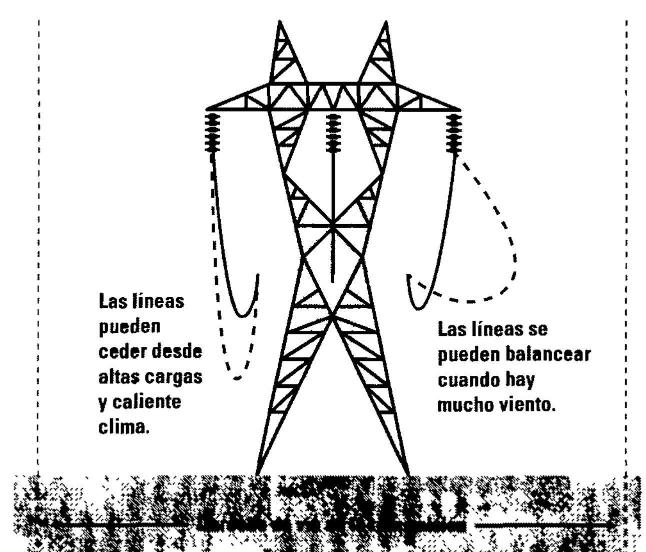
Cuando se realizó el análisis LiDAR para el mantenimiento de rutina y se modeló la ubicación del conductor en relación con el debilitamiento y la oscilación máximos, el mantenimiento de espacios despejados de árboles (Tabla A) se reemplaza por las distancias de despeje de la Prioridad 1 (P1) para generar los polígonos de condición de la vegetación en los mapas desarrollados para llevar a cabo el mantenimiento de rutina El nuevo crecimiento previsto de la vegetación para el ciclo correspondiente se debe incorporar en el umbral de despeje de la Prioridad 1 para determinar el espacio de despeje mínimo que se debe lograr durante el trabajo de gestión de la vegetación. También es posible que los trabajadores deban calcular el crecimiento de la vegetación que se produjo desde la fecha de adquisición de LiDAR

4.3.2. Interrelación del despeje en la gestión de vegetación para la transmisión y la defensa en profundidad

Xcel Energy brinda esta interpretación visual a modo de guía de orientación para comprender la interrelación entre distintas definiciones del despeje Si tiene dudas, comuníquese con su supervisor o gerente del programa



Además, incluimos un diagrama que ilustra el debilitamiento y balanceo de los conductores



Sección 4: GESTIÓN DE LA VEGETACIÓN PARA LA TRANSMISIÓN

4.4 TIPOS DE PROYECTOS DE TRANSMISIÓN

4.4.1 Mantenimiento de rutina/trabajo programado

El mantenimiento de rutina es un trabajo proactivo programado en un área de mantenimiento.

- Los contratistas deben determinar el método más rentable de completar realizar todo el trabajo de forma segura.
- Antes de ingresar a un tramo con derechos de acceso o propiedad privada con el fin de despejar el derecho de vía, a modo de cortesía, debe intentar comunicarse con el dueño de la propiedad.
- Si lo logra, debe informar al dueño de la propiedad acerca del trabajo que se realizará Tenga en cuenta que el derecho de acceso de un propietario puede incluir texto específico relacionado con cuestiones de vegetación
- *Si el contratista no puede comunicarse o localizar al dueño de una propiedad en la que se debe trabajar, debe informar a un* representante de la Gestión de la vegetación de Xcel Energy.
- Si es necesario ingresar a la propiedad para obtener acceso al derecho de vía, se debe acordar cuál es la mejor ruta. Si no se puede establecer un acuerdo o si el dueño está ausente, el contratista deberá informar a su representante de la Gestión de la vegetación de Xcel Energy
- Si se producen daños en la propiedad o el campo, el contratista será responsable de los reclamos relacionados, a menos que Xcel Energy establezca otras disposiciones.
- Si el dueño de una propiedad presenta un reclamo, el contratista deberá comunicarse con él de inmediato.

El contratista debe obtener una autorización escrita y firmada para la eliminación de la vegetación o el uso de herbicidas fuera de los límites del derecho de acceso o derecho de vía de Xcel Energy

4.4.2 Ciclo intermedio/inspección complementaria

Las inspecciones que se programan en áreas de mantenimiento seleccionadas con el fin de identificar y mitigar, según sea necesario, las condiciones de la vegetación que el inspector considera que se deben abordar antes del siguiente trabajo de mantenimiento Los proyectos serán asignados por el gerente del programa

4.4.3 Programa de Protección contra Incendios Forestales por la Transmisión

Las estructuras de transmisión sujetas a incendios forestales en áreas remotas y montañosas requieren el despeje de la vegetación para ayudar a proteger las instalaciones. Consulte los lineamientos de la protección contra incendios forestales por la transmisión para las áreas de servicios de Colorado, Texas y Nuevo México. En las áreas de servicio de Minnesota, Dakota del Norte, Dakota del Sur, Wisconsin y Michigan, se requiere el despeje de toda la vegetación leñosa en un radio de 10 pies (3 metros) de las estructuras de transmisión.

4.4.4 Solicitudes externas y de preparación para las tareas de despeje

Solo los contratistas calificados para el despeje de líneas, según los define las regulaciones o leyes locales, estatales o federales, pueden *trabajar en árboles que están a distancias menores a las establecidas en las leyes o regulaciones correspondientes con respecto a las* líneas de electricidad. Por lo tanto, cuando se solicite, Xcel Energy (a través de sus contratistas) ofrecerá el despeje preliminar para ayudar a reducir el riesgo de contacto eléctrico por parte de trabajadores externos no calificados Las solicitudes de estos despejes se conocen como solicitudes de "preparación" para el despeje.

Es importante que el personal contratado responda a estas solicitudes de forma oportuna y puntual, y de acuerdo con las leyes y regulaciones El personal del contratista también debe determinar cuál es la medida más rentable para ofrecer un despeje adecuado. Estos son algunos ejemplos:

- Podar la parte del árbol abarcando una distancia adecuada
- Dejar el árbol en el terreno

A partir de la fecha de publicación, Xcel Energy no cobra una tarifa por podar o derribar árboles en respuesta a solicitudes de preparación para el despeje, pero es importante que el contratista le comunique claramente al solicitante que los residuos se dejarán en el sitio y que Xcel Energy no se encargará de desecharlos

4.4.5 Solicitudes internas
Muchas entidades dentro de Xcel Energy pueden solicitar asistencia de la Gestión de la vegetación para mitigar problemas relacionados con esta última La mayoría de estas solicitudes se deben a problemas de confianza en el servicio (son resultado del proceso de supervisión de rutina) o a la implementación de instalaciones de reacondicionamiento

4.4.6 Solicitudes relacionadas con la confianza en el servicio
Es importante que los contratistas respondan estas solicitudes de forma rápida y oportuna, de acuerdo con las instrucciones incluidas en la solicitud y con las leyes y regulaciones En muchos casos, esperamos que los contratistas utilicen su criterio para tomar una decisión con respecto al alcance del trabajo Al tomar esta decisión deben tener en cuenta todos los factores, incluida la posibilidad de que la vegetación provoque un corte de electricidad en su condición actual, el riesgo para la seguridad pública y cuándo se debe realizar el mantenimiento de rutina en el área de mantenimiento señalada en el mapa

4.4.7 Costo de la construcción y los cruces
Estas solicitudes corresponden a la implementación, el reacondicionamiento o el trabajo en instalaciones de propiedad conjunta En muchos casos, al personal del contratista se le solicitará que identifique el alcance del trabajo requerido y que brinde información que se utilizará para calcular los costos relacionados Es importante que los contratistas respondan a estas solicitudes de forma rápida y oportuna, de acuerdo con las instrucciones incluidas en la solicitud y con las leyes y regulaciones

4.4.8 Respuesta ante emergencias o tormentas
El personal del contratista debe responder ante situaciones de tormentas, de acuerdo con el proceso regional de respuesta ante tormentas Solo se realizará el trabajo necesario para restaurar la electricidad Se debe hacer un intento razonable de informar a los clientes No se intentará desechar los residuos generados por los trabajos realizados.

Los contratistas deben reportar los peligros hallados como parte del programa de inspección de la seguridad en tendidos eléctricos, que se realiza en coordinación con las operaciones de despeje de las líneas de transmisión y distribución.

SECCIÓN 5: PROGRAMA DE INSPECCIÓN DE LA SEGURIDAD EN TENDIDOS ELÉCTRICOS

5.1 DESCRIPCIÓN

Los contratistas deben realizar inspecciones de la seguridad en tendidos eléctricos como parte de sus operaciones de gestión de la vegetación de rutina, que incluyen la inspección de lo siguiente, independientemente de la presencia de vegetación:

- Conductor de la línea primaria de distribución
- Línea secundaria de distribución y conductores de servicio en el lugar de trabajo
- Instalaciones de transmisión
- Otras instalaciones

Los contratistas deben identificar peligros obvios para la seguridad en las instalaciones de tendidos eléctricos de transmisión y distribución de Xcel Energy que podrían representar una amenaza para el público general, así como para nuestros empleados y trabajadores contratados. Los peligros que representan una amenaza inminente a la seguridad pública o personal se deben resolver de inmediato. En caso de emergencia, llame al área de control o despacho De acuerdo con la urgencia de la situación, es posible que sea necesario que el inspector permanezca en el sitio hasta que llegue un representante de servicios públicos.

Cuando se identifica un peligro, se debe respetar el proceso de inspección de la seguridad en tendidos eléctricos.

Luego de finalizar el trabajo en el área de mantenimiento, el contratista debe indicar si se completó la inspección de la seguridad en tendidos eléctricos en el formulario de Evaluación de la finalización del trabajo.

5.2 LISTA DE PELIGROS A MODO DE EJEMPLO

A continuación, se incluye una lista a modo de ejemplo de los peligros de la seguridad que los contratistas deben ser capaces de reconocer Tenga en cuenta que no se pueden incluir todas las situaciones y que se debe emplear un buen criterio al realizar una inspección

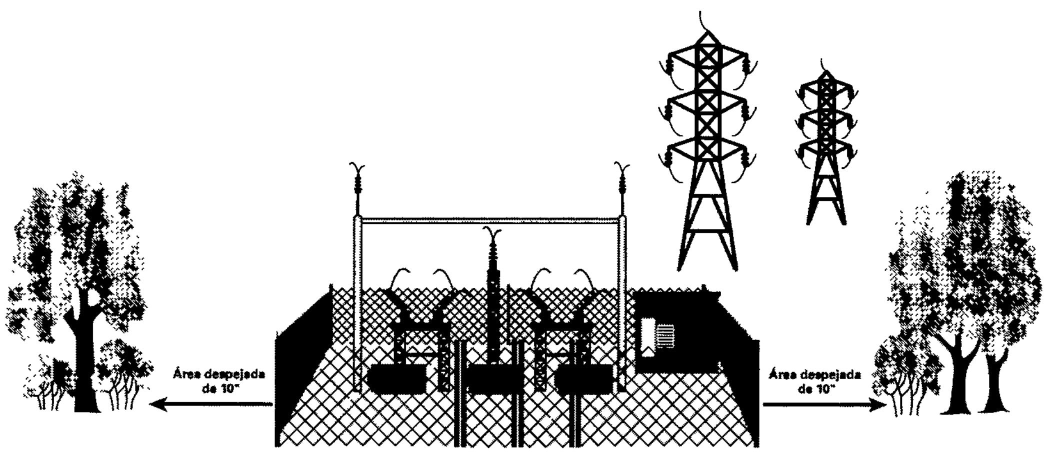
- Crucetas quebradas o rotas
- Crucetas faltantes
- Cables de sujeción faltantes o dañados
- Peligros de tropiezo, como cables que asoman fuera del poste en el suelo
- Fugas de aceite en equipos
- Equipos que están por caerse
- Invasión del derecho de vía de la línea de transmisión
- Despeje de los conductores de edificios, casas de árbol, escaleras, líneas de transmisión, etc.
- Postes, torres o bases inclinados
- Postes, torres o bases podridos o erosionados
- Nido de aves en una estructura
- Daño importante en un poste o torre causado por pájaros carpinteros
- Cables caídos o rotos
- Conductor, neutro o cables estáticos con daño significativo
- Cables fuera de aislantes o terminales
- Espacios en el suelo
- Daño en el aislante
- Daño en el terminal superior de un poste
- Daño en las escalinatas de un poste
- Objetos accesibles que cuelgan de las líneas
- Gabinete medidor suelto en la estructura
- Mástil o elevador tirando del gabinete
- Cables expuestos
- Puertas a los equipos o bóvedas subterráneos sin seguro o abiertas

SECCIÓN 6: TRABAJO EN SUBESTACIÓN ELÉCTRICA, INSTALACIÓN DE GAS NATURAL Y OTRAS INSTALACIONES

6.1 DESCRIPCIÓN GENERAL

El grupo de Gestión de la vegetación de Xcel Energy también es responsable de mantener la vegetación en subestaciones eléctricas e instalaciones de gas a alta y baja presión seleccionadas En algunas áreas, la Gestión de la vegetación de Xcel Energy también es responsable de ofrecer servicios de control de la vegetación en estaciones generadoras (también conocidas como plantas eléctricas) y en instalaciones tales como oficinas y centros de servicios, centros de telecomunicaciones y otras propiedades corporativas

Las instalaciones ubicadas en terrenos federales y algunas propiedades privadas requieren avisos y tipos de tratamientos especiales Los contratistas deben comunicarse con el representante correspondiente de la Gestión de la vegetación de Xcel Energy



6.2 DESPEJE DE LAS VALLAS DE SUBESTACIONES

Los árboles y arbustos que crecen muy cerca (a 10 pies [3 metros] o menos) de las vallas perimetrales pueden permitir el ingreso de animales, lo cual puede causar cortes en los transformadores de la subestación que podrían afectar a muchos clientes La vegetación puede encubrir el acceso humano no autorizado, lo cual crea problemas e inquietudes de seguridad en relación con el robo

En el momento del trabajo de mantenimiento de las líneas de transmisión y distribución, el contratista debe inspeccionar el perímetro de la valla de la subestación en donde se origina el circuito y despejar la vegetación que esté a menos de 10 pies (3 metros) de la valla

Si se identifica vegetación nueva, el contratista debe consultar con el representante de la Gestión de la vegetación de Xcel Energy antes de eliminarla

6.3 SEGURIDAD DE LAS SUBESTACIONES Y ACCESO

Todo personal contratado que ingrese a los depósitos de equipos de subestaciones debe estar calificado (normativa 1910.269 de la OSHA) y debe haber completado la capacitación de concienciación de peligros en subestaciones patrocinada por Xcel Energy. Cuando se le ordene que lo haga, el contratista debe informar al área de control o de despacho, antes de ingresar a una subestación y antes de retirarse de ella Los contratistas deben cerrar la puerta al ingresar a la subestación y asegurarla al salir Las puertas de la subestación deben permanecer aseguradas en todo momento, de acuerdo con el Programa de Acceso a Subestaciones de Xcel Energy No está permitido estacionar en subestaciones, a menos que cuente con la autorización previa del representante de Gestión de la Vegetación de Xcel Energy

Los contratistas deben conocer las condiciones especiales que rigen en cada región

SECCIÓN 7: GESTIÓN DE VEGETACIONES VARIAS

7.1 INFORMES SOBRE LAS ACTIVIDADES

Xcel Energy les brindará a los contratistas un método para informar sobre las actividades de sus equipos. Los contratistas deben registrar el tiempo y la actividad, de acuerdo con cada tipo de actividad realizada.

7.2 PROTECCIÓN AVIAR

El Plan de Protección Aviar a largo plazo de Xcel Energy detalla los esfuerzos de la empresa para proteger las instalaciones y reducir los riesgos de las aves por la interacción con las instalaciones de la empresa. Este plan forma parte de un acuerdo establecido en un Memorando de Acuerdo celebrado con la Dirección de Pesca y Fauna de los Estados Unidos (U S. Fish and Wildlife Service) Los siguientes elementos del Plan de Protección Aviar se relacionan con la actividad de mantenimiento de los árboles:

- Un nido de aves se define como aquel que no posee huevos o aves jóvenes. Si hay aves construyendo un nido que no tiene huevos ni aves jóvenes, este también se considera inactivo
- Si los equipos de Gestión de la vegetación encuentran un nido inactivo en una parte de un árbol que se debe podar, pueden quitar el nido. Solo hay dos excepciones:
  - Nido de águilas. Un nido inactivo de águilas no se puede quitar. Antes de comenzar un trabajo cerca de un nido de águilas, comuníquese con el representante de la Gestión de la vegetación de Xcel Energy.
  - Nido de águilas pescadoras: Debe comunicarse con un representante de la Gestión de la vegetación de Xcel Energy antes de quitar un nido de águilas pescadoras
- Si los equipos de Gestión de la vegetación encuentran un nido activo (con huevos o aves jóvenes) en una parte de un árbol en la que se debe trabajar, no se podrá quitar el nido hasta que se vuelva inactivo. Se puede despejar la parte del árbol que interfiere con los cables, sin molestar a los pájaros o sus nidos. Es posible que el equipo deba regresar para finalizar el trabajo una vez que el nido se vuelva inactivo Estas situaciones se deben reportar ante el representante de la Gestión de la vegetación de Xcel Energy
- Si los equipos de Gestión de la vegetación encuentran un ave muerta o herida que entró en contacto con la línea, deben comunicarse con el encargado general. El encargado general se comunicará con el representante asignado de la Gestión de la vegetación de Xcel Energy, quien se comunicará con el especialista en protección aviar apropiado de Xcel Energy.
- El encargado general contratado es responsable de contar con el Permiso con fines específicos de protección aviar de la Dirección de Pesca y Fauna de los Estados Unidos en el camión en todo momento.

7.3 GLOSARIO PARA PERSONAS QUE TRABAJAN CON ÁRBOLES

Maleza: Planta de tallo leñoso que tiene menos de 4" (10.1 cm) de diámetro a la altura del pecho

Tramo: consulte TMA (área de mantenimiento de la transmisión)

Circuito de distribución: Totalidad del circuito eléctrico desde una subestación hasta el medidor, incluida la línea primaria multifásica y monofásica, así como los conductores secundarios. En Xcel Energy, los circuitos de distribución suelen tener tensiones de 4 a 34 5 kV

Alimentador de la distribución: Conductores multifásicos entre el interruptor de la subestación y el siguiente dispositivo protector

Llave de distribución/lateral: Parte de un circuito de distribución de tensión que se desvía hacia un alimentador. Las llaves pueden ser monofásicas, bifásicas o trifásicas

DMA: Un área de mantenimiento de la distribución (Distribution Maintenance Area, DMA) es un área geográfica definida que contiene tensiones de distribución primaria y secundaria, independientemente de la configuración eléctrica existente

Árbol peligroso: Árbol que Xcel Energy o su contratista determinó que presenta un riesgo inaceptable de causar fallas en las instalaciones de Xcel Energy.

Sección 7: GESTIÓN DE VEGETACIONES VARIAS

Sitio en interrupción: Suspensión temporal del trabajo en un lugar

LiDAR: Sistema de detección que funciona con el principio de un radar, pero usa una luz láser. A fin de llevar a cabo la gestión de la vegetación en relación con los servicios públicos, el láser, por lo general, se monta en la parte inferior de una plataforma aérea

Área de mantenimiento: Un área geográfica definida con el fin de realizar la gestión de la vegetación, independientemente de la configuración eléctrica existente. En la mayoría de los casos, el área inicial se definía por el esquema de circuitos que existía en el momento de la creación del área de mantenimiento, y el nombre de dicha área se deriva del nombre de este circuito También se define como área de mantenimiento de la distribución (DMA) y área de mantenimiento de la transmisión (TMA)

Ciclo de mantenimiento: Cada área de mantenimiento tiene una duración de ciclo prestablecida para la actividad de despeje de la línea que se debe repetir cada una cantidad determinada de años (3, 4 o 5, por ejemplo)

Solicitudes de preparación para las tareas de despeje: Despeje basado en las distancias de abordaje mínimas de trabajadores no calificados para ayudar a reducir la posibilidad de contacto eléctrico Antes se denominaba despeje de la zona de seguridad

Línea primaria: Instalaciones de distribución de tensión (por ejemplo, conductores) que supera los 600 voltios y puede alcanzar los 34 500 voltios (34 5 kV)

Línea secundaria: Conductores de baja tensión del lado de baja tensión de un transformador Por lo general, la tensión es inferior a los 600 voltios Estos conductores incluyen los cables de luz de la calle

Servicio: Instalaciones de baja tensión entre la casa de un cliente y un poste También se lo denomina "acometida"

TMA: Un área de mantenimiento de la transmisión es un tramo sobre el que rige un derecho de vía mantenido, por lo general, entre dos o más subestaciones que pueden contener muchas líneas de transmisión o porciones de líneas de transmisión

Circuito de transmisión: Una línea completa, incluidos todos los conductores, tal como lo define la ingeniería de la transmisión de Xcel Energy. En Xcel Energy, por lo general, los circuitos de transmisión tienen tensiones operativas de 34 5 kV a 500 kV

Árbol: Planta con tallo leñoso y un diámetro igual o mayor a 4" (10 1 cm) de diámetro a la altura del pecho. Los árboles con varios tallos se deben contar de forma individual si no hay tierra entre los tallos al nivel del suelo

SECCIÓN 8: INTERACCIONES DE CLIENTES Y DERECHOS SOBRE LA TIERRA

8.1 GENERAL

La interacción con los propietarios de tierras (es decir, los clientes) ocurre en casi todos los aspectos del Programa de Gestión de la Vegetación, ya sea en relación con el área de mantenimiento, las solicitudes externas, la restauración después de las tormentas, etc. Es importante que todo el personal trabaje para asegurar una experiencia positiva del cliente, dado que interactuamos con propietarios de tierras. Además de ofrecer electricidad segura, confiable y rentable a nuestros clientes, tenemos en cuenta algunos principios básicos de orientación:

- Escucharemos a nuestros clientes
- Seremos accesibles a la hora de negociar
- Cumpliremos los compromisos con nuestros clientes
- Establecemos expectativas realistas
- Nos hacemos cargo de hallar soluciones
- Ofrecemos una comunicación clara, oportuna y proactiva
- Garantizamos la seguridad pública y del cliente

La experiencia positiva del cliente depende de la responsabilidad, cooperación y colaboración.

8.2 AVISO

Los contratistas deben realizar esfuerzos razonables para informar a los dueños de propiedades sobre el trabajo que se realizará Los contratistas deben conocer las condiciones especiales que rigen en cada región.

Distribución: Los contratistas deben obtener la autorización escrita del propietario para eliminar árboles y malezas y para usar herbicidas.

Transmisión: El contratista debe obtener una autorización escrita y firmada para la eliminación de la vegetación o el uso de herbicidas, fuera de los límites del derecho de acceso o derecho de vía de Xcel Energy

8.2.1 Comisión de Bienes Públicos (PUC) y Comisión de Servicios Públicos (PSC)

Las tarifas y acuerdos con varias entidades regulatorias estatales pueden ofrecerles a las empresas de servicios públicos y sus contratistas la capacidad de ingresar a propiedades privadas con fines de mantenimiento, independientemente de la existencia de derechos de acceso o derechos prescriptivos.

Las disposiciones sobre tarifas específicas incluyen lo siguiente
COLORADO: Reglas y regulaciones, general, R86 Acceso para empleados de la empresa
MICHIGAN: Reglas y regulaciones, parte 2, hoja C-2.0, Acceso a inmuebles
MINNESOTA: Libro de tasas eléctricas de Minnesota, Reglas y regulaciones, sección 1 3, hoja 6-4, Acceso al inmueble del cliente
NUEVO MÉXICO: Reglas y regulaciones de Nuevo México, regla original 10, acceso a inmuebles
DAKOTA DEL NORTE: Reglas y regulaciones generales, sección 1 3, hoja 6-1.1, Acceso al inmueble del cliente
DAKOTA DEL SUR: Reglas y regulaciones generales, sección 1 3, hoja 6-3.1, Acceso al inmueble del cliente
TEXAS: Reglas, regulaciones y condiciones del servicio, sección V, regla 10, hoja V-11, Acceso a inmuebles
WISCONSIN: Reglas y regulaciones, hoja E 90, programa Ex-22, Acceso al inmueble del cliente

Puede consultar la totalidad de las tarifas correspondientes a cada estado dentro del territorio en el que presta servicios Xcel Energy en xcelenergy com. Busque Tariffs (Tarifas), seleccione el enlace Energy Rates (Tasas de electricidad) del estado específico y seleccione Entire Electric Tariff Book (Libro completo de tarifas eléctricas) bajo el menú Electric Rate Books (Libros de tasas eléctricas) Si tiene problemas en el sitio web de Xcel Energy, puede ingresar en el sitio web de la Comisión de Bienes Públicos local o comunicarse con la empresa para obtener una copia de sus tarifas

4 Nota las referencias sobre tarifas rigen a partir de julio de 2018

8.2.2 DENEGACIÓN DEL CLIENTE O PROPIETARIO
Si el cliente o propietario le niega al contratista el ingreso a las instalaciones de la empresa o rechaza el alcance requerido del trabajo, se debe informar a la supervisión del contratista para que intente resolver el problema. Si el supervisor del contratista no logra establecer un acuerdo, se debe informar al representante correspondiente de la Gestión de la vegetación de Xcel Energy Además, las conductas peligrosas se deben reportar ante el Centro de Seguridad de las Operaciones (Security Operations Center, SOC) de Xcel Energy

8.2.3 Derechos sobre la tierra, derechos de vía, derechos de acceso o permisos de uso especial
Los contratistas deben saber que las líneas de transmisión y distribución se deben construir en zonas donde existen derechos legales de acceso u otros acuerdos o derechos para el uso de las tierras; por ejemplo, un permiso, contrato de alquiler o licencia Es posible que rijan condiciones especiales con respecto a las actividades de gestión de la vegetación, de acuerdo con los términos de estos contratos Si surgen preguntas, comuníquese con el representante correspondiente de la Gestión de la vegetación de Xcel Energy.

8.2.4 Derechos de vía con tarifas
Los derechos de vía o las tierras con tarifas son constituyen propiedades de Xcel Energy. Xcel Energy puede tener el control total de estas propiedades, sujeto a condiciones, reservas y gravámenes, licencias o contratos de alquiler. Es posible que se necesite la autorización del dueño de la propiedad adyacente para obtener acceso. Si surgen preguntas, comuníquese con el representante correspondiente de la Gestión de la vegetación de Xcel Energy.

8.2.5 Trabajo en tierras federales
Al trabajar en tierras federales, los contratistas deben saber que Xcel Energy es la propietaria de muchas instalaciones de distribución y transmisión eléctrica y de gas ubicadas en tierras federales (Oficina de Administración de Tierras del Servicio Forestal de los Estados Unidos [U.S. Forest Service, Bureau of Land Management], etc) y es quien las opera. Estas instalaciones están autorizadas a través de subsidios o permisos específicos que el administrador de tierras federales
le otorga a Xcel Energy. En todos los casos, la eliminación de árboles de tierras federales solo se puede llevar a cabo con permisos previos otorgados por el administrador de tierras federales. Por lo tanto, toda eliminación de árboles en tierras federales requiere la consulta previa con el administrador de tierras federales y su aprobación. La responsabilidad de esta consulta y del proceso de aprobación es exclusiva de Xcel Energy, a menos que se acuerde algo diferente por escrito.

Procedimiento de las operaciones de despeje de la vegetación en las instalaciones de transmisión, distribución y gas en tierras federales, después de que Xcel Energy obtuvo la aprobación del administrador de tierras correspondiente

- El encargado general del contratista se reunirá con el administrador de tierras correspondiente o el representante designado antes del inicio de las tareas del equipo En ese momento se abordarán las inquietudes o solicitudes específicas o se derivarán al personal correspondiente de Xcel Energy.
- Las operaciones del equipo en tierras federales respetarán estrictamente las solicitudes de la agencia federal aceptadas por Xcel Energy.
- Dichas solicitudes especiales pueden incluir, entre otras cosas, procedimientos y equipos para planes de prevención de incendios, el desecho de cortes y los requisitos de acumulación de maderas comercializables, el control semanal por parte del encargado general con respecto a la ubicación del equipo y el nivel de peligro de incendios.
- El contratista obtendrá los permisos necesarios para las estadías extendidas nocturnas en tierras federales
- Además, obtendrá la aprobación del administrador de tierras correspondiente antes de usar vehículos todoterreno, a menos que cuente con una autorización específica Todo acceso a derechos de vía, que no permita el ingreso por carreteras o senderos, debe tener la aprobación del administrador de tierras federales correspondiente.
- Las operaciones y el acceso de los equipos respetarán los cierres de carreteras en tierras federales Se puede lograr la apertura de carreteras cerradas, a criterio exclusivo del administrador de tierras correspondiente.
- Las áreas y campamentos donde trabajan los equipos y todas las áreas de trabajo se mantendrán libres de residuos y en cumplimiento con las normas establecidas por agencias federales

Es responsabilidad del contratista garantizar que todas las operaciones en tierras federales cumplan las condiciones establecidas en el permiso de uso especial y los demás requisitos vigentes que correspondan a las operaciones de despeje de líneas.

El uso de herbicidas y pesticidas químicos también está regulado en las tierras federales. Se requiere la aprobación previa por escrito del administrador de tierras federales antes de usar pesticidas o herbicidas. Solo los materiales registrados ante la Agencia de Protección Medioambiental de los Estados Unidos (U S. Environmental Protection Agency) con el fin específico planificado se podrán usar en tierras federales.

8.3 RECURSOS PARA NUESTROS CLIENTES
Nuestros clientes pueden hallar información útil en nuestro sitio web **xcelenergy.com/trees**. Allí se incluyen preguntas frecuentes que los clientes tienen con respecto a nuestro Programa de Gestión de la Vegetación.

El folleto Plant a Better Future (Plantemos un futuro mejor) de Xcel Energy está disponible en el sitio web y les ofrece a los clientes información detallada con respecto a los árboles compatibles con las líneas eléctricas. Se incluyen tres versiones correspondientes a las zonas de rusticidad del territorio en el que presta servicios Xcel Energy.

NOTES

[redacted]

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Appendix B - 2019 Remediation Plan for 2018 Top 10% SAIDI & SAIFI

APPENDIX B

2019 Texas Remediation Plan for 2018 Top 10% SAIFI & SAIDI Feeders - Vegetation Related Events Only

Feeder	SAIDI Top 10%	SAIFI Top 10%	# Events	Total CMO	Total SCIs	# SCIs Investigated by Veg Man Dept	# Preventable SCIs Determined by VM Dept	# Non-Preventable SCIs Determined by VM Dept	Vegetation Management Year Last Worked	Vegetation Management Year Scheduled	Remediation Plan?
CANA335	X	X	2	49,524	314	313	313		2015	2020	Yes, will inspect main feeder
VANB7044	X	X	4	105,327	497	484		484	2014	2020	Yes, will inspect main feeder
PERR1530	X	X	6	8,546	129	103	103		2018	2023	No, performed maintenance in 2018
BUSH5210	X	X	7	31,323	183	81	81		2018	2023	No, performed maintenance in 2018
SGEO2346	X	X	5	12,272	62	39		39	2017	2022	Yes, will inspect main feeder
DU191470	X	X	4	21,524	113	108	108		2015	2015	Yes, will inspect main feeder
LAWR5030	X	X	8	9,316	58	0			2014	2019	Yes, will inspect main feeder
SLATSL150		X	3	1,546	16	0			2015	2015	Yes, will inspect main feeder
LAWR5020	X	X	10	6,398	51	0			2013	2018	Yes, will inspect main feeder
BUFF2215	X	X	1	1,905	15	0			2013	2018	Yes, will inspect main feeder
SGEO5B35		X	4	2,689	52	0			2018	2023	No, performed maintenance in 2018

Feeder	SAIDI Top 10%	SAIFI Top 10%	# Events	Total CMO	Total SCIs	# SCIs Investigated by Veg Man Dept	# Preventable SCIs Determined by VM Dept	# Non-Preventable SCIs Determined by VM Dept	Vegetation Management Year Last Worked	Vegetation Management Year Scheduled	Remediation Plan?
HARTHA120	X	X	2	2,079	17	0			2018	2023	No, performed maintenance in 2018
DIMEDI180		X	1	1,079	13	0			2014	2019	Yes, will inspect main feeder
PLVWP110	X	X	1	14,063	41	41		41	2017	2022	No, performed maintenance in 2017
EPLAA126		X	2	1,787	18	0			2017	2021	Yes, will inspect main feeder
DU191367		X	3	5,384	51	0			2016	2021	Yes, will inspect main feeder
LPSB2580	X	X	3	6,925	26	0			2015	2020	Yes, will inspect main feeder
HERR1434	X		4	10,339	26	0			2014	2019	Yes, will inspect main feeder
PUCW5C30	X		1	5,533	11	0			2019	2024	YES, performed maintenance in 2019
LAWR5025	X		6	6,760	43	0			2014	2019	Yes, will inspect main feeder
DOSSS495	X		3	3,674	8	0			2018	2023	No, performed maintenance in 2018
LITSLI110	X		4	5,706	32	0			2018	2023	No, performed maintenance in 2018

Appendix C1 - 2018 Vegetation Annual Filing Feeder SAIDI

Monthly SAIDI by Feeder

Based on 2018 TX QSP Filing Data, Forced Events
Excludes Area Office Storm Days and Substation & Transmission Events. Includes only Vegetation Cause Coded Outages
Includes only feeders that had outages meeting the above criteria
2018 Top 10 % - 165 Feeders With Vegetation Cause Outages

Feeder	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YearEnd
CANA335	0.00	0.00	0.00	0.22	0.00	0.00	159.02	0.00	0.00	0.00	0.00	0.00	159.24
VANB7044	126.05	0.00	0.00	0.10	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	126.59
BUSH5210	0.06	1.97	0.00	0.00	0.00	0.04	13.19	0.00	3.29	0.00	0.00	0.00	18.54
PERR1530	0.00	0.00	0.00	0.48	2.72	0.00	0.00	6.96	0.00	2.64	0.00	0.00	12.80
SGEO2346	0.00	0.00	7.55	0.00	0.00	1.02	0.00	0.00	2.29	0.00	0.00	0.00	10.86
DU191470	0.00	0.00	0.00	0.00	0.00	0.06	2.19	0.00	0.00	0.04	7.69	0.00	9.99
PLVWP110	0.00	0.00	0.00	0.00	9.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.77
HERR1434	0.00	0.00	0.51	0.00	0.00	7.60	0.00	0.00	0.00	0.68	0.00	0.00	8.78
PUCW5C30	0.00	0.00	0.00	0.00	0.00	7.42	0.00	0.00	0.00	0.00	0.00	0.00	7.42
LPSB2580	0.00	0.00	0.00	0.19	6.15	0.16	0.00	0.00	0.00	0.00	0.00	0.00	6.50
LAWR5030	0.00	3.04	0.00	0.16	0.04	0.22	0.00	2.24	0.00	0.00	0.00	0.00	5.69
LAWR5020	0.00	0.00	0.00	0.00	0.00	2.60	0.00	1.35	0.04	0.18	0.00	0.00	4.16
BUFF2215	0.00	0.00	0.00	0.00	0.00	0.00	4.04	0.00	0.00	0.00	0.00	0.00	4.04
HARTHA120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.00	3.48	3.77
LAWR5025	0.00	0.00	0.00	0.26	0.17	3.25	0.00	0.00	0.07	0.00	0.00	0.00	3.75
DOSS5495	0.00	0.00	0.00	0.00	0.00	3.72	0.00	0.00	0.00	0.00	0.00	0.00	3.72
LITSLI110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.66	3.66
SLATSL150	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.62	0.00	1.97	0.00	3.35
DOSS5400	0.06	0.00	0.00	0.09	0.00	3.10	0.05	0.00	0.00	0.00	0.00	0.00	3.30
DU191367	0.00	0.00	0.00	0.00	0.00	1.07	0.00	0.00	1.86	0.00	0.00	0.00	2.93
SPEX1512	0.00	0.00	0.00	0.00	0.17	0.00	0.00	1.81	0.88	0.00	0.00	0.00	2.86
LAWR5315	0.15	0.00	0.00	0.00	1.70	0.85	0.00	0.00	0.10	0.00	0.00	0.00	2.80
EPLAA126	0.00	0.00	0.00	0.24	0.00	2.53	0.00	0.00	0.00	0.00	0.00	0.00	2.77
SPEA301	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00	2.39	0.00	0.00	2.76
DOSS6670	0.56	0.00	0.00	0.00	0.00	1.84	0.00	0.00	0.07	0.00	0.00	0.00	2.47
EPLAA122	0.08	0.00	0.22	0.00	0.26	1.89	0.00	0.00	0.00	0.00	0.00	0.00	2.45
DIMEDI180	0.00	0.00	0.00	0.00	0.00	2.44	0.00	0.00	0.00	0.00	0.00	0.00	2.44
VANB7046	0.00	0.00	0.05	1.48	0.00	0.03	0.05	0.00	0.11	0.13	0.38	0.15	2.38
LYON5C20	0.00	0.00	0.00	0.03	0.00	0.46	1.21	0.00	0.05	0.05	0.50	0.00	2.31
BUSH5205	0.00	0.00	0.16	1.08	0.08	0.37	0.27	0.15	0.10	0.06	0.00	0.00	2.26
MORTM120	0.00	0.00	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.11
HAST7078	0.00	0.07	0.00	0.10	0.00	1.70	0.06	0.02	0.00	0.00	0.06	0.05	2.05
EPLAA110	0.00	0.00	0.00	0.00	0.00	2.04	0.00	0.00	0.00	0.00	0.00	0.00	2.04

LAWR5275	0.00	0.00	0.29	0.00	0.01	0.28	1.25	0.10	0.00	0.09	0.00	0.00	2.03
SUDRSR120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.89	1.89
SGEO2338	0.31	0.00	0.48	0.03	0.06	0.04	0.83	0.00	0.00	0.08	0.00	0.03	1.85
SFLO3547	0.00	0.00	0.55	0.00	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.77
LYNN6300	0.00	0.26	0.00	0.00	0.85	0.00	0.15	0.00	0.00	0.00	0.29	0.18	1.73
FARM5390	0.00	0.00	0.10	0.00	0.00	0.05	0.00	0.00	0.00	1.50	0.00	0.00	1.65
LITWLI156	0.43	0.00	0.00	0.00	0.45	0.24	0.00	0.00	0.00	0.17	0.00	0.34	1.64
CNCK1B25	0.00	0.00	0.00	0.00	0.00	1.62	0.00	0.00	0.00	0.00	0.00	0.00	1.62
SGEO5B35	0.00	0.00	0.00	0.97	0.00	0.54	0.09	0.00	0.00	0.00	0.00	0.00	1.59
HOWA2480	0.00	0.00	0.00	0.00	0.00	0.00	0.30	1.15	0.00	0.00	0.11	0.00	1.56
TXFA1125	0.00	0.00	0.00	0.00	0.00	1.54	0.00	0.00	0.00	0.00	0.00	0.00	1.54
CANA350	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.00	0.00	1.44
ESTA5D65	0.00	0.00	0.00	0.00	0.00	1.35	0.00	0.00	0.00	0.00	0.00	0.00	1.35
PARM2475	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.14	0.97	0.00	1.35
ESTA5D70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.32	1.32
LITCLI630	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.28	0.00	0.00	1.28
ROXA2076	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.47	0.00	1.28
CURX3486	0.00	0.00	0.00	0.00	0.00	0.00	1.24	0.00	0.00	0.00	0.00	0.00	1.24
FARM5395	0.00	0.00	0.79	0.00	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	1.24
PLAXX310	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.23	0.00	0.56	0.00	1.23
ARRO5D85	0.00	0.17	0.00	0.00	0.27	0.78	0.00	0.00	0.00	0.00	0.00	0.00	1.23
ESTA5D20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18	0.00	0.00	0.00	1.18
MCLE5300	0.00	0.00	0.00	0.00	0.21	0.47	0.00	0.47	0.00	0.00	0.00	0.00	1.14
INDU1416	0.00	0.00	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08
OSAG6065	0.00	0.00	0.00	0.00	0.00	0.03	0.87	0.00	0.10	0.03	0.00	0.00	1.04
FRIO2436	0.00	0.00	0.00	0.07	0.00	0.00	0.73	0.00	0.10	0.07	0.00	0.05	1.02
LOCR3417	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
VANB7048	0.00	0.00	0.29	0.00	0.36	0.00	0.00	0.00	0.34	0.00	0.00	0.00	0.99
MCCU7005	0.00	0.00	0.06	0.00	0.38	0.09	0.00	0.45	0.00	0.00	0.00	0.00	0.97
LAPL2D65	0.00	0.00	0.39	0.10	0.02	0.41	0.00	0.00	0.00	0.05	0.00	0.01	0.97
CHER5C10	0.00	0.00	0.24	0.00	0.04	0.63	0.00	0.00	0.00	0.00	0.06	0.00	0.97
VANB7198	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.82	0.00	0.00	0.00	0.00	0.96
34ST5B90	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.00	0.32	0.00	0.00	0.95
KISRP970	0.00	0.00	0.00	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
CANA340	0.00	0.00	0.00	0.00	0.14	0.41	0.00	0.00	0.00	0.27	0.00	0.00	0.82
LYON5C25	0.03	0.00	0.00	0.00	0.00	0.19	0.00	0.03	0.31	0.00	0.00	0.24	0.80
MORTM130	0.00	0.00	0.16	0.00	0.00	0.00	0.11	0.00	0.00	0.50	0.00	0.00	0.77
GARZ6520	0.00	0.00	0.00	0.00	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77
PERR1235	0.00	0.00	0.00	0.00	0.14	0.45	0.00	0.00	0.09	0.00	0.00	0.09	0.76
SOEA5C80	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
HAST7082	0.00	0.00	0.15	0.22	0.00	0.14	0.00	0.10	0.00	0.06	0.04	0.00	0.71

CHAN1675	0.00	0.00	0.00	0.27	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.71
CARS7030	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.71
DALH1298	0.00	0.00	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
OLTOSO180	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.70
CANE5190	0.00	0.00	0.57	0.00	0.07	0.00	0.00	0.00	0.02	0.00	0.04	0.00	0.69
HERE2D50	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.66
DIMSDI110	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
WHITLV220	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.29	0.00	0.00	0.00	0.65
LEVCLV180	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.47	0.00	0.61
FARWFA610	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
34ST5B95	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.56
CARL6650	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.55
CONW5010	0.00	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
GARZ6500	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
LITCLI610	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.51
DALH116	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
LYNN6340	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.51
VEGA5195	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.51
PIER5B05	0.00	0.00	0.00	0.11	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.50
GARZPO120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.00	0.47
CONW5005	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
HERE2D45	0.00	0.00	0.06	0.00	0.00	0.24	0.00	0.00	0.00	0.06	0.00	0.09	0.45
WHIT5270	0.00	0.09	0.13	0.00	0.02	0.15	0.00	0.04	0.00	0.00	0.00	0.00	0.44
SOEA5C85	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.18	0.44
SLAT6690	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.21	0.00	0.00	0.00	0.43
MOSS6540	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.00	0.00	0.00	0.00	0.43
PLVEP160	0.00	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
BRIS3434	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.42
DALH108	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.41
HIGH5335	0.00	0.27	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
WBOR1A10	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.19	0.00	0.06	0.00	0.00	0.40
LEVCLV190	0.00	0.14	0.05	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.03	0.00	0.40
KITE7106	0.10	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.39
PERR1535	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.39
PIER5B10	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
AMHEAM62(	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
ALLMAT120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.38
FRIT1360	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.07	0.00	0.00	0.00	0.00	0.37
DALH1246	0.00	0.13	0.07	0.04	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.37
MANH7164	0.00	0.00	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.14	0.36
WHIT5260	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.06	0.04	0.07	0.08	0.00	0.32

MULWMR13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.31
INDU1412	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.31
MANH7160	0.00	0.00	0.00	0.00	0.12	0.00	0.11	0.00	0.05	0.00	0.00	0.00	0.28
SGEO5B30	0.00	0.00	0.00	0.00	0.00	0.04	0.05	0.13	0.00	0.00	0.07	0.00	0.28
MCCU5085	0.03	0.00	0.13	0.00	0.04	0.02	0.00	0.00	0.00	0.05	0.00	0.00	0.28
MULWMR14	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.27
SPRI1316	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
ETTR5410	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.24
LPSB1E50	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
MCCU7002	0.00	0.00	0.00	0.03	0.00	0.13	0.00	0.00	0.00	0.00	0.06	0.00	0.22
CANW7124	0.00	0.00	0.00	0.00	0.04	0.03	0.15	0.00	0.00	0.00	0.00	0.00	0.22
BOWE2057	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.10	0.00	0.00	0.21
WRIDP460	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.21
PLVSP220	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.20
WILD2018	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
KISRP965	0.09	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
SLAT6600	0.00	0.00	0.06	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
EPLAA118	0.00	0.07	0.00	0.00	0.07	0.00	0.00	0.03	0.00	0.02	0.00	0.00	0.19
TUCON404	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
FRIT1364	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.07	0.00	0.00	0.00	0.00	0.17
SGEO2342	0.00	0.00	0.00	0.07	0.00	0.00	0.07	0.00	0.00	0.00	0.04	0.00	0.17
DIMEDI150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.06	0.17
LAPL2D70	0.07	0.00	0.07	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.16
HAST7074	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.16
LITCLI640	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.15
WANT3502	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.14
OUTP2A055	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.12
DENES100	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.06	0.00	0.00	0.00	0.00	0.12
MULVMR155	0.04	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
DENES110	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.12
HOWA2485	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.12
34ST2B45	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
SPRD2C80	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.11
BENNS345	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.11
HEND6685	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
HEND6675	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
KING5115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10
HAST7086	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.10
SLATSL140	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.08
WRIDP450	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.08
CANW5160	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08

LAWR5050	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
34ST5B85	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.07
CHER5C15	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
PIER5B00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.03
SGEO5B40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
SONC5130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.02
WBOR1A20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WEAT1350	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WEAT1354	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
State of T	**0.43**	**0.04**	**0.08**	**0.05**	**0.15**	**0.28**	**0.37**	**0.07**	**0.08**	**0.05**	**0.09**	**0.05**	**1.73**

Appendix C2 - 2018 Vegetation Annual Filing Feeder SAIFI

Monthly SAIFI by Feeder

Based on 2018 TX QSP Filing Data, Forced Events
Excludes Area Office Storm Days and Substation & Transmission Events. Includes only Vegetation Cause Coded Outages
Includes only feeders that had outages meeting the above criteria
2018 Top 10 % - 165 Feeders With Vegetation Cause Outages

Feeder	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YearEnd
CANA335	0.000	0.000	0.000	0.003	0.000	0.000	1.006	0.000	0.000	0.000	0.000	0.000	1.010
VANB7044	0.582	0.000	0.000	0.001	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.597
PERR1530	0.000	0.000	0.000	0.003	0.015	0.000	0.000	0.155	0.000	0.021	0.000	0.000	0.194
BUSH5210	0.001	0.009	0.000	0.000	0.000	0.001	0.049	0.000	0.049	0.000	0.000	0.000	0.108
SGEO2346	0.000	0.000	0.035	0.000	0.000	0.005	0.000	0.000	0.014	0.000	0.000	0.000	0.055
DU191470	0.000	0.000	0.000	0.000	0.000	0.002	0.013	0.000	0.000	0.000	0.037	0.000	0.052
LAWR5030	0.000	0.009	0.000	0.001	0.001	0.006	0.000	0.019	0.000	0.000	0.000	0.000	0.035
SLATSL150	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.002	0.000	0.024	0.000	0.035
LAWR5020	0.000	0.000	0.000	0.000	0.000	0.025	0.000	0.007	0.001	0.001	0.000	0.000	0.033
BUFF2215	0.000	0.000	0.000	0.000	0.000	0.000	0.032	0.000	0.000	0.000	0.000	0.000	0.032
SGEO5B35	0.000	0.000	0.000	0.023	0.000	0.007	0.001	0.000	0.000	0.000	0.000	0.000	0.031
HARTHA120	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.029	0.031
DIMEDI180	0.000	0.000	0.000	0.000	0.000	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.029
PLVWP110	0.000	0.000	0.000	0.000	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.028
EPLAA126	0.000	0.000	0.000	0.002	0.000	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.028
DU191367	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.018	0.000	0.000	0.000	0.028
LPSB2580	0.000	0.000	0.000	0.002	0.022	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.024
LAWR5025	0.000	0.000	0.000	0.005	0.001	0.017	0.000	0.000	0.001	0.000	0.000	0.000	0.024
HERR1434	0.000	0.000	0.006	0.000	0.000	0.009	0.000	0.000	0.000	0.008	0.000	0.000	0.022
LYON5C20	0.000	0.000	0.000	0.001	0.000	0.005	0.008	0.000	0.001	0.001	0.006	0.000	0.022
LITSLI110	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.020
LAWR5315	0.001	0.000	0.000	0.000	0.008	0.010	0.000	0.000	0.001	0.000	0.000	0.000	0.020
BUSH5205	0.000	0.000	0.001	0.010	0.001	0.002	0.002	0.002	0.001	0.001	0.000	0.000	0.020
LITWLI156	0.004	0.000	0.000	0.000	0.004	0.004	0.000	0.000	0.000	0.004	0.000	0.004	0.020
VANB7046	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.001	0.001	0.006	0.001	0.018
LAWR5275	0.000	0.000	0.001	0.000	0.001	0.006	0.009	0.001	0.000	0.001	0.000	0.000	0.018
SUDRSR120	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.017
LYON5C25	0.001	0.000	0.000	0.000	0.000	0.003	0.000	0.001	0.008	0.000	0.000	0.005	0.017
SPEX1512	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.010	0.004	0.000	0.000	0.000	0.016
CURX3486	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.000	0.000	0.000	0.000	0.000	0.016

DOSS6670	0.005	0.000	0.000	0.000	0.000	0.011	0.000	0.000	0.001	0.000	0.000	0.000	0.016
LYNN6300	0.000	0.001	0.000	0.000	0.010	0.000	0.001	0.000	0.000	0.000	0.002	0.001	0.016
PUCW5C30	0.000	0.000	0.000	0.000	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.015
MCLE5300	0.000	0.000	0.000	0.000	0.006	0.002	0.000	0.006	0.000	0.000	0.000	0.000	0.015
SGEO2338	0.002	0.000	0.005	0.000	0.000	0.000	0.006	0.000	0.000	0.001	0.000	0.000	0.015
MCCU7005	0.000	0.000	0.001	0.000	0.006	0.001	0.000	0.006	0.000	0.000	0.000	0.000	0.014
EPLAA122	0.001	0.000	0.002	0.000	0.001	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.014
PARM2475	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.001	0.010	0.000	0.014
SPEA301	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.011	0.000	0.000	0.014
PLAXX310	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.003	0.000	0.006	0.000	0.013
HOWA2480	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.008	0.000	0.000	0.002	0.000	0.013
MORTM120	0.000	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013
ARRO5D85	0.000	0.001	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.011
HAST7086	0.000	0.000	0.000	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.011
ESTA5D70	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.011
ESTA5D65	0.000	0.000	0.000	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.011
LITCLI630	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.000	0.000	0.011
MORTM130	0.000	0.000	0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.008	0.000	0.000	0.010
34ST5B90	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.001	0.000	0.000	0.010
DOSSS400	0.001	0.000	0.000	0.001	0.000	0.007	0.001	0.000	0.000	0.000	0.000	0.000	0.010
FARM5390	0.000	0.000	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.009	0.000	0.000	0.010
ESTA5D20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.010
LAPL2D65	0.000	0.000	0.002	0.001	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.009
FRIO2436	0.000	0.000	0.000	0.001	0.000	0.000	0.006	0.000	0.001	0.001	0.000	0.001	0.009
LOCR3417	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009
EPLAA110	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.009
VANB7048	0.000	0.000	0.003	0.000	0.003	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.008
HAST7078	0.000	0.000	0.000	0.001	0.000	0.006	0.001	0.000	0.000	0.000	0.001	0.000	0.008
DOSSS495	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.008
HERE2D50	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.008
CANA350	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.008
OSAG6065	0.000	0.000	0.000	0.000	0.000	0.001	0.006	0.000	0.001	0.001	0.000	0.000	0.008
DALH1298	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008
CANE5190	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008
LEVCLV180	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.007
ALLMAT120	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.007
SFLO3547	0.000	0.000	0.004	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007
SOEA5C85	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.007

INDU1416	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007
WHITLV220	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.003	0.000	0.000	0.000	0.007
CANA340	0.000	0.000	0.000	0.000	0.002	0.002	0.000	0.000	0.000	0.002	0.000	0.000	0.007
WBOR1A10	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.004	0.000	0.001	0.000	0.000	0.007
34ST5B95	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.007
CARS7030	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.007
CNCK1B25	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.006
LITCLI610	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.006
VANB7198	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.006	0.000	0.000	0.000	0.000	0.006
PERR1235	0.000	0.000	0.000	0.000	0.002	0.003	0.000	0.000	0.001	0.000	0.000	0.001	0.006
SGEO5B30	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.004	0.000	0.000	0.001	0.000	0.006
FARM5395	0.000	0.000	0.005	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.006
CARL6650	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.005
ROXA2076	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.005
WHIT5270	0.000	0.001	0.003	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.005
GARZ6520	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
MULWMR13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.005
CHER5C10	0.000	0.000	0.001	0.000	0.001	0.002	0.000	0.000	0.000	0.000	0.001	0.000	0.005
TXFA1125	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.005
HAST7082	0.000	0.000	0.001	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.001	0.000	0.005
CHAN1675	0.000	0.000	0.000	0.002	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.004
MCCU5085	0.001	0.000	0.001	0.000	0.001	0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.004
CONW5005	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
DALH116	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
HERE2D45	0.000	0.000	0.001	0.000	0.000	0.002	0.000	0.000	0.000	0.001	0.000	0.001	0.004
MANH7164	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.004
FARWFA610	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
OLTOSO180	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.004
BOWE2057	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.002	0.000	0.000	0.004
LYNN6340	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.003
KISRP970	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
MOSS6540	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.003
KITE7106	0.002	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.003
PLVEP160	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
DALH108	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.003
SOEA5C80	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
MULWMR14	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.003
GARZPO120	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.003

SPRI1316	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
WHIT5260	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.000	0.003
INDU1412	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.003
AMHEAM62	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
DIMSDI110	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
KISRP965	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
CONW5010	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
SGEO2342	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.001	0.000	0.003
LEVCLV190	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
HOWA2485	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.002
MANH7160	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.002
MCCU7002	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.001	0.000	0.002
SLAT6690	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.002
LITCLI640	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.002
DALH1246	0.000	0.001	0.001	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.002
DIMEDI150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.002
FRIT1360	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.002
PERR1535	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.002
LPSB1E50	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
BRIS3434	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.002
HAST7074	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.002
PIER5B05	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.002
LAPL2D70	0.001	0.000	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.002
HIGH5335	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
DENES100	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.002
MULVMR15	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
PLVSP220	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002
SLAT6600	0.000	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
SLATSL140	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.002
WRIDP460	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002
WANT3502	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.002
EPLAA118	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
SONC5130	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.001
GARZ6500	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
WRIDP450	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.001
ETTR5410	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001
TUCON404	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
CANW7124	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001

CANW5160	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
KING5115	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001
VEGA5195	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001
DENES110	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001
PIER5B10	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
FRIT1364	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.001
PIER5B00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001
SPRD2C80	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
WILD2018	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
BENNS345	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001
HEND6685	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001
OUTP2A055	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001
LAWR5050	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
HEND6675	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
CHER5C15	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
SGEO5B40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001
34ST2B45	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
34ST5B85	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WBOR1A20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WEAT1350	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WEAT1354	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
State of TX	**0.002**	**0.000**	**0.001**	**0.000**	**0.001**	**0.002**	**0.002**	**0.001**	**0.001**	**0.000**	**0.001**	**0.000**	**0.011**

Appendix D - 2018 Remediation Plan for 2017 Top 10% SAIDI & SAIFI

APPENDIX D

2018 Texas Remediation Plan for 2017 Top 10% SAIFI & SAIDI Feeders - Vegetation Related Events Only

Feeder	SAIDI Top 10%	SAIFI Top 10%	# Events	Total CMO	Total SCIs	# SCIs Investigated by Veg Man Dept	# Preventable SCIs Determined by VM Dept	# Non-Preventable SCIs Determined by VM Dept	Vegetation Management Year Last Worked	Vegetation Management Year Scheduled	Remediation Plan?
BOOK422	X		1	3,449	1	0			2015	2020	No, secondary voltage (<240V) event only
BUFF2215		X	4	3,283	28	0			2014	2019	Yes, will inspect main feeder
CANA350	X		3	3,460	10	0			2015	2020	No, secondary voltage (<240V) events only
CENT5310	X		5	44,360	82	73	73		2017	2022	No, performed maintenance in 2017
DU191175	X		2	25,721	72	0			2017	2022	No, performed maintenance in 2017
FRIT1360		X	4	11,987	228	0			2014	2019	Yes, will inspect main feeder
HAST7078	X	X	23	98,434	361	275	275		2017	2022	No, performed maintenance in 2017

Feeder	SAIDI Top 10%	SAIFI Top 10%	# Events	Total CMO	Total SCIs	# SCIs Investigated by Veg Man Dept	# Preventable SCIs Determined by VM Dept	# Non-Preventable SCIs Determined by VM Dept	Vegetation Management Year Last Worked	Vegetation Management Year Scheduled	Remediation Plan?
HAST7086	X	X	1	47,630	203	203	203		2015	2020	Yes, will inspect main feeder
KITE5B80	X		8	17,851	39	0			2012	2018	Yes, maintenance is scheduled in 2018
LAWR5020	X	X	9	45,337	119	54	54		2014	2019	Yes, will inspect main feeder
LAWR5030	X	X	7	49,412	165	119	119		2014	2019	Yes, will inspect main feeder
LEVCLV180		X	13	11,320	125	0			2016	2021	No, secondary voltage (<240V) events only
LITCLI610		X	8	3,740	31	0			2014	2019	Yes, will inspect main feeder
LITCLI620	X	X	2	4,148	34	0			2014	2019	Yes, will inspect main feeder
LITCLI640	X	X	6	5,904	49	0			2014	2019	Yes, will inspect main feeder
PARM2475		X	4	9,452	91	0			2013	2019	Yes, will inspect main feeder

Feeder	SAIDI Top 10%	SAIFI Top 10%	# Events	Total CMO	Total SCIs	# SCIs Investigated by Veg Man Dept	# Preventable SCIs Determined by VM Dept	# Non-Preventable SCIs Determined by VM Dept	Vegetation Management Year Last Worked	Vegetation Management Year Scheduled	Remediation Plan?
PERR1230	X		12	24,727	21	0			2012	2018	Yes, maintenance is scheduled in 2018
PERR1235	X	X	19	84,469	135	126		126	2012	2018	Yes, maintenance is scheduled in 2018
PERR1530	X	X	15	77,870	79	64		64	2012	2018	Yes, maintenance is scheduled in 2018
PIER5B10		X	3	7,986	59	39	39		2012	2018	Yes, maintenance is scheduled in 2018
ROBE7065	X		2	5,674	4	0			2013	2019	No, minor events only
ROXA2076	X	X	3	6,654	54	0			2012	2018	Yes, maintenance is scheduled in 2018
SGEO2338	X	X	5	61,698	217	191		191	2012	2018	Yes, maintenance is scheduled in 2018
SPEA302		X	2	3,522	43	43	43		2017	2022	No, performed maintenance in 2017
WANT3502	X	X	5	13,932	90	0			2015	2020	Yes, will inspect main feeder

Southwestern Public Service Company

Quality of Service Improvements

Southwestern Public Service Company ("SPS") strives to design transmission and distribution systems that provide low-cost, high quality electric service in a safe and efficient manner. SPS's goal is to respond to customers' needs for quality service using the latest concepts and technologies consistent with cost effective operation. Improvements in service are achieved through distribution and transmission capacity planning, feeder performance improvement planning and implementation of appropriate technologies for maintenance, construction and operations.

Transmission and Distribution Planning

SPS's capacity planners use historic and current load studies to forecast and budget for future additions to the transmission and distributions system. Transmission and distribution design departments work with customers to plan for new loads and facility upgrades and make recommendations to Capacity Planning for system improvements.

SPS is a member of the Southwest Power Pool which conducts annual coordinated transmission analysis for its members' systems. This review is also comprehensive and determines the effects of contingencies on various critical elements of the networks. Each member system is responsible for improvements of its system, but coordinated study assures that all factors have been considered.

Substation Design, Construction, and Maintenance

The substation maintenance program is risk-based, and considers various operating factors as well as maintenance history, allowing for the use of maintenance resources in determining which substation equipment poses the highest operational risk. This enables the execution of the right maintenance activities on the right pieces of the equipment at the right time. Operation functionality tests are performed on feeder circuit breakers on a one to three year cycle depending on the performance reliability of the breaker.

A series of substation design standards have been created and implemented to improve the consistency and quality of newly constructed or significantly modified stations. The inherent reliability of the finished substation has been, and continues to be, a significant driver in the creation of these standards.

The replacement of aging and unreliable equipment is ongoing throughout the SPS system. Specific quality of service programs that have been implemented include:

- The replacement of particularly unreliable cap & pin insulators in transmission substations;
- The replacement of unreliable potential transformers in transmission substations;

- The proactive replacement of unreliable breakers in metal-clad switchgear and outdoor applications;
- The creation of replacement criteria for station batteries and the implementation of the criteria in performing several planned replacements of identified battery banks;
- The introduction of specific root cause analysis for each substation outage that occurs, including the creation of specific cost-effective action items to prevent similar outages;
- The introduction of specific root cause analysis for each misoperation of transmission protective systems, including the creation of specific cost-effective action items to prevent similar misoperation;
- The installation of wildlife deterrent systems in substations prone to animal incursion;
- The utilization of mobile substations; and
- The adoption of best-practices in testing and maintenance techniques by utilizing the knowledge and experience possessed by all four operating companies owned by Xcel Energy Inc.

Transmission Line Design, Construction and Maintenance

Transmission lines are inspected from a helicopter once a year and patrolled from the ground once every 18 months to identify any defects or damage which could lead to unsatisfactory operation. SPS's Inspection and Treatment program for wood poles provides a groundline inspection to determine if poles are compliant with the minimum strength guidelines set forth in the National Electrical Safety Code ("NESC"), and retreatment of wood transmission poles as needed to ensure that the NESC strength guidelines are met. In addition, poles that will remain in service may have additional wood preservative treatments applied to the poles to help maintain their structural integrity. Each pole is scheduled to be inspected and treated once every 12 years. Poles that are found to be not compliant with the NESC which are not able to be retreated are prioritized for replacement or are reinforced using engineered systems to be compliant.

System Operations

SPS operates and maintains an Energy Management System ("EMS") used for monitoring and control of generation and transmission, which has been upgraded for enhanced cyber security. SPS continues to make improvements to the EMS to meet the Federal Energy Regulatory Commission's Critical Energy Infrastructure Information requirements.

Various transmission upgrades have also been installed. Circuits have been re-conducted; transformers have been replaced with higher capacity units. New lines, substations, transformers and capacitors have been installed.

Distribution Operations

The distribution system is supervised and operated from the Distribution Control Center in Lubbock. The distribution system is monitored electronically by the distribution dispatcher 24 hours a day, 7 days a week. All trouble orders are dispatched to first responders who work out of 13 service centers in Texas. The Distribution Control Center also compiles customer interruption information in a database that is used for reliability reporting. The reliability information is used to determine feeder performance.

Area Engineers apply a detailed Feeder Performance Improvement Process where betterment jobs are initiated on feeders that perform unacceptably, in order to improve their performance. Tracking outage events by both premise and device further allows Area Engineers to identify and attempt to diagnose repeated outages utilizing the Outage Exception Reporting Tool.

Vegetation management crews report any unsafe line conditions found while clearing circuits. Betterment jobs are initiated as necessary to resolve any issues discovered.

SPS's Inspection and Treatment program for wood poles provides a groundline inspection to determine if poles are compliant with the minimum strength guidelines set forth in the NESC, and retreatment of wood distribution poles as needed to ensure that the NESC strength guidelines are met. Poles that will remain in service may have additional wood preservative treatments applied to the poles to help maintain their structural integrity. Poles that are found to be not compliant to the NESC guidelines are prioritized for replacement or are reinforced using engineered systems to be compliant.

Operations has begun a program to patrol all feeders and document the corrective actions required. Individual work orders are created for each specific location to correct inadequate conditions and are prioritized as high, medium, or low, each with its own timeline for completion.

Southwestern Public Service Company

IE-24 Reports (Form 417R)

Southwestern Public Service Company filed an OE-417 on 3/13/2019 with the Department of Energy and other required entities. This was the only IE-24 Report (FORM 417R), now referred to as OE-417 disturbance report filed during the Test Year (April 1, 2018 through March 31, 2019) or Updated Test Year (April 1, 2019 through June 30, 2019). The submitted form is provided beginning on the following page of this schedule.

3/18/2019 10:34:00 AM Submitted to DOE

U.S. Department of Energy Electricity Delivery and Energy Reliability Form OE-417	***ELECTRIC EMERGENCY INCIDENT AND DISTURBANCE REPORT***	**OMB No. 1901-0288 Approval Expires: 05/31/2021 Burden Per Response: 1.8 hours**

NOTICE: This report is **mandatory** under Public Law 93-275. Failure to comply may result in criminal fines, civil penalties and other sanctions as provided by law. For the sanctions and the provisions concerning the confidentiality of information submitted on this form, see General Information portion of the instructions **Title 18 USC 1001 makes it a criminal offense for any person knowingly and willingly to make to any Agency or Department of the United States any false, fictitious, or fraudulent statements as to any matter within its jurisdiction.**

RESPONSE DUE:
Within 1 hour of the incident, submit Schedule 1 and lines M - Q in Schedule 2 as an Emergency Alert report if criteria 1-8 are met
Within 6 hours of the incident, submit Schedule 1 and lines M - Q in Schedule 2 as a Normal Report if only criteria 9-12 are met.
By the later of 24 hours after the recognition of the incident OR by the end of the next business day submit Schedule 1 & lines M - Q in Schedule 2 as a System Report if criteria 13-24 are met *Note: 4:00pm local time will be considered the end of the business day*

Submit updates as needed and/or a final report (all of Schedules 1 and 2) within 72 hours of the incident.
For NERC reporting entities registered in the United States; NERC has approved that the form OE-417 meets the submittal requirements for NERC. There may be other applicable regional, state and local reporting requirements.

METHODS OF FILING RESPONSE
(Retain a completed copy of this form for your files.)

Online: Submit form via online submission at: https //www.oe netl.doe gov/OE417/
FAX: FAX Form OE-417 to the following facsimile number: (202) 586-8485
Alternate: If you are unable to submit online or by fax, forms may be e-mailed to doehqeoc@hq doe.gov, or call and report the information to the following telephone number: (202) 586-8100

SCHEDULE 1 -- ALERT CRITERIA
(Page 1 of 4)

Criteria for Filing (Check all that apply)
See Instructions For More Information

EMERGENCY ALERT File within 1-Hour If any box 1-8 on the right is checked, this form must be filed within 1 hour of the incident; check Emergency Alert (for the Alert Status) on **Line A** below	1 [ ] Physical attack that causes major interruptions or impacts to critical infrastructure facilities or to operations 2 [ ] Cyber event that causes interruptions of electrical system operations 3 [ ] Complete operational failure or shut-down of the transmission and/or distribution electrical system 4 [ ] Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational in an otherwise blacked out area or within the partial failure of an integrated electrical system 5 [ ] Uncontrolled loss of 300 Megawatts or more of firm system loads for 15 minutes or more from a single incident 6 [ ] Firm load shedding of 100 Megawatts or more implemented under emergency operational policy 7 [ ] System-wide voltage reductions of 3 percent or more 8 [ ] Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the Bulk Electric System
NORMAL REPORT File within 6-Hours If any box 9-12 on the right is checked AND none of the boxes 1-8 are checked, this form must be filed within 6 hours of the incident; check Normal Report (for the Alert Status) on **Line A** below.	9 [ ] Physical attack that could potentially impact electric power system adequacy or reliability, or vandalism which targets components of any security systems 10 [ ] Cyber event that could potentially impact electric power system adequacy or reliability 11 [X] Loss of electric service to more than 50,000 customers for 1 hour or more 12 [ ] Fuel supply emergencies that could impact electric power system adequacy or reliability

3/18/2019 10:34:00 AM Submitted to DOE

	SCHEDULE 1 -- ALERT CRITERIA -- CONTINUED (Page 2 of 4)
SYSTEM REPORT **File within 1-Business Day** If any box 13-24 on the right is checked AND none of the boxes 1-12 are checked, this form must be filed by the later of 24 hours after the recognition of the incident OR by the end of the next business day *Note:* 4:00pm local time will be considered the end of the business day. Check System Report (for the Alert Status) on **Line A** below	13 [ ] Damage or destruction of a Facility within its Reliability Coordinator Area, Balancing Authority Area or Transmission Operator Area that results in action(s) to avoid a Bulk Electric System Emergency 14. [ ] Damage or destruction of its Facility that results from actual or suspected intentional human action 15 [ ] Physical threat to its Facility excluding weather or natural disaster related threats, which has the potential to degrade the normal operation of the Facility Or suspicious device or activity at its Facility 16 [ ] Physical threat to its Bulk Electric System control center, excluding weather or natural disaster related threats, which has the potential to degrade the normal operation of the control center Or suspicious device or activity at its Bulk Electric System control center 17 [ ] Bulk Electric System Emergency resulting in voltage deviation on a Facility, A voltage deviation equal to or greater than 10% of nominal voltage sustained for greater than or equal to 15 continuous minutes 18 [ ] Uncontrolled loss of 200 Megawatts or more of firm system loads for 15 minutes or more from a single incident for entities with previous year's peak demand less than or equal to 3,000 Megawatts 19. [ ] Total generation loss, within one minute of greater than or equal to 2,000 Megawatts in the Eastern or Western Interconnection or greater than or equal to 1,400 Megawatts in the ERCOT Interconnection 20 [ ] Complete loss of off-site power (LOOP) affecting a nuclear generating station per the Nuclear Plant Interface Requirements 21 [ ] Unexpected Transmission loss within its area, contrary to design, of three or more Bulk Electric System Facilities caused by a common disturbance (excluding successful automatic reclosing) 22 [ ] Unplanned evacuation from its Bulk Electric System control center facility for 30 continuous minutes or more 23 [ ] Complete loss of Interpersonal Communication and Alternative Interpersonal Communication capability affecting its staffed Bulk Electric System control center for 30 continuous minutes or more 24 [ ] Complete loss of monitoring or control capability at its staffed Bulk Electric System control center for 30 continuous minutes or more

If significant changes have occurred after filing the initial report, re-file the form with the changes and check Update (for the Alert Status) on **Line A** below.

The form must be re-filed within 72 hours of the incident with the latest information and Final (Alert Status) checked on **Line A** below, unless updated

LINE NO.						
A.	Alert Status (check one)	Emergency Alert [ ] 1 Hour	Normal Report [X] 6 Hours	System Report [ ] 1 Business Day	Update [ ] As required	Final [ ] 72 Hours
B.	Organization Name	Southwestern Public Service				
C.	Address of Principal Business Office	6086 W 48th Street Amarillo Texas 79109				

3/18/2019 10:34:00 AM Submitted to DOE

U.S. Department of Energy Electricity Delivery and Energy Reliability Form OE-417	*ELECTRIC EMERGENCY INCIDENT AND DISTURBANCE REPORT*	OMB No. 1901-0288 Approval Expires: 05/31/2021 Burden Per Response: 1.8 hours

SCHEDULE 1 -- ALERT NOTICE

(Page 3 of 4)

INCIDENT AND DISTURBANCE DATA

D.	Geographic Area(s) Affected (County, State)	Texas		
E.	Date/Time Incident Began (mm-dd-yy/hh.mm) using 24-hour clock	03 - 13 - 2019 / 15 51 (mo dd yy hh mm)	[ ] Eastern [X] Central [ ] Mountain [ ] Pacific [ ] Alaska [ ] Hawaii	
F.	Date/Time Incident Ended (mm-dd-yy/ hh mm) using 24-hour clock	03 - 16 - 2019 / 18 00 (mo dd yy hh mm)	[ ] Eastern [X] Central [ ] Mountain [ ] Pacific [ ] Alaska [ ] Hawaii	
G.	Did the incident/disturbance originate in your system/area? (check one)	Yes [X]	No [ ]	Unknown [ ]
H.	Estimate of Amount of Demand Involved (Peak Megawatts)	50	Zero [ ]	Unknown [ ]
I.	Estimate of Number of Customers Affected	54,290	Zero [ ]	Unknown [ ]

SCHEDULE 1 – TYPE OF EMERGENCY

Check all that apply

J. Cause

- ☐ Unknown
- ☐ Physical attack
- ☐ Threat of physical attack
- ☐ Vandalism
- ☐ Theft
- ☐ Suspicious activity
- ☐ Cyber event (information technology)
- ☐ Cyber event (operational technology)
- ☐ Fuel supply emergencies, interruption, or deficiency
- ☐ Generator loss or failure not due to fuel supply interruption or deficiency or transmission failure
- ☐ Transmission equipment failure (not including substation or switchyard)
- ☐ Failure at high voltage substation or switchyard
- ☒ Weather or natural disaster
- ☐ Operator action(s)
- ☐ Other
- ☒ Additional Information/Comments

Record high winds across the SPS service area
The restoration date and time of, 3/16 at 1800, is when all customers capable of receiving electrical service were restored

K. Impact

- ☐ None
- ☐ Control center loss, failure, or evacuation
- ☐ Loss or degradation of control center monitoring or communication systems
- ☐ Damage or destruction of a facility
- ☐ Electrical system separation (islanding)
- ☐ Complete operational failure or shutdown of the transmission and/or distribution system
- ☒ Major transmission system interruption (three or more BES elements)
- ☐ Major distribution system interruption
- ☐ Uncontrolled loss of 200 MW or more of firm system loads for 15 minutes or more
- ☐ Loss of electric service to more than 50,000 customers for 1 hour or more
- ☐ System-wide voltage reductions or 3 percent or more
- ☐ Voltage deviation on an individual facility of ≥10% for 15 minutes or more
- ☐ Inadequate electric resources to serve load
- ☐ Generating capacity loss of 1,400 MW or more
- ☐ Generating capacity loss of 2,000 MW or more
- ☐ Complete loss of off-site power to a nuclear generating station
- ☒ Other
- ☒ Additional Information/Comments

At this time 7 BES level transmission lines are out of service
The restoration date and time of, 3/16 at 1800, is when all customers capable of receiving electrical service were restored

L. Action Taken

- ☐ None
- ☐ Shed Firm Load Load shedding of 100 MW or more implemented under emergency operational policy (manually or automatically via UFLS or remedial action scheme)
- ☐ Public appeal to reduce the use of electricity for the purpose of maintaining the continuity of the electric power system
- ☐ Implemented a warning, alert, or contingency plan
- ☐ Voltage reduction
- ☐ Shed Interruptible Load
- ☐ Repaired or restored
- ☐ Mitigation implemented
- ☒ Other
- ☒ Additional Information/Comments

Crews are working to restore service to the impacted customers
The restoration date and time of, 3/16 at 1800, is when all customers capable of receiving electrical service were restored

3/18/2019 10:34:00 AM Submitted to DOE

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SCHEDULE 2 -- NARRATIVE DESCRIPTION

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Information on Schedule 2 will not be disclosed to the public to the extent that it satisfies the criteria for exemption under the Freedom of Information Act, e.g., exemptions for confidential commercial information and trade secrets, certain information that could endanger the physical safety of an individual, or information designated as Critical Energy Infrastructure Information.

NAME OF OFFICIAL THAT SHOULD BE CONTACTED FOR FOLLOW-UP OR ANY ADDITIONAL INFORMATION

M.	Name	Kyle McMenamin
N.	Title	Transmission Control Center Manager
O.	Telephone Number	(806)-(640)-(6594)
P.	FAX Number	(806)-(640)-(6341)
Q.	E-mail Address	kyle.mcmenamin@xcelenergy.com

Provide a description of the incident and actions taken to resolve it. Include as appropriate, the cause of the incident/disturbance, change in frequency, mitigation actions taken, equipment damaged, critical infrastructures interrupted, effects on other systems, and preliminary results from any investigations. Be sure to identify: the estimate restoration date, the name of any lost high voltage substations or switchyards, whether there was any electrical system separation (and if there were, what the islanding boundaries were), and the name of the generators and voltage lines that were lost (shown by capacity type and voltage size grouping). If necessary, copy and attach additional sheets. Equivalent documents, containing this information can be supplied to meet the requirement; this includes the NERC EOP-004 Disturbance Report. **Along with the filing of Schedule 2, a final (updated) Schedule 1 needs to be filed. Check the Final box on line A for Alert Status on Schedule 1 and submit this and the completed Schedule 2 no later than 72 hours after detection that a criterion was met.**

R. Narrative:

A significant low pressure system moving across the SW part of the US impacted the SPS service territory. This storm began last night and is in progress with the composition of this form. The best estimation date for returning service to all impacted customers is end-of-day 3/14. We are bringing in extra help to supplement existing crews and working extra hours to repair outaged lines.

Update 3/18. The restoration date and time of, 3/16 at 1800, is when all customers capable of receiving electrical service were restored.

S. Estimated Restoration Date for all Affected Customers Who Can Receive Power	03 - 14 - 2019 (mo dd yy)
T. Name of Assets Impacted	Distribution lines and transmission lines Update 3/18. The restoration date and time of, 3/16 at 1800, is when all customers capable of receiving electrical service were restored.
U. Notify NERC/E-ISAC	Select if you approve of all of the information provided on the Form being submitted to the North America Electric Reliability Corporation (NERC) and/or the Electricity Information Sharing and Analysis Center (E-ISAC) NERC is an entity that is certified by the Federal Energy Regulatory Commission to establish and enforce reliability standards for the bulk power system but that is not part of the Federal Government. This information would be submitted to help fulfill the respondent's requirements under NERC's reliability standards. If approval is given to alert NERC and/or E-ISAC the Form will be emailed to systemawareness@nerc.net and/or operations@eisac.com when it is submitted to DOE. DOE is not responsible for ensuring the receipt of these emails by NERC and/or E-ISAC. ☒ Notify NERC | ☐ Notify E-ISAC

Southwestern Public Service Company

Continuity of Service

Year	**Continuity of Service Index [1]**	**Average Length of Interruptions [2] (Hours)**
TEST YEAR	0.99978	2.17
2018	0.99980	2.00
2017	0.99977	2.21
2016	0.99985	1.66
2015	0.99974	2.31
2014	0.99984	2.09
2013	0.99983	2.02
2012	0.99982	2.10
2011	0.99984	1.74
2010	0.99985	1.97
2009	0.99984	1.95
Average (2009-2018) [3]	**0.99982**	**2.01**

Notes:

The Test Year is April 1, 2018 through March 31, 2019.

All numbers include forced outages. All numbers exclude major events, outside-caused and planned outages. "Outside-caused" refers to interruptions outside of the distribution system, such as substation, transmission, and generation levels.

[1] Continuity of Service Index - Average Service Availability Index(ASAI)

$$\text{ASAI(per IEEE 1366)} = \frac{\text{Customer Hours Possible} - \text{Customer Hours Outage}}{\text{Customer Hours Possible}}$$

Customer Hours Possible = Total Number of Customers Served x Period Hours

Customer Hours Outage = A Summation of [Number of Customers Affected by Each Outage x Length (in Hours) of Each Outage]

Period Hours = Number of Hours per Specified Unit of Time (Example: 8,760 hours per 365-day year)

Indicates the fraction of time customers were receiving power over the measured period of time.

[2] Customer Average Interruption Duration Index ("CAIDI").

$$\text{CAIDI (per IEEE 1366)} = \frac{\text{Customer Hours Outage}}{\text{Total Number of Customer Interruptions from all outages}}$$

Indicates the average time(in hours) to restore service of an outage lasting longer than 5 minutes over the measured period of time.

[3] Average based on mean of annual CAIDI results.

Southwestern Public Service Company

Available Capacity Wheeling

Southwestern Public Service Company requested transmission service from the Southwest Power Pool, Inc. for all Qualifying Facilities ("QFs") under contract during the Test Year; however, firm transmission service was not available for any of the QFs during the Test Year.

Southwestern Public Service Company

Planned Capacity Wheeling

Southwestern Public Service Company cannot request or obtain long term (i.e., greater than one year) transmission service for the Qualifying Facilities on its system because the underlying power purchase agreements are for one year rolling terms with 90 days' notice of cancellation.

Southwestern Public Service Company

Wheeling Information

Line No.	LINE DESCRIPTION FROM	TO	LENGTH (miles)	THERMAL RATING (MVA)	80% THERMAL RATING (MVA)	MW - MILES
	69-kV TRANSMISSION LINES					
1	ACCO Sub 69 kV (Anderson, Clayton & Company	Ivory Tap 69 kV	2 60	54	43 2	112 32
2	ACCO Sub 69 kV (Anderson, Clayton & Company	Clutter Sub 69 kV	2 30	54	43 2	99 36
3	Adair Sub 69 kV	Sulphur Springs Interchange 69 kV	3 56	88	70 4	250 62
4	Allmon Sub 69 kV	Lighthouse REC-Petersburg 69 kV	0 02	54	43 2	0 86
5	Amherst Sub 69 kV	West Littlefield Sub 69 kV	4 90	88	70 4	344 96
6	Artesia Interchange 69 kV	Eagle Creek 69 kV	1 03	52	41 6	42 64
7	Artesia Interchange 69 kV	Artesia Interchange Tap 69 kV	0 45	54	43 2	19 44
8	Artesia Interchange Tap 69 kV	Artesia West/13th Street Sub 69 kV	1 19	54	43 2	51 41
9	Artesia Town Sub 69 kV	Artesia South Rural Sub 69 kV	3 07	94	75 2	230 86
10	Artesia West/13th Street Sub 69 kV	Artesia Country Club Road Sub Tap 69 kV	1 56	54	43 2	67 39
11	Artesia Country Club Road Sub Tap 69 kV	Artesia Country Club Road Sub 69 kV	2 25	54	43 2	97 20
12	Artesia Country Club Road Sub Tap 69 kV	Artesia South Rural Sub Tap 69 kV	0 80	54	43 2	34 56
13	Artesia South Rural Sub Tap 69 kV	Artesia South Rural Sub 69 kV	1 01	54	43 2	43 63
14	Artesia South Rural Sub Tap 69 kV	Atoka Interchange 69 kV	4 05	88	70 4	285 12
15	Bailey County Pump Station 69 kV	Lamb County REC-Beck 69 kV	7 70	88	70 4	542 08
16	Bainer Sub 69 kV	West Anton Sub 69 kV	5 91	54	43 2	255 31
17	Barwise Sub 69 kV	Floyd County Interchange 69 kV	4 36	54	43 2	188 35
18	Batton Sub North 69 kV	Batton Sub South 69 kV	0 00	54	43 2	0 00
19	Bailey County REC-Lariat Sub Tap 69 kV	Bailey County REC-Progress Sub Tap 69 kV	3 28	88	70 4	230 91
20	Bailey County REC-Progress Sub Tap 69 kV	West Muleshoe Sub 69 kV	5 84	88	70 4	411 14
21	Bailey County REC-South Bailey 69 kV	Lamb County REC-Whiteface 69 kV	6 98	36	28 8	201 02
22	Bailey County REC-Sunnyside Sub 69 kV	Hart Industrial 69 kV	9 09	54	43 2	392 69
23	Blackhawk Station 69 kV	Phillips No 1 Sub 69 kV	2 79	135	108 0	301 32
24	Blackhawk Station 69 kV	Phillips No 2 Sub 69 kV	2 04	135	108 0	220 32
25	Boardman Sub 69 kV	Flannagan Sub 69 kV	5 00	54	43 2	216 00
26	Bowers Interchange 69 kV	Greenbelt REC-Kellerville 69 kV	22 99	88	70 4	1618 50
27	Briscoe Sub 69 kV	Lighthouse REC-Silverton 69 kV	6 10	54	43 2	263 52
28	Brownfield Switching Station 69 kV	City of Brownfield Tap 69 kV	1 10	54	43 2	47 52
29	City of Brownfield Tap 69 kV	Goodpasture Sub 69 kV	2 58	54	43 2	111 46
30	Buffalo Tap 69 kV	Buffalo Sub 69 kV	4 36	41	32 8	143 01
31	Buffalo Tap 69 kV	Magic City Switch 69 kV	17 18	41	32 8	563 50
32	Burnett Sub 69 kV	Roxana Sub 69 kV	12 65	41	32 8	414 92
33	Burnett Sub 69 kV	CRMWA No 22 Sub 69 kV	4 04	41	32 8	132 51
34	Camex/Transpetco Sub 69 kV	Hutchinson County Interchange 69 kV	1 20	88	70 4	84 48
35	Carlisle Interchange 69 kV	Switch #6878 69 kV	3 13	54	43 2	135 22
36	Carlsbad Interchange 69 kV	South Loving Tap 69 kV	6 75	36	28 8	194 40
37	Carlsbad Waterfield Tap 69 kV	Carlsbad Waterfield Sub 69 kV	6 36	54	43 2	274 75
38	Carlsbad Waterfield Tap 69 kV	Whites City Sub 69 kV	13 24	36	28 8	381 31
39	Cedar Lake Sub 69 kV	Oxy Cedar Lake Sub 69 kV	0 05	54	43 2	2 25
40	Hereford Centre Street Sub 69 kV	Northeast Hereford Interchange 69 kV	4 90	54	43 2	211 68
41	Cliffside Tap 69 kV	North Amarillo Switching Station 69 kV	10 15	41	32 8	332 92
42	Cliffside Sub 69 kV	Cliffside Tap 69 kV	0 67	41	32 8	21 98
43	Cliffside Sub 69 kV	Switch #2749 69 kV	10 00	35	28 0	280 00
44	County Line Sub Tap 69 kV	County Line Sub 69 kV	2 76	54	43 2	119 23
45	County Line Sub Tap 69 kV	South Plains REC-Abernathy 69 kV	6 05	88	70 4	425 92
46	Cochran Interchange 69 kV	Lyntegar REC-Sundown 69 kV	9 59	36	28 8	276 19
47	Cochran Interchange 69 kV	Middleton Sub 69 kV	5 50	88	70 4	387 20
48	Corner 69 kV	South Plains REC-Halfway 69 kV	4 40	54	43 2	190 08
49	Cox Interchange 69 kV	Aiken Rural Sub 69 kV	3 08	54	43 2	133 06
50	CRMWA No 21 Sub 69 kV	CRMWA No 23 Sub Tap 69 kV	0 14	88	70 4	9 86
51	CRMWA No 23 Sub Tap 69 kV	CRMWA No 23 Sub 69 kV	12 57	94	75 2	945 26
52	Crosby County Interchange 69 kV	Lighthouse REC-Crosbyton 69 kV	3 95	54	43 2	170 64
53	Curry County Interchange 69 kV	Farwell Sub 69 kV	10 41	54	43 2	449 71
54	Central Valley REC-Artesia 69 kV	Artesia Interchange Tap 69 kV	0 27	54	43 2	11 66
55	Central Valley REC-Cottonwood 69 kV	Cottonwood Sub 69 kV	1 53	54	43 2	66 10
56	Central Valley REC-Cottonwood 69 kV	Smith Sub 69 kV	5 82	88	70 4	409 73
57	Central Valley REC-Dexter 69 kV	Dexter Interchange 69 kV	1 91	36	28 8	55 01
58	Central Valley REC-Hagerman 69 kV	Central Valley REC-Lake Arthur 69 kV	9 00	88	70 4	633 60
59	Central Valley REC-Hagerman 69 kV	Central Valley REC-YO Tap 69 kV	1 49	88	70 4	104 90
60	Central Valley REC-Lake Arthur 69 kV	Central Valley REC-Cottonwood 69 kV	5 47	88	70 4	385 09
61	Central Valley REC-Orchard 69 kV	Dexter Tap 69 kV	4 29	88	70 4	302 02
62	Central Valley REC-Pine Lodge 69 kV	Roswell Interchange 69 kV	11 68	54	43 2	504 58
63	Damron (Mid America #4) Sub 69 kV	Gray County Interchange 69 kV	5 56	54	43 2	240 19
64	Denver City East Sub 69 kV	Denver City Interchange 69 kV	2 00	36	28 8	57 60
65	Denver City Interchange 69 kV	Jaybee Sub 69 kV	5 51	88	70 4	387 90
66	Denver City Interchange 69 kV	Mid America Tap 69 kV	13 13	54	43 2	567 22
67	Dexter Tap 69 kV	Central Valley REC-Dexter 69 kV	1 97	36	28 8	56 74
68	Dexter Tap 69 kV	Central Valley REC-YO Tap 69 kV	2 51	88	70 4	176 70
69	Diamondback Substation 69 kV	Ozark Mahoning #2 Sub 69 kV	1 59	54	43 2	68 69
70	Diamondback Substation 69 kV	Lyntegar REC-Ashmore 69 kV	5 24	54	43 2	226 37
71	Diamondback Substation 69 kV	Oxy Cedar Lake Sub 69 kV	2 11	54	43 2	91 15
72	Dickemper Sub 69 kV	Graham Interchange 69 kV	2 47	54	43 2	106 70
73	Dimmit South Tap 69 kV	Dimmit South Sub 69 kV	0 26	54	43 2	11 23
74	Dimmit South Tap 69 kV	Dimmit East Sub 69 kV	0 66	54	43 2	28 51
75	Dimmit South Tap 69 kV	Deaf Smith REC-#3 69 kV	0 21	54	43 2	9 07
76	Doss Interchange 69 kV	Legacy Interchange 69 kV	5 98	90	72 0	430 49

Southwestern Public Service Company

Wheeling Information

Line No.	LINE DESCRIPTION FROM	TO	LENGTH (miles)	THERMAL RATING (MVA)	80% THERMAL RATING (MVA)	MW-MILES
77	Deaf Smith REC-#10 69 kV	Lariat Sub 69 kV	6 00	88	70 4	422 40
78	Deaf Smith REC-#12 69 kV	Bailey County REC-Sunnyside Sub 69 kV	4 33	54	43 2	187 06
79	Deaf Smith REC-#15 & #19 69 kV	Castro County Interchange 69 kV	7 10	54	43 2	306 72
80	Deaf Smith REC-#15 & #19 69 kV	Deaf Smith REC-#12 69 kV	5 80	54	43 2	250 56
81	Deaf Smith REC-#3 69 kV	Castro County Interchange 69 kV	9 38	54	43 2	405 22
82	Deaf Smith REC-#4 69 kV	Deaf Smith REC-#8 69 kV	11 68	88	70 4	822 27
83	Deaf Smith REC-#5 & #11 69 kV	Hereford Centre Street Sub 69 kV	2 47	54	43 2	106 70
84	Deaf Smith REC-#5 & #11 69 kV	Deaf Smith REC-#9 69 kV Sub, Tap Location	2 86	50	40 0	114 40
85	Deaf Smith REC-#8 69 kV	Dimmitt East Sub 69 kV	7 18	88	70 4	505 47
86	Deaf Smith REC-#9 69 kV Sub, Tap Location	Hereford South 69 kV Sub	3 84	50	40 0	153 60
87	Deaf Smith REC-Castro 69 kV	Castro County Interchange 69 kV	5 10	54	43 2	220 32
88	Deaf Smith REC-Metering Station 69 kV	Northeast Hereford Interchange 69 kV	0 75	57	45 6	34 20
89	Duval #3 Sub 69 kV	I M C #4 Sub 69 kV	2 85	88	70 4	200 64
90	Duval #3 Sub 69 kV	I M C #3 Sub 69 kV	2 90	36	28 8	83 52
91	East Levelland Sub 69 kV	Slaughter Tap 69 kV	11 63	54	43 2	502 42
92	East Plainview Sub 69 kV	Cox Interchange 69 kV	5 00	54	43 2	216 00
93	Eagle Creek 69 kV	Navajo No 1 Sub 69 kV	1 31	52	41 6	54 41
94	East Muleshoe & Valley Substations 69 kV	Bailey County Interchange 69 kV	1 90	54	43 2	82 08
95	East Muleshoe & Valley Substations 69 kV	Bailey County Pump Station 69 kV	6 50	88	70 4	457 60
96	Farwell Sub 69 kV	Deaf Smith REC-#10 69 kV	2 04	88	70 4	143 62
97	Flannagan Sub 69 kV	Lyntegar REC-Florey 69 kV	0 00	54	43 2	0 00
98	Floyd County Interchange 69 kV	Floydada Tap 69 kV	9 05	54	43 2	390 96
99	Floyd County Interchange 69 kV	Lighthouse REC-Harmony 69 kV	1 71	54	43 2	73 87
100	Floydada Tap 69 kV	South Floydada Sub 69 kV	0 12	54	43 2	5 18
101	Gaines County Interchange 69 kV	Tenneco Sub Tap 69 kV	2 53	54	43 2	109 30
102	Garza Sub 69 kV	Graham Interchange 69 kV	1 05	54	43 2	45 36
103	Greenbelt REC-Kellerville 69 kV	Magic City Switch 69 kV	6 05	41	32 8	198 44
104	Goodpasture Sub 69 kV	Lyntegar REC-Jess Smith 69 kV	2 50	41	32 8	82 00
105	Graham Interchange 69 kV	Justiceburg Corner 69 kV	15 41	88	70 4	1084 86
106	Gray County Interchange 69 kV	CRMWA No 23 Sub Tap 69 kV	13 64	88	70 4	960 26
107	Gray County Interchange 69 kV	Kite Sub 69 kV	3 46	88	70 4	243 58
108	Gray County Interchange 69 kV	Kingsmill Interchange 69 kV	5 73	88	70 4	403 39
109	Hale Center Sub 69 kV	Lighthouse REC-Hale Center 69 kV	0 21	54	43 2	9 07
110	Hale Center Sub 69 kV	TUCO Interchange 69 kV	13 00	54	43 2	561 60
111	Happy City Sub 69 kV	Happy City Tap 69 kV	6 90	54	43 2	298 08
112	Happy City Tap 69 kV	Happy Interchange 69 kV	1 10	54	43 2	47 52
113	Happy City Tap 69 kV	Shamrock Pump Sub 69 kV	3 10	54	43 2	133 92
114	Hart Industrial 69 kV	Lamb County REC-Hart#2 69 kV	5 00	54	43 2	216 00
115	Hereford South 69 kV Sub	Deaf Smith REC-#4 69 kV	4 56	88	70 4	321 02
116	Hobgood Sub 69 kV	Phillips Pump #2 & Yellow House Subs Tap 69 kV	1 00	54	43 2	43 20
117	Hockley County Interchange 69 kV	Coble Sub 69 kV	10 41	54	43 2	449 71
118	Hockley County Interchange 69 kV	Levelland City Tap 69 kV	1 70	54	43 2	73 44
119	Hutchinson County Interchange 69 kV	CRMWA No 22 Sub 69 kV	0 64	41	32 8	20 99
120	I M C #2 Sub 69 kV	United Salt Sub 69 kV	0 48	88	70 4	33 79
121	Industrial Sub 69 kV	Huber Gen 69 kV	1 23	54	43 2	53 14
122	Industrial Sub 69 kV	Sid Richardson (Phillips) Gen 69 kV	1 14	54	43 2	49 25
123	Industrial Sub 69 kV	Camex/Transpetco Sub 69 kV	1 74	88	70 4	122 50
124	Inck Sub 69 kV	Barwise Sub 69 kV	3 66	54	43 2	158 11
125	Ivory Sub 69 kV	Batton Sub South 69 kV	5 03	54	43 2	217 30
126	Ivory Sub 69 kV	Ivory Tap 69 kV	0 02	54	43 2	0 86
127	Ivory Sub 69 kV	Lubbock South Interchange 69 kV	1 11	54	43 2	47 95
128	Ivory Tap 69 kV	Lubbock South Interchange 69 kV	1 11	54	43 2	47 95
129	Jaybee Sub 69 kV	Lyntegar REC-Seagraves 69 kV	1 87	88	70 4	131 65
130	Kinney Sub 69 kV	Tokio Tap 69 kV	6 00	54	43 2	259 20
131	Kiser Sub 69 kV	East Plainview Sub 69 kV	3 82	54	43 2	165 02
132	Kite Sub 69 kV	Lyons Tap 69 kV	3 47	88	70 4	244 29
133	Kress Interchange 69 kV	Kress Rural Sub 69 kV	7 46	54	43 2	322 27
134	Kress Rural Sub 69 kV	Lighthouse REC-Plainview & Finney 69 kV	10 06	54	43 2	434 59
135	Lyntegar REC-Lakeview 69 kV	Lyntegar REC-New Moore 69 kV	0 98	54	43 2	42 34
136	Lyntegar REC-Lakeview 69 kV	Ozark Mahoning #1 Tap 69 kV	4 50	54	43 2	194 40
137	Lamb County Interchange 69 kV	Lamb County REC-Littlefield 69 kV	1 66	88	70 4	116 86
138	Lamb County Interchange 69 kV	Lamb County REC-Lums Chapel 69 kV	2 10	54	43 2	90 72
139	Lamton Interchange 69 kV	Corner 69 kV	14 40	54	43 2	622 08
140	Lariat Sub 69 kV	Bailey County REC-Lariat Sub Tap 69 kV	2 33	88	70 4	164 03
141	Lawrence Park Sub 1 (East) 69 kV	South Georgia Interchange 69 kV	1 91	60	48 0	91 68
142	Lamb County REC-Beck 69 kV	Sudan Rural Sub 69 kV	1 61	88	70 4	113 34
143	Lamb County REC-Hart#2 69 kV	Lamb County REC – North Olton Sub 69 kV	2 80	54	43 2	120 96
144	Lamb County REC-Hodge 69 kV	Ellwood Sub 69 kV	4 70	54	43 2	203 04
145	Lamb County REC-Hodge Tap 69 kV	Lamb County REC-Whitharral 69 kV	1 50	54	43 2	64 80
146	Lamb County REC-Levelland #2 69 kV	Hockley County Interchange 69 kV	1 70	54	43 2	73 44
147	Lamb County REC-Littlefield 69 kV	West Anton Tap 69 kV	2 03	88	70 4	142 91
148	Lamb County REC-Lums Chapel 69 kV	Hobgood Sub 69 kV	3 20	54	43 2	138 24
149	Lamb County REC – North Olton Sub 69 kV	Lamton Interchange 69 kV	5 76	54	43 2	248 83
150	Lamb County REC-Olton 69 kV	Lamton Interchange 69 kV	1 50	54	43 2	64 80
151	Lamb County REC-Pettit 69 kV	Coble Sub 69 kV	3 70	54	43 2	159 84
152	Lamb County REC-Sandhill 69 kV	Amherst Sub 69 kV	2 60	88	70 4	183 04
153	Lamb County REC-Spade & Hart Camp 69 kV	County Line Sub Tap 69 kV	5 89	88	70 4	414 66
154	Lamb County REC-Whitharral 69 kV	Lamb County REC-Levelland #2 69 kV	4 90	54	43 2	211 68
155	Lamb County REC-Whiteface 69 kV	Whiteface Sub Tap 69 kV	5 08	36	28 8	146 30
156	Legacy Interchange 69 kV	XTO-Robertson 69 kV	5 97	54	43 2	257 90
157	Legacy Interchange 69 kV	Tenneco Sub Tap 69 kV	2 46	54	43 2	106 27

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Line No.	LINE DESCRIPTION FROM	TO	LENGTH (miles)	THERMAL RATING (MVA)	80% THERMAL RATING (MVA)	MW - MILES
158	Lea County REC-KCM 69 kV	Mid America Tap 69 kV	3 00	54	43 2	129 60
159	Lyntegar REC-Ashmore 69 kV	Adair Sub 69 kV	2 91	41	32 8	95 45
160	Lyntegar REC-Brownfield 69 kV	Brownfield Switching Station 69 kV	2 00	54	43 2	86 40
161	Lyntegar REC-Central 69 kV	Lyntegar REC-Draw 69 kV	4 10	54	43 2	177 12
162	Lyntegar REC-Dixon 69 kV	Brownfield Switching Station 69 kV	9 50	54	43 2	410 40
163	Lyntegar REC-Dixon 69 kV	Ozark Mahoning #1 Tap 69 kV	4 60	54	43 2	198 72
164	Lyntegar REC-Doc Webber 69 kV	Terry County Interchange 69 kV	2 50	54	43 2	108 00
165	Lyntegar REC-Hackberry 69 kV	Diekemper Sub 69 kV	10 80	54	43 2	466 56
166	Lyntegar REC-Jess Smith 69 kV	Wellman Sub 69 kV	7 40	54	43 2	319 68
167	Lyntegar REC-McConal & Seminole 69 kV	Lyntegar REC-Sawyer Flat 69 kV	6 99	88	70 4	492 10
168	Lyntegar REC-Meadow 69 kV	Lyntegar REC-Doc Webber 69 kV	2 80	54	43 2	120 96
169	Lyntegar REC-New Moore 69 kV	Lyntegar REC-New Home & Wilson 69 kV	10 20	54	43 2	440 64
170	Lyntegar REC-New Home & Wilson 69 kV	Lynn County Interchange 69 kV	4 00	54	43 2	172 80
171	Lyntegar REC-Two Draw 69 kV	Diekemper Sub 69 kV	0 06	54	43 2	2 59
172	Lyntegar REC-Wellman 69 kV	Seagraves Interchange 69 kV	6 05	54	43 2	261 36
173	Lighthouse REC-Aiken 69 kV	Irick Sub 69 kV	4 45	54	43 2	192 24
174	Lighthouse REC-Cedar Hill 69 kV	Lighthouse REC-Lone Star Tap 69 kV	4 37	36	28 8	125 86
175	Lighthouse REC-Crosbyton 69 kV	Hendricks Sub 69 kV	0 40	54	43 2	17 28
176	Lighthouse REC-Harmony 69 kV	Lighthouse REC-Petersburg 69 kV	7 60	36	28 8	218 88
177	Lighthouse REC-Lone Star 69 kV	Lighthouse REC-Lone Star Tap 69 kV	1 00	36	28 8	28 80
178	Lighthouse REC-Plainview & Finney 69 kV	Switch 9748 69 kV	2 18	54	43 2	94 18
179	Lighthouse REC-Silverton 69 kV	Lighthouse REC-South Plains 69 kV	10 00	54	43 2	432 00
180	Lighthouse REC-Wilson & Ellen 69 kV	South Plains REC-Becton 69 kV	1 97	54	43 2	85 10
181	Lockney Sub 69 kV	Lighthouse REC-Cedar Hill 69 kV	3 48	36	28 8	100 22
182	South Littlefield & Littlefield City Sub 69 kV	Lamb County Interchange 69 kV	2 70	36	28 8	77 76
183	South Littlefield & Littlefield City Sub 69 kV	West Anton Tap 69 kV	4 70	36	28 8	135 36
184	Lubbock East Interchange 69 kV	Clutter Sub 69 kV	2 71	54	43 2	117 07
185	Lubbock East Interchange 69 kV	Slaton Sub 69 kV	12 38	54	43 2	534 82
186	Levelland City Tap 69 kV	Levelland City Sub 69 kV	1 10	54	43 2	47 52
187	Levelland City Tap 69 kV	East Levelland Sub 69 kV	0 29	54	43 2	12 53
188	Lynn County Interchange 69 kV	Lyntegar REC-Draw 69 kV	7 61	54	43 2	328 75
189	Lyons Tap 69 kV	Lyons Sub 69 kV	3 94	88	70 4	277 38
190	Lyons Tap 69 kV	Bowers Interchange 69 kV	13 96	88	70 4	982 78
191	Magic City Switch 69 kV	Howard Sub 69 kV	5 70	41	32 8	187 09
192	Magic City Switch 69 kV	Demarcation Bus Location 69 kV	8 30	41	32 8	272 24
193	Mallet Sub 69 kV	Texaco Sub 69 kV	2 42	54	43 2	104 54
194	McCullough Sub 69 kV	Kingsmill Interchange 69 kV	4 71	88	70 4	331 58
195	McCullough Sub 69 kV	Bowers Interchange 69 kV	5 79	88	70 4	407 62
196	Mid-American #2 Sub 69 kV	Whitharral Sub 69 kV	0 50	54	43 2	21 60
197	Middleton Sub 69 kV	Mallet Sub 69 kV	2 62	88	70 4	184 45
198	Mississippi West No 2 Sub 69 kV	I M C #2 Sub 69 kV	4 18	88	70 4	294 27
199	Morton Sub 69 kV	Bailey County REC-South Bailey 69 kV	1 04	36	28 8	29 95
200	Muleshoe City Sub 69 kV	Bailey County Interchange 69 kV	2 10	88	70 4	147 84
201	Navajo No 1 Sub 69 kV	Artesia Town Sub 69 kV	0 34	54	43 2	14 69
202	Navajo-Malaga Tap 69 kV	Navajo-Malaga Sub 69 kV	2 88	54	43 2	124 42
203	Navajo-Malaga Tap 69 kV	South Loving Sub 69 kV	3 04	54	43 2	131 33
204	Northeast Miami Breaker Station 69 kV	Canadian Sub 69 kV	23 67	149	119 2	2821 46
205	New Mexico Potash Sub 69 kV	Kermac Sub 69 kV	2 28	54	43 2	98 50
206	Northwest Interchange 69 kV	North Amarillo Switching Station 69 kV	3 09	54	43 2	133 49
207	North Plains REC-Hemphill 69 kV	Canadian Sub 69 kV	7 48	149	119 2	891 62
208	Northwest Tap 69 kV	Northwest Interchange 69 kV	3 20	88	70 4	225 28
209	Northwest Tap 69 kV	Soncy Sub Tap 69 kV	1 21	88	70 4	85 18
210	Olton Sub 69 kV	Lamb County REC-Olton 69 kV	0 73	54	43 2	31 54
211	Oxy Denver City West 69 kV	Denver City East Sub 69 kV	2 58	54	43 2	111 46
212	Ozark Mahoning #2 Sub 69 kV	Lyntegar REC-Sawyer Flat 69 kV	4 44	54	43 2	191 81
213	PCA Interchange 69 kV	Central Valley REC-Lusk 69 kV	11 11	54	43 2	479 95
214	PCA Interchange 69 kV	National Potash Tap 69 kV	4 67	88	70 4	328 77
215	Phillips Pump No 1 Sub 69 kV	Phillips Pump No 1 TAP 69 kV	7 49	54	43 2	323 57
216	Phillips Pump No 1 TAP 69 kV	Switch #7848 / Switch #7814 69 kV	2 48	54	43 2	107 14
217	Phillips No 2 Sub 69 kV	Weatherly Sub 69 kV	5 44	88	70 4	382 98
218	Phillips Pump #2	Yellow House Sub 69 kV	4 11	54	43 2	177 55
219	Plainview Tap 69 kV	Hale Co Interchange 69 kV	0 46	88	70 4	32 38
220	Plainview Tap 69 kV	Lighthouse REC-Hale Center 69 kV	4 89	54	43 2	211 25
221	Planters Sub 69 kV	Lubbock East Interchange 69 kV	2 03	54	43 2	87 70
222	Portales E F D C Sub 69 kV	Market Street Sub 69 kV	0 15	54	43 2	6 48
223	Portales Interchange 69 kV	Zodiac Sub 69 kV	2 43	54	43 2	104 98
224	Portales Interchange 69 kV	Portales No 1 Sub 69 kV	2 20	54	43 2	95 04
225	Portales No 1 Sub 69 kV	Portales No 2 Sub 69 kV	1 18	36	28 8	33 98
226	Portales No 2 Sub 69 kV	Market Street Sub 69 kV	1 66	54	43 2	71 71
227	Potash Junction Interchange 69 kV	Duval #1 Sub 69 kV	2 60	54	43 2	112 32
228	Potash Junction Interchange 69 kV	Kermac Sub 69 kV	9 51	54	43 2	410 83
229	Potash Junction Interchange 69 kV	Mississippi West No 2 Sub 69 kV	1 71	88	70 4	120 38
230	Potash Junction Interchange 69 kV	National Potash Tap 69 kV	0 05	88	70 4	3 52
231	Phillips Pump #2 & Yellow House Subs Tap 69 kV	Yellow House Sub 69 kV	6 89	54	43 2	297 65
232	Phillips Pump #2 & Yellow House Subs Tap 69 kV	Mid-American #2 Sub 69 kV	4 00	54	43 2	172 80
233	Rita Blanca REC-Dallam County 69 kV	Dalhart Interchange 69 kV	1 34	88	70 4	94 34
234	Riley Sub Tap 69 kV	Mid America Tap 69 kV	3 00	54	43 2	129 60
235	Riley Sub Tap 69 kV	Gaines County Interchange 69 kV	0 44	54	43 2	19 01
236	Riley Sub Tap 69 kV	Riley Sub 69 kV	0 44	54	43 2	19 01
237	Riverview Interchange 69 kV	Rocky Point Sub 69 kV	3 60	54	43 2	155 52

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238	Riverview Interchange 69 kV	Industrial Sub 69 kV	4 36	88	70 4	306 94
239	Riverview Interchange 69 kV	Phillips No 1 Sub 69 kV	4 01	88	70 4	282 30
240	Roberts County Sub 69 kV	Northeast Miami Breaker Station 69 kV	6 61	149	119 2	787 91
241	Roberts County Sub 69 kV	Bowers Interchange 69 kV	18 75	149	119 2	2235 00
242	Rocky Point Sub 69 kV	Spring Creek Sub 69 kV	4 55	54	43 2	196 56
243	Roswell Interchange 69 kV	Switch #4702 69 kV	1 49	88	70 4	104 90
244	Roxana Sub 69 kV	Damron (Mid America #4) Sub 69 kV	3 42	54	43 2	147 74
245	South Floydada Sub 69 kV	Lighthouse REC-Floydada 69 kV	0 12	54	43 2	5 18
246	South Loving Tap 69 kV	Carlsbad Waterfield Tap 69 kV	1 75	36	28 8	50 40
247	South Loving Tap 69 kV	Navajo-Malaga Tap 69 kV	5 70	54	43 2	246 24
248	South Plainview Sub 69 kV	Hale Co Interchange 69 kV	10 08	54	43 2	435 46
249	South Portales Sub 69 kV	Market Street Sub 69 kV	1 92	54	43 2	82 94
250	Seagraves Interchange 69 kV	Moss Sub 69 kV	0 52	88	70 4	36 61
251	Seagraves Interchange 69 kV	Lyntegar REC-McConal & Seminole 69 kV	10 40	88	70 4	732 16
252	Slaton Sub 69 kV	South Plains REC-Slaton 69 kV	3 10	54	43 2	133 92
253	Slaughter Sub 69 kV	Slaughter Tap 69 kV	5 48	54	43 2	236 74
254	Slaughter Tap 69 kV	Lyntegar REC-Meadow 69 kV	2 03	54	43 2	87 70
255	Smith Sub 69 kV	Artesia Interchange 69 kV	0 01	88	70 4	0 70
256	Soncy Sub 69 kV	Lawrence Park Sub 2 (West) 69 kV	3 24	60	48 0	155 52
257	Soncy Sub 69 kV	Soncy Sub Tap 69 kV	1 00	88	70 4	70 40
258	Southland Sub 69 kV	Lyntegar REC-Hackberry 69 kV	4 80	54	43 2	207 36
259	South Plains REC-Abernathy 69 kV	TUCO Interchange 69 kV - 2nd Bus	5 89	88	70 4	414 66
260	South Plains REC-Acuff 69 kV	Crosby County Interchange 69 kV	10 40	54	43 2	449 28
261	South Plains REC-Acuff 69 kV	Vickers Sub 69 kV	1 11	54	43 2	47 95
262	South Plains REC-Becton 69 kV	Allmon Sub 69 kV	5 01	54	43 2	216 43
263	South Plains REC-Carlisle 69 kV	Switch #6878 69 kV	5 99	54	43 2	258 77
264	South Plains REC-Crosby County 69 kV	Crosby County Interchange 69 kV	1 04	54	43 2	44 93
265	South Plains REC-Halfway 69 kV	Hale Co Interchange 69 kV	1 11	54	43 2	47 95
266	South Plains REC-Hettler 69 kV	South Plains REC-Idalou 69 kV	5 63	54	43 2	243 22
267	South Plains REC-Idalou 69 kV	Vickers Sub 69 kV	1 34	54	43 2	57 89
268	South Plains REC-New Deal 69 kV	Monroe Sub 69 kV	3 04	54	43 2	131 33
269	Spring Creek Sub 69 kV	Kingsmill Interchange 69 kV	22 26	54	43 2	961 63
270	Springlake Sub 69 kV	Olton Sub 69 kV	10 47	54	43 2	452 30
271	South Plains REC-Shallowater 69 kV	Stanton Sub North Bus 69 kV	5 00	54	43 2	216 00
272	South Plains REC-Slaton 69 kV	Southland Sub 69 kV	4 50	54	43 2	194 40
273	Stanton Sub South Bus 69 kV	Switch #6786 South Side Of Switch 69 kV	4 47	54	43 2	193 10
274	Stanton Sub North Bus 69 kV	Stanton Sub South Bus 69 kV	0 00	72	57 6	0 00
275	Stanton Sub North Bus 69 kV	Switch #6786 North Side Of Switch 69 kV	4 50	54	43 2	194 40
276	Strata Sub 69 kV	I M C #3 Sub 69 kV	0 10	54	43 2	4 32
277	Sudan Rural Sub 69 kV	Lamb County REC-Sandhill 69 kV	4 10	88	70 4	288 64
278	Sulphur Springs Interchange 69 kV	Lyntegar REC-Foster 69 kV	3 09	54	43 2	133 49
279	Switch #2749 69 kV	Southwest Portland Cement Tap 69 kV	4 96	88	70 4	349 18
280	Switch 3710 69 kV Bus	Aiken Rural Sub 69 kV	1 48	54	43 2	63 94
281	Switch 3710 69 kV Bus	Lighthouse REC-Aiken 69 kV	4 26	54	43 2	184 03
282	Switch 3710 69 kV Bus	Lockney Sub 69 kV	3 47	54	43 2	149 90
283	Switch #4702 69 kV	Central Valley REC-Orchard 69 kV	9 62	88	70 4	677 25
284	Switch #6786 North Side Of Switch 69 kV	Switch #6786 South Side Of Switch 69 kV	0 00	72	57 6	0 00
285	Switch #6786 North Side Of Switch 69 kV	South Plains REC-Hettler 69 kV	4 63	54	43 2	200 02
286	Switch #6786 South Side Of Switch 69 kV	Planters Sub 69 kV	1 09	54	43 2	47 09
287	Switch 6865 & 6867 69 kV	Lamb County REC-Pettit 69 kV	2 62	54	43 2	113 18
288	Switch 6865 & 6867 69 kV	Cochran Interchange 69 kV	4 45	90	72 0	320 40
289	Switch #6878 69 kV	Batton Sub North 69 kV	4 35	54	43 2	187 92
290	Switch #7848 / Switch #7814 69 kV	Oxy Denver City West 69 kV	0 64	54	43 2	27 65
291	Switch #7848 / Switch #7814 69 kV	Switch #7814 69 kV	5 83	54	43 2	251 86
292	Switch 9748 69 kV	Kiser Sub 69 kV	1 61	54	43 2	69 55
293	Southwest Portland Cement Tap 69 kV	Northwest Tap 69 kV	8 77	88	70 4	617 41
294	Tenneco Sub Tap 69 kV	Tenneco Sub 69 kV	0 99	54	43 2	42 77
295	Terry County Interchange 69 kV	Lyntegar REC-Brownfield 69 kV	5 93	54	43 2	256 18
296	Texaco Sub 69 kV	Zavalla Sub 69 kV	6 44	88	70 4	453 38
297	Tokio Sub 69 kV	Lyntegar REC-Tokio 69 kV	0 11	54	43 2	4 75
298	Tokio Sub 69 kV	Kinney Sub 69 kV	9 04	54	43 2	390 53
299	Tokio Tap 69 kV	Lyntegar REC-Seagraves 69 kV	2 66	88	70 4	187 26
300	Tokio Tap 69 kV	Moss Sub 69 kV	4 19	88	70 4	294 98
301	TUCO Interchange 69 kV	Lighthouse REC-Wilson & Ellen 69 kV	8 83	54	43 2	381 46
302	TUCO Interchange 69 kV	South Plains REC-New Deal 69 kV	7 23	54	43 2	312 34
303	Union Texas Sub 69 kV	Lyntegar REC-Foster 69 kV	2 17	54	43 2	93 74
304	United Salt Sub 69 kV	Strata Sub 69 kV	4 00	54	43 2	172 80
305	Van Buren Sub 1 69 kV (North Auto)	Van Buren Sub 2 69 kV (South Auto)	0 00	79	63 2	0 00
306	Van Buren Sub 1 69 kV (North Auto)	East Plant Interchange 69 kV	4 25	86	68 8	292 40
307	Van Buren Sub 2 69 kV (South Auto)	East Plant Interchange 69 kV	2 08	88	70 4	146 43
308	Vega Sub 69 kV	Wildorado 69 kV	14 06	54	43 2	607 39
309	West Anton Tap 69 kV	Lamb County REC-Spade & Hart Camp 69 kV	7 56	88	70 4	532 22
310	West Anton Tap 69 kV	Bainer Sub 69 kV	1 83	54	43 2	79 06
311	West Clovis Sub 69 kV	Curry County Interchange 69 kV	8 14	54	43 2	351 65
312	West Littlefield Sub 69 kV	Lamb County Interchange 69 kV	7 00	54	43 2	302 40
313	West Muleshoe Sub 69 kV	Muleshoe City Sub 69 kV	0 54	88	70 4	38 02
314	West Plainview Sub 69 kV	Kiser Sub 69 kV	2 10	54	43 2	90 72
315	West Plainview Sub 69 kV	Westridge Sub Tap 69 kV	7 09	88	70 4	499 14
316	Wasson Sub 69 kV	Switch #7814 69 kV	6 69	54	43 2	289 01
317	Wasson Sub 69 kV	Denver City Interchange 69 kV	2 37	54	43 2	102 38
318	Waterfield Tap 69 kV	Soncy Sub Tap 69 kV	1 90	88	70 4	133 76

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Line No.	LINE DESCRIPTION FROM	TO	LENGTH (miles)	THERMAL RATING (MVA)	80% THERMAL RATING (MVA)	MW-MILES
319	Waterfield Tap 69 kV	Coulter Interchange 69 kV	1.12	88	70.4	78.85
320	Weatherly Sub 69 kV	Hutchinson County Interchange 69 kV	2.55	88	70.4	179.52
321	Wellman Sub 69 kV	Lyntegar REC-Wellman 69 kV	1.00	54	43.2	43.20
322	Wellman Sub 69 kV	Union Texas Sub 69 kV	4.26	54	43.2	184.03
323	Whiteface Sub 69 kV	Whiteface Sub Tap 69 kV	0.26	38	30.4	7.90
324	Whitehead Sub 69 kV	Monroe Sub 69 kV	0.57	54	43.2	24.62
325	Whitehead Sub 69 kV	South Plains REC-Shallowater 69 kV	3.39	54	43.2	146.45
326	Whitharral Sub 69 kV	Lamb County REC-Hodge Tap 69 kV	1.50	54	43.2	64.80
327	Whiteface Sub Tap 69 kV	Switch 6865 & 6867 69 kV	0.11	38	30.4	3.34
328	Wildorado 69 kV	Switch #2749 69 kV	3.60	35	28.0	100.80
329	Westridge Sub Tap 69 kV	Westridge Sub 69 kV	4.05	88	70.4	285.12
330	Westridge Sub Tap 69 kV	Plainview Tap 69 kV	3.98	88	70.4	280.19
331	XTO-Robertson 69 kV	Boardman Sub 69 kV	1.00	54	43.2	43.20
332	Yancy Sub 69 kV	Big Country REC-Yancy Tap 69 kV	2.50	54	43.2	108.00
333	Yancy Tap 69 kV	Garza Sub 69 kV	0.21	54	43.2	9.07
334	Yancy Tap 69 kV	Lyntegar REC-Central 69 kV	11.72	54	43.2	506.30
335	Yancy Tap 69 kV	Big Country REC-Yancy Tap 69 kV	0.50	54	43.2	21.60
336	Zavalla Sub 69 kV	Slaughter Sub 69 kV	0.91	54	43.2	39.31
337	Zodiac Sub 69 kV	South Portales Sub 69 kV	2.20	54	43.2	95.04
338		69-kV TOTAL	1450.04			75,933.02
	115-kV TRANSMISSION LINES					
339	34th Street Sub Tap 115 kV	34th Street Sub 115 kV	1.22	93	74.6	90.96
340	34th Street Sub Tap 115 kV	Coulter Interchange 115 kV	1.00	120	95.6	95.60
341	34th Street Sub Tap 115 kV	South Georgia Interchange 115 kV	2.21	159	127.1	280.94
342	Seven Rivers Interchange 115 kV	Central Valley REC-Lakewood 115 kV	7.98	159	127.4	1016.97
343	Agave Red Hills 115 kV	Ochoa Sub 115 kV	0.39	159	127.4	49.67
344	Allen Sub 115 kV	Wheelock Sub 115 kV	1.95	60	48.0	93.60
345	Allen Sub 115 kV	South Plains REC-Quaker 115 kV	3.57	120	95.6	341.29
346	Allen Sub 115 kV	Lubbock South Interchange 115 kV	5.98	159	127.2	760.66
347	Allred Subs 115 kV	Allred/Cortez Tap 115 kV	0.95	159	127.1	120.76
348	Allred/Cortez Tap 115 kV	Shell C3 Tap 115 kV	4.27	212	169.2	722.48
349	Allred/Cortez Tap 115 kV	Lea County REC-Waits Interchange 115 kV	9.57	120	95.6	914.89
350	Am Frac Sub 115 kV	Mid America #1 Sub 115 kV	0.65	93	74.6	48.46
351	Amarillo South Interchange 115 kV	Spring Draw Sub 115 kV	7.79	138	110.4	860.02
352	Amerada Hess Co2 Sub 115 kV	Seminole Interchange 115 kV	2.53	159	127.4	322.42
353	Amoco Tap 115 kV	Amoco (Amoco Cryogenics) Sub 115 kV	4.86	120	95.6	464.62
354	Amoco Tap 115 kV	Lyntegar REC-Levelland 115 kV	2.01	159	127.4	255.99
355	Andrews 115 kV Bus	National Enrichment Plant Sub 115 kV	2.00	478	382.5	764.96
356	Apache-Roberts Sub 115 kV (customer sub)	Allred Subs 115 kV	1.00	159	127.1	127.12
357	ARCO-Willard Tap 115 kV	OXY-Willard Sub 115 kV	1.54	159	127.1	195.76
358	Arrowhead Sub 115 kV	Amarillo South Interchange 115 kV	3.38	159	127.1	429.67
359	Artesia Interchange 115 kV	Eagle Creek 115 kV	1.11	96	77.0	85.35
360	ASARCO Sub 115 kV	ASARCO TAP 115 kV	0.77	159	127.1	97.88
361	ASARCO TAP 115 kV	Nichols Station 115 kV	0.21	159	127.4	26.75
362	Atoka Interchange 115 kV	Central Valley REC- Dayton 115 kV	1.01	159	127.1	128.39
363	Atoka Interchange 115 kV	Central Valley REC-Irish Hills 115 kV	4.75	159	127.1	603.82
364	Bailey County REC-Earth Interchange 115 kV	Plant X Station 115 kV	10.75	120	95.6	1027.70
365	Bailey County REC-Kelley 115kV	Bailey County REC-Earth Interchange 115 kV	3.88	159	126.9	492.29
366	Bennett Sub 115 kV	ARCO-Willard Tap 115 kV	0.16	159	127.4	20.38
367	Bennett Sub 115 kV	ODC Tap 115 kV	0.04	159	127.4	5.09
368	Blanco Switching Station 115kV	Crosby County Interchange 115 kV	8.92	96	77.1	687.91
369	Blackhawk Interchange East Bus 115 kV	Quench Ryton Plant Tap 115 kV	0.48	159	127.4	61.17
370	Blackhawk Interchange West Bus 115 kV	Hutchinson County Interchange N 115 kV	11.94	120	95.6	1141.46
371	BOPCO Poker Lake Substation 115 kV	Wood Draw Substation 115 kV	7.59	159	127.4	967.27
372	Bowers Interchange 115 kV	Grapevine Interchange 115 kV	3.86	277	221.4	853.34
373	Bowers Interchange 115 kV	Howard Sub 115 kV	36.80	252	201.6	7418.88
374	Buckeye Tap 115 kV	Buckeye Sub 115 kV	1.10	141	113.0	124.26
375	Byrd Sub Tap 115 kV	Byrd Sub 115 kV	0.85	143	114.4	97.24
376	Camex/Agrium Tap 115 kV	Camex/Agrium Sub 115 kV	0.50	159	127.1	63.56
377	Camex/Agrium Tap 115 kV	West Borger Sub Tap 115 kV	2.70	160	127.8	345.17
378	Camex/Agrium Tap 115 kV	Hutchinson County Interchange N 115 kV	1.10	159	127.4	140.18
379	Cannon A F B Sub Tap 115 kV	Cannon A F B Sub 115 kV	0.89	160	127.9	113.85
380	Cannon A F B Sub Tap 115 kV	Perimeter Sub 115 kV	7.30	159	127.1	927.98
381	Canyon East Tap 115 kV	Canyon East Sub 115 kV	0.99	80	63.8	63.12
382	Canyon West Sub 115 kV	Canyon East Tap 115 kV	3.78	276	220.4	832.89
383	Canyon West Sub 115 kV	Dawn Sub 115 kV	15.01	276	220.8	3314.21
384	Capitan Sub 115 kV	Roswell Interchange 115 kV	8.96	216	172.4	1544.70
385	Cardinal Sub 115 kV	Targa Subs 115 kV	3.00	159	127.4	382.32
386	Cargill Sub 115 kV	Friona Sub 115 kV	1.15	96	76.5	87.95
387	Cargill Sub 115 kV	Deaf Smith REC-#24 115 kV	7.74	95	76.3	590.72
388	Carlisle Interchange 115 kV	Lubbock Power & Light-Doud Substation Tap 115 kV	2.29	120	95.6	218.92
389	Carlisle Interchange 115 kV	Murphy Sub 115 kV	3.98	138	110.7	440.67
390	Carlsbad Interchange 115 kV	Pecos Interchange 115 kV	1.83	120	95.6	174.95
391	Carson Sub 115 kV	Martin Sub 115 kV	1.20	93	74.6	89.47
392	Castro County Interchange 115 kV	Bailey County REC-Kelley 115kV	10.48	159	126.9	1329.70
393	Castro County Interchange 115 kV	Newhart Interchange 115 kV	17.88	159	126.9	2268.61
394	Chaves County Interchange 115 kV	Urton Sub 115 kV	3.70	159	127.1	470.34
395	Chaves County Interchange 115 kV	Price Sub Tap 115 kV	4.47	275	220.2	985.35
396	Chaves County Interchange 115 kV	Samson Sub 115 kV	7.78	159	127.4	990.86

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Wheeling Information

Line No.	LINE DESCRIPTION FROM	TO	LENGTH (miles)	THERMAL RATING (MVA)	80% THERMAL RATING (MVA)	MW - MILES
397	China Draw Substation 115 kV	China Draw SVC 115 kV	0 00	200	160 0	0 00
398	China Draw Substation 115 kV	Wood Draw Substation 115 kV	20 00	277	221 4	4427 20
399	China Draw Substation 115 kV	Chevron Eddy South Sub 115kV	3 80	276	220 8	839 04
400	Coburn Creek 115 kV Sub	Wheeler County Interchange 115 kV	10 85	160	128 0	1388 80
401	Cochran Interchange 115 kV	Pacific Sub 115 kV	7 50	159	127 1	953 40
402	Cole Interchange 115 kV	Tri Co REC- Aggie Sub 115kV	2 95	159	127 1	375 00
403	Cole Interchange 115 kV	Ochiltree Interchange 115 kV	16 37	277	221 7	3628 90
404	Conway Sub 115 kV	Kirby Switching Station 115 kV	25 18	159	127 4	3208 94
405	Cooper Ranch Sub 115 kV	Byrd Sub Tap 115 kV	4 86	143	114 6	556 76
406	Cortez Sub 115 kV	Apache-Roberts Sub 115 kV (customer sub)	1 48	159	127 1	188 14
407	Coulter Interchange 115 kV	Estacado Tap 115 kV	1 92	159	127 1	244 07
408	Cox Interchange 115 kv	Hale Co Interchange 115 kV	19 80	96	77 0	1523 81
409	Cox Interchange 115 kv	Floyd County Interchange 115 kV	21 30	159	127 4	2714 47
410	CRMWA #1 115 kV	CRMWA #1 Tap 115 kV	2 08	128	102 5	213 16
411	CRMWA #1 Tap 115 kV	CRMWA #2 115 kV	0 31	160	127 8	39 63
412	CRMWA #2 115 kV	Fritch Rural Sub 115 kV	2 45	120	95 6	234 22
413	CRMWA #3 115 kV	Fritch Rural Sub 115 kV	6 37	120	95 6	608 97
414	CRMWA #3 115 kV	Meredith Sub 115 kV	10 09	159	127 4	1285 06
415	CRMWA #4 115 kV	Meredith Sub 115 kV	4 14	159	127 4	527 27
416	CRMWA #4 115 kV	Nichols Station 115 kV	7 45	159	127 4	948 83
417	Crosby County Interchange 115 kV	Lubbock East Interchange 115 kV	27 26	159	127 1	3465 29
418	Crouse Hinds Sub Tap 115 kV	Crouse Hinds Sub 115 kV	0 76	159	127 2	96 67
419	Cunningham Station 115 kV	Hobbs Interchange 115 kV	3 20	159	127 0	406 53
420	Cunningham Station 115 kV	Hobbs Interchange 115 kV	3 67	159	127 0	466 24
421	Cunningham Station 115 kV	Buckeye Tap 115 kV	8 55	249	198 9	1700 42
422	Cunningham Station 115 kV	Maddox Station 115 kV	3 19	239	191 2	609 93
423	Cunningham Station 115 kV	Quahada Sub 115 kV	27 14	158	126 6	3437 01
424	Cunningham Station 115 kV	Monument Tap 115 kV	6 51	159	127 0	827 03
425	Curry County Interchange 115 kV	Farmers Electric REC-Clovis#2 115 kV	0 67	158	126 3	84 63
426	Curry County Interchange 115 kV	Roosevelt County Interchange 115 kV	6 10	158	126 6	772 02
427	Curry County Interchange 115 kV	Bailey County Interchange 115 kV	36 01	274	219 3	7896 27
428	Custer Mountain 115 kV	Ponderosa Sub 115 kV	10 75	276	220 9	2374 46
429	Custer Mountain 115 kV	Whitten Sub 115 kV	3 98	239	191 2	761 74
430	Central Valley REC-Azotea Mesa Transmission Tap 115 kV	Seven Rivers Interchange 115 kV	4 97	159	127 1	631 79
431	Central Valley REC-Azotea Mesa Transmission Tap 115 kV	Pecos Interchange 115 kV	12 55	159	127 1	1595 36
432	Central Valley REC-Lakewood 115 kV	Central Valley REC-Irish Hills 115 kV	3 24	159	127 4	412 91
433	Dallam County Interchange 115 kV	Hilmar Cheese Plant Tap 115 kV	1 59	158	126 6	201 36
434	Dallam County Interchange 115 kV	Dalhart Interchange 115 kV	1 40	158	126 6	177 30
435	Dawn Sub 115 kV	Panda Energy Substation, Hereford 115 kV	8 43	276	220 8	1861 34
436	DCP Zia Sub Tap 115 kV	DCP Zia Sub 115 kV	0 70	249	199 2	139 44
437	Deaf Smith County Interchange West Bus 115 kV	Deaf Smith REC-#21 115 kV	21 56	159	126 9	2735 53
438	Denver City Interchange N 115 kV	Mustang Interchange North Bus 115 kV	2 82	243	194 6	548 66
439	Denver City Interchange N 115 kV	Higg East Sub 115 kV	12 81	120	95 6	1224 64
440	Denver City Interchange S 115 kV	Mustang Interchange North Bus 115 kV	2 96	237	189 4	560 74
441	Diamondback Substation 115 kV	Sulphur Springs Interchange 115 kV	11 75	160	127 7	1500 24
442	Doss Interchange 115 kV	Legacy Interchange 115 kV	6 42	159	127 1	816 49
443	Drinkard Sub 115 kV	National Enrichment Plant Sub 115 kV	7 38	159	127 1	938 15
444	Drinkard Tap 115 kV	Drinkard Sub 115 kV	2 03	159	127 1	258 05
445	Deaf Smith REC-#20 115 kV	Curry County Interchange 115 kV	12 73	93	74 6	949 15
446	Deaf Smith REC-#21 115 kV	Castro County Interchange 115 kV	1 02	159	126 9	129 42
447	Deaf Smith REC-#25 115 kV Sub	Panda Energy Substation, Hereford 115 kV	1 59	276	220 8	351 07
448	Deaf Smith REC-#25 115 kV Sub	Deaf Smith County Interchange West Bus 115 kV	1 95	276	220 8	430 56
449	Deaf Smith REC-#6 115 kV	Friona Sub 115 kV	18 90	96	76 5	1445 47
450	Dumas 19th Street Sub 34 5 kV	Exell Sub Tap 115 kV	15 09	120	95 6	1442 60
451	East Clovis Sub 115 kV	Curry County Interchange 115 kV	5 46	123	98 5	537 60
452	East Sanger Sub 115 kV	South Hobbs Sub 115 kV	5 93	120	95 6	566 91
453	Eagle Creek 115 kV	Navajo No 2 Sub Tap 115 kV	0 55	159	127 1	69 92
454	Eagle Creek 115 kV	Navajo No 5 Sub Tap 115 kV	0 62	159	127 1	78 81
455	Eagle Creek 115 kV	Atoka Interchange 115 kV	21 00	276	220 8	4636 80
456	Eagle Creek 115 kV	Eddy County Interchange North 115 kV	9 53	159	127 4	1213 74
457	Eagle Creek 115 kV	Seven Rivers Interchange 115 kV	32 62	238	190 1	6200 41
458	East Plant Interchange 115 kV	Pierce Street Tap 115 kV	1 06	159	127 1	134 75
459	East Plant Interchange 115 kV	Manhattan Sub 115 kV	3 32	159	127 1	422 04
460	Eddy County Interchange South 115 kV	Central Valley REC- Dayton 115 kV	12 02	159	127 4	1530 87
461	Eddy County Interchange South 115 kV	Pecos Interchange 115 kV	27 16	192	153 4	4167 43
462	El Paso Sub 115 kV	Denver City Interchange N 115 kV	3 94	159	127 1	500 85
463	Enron Tap 115 kV	Enron Sub 115 kV	1 81	120	95 9	173 62
464	Enron Tap 115 kV	Pearl Sub 115 kV	18 51	120	95 6	1769 56
465	Enron Tap 115 kV	Lea National Sub 115 kV	0 17	120	95 9	16 31
466	Estacado Tap 115 kV	Estacado Sub 115 kV	0 83	159	127 1	105 51
467	Etter Rural Sub 115 kV	Moore County Interchange East Bus 115 kV	10 25	96	76 6	785 56
468	Eunice Sub 115 kV	Drinkard Tap 115 kV	3 08	159	127 1	391 53
469	Eunice Sub 115 kV	Cardinal Sub 115 kV	1 56	159	127 4	198 81
470	Exell Sub 115 kV	Exell Sub Tap 115 kV	2 50	159	127 1	317 80
471	Exell Sub Tap 115 kV	Fain Sub 115 kV	7 46	159	127 1	948 32
472	Fain Sub 115 kV	Nichols Station 115 kV	21 10	159	127 4	2687 30
473	Farmers Sub 115 kV	Crouse Hinds Sub Tap 115 kV	0 09	159	127 1	11 44
474	Farmers Sub 115 kV	Amarillo South Interchange 115 kV	2 35	159	127 1	298 73
475	Farmers Electric REC-Cheese Plant 115 kV Tap	Oasis Interchange 115 kV	7 80	130	104 1	811 82
476	Farmers Electric REC-Holland 115 kV	Farmers Electric REC-Clovis#2 115 kV	4 88	158	126 3	616 69
477	Fiesta Sub 115 kV	Carlsbad Interchange 115 kV	1 10	138	110 4	121 44

Southwestern Public Service Company

Wheeling Information

Line No.	LINE DESCRIPTION FROM	TO	LENGTH (miles)	THERMAL RATING (MVA)	80% THERMAL RATING (MVA)	MW-MILES
478	Floyd County Interchange 115 kV	Blanco Switching Station 115kV	16 87	159	127 4	2149 91
479	Floyd County Interchange 115 kV	TUCO Interchange 115 kV	25 16	120	95 6	2405 30
480	Frisco Wind Farm Tap 115kV	Lasley Switching Station 115 kV	16 41	159	127 1	2086 04
481	Gaines County Interchange 115 kV	Oxy West Seminole Tap 115 kV	0 80	120	95 6	76 48
482	Gaines County Interchange 115 kV	Legacy Interchange 115 kV	4 94	159	127 1	627 85
483	South Georgia Interchange 115 kV	Randall County Interchange 115 kV	5 89	249	198 9	1171 60
484	South Georgia Interchange 115 kV	Crouse Hinds Sub Tap 115 kV	1 93	159	127 1	245 34
485	Grapevine Interchange 115 kV	Kirby Switching Station 115 kV	11 72	160	127 8	1498 28
486	Grassland Interchange 115 kV	Graham Interchange 115 kV	17 28	138	110 4	1907 71
487	Hale Co Interchange 115 kV	Plant X Station 115 kV	39 85	80	63 8	2540 84
488	Hale Co Interchange 115 kV	TUCO Interchange 115 kV	20 73	96	76 8	1592 06
489	Happy Interchange 115 kV	Tulia Tap 115 kV	7 47	239	191 2	1428 26
490	Hart Industrial 115 kV	Lamton Interchange 115 kV	17 60	159	127 1	2237 31
491	Hart Industrial 115 kV	Newhart Interchange 115 kV	9 30	159	127 1	1182 22
492	Hastings Sub 115 kV	East Plant Interchange 115 kV	4 88	276	220 4	1075 55
493	Hereford Interchange 115 kV	Deaf Smith County Interchange West Bus 115 kV	2 17	120	95 6	207 45
494	Hereford Interchange 115 kV	Deaf Smith County Interchange West Bus 115 kV	2 35	120	95 6	224 66
495	Hereford Interchange 115 kV	Deaf Smith REC-#6 115 kV	7 12	96	76 5	544 54
496	Herring Tap 115 kV	Herring Sub 115 kV	4 49	93	74 6	334 77
497	Herring Tap 115 kV	Rita Blanca REC-Sneed 115 kV	6 31	212	169 8	1071 69
498	Herring Tap 115 kV	Riverview Interchange 115 kV	11 45	213	170 0	1946 50
499	Higg Switch Station 115 kV	Bensing Sub 115kV	13 60	159	127 1	1728 83
500	Higg East Sub 115 kV	Higg Switch Station 115 kV	1 00	159	127 4	127 36
501	Highland Park Tap 115 kV	Pantex South Sub 115 kV	6 78	159	127 2	862 42
502	Highland Park Tap 115 kV	ASARCO TAP 115 kV	5 84	159	127 4	743 78
503	Highland Park Tap 115 kV	Highland Park Sub 115 kV	5 84	96	76 6	447 58
504	Hillside Substation 115kV	Coulter Interchange 115 kV	2 11	159	127 4	268 90
505	Hilmar Cheese Plant Tap 115 kV	Hilmar Cheese Plant 115 kV	0 49	158	126 7	62 09
506	Hilmar Cheese Plant Tap 115 kV	Rita Blanca REC-Exum Sub 115 kV	21 94	159	127 1	2789 01
507	Hitchland Interchange 115 kV	Frisco Wind Farm Tap 115kV	12 13	160	127 7	1548 76
508	Hitchland Interchange 115 kV	Hansford County Switch Station 115 kV	6 67	224	179 0	1193 66
509	Hobbs Interchange 115 kV	Maddox Station 115 kV	2 06	239	191 2	393 87
510	Hobbs Interchange 115 kV	Bensing Sub 115kV	13 60	159	127 1	1728 83
511	Hobbs Interchange 115 kV	Millen Sub Tap West 115 kV	10 15	143	114 4	1161 16
512	Hockley County Interchange 115 kV	Lamb County REC-Opdyke Sub 115 kV	3 70	159	127 4	471 23
513	Hutchinson County Interchange S 115 kV	Gray County Interchange 115 kV	25 32	120	95 6	2420 59
514	Hutchinson County Interchange S 115 kV	Martin Sub 115 kV	21 02	239	191 2	4019 02
515	I M C #1 Sub Tap 115 kV	I M C #1 Sub 115 kV	1 01	160	127 8	129 12
516	I M C #1 Sub Tap 115 kV	XTO DI9 Sub Tap 115 kV	4 00	276	220 8	883 20
517	Intrepid West Tap 115 kV	I M C #1 Sub Tap 115 kV	4 02	159	127 4	512 31
518	Jericho Substation (AEP) 115kV	Kirby Switching Station 115 kV	5 02	80	63 8	320 08
519	Johnson Draw 115 kV	Higg Switch Station 115 kV	8 24	96	76 8	632 83
520	Johnson Draw 115 kV	Taylor Switching Station 115 kV	11 93	159	127 1	1516 54
521	Kilgore Sub 115 kV (Zodiac 115kV)	South Portales Sub 115 kV	2 20	275	219 6	483 12
522	Kingsmill Interchange 115 kV	Llano Estacado Wind POI 115 kV	11 30	131	105 0	1186 95
523	Kiser Sub 115 kV	Cox Interchange 115 kv	10 00	159	127 1	1271 20
524	Kress Interchange 115 kV	Swisher County Interchange 115 kV	2 88	239	191 2	550 46
525	Kress Interchange 115 kV	Kress Rural Tap 115 kV	9 03	159	127 1	1147 89
526	Kress Interchange 115 kV	Hale Co Interchange 115 kV	18 40	80	63 8	1173 18
527	Kress Interchange 115 kV	Newhart Interchange 115 kV	20 02	159	127 1	2544 94
528	Kress Rural Sub 115 kV	Kress Rural Tap 115 kV	0 98	159	127 1	124 58
529	Kress Rural Tap 115 kV	North Plainview Sub 115 kV	12 11	159	127 1	1539 42
530	Lamb County Interchange 115 kV	Hockley County Interchange 115 kV	22 70	120	95 6	2170 12
531	Lamton Interchange 115 kV	Lamb County REC-South Olton 115 kV	6 45	129	103 3	666 16
532	Lamton Interchange 115 kV	Hale Co Interchange 115 kV	20 06	80	63 8	1279 03
533	Hereford Centre Street Sub 115 kV	Northeast Hereford Interchange 115 kV	7 50	276	220 8	1656 00
534	Lasley Switching Station 115 kV	Rita Blanca Elks Sub 115kV	0 60	159	127 1	76 27
535	Lamb County REC-Opdyke Sub 115 kV	Sundown Interchange 115 kV	13 52	120	95 6	1292 51
536	Lamb County REC-South Olton 115 kV	Plant X Station 115 kV	15 66	120	95 6	1497 10
537	Lea Road Sub 115 kV	Ward Sub 115 kV	8 00	120	95 6	764 80
538	Lea Road Sub 115 kV	Oil Center Sub 115 kV	3 11	120	95 6	297 32
539	Lehman Sub Tap 115 kV	Lehman Sub 115 kV	2 06	93	74 4	153 26
540	Lehman Sub Tap 115 kV	Lyntegar REC-Plains 115 kV	23 33	159	127 2	2967 58
541	Lyntegar REC-Clauene 115 kV	Terry County Interchange 115 kV	10 95	80	63 8	698 17
542	Lyntegar REC-Levelland 115 kV	Lyntegar REC-Clauene 115 kV	6 41	159	127 4	816 38
543	Lyntegar REC-Pleasant Hill 115 kV	Seagraves Interchange 115 kV	4 20	159	127 4	534 91
544	Lipscomb Co Sub 115 kV	Wade Sub Tap 115 kV	7 05	159	127 1	896 20
545	Livingston Ridge Sub 115 kV	Sage Brush 115 kV bus	27 48	275	219 9	6043 40
546	Livingston Ridge Sub 115 kV	WIPP Sub 115 kV	2 78	159	127 4	354 41
547	Livingston Ridge Sub 115 kV	XTO DI9 Sub Tap 115 kV	5 48	276	220 8	1209 98
548	Llano Estacado Wind POI 115 kV	Midstream Energy Tap 115 kV	9 33	129	103 4	965 10
549	Lopez Switch Station 115 kV	Campbell Street Sub 115 kV	0 12	80	63 8	7 65
550	Lopez Switch Station 115 kV	Farmers Electric REC-Tucumcari 115 kV	4 45	158	126 6	563 55
551	Dean Interchange 115 kV	Lehman Sub Tap 115 kV	1 13	159	127 2	143 74
552	Dean Interchange 115 kV	Cochran Interchange 115 kV	11 45	159	127 2	1456 44
553	Lubbock Power & Light-Doud Substation Tap 115 kV	Lubbock Power & Light Doud Sub Tap 115 kV	1 71	94	74 9	128 04
554	Lubbock Power & Light-Doud Substation Tap 115 kV	South Plains REC-Wolfforth Tap 115 kV	1 38	212	169 2	233 50
555	Lubbock South Interchange 115 kV	Lubbock East Interchange 115 kV	6 82	120	95 6	651 99
556	Lubbock South Interchange 115 kV	South Plains REC-Woodrow Interchange 69 kV	5 62	120	95 6	537 27
557	Lynn County Interchange 115 kV	Grassland Interchange 115 kV	7 10	159	127 4	904 82
558	Maddox Station 115 kV	Pearl Sub 115 kV	15 33	120	96 1	1472 91

Southwestern Public Service Company

Wheeling Information

Line No.	LINE DESCRIPTION FROM	TO	LENGTH (miles)	THERMAL RATING (MVA)	80% THERMAL RATING (MVA)	MW - MILES
559	Maddox Station 115 kV	Sanger Switching Station 115 kV	6 15	239	191 2	1175 88
560	Maddox Station 115 kV	Monument Sub 115 kV	3 36	169	135 4	455 08
561	Maljamar Subs 1&2 115 kV	Zia Sub 115 kV	12 18	143	114 4	1393 39
562	Manhattan Sub 115 kV	Randall County Interchange 115 kV	4 10	159	127 1	521 19
563	Mid America #1 Sub 115 kV	Johnson Draw 115 kV	0 15	93	74 6	11 18
564	Martin Sub 115 kV	Pantex North Sub 115 kV	5 14	159	127 2	653 81
565	McClellan Sub 115 kV	McLean Rural Sub 115 kV	21 27	93	74 6	1585 89
566	McClellan Sub 115 kV	Kirby Switching Station 115 kV	0 69	96	77 1	53 21
567	Midstream Energy Tap 115 kV	Nichols Station 115 kV	27 49	120	95 6	2628 04
568	Millen Sub Tap East 115 kV	Northeast Hobbs Sub 115 kV	2 00	120	95 6	191 20
569	Monument Sub 115 kV	West Hobbs Switching Station 115 kV	5 75	143	114 4	657 80
570	Monument Sub 115 kV	Monument Tap 115 kV	0 10	249	198 9	19 89
571	Monument Tap 115 kV	Byrd Sub Tap 115 kV	3 80	143	114 4	434 72
572	Moore County Interchange West Bus 115 kV	Rita Blanca REC-Stokes & Sheldon 115kV	3 97	80	63 8	253 13
573	Moore County Interchange West Bus 115 kV	Rita Blanca REC-Sneed 115 kV	16 35	120	95 6	1563 06
574	East Muleshoe & Valley Substations 115 kV	East Muleshoe & Valley Substations Tap 115 kV	1 02	160	128 0	130 56
575	East Muleshoe & Valley Substations Tap 115 kV	Bailey County Interchange 115 kV	1 10	120	95 9	105 51
576	East Muleshoe & Valley Substations Tap 115 kV	Plant X Station 115 kV	18 11	120	95 6	1731 32
577	Murphy Sub 115 kV	Quincy Switching Station 115kV	2 24	120	95 6	214 14
578	Mustang Interchange North Bus 115 kV	Seagraves Interchange 115 kV	13 13	159	127 4	1672 24
579	North Canal Sub Tap 115 kV	Pecos Interchange 115 kV	2 54	159	127 1	322 88
580	North Clovis Sub Tap 115 kV	North Clovis Sub 115 kV	1 02	93	74 6	75 90
581	North Clovis Sub Tap 115 kV	Farmers Electric REC-Clovis Interchange 115 kV	1 95	159	127 1	248 27
582	North Plainview Sub 115 kV	Kiser Sub 115 kV	1 62	159	127 1	206 06
583	National Enrichment Plant Sub 115 kV	Targa Subs 115 kV	4 26	273	218 4	930 38
584	Navajo No 2 Sub Tap 115 kV	Navajo No 2 Sub 115 kV	0 14	115	91 9	12 87
585	Navajo No 2 Sub Tap 115 kV	Navajo No 3 Sub 115 kV	0 07	138	110 4	7 73
586	Navajo No 5 Sub Tap 115 kV	Navajo No 4 Sub 115 kV	0 03	159	127 1	3 81
587	Navajo No 5 Sub Tap 115 kV	Navajo No 5 Sub 115 kV	0 24	159	127 1	30 51
588	Northeast Hereford Interchange 115 kV	Hereford Interchange 115 kV	4 36	159	127 0	553 89
589	Northeast Hereford Interchange 115 kV	Deaf Smith County Interchange West Bus 115 kV	2 49	159	127 0	316 33
590	Nichols Station 115 kV	Whitaker Sub 115 kV	2 80	233	186 2	521 25
591	Nichols Station 115 kV	Yarnell Sub Tap 115 kV	9 72	179	142 8	1388 02
592	Norris Street Tap 115 kV	Norris Street Sub 115 kV	0 60	93	74 6	44 74
593	Norris Street Tap 115 kV	Curry County Interchange 115 kV	0 03	158	126 6	3 80
594	Norris Street Tap 115 kV	Farmers Electric REC-Cheese Plant 115 kV Tap	7 62	128	102 5	780 90
595	NORTH LOVING Sub 115 kV	BLACK RIVER SUB 115kV	2 13	277	221 2	471 16
596	NORTH LOVING Sub 115 kV	Hopi Sub 115 kV	15 00	225	180 2	2703 60
597	Northwest Interchange 115 kV	Bush Sub 115 kV	4 32	40	31 8	137 55
598	Northwest Interchange 115 kV	Sunset Sub115 kV	3 27	159	127 1	415 68
599	Norton Switching Station 115 kV	Farmers Electric REC-Tucumcari 115 kV	13 19	136	109 0	1437 18
600	Norton Switching Station 115 kV	Pleasant Hill 115 kV	54 54	128	102 5	5589 26
601	Oasis Interchange 115 kV	Portales Interchange 115 kV	7 40	158	126 6	936 54
602	Ochiltree Interchange 115 kV	Perryton Interchange 115 kV	1 08	97	77 3	83 46
603	Ochiltree Interchange 115 kV	Perryton Interchange 115 kV	1 48	176	140 9	208 50
604	Ocotillo Sub 115 kV	Pecos Interchange 115 kV	5 82	93	74 6	433 94
605	ODC Tap 115 kV	ODC Sub 115 kV	2 04	159	127 1	259 32
606	ODC Tap 115 kV	Shell CO2 Gas Sub 115 kV	2 72	159	127 4	346 42
607	Oil Center Sub 115 kV	Cooper Ranch Sub 115 kV	3 54	143	114 4	404 98
608	Osage Switching Station 115 kV	Arrowhead Sub 115 kV	3 00	120	95 6	286 80
609	Outpost Sub 115 kV	Bushland Interchange 115 kV	1 98	159	127 4	252 33
610	Outpost Sub 115 kV	Hillside Substation 115kV	7 02	159	127 4	894 63
611	Owens Corning Sub 115 kV	Amarillo South Interchange 115 kV	1 15	215	172 2	198 08
612	Owens Corning Sub 115 kV	Estacado Tap 115 kV	5 51	159	127 1	700 43
613	Oxy South Hobbs 115 kV	Switch #4J44 115 kV	1 90	143	114 4	217 13
614	Oxy West Seminole Tap 115 kV	Johnson Draw 115 kV	13 19	155	123 8	1633 45
615	Pacific Sub 115 kV	Sundown Interchange 115 kV	2 05	159	127 1	260 60
616	Palo Duro Sub 115 kV	Happy Interchange 115 kV	23 81	239	191 2	4552 47
617	Pantex North Sub 115 kV	Pantex South Sub 115 kV	3 35	159	127 4	426 66
618	Parmer County Sub 115 kV	Deaf Smith REC-#24 115 kV	1 16	96	76 5	88 72
619	Parmer County Sub 115 kV	Deaf Smith REC-#20 115 kV	7 60	93	74 6	566 66
620	PCA Interchange 115 kV	Potash Junction Interchange 115 kV	4 72	159	127 4	601 52
621	PCA Interchange 115 kV	Carlsbad Interchange 115 kV	19 07	120	95 6	1823 09
622	PCA Interchange 115 kV	XTO Big Eddy Tap 115kV	5 63	239	191 2	1076 46
623	Pecos Interchange 115 kV	Hopi Sub 115 kV	11 03	250	200 2	2207 76
624	Perimeter Sub 115 kV	Oasis Interchange 115 kV	7 63	158	126 6	965 65
625	Phantom Substation 115 kV BUS	BOPCO Poker Lake Substation 115 kV	0 69	159	127 2	87 77
626	Phantom Substation 115 kV BUS	WolfCamp Sub Tap 115kV	0 69	159	127 2	87 77
627	Pierce Street Tap 115 kV	Pierce Street Sub115 kV	2 02	160	127 9	258 40
628	Pierce Street Tap 115 kV	Osage Switching Station 115 kV	3 95	120	95 6	377 62
629	Lea County REC-Plains Interchange 115 kV	Yoakum County Interchange 115 kV	4 95	159	127 1	629 24
630	Lea County REC-Plains Interchange 115 kV	Lyntegar REC-Plains 115 kV	4 04	159	127 2	513 89
631	Plant X Station 115 kV	Lamb County Interchange 115 kV	23 14	120	95 6	2212 18
632	Pleasant Hill 115 kV	East Clovis Sub 115 kV	4 41	123	98 5	434 20
633	Pleasant Hill 115 kV	North Clovis Sub Tap 115 kV	5 11	158	126 2	645 21
634	Pleasant Hill 115 kV	Farmers Electric REC-Holland 115 kV	3 51	158	126 3	443 38
635	Portales Interchange 115 kV	Kilgore Sub 115 kV (Zodiac 115kV)	3 20	275	219 6	702 72
636	Portales Interchange 115 kV	Market Street Sub 115 kV	7 00	275	219 6	1537 20
637	Potash Junction Interchange 115 kV	Kiowa Sub 115 kV	0 30	384	307 5	93 18
638	Potash Junction Interchange 115 kV	Intrepid West Tap 115 kV	1 38	159	127 4	175 87
639	Potash Junction Interchange 115 kV	Carlsbad Interchange 115 kV	16 33	96	77 0	1256 76

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Line No.	LINE DESCRIPTION FROM	TO	LENGTH (miles)	THERMAL RATING (MVA)	80% THERMAL RATING (MVA)	MW - MILES
640	Prentice Sub 115 kV	Yoakum County Interchange 115 kV	21 08	159	127 1	2679 69
641	Price Sub 115 kV	Price Sub Tap 115 kV	1 84	159	127 2	234 30
642	Price Sub Tap 115 kV	Capitan Sub 115 kV	8 96	275	220 2	1973 57
643	Pringle Interchange 115 kV	Riverview Interchange 115 kV	20 25	160	127 8	2588 76
644	Pringle Interchange 115 kV	Quench Ryton Plant Tap 115 kV	27 36	159	127 1	3478 00
645	Puckett Sub 115 kV	Coulter Interchange 115 kV	2 35	120	95 6	224 66
646	Pullman Sub 115 kV	Southeast Sub 115 kV	4 20	160	127 9	537 26
647	Quahada Sub 115 kV	XTO Big Eddy Tap 115kV	6 89	239	191 2	1317 37
648	Quahada Sub 115 kV	Lea National Sub 115 kV	3 68	143	114 6	421 58
649	Quahada Sub 115 kV	DCP Zia Sub Tap 115 kV	1 52	143	114 4	173 89
650	Quincy Switching Station 115kV	South Plains REC-Frankford Sub 115 kV	1 74	120	95 6	166 34
651	Randall County Interchange 115 kV	Canyon East Tap 115 kV	18 00	96	76 8	1382 40
652	Randall County Interchange 115 kV	Palo Duro Sub 115 kV	13 63	239	191 2	2606 06
653	Rita Blanca Elks Sub 115kV	Rita Blanca Spurlock Substation 115 kV	15 75	159	127 1	2002 14
654	Rita Blanca REC-Exum Sub 115 kV	Etter Rural Sub 115 kV	11 55	120	95 6	1104 18
655	Rita Blanca REC-Hogue 115 kV	Rita Blanca REC-Kemp 115 kV	7 06	93	74 2	524 13
656	Rita Blanca REC-Hogue 115 kV	Dalhart Interchange 115 kV	11 44	82	65 8	753 21
657	Rita Blanca REC-Kemp 115 kV	Moore County Interchange East Bus 115 kV	25 01	93	74 2	1856 74
658	Rita Blanca REC-Stokes & Sheldon 115kV	Dumas 19th Street Sub 34 5 kV	9 27	93	74 6	691 17
659	Rita Blanca Spurlock Substation 115 kV	Moore County Interchange East Bus 115 kV	13 02	80	63 8	830 16
660	Road Runner Sub 115 kV	Battle Axe Substation 115 kV BUS	19 73	249	198 9	3923 90
661	Road Runner Sub 115 kV	Agave Red Hills 115 kV	0 70	159	127 4	89 15
662	Road Runner Sub 115 kV	Agave Red Hills #2 115 kV	1 12	158	126 4	141 57
663	Road Runner Sub 115 kV	Custer Mountain 115 kV	11 95	273	218 4	2609 88
664	Red Bluff Switching Station 115 kV	WolfCamp Sub Tap 115kV	7 63	159	127 3	971 15
665	RIAC/Tweety Tap 115kV	Brasher Sub 115 kV	0 47	93	74 4	34 97
666	RIAC/Tweety Tap 115kV	Sierra Sub 115kV	1 50	276	220 8	331 20
667	RIAC/Tweety Tap 115kV	Roswell Interchange 115 kV	1 04	276	220 8	229 63
668	Riverview Interchange 115 kV	CRMWA #1 Tap 115 kV	8 28	120	95 6	791 57
669	Riverview Interchange 115 kV	West Borger Sub Tap 115 kV	3 24	159	127 4	412 91
670	Riverview Interchange 115 kV	Hutchinson County Interchange S 115 kV	10 99	160	127 8	1404 96
671	Rolling Hills Interchange 115 kV	Cherry Sub 115 kV	0 20	159	127 1	25 42
672	Rolling Hills Interchange 115 kV	Nichols Station 115 kV	6 24	159	127 4	794 73
673	Rolling Hills Interchange 115 kV	Northwest Interchange 115 kV	8 34	159	127 4	1062 18
674	Rolling Hills Interchange 115 kV	Hastings Sub 115 kV	6 10	263	210 0	1281 00
675	Roosevelt County Interchange 115 kV	Portales Interchange 115 kV	11 62	158	126 6	1470 63
676	Roswell City Sub 115 kV	Roswell Interchange 115 kV	3 49	159	127 2	443 93
677	Roswell Interchange 115 kV	Tweedy Sub 115 kV	2 49	159	127 4	317 33
678	Roz Substation 115 kV	Amerada Hess Co2 Sub 115 kV	0 75	80	63 8	47 82
679	Roz Substation 115 kV	Seminole Interchange 115 kV	3 43	159	127 4	437 12
680	Road Runner SVC 115kV Bus	Road Runner Sub 115 kV	0 00	200	160 0	0 00
681	Russell Oil Field Sub 115 kV	Higg Switch Station 115 kV	1 00	159	127 1	127 12
682	South Hobbs Sub 115 kV	Oxy South Hobbs 115 kV	1 21	120	95 6	115 48
683	South Jal Sub 115 kV	Dollarhide Sub 115 kV	3 70	96	77 1	285 34
684	South Portales Sub 115 kV	Market Street Sub 115 kV	1 90	275	219 6	417 24
685	Sage Brush 115 kV bus	Cardinal Sub 115 kV	20 32	276	220 8	4486 66
686	Samson Sub 115 kV	Roswell Interchange 115 kV	3 22	159	127 1	409 33
687	San Andres Sub Tap 115 kV	San Andres Sub 115 kV	2 00	159	127 1	254 24
688	San Andres Sub Tap 115 kV	Denver City Interchange S 115 kV	1 57	159	127 1	199 58
689	San Andres Sub Tap 115 kV	Seminole Interchange 115 kV	17 56	159	127 1	2232 23
690	Sand Dunes Sub 115 kV	Red Bluff Switching Station 115 kV	7 69	159	127 4	979 40
691	Sanger Switching Station 115 kV	Switch #4J44 115 kV	2 00	143	114 4	228 80
692	Sanger Switching Station 115 kV	OXY Permian Sub 115	0 50	239	191 2	95 60
693	Seagraves Interchange 115 kV	Sulphur Springs Interchange 115 kV	12 53	139	110 9	1389 33
694	Seminole Interchange 115 kV	Gaines County Interchange 115 kV	10 46	159	127 1	1329 68
695	Seminole Interchange 115 kV	Doss Interchange 115 kV	7 75	159	127 4	987 66
696	Sendero Sub 115 kV	BLACK RIVER SUB 115kV	0 33	277	221 2	73 00
697	Sendero Sub 115 kV	China Draw Substation 115 kV	15 88	250	200 3	3181 08
698	Shamrock Substation (AEP) 115kV	McLean Rural Sub 115 kV	4 00	65	51 6	206 18
699	Shell C2 Sub 115 kV	Shell C3 Tap 115 kV	2 18	212	169 2	368 86
700	Shell C2 Sub 115 kV	Denver City Interchange S 115 kV	3 36	159	127 4	427 93
701	Shell CO2 Gas Sub 115 kV	El Paso Sub 115 kV	0 66	159	127 4	84 06
702	Shell C3 Tap 115 kV	Shell C3 Sub 115 kV	0 90	93	74 6	67 10
703	Sherman County Sub 115 kV	Lasley Switching Station 115 kV	11 25	159	127 1	1430 10
704	Sherman County Sub 115 kV	Dallam County Interchange 115 kV	37 11	158	126 6	4699 61
705	Sendero Lea Co Cryo Sub 115kV	Red Bluff Switching Station 115 kV	5 13	140	112 2	575 38
706	Sendero Lea Co Cryo Sub 115kV	Road Runner Sub 115 kV	6 41	140	112 2	718 95
707	Soncy Sub Tap 115 kV	Soncy Sub 115 kV	1 05	159	127 2	133 56
708	Soncy Sub Tap 115 kV	Puckett Sub 115 kV	0 71	159	127 2	90 31
709	Southeast Sub 115 kV	Randall County Interchange 115 kV	3 38	160	127 9	432 37
710	Spearman Interchange 115 kV	Hansford County Switch Station 115 kV	14 89	159	127 4	1897 58
711	Spearman Interchange 115 kV	Spearman Sub 115 kV	8 44	159	127 4	1075 59
712	Spearman Interchange 115 kV	Pringle Interchange 115 kV	17 76	159	127 1	2257 65
713	Spearman Interchange 115 kV	Pringle Interchange 115 kV	20 02	159	127 4	2551 35
714	South Plains REC-Erskine 115 kV	Indiana Sub 115 kV	3 90	159	127 2	496 08
715	South Plains REC-Erskine 115 kV	Carlisle Interchange 115 kV	2 16	94	74 9	161 74
716	South Plains REC-Frankford Sub 115 kV	South Plains REC-Quaker 115 kV	2 01	159	127 1	255 51
717	South Plains REC-Upland 115 kV	South Plains REC-Wolfforth Tap 115 kV	1 45	76	61 1	88 62
718	Stanton Sub 115 kV	Indiana Sub 115 kV	1 49	120	96 0	143 04
719	Sundown Interchange 115 kV	Amoco Tap 115 kV	0 97	120	95 6	92 73
720	Sunset Sub115 kV	Soncy Sub Tap 115 kV	1 39	159	127 2	176 81

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Line No.	LINE DESCRIPTION FROM	TO	LENGTH (miles)	THERMAL RATING (MVA)	80% THERMAL RATING (MVA)	MW - MILES
721	Switch #4J44 115 kV	West Hobbs Switching Station 115 kV	1 00	143	114 4	114 40
722	Taylor Switching Station 115 kV	Northeast Hobbs Sub 115 kV	3 49	120	95 6	333 64
723	Taylor Switching Station 115 kV	West Bender Sub 115 kV	6 40	143	114 4	732 16
724	Taylor Switching Station 115 kV	East Sanger Sub 115 kV	1 50	120	95 6	143 40
725	Tri County REC-McMurry Sub 115 kV	Tri Co REC- Aggie Sub 115kV	31 00	159	127 1	3940 72
726	Teague Sub 115 kV	South Jal Sub 115 kV	10 28	120	95 6	982 77
727	Teague Sub 115 kV	Cardinal Sub 115 kV	6 81	143	114 7	781 24
728	Terry County Interchange 115 kV	Prentice Sub 115 kV	16 98	159	127 4	2162 57
729	Terry County Interchange 115 kV	Denver City Interchange N 115 kV	35 61	96	76 8	2734 85
730	Terry County Interchange 115 kV	Sulphur Springs Interchange 115 kV	23 10	120	95 6	2208 36
731	Texas County Interchange 115 kV	Hitchland Interchange 115 kV	13 04	139	111 0	1447 96
732	Texas County Interchange 115 kV	Hitchland Interchange 115 kV	23 95	139	111 0	2659 41
733	Texas County Interchange 115 kV	Tri County REC-McMurry Sub 115 kV	4 13	80	63 8	263 33
734	TUCO Interchange 115 kV	Stanton Sub 115 kV	19 24	120	96 0	1847 04
735	TUCO Interchange 115 kV	Lubbock East Interchange 115 kV	22 78	160	127 7	2908 55
736	Tulia Tap 115 kV	Kress Interchange 115 kV	10 38	249	199 2	2067 70
737	Tweedy Sub 115 kV	Eddy County Interchange North 115 kV	44 83	181	144 4	6473 45
738	Texas Farms Sub 115 kV	Ochilltree Interchange 115 kV	8 63	178	142 6	1230 98
739	*Texas Farms Sub* 115 kV	*Spearman* Sub 115 kV	18 05	178	142 6	2574 08
740	Texas County Interchange Phase Angle Regulator 115 kV	East Liberal Substation (SUNC) 115kV	42 50	80	63 8	2710 10
741	Urton Sub 115 kV	Roswell City Sub 115 kV	3 17	138	110 4	349 97
742	Valero Sub 115 kV	Moore County Interchange West Bus 115 kV	2 01	159	127 1	255 51
743	Valero Sub 115 kV	Moore County Interchange East Bus 115 kV	1 41	159	127 1	179 24
744	West Bender Sub 115 kV	North Hobbs Sub 115 kV	2 70	73	58 2	157 03
745	West Bender Sub 115 kV	OXY Permian Sub 115	0 50	120	95 6	47 80
746	West Borger Sub Tap 115 kV	West Borger Sub 115 kV	1 80	50	40 0	72 00
747	West Clovis Sub 115 kV	Cannon A F B Sub Tap 115 kV	4 60	158	126 2	580 70
748	West Clovis Sub 115 kV	Farmers Electric REC-Clovis Interchange 115 kV	3 20	159	127 1	406 78
749	West Hobbs Switching Station 115 kV	Drinkard Tap 115 kV	12 49	159	127 1	1587 73
750	Wade Sub Tap 115 kV	Wade Sub 115 kV	1 50	159	127 1	190 68
751	Wade Sub Tap 115 kV	Ochilltree Interchange 115 kV	10 98	159	127 1	1395 78
752	Ward Sub 115 kV	Whitten Sub 115 kV	10 30	143	114 4	1178 32
753	Wheeler County Interchange 115 kV	Howard Sub 115 kV	8 38	161	128 6	1077 33
754	Whitaker Sub 115 kV	East Plant Interchange 115 kV	4 60	215	172 2	792 30
755	Whitten Sub 115 kV	South Jal Sub 115 kV	7 90	120	95 6	755 24
756	WIPP Sub 115 kV	Sand Dunes Sub 115 kV	5 63	159	127 4	717 49
757	Wolfforth Interchange 115 kV	Terry County Interchange 115 kV	20 54	120	95 6	1963 62
758	South Plains REC-Woodrow Interchange 69 kV	Lynn County Interchange 115 kV	18 43	120	95 6	1761 91
759	XIT Interchange 115 kV	Dallam County Interchange 115 kV	1 25	235	188 3	235 21
760	XTO DI9 Sub Tap 115 kV	XTO DI9 Sub 115 kV	1 00	159	127 4	127 44
761	Yarnell Sub Tap 115 kV	Conway Sub 115 kV	13 03	179	143 0	1862 77
762	Yoakum County Interchange 115 kV	ARCO-Willard Tap 115 kV	8 73	159	127 1	1109 76
763	Yoakum County Interchange *115 kV*	*Lyntegar REC-Pleasant Hill 115 kV*	*19 24*	*120*	95 6	1839 34
764	Yuma Interchange 115 kV	South Plains REC-Wolfforth Tap 115 kV	0 81	159	127 4	103 23
765	Yuma Interchange 115 kV	Wolfforth Interchange 115 kV	5 09	199	159 4	811 14
766	Zia Sub 115 kV	DCP Zia Sub Tap 115 kV	0 80	143	114 4	91 52
767		**115-kV TOTAL**	**3303.55**			**418,706.31**
	230-kV TRANSMISSION LINES					
768	Seven Rivers Interchange 230 kV	Pecos Interchange 230 kV	20 61	499	399 0	8224 21
769	Amarillo South Interchange 230 kV	Swisher County Interchange 230 kV	57 90	498	398 1	23048 83
770	Amoco Switching Station 230 kV	Yoakum County Interchange 230 kV	37 03	414	331 1	12261 37
771	Amoco Wasson Switching Station 230 kV	XTO-Mahoney 230 kV	4 62	399	319 4	1475 44
772	Amoco Wasson Switching Station 230 kV	Mustang Interchange 230 kV	3 55	431	345 1	1225 18
773	Bennett Ranch Unit Sub 230 kV	Oxy Bennett Ranch Unit Sub 230 kV	0 11	497	397 6	43 74
774	Bennett Ranch Unit Sub 230 kV	XTO-Mahoney 230 kV	1 76	399	319 4	562 07
775	Bushland Interchange 230 kV	Deaf Smith County Interchange 230 kV	33 48	389	311 4	10424 33
776	Carlisle Interchange 230 kV	Wolfforth Interchange 230 kV	13 04	499	399 4	5207 65
777	Channing Sub 230 kV	Potter County Interchange 230 kV	41 65	496	397 1	16540 05
778	Chaves County Interchange 230 kV	Eddy County Interchange North 230 kV	52 45	319	255 0	13372 65
779	Cunningham Station North 230 kV	Potash Junction Interchange 230 kV	38 48	478	382 5	14717 83
780	Cunningham Station South 230 kV	Hobbs Interchange 230 kV	4 02	478	382 5	1537 57
781	Deaf Smith County Interchange 230 kV	Plant X Station 230 kV	45 94	319	255 0	11712 86
782	Eddy County Interchange South 230 kV	Cunningham Station North 230 kV	58 81	319	255 0	14994 20
783	Eddy County Interchange South 230 kV	Seven Rivers Interchange 230 kV	24 10	497	397 8	9586 02
784	Grapevine Interchange 230 kV	Wheeler County Interchange 230 kV	37 18	319	255 0	9479 41
785	Grapevine Interchange 230 kV	Nichols Station 230 kV	53 43	319	255 0	13622 51
786	Grassland Interchange 230 kV	Cirrus Wind Farm POI 230kV	10 15	478	382 5	3882 17
787	Harrington Station Mid Bus 230 kV	Nichols Station 230 kV	1 13	650	519 8	587 33
788	Harrington Station Mid Bus 230 kV	Randall County Interchange 230 kV	11 58	478	382 5	4429 12
789	Harrington Station West Bus 230 kV	Rolling Hills Interchange 230 kV	5 10	478	382 5	1950 65
790	Harrington Station West Bus 230 kV	Nichols Station 230 kV	1 07	650	519 8	556 14
791	Harrington Station West Bus 230 kV	East Plant Interchange 230 kV	7 07	319	255 0	1802 57
792	Hitchland Interchange 230 kV	Ochilltree Interchange 230 kV	38 23	500	400 3	15304 23

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Line No.	LINE DESCRIPTION FROM	LINE DESCRIPTION TO	LENGTH (miles)	THERMAL RATING (MVA)	80% THERMAL RATING (MVA)	MW - MILES
793	Hitchland Interchange 230 kV	Moore County Interchange 230 kV	62 69	498	398 4	24975 70
794	Hobbs Interchange 230 kV	Andrews 230 kV Bus	30 77	496	396 8	12209 54
795	Hutchinson County Interchange 230 kV	Nichols Station 230 kV	29 41	319	255 0	7498 37
796	Jones Station Bus#1 230 kV	Grassland Interchange 230 kV	26 72	319	255 0	6812 53
797	Lubbock East Interchange 230 kV	Jones Station Bus#1 230 kV	6 21	433	346 7	2153 13
798	Lubbock South Interchange 230 kV	Jones Station Bus#1 230 kV	5 43	478	382 5	2076 87
799	Lubbock South Interchange 230 kV	Jones Station Bus#1 230 kV	5 43	478	382 5	2076 87
800	Lubbock South Interchange 230 kV	Wolfforth Interchange 230 kV	14 62	319	255 0	3727 52
801	Moore County Interchange 230 kV	Potter County Interchange 230 kV	47 48	319	255 0	12105 50
802	Mustang Interchange 230 kV	Seminole Interchange 230 kV	18 07	498	398 4	7199 09
803	Needmore Sub 230kV	Yoakum County Interchange 230 kV	74 39	490	392 0	29160 88
804	Newhart Interchange 230 kV	Plant X Station 230 kV	39 59	321	256 9	10169 88
805	Nichols Station 230 kV	Amarillo South Interchange 230 kV	19 99	319	255 0	5096 65
806	Oasis Interchange 230 kV	San Juan Mesa Tap 230 kV	46 20	319	255 0	11779 15
807	Oasis Interchange 230 kV	Roosevelt County Interchange NORTH 230 kV	9 60	319	255 0	2447 62
808	Plant X Station 230 kV	Tolk Station East 230 kV	10 00	478	382 5	3824 80
809	Plant X Station 230 kV	Tolk Station West 230 kV	10 10	478	382 5	3863 05
810	Plant X Station 230 kV	Sundown Interchange 230 kV	48 20	497	397 8	19172 03
811	Pleasant Hill 230 kV	Oasis Interchange 230 kV	27 96	494	395 5	11058 74
812	Pleasant Hill 230 kV	Roosevelt County Interchange NORTH 230 kV	19 52	493	394 6	7701 81
813	Potash Junction Interchange 230 kV	Pecos Interchange 230 kV	14 64	498	398 7	5837 26
814	Potter County Interchange 230 kV	Harrington Station East Bus 230 kV	11 20	497	397 6	4453 12
815	Potter County Interchange 230 kV	Rolling Hills Interchange 230 kV	6 23	498	398 4	2482 03
816	Potter County Interchange 230 kV	Bushland Interchange 230 kV	18 95	459	367 1	6956 92
817	Potter County Interchange 230 kV	Newhart Interchange 230 kV	67 25	376	300 6	20212 66
818	Pringle Interchange 230 kV	Harrington Station East Bus 230 kV	59 17	326	260 7	15426 80
819	Randall County Interchange 230 kV	Amarillo South Interchange 230 kV	8 33	497	397 8	3313 34
820	Roosevelt County Interchange NORTH 230 kV	Tolk Station East 230 kV	39 39	478	382 5	15065 89
821	Roosevelt County Interchange NORTH 230 kV	Tolk Station West 230 kV	39 87	478	382 5	15249 48
822	San Juan Mesa Tap 230 kV	Chaves County Interchange 230 kV	51 60	478	382 5	19735 97
823	Sundown Interchange 230 kV	Amoco Switching Station 230 kV	5 16	497	397 6	2051 62
824	Sundown Interchange 230 kV	Wolfforth Interchange 230 kV	24 62	426	340 7	8388 53
825	Swisher County Interchange 230 kV	Newhart Interchange 230 kV	20 83	497	397 4	8278 68
826	Swisher County Interchange 230 kV	TUCO Interchange 230 kV	39 62	498	398 4	15784 61
827	Tolk Station East 230 kV	TUCO Interchange 230 kV	54 58	319	255 0	13915 72
828	Tolk Station West 230 kV	Needmore Sub 230kV	13 65	430	344 2	4697 78
829	Tolk Station West 230 kV	Lamb County Interchange 230 kV	35 10	319	255 0	8949 10
830	TUCO Interchange 230 kV	Carlisle Interchange 230 kV	26 89	499	399 0	10730 19
831	TUCO Interchange 230 kV	Jones Station Bus#1 230 kV	29 67	499	399 4	11849 01
832	Wheeler County Interchange 230 kV	Demarcation Bus Location 230kV	13 92	353	282 4	3931 01
833	XIT Interchange 230 kV	Channing Sub 230 kV	32 28	495	396 2	12788 04
834	Yoakum County Interchange 230 kV	Bennett Ranch Unit Sub 230 kV	5 35	470	375 8	2010 32
835	Yoakum County Interchange 230 kV	Mustang Interchange 230 kV	15 65	447	357 9	5601 45
836	Yoakum County Interchange 230 kV	Hobbs Interchange 230 kV	48 03	378	302 2	14512 74
837		**230-kV TOTAL**	**1836.85**			**613,880.12**
	345-kV TRANSMISSION LINES					
838	Border Substation (OGE) 345kV	TUCO Interchange 345 kV	201 10	1793	1434 2	288409 58
839	Beaver (OGE) 345kV	Hitchland Interchange 345 kV	29 25	1793	1434 2	41949 18
840	Beaver (OGE) 345kV	Hitchland Interchange 345 kV	29 25	1793	1434 2	41949 18
841	Walkemeyer Sub 345 kV	Finney Switching Station 345 kV	67 96	950	759 6	51622 42
842	Crossroads Switching Station 345kV	Eddy County Interchange 345 kV	105 72	717	573 7	60649 45
843	Finney Switching Station 345 kV	Holcomb Interchange (SUN) 345kV	0 75	956	764 9	573 66
844	Finney Switching Station 345 kV	Lamar HVDC (PSCO) 345 kV	78 86	380	304 1	23978 23
845	Hitchland Interchange 345 kV	Walkemeyer Sub 345 kV	50 02	1098	878 6	43949 57
846	Hitchland Interchange 345 kV	Potter County Interchange 345 kV	102 60	956	764 9	78476 69
847	Hobbs Interchange 345 kV	Kiowa Sub 345 kV	48 00	1721	1376 8	66086 40
848	Kiowa Sub 345 kV	Road Runner Sub 345 kV	39 75	1793	1434 2	57007 86
849	Kiowa Sub 345 kV	NORTH LOVING Sub 345 kV	21 88	1793	1434 2	31379 42
850	NORTH LOVING Sub 345 kV	China Draw Substation 345 kV	18 08	1793	1434 2	25929 61
851	OKU Station (PSO) 345kV	TUCO Interchange 345 kV	160 79	956	764 9	122986 58
852	Tolk Station 345 kV	Crossroads Switching Station 345kV	52 00	782	625 3	32514 56
853		**345-kV TOTAL**	**1006.01**			**967,462.39**

Acronyms: AEP - American Electric Powe
ACCO - Anderson, Clayton and Compan
A F B - Air Force Base
ASARCO - American Smelting and Refining Company
CRMWA - Canadian River Municipal Water Authorit
DCP - Duke-Conoco Phillips
HVDC - High Voltage Direct Current
I M C - International Minerals and Chemical Corp
KCM - Owned by Lea County REC
OGE - Oklahoma Gas and Electric
OXY - Occidental Petroleum Corporatio
OKU - Oklaunion
PCA - Potash Company of Americ
POI - Point of Interconnectio
PSCO - Public Service Company of Colorad
PSO - Public Service Company of Oaklahom
REC - Rural Electric Cooperativ
RIAC - Roswell Industrial Air Cente
Sub - Substation
SUNC - Sunflower Electric Power Corporatio
WIPP - Waste Isolation Pilot Plant