

EL PASO ELECTRIC COMPANY
 2021 TEXAS RATE CASE FILING
 SCHEDULE O-3 1. NUMBER OF CUSTOMERS
 SPONSOR: MANUEL CARRASCO
 PREPARER: E. MORENO/A. HERNANDEZ
 FOR THE TEST YEAR ENDED DECEMBER 31 2020

SCHEDULE O-3.1
 10 OF 15

NEW MEXICO RATE CLASSES - CUSTOMERS

	(a)	(b)	(c)
<u>Line</u>	<u>Month</u>	<u>Year</u>	<u>Total</u>
1	Jan	2019	99,610
2	Feb	2019	99,712
3	Mar	2019	99,952
4	Apr	2019	100,150
5	May	2019	100,236
6	Jun	2019	100,420
7	Jul	2019	100,574
8	Aug	2019	100,619
9	Sep	2019	100,876
10	Oct	2019	100,968
11	Nov	2019	100,998
12	Dec	2019	101,100
TEST YEAR.			
13	Jan	2020	101,195
14	Feb	2020	101,294
15	Mar	2020	101,446
16	Apr	2020	101,629
17	May	2020	101,861
18	Jun	2020	102,063
19	Jul	2020	102,341
20	Aug	2020	102,426
21	Sep	2020	102,705
22	Oct	2020	102,811
23	Nov	2020	102,924
24	Dec	2020	103,047
25	Unadjusted TY Avg		102,145
26	Unadjusted TY Total		1,225,742

SCHEDULE O-3 1
 PAGE 10 OF 15

SCHEDULE O-3.1
11 OF 15

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
			<u>Residential</u>	<u>Sm Gen Serv</u>	<u>Gen Serv</u>	<u>Irrigation</u>	<u>City/County</u>	<u>Water Pump</u>	<u>Lq Power</u>	<u>MR & D</u>	<u>Street</u>	<u>Area</u>	<u>Seasonal Ag</u>	<u>Outdoor</u>	<u>State</u>
<u>Line</u>	<u>Month</u>	<u>Year</u>	<u>Rate 01</u>	<u>Rate 03</u>	<u>Rate 04</u>	<u>Rate 05</u>	<u>Rate 07</u>	<u>Rate 08</u>	<u>Rate 09 (A)</u>	<u>Rate 10</u>	<u>Lighting</u>	<u>Lighting</u>	<u>Rate 19</u>	<u>Lighting</u>	<u>University</u>
	ADJUSTED TEST YEAR				(C)								(D)		
1	Jan	2020	90,533	9,547	630	842	764	192	22	2	18	420	47	29	1
2	Feb	2020	90,533	9,547	630	842	764	192	22	2	18	420	47	29	1
3	Mar	2020	90,533	9,547	630	842	764	192	22	2	18	420	45	29	1
4	Apr	2020	90,533	9,547	630	842	764	192	22	2	18	420	46	29	1
5	May	2020	90,533	9,547	630	842	764	192	22	2	18	420	46	29	1
6	Jun	2020	90,533	9,547	629	842	764	192	22	2	18	420	45	29	1
7	Jul	2020	90,533	9,547	629	842	764	192	22	2	18	420	45	29	1
8	Aug	2020	90,533	9,547	629	842	764	192	22	2	18	420	45	29	1
9	Sep	2020	90,533	9,547	629	842	764	192	21	2	18	420	47	29	1
10	Oct	2020	90,533	9,547	629	842	764	192	21	2	18	420	49	29	1
11	Nov	2020	90,533	9,547	629	842	764	192	21	2	18	420	49	29	1
12	Dec	2020	90,533	9,547	629	842	764	192	21	2	18	420	49	29	1
13	Adjusted TY Total		1,086,396	114,564	7,553	10,104	9,168	2,304	260	24	216	5,040	560	348	12

(A) Includes customers billed under New Mexico Rate No. 29

(B) Area Lighting Rate 12 excludes any customer that is counted under another rate class.

(C) Includes a customer which operates only for certain months of the year

(D) Test Year customer count is restated for Adjusted Test Year

EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-3.1: NUMBER OF CUSTOMERS
SPONSOR: MANUEL CARRASCO
PREPARER: E MORENO/A HERNANDEZ
FOR THE TEST YEAR ENDED DECEMBER 31 2020

SCHEDULE O-3.1
12 OF 15

NEW MEXICO RATE CLASSES - CUSTOMERS

(a) (b) (c)

<u>Line</u>	<u>Month</u>	<u>Year</u>	<u>Total</u>
ADJUSTED TEST YEAR			
1	Jan	2020	103,047
2	Feb	2020	103,047
3	Mar	2020	103,045
4	Apr	2020	103,046
5	May	2020	103,046
6	Jun	2020	103,044
7	Jul	2020	103,044
8	Aug	2020	103,044
9	Sep	2020	103,045
10	Oct	2020	103,047
11	Nov	2020	103,047
12	Dec	2020	103,047
13	Adjusted TY Total		1,236,549

SCHEDULE O-3.1
PAGE 12 OF 15

EL PASO ELECTRIC COMPANY
 2021 TEXAS RATE CASE FILING
 SCHEDULE O-3.1: NUMBER OF CUSTOMERS
 SPONSOR: MANUEL CARRASCO
 PREPARER: ELIZABETH MORENO
 FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-3.1
 13 OF 15

FERC CUSTOMER

(a) (b) (c) (d)

<u>Line</u>	<u>Month</u>	<u>Year</u>	<u>RGEC</u>	<u>Total</u>
1	Jan	2017	1	1
2	Feb	2017	1	1
3	Mar	2017	1	1
4	Apr	2017	1	1
5	May	2017	1	1
6	Jun	2017	1	1
7	Jul	2017	1	1
8	Aug	2017	1	1
9	Sep	2017	1	1
10	Oct	2017	1	1
11	Nov	2017	1	1
12	Dec	2017	1	1
13	Jan	2018	1	1
14	Feb	2018	1	1
15	Mar	2018	1	1
16	Apr	2018	1	1
17	May	2018	1	1
18	Jun	2018	1	1
19	Jul	2018	1	1
20	Aug	2018	1	1
21	Sep	2018	1	1
22	Oct	2018	1	1
23	Nov	2018	1	1
24	Dec	2018	1	1

SCHEDULE O-3.1
 PAGE 13 OF 15

EL PASO ELECTRIC COMPANY
 2021 TEXAS RATE CASE FILING
 SCHEDULE O-3 1: NUMBER OF CUSTOMERS
 SPONSOR: MANUEL CARRASCO
 PREPARER: ELIZABETH MORENO
 FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-3.1
 14 OF 15

FERC CUSTOMER

(a) (b) (c) (d)

<u>Line</u>	<u>Month</u>	<u>Year</u>	<u>RGEC</u>	<u>Total</u>
1	Jan	2019	1	1
2	Feb	2019	1	1
3	Mar	2019	1	1
4	Apr	2019	1	1
5	May	2019	1	1
6	Jun	2019	1	1
7	Jul	2019	1	1
8	Aug	2019	1	1
9	Sep	2019	1	1
10	Oct	2019	1	1
11	Nov	2019	1	1
12	Dec	2019	1	1
TEST YEAR				
13	Jan	2020	1	1
14	Feb	2020	1	1
15	Mar	2020	1	1
16	Apr	2020	1	1
17	May	2020	1	1
18	Jun	2020	1	1
19	Jul	2020	1	1
20	Aug	2020	1	1
21	Sep	2020	1	1
22	Oct	2020	1	1
23	Nov	2020	1	1
24	Dec	2020	1	1

SCHEDULE O-3.1
 PAGE 14 OF 15

EL PASO ELECTRIC COMPANY
 2021 TEXAS RATE CASE FILING
 SCHEDULE O-3 1: NUMBER OF CUSTOMERS
 SPONSOR: MANUEL CARRASCO
 PREPARER: ELIZABETH MORENO
 FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-3.1
 15 OF 15

FERC CUSTOMER

(a) (b) (c) (d)

<u>Line</u>	<u>Month</u>	<u>Year</u>	<u>RGEC</u>	<u>Total</u>
ADJUSTED TEST YEAR				
1	Jan	2020	1	1
2	Feb	2020	1	1
3	Mar	2020	1	1
4	Apr	2020	1	1
5	May	2020	1	1
6	Jun	2020	1	1
7	Jul	2020	1	1
8	Aug	2020	1	1
9	Sep	2020	1	1
10	Oct	2020	1	1
11	Nov	2020	1	1
12	Dec	2020	1	1

SCHEDULE O-3 1
 PAGE 15 OF 15

EPE has proposed to adjust customer counts to annualize the number of customers at Test Year end.

For the following Texas rate classes and sub-classes (voltage levels), an 'annualization factor' was applied to each month's recorded customer count. That factor is the ratio of customer count of the last month in the Test Year to the proper month. For example, the Test Year end customer count for Schedule No. 01 – Residential Service was 301,303 and the January customer count was 294,970, therefore, the annualization factor for the January customer count is 1.021470. Applying that factor to the 294,970 customer count recorded in January results in an increase in that count to the Test Year end customer count of 301,303.

- Residential Service
- Small General Service
- Outdoor Recreational Lighting Service (Secondary Voltage)
- Municipal Pumping TOU (Secondary Voltage)
- Water Heating Service (at the service agreement level)
- Irrigation Service
- General Service (Secondary Voltage)
- City & County (Secondary Voltage)

For the following Texas rate classes and subclasses, EPE reviewed individual customer information to determine if any customer adjustment was necessary.

- Street Lighting Service (at lamp count level)
- Traffic Signals (at lamp count and service agreement level)
- Water Heating Service
- General Service (Primary Voltage)
- Large Power Service (Secondary Voltage)
- Area Lighting Service (at lamp count level)
- City & County (Secondary Voltage)

Annualization of customer count is necessary to adjust energy sales and, for some rate classes, billed demand, to a level representative of ongoing conditions had the number of customers at year-end been served the entire year. Since EPE is a multi-jurisdictional utility, it was necessary to perform this customer annualization to all jurisdictions to allocate its cost of service among the jurisdictions. These adjustments, result in annualized sales revenue that serve as the basis for EPE's proposed base rate increase or decrease.

See Schedule O-3.3 for all data necessary to reproduce the proposed customer adjustments.

EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-3.3 OTHER CUSTOMER ADJUSTMENT INFORMATION
SPONSOR: MANUEL CARRASCO
PREPARER: RENE GONZALEZ / ADRIAN HERNANDEZ
FOR THE TEST YEAR ENDED DECEMBER 30, 2020

SCHEDULE O-3.3
PAGE 1 OF 6

Line	Texas Rate Class	Rate	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Total	Average
1	Residential Service	01														
2	Customer Count - Unadjusted		294,970	295,248	295,813	296,204	297,024	297,782	298,614	299,201	300,014	300,444	300,839	301,303	3,577,456	298,121
3	Annualization Factor		1.021470	1.020508	1.018559	1.017214	1.014406	1.011824	1.009005	1.007025	1.004296	1.002859	1.001542	1.000000		
4	Customer Count - Adjusted		301,303	301,303	301,303	301,303	301,303	301,303	301,303	301,303	301,303	301,303	301,303	301,303	3,615,636	301,303
5	Small General Service	02														
6	Customer Count - Unadjusted		27,022	26,982	27,141	27,180	27,197	27,218	27,098	27,084	27,141	27,112	27,359	27,394	325,928	27,161
7	Annualization Factor		1.013767	1.015269	1.009322	1.007873	1.007243	1.006466	1.010923	1.011446	1.009322	1.010401	1.001279	1.000000		
8	Customer Count - Adjusted		27,394	27,394	27,394	27,394	27,394	27,394	27,394	27,394	27,394	27,394	27,394	27,394	328,728	27,394
9	Outdoor Recreational Lighting Service	07														
10	Customer Count - Unadjusted (Primary Voltage)	Pri	3	3	3	3	3	3	3	3	3	3	3	3	36	3
11	New(Closed) Customers		0	0	0	0	0	0	0	0	0	0	0	0	0	
12	Customer Count - Adjusted (Primary Voltage)	Pri	3	3	3	3	3	3	3	3	3	3	3	3	36	3
13	Customer Count - Unadjusted (Secondary Voltage)	Sec	210	210	209	213	202	205	208	210	209	209	210	208	2,503	209
14	Annualization Factor		0.990476	0.990476	0.995215	0.976526	1.029703	1.014634	1.000000	0.990476	0.995215	0.995215	0.990476	1.000000		
15	Customer Count - Adjusted (Secondary Voltage)	Sec	208	208	208	208	208	208	208	208	208	208	208	208	2,496	208
16	Customer Count - Unadjusted	All	213	213	212	216	205	208	211	213	212	212	213	211	2,539	212
17	Customer Count - Adjustment		(2)	(2)	(1)	(5)	6	3	-	(2)	(1)	(1)	(2)	-	(7)	
18	Customer Count - Adjusted	All	211	211	211	211	211	211	211	211	211	211	211	211	2,532	211
19	Street Lighting Service	08														
20	Customer Count - Unadjusted		173	174	174	174	174	174	174	176	177	177	179	179	2,105	175
21	New(Closed) Customers		6	5	5	5	5	5	5	3	2	2	0	0	43	
22	Customer Count - Adjusted		179	179	179	179	179	179	179	179	179	179	179	179	2,148	179
23	Traffic Signals	09														
24	Customer Count - Unadjusted		44	44	44	44	44	44	47	47	48	48	48	50	552	46
25	New(Closed) Customers		6	6	6	6	6	6	3	3	2	2	2	0	48	
26	Customer Count - Adjusted		50	50	50	50	50	50	50	50	50	50	50	50	600	50
27	Municipal Pumping - TOU	11-TOU														
28	Customer Count - Unadjusted (Primary Voltage)	Pri	11	11	11	11	11	11	11	11	11	11	11	11	132	11
29	New(Closed) Customers		-	-	-	-	-	-	-	-	-	-	-	-	-	
30	Customer Count - Adjusted (Primary Voltage)	Pri	11	11	11	11	11	11	11	11	11	11	11	11	132	11
31	Customer Count - Unadjusted (Secondary Voltage)	Sec	387	400	392	385	391	386	387	387	389	392	392	391	4,679	390
32	Annualization Factor		1.010336	0.977500	0.997449	1.015584	1.000000	1.012953	1.010336	1.010336	1.005141	0.997449	0.997449	1.000000		
33	Customer Count - Adjusted (Secondary Voltage)	Sec	391	391	391	391	391	391	391	391	391	391	391	391	4,692	391
34	Customer Count - Unadjusted	All	398	411	403	396	402	397	398	398	400	403	403	402	4,811	401
35	Customer Count - Adjustment		4	(9)	(1)	6	-	5	4	4	2	(1)	(1)	-	13	
36	Customer Count - Adjusted	All	402	402	402	402	402	402	402	402	402	402	402	402	4,824	402

SCHEDULE O - 3.3
PAGE 1 OF 6

Line	Texas Rate Class (Cont'd)	Rate	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Total	Average
37	Electrolytic Refining Firm Service	15														
38	Customer Count - Unadjusted		1	1	1	1	1	1	1	1	1	1	1	1	12	1
39	New(Closed) Customers		0	0	0	0	0	0	0	0	0	0	0	0	-	
40	Customer Count - Adjusted		1	1	1	1	1	1	1	1	1	1	1	1	12	1
41	Water Heating Service	WH														
42	Customer Count - Unadjusted		6	6	6	7	6	9	6	6	7	7	7	6	79	7
43	New(Closed) Customers		0	0	0	(1)	0	(3)	0	0	(1)	(1)	(1)	0	(7)	
44	Customer Count - Adjusted		6	6	6	6	6	6	6	6	6	6	6	6	72	6
45	Irrigation Service	22														
46	Customer Count - Unadjusted		145	143	143	140	141	141	140	142	142	146	142	144	1,709	142
47	Annualization Factor		0.993103	1.006993	1.006993	1.028571	1.021277	1.021277	1.028571	1.014085	1.014085	0.986301	1.014085	1.000000		
48	Customer Count - Adjusted		144	144	144	144	144	144	144	144	144	144	144	144	1,728	144
49	General Service	24														
50	Customer Count - Unadjusted (Primary Voltage)	Pri	39	40	39	38	37	37	37	37	36	36	36	36	448	37
51	New(Closed) Customers		(3)	(4)	(3)	(2)	(1)	(1)	(1)	(1)	0	0	0	0	(16)	
52	Customer Count - Adjusted (Primary Voltage)	Pri	36	36	36	36	36	36	36	36	36	36	36	36	432	36
53	Customer Count - Unadjusted (Secondary Voltage)	Sec	7319	7373	7363	7322	7293	7267	7242	7305	7323	7305	7265	7257	87,634	7,303
54	Annualization Factor		0.991529	0.984267	0.985604	0.991123	0.995064	0.998624	1.002071	0.993429	0.990987	0.993429	0.998899	1.000000		
55	Customer Count - Adjusted (Secondary Voltage)	Sec	7,257	7,257	7,257	7,257	7,257	7,257	7,257	7,257	7,257	7,257	7,257	7,257	87,084	7,257
56	Customer Count - Unadjusted	All	7,358	7,413	7,402	7,360	7,330	7,304	7,279	7,342	7,359	7,341	7,301	7,293	88,082	7,340
57	Customer Count - Adjustment		(65)	(120)	(109)	(67)	(37)	(11)	14	(49)	(66)	(48)	(8)	-	(566)	
58	Customer Count - Adjusted	All	7,293	7,293	7,293	7,293	7,293	7,293	7,293	7,293	7,293	7,293	7,293	7,293	87,516	7,293
59	Large Power Service (A)	25														
60	Customer Count - Unadjusted (Transmission Voltage)	Tra	1	1	1	1	1	1	1	1	1	1	1	1	12	1
61	New(Closed) Customers		0	0	0	0	0	0	0	0	0	0	0	0	0	
62	Customer Count - Adjusted (Transmission Voltage)	Tra	1	1	1	1	1	1	1	1	1	1	1	1	12	1
60	Customer Count - Unadjusted (Primary Voltage)	Pri	19	19	19	19	19	19	19	19	19	19	19	19	228	19
61	New(Closed) Customers		0	0	0	0	0	0	0	0	0	0	0	0	0	
62	Customer Count - Adjusted (Primary Voltage)	Pri	19	19	19	19	19	19	19	19	19	19	19	19	228	19
63	Customer Count - Unadjusted (Secondary Voltage)	Sec	92	92	92	92	92	92	91	91	91	92	91	90	1,098	92
64	New(Closed) Customers		(2)	(2)	(2)	(2)	(2)	(2)	(1)	(1)	(1)	(2)	(1)	0	(18)	
65	Customer Count - Adjusted (Secondary Voltage)	Sec	90	90	90	90	90	90	90	90	90	90	90	90	1,080	90
66	Customer Count - Unadjusted	All	112	112	112	112	112	111	111	111	111	112	111	110	1,338	112
67	Customer Count - Adjustment		(2)	(2)	(2)	(2)	(2)	(2)	(1)	(1)	(1)	(2)	(1)	0	(18)	
68	Customer Count - Adjusted	All	110	110	110	110	110	110	110	110	110	110	110	110	1,320	110

EL PASO ELECTRIC COMPANY
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FOR THE TEST YEAR ENDED DECEMBER 30, 2020

SCHEDULE O-3.3
PAGE 3 OF 6

Line	Texas Rate Class (Cont'd)	Rate	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Total	Average
69	Petroleum Refinery Firm Service	26														
70	Customer Count - Unadjusted		1	1	1	1	1	1	1	1	1	1	1	1	12	1
71	New(Closed) Customers		0	0	0	0	0	0	0	0	0	0	0	0	-	
72	Customer Count - Adjusted		1	1	1	1	1	1	1	1	1	1	1	1	12	1
73	Area Lighting Service	28														
74	Customer Count - Unadjusted		817	821	819	822	823	825	829	822	824	820	822	821	9,865	822
75	Annualization Factor		1.004896	1.000000	1.002442	0.998783	0.997570	0.995152	0.990350	0.998783	0.996359	1.001220	0.998783	1.000000		
76	Customer Count - Adjusted		821	821	821	821	821	821	821	821	821	821	821	821	9,852	821
77	Electric Furnace Firm Service	30														
78	Customer Count - Unadjusted		1	1	1	1	1	1	1	1	1	1	1	1	12	1
79	New(Closed) Customers		0	0	0	0	0	0	0	0	0	0	0	0	0	
80	Customer Count - Adjusted		1	1	1	1	1	1	1	1	1	1	1	1	12	1
81	Military Reservation Service	31														
82	Customer Count - Unadjusted		1	1	1	1	1	1	1	1	1	1	1	1	12	1
83	New(Closed) Customers		0	0	0	0	0	0	0	0	0	0	0	0	0	
84	Customer Count - Adjusted		1	1	1	1	1	1	1	1	1	1	1	1	12	1
85	Cotton Gin Service	34														
86	Customer Count - Unadjusted		2	2	2	2	2	2	2	2	2	2	2	2	24	2
87	New(Closed) Customers		0	0	0	0	0	0	0	0	0	0	0	0	0	
88	Customer Count - Adjusted		2	2	2	2	2	2	2	2	2	2	2	2	24	2
89	City and County Service	41														
90	Customer Count - Unadjusted (Primary Voltage)	Pri	17	17	17	16	16	14	14	14	14	14	14	13	180	15
91	New(Closed) Customers		(4)	(4)	(4)	(3)	(3)	(1)	(1)	(1)	(1)	(1)	(1)	-	(24)	
92	Customer Count - Adjusted (Primary Voltage)	Pri	13	13	13	13	13	13	13	13	13	13	13	13	156	13
93	Customer Count - Unadjusted (Secondary Voltage)	Sec	848	836	847	849	843	842	844	837	837	810	836	833	10,062	839
94	Annualization Factor		0.982311	0.996411	0.983471	0.981154	0.988138	0.989311	0.986967	0.995221	0.995221	1.028395	0.996411	1.000000		
95	Customer Count - Adjusted (Secondary Voltage)	Sec	833	833	833	833	833	833	833	833	833	833	833	833	9,996	833
96	Customer Count - Unadjusted	All	865	853	864	865	859	856	858	851	851	824	850	846	10,242	854
97	Customer Count - Adjustment		(19)	(7)	(18)	(19)	(13)	(10)	(12)	(5)	(5)	22	(4)	-	(90)	
98	Customer Count - Adjusted	All	846	846	846	846	846	846	846	846	846	846	846	846	10,152	846
99	Customer Count - Unadjusted Total		332,129	332,426	333,139	333,526	334,323	335,076	335,771	336,399	337,292	337,652	338,280	338,765	4,024,778	335,399
100	Customer Count - Adjusted Total		338,765	338,765	338,765	338,765	338,765	338,765	338,765	338,765	338,765	338,765	338,765	338,765	4,065,180	338,765
101	Difference		6,636	6,339	5,626	5,239	4,442	3,689	2,994	2,366	1,473	1,113	485	-	40,402	

SCHEDULE O-3.3
PAGE 3 OF 6

Line	New Mexico Rate Class	Rate	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Total	Average
102	Residential Service	01														
103	Customer Count - Unadjusted		88,894	88,987	89,114	89,219	89,434	89,598	89,804	89,945	90,197	90,328	90,433	90,533	1,076,486	89,707
104	Annualization Factor		1.018438	1.017373	1.015923	1.014728	1.012288	1.010436	1.008118	1.006537	1.003725	1.002270	1.001106	1.000000		
105	Customer Count - Adjusted		90,533	90,533	90,533	90,533	90,533	90,533	90,533	90,533	90,533	90,533	90,533	90,533	1,086,396	90,533
106	Small Commercial Service	03														
107	Customer Count - Unadjusted (Standard Option)	Std	1,406	1,407	1,408	1,407	1,406	1,415	1,434	1,480	1,529	1,573	1,563	1,540	17,568	1,464
108	Annualization Factor		1.095306	1.094527	1.093750	1.094527	1.095306	1.088339	1.073919	1.040541	1.007194	0.979021	0.985285	1.000000		
109	Customer Count - Adjusted (Standard Option)	Std	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	18,480	1,540
110	Customer Count - Unadjusted (Alternate Option)	Alt	7,937	7,943	7,969	8,036	8,051	8,074	8,127	8,029	8,003	7,926	7,957	8,007	96,059	8,005
111	Annualization Factor		1.008819	1.008057	1.004768	0.996391	0.994535	0.991702	0.985234	0.997260	1.000500	1.010220	1.006284	1.000000		
112	Customer Count - Adjusted (Alternate Option)	Alt	8,007	8,007	8,007	8,007	8,007	8,007	8,007	8,007	8,007	8,007	8,007	8,007	96,084	8,007
113	Customer Count - Unadjusted	All	9,343	9,350	9,377	9,443	9,457	9,489	9,561	9,509	9,532	9,499	9,520	9,547	113,627	9,469
114	Customer Count - Adjustment		204	197	170	104	90	58	(14)	38	15	48	27	-	937	
115	Customer Count - Adjusted	All	9,547	9,547	9,547	9,547	9,547	9,547	9,547	9,547	9,547	9,547	9,547	9,547	114,564	9,547
116	General Service	04														
117	Customer Count - Unadjusted (Primary Voltage)	Pri	12	12	12	12	12	11	12	12	12	14	15	15	151	13
118	New(Closed) Customers		1	1	1	1	1	1	0	0	0	(2)	(3)	(3)	(2)	
119	Customer Count - Adjusted (Primary Voltage)	Pri	13	13	13	13	13	12	12	12	12	12	12	12	149	12
120	Customer Count - Unadjusted (Secondary Voltage)	Sec	615	620	621	621	622	624	628	623	620	622	617	614	7,447	621
121	New(Closed) Customers		0	0	0	0	0	0	0	0	0	2	3	3	8	
122	Annualization Factor		1.003252	0.995161	0.993559	0.993559	0.991961	0.988782	0.982484	0.990369	0.995161	0.988782	0.995161	1.000000		
123	Customer Count - Adjusted (Secondary Voltage)	Sec	617	617	617	617	617	617	617	617	617	617	617	617	7,404	617
124	Customer Count - Unadjusted	All	627	632	633	633	634	635	640	635	632	636	632	629	7,598	633
125	Customer Count - Adjustment		3	(2)	(3)	(3)	(4)	(6)	(11)	(6)	(3)	(7)	(3)	-	(45)	
126	Customer Count - Adjusted	All	630	630	630	630	630	629	629	629	629	629	629	629	7,553	629
127	Irrigation Service	05														
128	Customer Count - Unadjusted		830	828	827	843	846	849	848	848	851	855	847	842	10,114	843
129	Annualization Factor		1.014458	1.016908	1.018138	0.998814	0.995272	0.991755	0.992925	0.992925	0.989424	0.984795	0.994097	1.000000		
130	Customer Count - Adjusted		842	842	842	842	842	842	842	842	842	842	842	842	10,104	842
131	City & County Service	07														
132	Customer Count - Unadjusted		764	764	762	760	758	762	761	763	763	763	760	764	9,144	762
133	Annualization Factor		1.000000	1.000000	1.002625	1.005263	1.007916	1.002625	1.003942	1.001311	1.001311	1.001311	1.005263	1.000000		
134	Customer Count - Adjusted		764	764	764	764	764	764	764	764	764	764	764	764	9,168	764

Line	New Mexico Rate Class (Cont'd)	Rate	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Total
135	Water Pumping Service	08													
136	Customer Count - Unadjusted (Primary Voltage)	Pri	2	2	2	2	2	1	2	2	2	2	2	2	23
137	New(Closed) Customers		0	0	0	0	0	1	0	0	0	0	0	0	1
138	Customer Count - Adjusted (Primary Voltage)	Pri	2	2	2	2	2	2	2	2	2	2	2	2	24
139	Customer Count - Unadjusted (Secondary Voltage)	Sec	188	187	188	188	188	189	189	188	188	188	188	190	2,259
140	New(Closed) Customers		(2)	(2)	(2)	(2)	(2)	(1)	(2)	(1)	(1)	(1)	0	0	(16)
141	Annualization Factor		1.021505	1.027027	1.021505	1.021505	1.021505	1.010638	1.016043	1.016043	1.016043	1.016043	1.010638	1.000000	
142	Customer Count - Adjusted (Secondary Voltage)	All	190	190	190	190	190	190	190	190	190	190	190	190	2,280
143	Customer Count - Unadjusted	All	190	189	190	190	190	190	191	190	190	190	190	192	2,282
144	Customer Count - Adjustment		2	3	2	2	2	2	1	2	2	2	2	-	22
145	Customer Count - Adjusted	All	192	192	192	192	192	192	192	192	192	192	192	192	2,304
146	Large Power Service (B)	09													
147	Customer Count - Unadjusted (Primary Voltage)	Pri	8	8	8	8	8	8	8	8	8	8	8	8	96
148	New(Closed) Customers		0	0	0	0	0	0	0	0	0	0	0	0	-
149	Customer Count - Adjusted (Primary Voltage)	Pri	8	8	8	8	8	8	8	8	8	8	8	8	96
150	Customer Count - Unadjusted (Secondary Voltage)	Sec	14	14	14	14	14	14	14	14	13	13	13	13	164
151	New(Closed) Customers		0	0	0	0	0	0	0	0	0	0	0	0	-
152	Customer Count - Adjusted (Secondary Voltage)	Sec	14	14	14	14	14	14	14	14	13	13	13	13	164
153	Customer Count - Unadjusted	All	22	22	22	22	22	22	22	22	21	21	21	21	260
154	Customer Count - Adjustment		-	-	-	-	-	-	-	-	-	-	-	-	-
155	Customer Count - Adjusted	All	22	22	22	22	22	22	22	22	21	21	21	21	260
156	Military Research & Dev. Service	10													
157	Customer Count - Unadjusted		2	2	2	2	2	2	2	2	2	2	2	2	24
158	New(Closed) Customers		0	0	0	0	0	0	0	0	0	0	0	0	-
159	Customer Count - Adjusted		2	2	2	2	2	2	2	2	2	2	2	2	24
160	Street Lighting Service	11													
161	Customer Count - Unadjusted		16	17	17	17	17	17	17	17	17	17	18	18	205
162	New(Closed) Customers		2	1	1	1	1	1	1	1	1	1	0	0	11
163	Customer Count - Adjusted		18	18	18	18	18	18	18	18	18	18	18	18	216
164	Private Area Lighting Service	12													
165	Customer Count - Unadjusted		431	427	428	425	426	425	421	421	423	421	423	420	5,091
166	New(Closed) Customers		(11)	(7)	(8)	(5)	(6)	(5)	(1)	(1)	(3)	(1)	(3)	0	(51)
167	Customer Count - Adjusted		420	420	420	420	420	420	420	420	420	420	420	420	5,040
168	Seasonal Agricultural Service	19													
169	Customer Count - Unadjusted		47	47	45	46	46	45	45	45	47	49	49	49	560
170	New(Closed) Customers		0	0	0	0	0	0	0	0	0	0	0	0	-
171	Customer Count - Adjusted		47	47	45	46	46	45	45	45	47	49	49	49	560

Line	New Mexico Rate Class (Cont'd)	Rate	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	Jun 2020	Jul 2020	Aug 2020	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Total
172	Outdoor Recreational Lighting	25													
173	Customer Count - Unadjusted		28	28	28	28	28	28	28	28	29	29	28	29	339
174	Annualization Factor		1.035714	1.035714	1.035714	1.035714	1.035714	1.035714	1.035714	1.035714	1.000000	1.000000	1.035714	1.000000	
175	Customer Count - Adjusted		29	29	29	29	29	29	29	29	29	29	29	29	348
176	State University Service	26													
177	Customer Count - Unadjusted		1	1	1	1	1	1	1	1	1	1	1	1	12
178	New(Closed) Customers		0	0	0	0	0	0	0	0	0	0	0	0	-
179	Customer Count - Adjusted		1	1	1	1	1	1	1	1	1	1	1	1	12
180	Customer Count - Unadjusted Total		101,195	101,294	101,446	101,629	101,861	102,063	102,341	102,426	102,705	102,811	102,924	103,047	1,225,742
181	Customer Count - Adjusted Total		103,047	103,047	103,045	103,046	103,046	103,044	103,044	103,044	103,045	103,047	103,047	103,047	1,236,549
	Difference		1,852	1,753	1,599	1,417	1,185	981	703	618	340	236	123	-	10,807

(A) Includes customers billed under Texas Rate No. 38

(B) Includes customers billed under New Mexico Rate No. 29.

Note: Amounts may not add or tie to other schedules due to rounding

EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-4 1: KWH SALES AND KW DEMAND
SPONSOR MANUEL CARRASCO
PREPARER ELIZABETH MORENO
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-4 1
PAGE 1 OF 12

1. UNADJUSTED TEST YEAR REVENUES

Line	(a) Rate Description	(b) Rate	(c) kWh	(d) Non-Fuel (C)	(e) Revenue Fuel	(f) Total
Texas Firm Service Rate Classes						
1	Residential Service	01	2,526,537,338	\$ 272,724,873	\$ 31,143,011	\$ 303,867,884
2	Small General Service	02	275,543,110	32,544,395	3,408,701	35,953,096
3	Outdoor Recreational Lighting	07	3,659,275	421,719	45,327	467,047
4	Governmental Street Lighting	08	35,538,352	3,859,878	440,320	4,300,198
5	Traffic Signals	09	2,651,365	93,672	32,850	126,522
6	Municipal Pumping TOU	11TOU	173,330,002	9,924,204	2,134,325	12,058,529
7	Electrolytic Refining	15	42,604,774	1,836,089	929,089	2,765,178
8	Water Heating Rider	Rider	5,348,375	444,696	66,266	510,962
9	Irrigation Service	22	4,058,730	397,589	50,288	447,877
10	General Service	24	1,494,847,069	122,850,833	18,501,101	141,351,934
11	Large Power Service	25	617,702,889	35,516,470	8,436,474	43,952,944
12	Petroleum Refinery Service	26	356,778,728	12,554,335	4,515,362	17,069,697
13	Area Lighting	28	26,176,204	2,705,133	324,328	3,029,461
14	Electric Furnace	30	19,888,223	1,177,807	1,890,390	3,068,197
15	Military Reservation	31	280,363,953	13,091,801	3,961,333	17,053,134
16	Cotton Gin Service	34	1,596,380	124,094	19,779	143,873
17	City and County Service	41	201,180,512	18,938,327	2,484,716	21,423,043
18	Total Texas		6,067,805,279	\$ 529,205,913	\$ 78,383,662	\$ 607,589,575
19	Texas Non-Firm Service					
20	Interruptible for Large Power	38	329,818,983	\$ 3,642,224	(A)	\$ 3,642,224
21	Total Texas Sales		6,397,624,262	\$ 532,848,138	\$ 78,383,662	\$ 611,231,800
22	New Mexico Firm Service Rate Classes					
23	Residential Service	01	785,594,721	\$ 64,772,783	\$ 18,753,708	\$ 83,526,491
24	Small General Service	03	158,892,126	16,580,301	3,719,855	20,300,156
25	General Service	04	293,599,776	20,424,776	6,701,280	27,126,056
26	Irrigation Service	05	42,914,256	3,118,733	989,967	4,108,700
27	City and County Service	07	52,202,050	4,270,619	1,222,003	5,492,622
28	Municipal Pumping	08	39,631,655	2,166,357	921,151	3,087,508
29	Large Power Service	09	158,878,638	7,465,950	3,240,267	10,706,217
30	M R & D	10	125,000,866	5,157,358	2,614,999	7,772,357
31	Municipal Street Lights	11	1,809,339	298,486	40,265	338,751
32	Area Lighting	12	5,172,876	965,983	114,994	1,080,977
33	Seasonal Agricultural Processing	19	8,300,042	830,927	187,226	1,018,153
34	Outdoor Recreational Lighting	25	388,430	37,295	9,205	46,500
35	State University Service	26	27,481,344	1,240,376	640,361	1,880,737
36	Total New Mexico Firm Service		1,699,866,119	\$ 127,329,944	\$ 39,155,281	\$ 166,485,225
37	New Mexico Non-Firm Service					
38	Large Power Interruptible Service	29	7,764,925	139,575	(A)	\$ 139,575
39	Total New Mexico Sales		1,707,631,044	\$ 127,469,519	\$ 39,155,281	\$ 139,575
40	F E R C					
41	R G E C	94	63,223,969	2,722,610	856,930	3,579,540
42	Total FERC		63,223,969	\$ 2,722,610	\$ 856,930	\$ 3,579,540
43	Total Company		8,168,479,275	\$ 663,040,266	\$ 118,395,873	\$ 614,950,915

(A) Fuel revenue related to non-firm is included in the corresponding retail rate

(B) No adjustment was made to EPE's cost of service studies for New Mexico and FERC revenues

(C) Non-Fuel Revenue excludes recorded amounts for unbilled revenue

Note Amounts may not add or tie to other schedules due to rounding.

2 REVENUES ASSOCIATED WITH ANY RATE ANNUALIZATION ADJUSTMENTS

	(a)	(b)	(c)	(d)		(e)		(f)
Line	Rate Description	Rate	kWh	Revenue				
				Non-Fuel		Fuel	Total	
Texas Firm Service Rate Classes								
1	Residential Service	01	-	\$	5,785,748	\$	1,285,548	\$ 7,071,297
2	Small General Service	02	-	\$	854,200	\$	117,150	971,350
3	Outdoor Recreational Lighting	07	-	\$	39,447	\$	1,478	40,925
4	Governmental Street Lighting	08	-	\$	149,261	\$	14,508	163,769
5	Traffic Signals	09	-	\$	1,406	\$	(6,343)	(4,938)
6	Municipal Pumping TOU	11TOU	-	\$	231,543	\$	66,865	298,408
7	Electrolytic Refining	15	-	\$	(7,131)	\$	36,795	29,664
8	Water Heating Rider	Rider	-	\$	49,364	\$	2,062	51,426
9	Irrigation Service	22	-	\$	21,827	\$	1,657	23,484
10	General Service	24	-	\$	2,553,608	\$	607,634	3,161,242
11	Large Power Service	25	-	\$	533,516	\$	276,720	810,236
12	Petroleum Refinery Service	26	-	\$	(36,853)	\$	158,058	121,205
13	Area Lighting	28	-	\$	154,997	\$	10,791	165,788
14	Electric Furnace	30	-	\$	(4,011)	\$	181,206	177,195
15	Military Reservation	31	-	\$	(39,032)	\$	143,157	104,125
16	Cotton Gin Service	34	-	\$	9,389	\$	642	10,031
17	City and County Service	41	-	\$	558,346	\$	92,378	650,724
18	Total Texas Firm Service		-	\$	10,855,625	\$	2,990,308	\$ 13,845,933
19	Texas Non-Firm Service							
20	Interruptible for Large Power	38	-	\$	(10,924)	(A)	\$	(10,924)
21	Total Texas Sales		-	\$	10,844,701	\$	2,990,308	\$ 13,835,009
22	New Mexico Firm Service Rate Classes							(B)
23	Residential Service	01	-	\$	-	\$	(1,850,876)	\$ (1,850,876)
24	Small General Service	03	-	-	-		(379,744)	(379,744)
25	General Service	04	-	-	-		(661,829)	(661,829)
26	Irrigation Service	05	-	-	-		(94,762)	(94,762)
27	City and County Service	07	-	-	-		(120,064)	(120,064)
28	Municipal Pumping	08	-	-	-		(92,309)	(92,309)
29	Large Power Service	09	-	-	-		(327,914)	(327,914)
30	M R & D	10	-		(752,696)		(261,921)	(1,014,617)
31	Municipal Street Lights	11	-	-	-		(4,048)	(4,048)
32	Area Lighting	12	-	-	-		(11,638)	(11,638)
33	Seasonal Agncultural Processing	19	-	-	-		(19,064)	(19,064)
34	Outdoor Recreational Lighting	25	-	-	-		(964)	(964)
35	State University Service	26	-	-	-		(65,203)	(65,203)
36	Total New Mexico Firm Service		-	\$	(752,696)	\$	(3,890,335)	\$ (4,643,032)
37	New Mexico Non-Firm Service							
38	Interruptible Power Service Rate	29	-	\$	-	(A)	\$	-
39	Total New Mexico Sales		-	\$	(752,696)	\$	(3,890,335)	\$ -
40	F E R C							(B)
41	R G E C	94	-	\$	21,899	\$	(113,037)	\$ (91,138)
42	Total FERC		-	\$	21,899	\$	(113,037)	\$ (91,138)
43	Total Company		-	\$	10,113,903	\$	(1,013,064)	\$ 13,743,871

(A) Fuel revenue related to non-firm is included in the corresponding retail rate

(B) No adjustment was made to EPE's cost of service studies for New Mexico and FERC revenues

Note: Amounts may not add or tie to other schedules due to rounding.

3 REVENUES ASSOCIATED WITH KWH CUSTOMER ADJUSTMENTS

	(a)	(b)	(c)	(d)	(e)		(f)
Line	Rate Description	Rate	kWh	Revenue			Total
				Non-Fuel	Fuel		
Texas Firm Service Rate Classes							
1	Residential Service	01	24,402,504	\$ 2,700,806	\$ 300,794	\$	3,001,600
2	Small General Service	02	2,451,105	\$ 561,925	\$ 30,322		592,247
3	Outdoor Recreational Lighting	07	17,251	\$ 1,813	\$ 214		2,027
4	Governmental Street Lighting	08	516,411	\$ 37,481	\$ 6,398		43,880
5	Traffic Signals	09	3,797	\$ 126	\$ 47		174
6	Municipal Pumping TOU	11TOU	(225,997)	\$ 8,010	\$ (2,783)		5,227
7	Electrolytic Refining	15	-	\$ 1,105	\$ -		1,105
8	Water Heating Rider	Rider	(224,735)	\$ (19,478)	\$ (2,784)		(22,263)
9	Irrigation Service	22	60,309	\$ 32,134	\$ 747		32,882
10	General Service	24	(11,448,247)	\$ 1,803,198	\$ (141,690)		1,661,508
11	Large Power Service	25	(1,955,625)	\$ (24,506)	\$ (26,710)		(51,216)
12	Petroleum Refinery Service	26	-	\$ 12,966	\$ -		12,966
13	Area Lighting	28	653,115	\$ 72,484	\$ 8,092		80,577
14	Electric Furnace	30	1,680,409	\$ 17,963	\$ 159,724		177,687
15	Military Reservation	31	-	\$ 0	\$ -		0
16	Cotton Gin Service	34	-	\$ (511)	\$ -		(511)
17	City and County Service	41	(1,105,295)	\$ (47,974)	\$ (13,651)		(61,626)
18	Total Texas Firm Service		14,825,002	\$ 5,157,544	\$ 318,721	\$	5,476,265
19	Texas Non-Firm Service						
20	Interruptible for Large Power	38	21,057,008	\$ 105,828	(A)	\$	105,828
21	Total Texas Sales		35,882,010	\$ 5,263,372	\$ 318,721	\$	5,582,093
22	New Mexico Firm Service Rate Classes						(B)
23	Residential Service	01	6,959,243	\$ 561,727	\$ 166,131	\$	727,858
24	Small General Service	03	4,508,562	193,088	105,551		298,639
25	General Service	04	(1,988,407)	(9,537)	(45,384)		(54,921)
26	Irrigation Service	05	(271,165)	(7,406)	(6,255)		(13,661)
27	City and County Service	07	128,675	5,618	3,012		8,630
28	Municipal Pumping	08	194,398	(18,178)	4,518		(13,660)
29	Large Power Service	09	-	14,685	-		14,685
30	M R & D	10	-	1,103	-		1,103
31	Municipal Street Lights	11	(22,911)	(821)	(510)		(1,331)
32	Area Lighting	12	(31,284)	(4,536)	(695)		(5,231)
33	Seasonal Agricultural Processing	19	-	58	-		58
34	Outdoor Recreational Lighting	25	11,506	1,068	273		1,341
35	State University Service	26	-	-	-		-
36	Total New Mexico Firm Service		9,488,617	\$ 736,869	\$ 226,640	\$	963,508
37	New Mexico Non-Firm Service						
38	Interruptible Power Service Rate	29	-	-	(A)	\$	-
39	Total New Mexico Sales		9,488,617	\$ 736,869	\$ 226,640	\$	-
40	F.E.R.C						(B)
41	R G E C	94	-	-	-		-
42	Total FERC		-	\$ -	\$ -	\$	-
43	Total Company		45,370,627	\$ 6,000,241	\$ 545,361	\$	5,582,093

(A) Fuel revenue related to non-firm is included in the corresponding retail rate

(B) No adjustment was made to EPE's cost of service studies for New Mexico and FERC revenues

Note. Amounts may not add or tie to other schedules due to rounding.

4 REVENUES ASSOCIATED WITH KW CUSTOMER ADJUSTMENTS

	(a)	(b)	(c)	(d)		(e)		(f)
Line	Rate Description	Rate	kW	Revenue				Total
				Non-Fuel	Fuel			
Texas Firm Service Rate Classes								
1	Residential Service	01	-	\$	-	\$	-	\$
2	Small General Service	02	-	\$	-	\$	-	-
3	Outdoor Recreational Lighting	07	-	\$	-	\$	-	-
4	Governmental Street Lighting	08	-	\$	-	\$	-	-
5	Traffic Signals	09	-	\$	-	\$	-	-
6	Municipal Pumping TOU	11TOU	-	\$	-	\$	-	-
7	Electrolytic Refining	15	-	\$	-	\$	-	-
8	Water Heating Rider	Rider	-	\$	-	\$	-	-
9	Irrigation Service	22	-	\$	-	\$	-	-
10	General Service	24	(31,143)	\$	(317,737)	\$	-	(317,737)
11	Large Power Service	25	(11,925)	\$	(11,310)	\$	-	(11,310)
12	Petroleum Refinery Service	26	-	\$	-	\$	-	-
13	Area Lighting	28	-	\$	-	\$	-	-
14	Electric Furnace	30	(928)	\$	-	\$	-	-
15	Military Reservation	31	-	\$	-	\$	-	-
16	Cotton Gin Service	34	-	\$	-	\$	-	-
17	City and County Service	41	(3,858)	\$	(74,648)	\$	-	(74,648)
18	Total Texas Firm Service		(47,854)	\$	(403,695)	\$	-	(403,695)
19	Texas Non-Firm Service							
20	Interruptible for Large Power	38	38,833	\$	83,879	(A)	\$	83,879
21	Total Texas Sales		(9,021)	\$	(319,816)	\$	-	(319,816)
22	New Mexico Firm Service Rate Classes (B)							
23	Residential Service	01	-	\$	-	\$	-	-
24	Small General Service	03	18,988		294,839		-	294,839
25	General Service	04	(6,089)		(108,877)		-	(108,877)
26	Irrigation Service	05	-		-		-	-
27	City and County Service	07	572		7,097		-	7,097
28	Municipal Pumping	08	-		-		-	-
29	Large Power Service	09	-		-		-	-
30	M R & D	10	-		-		-	-
31	Municipal Street Lights	11	-		-		-	-
32	Area Lighting	12	-		-		-	-
33	Seasonal Agricultural Processing	19	-		-		-	-
34	Outdoor Recreational Lighting	25	-		-		-	-
35	State University Service	26	-		-		-	-
36	Total New Mexico Firm Service		13,471	\$	193,059	\$	-	193,059
37	New Mexico Non-Firm Service							
38	Interruptible Power Service Rate	29	-		-	(A)	\$	-
39	Total New Mexico Sales		13,471	\$	193,059	\$	-	-
40	F.E.R.C (B)							
41	R.G.E.C	94	-		-		-	-
42	Total FERC		-	\$	-	\$	-	-
43	Total Company		4,450	\$	(126,757)	\$	-	(319,816)

(A) Fuel revenue related to non-firm is included in the corresponding retail rate.

(B) No adjustment was made to EPE's cost of service studies for New Mexico and FERC revenues

Note. Amounts may not add or tie to other schedules due to rounding

5 REVENUES ASSOCIATED WITH KWH WEATHER ADJUSTMENTS

	(a)	(b)	(c)	(d)	(e)		(f)		
Line	Rate Description	Rate	kWh	Revenue			Total		
				Non-Fuel	Fuel				
	Texas Firm Service Rate Classes								
1	Residential Service	01	(67,276,201)	\$	(7,105,939)	\$	(863,178)	\$	(7,969,117)
2	Small General Service	02	(4,706,282)	\$	(533,879)	\$	(60,203)		(594,082)
3	Outdoor Recreational Lighting	07	-	\$	-	\$	-		-
4	Governmental Street Lighting	08	-	\$	-	\$	-		-
5	Traffic Signals	09	-	\$	-	\$	-		-
6	Municipal Pumping TOU	11TOU	-	\$	-	\$	-		-
7	Electrolytic Refining	15	-	\$	-	\$	-		-
8	Water Heating Rider	Rider	-	\$	-	\$	-		-
9	Irrigation Service	22	(108,940)	\$	(11,653)	\$	(1,394)		(13,046)
10	General Service	24	(26,568,805)	\$	(1,577,965)	\$	(339,695)		(1,917,660)
11	Large Power Service	25	-	\$	-	\$	-		-
12	Petroleum Refinery Service	26	-	\$	-	\$	-		-
13	Area Lighting	28	-	\$	-	\$	-		-
14	Electric Furnace	30	-	\$	-	\$	-		-
15	Military Reservation	31	(1,824,855)	\$	(42,877)	\$	(26,716)		(69,592)
16	Cotton Gin Service	34	-	\$	-	\$	-		-
17	City and County Service	41	(4,249,616)	\$	(163,412)	\$	(54,448)		(217,859)
18	Total Texas Firm Service		(104,734,699)	\$	(9,435,724)	\$	(1,345,634)	\$	(10,781,357)
19	Texas Non-Firm Service								
20	Interruptible for Large Power	38	-	\$	-	(A)	\$		-
21	Total Texas Sales		(104,734,699)	\$	(9,435,724)	\$	(1,345,634)	\$	(10,781,357)
22	New Mexico Firm Service Rate Classes							(B)	
23	Residential Service	01	(21,008,679)	\$	(1,885,499)	\$	(501,519)	\$	(2,387,018)
24	Small General Service	03	(3,294,826)		(205,209)		(77,136)		(282,345)
25	General Service	04	(4,474,697)		(83,144)		(102,133)		(185,277)
26	Irrigation Service	05	(2,303,114)		(168,253)		(53,129)		(221,382)
27	City and County Service	07	(1,177,968)		(37,480)		(27,575)		(65,055)
28	Municipal Pumping	08	(711,587)		(39,313)		(16,539)		(55,852)
29	Large Power Service	09	-		-		-		-
30	M R & D	10	(2,040,276)		(42,629)		(42,682)		(85,311)
31	Municipal Street Lights	11	-		-		-		-
32	Area Lighting	12	-		-		-		-
33	Seasonal Agricultural Processing	19	-		-		-		-
34	Outdoor Recreational Lighting	25	-		-		-		-
35	State University Service	26	-		-		-		-
36	Total New Mexico Firm Service		(35,011,147)	\$	(2,461,527)	\$	(820,714)	\$	(3,282,241)
37	New Mexico Non-Firm Service								
38	Interruptible Power Service Rate	29	-		-	(A)	\$		-
39	Total New Mexico Sales		(35,011,147)	\$	(2,461,527)	\$	(820,714)	\$	-
40	F E R C							(B)	
41	R G E C	94	-		-		-		-
42	Total FERC		-	\$	-	\$	-	\$	-
43	Total Company		(139,745,846)	\$	(11,897,251)	\$	(2,166,347)	\$	(10,781,357)

(A) Fuel revenue related to non-firm is included in the corresponding retail rate

(B) No adjustment was made to EPE's cost of service studies for New Mexico and FERC revenues

Note. Amounts may not add or tie to other schedules due to rounding.

EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-4 1: KWH SALES AND KW DEMAND
SPONSOR: MANUEL CARRASCO
PREPARER: ELIZABETH MORENO
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-4.1
PAGE 6 OF 12

6 REVENUES ASSOCIATED WITH KW WEATHER ADJUSTMENTS

	(a)	(b)	(c)	(d)	(e)	(f)
Line	Rate Description	Rate	kW	Revenue		Total
				Non-Fuel	Fuel	
	Texas Firm Service Rate Classes					
1	Residential Service	01	-	-	-	\$ -
2	Small General Service	02	-	-	-	-
3	Outdoor Recreational Lighting	07	-	-	-	-
4	Governmental Street Lighting	08	-	-	-	-
5	Traffic Signals	09	-	-	-	-
6	Municipal Pumping TOU	11TOU	-	-	-	-
7	Electrolytic Refining	15	-	-	-	-
8	Water Heating Rider	Rider	-	-	-	-
9	Irrigation Service	22	-	-	-	-
10	General Service	24	-	-	-	-
11	Large Power Service	25	-	-	-	-
12	Petroleum Refinery Service	26	-	-	-	-
13	Area Lighting	28	-	-	-	-
14	Electric Furnace	30	-	-	-	-
15	Military Reservation	31	-	-	-	-
16	Cotton Gin Service	34	-	-	-	-
17	City and County Service	41	-	-	-	-
18	Total Texas Firm Service		-	\$ -	\$ -	\$ -
19	Texas Non-Firm Service					
20	Interruptible for Large Power	38	-	-	(A)	\$ -
21	Total Texas Sales		-	\$ -	\$ -	\$ -
22	New Mexico Firm Service Rate Classes (B)					
23	Residential Service	01	-	\$ -	\$ -	\$ -
24	Small General Service	03	-	-	-	-
25	General Service	04	-	-	-	-
26	Irrigation Service	05	-	-	-	-
27	City and County Service	07	-	-	-	-
28	Municipal Pumping	08	-	-	-	-
29	Large Power Service	09	-	-	-	-
30	M R & D	10	-	-	-	-
31	Municipal Street Lights	11	-	-	-	-
32	Area Lighting	12	-	-	-	-
33	Seasonal Agricultural Processing	19	-	-	-	-
34	Outdoor Recreational Lighting	25	-	-	-	-
35	State University Service	26	-	-	-	-
36	Total New Mexico Firm Service		-	\$ -	\$ -	\$ -
37	New Mexico Non-Firm Service					
38	Interruptible Power Service Rate	29	-	-	(A)	\$ -
39	Total New Mexico Sales		-	\$ -	\$ -	\$ -
40	F E R C (B)					
41	R G E C	94	-	-	-	-
42	Total FERC		-	\$ -	\$ -	\$ -
43	Total Company		-	\$ -	\$ -	\$ -

(A) Fuel revenue related to non-firm is included in the corresponding retail rate

(B) No adjustment was made to EPE's cost of service studies for New Mexico and FERC revenues

Note Amounts may not add or tie to other schedules due to rounding

7 REVENUES ASSOCIATED WITH ANNUALIZATION OF ENERGY EFFICIENCY KWH ADJUSTMENTS

	(a)	(b)	(c)	(d)	(e)	(f)
Line	Rate Description	Rate	kWh	Revenue		Total
				Non-Fuel	Fuel	
Texas Firm Service Rate Classes						
1	Residential Service	01	(4,535,420)	\$ (441,520)	\$ (58,191)	\$ (499,711)
2	Small General Service	02	(1,057,867)	\$ (115,013)	\$ (13,532)	(128,545)
3	Outdoor Recreational Lighting	07	-	\$ -	\$ -	-
4	Governmental Street Lighting	08	-	\$ -	\$ -	-
5	Traffic Signals	09	-	\$ -	\$ -	-
6	Municipal Pumping TOU	11TOU	-	\$ -	\$ -	-
7	Electrolytic Refining	15	-	\$ -	\$ -	-
8	Water Heating Rider	Rider	-	\$ -	\$ -	-
9	Irrigation Service	22	(169,888)	\$ (16,191)	\$ (2,173)	(18,364)
10	General Service	24	(8,668,914)	\$ (387,015)	\$ (110,836)	(497,851)
11	Large Power Service	25	(4,640,216)	\$ (58,505)	\$ (65,461)	(123,966)
12	Petroleum Refinery Service	26	-	\$ -	\$ -	-
13	Area Lighting	28	-	\$ -	\$ -	-
14	Electric Furnace	30	-	\$ -	\$ -	-
15	Military Reservation	31	-	\$ -	\$ -	-
16	Cotton Gin Service	34	-	\$ -	\$ -	-
17	City and County Service	41	(2,585,047)	\$ (83,562)	\$ (33,121)	(116,683)
18	Total Texas Firm Service		(21,657,352)	\$ (1,101,806)	\$ (283,314)	\$ (1,385,120)
19	Texas Non-Firm Service					
20	Interruptible for Large Power	38	-	\$ -	(A)	\$ -
21	Total Texas Sales		(21,657,352)	\$ (1,101,806)	\$ (283,314)	\$ (1,385,120)
22	New Mexico Firm Service Rate Classes					(B)
23	Residential Service	01	(5,758,899)	\$ (420,972)	\$ (137,476)	\$ (558,448)
24	Small General Service	03	(796,424)	(45,764)	(18,645)	(64,409)
25	General Service	04	(2,395,915)	(37,114)	(54,686)	(91,800)
26	Irrigation Service	05	-	-	-	-
27	City and County Service	07	(784,142)	(21,588)	(18,356)	(39,944)
28	Municipal Pumping	08	(4,086)	(216)	(95)	(311)
29	Large Power Service	09	(1,016,476)	(10,826)	(19,835)	(30,661)
30	M R & D	10	-	-	-	-
31	Municipal Street Lights	11	-	-	-	-
32	Area Lighting	12	-	-	-	-
33	Seasonal Agricultural Processing	19	-	-	-	-
34	Outdoor Recreational Lighting	25	-	-	-	-
35	State University Service	26	-	-	-	-
36	Total New Mexico Firm Service		(10,755,942)	\$ (536,480)	\$ (249,093)	\$ (785,573)
37	New Mexico Non-Firm Service					
38	Interruptible Power Service Rate	29	-	-	(A)	\$ -
39	Total New Mexico Sales		(10,755,942)	\$ (536,480)	\$ (249,093)	\$ (785,573)
40	F E R C					(B)
41	R G E C	94	-	-	-	-
42	Total FERC		-	\$ -	\$ -	\$ -
43	Total Company		(32,413,294)	\$ (1,638,286)	\$ (532,407)	\$ (1,385,120)

(A) Fuel revenue related to non-firm is included in the corresponding retail rate

(B) No adjustment was made to EPE's cost of service studies for New Mexico and FERC revenues

Note: Amounts may not add or tie to other schedules due to rounding

8 KWH REVENUES ASSOCIATED WITH FIRM/INTERRUPTIBLE RECLASS (A)

	(a)	(b)	(c)	(d)	(e)	(f)
Line	Rate Description	Rate	kWh	Revenue		Total
				Non-Fuel	Fuel	
Texas Firm Service Rate Classes						
1	Residential Service	01	-	-	-	\$ -
2	Small General Service	02	-	-	-	-
3	Outdoor Recreational Lighting	07	-	-	-	-
4	Governmental Street Lighting	08	-	-	-	-
5	Traffic Signals	09	-	-	-	-
6	Municipal Pumping TOU	11TOU	-	-	-	-
7	Electrolytic Refining	15	-	-	-	-
8	Water Heating Rider	Rider	-	-	-	-
9	Irrigation Service	22	-	-	-	-
10	General Service	24	-	-	-	-
11	Large Power Service	25	-	-	-	-
12	Petroleum Refinery Service (A)	26	(42,137,009)	(329,777)	-	(329,777)
13	Area Lighting	28	-	-	-	-
14	Electric Furnace	30	-	-	-	-
15	Military Reservation	31	-	-	-	-
16	Cotton Gin Service	34	-	-	-	-
17	City and County Service	41	-	-	-	-
18	Total Texas Firm Service		(42,137,009)	\$ (329,777)	\$ -	\$ (329,777)
19	Texas Non-Firm Service					
20	Interruptible for Large Power (A)	38	42,137,009	\$ 143,984	(B)	\$ 143,984
21	Total Texas Sales		-	\$ (185,793)	\$ -	\$ (185,793)
22	New Mexico Firm Service Rate Classes					(C)
23	Residential Service	01	-	-	-	\$ -
24	Small General Service	03	-	-	-	-
25	General Service	04	-	-	-	-
26	Irrigation Service	05	-	-	-	-
27	City and County Service	07	-	-	-	-
28	Municipal Pumping	08	-	-	-	-
29	Large Power Service	09	-	-	-	-
30	M R & D	10	-	-	-	-
31	Municipal Street Lights	11	-	-	-	-
32	Area Lighting	12	-	-	-	-
33	Seasonal Agricultural Processing	19	-	-	-	-
34	Outdoor Recreational Lighting	25	-	-	-	-
35	State University Service	26	-	-	-	-
36	Total New Mexico Firm Service		-	\$ -	\$ -	\$ -
37	New Mexico Non-Firm Service					
38	Interruptible Power Service Rate	29	-	-	(B)	\$ -
39	Total New Mexico Sales		-	\$ -	\$ -	\$ -
40	F.E.R.C					(C)
41	R.G.E.C	94	-	-	-	-
42	Total FERC		-	\$ -	\$ -	\$ -
43	Total Company		-	\$ (185,793)	\$ -	\$ (185,793)

- (A) Pursuant to Texas Rate No. 38, a customer which fails to comply with a request for curtailment shall result in customer being billed at the retail rates applicable to the customer. During the test year, the customer served under Texas Rate No. 26 failed to curtail and was therefore billed at the retail rate during the month of non-compliance. This adjustment reclassifies the kWh that was billed at retail rates to reflect the customer's normal operating levels at interruptible service
- (B) Fuel revenue related to non-firm is included in the corresponding retail rate
- (C) No adjustment was made to EPE's cost of service studies for New Mexico and FERC revenues

Note Amounts may not add or tie to other schedules due to rounding

9. KW REVENUES ASSOCIATED WITH FIRM/INTERRUPTIBLE RECLASS

	(a)	(b)	(c)	(d)	(e)	(f)
Line	Rate Description	Rate	kW	Revenue		Total
				Non-Fuel	Fuel	
Texas Firm Service Rate Classes						
1	Residential Service	01	-	-	-	\$ -
2	Small General Service	02	-	-	-	-
3	Outdoor Recreational Lighting	07	-	-	-	-
4	Governmental Street Lighting	08	-	-	-	-
5	Traffic Signals	09	-	-	-	-
6	Municipal Pumping TOU	11TOU	-	-	-	-
7	Electrolytic Refining	15	-	-	-	-
8	Water Heating Rider	Rider	-	-	-	-
9	Irrigation Service	22	-	-	-	-
10	General Service	24	-	-	-	-
11	Large Power Service	25	-	-	-	-
12	Petroleum Refinery Service (A)	26	(65,945)	\$ (1,235,899)	-	(1,235,899)
13	Area Lighting	28	-	-	-	-
14	Electric Furnace	30	-	-	-	-
15	Military Reservation	31	-	-	-	-
16	Cotton Gin Service	34	-	-	-	-
17	City and County Service	41	-	-	-	-
18	Total Texas Firm Service		(65,945)	\$ (1,235,899)	\$ -	\$ (1,235,899)
Texas Non-Firm Service						
19	Interruptible for Large Power (A)	38	65,945	\$ 209,352	(B)	\$ 209,352
21	Total Texas Sales		-	\$ (1,026,547)	\$ -	\$ (1,026,547)
New Mexico Firm Service Rate Classes (B)						
22	Residential Service	01	-	-	-	\$ -
23	Small General Service	03	-	-	-	-
24	General Service	04	-	-	-	-
25	Irrigation Service	05	-	-	-	-
26	City and County Service	07	-	-	-	-
27	Municipal Pumping	08	-	-	-	-
28	Large Power Service	09	-	-	-	-
29	M R & D	10	-	-	-	-
30	Municipal Street Lights	11	-	-	-	-
31	Area Lighting	12	-	-	-	-
32	Seasonal Agricultural Processing	19	-	-	-	-
33	Outdoor Recreational Lighting	25	-	-	-	-
34	State University Service	26	-	-	-	-
35	Total New Mexico Firm Service		-	\$ -	\$ -	\$ -
New Mexico Non-Firm Service						
36	Interruptible Power Service Rate	29	-	-	(B)	\$ -
37	Total New Mexico Sales		-	\$ -	\$ -	\$ -
F E R C (B)						
38	R G E C	94	-	-	-	-
39	Total FERC		-	\$ -	\$ -	\$ -
40	Total Company		-	\$ (1,026,547)	\$ -	\$ (1,026,547)

(A) Pursuant to Texas Rate No 38, a customer which fails to comply with a request for curtailment shall result in customer being billed at the retail rates applicable to the customer. During the test year, the customer served under Texas Rate No 26 failed to curtail and was therefore billed at the retail rate during the month of non-compliance. This adjustment reclassifies the kW that was billed at retail rates to reflect the customer's normal operating levels at interruptible service

(B) Fuel revenue related to non-firm is included in the corresponding retail rate

(C) No adjustment was made to EPE's cost of service studies for New Mexico and FERC revenues

Note Amounts may not add or tie to other schedules due to rounding

8 REVENUES ASSOCIATED WITH OUT OF BILLING PERIOD KWH ADJUSTMENTS

	(a)	(b)	(c)	(d)	(e)	(f)
Line	Rate Description	Rate	kWh	Revenue		Total
				Non-Fuel	Fuel	
Texas Firm Service Rate Classes						
1	Residential Service	01	(276,895)	\$ (25,138)	\$ (3,413)	\$ (28,551)
2	Small General Service	02	79,043	\$ 8,055	\$ 978	9,033
3	Outdoor Recreational Lighting	07	-	\$ -	\$ -	-
4	Governmental Street Lighting	08	-	\$ -	\$ -	-
5	Traffic Signals	09	-	\$ (0)	\$ -	(0)
6	Municipal Pumping TOU	11TOU	(753,651)	\$ (61,408)	\$ (9,280)	(70,688)
7	Electrolytic Refining	15	-	\$ -	\$ -	-
8	Water Heating Rider	Rider	-	\$ -	\$ -	-
9	Irrigation Service	22	(182)	\$ (293)	\$ (2)	(295)
10	General Service	24	2,640,541	\$ 80,819	\$ 32,681	113,500
11	Large Power Service	25	0	\$ -	\$ -	-
12	Petroleum Refinery Service	26	-	\$ -	\$ -	-
13	Area Lighting	28	-	\$ -	\$ -	-
14	Electric Furnace	30	-	\$ -	\$ -	-
15	Military Reservation	31	(1)	\$ (0)	\$ -	(0)
16	Cotton Gin Service	34	-	\$ -	\$ -	-
17	City and County Service	41	(0)	\$ (578)	\$ -	(578)
18	Total Texas Firm Service		1,688,855	\$ 1,457	\$ 20,963	22,421
19	Texas Non-Firm Service					
20	Interruptible for Large Power	38	-	\$ -	(A) \$	-
21	Total Texas Sales		1,688,855	\$ 1,457	\$ 20,963	22,421
22	New Mexico Firm Service Rate Classes					(B)
23	Residential Service	01	(102,311)	\$ (7,046)	\$ (2,442)	\$ (9,488)
24	Small General Service	03	(7,331)	(624)	(172)	(796)
25	General Service	04	31,586	1,137	721	1,858
26	Irrigation Service	05	3,234	388	75	463
27	City and County Service	07	2,374	(282)	56	(226)
28	Municipal Pumping	08	(106,531)	(1)	(2,476)	(2,477)
29	Large Power Service	09	-	(1,104)	-	(1,104)
30	M R & D	10	-	(1,104)	-	(1,104)
31	Municipal Street Lights	11	-	-	-	-
32	Area Lighting	12	-	-	-	-
33	Seasonal Agricultural Processing	19	-	-	-	-
34	Outdoor Recreational Lighting	25	(450)	(36)	(11)	(47)
35	State University Service	26	-	-	-	-
36	Total New Mexico Firm Service		(179,429)	\$ (8,671)	\$ (4,250)	\$ (12,921)
37	New Mexico Non-Firm Service					
38	Interruptible Power Service Rate	29	-	-	(A) \$	-
39	Total New Mexico Sales		(179,429)	\$ (8,671)	\$ (4,250)	-
40	F E R C					(B)
41	R G E C	94	-	-	-	-
42	Total FERC		-	\$ -	\$ -	-
43	Total Company		1,509,426	\$ (7,214)	\$ 16,714	22,421

(A) Fuel revenue related to non-firm is included in the corresponding retail rate

(B) No adjustment was made to EPE's cost of service studies for New Mexico and FERC revenues

Note: Amounts may not add or tie to other schedules due to rounding.

9. REVENUES ASSOCIATED WITH OTHER KW ADJUSTMENTS

	(a)	(b)	(c)	(d)		(e)		(f)
Line	Rate Description	Rate	kW	Revenue				Total
				Non-Fuel	Fuel			
	Texas Firm Service Rate Classes							
1	Residential Service	01	-	\$	-	\$	-	\$
2	Small General Service	02	-	\$	-	\$	-	-
3	Outdoor Recreational Lighting	07	-	\$	-	\$	-	-
4	Governmental Street Lighting	08	-	\$	-	\$	-	-
5	Traffic Signals	09	-	\$	-	\$	-	-
6	Municipal Pumping TOU	11TOU	-	\$	-	\$	-	-
7	Electrolytic Refining	15	-	\$	-	\$	-	-
8	Water Heating Rider	Rider	-	\$	-	\$	-	-
9	Irrigation Service	22	-	\$	-	\$	-	-
10	General Service	24	-	\$	-	\$	-	-
11	Large Power Service	25	-	\$	-	\$	-	-
12	Petroleum Refinery Service	26	-	\$	-	\$	-	-
13	Area Lighting	28	-	\$	-	\$	-	-
14	Electric Furnace	30	-	\$	-	\$	-	-
15	Military Reservation	31	-	\$	-	\$	-	-
16	Cotton Gin Service	34	-	\$	-	\$	-	-
17	City and County Service	41	-	\$	-	\$	-	-
18	Total Texas Firm Service		-	\$	-	\$	-	\$
19	Texas Non-Firm Service							
20	Interruptible for Large Power	38	-	\$	-	(A)	\$	-
21	Total Texas Sales		-	\$	-	\$	-	\$
22	New Mexico Firm Service Rate Classes (B)							
23	Residential Service	01	-	\$	-	\$	-	\$
24	Small General Service	03	-		-		-	-
25	General Service	04	-		-		-	-
26	Irrigation Service	05	-		-		-	-
27	City and County Service	07	-		-		-	-
28	Municipal Pumping	08	-		-		-	-
29	Large Power Service	09	-		-		-	-
30	M R & D (A)	10	-		-		-	-
31	Municipal Street Lights	11	-		-		-	-
32	Area Lighting	12	-		-		-	-
33	Seasonal Agncultural Processing	19	-		-		-	-
34	Outdoor Recreational Lighting	25	-		-		-	-
35	State University Service	26	-		-		-	-
36	Total New Mexico Firm Service		-	\$	-	\$	-	\$
37	New Mexico Non-Firm Service							
38	Interruptible Power Service Rate	29	-		-	(A)	\$	-
39	Total New Mexico Sales		-	\$	-	\$	-	\$
40	F E R C (B)							
41	R G E C	94	-		-		-	-
42	Total FERC		-	\$	-	\$	-	\$
43	Total Company		-	\$	-	\$	-	\$

(A) Fuel revenue related to non-firm is included in the corresponding retail rate.

(B) No adjustment was made to EPE's cost of service studies for New Mexico and FERC revenues

Note Amounts may not add or tie to other schedules due to rounding

EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-4.1: KWH SALES AND KW DEMAND
SPONSOR MANUEL CARRASCO
PREPARER ELIZABETH MORENO
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-4.1
PAGE 12 OF 12

10 TOTAL ADJUSTED REVENUE

	(a)	(b)	(c)	(d)		(e)	(f)
Line	Rate Description	Rate	kWh	Revenue		Total	
				Non-Fuel	Fuel		
Texas Firm Service Rate Classes							
1	Residential Service	01	2,478,851,326	\$ 273,638,830	\$ 31,804,571	\$ 305,443,401	
2	Small General Service	02	272,309,109	33,319,684	3,483,415	36,803,099	
3	Outdoor Recreational Lighting	07	3,676,526	462,980	47,019	509,999	
4	Governmental Street Lighting	08	36,054,763	4,046,620	461,227	4,507,847	
5	Traffic Signals	09	2,655,162	95,204	26,554	121,758	
6	Municipal Pumping TOU	11TOU	172,350,354	10,102,350	2,189,127	12,291,477	
7	Electrolytic Refining	15	42,604,774	1,830,063	965,884	2,795,947	
8	Water Heating Rider	Rider	5,123,640	474,582	65,544	540,126	
9	Irrigation Service	22	3,840,029	423,414	49,123	472,537	
10	General Service	24	1,450,801,644	125,005,740	18,549,194	143,554,934	
11	Large Power Service	25	611,107,048	35,955,664	8,621,024	44,576,688	
12	Petroleum Refinery Service	26	314,641,719	10,964,770	4,673,421	15,638,191	
13	Area Lighting	28	26,829,319	2,932,614	343,211	3,275,825	
14	Electric Furnace	30	21,568,632	1,191,760	2,231,320	3,423,080	
15	Military Reservation	31	278,539,097	13,009,892	4,077,775	17,087,667	
16	Cotton Gin Service	34	1,596,380	132,972	20,422	153,394	
17	City and County Service	41	193,240,554	19,126,500	2,475,875	21,602,374	
18	Total Texas Firm Service		5,915,790,076	\$ 532,713,638	\$ 80,084,706	\$ 612,798,345	
19	Texas Non-Firm Service						
20	Interruptible for Large Power	38	393,013,000	\$ 4,174,343	(A)	\$ 4,174,343	
21	Total Texas Sales		6,308,803,076	\$ 536,887,982	\$ 80,084,706	\$ 616,972,688	
22	New Mexico Firm Service Rate Classes					(B)	
23	Residential Service	01	765,684,075	\$ 63,020,993	\$ 16,427,526	\$ 79,448,519	
24	Small General Service	03	159,302,107	16,816,631	3,349,709	20,166,340	
25	General Service	04	284,772,343	20,187,241	5,837,969	26,025,210	
26	Irrigation Service	05	40,343,211	2,943,462	835,895	3,779,357	
27	City and County Service	07	50,370,989	4,223,984	1,059,076	5,283,060	
28	Municipal Pumping	08	39,003,849	2,108,649	814,250	2,922,899	
29	Large Power Service	09	157,862,162	7,468,705	2,892,518	10,361,223	
30	M R & D	10	122,960,590	4,362,032	2,310,396	6,672,428	
31	Municipal Street Lights	11	1,786,428	297,665	35,707	333,372	
32	Area Lighting	12	5,141,592	961,447	102,660	1,064,107	
33	Seasonal Agricultural Processing	19	8,300,042	830,985	168,162	999,147	
34	Outdoor Recreational Lighting	25	399,486	38,327	8,503	46,830	
35	State University Service	26	27,481,344	1,240,376	575,158	1,815,534	
36	Total New Mexico Firm Service		1,663,408,218	\$ 124,500,497	\$ 34,417,529	\$ 158,918,026	
37	New Mexico Non-Firm Service						
38	Interruptible Power Service Rate	29	7,764,925	139,575	(A)	\$ 139,575	
39	Total New Mexico Sales		1,671,173,143	\$ 124,640,072	\$ 34,417,529	\$ 139,575	
40	F E R C					(B)	
41	R G E C	94	63,223,969	2,744,509	743,893	3,488,402	
42	Total FERC		63,223,969	\$ 2,744,509	\$ 743,893	\$ 3,488,402	
43	Total Company		8,043,200,189	\$ 664,272,562	\$ 115,246,129	\$ 620,600,665	

(A) Fuel revenue related to non-firm is included in the corresponding retail rate

(B) No adjustment was made to EPE's cost of service studies for New Mexico and FERC revenues

Note Amounts may not add or tie to other schedules due to rounding

A narrative explanation of the methodologies used to calculate the revenue items in Schedule O-4.1 is provided below.

Schedule O-4.1 requires eleven itemizations (steps) that show the process which takes per-book billing determinants and the associated revenue to adjusted (annualized and restated) billing determinants and revenues.

Item 1. Unadjusted test year revenues

Non-Fuel (Base) and Fuel Revenue are the revenues of each rate class which were billed and recorded in the company accounting records during the twelve months ended December 31, 2020. The amounts shown exclude recorded amounts for unbilled revenue.

Item 2. Revenue associated with any rate annualization adjustment

Item 2 displays the difference in Base revenues between a Customer's revenues as billed under prior rates, and the revenues for associated billing determinants had they been billed under the existing rates. In this proceeding, the amounts shown for this item are to remove revenue related to the expired Rate Case Expense Surcharge and to recognize the revenue related to the recent revision and implementation of the Distribution Cost Recovery Factor.

Item 3. Revenues associated with KWH customer adjustments

Included in this item are revenue increases or decreases associated directly with kWh customer adjustments. These adjustments, termed annualization, adjusts customer count (or lamp count) and the associated billing determinants to reflect a level that would have occurred had the number of customers (lamps) in the last month of the test year been on the system, or taking service under the applicable tariff, for the entire year.

Item 4. Revenues associated with KW customer adjustments

Customer adjustments as described in Item 3, above, are also applicable to revenues associated with kW customer adjustments for those classes with a demand (\$/kW) rate.

Item 5. Revenues associated with KWH weather adjustments

EPE adjusted the kWh of several Texas and New Mexico rate classes to reflect normal weather conditions during the test year. This adjustment was performed to show what kWh sales would have been had normal weather conditions occurred.

Item 6. Revenues associated with KW weather adjustments

No adjustment to kW was made to reflect normal weather conditions.

Item 7. Revenues associated with the annualization of the energy efficiency programs

Adjustments to kWh of several rate classes were made to reflect the annual impact of customers participating in EPE's energy efficiency programs for the associated billing determinants to reflect a level that would have occurred had the energy efficiency measures been in place for the entire test year.

Item 8. Revenues associated with firm/interruptible kWh reclassification adjustments

Adjustments in this item include the normalization of firm consumption of a major interruptible customer due its failure to curtail when an interruption was called.

Item 9. Revenues associated with firm/interruptible KW reclassification adjustments

See the discussion in Item 8.

Item 10. Revenues associated with out of billing period KWH adjustments

Adjustments in this item includes out of period adjustments for bill corrections.

Item 11. Revenues associated with other KW adjustments

Adjustments in this item are specifically identified in the footnote section of this item.

Item 12. Total Adjusted Revenue

This item is the cumulative result of the above ten items.

EL PASO ELECTRIC COMPANY
 2021 TEXAS RATE CASE FILING
 SCHEDULE O-5: VARIABILITY OF AVERAGE FUEL COSTS WITH KWH SALES
 SPONSOR: ADRIAN HERNANDEZ
 PREPARER: ADRIAN HERNANDEZ
 FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-5
 PAGE 1 OF 1

		(a)	(b)	(c)
Line No	Description	Total System Fuel Cost		
			<u>Unadjusted</u>	<u>Adjusted</u>
1	Net System Fuel & Purchased Power Costs		\$ 200,521,600	\$ 198,143,883
2	kWh Sales		8,168,479,275	8,043,200,188
3	Average Cost per kWh		\$ 0.024548	\$ 0.024635

Notes: Line 1 Unadjusted Net System Fuel & Purchased Power Costs from Schedule A-3 Adjustment 2, page 2 of 2.
 Total per book less capacity costs of \$1,763,715.

Line 1 Adjusted Net System Fuel & Purchased Power Costs from Schedule A-3 Adjustment 2, page 2 of 2.
 Total As Adjusted less capacity costs of \$1,763,715.

Line 2 kWh Sales from Schedule O-1.1

Amounts may not add or tie to other schedules due to rounding.

EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-6.1: UNADJUSTED KWH SALES BY MONTH OF THE TEST YEAR
SPONSOR: GEORGE NOVELA
PREPARER: JUAN CARDENAS
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-6.1
PAGE 1 OF 1

(a)	(b)	(c)	(d)	(e)	(f)	(g)
Month	Year	Total System Unadjusted Sales (kWh)	Unadjusted Total System Line and Transformer Losses (kWh)	Company Use (kWh)	Net Energy for Load (kWh)	Opportunity Sales And Other Off-System Sales (kWh)
January	2020	628,710,599	-20,483,569	1,142,970	609,370,000	294,691,000
February	2020	570,162,937	-7,421,701	1,250,764	563,992,000	241,122,000
March	2020	545,736,074	20,823,351	1,007,575	567,567,000	311,324,000
April	2020	516,446,668	45,505,511	935,821	562,888,000	228,052,000
May	2020	606,067,398	145,248,667	998,935	752,315,000	259,104,000
June	2020	784,012,082	111,782,369	939,549	896,734,000	191,887,000
July	2020	945,050,486	93,474,002	1,083,513	1,039,608,000	197,997,000
August	2020	934,535,938	97,464,388	1,191,674	1,033,192,000	175,881,000
September	2020	903,355,638	-134,467,068	956,430	769,845,000	260,689,000
October	2020	666,673,613	-144,229	964,616	667,494,000	142,700,000
November	2020	559,438,148	-3,968,174	946,026	556,416,000	122,763,000
December	2020	570,730,442	82,721,161	1,390,397	654,842,000	231,211,000
Annual Summary		<u>8,230,920,022</u>	<u>430,534,708</u>	<u>12,808,270</u>	<u>8,674,263,000</u>	<u>2,657,421,000</u>

EL PASO ELECTRIC COMPANY
 2021 TEXAS RATE CASE FILING
 SCHEDULE O-6.2: ADJUSTED KWH SALES BY MONTH
 SPONSOR: GEORGE NOVELA
 PREPARER: JUAN CARDENAS
 FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-6.2
 PAGE 1 OF 1

(a)	(b)	(c)	(d)	(e)	(f)	(g)
Month	Year	Total System Adjusted Sales (kWh)	Adjusted Total System Line and Transformer Losses (kWh)	Company Use (kWh)	Net Energy for Load (kWh)	Opportunity Sales And Other Off- System Sales (kWh) (1)
January	2020	634,217,778	-25,990,748	1,142,970	609,370,000	0
February	2020	567,063,537	-4,322,301	1,250,764	563,992,000	0
March	2020	539,188,753	27,370,672	1,007,575	567,567,000	0
April	2020	513,963,692	47,988,487	935,821	562,888,000	0
May	2020	578,061,006	173,255,059	998,935	752,315,000	0
June	2020	754,581,753	141,212,698	939,549	896,734,000	0
July	2020	918,892,832	119,631,655	1,083,513	1,039,608,000	0
August	2020	873,371,279	158,629,047	1,191,674	1,033,192,000	0
September	2020	872,731,890	-103,843,320	956,430	769,845,000	0
October	2020	663,731,909	2,797,475	964,616	667,494,000	0
November	2020	570,059,472	-14,589,498	946,026	556,416,000	0
December	2020	567,277,568	86,174,035	1,390,397	654,842,000	0
Annual Summary		<u>8,053,141,469</u>	<u>608,313,261</u>	<u>12,808,270</u>	<u>8,674,263,000</u>	<u>0</u>

NOTES:

(1) All Opportunity Sales and Other off system sales are removed from the Adjusted data.

EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-6.3: SYSTEM LINE LOSS CALCULATIONS
SPONSOR: GEORGE NOVELA
PREPARER: ERIC GALVAN
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-6.3
PAGE 1 OF 1

El Paso Electric Company's ("EPE") "2017 Analysis of System Losses", conducted by Management Applications Consulting, Inc., as filed in PUCT Docket No. 50058, is attached. EPE witness George Novela discusses the proposed system loss factors in his testimony.

EL PASO ELECTRIC COMPANY

2017 Analysis of System Losses

April 2019

Final
4/18/19

Prepared by:



Management Applications Consulting, Inc.
1103 Rocky Drive – Suite 201
Reading, PA 19609
Phone: (610) 670-9199 / Fax: (610) 670-9190



MANAGEMENT APPLICATIONS CONSULTING, INC.

1103 Rocky Drive • Suite 201 • Reading, PA 19609-1157 • 610/670-9199 • fax 610/670-9190 • www.manapp.com

April 18, 2019

Mr. James Schichtl
Director – Regulatory Affairs
El Paso Electric Company
P. O. Box 982
El Paso, TX 79960-0982

RE: 2017 EL PASO LOSS ANALYSES

Dear Mr. Schichtl:

Transmitted herewith are the results of the 2017 Analysis of System Losses for El Paso Electric Company's (EPE) power system. These results consist of an Annual analysis which develops cumulative expansion factors (loss factors) for both demand (peak hour-kW) and energy (annual average-kWh) losses by discrete voltage levels applicable to metered sales data. The loss calculations were made using a separate transmission loss model to derive the final results prescribed herein. Our analyses consider only technical losses in arriving at our final recommendations.

On behalf of MAC, we appreciate the opportunity to assist you in performing the loss analysis contained herein. The level of detail, multiple databases, and multiple power flow analyses reflect reasonable and representative power losses on the El Paso Electric Company system. Our review of these data and calculated loss results support the proposed loss factors as presented herein for your use in various cost of service, rate studies, and demand analyses.

Should you require any additional information, please let us know at your earliest convenience.

Sincerely,

Paul M. Normand
Principal

EL PASO ELECTRIC COMPANY **2017 ANALYSIS OF SYSTEM LOSSES**

TABLE OF CONTENTS

1.0	EXECUTIVE SUMMARY	1
2.0	INTRODUCTION	7
2.1	Conduct of Study	7
2.2	Electric Power Losses	8
2.3	Loss Impacts from Distributed Generation (DG)	9
2.4	Description of Model	9
3.0	METHODOLOGY	10
3.1	Background.....	10
3.2	Calculations and Analysis.....	12
3.2.1	Bulk and Transmission Lines.....	12
3.2.2	Transformers.....	13
3.2.3	Distribution System	13
4.0	DISCUSSION OF RESULTS.....	15

Appendix A – Results of El Paso Electric Company Transmission 2017 Loss Analysis
(69 kV – 345 kV), 115 to 345 kV, and 69 kV only.

Appendix B – Results of El Paso Electric Company 2017 Loss Analysis – Transmission and
Distribution with Generation Step Up (GSU) Losses

Appendix C – Discussion of Hoebel Coefficient

El Paso Electric Company 2017 Analysis of System Losses

1.0 EXECUTIVE SUMMARY

This report presents El Paso Electric Company's (EPE) 2017 Analysis of System Losses for its integrated power system as performed by Management Applications Consulting, Inc. (MAC). Our analyses considered only technical losses and did not attempt to quantify non-technical factors such as theft and metering accuracy. The study developed separate demand (kW) and energy (kWh) loss factors for each voltage level of service in the power system. The cumulative loss factor results by voltage level, as presented herein, can be used to adjust metered sales data for losses to input in performing cost of service studies, determining voltage discounts, and other analyses which may require a loss adjustment.

The procedures used in the overall loss study emphasized the use of "in house" resources where possible. To this end, extensive use was made of the Company's power flow studies (eight analyses) and transformer plant investments in the model. Using estimated load data provided a means of calculating reasonable estimates of losses by using a "top-down" and "bottom-up" procedure. In the "top-down" approach, losses from the high voltage system, through and including distribution substations, were calculated along with power flow data, conductor and transformer loss estimates, and metered sales.

At this point in the analysis, system loads and losses at the input into the distribution substation system are known with reasonable accuracy. However, it is the remaining loads and losses on the distribution substations, primary system, secondary circuits, and services which are generally difficult to estimate. Estimated and actual Company load data provided the starting point for performing a "bottom-up" approach for calculating the remaining distribution losses. Basically, this "bottom-up" approach develops line loadings by first determining loads and losses at each level beginning at a customer's meter service entrance and then going through secondary lines, line transformers, primary lines and finally distribution substation. These distribution system loads and associated losses are then compared to the initial calculated input into Distribution Substation loadings for reasonableness prior to finalizing the loss factors. An overview of the loss study is shown on Figure 1 on page 4.

With the emergence of transmission as a stand-alone function throughout various regions of the country, a modification to the historical calculation of the transmission loss factors was required. Historic loss studies recognized the multipath approach to losses from high voltage to low voltage delivery. The current definition of transmission losses recognized in the industry is simply to sum all losses at transmission as an integrated system. This approach will typically increase the resulting composite transmission loss factors but better reflects the topology of the systems with dispersed supply resources and interconnections.

The load research data provided the starting point for performing a "bottom-up" approach for estimating the remaining distribution losses. Basically, this "bottom-up" approach develops line loadings by first determining loads and losses at each level beginning at a customer's meter and service entrance and then going through secondary lines, line transformers, primary lines and finally distribution substation. These distribution system loads and associated losses are then compared to the initial calculated input into Distribution Substation loadings for reasonableness

**El Paso Electric Company
 2017 Analysis of System Losses**

prior to finalizing the loss factors. An overview of the loss study is shown on Figure 1 on the next page.

Appendix A presents the results of the El Paso Electric Company Transmission 2017 Loss Analysis for 69 kV and 115 through 345 kV. These results were developed using eight distinct power flows at loading levels representing 8,760 hours of the calendar year.

Appendix B incorporates Appendix A's results and presents the total El Paso power system losses and resulting loss factors by delivery voltage. Table 1, below, provides the final results from Appendices A and B for the calendar year. The distribution system losses are calculated in Appendix B for all voltage levels. These loss expansion factors are applicable only to metered sales at the point of receipt for adjustment to the power system's input level.

**TABLE 1
 Loss Factors at Sales (Metered) Level**

Voltage Level of Service	w/ GSU* (a)	w/o GSU* (b)	Delivery (c)
<u>Demand (kW)</u>			
Transmission ¹	1.02790	1.02596	1.00000
Primary Substation	1.03158	N/A	1.00358
Primary	1.06265	N/A	1.03381
Secondary	1.08212	N/A	1.05275
<u>Energy (kWh)</u>			
Transmission ¹	1.02916	1.02690	1.00000
Primary Substation	1.03467	N/A	1.00535
Primary	1.05123	N/A	1.02144
Secondary	1.07850	N/A	1.04794
<u>Losses – Net System Input²</u>	6.45	% MWh	
	7.01	% MW	
<u>Losses – Net System Output³</u>	6.90	% MWh	
	7.54	% MW	

**Generation Step Up Transformers*

Table 1, above, presents three loss factor columns as follows:

Column (a) These loss factors are calculated with the transmission component which includes GSU losses as calculated and presented in Appendix A, Schedules 1 and 2 (Section I).

¹ Reflects results from Appendix A for 345 kV - 115 kV and 69 kV

² Net system input equals firm sales plus losses, Company use less non-requirement sales and related losses See Appendix B, Exhibit 1, for their calculations

³ Net system output uses losses divided by output or sales data as a reference

**El Paso Electric Company
2017 Analysis of System Losses**

Column (b) These loss factors are similar to Column (a) except that transmission losses do not include any GSU losses as presented in Appendix A, Schedule I (Section II).

Column (c) These are Delivery Only loss factors that exclude all transmission losses.

The delivery voltages considered in Table 1 are defined in Appendix B, Exhibit 1, and include 1 kV through 24 kV for primary and voltages less than 1 kV for secondary.

The loss factors presented in the Delivery Only column (c) of Table 1 are the Total El Paso Electric Company loss factors divided by the transmission loss factor in order to remove the transmission losses from each service level loss factor. For example, the secondary distribution demand loss factor of 1.05275 includes the recovery of all non-transmission losses from distribution substation, primary lines, line transformers, secondary conductors and services.

The net system input shown in Table 1 represents the MWh losses of 6.45% for the total El Paso Electric Company load using calculated losses divided by the associated input energy to the system. The 7.01% represents the MW losses also using system input as a reference. The net system output reference shown in Table 1 represents MWh losses of 6.90% and MW losses of 7.54%. These results use the appropriate total losses for each but are divided by system output or sales. These calculations are all based on the results from Exhibits 1, 7 and 9 of Appendix B.

The loss factor derivations for any voltage level must consider both the load at that level plus the loads from lower voltages and their associated losses. As a result, cumulative losses on losses equates to additional load at higher levels along with future changes (+ or -) in loads throughout the power system. It is therefore important to recognize that losses are multiplicative in nature (future) and not additive (test year only) for all future years to ensure total recovery based on prospective fixed loss factors for each service voltage.

The derivation of the cumulative loss factors shown in Table 1 have been detailed for all electrical facilities in Exhibit 9, page 1 for demand and page 2 for energy. Beginning on line 1 of page 1 (demand) under the secondary column, metered sales are adjusted for service losses on lines 3 and 4. This new total load (with losses) becomes the load amount for the next higher facilities of secondary conductors and their loss calculations. This process is repeated for all the installed facilities until the secondary sales are at the input level (line 45). The final loss factor for all delivery voltages using this same process is shown on line 46 and Table 1 for demand. This procedure is repeated in Exhibit 9, page 2, for the energy loss factors.

The loss factor calculation is simply the input required (line 45) divided by the metered sales (line 2).

Table 2 below expands the Table 1 to include a separation of the transmission voltage range to identify a range of 115 kV to 345 kV and a separate 69 kV level for possible use in the Company's studies.

**El Paso Electric Company
2017 Analysis of System Losses**

**TABLE 2
Loss Factors at Sales (Metered) Level**

Voltage Level of Service	w/ GSU* (a)	w/o GSU* (b)	Delivery (c)
<u>Demand (kW)</u>			
Transmission ⁴ (115 kV)	1.02412	1.02230	1.00000
Primary Substation (115 kV)**	1.03022	1.02932	1.00596
Transmission (69 kV)	1.02790	1.02596	1.00369
Primary Substation (69 kV)**	1.03403	1.03275	1.00967
Primary	1.06265	1.06064	1.03381
Secondary	1.08212	1.08008	1.05275
<u>Energy (kWh)</u>			
Transmission ⁴ (115 kV)	1.02669	1.02458	1.00000
Primary Substation (115 kV)	1.03374	1.03162	1.00687
Transmission (69 kV)	1.02916	1.02690	1.00241
Primary Substation (69 kV)	1.03623	1.03395	1.00929
Primary	1.05123	1.04892	1.02144
Secondary	1.07850	1.0762813	1.04794
<u>Losses – Net System Input⁵</u>	6.45	% MWh	
	7.01	% MW	
<u>Losses – Net System Output⁶</u>	6.90	% MWh	
	7.54	% MW	

*Generation Step Up Transformers

**Primary Substation Multiplier from Exhibit 8

MW 1.00596 MWH 1.00687

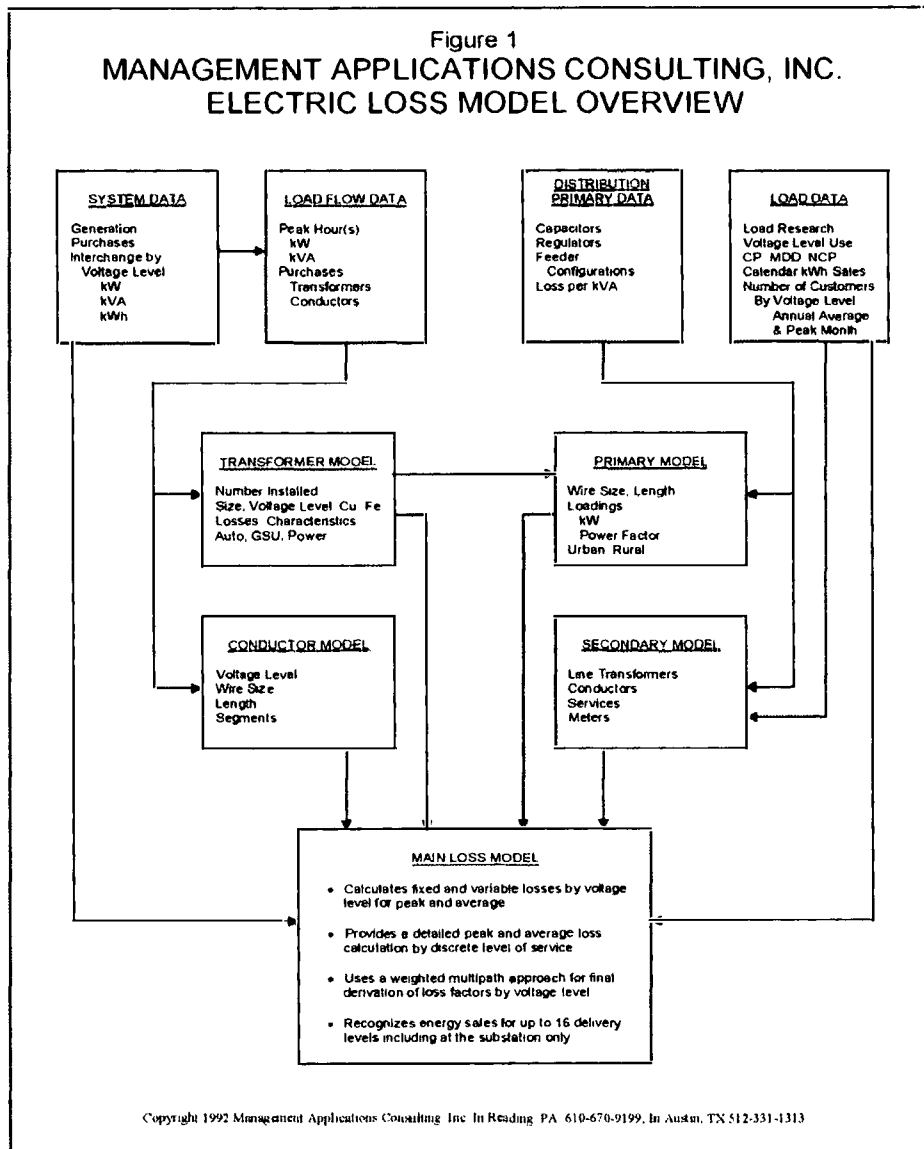
An overview of the loss study is shown on Figure 1 on the next page. Figure 2 simply illustrates the major components that must be considered in a loss analysis.

⁴ Reflects results from Appendix A for 345 kV - 115 kV and 69 kV.

⁵ Net system input equals firm sales plus losses, Company use less non-requirement sales and related losses See Appendix B, Exhibit 1, for their calculations

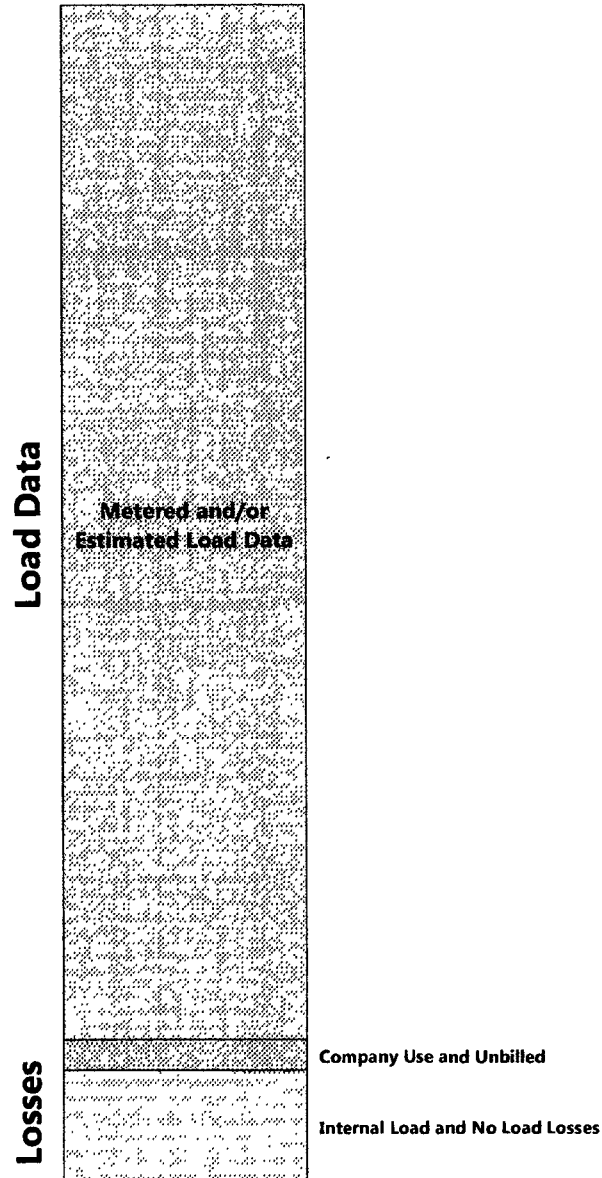
⁶ Net system output uses losses divided by output or sales data as a reference

**El Paso Electric Company
 2017 Analysis of System Losses**



**El Paso Electric Company
2017 Analysis of System Losses**

Figure 2
INTERNAL ENERGY ELEMENTS



El Paso Electric Company 2017 Analysis of System Losses

2.0 INTRODUCTION

This report of the 2017 Analysis of System Losses provides a summary of results, conceptual background or methodology, description of the analyses, and input information related to the study.

2.1 Conduct of Study

Typically, between five to ten percent of the total peak hour MW and annual MWH requirements of an electric utility is lost or unaccounted for in the delivery of power to customers. These losses occur as a result of heating or magnetizing various electrical components of a power system. Investments must be made in facilities which support the total load which includes losses or unaccounted for load. While losses are a small portion of total delivered energy, they cannot be eliminated. Revenue requirements associated with load losses are an important concern to utilities and regulators in that customers must equitably share in all of these cost responsibilities. Loss expansion factors by voltage are the mechanism by which customers' metered demand and energy data are mathematically adjusted to the generation or input level (point of reference) when performing cost and revenue calculations.

An acceptable accounting of losses can be determined for any given time period using available engineering, system, and customer data along with empirical relationships. This loss analysis for the delivery of demand and energy utilizes such an approach. A microcomputer loss model⁷ is utilized as the vehicle to organize the available data, develop the relationships, calculate the losses, and provide an efficient and timely avenue for future updates and sensitivity analyses. Our procedures and calculations are similar with prior loss studies, and they rely on numerous databases that include customer statistics and power system investments at various voltage levels of service.

Company personnel performed most of the data gathering and data processing efforts. MAC analyzed the Company's various databases and performed calculations to check the reasonableness of results. Efforts in determining the data required to perform the loss analysis centered on information which was available from existing studies or reports within the Company. From an overall perspective, our efforts concentrated on five major areas:

1. System information relating to peak demand and metered annual sales data by voltage level,
2. High voltage power system power flow data and associated loss calculations,
3. Distribution system primary and secondary loss calculations,
4. Derivation of fixed and variable losses by voltage level, and
5. Development of final cumulative expansion factors at each voltage level for peak demand (kW) and annual energy (kWh) requirements reconciled to system input.

⁷Copyright by Management Applications Consulting, Inc.

El Paso Electric Company 2017 Analysis of System Losses

2.2 Electric Power Losses

Losses in power systems consist of primarily technical losses with a much smaller level of non-technical losses.

Technical Losses

Electrical losses result from the transmission of energy over various electrical equipment. The largest component of total losses during peaking conditions is power dissipation as a result of varying loading conditions and are oftentimes called load losses which are mostly related to the square of the current (I^2R). These peak hour losses can be as high as 65% to 80% of all technical losses during peak loading conditions. The remaining losses are called no-load and represent essentially fixed (constant) energy losses throughout the year. These no-load losses represent energy required to energize various electrical equipment regardless of their loading levels over the entire year. The major portion of these no-load losses consist of core or magnetizing energy related to installed transformers throughout the power system and generates the major component of annual losses on any distribution system.

The following Table 3 summarizes the unadjusted fixed and variable losses by major functional categories from Exhibit 5 of Appendix A:

TABLE 3

	<u>DEMAND (PEAK HOUR)</u>			<u>ENERGY (ANNUAL AVERAGE)</u>		
	FIXED	VARIABLE	TOTAL	FIXED	VARIABLE	TOTAL
TRANS	6.84	38.74	45.57	59,883	159,754	219,637
(%)	15.00%	85.00%	100.00%	27.26%	72.74%	100.00%
SUBTRANS	1.05	5.94	6.98	9,176	10,572	19,748
(%)	15.00%	85.00%	100.00%	46.47%	53.53%	100.00%
DIST SUBS	3.87	6.55	10.42	33,874	15,804	49,678
(%)	37.12%	62.88%	100.00%	68.19%	31.81%	100.00%
PRIMARY	4.17	53.93	58.09	36,488	119,781	156,270
(%)	7.17%	92.83%	100.00%	23.35%	76.65%	100.00%
SECONDARY	15.11	12.16	27.27	132,389	24,118	156,507
(%)	55.42%	44.58%	100.00%	84.59%	15.41%	100.00%
TOTAL SYS	27.16	110.75	137.92	237,936	314,226	552,162
(%)	19.69%	80.31%	100.00%	43.09%	56.91%	100.00%
TOTAL DIST	19.28	66.08	85.36	168,878	143,899	312,777
(%)	22.59%	77.41%	100.00%	53.99%	46.01%	100.00%

El Paso Electric Company 2017 Analysis of System Losses

Non-Technical Losses

These are unaccounted for energy losses that are related to energy theft, metering, non-payment by customers, and accounting errors. Losses related to these areas are generally very small and can be extremely difficult and subjective to quantify. Our efforts generally do not develop any meaningful level because we assume that improving technology and utility practices have minimized these amounts.

2.3 Loss Impacts from Distributed Generation (DG)

The impacts of losses on a power system from the installation of various DG facilities will depend somewhat on the penetration level, type of installations and location on a circuit. Based on the results presented in Table 2 of this loss study, the impacts are significantly different from looking at any single peak load hour versus the potential impacts over all hours of an entire year. Use of a typical uniform loss factor(s) for each voltage level may require additional consideration to recognize that a reduced consumption level could have little or no impact due to the recovery requirements for the high level of fixed losses over the entire hourly electric grid condition for any DG location.

2.4 Description of Model

The Loss Model is a customized applications model, constructed using the Excel software program. Documentation consists primarily of the model equations at each cell location. A significant advantage of such a model is that the actual formulas and their corresponding computed values at each cell of the model are immediately available to the analyst.

A brief description of the major categories of effort for the preparation of each loss model is as follows:

- Main sheet which contains calculations for all primary and secondary losses, summaries of all conductor and transformer calculations from other sheets discussed below, output reports and supporting results.
- Transformer sheet which contains data input and loss calculations for each distribution substation and high voltage transformer. Separate iron and winding losses are calculated for each transformer by identified type.
- Conductor sheet containing summary data by major voltage level as to circuit miles, loading assumptions, and kW and kWh loss calculations. Separate loss calculations for each line segment were made using the Company's power flow data by line segment and summarized by voltage level in this model.

**El Paso Electric Company
2017 Analysis of System Losses**

3.0 METHODOLOGY

3.1 Background

The objective of a Loss Study is to provide a reasonable set of energy (average) and demand (peak) loss expansion factors which account for system losses associated with the transmission and delivery of power to each voltage level over a designated period of time. The focus of this study is to identify the difference between total energy inputs and the associated sales with the difference being equitably allocated to all delivery levels. Several key elements are important in establishing the methodology for calculating and reporting the Company's losses. These elements are:

- Selection of voltage level of services,
- Recognition of losses associated with conductors, transformations, and other electrical equipment/components within voltage levels,
- Identification of customers and loads at various voltage levels of service,
- Review of generation or net power supply input at each level for the test period studied, and
- Analysis of kW and kWh sales by voltage levels within the test period.

The three major areas of data gathering and calculations in the loss analysis were as follows:

1. System Information (monthly and annual)
 - MWH generation and MWH sales.
 - Coincident peak estimates and net power supply input from all sources and voltage levels.
 - Customer load data estimates from available load research information, adjusted MWH sales, and number of customers in the customer groupings and voltage levels identified in the model.
 - System default values, such as power factor, loading factors, and load factors by voltage level.
2. High Voltage System (Appendix A)
 - Conductor and transformer information was summarized from a database by the Company which reflects the transmission system by voltage level. Extensive use was made of the Company's power flow capability with the

**El Paso Electric Company
2017 Analysis of System Losses**

losses calculated for eight separate load levels. Loss calculations were then performed hourly based on a linear interpolation of the eight power flow analyses and incorporated into the final loss calculations.

- Transformer information was developed in a database to model transformation at each voltage level. Substation power, step-up, and auto transformers were individually identified along with any operating data related to loads and losses.
- Power flow data of peak condition was the primary source of equipment loadings and derivation of load losses in the high voltage loss calculations.

3. Distribution System (Appendix B)

- Distribution Substations – data was developed for modeling each substation as to its size and loading. Loss calculations were performed from this data to determine load and no load losses separately for each transformer.
- Primary lines – Line loading and loss characteristics were reviewed from distribution feeder analyses. These loss results developed kW loss per MW of load by Primary Voltage level. The final estimated primary losses were developed iteratively after establishing all other loss characteristics.
- Line transformers – Losses in line transformers were based on each customer service group's size, as well as the number of customers per transformer. Accounting and load data provided the foundation with which to model the transformer loadings and calculate load and no load losses.
- Secondary network – Typical secondary networks were estimated for conductor sizes, lengths, loadings, and customer penetration for residential and small general service customers.
- Services – Typical services were estimated for each secondary service class of customers identified in the study with respect to type, length, and loading.

The loss analysis was thus performed by constructing the model in segments and subsequently calculating the composite until the constraints of peak demand and energy were met:

- Information as to the physical characteristics and loading of each transformer and conductor segment was modeled.

El Paso Electric Company 2017 Analysis of System Losses

- Conductors, transformers, and distribution were grouped by voltage level, and unadjusted losses were calculated.
- The loss factors calculated at each voltage level were determined by “compounding” the per-unit losses. Equivalent sales at the supply point were obtained by dividing sales at a specific level by the compounded loss factor to determine losses by voltage level.
- The resulting demand and energy loss expansion factors were then used to adjust all sales to the generation or input level in order to estimate the difference.
- Reconciliation of kW and kWh sales by voltage level using the reported system kW and kWh was accomplished by adjusting the initial loss factor estimates until the mismatch or difference was eliminated.

3.2 Calculations and Analysis

This section provides a discussion of the input data, assumptions, and calculations performed in the loss analysis. Specific appendices have been included in order to provide documentation of the input data utilized in the model.

3.2.1 Bulk and Transmission Lines

The transmission and subtransmission line losses were calculated based on a modeling of unique voltage levels identified by the Company’s power flow data and configuration for the entire integrated El Paso Electric Power System. Specific information as to length of line, type of conductor, voltage level, peak load, maximum load, etc., were provided based on Company records and utilized as data input in the loss model.

Actual MW and MVA line loadings were based on El Paso Electric’s peak loading conditions. Calculations of line losses were performed for each line segment separately and combined by voltage levels for reporting purposes as shown in the Discussion of Results (Section 4.0) of this report. The loss calculations consisted of determining a circuit current value based on MVA line loadings and evaluating the I^2R results for each line segment.

After system coincident peak hour losses were identified for each voltage level, a separate calculation was then made to develop annual average energy losses based on a loss factor approach. Load factors were determined for each voltage level based on system and customer load information. An estimate of the Hoebel coefficient (see Appendix B) was then used to calculate energy losses for the entire period being analyzed. The results are presented in Section 4.0 of this report.

El Paso Electric Company 2017 Analysis of System Losses

3.2.2 Transformers

The transformer loss analysis required several steps in order to properly consider the characteristics associated with various transformer types; such as, step-up, auto transformers, distribution substations, and line transformers. In addition, further efforts were required to identify both iron and winding losses within each of these transformer types in order to obtain reasonable peak (kW) and average energy (kWh) losses. While iron losses were considered essentially constant for each hour, recognition had to be made for the varying degree of winding losses due to hourly equipment loadings.

Standardized test data tables were used to represent no load information (fixed) and full load (variable) losses for different types and sizes of transformers. This test data was incorporated into the loss model to develop relationships representing winding and iron or core losses for the transformer loss calculation. These results were then totaled by various groups, as identified and discussed in Section 4.0.

The remaining miscellaneous losses considered in the loss study consisted of several areas which do not lend themselves to any reasonable level of modeling for estimating their respective losses and were therefore lumped together into a single loss factor as shown in Appendix A, Workpaper 2. The typical range of values for these losses is from 0.10% to 0.25%, and we have assumed a lower value to be conservative at this time. The losses associated with this loss factor include bus bars, unmetered station use, grounding transformers, cooling fans, heating and air conditioning requirements, and other remaining station use requirements.

3.2.3 Distribution System

The load data at the substation and customer level, coupled with primary and secondary network information, was sufficient to model the distribution system in adequate detail to calculate losses.

Primary Lines

Estimates were made by the Company of primary line losses by the different levels of distribution voltage. These estimates consider feeders per substation, voltage levels, loadings, total circuit miles, wire size, and single- to three-phase investment estimates. Our final recommendations and loss levels were derived by calculating all other loss categories with the final primary loss level estimated by subtraction.

**El Paso Electric Company
2017 Analysis of System Losses**

Line Transformers

Losses in line transformers were determined based on typical transformer sizes for each secondary customer service group and an estimated or calculated number of customers per transformer. Accounting records and estimates of load data provided the necessary database with which to model the loadings. These calculations also made it possible to determine separate winding and iron losses based on a table of representative losses for various transformer sizes.

Secondary Line Circuits

Calculations of secondary line circuit losses were performed for loads served through these secondary line investments. Estimates of typical conductor sizes, lengths, loadings and customer class penetrations were made to obtain total circuit miles and losses for the secondary network. Customer loads which do not have secondary line requirements were also identified so that a reasonable estimate of losses and circuit miles of the investments could be made.

Service Drops and Meters

Service drops were estimated for each secondary customer reflecting conductor size, length and loadings to obtain demand losses. A separate calculation was also performed using customer maximum demands to obtain kWh losses. Meter loss estimates were also made for each customer and incorporated into the calculations of kW and kWh losses included in the Summary Results.

El Paso Electric Company 2017 Analysis of System Losses

4.0 DISCUSSION OF RESULTS

A brief description of each Schedule and calculations is provided in **Appendix A**. A brief description of each Exhibit is provided in **Appendix B** as follows:

Exhibit 1 - Summary of Company Data

This exhibit reflects system information used to determine percent losses and a detailed summary of kW and kWh losses by voltage level. The loss factors developed in Exhibit 7 are also summarized by voltage level.

Exhibit 2 - Summary of Conductor Information

A summary of MW and MWH load and no load losses for conductors by voltage levels is presented. The sum of all calculated losses by voltage level is based on input data information provided in Appendix A. Percent losses are based on equipment loadings.

Exhibit 3 - Summary of Transformer Information

This exhibit summarizes transformer losses by various types and voltage levels throughout the system. Load losses reflect the winding portion of transformer losses while iron losses reflect the no load or constant losses. MWH losses are estimated using a calculated loss factor for winding and the test year hours times no load losses.

Exhibit 4 - Summary of Losses Diagram (2 Pages)

This loss diagram represents the inputs and output of power at system peak conditions. Page 1 details information from all points of the power system and what is provided to the distribution system for primary loads. This portion of the summary can be viewed as a “top down” summary into the distributor system.

Page 2 represents a summary of the development of primary line loads and distribution substations based on a “bottom up” approach. Basically, loadings are developed from the customer meter through the Company’s physical investments based on load research and other metered information by voltage level to arrive at MW and MVA requirements during peak load conditions by voltage levels.

Exhibit 5 - Summary of Sales and Calculated Losses

Summary of Calculated Losses represents a tabular summary of MW and MWH load and no load losses by discrete areas of delivery within each voltage level. Losses have been identified and are derived based on summaries obtained from Exhibits 2 and 3 and losses associated with meters, capacitors and regulators.

**El Paso Electric Company
2017 Analysis of System Losses**

Exhibit 6 - Development of Loss Factors, Unadjusted

This exhibit calculates demand and energy losses and loss factors by specific voltage levels based on sales level requirements. The actual results reflect loads by level and summary totals of losses at that level, or up to that level, based on the results as shown in Exhibit 5. Finally, the estimated values at generation are developed and compared to actual generation to obtain any difference or mismatch.

Exhibit 7 - Development of Loss Factors, Adjusted

The adjusted loss factors are the results of adjusting Exhibit 6 for any difference. All differences between estimated and actual are prorated to each level based on the ratio of each level's total load plus losses to the system total as shown on Exhibit 8. These new loss factors reflect an adjustment in losses due only to kW and kWh mismatch.

Exhibit 8 – Adjusted Losses and Loss Factors by Facility

These calculations present an expanded summary detail of Exhibit 7 for each segment of the power system with respect to the flow of power and associated losses from the receipt of energy at the meter to the generation for the Company's power system.

Exhibit 9 – Appendix B Only – Summary of Losses by Delivery Voltage

These calculations present a reformatted summary of the losses presented in Exhibits 7 and 8 by power system delivery segment as calculated by voltage level of service based on sales.

**El Paso Electric Company
2017 Analysis of System Losses**

Appendix A

**Results of El Paso Electric Company
Transmission 2017 System Loss Analysis
(69 kV – 345 kV)
for 69 kV and 115 to 345**



**Draft 1
APPENDIX A**

**EI Paso Electric Company
2017 Transmission Loss Analysis
With and Without GSU's**

Pages 1-2	Index
Schedule 1A, Page 3	Presents the summary loss results of the calculated hourly losses for the Company at the annual peak hour and for the annual average losses for all hours of the year Calculated loss factors are applicable to the metered (output) sales level. Section I shows transmission losses of greater than or equal to 115 kV including the GSU losses Section II shows the same numbers as Section 1 except that the GSU losses (A) have been removed from the losses in B and C
Schedule 1B, Page 4	Presents the summary loss results of the calculated hourly losses for only the 69 kV at the annual peak hour and for the annual average losses for all hours of the year Calculated loss factors are applicable to the metered (output) sales level Section I shows transmission losses equal to 69 kV Section II shows the same numbers as Section 1 except that the GSU losses (A) have been removed from the losses in B and C
Schedule 1C, Page 5	Presents the summary loss results of the calculated hourly losses for the Company at the annual peak hour and for the annual average losses for all hours of the year Calculated loss factors are applicable to the metered (output) sales level Section I shows transmission losses of greater than or equal to 69 kV including the GSU losses Section II shows the same numbers as Section 1 except that the GSU losses (A) have been removed from the losses in B and C
Schedule 2, Page 6	Section I shows the summary of the summer and winter peak hour MW and annual MWH losses for the system greater than or equal to 115 kV. Section II shows the summary of the summer and winter peak hour MW and annual MWH losses for the system equal to 69 kV Results are detailed by segment and season Summer (June, July, August, and September), Winter (all months excluding Summer months) Loss data is from Schedule 3
Schedule 2, Page 7	Section III shows the summary of the summer and winter peak hour MW and annual MWH losses for the total system Results are detailed by segment and season Summer (June, July, August, and September), Winter (all months excluding Summer months) Loss data is from Schedule 3
Schedule 3, Page 8	Summary of MW and MWH loss results by season and voltage level
Schedule 4, Page 9	Summary of seasonal peak hour MW and average MWH loss results for EI Paso Electric Company by voltage level from Appendices A (Winter-5832 hours) and B (Summer-2928 hours) hourly loss calculations

**Draft 1
 APPENDIX A**

**El Paso Electric Company
 2017 Transmission Loss Analysis
 With and Without GSU's**

Appendices:

- Page 10** A - Winter Hourly Power Flow Results
Page 11 B - Summer Hourly Power Flow Results

Detailed hourly calculation of losses for each identified type, voltage level, and season are based on eight unique power flow simulations of the Company's power system based on the following

Summer (June, July, August, September)		Winter (All other months)	
Percent	Load	Percent	Load
100	1947.8	100	1543.7
90	1753.0	90	1389.3
75	1460.9	75	1157.8
50	973.9	50	771.8

Workpapers:

- Page 12** Workpaper 1 presents detailed summary results of four separate power flows for two seasons for a total of eight unique simulations and loss results
 Adjustments or additions to the results are presented at the bottom of each workpaper

- Page 13** Workpaper 2 presents summary calculations for miscellaneous losses

- Pages 14-15** Workpaper 3 presents Corona Loss Calculations
 Page 14 presents the Corona loss estimate and calculations by voltage level for the peak in MW and the annual MWH for 2017
 Page 15 presents the pole miles by voltage level

EL PASO ELECTRIC COMPANY 2017 TRANSMISSION LOSS ANALYSIS
(Includes 115 kV to 500 Kv)

TRANSMISSION		LOSSES	PERCENT OF TOTAL TRANSMISSION	INPUT	OUTPUT	LOSS FACTOR (Input/Output)
I. WITH GSU LOSSES						
A. DEMAND						
Peak (MW) Summer						
1	Total Demand	45.6	100.0%	1,948	1,902	1.02399
2	Unmetered Station Use Adjustment	0.2				
3	Total Transmission Losses	45.9		1,948	1,902	1.02412
4	Demand Loss Factor					1.02412
B. ENERGY						
Annual MWH						
5	Total Energy	218,335	100.0%	8,440,085	8,221,749	1.02656
6	Unmetered Station Use Adjustment	1,045				
7	Total Transmission Losses	219,380		8,440,085	8,220,705	1.02669
8	Energy Loss Factor					1.02669
II. EXCLUDING GSU LOSSES						
A. GSU LOSSES						
9	Total Demand (Peak (MW) Summer)	3.4	7.4%	1,948	1,944	1.00174
10	Total Energy (Annual MWH)	16,926	7.8%	8,440,085	8,423,159	1.00201
B. DEMAND						
Peak (MW) Summer						
11	Total Demand	42.3	92.6%	1,948	1,906	1.02217
12	Unmetered Station Use Adjustment	0.2				
13	Total Transmission Losses	42.5		1,948	1,905	1.02230
14	Demand Loss Factor					1.02230
C. ENERGY						
Annual MWH						
15	Total Energy	201,409	92.2%	8,440,085	8,238,675	1.02445
16	Unmetered Station Use Adjustment	1,045				
17	Total Transmission Losses	202,454		8,440,085	8,237,631	1.02458
18	Energy Loss Factor					1.02458

EL PASO ELECTRIC COMPANY 2017 TRANSMISSION LOSS ANALYSIS
(Only 69 kV)

TRANSMISSION		LOSSES	PERCENT OF TOTAL TRANSMISSION	INPUT	OUTPUT	LOSS FACTOR (Input/Output)
I. WITH GSU LOSSES						
A. DEMAND						
Peak (MW) Summer						
1	Total Demand	6.8	100.0%	445	438	1.01559
2	Unmetered Station Use Adjustment	0.2				
3	Total Transmission Losses	7.0		445	438	1.01595
4	Demand Loss Factor					1.01595
B. ENERGY						
Annual MWH						
5	Total Energy	19,064	100.0%	1,949,000	1,929,936	1.00988
6	Unmetered Station Use Adjustment	696				
7	Total Transmission Losses	19,760		1,949,000	1,929,240	1.01024
8	Energy Loss Factor					1.01024
II. EXCLUDING GSU LOSSES						
A. GSU LOSSES						
9	Total Demand (Peak (MW) Summer)	0.2	2.9%	445	445	1.00045
10	Total Energy (Annual MWH)	1,143	6.0%	1,949,000	1,947,857	1.00059
B. DEMAND						
Peak (MW) Summer						
11	Total Demand	6.6	97.1%	445	438	1.01512
12	Unmetered Station Use Adjustment	0.2				
13	Total Transmission Losses	6.8		445	438	1.01549
14	Demand Loss Factor					1.01549
C. ENERGY						
Annual MWH						
15	Total Energy	17,921	94.0%	1,949,000	1,931,079	1.00928
16	Unmetered Station Use Adjustment	696				
17	Total Transmission Losses	18,617		1,949,000	1,930,383	1.00964
18	Energy Loss Factor					1.00964

EL PASO ELECTRIC COMPANY 2017 TRANSMISSION LOSS ANALYSIS
(Includes 69 kV to 500 Kv)

TRANSMISSION		LOSSES	PERCENT OF TOTAL TRANSMISSION	INPUT	OUTPUT	LOSS FACTOR (Input/Output)
I. WITH GSU LOSSES						
A. DEMAND		Peak (MW) Summer				
1	Total Demand	52.5	100.0%	1,948	1,895	1.02768
2	Unmetered Station Use Adjustment	0.4				
3	Total Transmission Losses	52.9		1,948	1,895	1.02790
4	Demand Loss Factor					1.02790
B. ENERGY		Annual MWH				
5	Total Energy	237,399	100.0%	8,440,085	8,202,686	1.02894
6	Unmetered Station Use Adjustment	1,741				
7	Total Transmission Losses	239,140		8,440,085	8,200,945	1.02916
8	Energy Loss Factor					1.02916
II. EXCLUDING GSU LOSSES						
A. GSU LOSSES						
9	Total Demand (Peak (MW) Summer)	3.6	6.8%	1,948	1,944	1.00184
10	Total Energy (Annual MWH)	18,068	7.6%	8,440,085	8,422,016	1.00215
B. DEMAND		Peak (MW) Summer				
11	Total Demand	48.9	93.2%	1,948	1,899	1.02574
12	Unmetered Station Use Adjustment	0.4				
13	Total Transmission Losses	49.3		1,948	1,899	1.02596
14	Demand Loss Factor					1.02596
C. ENERGY		Annual MWH				
15	Total Energy	219,330	92.4%	8,440,085	8,220,754	1.02668
16	Unmetered Station Use Adjustment	1,741				
17	Total Transmission Losses	221,071		8,440,085	8,219,013	1.02690
18	Energy Loss Factor					1.02690

EL PASO ELECTRIC COMPANY POWER FLOW RESULTS - SUMMARY OF LOSSES

	PEAK (SUMMER)		PEAK (WINTER)		ANNUAL	
	Total (MW)	% of Total System	Total (MW)	% of Total System	Total Annual (MWH)	% of Total System
I 115 kV to 500 kV						
1 Load (Peak MW, Annual MWH)	1,948	100.00%	1,544	79.25%	8,440,085	
Transmission Losses						
2 Transformers	4.8	10.5%	4.0	10.9%	25,434	11.6%
3 Transmission Lines	40.8	89.5%	33.0	89.1%	192,901	88.4%
4 Total Transmission Losses	45.6	100.0%	37.0	100.0%	218,335	100.0%
5 Losses % of Input (Line 4/Line 1)	2.34%		2.40%		2.59%	
6 Losses % of Output (Line 4/(Line 1/Line 4))	2.40%		2.46%		2.66%	
	SUMMER AVERAGE		WINTER AVERAGE		ANNUAL AVERAGE	
7 Load (All data in MWH)	3,471,084	41.13%	4,969,000	58.87%	8,440,085	100.00%
Transmission Losses						
8 Transformers	9,187	10.6%	16,247	12.3%	25,434	11.6%
9 Transmission Lines	77,478	89.4%	115,423	87.7%	192,901	88.4%
10 Total Transmission Losses	86,665	100.0%	131,670	100.0%	218,335	100.0%
11 Losses % of Input (Line 10/Line 7)	2.50%		2.65%		2.59%	
12 Losses % of Output (Line 10/(Line 7/Line 10))	2.56%		2.72%		2.66%	
	PEAK (SUMMER)		PEAK (WINTER)		ANNUAL	
	Total (MW)	% of Total System	Total (MW)	% of Total System	Total Annual (MWH)	% of Total System
II 69 kV						
13 Load (Peak MW, Annual MWH) (Appendix B, Exhibit 5, Line 11)	445		353	79.25%	1,949,000	
Transmission Losses						
14 Transformers	1.0	2.1%	0.8	2.1%	5,461	2.5%
15 Transmission Lines	5.9	12.8%	3.7	10.0%	13,602	6.2%
16 Total Transmission Losses	6.8	15.0%	4.5	12.2%	19,064	8.7%
17 Losses % of Input (Line 16/Line 13)	1.53%		1.28%		0.98%	
18 Losses % of Output (Line 16/(Line 13/Line 16))	1.56%		1.29%		0.99%	
	SUMMER AVERAGE		WINTER AVERAGE		ANNUAL AVERAGE	
19 Load (All data in MWH)	801,549	41.13%	1,147,451	58.87%	1,949,000	100.00%
Transmission Losses						
20 Transformers	2,063	2.4%	3,398	2.6%	5,461	2.5%
21 Transmission Lines	7,350	8.5%	6,252	4.7%	13,602	6.2%
22 Total Transmission Losses	9,413	10.9%	9,650	7.3%	19,064	8.7%
23 Losses % of Input (Line 22/Line 19)	1.17%		0.84%		0.98%	
24 Losses % of Output (Line 22/(Line 19/Line 22))	1.19%		0.85%		0.99%	

EL PASO ELECTRIC COMPANY POWER FLOW RESULTS - SUMMARY OF LOSSES

	PEAK (SUMMER)		PEAK (WINTER)		ANNUAL	
	Total (MW)	% of Total System	Total (MW)	% of Total System	Total Annual (MWH)	% of Total System
III <u>Total (Includes 69 kV to 500 Kv)</u>						
25 Load (Peak MW, Annual MWh)	1,948		1,544		8,440,085	
Transmission Losses						
26 Transformers	5.8	12.7%	4.8	13.0%	30,896	14.2%
27 Transmission Lines	46.7	102.3%	36.7	99.1%	206,503	94.6%
28 Total Transmission Losses	52.5	115.0%	41.5	112.2%	237,399	108.7%
29 Losses % of Input (Line 28/Line 25)	2.69%		2.69%		2.81%	
30 Losses % of Output (Line 28/(Line 25/Line 28))	2.77%		2.76%		2.89%	
	SUMMER AVERAGE		WINTER AVERAGE		ANNUAL AVERAGE	
31 Load (All data in MWh)	3,471,084		4,969,000		8,440,085	
Transmission Losses						
32 Transformers	11,252	13.0%	19,645	14.9%	30,896	14.2%
33 Transmission Lines	84,828	97.9%	121,675	92.4%	206,503	94.6%
34 Total Transmission Losses	96,081	110.9%	141,320	107.3%	237,399	108.7%
35 Losses % of Input (Line 34/Line 31)	2.77%		2.84%		2.81%	
26 Losses % of Output (Line 34/(Line 31/Line 34))	2.85%		2.93%		2.89%	

EL PASO ELECTRIC COMPANY POWER FLOW RESULTS - TOTAL TRANSMISSION

TRANSFORMER LOSSES MW							TRANSMISSION LINE LOSSES MW					Subtotal Transm Lines	Total Transmission Losses	
TIME	MW INPUT	345 kV	115 kV	69 kV	GSU - 115 kV	GSU - 69 kV	Subtotal Transformers	345 kV	Corona 345 kV to 138 kV	115 kV	69 kV			BELOW 69 kV
WINTER														
1 PEAK - MW	1,544	0.000	1.110	0.640	2.930	0.150	4.830	20.054	4.090	8.828	3.708	0.000	36.680	41.510
2 LOSS % TO INPUT		0.000%	0.072%	0.041%	0.190%	0.010%	0.313%	1.299%	0.265%	0.572%	0.240%	0.000%	2.376%	
3 LOSS % TO TOTAL LOSSES							11.636%						88.364%	100.000%
4														
5 WINTER MWH	4 969 000	0	5,347	2 721	10 900	677	19 645	66 017	23 853	25,553	6,252	0	121 675	141 320
6 LOSS % TO INPUT		0.000%	0.108%	0.055%	0.219%	0.014%	0.395%	1.329%	0.480%	0.514%	0.126%	0.000%	2.449%	
7 LOSS % TO TOTAL LOSSES							13.901%						86.099%	100.000%
SUMMER														
8 PEAK - MW	1 948	0.000	1.430	0.770	3.380	0.200	5.780	22.850	4.090	13.880	5.860	0.000	46.680	52.460
9 LOSS % TO INPUT		0.000%	0.073%	0.040%	0.174%	0.010%	0.297%	1.173%	0.210%	0.713%	0.301%	0.000%	2.397%	
10 LOSS % TO TOTAL LOSSES							11.018%						88.982%	100.000%
11														
12 SUMMER MWH	3 471 084	0	3 162	1 597	6 025	466	11,252	45 817	11 976	19 685	7 350	0	84 828	96 081
13 LOSS % TO INPUT		0.000%	0.091%	0.046%	0.174%	0.013%	0.324%	1.320%	0.345%	0.567%	0.212%	0.000%	2.444%	
14 LOSS % TO TOTAL LOSSES							11.711%						88.289%	100.000%
TOTAL ANNUAL														
15 PEAK - MW	1 948	0.000	1.430	0.770	3.380	0.200	5.780	22.850	4.090	13.880	5.860	0.000	46.680	52.460
16 ANNUAL MWH	8 440 085	0	8 509	4 318	16 926	1,143	30,696	111,834	35 828	45,239	13,602	0	206 503	237,399
17 LOSS % TO INPUT		0.000%	0.101%	0.051%	0.201%	0.014%	0.386%	1.325%	0.425%	0.536%	0.161%	0.000%	2.447%	
18 LOSS % TO TOTAL ANNUAL INPUT							13.014%						86.986%	100.000%
19 LOSS % TO TOTAL ANNUAL OUTPUT														8,202,686
20 (Input - Losses)														2.894%
LOSS FACTORS														
21 Demand														1 02768
22 Energy														1 02894

EL PASO ELECTRIC COMPANY POWER FLOW RESULTS

TRANSFORMER LOSSES MW							TRANSMISSION LINE LOSSES MW					Subtotal Transm Lines	Total Transmission Losses	
TIME	MW INPUT	345 kV	115 kV	69 kV	GSU -.115	GSU -.69	Subtotal Transformers	345 kV	Corona 345 kV to 138 kV	115 kV	69 kV			BELOW 69 kV
WINTER														
1 PEAK - MW	1 544	0 000	1 110	0 640	2 930	0 150	4 830	20 054	4 090	8 828	3 708	0 000	36 680	41 510
2 LOSS % TO INPUT		0 000%	0 072%	0 041%	0 190%	0 010%	0 313%	1 299%	0 265%	0 572%	0 240%	0 000%	2 376%	
3 LOSS % TO TOTAL LOSSES							11 636%						88 364%	100 000%
4														
5 WINTER MWH	4 969 000	0	5 347	2 721	10 900	677	19 645	66,017	23 853	25 553	6 252	0	121 675	141 320
6 LOSS % TO INPUT		0 000%	0 108%	0 055%	0 219%	0 014%	0 395%	1 329%	0 480%	0 514%	0 126%	0 000%	2 449%	
7 LOSS % TO TOTAL LOSSES							13 901%						86 099%	100 000%
SUMMER														
8 PEAK - MW	1,948	0 000	1 430	0 770	3 380	0 200	5 780	22 850	4 090	13 880	5 860	0 000	46 680	52 460
9 LOSS % TO INPUT		0 000%	0 073%	0 040%	0 174%	0 010%	0 297%	1 173%	0 210%	0 713%	0 301%	0 000%	2 397%	
10 LOSS % TO TOTAL LOSSES							11 018%						88 982%	100 000%
11														
12 SUMMER MWH	3 471,084	0	3,162	1 597	6,025	466	11 250	45 817	11,976	19 685	7 350	0	84 828	96,079
13 LOSS % TO INPUT		0 000%	0 091%	0 046%	0 174%	0 013%	0 324%	1 320%	0 345%	0 567%	0 212%	0 000%	2 444%	
14 LOSS % TO TOTAL LOSSES							11 709%						88 291%	100 000%
TOTAL ANNUAL														
15 PEAK - MW	1 948	0 000	1 430	0 770	3 380	0 200	5 780	22 850	4 090	13 880	5 860	0 000	46 680	52 460
16 ANNUAL MWH	8 440 085	0	8 509	4 318	16,925	1,143	30,896	111 834	35 828	45 239	13 602	0	206 503	237 399
17 LOSS % TO INPUT		0 000%	0 101%	0 051%	0 201%	0 014%	0 366%	1 325%	0 425%	0 536%	0 161%	0 000%	2 447%	
18 LOSS % TO TOTAL ANNUAL INPUT							13 014%						86 986%	100 000%
19 LOSS % TO TOTAL ANNUAL OUTPUT														
20 (Input - Losses)														
LOSS FACTORS														
21 Demand														
22 Energy														
PERCENT RANGE														
		Winter Hours	Summer Hours	Total Hours	Percent of Total Hours									
23 91-100		31	41	72	0 82%									
24 76-90		277	540	817	9 33%									
25 51-75		3 581	1 473	5 054	57 69%									
26 1-50		1 943	874	2 817	32 16%									
27 Total Hours		5 832	2,928	8 760	100 00%									

NOTES:

- (1) Summer Period includes June, July, August, and September
(2) Winter Period includes all non Summer months

EL PASO ELECTRIC COMPANY POWER FLOW RESULTS - WINTER SUMMARY

TIME	MW	TRANSFORMER LOSSES MW					Subtotal Transformers	TRANSMISSION LINE LOSSES MW				Subtotal Transm Lines	Total Transmission Losses
		345 kV	115 kV	69 kV	GSU - 115 kV	GSU - 69 kV		345 kV	115 kV	69 kV	BELOW 69 kV		
1 PEAK - MW	1,544	0.000	1.110	0.640	2.930	0.150	4.830	20.054	8.828	3.708	0.000	32.590	37.420
2 LOSS % TO INPUT		0.000%	0.072%	0.041%	0.000%	0.000%	0.313%	1.299%	0.572%	0.240%	0.000%	2.111%	2.111%
3 LOSS % TO TOTAL							12.908%					87.092%	100.000%
4													
5 WINTER MWH	4,969,000	0	5,347	2,721	10,900	677	19,645	66,017	25,553	6,252	0	97,822	117,469
6 LOSS % TO INPUT		0.000%	0.108%	0.055%	0.219%	0.014%	0.395%	1.329%	0.514%	0.126%	0.000%	1.969%	1.969%
7 LOSS % TO TOTAL							16.724%					83.276%	100.000%
8													
9													
10													

EL PASO ELECTRIC COMPANY POWER FLOW RESULTS - SUMMER SUMMARY

		TRANSFORMER LOSSES MW						TRANSMISSION LINE LOSSES MW							
						GSU - 115 kV	GSU - 69 kV						Subtotal Transm Lines	Total Transmission Losses	
TIME	MW	345 kV	115 kV	69 kV	kV	kV	Subtotal Transformers	345 kV	115 kV	69 kV	BELOW 69 kV				
1 PEAK - MW	1,948	0.000	1.430	0.770	3.380	0.200	5.780	22.850	13.880	5.860	0.000	42.590	48.370		
2 LOSS % TO INPUT		0.000%	0.073%	0.040%	0.174%	0.010%	0.297%	1.173%	0.713%	0.301%	0.000%	2.187%	2.187%		
3 LOSS % TO TOTAL							11.950%					88.050%	100.000%		
4															
5 SUMMER MWH	3,471,064	0	3,162	1,597	6,025	466	11,250	45,817	19,685	7,350	0	72,853	84,103		
6 LOSS % TO INPUT		0.000%	0.091%	0.046%	0.174%	0.013%	0.324%	1.320%	0.567%	0.212%	0.000%	2.099%	2.099%		
7 LOSS % TO TOTAL							13.377%					86.623%	100.000%		
8															
9															
10															

El Paso Electric Company

MW	13 Summer 100% LOAD 1,947.8	13 Summer 90% LOAD 1,753.0	13 Summer 75% LOAD 1,460.9	13 Summer 50% LOAD 973.9	13 Winter 100% LOAD 1,543.7	13 Winter 90% LOAD 1,389.3	13 Winter 75% LOAD 1,157.8	13 Winter 50% LOAD 771.8
TRANSFORMER LOSSES								
KV LEVEL	kW	kW	kW	kW	kW	kW	kW	kW
ALL DISTRIBUTION XFMRs*	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
BELOW 69 kV	10,720 0	8,960 0	6,920 0	4,090 0	7,310 0	6,290 0	4,950 0	3,230 0
69 kV	770 0	710 0	620 0	500 0	640 0	580 0	540 0	460 0
115 kV	1,430 0	1,260 0	1,160 0	1,060 0	1,110 0	1,060 0	1,080 0	900 0
345 kV								
GSU - 69 kV	200 0	160 0	200 0	140 0	150 0	120 0	120 0	120 0
GSU - 115 kV	3,380 0	3,450 0	2,660 0	1,540 0	2,930 0	2,770 0	2,130 0	1,840 0
SUBTOTAL	16,500.0	14,540.0	11,560.0	7,330.0	12,140.0	10,820.0	8,820.0	6,550.0
LINE LOSSES								
KV LEVEL	kW	kW	kW	kW	kW	kW	kW	kW
BELOW 69 kV	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
69 kV	5,860 0	4,544 0	3,280 0	1,786 0	3,708 0	2,997 0	2,100 0	1,104 0
115 kV	13,880 0	12,154 0	8,730 0	4,840 0	8,828 0	8,374 0	6,543 0	3,784 0
345 kV	22,850 0	17,112 0	15,890 0	16,153 0	20,054 0	16,265 0	17,380 0	9,640 0
SUBTOTAL	42,590.0	33,810.0	27,900.0	22,779.0	32,590.0	27,636.0	26,023.0	14,528.0
COMBINED LOSSES (Lines & Xfmr)								
KV LEVEL	kW	kW	kW	kW	kW	kW	kW	kW
GSU	3,580 0	3,610 0	2,860 0	1,680 0	3,080 0	2,890 0	2,250 0	1,960 0
69 kV	6,630 0	5,254 0	3,900 0	2,286 0	4,348 0	3,577 0	2,640 0	1,564 0
115 kV	15,310 0	13,414 0	9,890 0	5,900 0	9,938 0	9,434 0	7,623 0	4,684 0
345 kV	22,850 0	17,112 0	15,890 0	16,153 0	20,054 0	16,265 0	17,380 0	9,640 0
Other	11,042 0	8,970 0	6,920 0	4,090 0	7,882 0	7,088 0	5,684 0	3,230 0
TOTAL EPE System Losses	59,412.0	48,360.0	39,460.0	30,109.0	45,302.0	39,254.0	35,577.0	21,078.0

Notes

(1) Source file for loss data "EPE_Substation_Losses_2017.xlsx"

(2) Source for summer and winter peaks is 2017 FERC Form 1, page 400
Monthly Peak (MW, 60 minute integration) Summer 1,935 0

Winter 1,531 0

El Paso Electric Company

Workpaper 2
Page 13 of 15

Workpaper 2 (Miscellaneous Losses)

	(Includes 115 kV to 500 Kv)	(Only 69 kV)	(Includes 69 kV to 500 Kv)
A Transmission Unmetered Energy Losses			
Transmission Substations	9	6	15
Assumed Unmetered Station Use	25 kVA	25 kVA	25 kVA
Hours	8760	8760	8760
Load Factor	53%	53%	53%
Unmetered Use (MWH)	1,045	696	1,741
Annual Hourly Energy	8,221,749	1,929,936	8,202,686
Unmetered Losses @	0.01% of Transmission Load	0.04% of Transmission Load	0.02% of Transmission Load
Peak Load (Schedule 1 w/o Losses)	1,902 MW *	438 MW *	1,895 MW *
	0.01% =	0.04% =	0.02% =
	0.2 MW	0.2 MW	0.4 MW
Annual (Schedule 1 w/o Losses)	8,221,749 MWH *	1,929,936 MWH *	8,202,686 MWH *
	0.01% =	0.04% =	0.02% =
	1,045 MWH	696 MWH	1,741 MWH
B Distribution Unmetered Energy Losses			
Distribution Substations	67	31	98
Estimated Large Substation Factor	50%	50%	50%
Assumed Unmetered Station Use	15 kVA	15 kVA	15 kVA
Hours	8760	8760	8760
Load Factor	60%	60%	60%
Unmetered Use (MWH)	2,641	1,222	3,863
Annual Hourly Energy	5,350,000	1,765,000	7,135,000
Unmetered Losses @	0.05% of Distribution Load	0.07% of Distribution Load	0.05% of Distribution Load
Peak Load	1,250 MW *	420 MW *	1,680 MW *
	0.05% =	0.07% =	0.05% =
	0.6 MW	0.3 MW	0.9 MW
Annual	8,221,749 MWH *	1,929,936 MWH *	8,202,686 MWH *
	0.05% =	0.07% =	0.05% =
	4,059 MWH	1,336 MWH	4,441 MWH

El Paso Electric Company

Workpaper 3
 Corona Losses
 Page 14 of 15

CORONA LOSS ESTIMATE

	VOLTAGE (kV)	MILES	CORONA PEAK LOSS FACTOR (MW Mile)	CORONA LOSSES (MW)	CORONA WINTER HOURS & LOSSES (MWH)	CORONA SUMMER HOURS & LOSSES (MWH)	CORONA TOTAL LOSSES (MWH)
A Fair Weather Corona Losses							
1	Hours				5,832	2,928	
2	500	165	0.0060	0.990	5,774	2,899	8,672
3	345	946	0.0030	2.839	16,558	8,313	24,871
4	115	522	0.0005	0.261	1,521	764	2,285
5	69	216	0.0000	0.000	0	0	0
6	TOTAL	1,849		4 090	23,853	11,976	35,828

NOTE:

(1) Line 6 loss results included in Schedules 3 and 4.

El Paso Electric Company

Workpaper 3
Corona Losses
Page 15 of 15

Pole Miles

	Voltage	Total
1	500	165
2	345	946
3	115	522
4	69	216
5	Total Pole Miles	<u>1,849</u>

NOTE:

(1) Source 2017 FERC Form 1 El Paso Electric Company,

**El Paso Electric Company
2017 Analysis of System Losses**

Appendix B

**Results of El Paso Electric Company 2017
Loss Analysis – Transmission and
Distribution
(with Generation Step Up (GSU) Losses)**



EL PASO ELECTRIC 2017 LOSS ANALYSIS

EL PASO ELECTRIC

EXHIBIT 1

SUMMARY OF COMPANY DATA

ANNUAL PEAK	1,935 MW
ANNUAL SYSTEM INPUT	8,448,832 MWH
ANNUAL SALES	7,903,475 MWH
SYSTEM LOSSES @ INPUT	545,357 or 6.45%
SYSTEM LOAD FACTOR	49.8%

SUMMARY OF LOSSES - OUTPUT RESULTS

SERVICE	KV	— MW — Input	% TOTAL	— MWH — Input	% TOTAL
TRANS	345,115	45.6 2.36%	33.60%	219,637 2.60%	40.27%
SUBTRANS	69	7.0 0.36%	5.15%	19,748 0.23%	3.62%
PRIMARY	35,12,1	56.5 2.92%	41.69%	152,870 1.81%	28.03%
SECONDARY	120/240, to, 477	26.5 1.37%	19.57%	153,102 1.81%	28.07%
TOTAL		135.6 7.01%	100.00%	545,357 6.45%	100.00%

SUMMARY OF LOSS FACTORS

SERVICE	KV	CUMMULATIVE SALES EXPANSION FACTORS			
		DEMAND (Peak) d	1/d	ENERGY (Annual) e	1/e
TOT TRANS	345,115	1.02412	0.97645	1.02669	0.97400
SUBTRAN	69	1.02790	0.97286	1.02916	0.97167
PRIMARY	35,12,1	1.06265	0.94104	1.05123	0.95126
SECONDARY	120/240, to, 477	1.08212	0.92411	1.07850	0.92722

EXHIBIT 2

--- MWH LOSSES ---		
LOAD	NO LOAD	TOTAL

0	0	0
<u>0</u>	<u>0</u>	<u>0</u>
0	0	0
0	0	0
<u>0</u>	<u>5</u>	<u>5</u>
0	5	5
0	0	0
0	0	0
0	0	0
<u>0</u>	<u>1</u>	<u>1</u>
0	1	1
103,621	2,614	106,235
2,491	0	2,491
10,605	7,558	18,163
116,717	10,178	126,895

EL PASO ELECTRIC 2017 LOSS ANALYSIS

SUMMARY OF TRANSFORMER INFORMATION

EXHIBIT 3

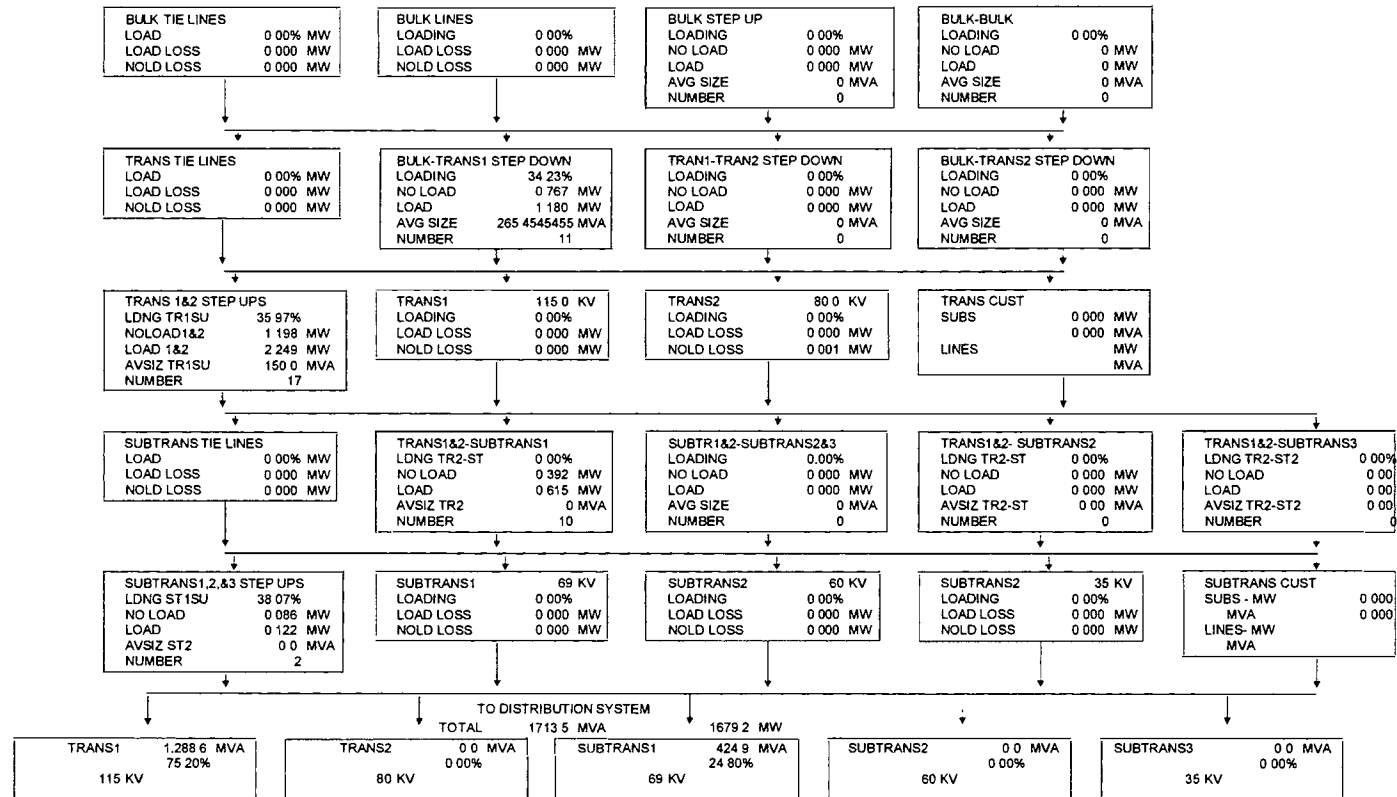
DESCRIPTION	KV	CAPACITY	NUMBER	AVERAGE	LOADING	MVA	MW LOSSES			MWH LOSSES		
	VOLTAGE	MVA	TRANSFMR	SIZE	%	LOAD	LOAD	NO LOAD	TOTAL	LOAD	NO LOAD	TOTAL
BULK STEP-UP	345	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0	0
BULK - BULK		0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0	0
BULK - TRANS1	115	2,920.0	11	265.5	34.23%	999	1.180	0.767	1.947	2,491	6,718	9,209
BULK - TRANS2	80	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0	0
TRANS1 STEP-UP	115	2,550.6	17	150.0	35.97%	917	2.249	1.198	3.447	5,173	8,812	13,986
TRANS1 - TRANS2	80	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0	0
TRANS1-SUBTRANS1	69	1,160.4	10	116.0	34.05%	395	0.615	0.392	1.007	1,674	3,432	5,106
TRANS1-SUBTRANS2	60	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0	0
TRANS1-SUBTRANS3	35	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0	0
TRANS2 STEP-UP	80	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0	0
TRANS2-SUBTRANS1	69	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0	0
TRANS2-SUBTRANS2	60	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0	0
TRANS2-SUBTRANS3	35	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0	0
SUBTRAN1 STEP-UP	69	154.4	2	77.2	38.07%	59	0.122	0.085	0.207	294	745	1,038
SUBTRAN2 STEP-UP	60	0.0	0	0.0	0.00%	0	0.000	0.001	0.001	0	0	0
SUBTRAN3 STEP-UP	35	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0	0
SUBTRAN1-SUBTRAN2	60	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0	0
SUBTRAN1-SUBTRAN3	35	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0	0
SUBTRAN2-SUBTRAN3	35	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0	0
DISTRIBUTION SUBSTATIONS												
TRANS1 -	115	23	997.1	22	45.3	51.38%	512	2.209	1.173	3.382	5,296	10,274
TRANS1 -	115	12	1,706.9	44	38.8	45.36%	774	2.527	1.458	3.985	6,155	12,775
TRANS1 -	115	1	12.8	1	12.8	15.94%	2	0.101	0.083	0.183	230	723
TRANS2 -	80	23	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0
TRANS2 -	80	12	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0
TRANS2 -	80	1	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0
SUBTRAN1-	69	23	109.4	4	27.4	21.08%	23	0.039	0.043	0.081	100	375
SUBTRAN1-	69	12	781.7	22	35.5	47.95%	375	1.572	1.025	2.597	3,774	8,976
SUBTRAN1-	69	1	50.1	5	10.0	53.97%	27	0.103	0.086	0.189	249	751
SUBTRAN2-	60	23	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0
SUBTRAN2-	60	12	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0
SUBTRAN2-	60	1	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0
SUBTRAN3-	35	23	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0
SUBTRAN3-	35	12	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0
SUBTRAN3-	35	1	0.0	0	0.0	0.00%	0	0.000	0.000	0.000	0	0
PRIMARY - PRIMARY			153.8	54	2.8	38.00%	58	0.157	0.291	0.447	357	2,546
LINE TRANSFMR			5,136.0	92,180	55.7	33.41%	1,716	6.492	14.250	20.742	11,023	124,832
TOTAL			15,733	92,372			17.365	20.850	38.215	36,816	180,959	217,774

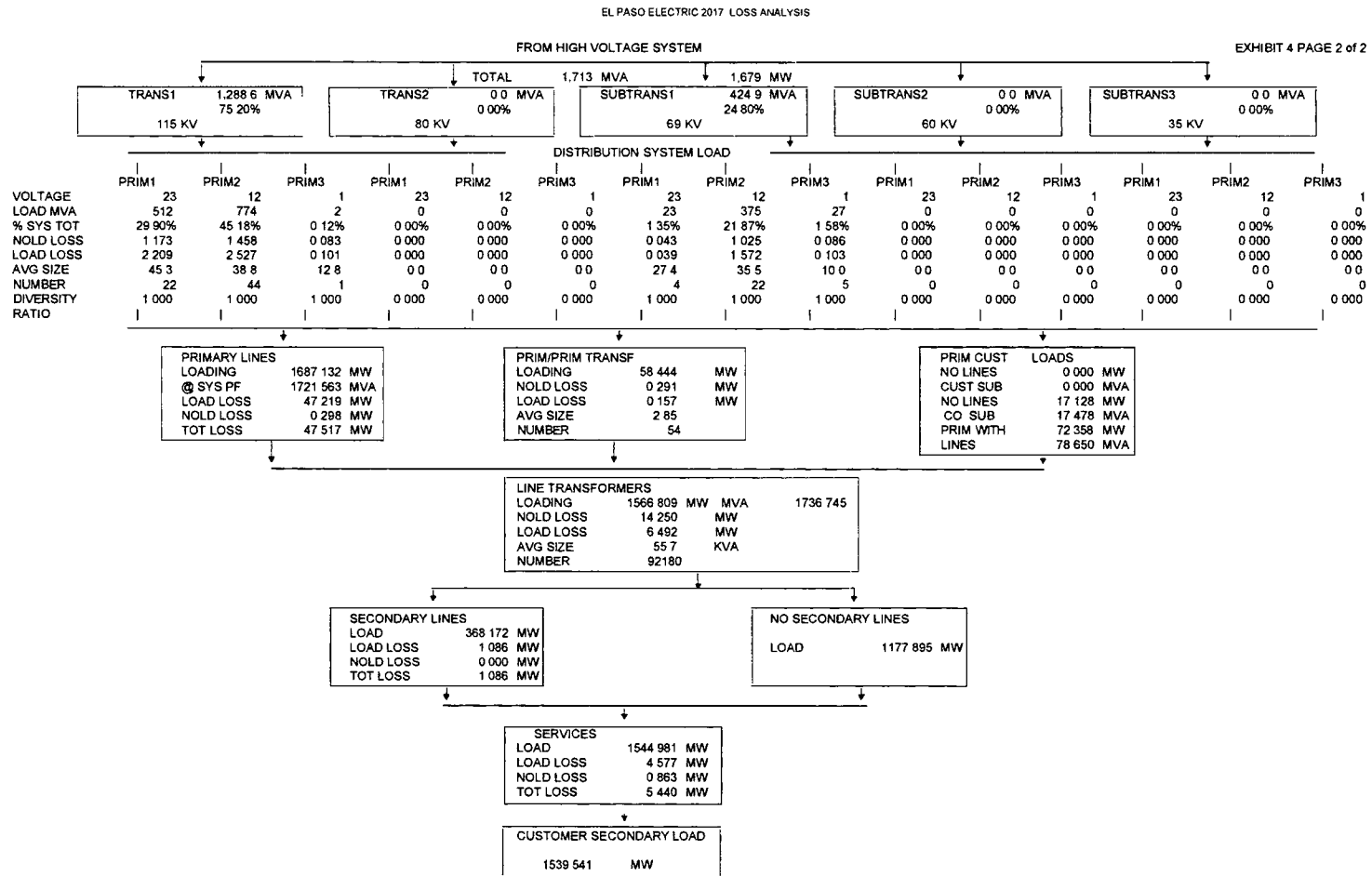
EL PASO ELECTRIC 2017 LOSS ANALYSIS

SUMMARY OF LOSSES DIAGRAM - DEMAND MODEL - SYSTEM PEAK

1935 MW

EXHIBIT 4 PAGE 1 of 2





EL PASO ELECTRIC 2017 LOSS ANALYSIS

SUMMARY of SALES and CALCULATED LOSSES

EXHIBIT 5

LOSS # AND LEVEL	MW LOAD	NO LOAD	+	LOAD	=	TOT LOSS	EXP FACTOR	CUM EXP FAC	MWH LOAD	NO LOAD	+	LOAD	=	TOT LOSS	EXP FACTOR	CUM EXP FAC
1 BULK XFMMR	0.0	0.00		0.00		0.00	0.000000	0.000000	0	0		0		0	0	0
2 BULK LINES	0.0	0.00		0.00		0.00	0.000000	0.000000	0	0		0		0	0	0
3 TRANS1 XFMR	979.5	0.77		1.18		1.95	1.001991	0.000000	4,547.623	6.718		2.491		9.209	1.0020292	0.0000000
4 TRANS1 LINES	1,878.5	1.20		2.25		3.45	1.001838	0.479453	8,042.892	8.812		5.173		13.986	1.0017419	0.4353357
5 TRANS2TR1 SD	0.0	0.00		0.00		0.00	0.000000	0.000000	0	0		0		0	0	0.0000000
6 TRANS2BLK SD	0.0	0.00		0.00		0.00	0.000000	0.000000	0	0		0		0	0	0.0000000
7 TRANS2 LINES	0.0	0.00		0.00		0.00	0.000000	0.000000	0	5		0		5	0	0.0000000
115 KV > TOTAL TRAN	1,935.0	6.84		38.74		45.57	1.024120	1.024120	8,448.832	59.883		159.754		219.637	1.0266900	1.0266900
8 STR1BLK SD																
9 STR1T1 SD	387.2	0.39		0.61		1.01	1.002606	1.026789	1,695.936	3.432		1,674		5.106	1.0030200	1.0297906
10 SRT1T2 SD	0.0	0.00		0.00		0.00	0.000000	0.000000	0	0		0		0	0	0.0000000
11 SUBTRANS1 LINES	444.8	1.05		5.94		6.98	1.015950	1.027900	1,948.224	9.176		10,572		19,748	1.0102400	1.0291600
12 STR2T1 SD	0.0	0.00		0.00		0.00	0.000000	0.000000	0	0		0		0	0.0000000	0.0000000
13 STR2T2 SD	0.0	0.00		0.00		0.00	0.000000	0.000000	0	0		0		0	0	0.0000000
14 STR2S1 SD	0.0	0.00		0.00		0.00	0.000000	0.000000	0	0		0		0	0	0.0000000
15 SUBTRANS2 LINES	0.0	0.00		0.00		0.00	0.000000	0.000000	0	0		0		0	0	0.0000000
16 STR3T1 SD	0.0	0.00		0.00		0.00	0.000000	0.000000	0	0		0		0	0	0.0000000
17 STR3T2 SD	0.0	0.00		0.00		0.00	0.000000	0.000000	0	0		0		0	0	0.0000000
18 STR3S1 SD	0.0	0.00		0.00		0.00	0.000000	0.000000	0	0		0		0	0	0.0000000
19 STR3S2 SD	0.0	0.00		0.00		0.00	0.000000	0.000000	0	0		0		0	0	0.0000000
20 SUBTRANS3 LINES	0.0	0.00		0.00		0.00	0.000000	0.000000	0	1		0		1	0	0.0000000
21 SUBTRANS TOTAL	444.8	1.05		5.94		6.98	1.015950	1.027900	1,948.224	9.176		10,572		19,748	1.0102400	1.0291600
DISTRIBUTION SUBST																
TRANS1	1,262.8	2.71		4.84		7.55	1.006015	1.030280	5,360,707	23,772		11,680		35,452	1.0066573	1.0335250
TRANS2	0.0	0.00		0.00		0.00	0.000000	0.000000	0	0		0		0	0	0.0000000
SUBTR1	416.4	1.15		1.71		2.87	1.006934	1.035027	1,767,658	10,102		4,123		14,225	1.0081129	1.0375095
SUBTR2	0.0	0.00		0.00		0.00	0.000000	0.000000	0	0		0		0	0	0.0000000
SUBTR3	0.0	0.00		0.00		0.00	0.000000	0.000000	0	0		0		0	0	0.0000000
WEIGHTED AVERAGE	1,679.2	3.87		6.55		10.42	1.006242	1.031457	7,128,365	33,874		15,804		49,678	1.0070179	1.0345131
PRIMARY INTRCHNGE	0.0						0.000000		0						0.0000000	
PRIMARY LINES	1,686.8	0.30		47.38		47.67	1.029084	1.061456	6,952,404	2,614		103,978		106,592	1.0155704	1.0506209
LINE TRANSF	1,566.8	14.25		6.49		20.74	1.013416	1.075697	6,360,483	124,832		11,023		135,854	1.0218253	1.0735509
SECONDARY	1,546.1	0.00		1.09		1.09	1.000703	1.076453	6,224,629	0		2,491		2,491	1.0004003	1.0739807
SERVICES	1,545.0	0.86		4.58		5.44	1.003534	1.080257	6,222,139	7,558		10,605		18,163	1.0029276	1.0771248
TOTAL SYSTEM																
		27.16		110.75		137.92			237,936			314,226		552,162		

EL PASO ELECTRIC 2017 LOSS ANALYSIS

DEVELOPMENT of LOSS FACTORS
 UNADJUSTED
 DEMAND

EXHIBIT 6

LOSS FACTOR LEVEL	CUSTOMER SALES MW a	CALC LOSS TO LEVEL b	SALES MW @ GEN c	CUM PEAK EXPANSION FACTORS d	1/d
BULK LINES	0.0	0.0	0.0	0.00000	0.00000
TRANS SUBS	0.0	0.0	0.0	0.00000	0.00000
TRANS LINES	162.0	3.9	165.9	1.02412	0.97645
TOTAL TRANS	0.0	0.0	0.0	0.00000	0.00000
SUBTRANS	8.4	0.2	8.6	1.02790	0.97286
PRIM SUBS	17.1	0.5	17.7	1.03146	0.96950
PRIM LINES	72.4	4.4	76.8	1.06146	0.94210
SECONDARY	<u>1,539.5</u>	<u>123.6</u>	<u>1,663.1</u>	1.08026	0.92571
TOTALS	1,799.4	132.7	1,932.0		

DEVELOPMENT of LOSS FACTORS
 UNADJUSTED
 ENERGY

LOSS FACTOR LEVEL	CUSTOMER SALES MWH a	CALC LOSS TO LEVEL b	SALES MWH @ GEN c	CUM ANNUAL EXPANSION FACTORS d	1/d
BULK LINES	0	0	0	0.00000	0.00000
TRANS SUBS	0	0	0	0.00000	0.00000
TRANS LINES	1,054,548	28,146	1,082,694	1.02669	0.97400
TOTAL TRANS	0	0	0	0.00000	0.00000
SUBTRANS	31,436	917	32,353	1.02916	0.97167
PRIM SUBS	128,187	4,424	132,611	1.03451	0.96664
PRIM LINES	485,328	24,568	509,896	1.05062	0.95182
SECONDARY	<u>6,203,976</u>	<u>478,481</u>	<u>6,682,457</u>	1.07712	0.92840
TOTALS	7,903,475	536,535	8,440,010		

ESTIMATED VALUES AT GENERATION

LOSS FACTOR AT VOLTAGE LEVEL	MW	MWH
BULK LINES	0.00	0
TRANS SUBS	0.00	0
TRANS LINES	165.86	1,082,694
SUBTRANS SUBS	0.00	0
SUBTRANS LINES	8.61	32,353
PRIM SUBS	17.67	132,611
PRIM LINES	76.80	509,896
SECONDARY	<u>1,663.10</u>	<u>6,682,457</u>
SUBTOTAL	1,932.04	8,440,010
ACTUAL ENERGY	1,935.00	8,448,832
MISSMATCH	(2.96)	(8,822)
% MISSMATCH	-0.15%	-0.10%

EL PASO ELECTRIC 2017 LOSS ANALYSIS

DEVELOPMENT of LOSS FACTORS
 ADJUSTED
 DEMAND

EXHIBIT 7

LOSS FACTOR LEVEL	CUSTOMER SALES MW a	SALES ADJUST b	CALC LOSS TO LEVEL c	SALES MW @ GEN d	CUM PEAK EXPANSION FACTORS e	f=1/e
BULK LINES	0.0	0.0	0.0	0.0	0.00000	0.00000
TRANS SUBS	0.0	0.0	0.0	0.0	0.00000	0.00000
TRANS LINES	162.0	0.0	3.9	165.9	1.02412	0.97645
TOTAL TRANS	0.0	0.0	0.0	0.0	0.00000	0.00000
SUBTRANS	8.4	0.0	0.2	8.6	1.02790	0.97286
PRIM SUBS	17.1	0.0	0.5	17.7	1.03158	0.96938
PRIM LINES	72.4	0.0	4.5	76.9	1.06265	0.94104
SECONDARY	<u>1,539.5</u>	<u>0.0</u>	126.4	<u>1,666.0</u>	1.08212	0.92411
			135.6			
TOTALS	1,799.4	0.0	135.6	1,935.0	1.07539	<COMPOSITE

DEVELOPMENT of LOSS FACTORS
 ADJUSTED
 ENERGY

LOSS FACTOR LEVEL	CUSTOMER SALES MWH a	SALES ADJUST b	CALC LOSS TO LEVEL c	SALES MWH @ GEN d	CUM ANNUAL EXPANSION FACTORS e	f=1/e
BULK LINES	0	0	0	0	0.00000	0.00000
TRANS SUBS	0	0	0	0	0.00000	0.00000
TRANS LINES	1,054,548	0	28,146	1,082,694	1.02669	0.97400
TOTAL TRANS	0	0	0	0	0.00000	0.00000
SUBTRANS	31,436	0	917	32,353	1.02916	0.97167
PRIM SUBS	128,187	0	4,444	132,631	1.03467	0.96650
PRIM LINES	485,328	0	24,865	510,193	1.05123	0.95126
SECONDARY	<u>6,203,976</u>	<u>0</u>	486,985	<u>6,690,961</u>	1.07850	0.92722
			545,357			
TOTALS	7,903,475	0	545,357	8,448,832	1.06900	<COMPOSITE

ESTIMATED VALUES AT GENERATION

LOSS FACTOR AT
 VOLTAGE LEVEL

	MW	MWH
BULK LINES	0.00	0
TRANS SUBS	0.00	0
TRANS LINES	165.86	1,082,694
SUBTRANS SUBS	0.00	0
SUBTRANS LINES	8.61	32,353
PRIM SUBS	17.67	132,631
PRIM LINES	76.89	510,193
SECONDARY	<u>1,665.97</u>	<u>6,690,961</u>
	1,935.00	8,448,832
ACTUAL ENERGY	1,935.00	8,448,832
MISSMATCH	0.00	0
% MISSMATCH	0.00%	0.00%

EL PASO ELECTRIC 2017 LOSS ANALYSIS

Adjusted Losses and Loss Factors by Facility

EXHIBIT 8

Unadjusted Losses by Segment				
	MW	Unadjusted	MWH	Unadjusted
Service Drop Losses	5.44	5.11	18,163	17,255
Secondary Losses	1.09	1.02	2,491	2,366
Line Transformer Losses	20.74	19.47	135,854	129,067
Primary Line Losses	47.67	44.75	106,592	101,267
Distribution Substation Losses	10.42	9.78	49,678	47,196
Subtransmission Losses	6.98	6.98	19,748	19,748
<u>Transmission System Losses</u>	<u>45.57</u>	<u>45.57</u>	<u>219,637</u>	<u>219,637</u>
Total	137.92	132.68	552,162	536,535

Mismatch Allocation by Segment			
	MW		MWH
Service Drop Losses	-0.19		-512
Secondary Losses	-0.04		-70
Line Transformer Losses	-0.72		-3,832
Primary Line Losses	-1.65		-3,006
Distribution Substation Losses	-0.36		-1,401
Subtransmission Losses	0.00		0
<u>Transmission System Losses</u>	<u>0.00</u>		<u>0</u>
Total	-2.96		-8,822

Adjusted Losses by Segment				
	MW	% of Total	MWH	% of Total
Service Drop Losses	5.30	3.9%	17,767	3.3%
Secondary Losses	1.06	0.8%	2,437	0.4%
Line Transformer Losses	20.19	14.9%	132,899	24.4%
Primary Line Losses	46.41	34.2%	104,273	19.1%
Distribution Substation Losses	10.14	7.5%	48,597	8.9%
Subtransmission Losses	6.98	5.1%	19,748	3.6%
<u>Transmission System Losses</u>	<u>45.57</u>	<u>33.6%</u>	<u>219,637</u>	<u>40.3%</u>
Total	135.65	100.0%	545,357	100.0%

Loss Factors by Segment			
	MW		MWH
Retail Sales from Service Drops	1539.54		6,203,976
<u>Adjusted Service Drop Losses</u>	<u>5.30</u>		<u>17,767</u>
Input to Service Drops	1544.84		6,221,743
Service Drop Loss Factor	1.00344		1.00286
Output from Secondary	1544.84		6,221,743
<u>Adjusted Secondary Losses</u>	<u>1.06</u>		<u>2,437</u>
Input to Secondary	1545.89		6,224,180
Secondary Conductor Loss Factor	1.00068		1.00039
Output from Line Transformers	1545.89		6,224,180
<u>Adjusted Line Transformer Losses</u>	<u>20.19</u>		<u>132,899</u>
Input to Line Transformers	1566.08		6,357,078
Line Transformer Loss Factor	1.01306		1.02135
Secondary Composite	1.01724		1.02468
Retail Sales from Primary	72.36		485,328
Req. Whis Sales from Primary	0.00		0
<u>Input to Line Transformers</u>	<u>1566.08</u>		<u>6,357,078</u>
Output from Primary Lines	1638.44		6,842,406
<u>Adjusted Primary Line Losses</u>	<u>46.41</u>		<u>104,273</u>
Input to Primary Lines	1684.85		6,946,679
Primary Line Loss Factor	1.02832		1.01524
Output PI from Distribution Substations	1684.85		6,946,679
Req. Whis Sales from Substations	0.00		0
Retail Sales from Substations	17.13		128,187
Total Output from Distribution Substations	1701.98		7,074,866
<u>Adjusted Distribution Substation Losses</u>	<u>10.14</u>		<u>48,597</u>
Input to Distribution Substations	1712.12		7,123,463
Distribution Substation Loss Factor	1.00596		1.00687
FROM SUBTRANS	400.93		1,719,811
Retail Sales at from SubTransmission	1.59		7,761
Req. Whis Sales from SubTransmission	6.78		23,675
<u>Input to Distribution Substations</u>	<u>400.93</u>		<u>1,768,408</u>
Output from SubTransmission	409.30		1,799,844
<u>Adjusted SubTransmission System Losses</u>	<u>6.98</u>		<u>19,748</u>
Input to SubTransmission	416.29		1,819,591
SubTransmission Loss Factor	1.01706		1.01097
FROM TRANS TO DIST SUBS	0.00		0
Retail Sales at from Transmission	156.11		1,015,336
Req. Whis Sales from Transmission	5.84		39,212
<u>Input Subtransmission</u>	<u>416.29</u>		<u>1,819,591</u>
Output from Transmission	1889.43		8,229,195
<u>Adjusted Transmission System Losses</u>	<u>45.57</u>		<u>219,637</u>
Input to Transmission	1935.00		8,448,832
Transmission Loss Factor	1.02412		1.02669

DEMAND MW			SUMMARY OF LOSSES AND LOSS FACTORS BY DELIVERY VOLTAGE							EXHIBIT 9
SERVICE LEVEL			SALES MW	LOSSES	SECONDARY	PRIMARY	SUBSTATION	SUBTRANS	TRANSMISSION	PAGE 1 of 2
1	SERVICES									
2	SALES		1,539.54		1,539.5					
3	LOSSES			5.3	5.3					
4	INPUT				1,544.8					
5	EXPANSION FACTOR		1.00344							
6	SECONDARY									
7	SALES				1.1	1.1				
8	LOSSES			1.1	1,545.9					
9	INPUT									
10	EXPANSION FACTOR		1.00068							
11	LINE TRANSFORMER									
12	SALES				20.2	20.2				
13	LOSSES			20.2	1,566.1					
14	INPUT									
15	EXPANSION FACTOR		1.01306							
16	PRIMARY									
17	SECONDARY				1,566.1					
18	SALES		72.36			72.4				
19	LOSSES			46.4	44.4	2.0				
20	INPUT									
21	EXPANSION FACTOR		1.02832							
22	SUBSTATION									
23	PRIMARY				1,610.4	74.4				
24	SALES		17.1				17.1			
25	LOSSES			10.1	9.6	0.4	0.1			
26	INPUT				1,620.0	74.9	17.2			
27	EXPANSION FACTOR		1.00596							
28	SUB-TRANSMISSION									
29	DISTRIBUTION SUBS				360.8	34.4				
30	SALES		8.37				0.0	8.4		
31	LOSSES			7.0	6.2	0.6	0.0	0.14		
32	INPUT				367.0	35.0	0.0	8.51		
33	EXPANSION FACTOR		1.01706							
34	TRANSMISSION									
35	SUBTRANSMISSION				367.0	35.0		8.5		
36	DISTRIBUTION SUBS				1,222.4	40.4	17.2			
37	SALES		161.96						162.0	
38	LOSSES			45.6	38.3	1.8	0.4	0.2	3.9	
39	INPUT				1,668.1	77.3	17.6	8.7	165.9	
40	EXPANSION FACTOR		1.02412							
41	TOTALS	LOSSES	CALCULATED	135.6	125.0	4.9	0.5	0.3	3.9	
			EXHIBIT 7	135.6	126.4	4.5	0.5	0.2	3.9	
42		% OF TOTAL		100%	93.21%	3.34%	0.38%	0.26%	2.88%	
43		SALES	1,799.4		1,539.5	72.4	17.1	8.4	162.0	
44		% OF TOTAL	100.00%		85.56%	4.02%	0.95%	0.47%	9.00%	
45		INPUT	1,935.0		1,666.0	76.9	17.6	8.6	165.9	
46	CUMMULATIVE EXPANSION LOSS FACTORS				1.08212	1.06265	NA	1.02780	1.02412	
	(from meter to system input)									

ENERGY MWH		SUMMARY OF LOSSES AND LOSS FACTORS BY DELIVERY VOLTAGE							EXHIBIT 9
SERVICE LEVEL		SALES	LOSSES	SECONDARY	PRIMARY	SUBSTATION	SUBTRANS	TRANSMISSION	PAGE 2 of 2
1	SERVICES								
2	SALES	6,203,976		6,203,976					
3	LOSSES		17,767	17,767					
4	INPUT			6,221,743					
5	EXPANSION FACTOR	1.00286							
6	SECONDARY								
7	SALES								
8	LOSSES		2,437	2,437					
9	INPUT			6,224,180					
10	EXPANSION FACTOR	1.00039							
11	LINE TRANSFORMER								
12	SALES								
13	LOSSES		132,899	132,899					
14	INPUT			6,357,078					
15	EXPANSION FACTOR	1.02135							
16	PRIMARY								
17	SECONDARY			6,357,078					
18	SALES	485,328 000		485,328					
19	LOSSES		104,273	96,877	7,396				
20	INPUT								
21	EXPANSION FACTOR	1.01524							
22	SUBSTATION								
23	PRIMARY			6,453,955	492,724				
24	SALES	128,187				128,187			
25	LOSSES		48,597	44,332	3,384	881			
26	INPUT			6,498,287	496,109	129,068			
27	EXPANSION FACTOR	1.00687							
28	SUB-TRANSMISSION								
29	DISTRIBUTION SUBS			1,508,452	218,288	0 000			
30	SALES	31,436				0 000	31,436		
31	LOSSES		19,748	16,550	2,395	0 000	345		
32	INPUT			1,525,002	220,683		31,781		
33	EXPANSION FACTOR	1.01097							
34	TRANSMISSION								
35	SUBTRANSMISSION			1,525,002	220,683		31,781		
36	DISTRIBUTION SUBS			5,034,640	277,821	129,068			
37	SALES	1,054,548						1,054,548	
38	LOSSES		219,637	175,077	13,305	3,445	848	28,146	
39	INPUT			6,734,719	511,809	132,512	32,629	1,082,694	
40	EXPANSION FACTOR	1.02669							
41	TOTALS	LOSSES	Calculated	545,357	485,939	26,481	4,325	1,193	28,146
42	% OF TOTAL	EXHIBIT 7		545,239	486,985	24,865	4,325	917	28,146
				100%	89 10%	4 86%	0 79%		5 16%
43	SALES	7,903,475		6,203,976	485,328	128,187	31,436	1,054,548	
44	% OF TOTAL	100 00%		78 50%	6 14%	1 62%	0 40%	13 34%	
45	INPUT	8,448,714		6,690,961	510,193	132,512	32,353	1,082,694	
46	CUMMULATIVE EXPANSION LOSS FACTORS			1.07860	1.05123	NA	1.02916	1.02669	
	(from meter to system input)								

**El Paso Electric Company
2017 Analysis of System Losses**

Appendix C

Discussion of Hoebel Coefficient



**El Paso Electric Company
 2017 Analysis of System Losses**

COMMENTS ON HOEBEL COEFFICIENTS

The Hoebel constant represents an established industry standard relationship between peak losses and average losses and is used in a loss study to estimate energy losses from peak demand losses. H. F. Hoebel described this relationship in his article, "Cost of Electric Distribution Losses," Electric Light and Power, March 15, 1959.

Within any loss evaluation study, peak demand losses can readily be calculated given equipment resistance and approximate loading. Energy losses, however, are much more difficult to determine given their time-varying nature. This difficulty can be reduced by the use of an equation which relates peak load losses (demand) to average losses (energy). Once the relationship between peak and average losses is known, average losses can be estimated from the known peak load losses.

Within the electric utility industry, the relationship between peak and average losses is known as the loss factor. For definitional purposes, loss factor is the ratio of the average power loss to the peak load power loss, during a specified period of time. This relationship is expressed mathematically as follows:

$$(1) \ F_{LS} \cong A_{LS} \div P_{LS} \quad \text{where: } \begin{array}{ll} F_{LS} & = \text{Loss Factor} \\ A_{LS} & = \text{Average Losses} \\ P_{LS} & = \text{Peak Losses} \end{array}$$

The loss factor provides an estimate of the degree to which the load loss is maintained throughout the period in which the loss is being considered. In other words, loss factor is the ratio of the actual kWh losses incurred to the kWh losses which would have occurred if full load had continued throughout the period under study.

Examining the loss factor expression in light of a similar expression for load factor indicates a high degree of similarity. The mathematical expression for load factor is as follows:

$$(2) \ F_{LD} \cong A_{LD} \div P_{LD} \quad \text{where: } \begin{array}{ll} F_{LD} & = \text{Load Factor} \\ A_{LD} & = \text{Average Load} \\ P_{LD} & = \text{Peak Load} \end{array}$$

This load factor result provides an estimate of the degree to which the load loss is maintained throughout the period in which the load is being considered. Because of the similarities in definition, the loss factor is sometimes called the "load factor of losses." While the definitions are similar, a strict equating of the two factors cannot be made. There does exist, however, a relationship between these two factors which is dependent upon the shape of the load duration curve. Since resistive losses vary as the square of the load, it can be shown mathematically that the loss factor can vary between the extreme limits of load factor and load factor squared. The



**El Paso Electric Company
 2017 Analysis of System Losses**

relationship between load factor and loss factor has become an industry standard and is as follows:

$$(3) F_{LS} \cong H * F_{LD}^2 + (1-H) * F_{LD}$$

where: F_{LS} = Loss Factor
 F_{LD} = Load Factor
 H = Hoebel Coefficient

As noted in the attached article, the suggested value for H (the Hoebel coefficient) is 0.7. The exact value of H will vary as a function of the shape of the utility's load duration curve. In recent years, values of H have been computed directly for a number of utilities based on EEI load data. It appears on this basis, the suggested value of 0.7 should be considered a lower bound and that values approaching unity may be considered a reasonable upper bound. Based on experience, values of H have ranged from approximately 0.85 to 0.95. The standard default value of 0.9 is generally used.

Inserting the Hoebel coefficient estimate gives the following loss factor relationship using Equation (3):

$$(4) F_{LS} \cong 0.90 * F_{LD}^2 + 0.10 * F_{LD}$$

Once the Hoebel constant has been estimated and the load factor and peak losses associated with a piece of equipment have been estimated, one can calculate the average, or energy losses as follows:

$$(5) A_{LS} \cong P_{LS} * [H * F_{LD}^2 + (1-H) * F_{LD}]$$

where: A_{LS} = Average Losses
 P_{LS} = Peak Losses
 H = Hoebel Coefficient
 F_{LD} = Load Factor

Loss studies use this equation to calculate energy losses at each major voltage level in the analysis.

kWh Sales at the Meter by Rate Class for the Texas Jurisdiction.

COL	MNEMONIC	Description
(a)	S01	Residential
(b)	S02	Small General Service
(c)	S07	Outdoor Recreational
(d)	S08	Street Lighting
(e)	S09	Traffic Lighting
(f)	S11	Water Pumping
(g)	S15	Electrolytic Refining
(h)	SWH	Water Heating
(i)	S22	Irrigation
(j)	S24	General Service
(k)	S25	Large Power
(l)	S26	Petroleum Refinery
(m)	S28	Area Lighting
(n)	S30	Electric Furnace
(o)	S31	Military
(p)	S34	Cotton Gin
(q)	S38	Interruptible
(r)	S41	City & County
(s)	SRGEC	Total RGEC
(t)	TEXAS	Total Texas Energy Sales

Notes. 1. Schedule O-7.1 requires monthly kWh sales at the meter for the Company's proposed 12-month Rate Year plus the 24 months following the Rate Year by rate class and by voltage level for the Texas jurisdiction. EPE does not forecast sales classified by voltage level. Monthly sales at the meter by revenue and rate class are provided herein.

EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-7.1: RETAIL SALES AT METER
SPONSOR: GEORGE NOVELA
PREPARER: ENEDINA SOTO
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-7.1
PAGE 2 OF 8

Month	(a) S01	(b) S02	(c) S07	(d) S08	(e) S09	(f) S11	(g) S15	(h) SWH	(i) S22	(j) S24	(k) S25
RATE YEAR											
Jan-22	182,040	21,398	313	3,559	227	13,180	3,393	524	118	110,038	47,191
Feb-22	156,367	20,880	386	3,108	228	13,763	3,578	493	143	109,288	49,666
Mar-22	134,761	19,354	404	3,152	228	13,473	3,333	437	228	103,941	47,978
Apr-22	136,273	19,266	243	2,809	227	13,269	2,950	406	571	107,872	47,980
May-22	179,274	21,478	257	2,667	227	14,251	2,905	347	496	116,956	48,699
Jun-22	258,123	26,767	236	2,422	227	15,890	3,928	311	506	140,937	56,051
Jul-22	333,629	31,708	234	2,629	228	17,330	3,801	279	498	159,451	57,148
Aug-22	339,568	31,107	256	2,834	228	15,800	3,909	246	475	159,536	59,079
Sep-22	325,713	30,932	355	2,976	228	15,766	4,273	265	452	163,855	61,114
Oct-22	218,371	24,574	335	3,306	228	15,144	3,802	285	338	134,984	53,949
Nov-22	144,788	19,119	351	3,447	228	13,953	3,830	326	227	108,655	50,561
Dec-22	158,351	19,392	312	3,701	228	13,205	3,433	398	151	104,628	45,501
TWENTY FOUR MONTHS FOLLOWING RATE YEAR											
Jan-23	185,582	21,642	316	3,597	230	13,291	3,410	470	119	110,231	47,312
Feb-23	159,409	21,118	390	3,141	230	13,878	3,596	443	144	109,482	49,794
Mar-23	137,383	19,576	407	3,186	230	13,586	3,350	393	230	104,124	48,100
Apr-23	138,924	19,486	245	2,839	230	13,380	2,964	365	578	108,061	48,105
May-23	182,763	21,724	259	2,696	230	14,371	2,920	312	501	117,164	48,828
Jun-23	263,145	27,073	238	2,448	230	16,024	3,947	280	512	141,184	56,198
Jul-23	340,121	32,071	236	2,657	230	17,476	3,820	251	504	159,726	57,302
Aug-23	346,176	31,464	258	2,865	230	15,933	3,929	221	481	159,814	59,238
Sep-23	332,050	31,286	358	3,008	230	15,899	4,295	238	457	164,145	61,279
Oct-23	222,620	24,855	339	3,341	230	15,272	3,821	256	342	135,222	54,091
Nov-23	147,605	19,338	354	3,484	230	14,070	3,849	293	229	108,849	50,692
Dec-23	161,431	19,613	315	3,741	230	13,316	3,450	357	153	104,823	45,617
Jan-24	188,388	21,845	318	3,635	232	13,367	3,425	423	120	110,204	47,359
Feb-24	161,819	21,317	392	3,175	233	13,958	3,611	398	146	109,457	49,844
Mar-24	139,460	19,760	410	3,220	233	13,664	3,364	353	232	104,099	48,147
Apr-24	141,025	19,670	246	2,869	232	13,457	2,977	328	583	108,034	48,154
May-24	185,527	21,929	261	2,725	232	14,453	2,932	280	506	117,139	48,881
Jun-24	267,125	27,329	239	2,474	232	16,115	3,964	251	516	141,150	56,257
Jul-24	345,265	32,375	237	2,685	232	17,576	3,836	225	508	159,682	57,364
Aug-24	351,412	31,761	260	2,895	233	16,024	3,946	198	485	159,774	59,302
Sep-24	337,072	31,582	360	3,040	233	15,990	4,313	214	461	164,107	61,345
Oct-24	225,987	25,089	341	3,377	233	15,359	3,837	230	345	135,191	54,147
Nov-24	149,837	19,520	357	3,521	233	14,151	3,866	263	231	108,826	50,743
Dec-24	163,872	19,797	317	3,781	233	13,392	3,465	321	154	104,808	45,661

EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-7.1. RETAIL SALES AT METER
SPONSOR: GEORGE NOVELA
PREPARER: ENEDINA SOTO
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-7.1
PAGE 3 OF 8

Month	(l) S26	(m) S28	(n) S30	(o) S31	(p) S34	(q) S38	(r) S41	(s) SRGEC	(t) TEXAS
RATE YEAR									
Jan-22	26,368	2,656	1,883	25,893	449	26,043	14,945	3,513	483,731
Feb-22	23,663	2,313	1,828	23,945	258	25,914	16,715	4,036	456,571
Mar-22	25,464	2,354	1,690	21,481	11	25,950	15,388	4,227	423,855
Apr-22	26,761	2,065	1,725	23,721	7	27,859	13,770	5,244	433,016
May-22	26,817	1,983	1,650	23,060	6	31,367	15,543	6,733	494,716
Jun-22	27,995	1,827	1,839	27,106	5	39,914	17,523	7,779	629,383
Jul-22	29,468	1,944	1,800	26,580	5	39,596	17,756	8,413	732,497
Aug-22	26,144	2,115	1,611	26,274	5	41,616	20,592	8,745	740,141
Sep-22	27,691	2,215	1,728	26,223	6	41,464	23,552	5,638	734,448
Oct-22	27,068	2,466	1,375	23,487	7	30,971	18,648	3,970	563,308
Nov-22	25,583	2,556	1,643	22,057	326	22,374	14,395	3,475	437,894
Dec-22	25,535	2,725	1,365	24,442	587	22,301	13,326	4,225	443,805
TWENTY FOUR MONTHS FOLLOWING RATE YEAR									
Jan-23	26,500	2,689	1,893	26,189	455	26,178	15,072	3,577	488,751
Feb-23	23,781	2,341	1,837	24,220	262	26,049	16,856	4,110	461,080
Mar-23	25,591	2,383	1,698	21,727	11	26,085	15,519	4,305	427,883
Apr-23	26,894	2,090	1,733	23,993	7	28,008	13,886	5,340	437,127
May-23	26,951	2,008	1,658	23,324	6	31,545	15,674	6,856	499,788
Jun-23	28,134	1,849	1,848	27,416	5	40,149	17,671	7,921	636,272
Jul-23	29,615	1,967	1,808	26,885	5	39,835	17,906	8,566	740,982
Aug-23	26,274	2,141	1,619	26,575	5	41,866	20,766	8,905	748,759
Sep-23	27,829	2,242	1,737	26,523	6	41,711	23,751	5,741	742,786
Oct-23	27,203	2,496	1,381	23,756	7	31,147	18,806	4,042	569,228
Nov-23	25,710	2,587	1,651	22,310	330	22,491	14,516	3,538	442,128
Dec-23	25,662	2,758	1,371	24,722	594	22,417	13,439	4,302	448,312
Jan-24	26,614	2,715	1,901	26,693	459	26,292	15,158	3,641	492,790
Feb-24	23,884	2,363	1,845	24,686	264	26,163	16,953	4,184	464,691
Mar-24	25,702	2,406	1,706	22,145	11	26,200	15,608	4,382	431,101
Apr-24	27,010	2,110	1,741	24,454	8	28,132	13,966	5,435	440,431
May-24	27,067	2,027	1,665	23,773	6	31,688	15,764	6,979	503,833
Jun-24	28,256	1,867	1,856	27,944	5	40,334	17,773	8,063	641,751
Jul-24	29,743	1,986	1,816	27,402	5	40,021	18,010	8,720	747,691
Aug-24	26,387	2,162	1,626	27,086	5	42,060	20,886	9,065	755,567
Sep-24	27,949	2,264	1,744	27,033	6	41,904	23,888	5,844	749,351
Oct-24	27,320	2,520	1,387	24,213	7	31,289	18,914	4,115	573,901
Nov-24	25,821	2,612	1,658	22,739	334	22,590	14,600	3,602	445,502
Dec-24	25,773	2,785	1,377	25,198	601	22,515	13,516	4,379	451,945

EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-7.1: SALES AND DEMAND DATA
SPONSOR: GEORGE NOVELA
PREPARER: ENEDINA SOTO
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-7.1
PAGE 4 OF 8

Schedule O-7.1 requires kWh sales at the source (busbar) by rate class and by voltage level for the Texas jurisdiction. EPE does not forecast sales at the source by rate class or voltage level.

EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-7.1: SALES AND DEMAND DATA
SPONSOR: GEORGE NOVELA
PREPARER: ENEDINA SOTO
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-7.1
PAGE 5 OF 8

COL	DESCRIPTION
(a)	Total System sales at the meter Native System retail and wholesale sales at the meter.
(b)	Company Use
(c)	Internal System Losses: (native system losses) line losses and unaccounted for energy in EPE's control area
(d)	Wheeling Losses. Losses associated with Off-System wheeling.
(e)	Total System Sales at the source (net energy output to lines) Also includes allocated off-system wheeling losses.

Month	(a) Total System Sales @ the Meter	(b) Company Use	(c) Internal System Losses	(d) Wheeling Losses	(e) Total System @ the Source
RATE YEAR					
Jan-22	622,404,301	1,163,636	42,676,092	(2,225,090)	664,018,939
Feb-22	586,219,242	1,273,379	39,886,652	(2,843,866)	624,535,407
Mar-22	538,975,967	1,025,793	36,345,568	(1,960,689)	574,386,639
Apr-22	547,286,043	952,742	36,755,352	(2,272,309)	582,721,827
May-22	623,238,381	1,016,997	42,264,280	(2,857,550)	663,662,108
Jun-22	788,353,653	956,537	55,087,969	(3,346,004)	841,052,154
Jul-22	922,246,682	1,103,104	65,434,457	(3,626,908)	985,157,334
Aug-22	931,628,564	1,213,221	65,945,432	(3,139,511)	995,647,705
Sep-22	925,372,156	973,723	65,390,884	(3,332,379)	988,404,385
Oct-22	707,947,556	982,057	48,953,999	(4,841,261)	753,042,351
Nov-22	554,371,012	963,131	37,366,892	(4,161,994)	588,539,041
Dec-22	568,834,074	1,415,537	38,656,730	(2,503,939)	606,402,402

TWENTY FOUR MONTHS FOLLOWING RATE YEAR

Jan-23	628,138,167	1,174,109	42,904,224	(2,225,090)	669,991,409
Feb-23	591,359,983	1,284,839	39,933,716	(2,843,866)	629,734,673
Mar-23	543,550,095	1,035,025	36,243,363	(1,960,689)	578,867,794
Apr-23	551,946,310	961,316	36,590,444	(2,272,309)	587,225,761
May-23	628,963,565	1,026,150	42,291,283	(2,857,550)	669,423,448
Jun-23	796,087,821	965,146	55,933,330	(3,346,004)	849,640,293
Jul-23	931,782,031	1,113,032	66,899,238	(3,626,908)	996,167,393
Aug-23	941,300,953	1,224,140	67,354,788	(3,139,511)	1,006,740,371
Sep-23	934,750,265	982,487	66,719,667	(3,332,379)	999,120,040
Oct-23	714,598,342	990,896	49,427,653	(4,841,261)	760,175,629
Nov-23	559,164,822	971,799	37,221,085	(4,161,994)	593,195,712
Dec-23	573,976,910	1,428,277	38,686,785	(2,503,939)	611,588,033
Jan-24	632,885,222	1,184,676	43,059,955	(2,225,090)	674,904,763
Feb-24	595,602,466	1,296,403	39,923,504	(2,843,866)	633,978,506
Mar-24	547,314,989	1,044,340	36,089,800	(1,960,689)	582,488,440
Apr-24	555,801,870	969,968	36,374,087	(2,272,309)	590,873,617
May-24	633,661,506	1,035,385	42,247,127	(2,857,550)	674,086,468
Jun-24	802,403,846	973,832	56,665,073	(3,346,004)	856,696,747
Jul-24	939,520,553	1,123,049	68,218,530	(3,626,908)	1,005,235,224
Aug-24	949,145,072	1,235,157	68,623,030	(3,139,511)	1,015,863,748
Sep-24	942,339,427	991,329	67,914,458	(3,332,379)	1,007,912,836
Oct-24	719,999,322	999,814	49,822,825	(4,841,261)	765,980,700
Nov-24	563,100,174	980,545	37,042,943	(4,161,994)	596,961,668
Dec-24	578,241,553	1,441,131	38,675,790	(2,503,939)	615,854,535

1. Schedule O-7.1 requires monthly total system kWh sales at the source (busbar) and at the meter
The required data is included herein

EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-7.1: JURISDICTIONAL COINCIDENT DEMAND AT SOURCE
SPONSOR: GEORGE NOVELA
PREPARER: ENEDINA SOTO
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-7.1
PAGE 6 OF 8

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Small	Large	Street Lights		Rio	
		Commercial	Commercial	And Other	Total	Grande	Total
		And	And	Public	Texas	Electric	Texas
Year	Residential	Industrial	Industrial	Authority	Retail	Cooperative	Demand
2022	933	409	220	129	1,692	20	1,711
2023	944	414	222	131	1,711	20	1,731
2024	950	417	223	132	1,722	20	1,742

NOTES:

1. All demand data is in MW.
2. Schedule O-7.1 requires coincident peak demand, in MW, by rate class at the source (busbar) and at the meter for the Texas jurisdiction for the proposed rate year and 24 months past the rate year. EPE does not forecast peak demand by rate class by month at the source or at the meter. Coincident peak demand projected by revenue class level and jurisdictional level, at the source on an annual basis, is provided herein.

EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-7.1: SALES AND DEMAND DATA
SPONSOR: GEORGE NOVELA
PREPARER: ENEDINA SOTO
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-7.1
PAGE 7 OF 8

Schedule O-7.1 requires monthly noncoincident (class) peak MW by rate class at the source (busbar) and at the meter. EPE does not forecast noncoincident peak data.

EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-7.1: SALES AND DEMAND DATA
SPONSOR: GEORGE NOVELA
PREPARER: ENEDINA SOTO
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-7.1
PAGE 8 OF 8

Total Native System Peak at the Source:

RATE YEAR

Jan-22	1,081
Feb-22	1,140
Mar-22	1,028
Apr-22	1,379
May-22	1,636
Jun-22	1,908
Jul-22	2,155
Aug-22	2,106
Sep-22	1,854
Oct-22	1,437
Nov-22	1,045
Dec-22	1,104

TWENTY FOUR MONTHS FOLLOWING RATE YEAR

Jan-23	1,097
Feb-23	1,159
Mar-23	1,049
Apr-23	1,396
May-23	1,654
Jun-23	1,924
Jul-23	2,177
Aug-23	2,140
Sep-23	1,873
Oct-23	1,453
Nov-23	1,061
Dec-23	1,123
Jan-24	1,109
Feb-24	1,174
Mar-24	1,065
Apr-24	1,407
May-24	1,665
Jun-24	1,932
Jul-24	2,190
Aug-24	2,164
Sep-24	1,883
Oct-24	1,462
Nov-24	1,073
Dec-24	1,137

Notes:

1. All Demand data is in MW.
2. Total Native System Demand does not include an allocation from off-system wheeling losses.
3. Schedule O-7.1 requires system peak kW at the source (busbar) and at the meter.
4. EPE does not forecast peak demand at the meter.

EL PASO ELECTRIC COMPANY
 2021 TEXAS RATE CASE FILING
 SCHEDULE O-7.2: HISTORICAL SALES DATA
 SPONSOR: GEORGE NOVELA
 PREPARER: ENEDINA SOTO
 FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-7.2
 PAGE 1 OF 15

NOTES.

1. All Energy data is in kWh.
2. Schedule O-7.2 requires monthly kWh sales at the meter by rate class and by voltage level for the Texas jurisdiction. EPE does not track or forecast sales classified by the voltage level. Monthly sales at the meter by revenue and rate class are provided herein
- 3 All data is used in fuel calculation.

- (a) S01 Residential
- (b) SEVC Electric Vehicle
- (c) SWH Water Heating
- (d) S02 Small General Service
- (e) S07 Outdoor Recreational
- (f) S08 Street Lighting
- (g) S09 Traffic Signals
- (h) S11 Water Pumping
- (i) S15 Electrolytic Refining
- (j) S22 Irrigation
- (k) S24 General Service
- (l) S25 Large Power
- (m) S26 Petroleum Refinery
- (n) S28 Area Lighting
- (o) S30 Electric Furnace
- (p) S31 Military
- (q) S34 Cotton Gin
- (r) S38 Interruptible
- (s) S41 City & County
- (t) SRGEC Total RGEC
- (u) TEXAS Total Texas Energy Sales

Selected rates have been combined for internal reporting purposes

Rate	Includes
S25	TXRT25 Large Power
	TXRT25A Large Power Off-Peak Rate
	TXRT45 Supplemental, Maintenance and Power Backup
S11	TXRT11 Municipal Pumping
	TXRT11 TOU Municipal Pumping Time of Use

EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-7.2. HISTORICAL SALES DATA
SPONSOR GEORGE NOVELA
PREPARER ENEDINA SOTO
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-7.2
PAGE 2 OF 15

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
MONTH	S01	SEVC	SWH	S02	S07	S08	S09	S11
Jan-10	159,151,405	0	2,373,276	24,453,544	379,431	4,382,320	0	11,155,264
Feb-10	124,236,045	0	2,050,719	22,186,290	431,767	3,914,037	0	9,921,907
Mar-10	112,373,128	0	2,012,813	21,229,236	439,152	3,965,123	0	10,308,820
Apr-10	130,820,633	0	2,287,592	26,415,913	451,234	2,784,038	0	4,380,591
May-10	115,301,803	0	1,666,687	23,350,306	388,362	2,654,059	0	8,491,554
Jun-10	174,766,944	0	1,404,174	30,773,123	411,120	2,623,635	0	22,610,400
Jul-10	213,157,313	0	1,302,252	34,616,026	493,852	2,803,495	0	4,458,688
Aug-10	209,508,423	0	1,144,330	34,191,439	327,636	3,004,921	0	16,407,902
Sep-10	205,594,251	0	1,190,811	36,073,466	487,360	3,149,279	0	18,958,160
Oct-10	156,930,433	0	1,325,677	28,651,232	542,083	3,532,824	0	5,169,904
Nov-10	113,544,458	0	1,522,779	25,818,254	529,745	3,684,063	0	15,701,147
Dec-10	132,828,452	0	1,962,182	23,662,873	415,014	3,967,140	0	16,938,485
Jan-11	152,072,123	0	2,154,006	24,918,479	435,355	3,545,618	0	7,472,057
Feb-11	138,523,404	0	2,036,852	19,693,641	373,486	3,087,293	0	14,653,598
Mar-11	115,363,710	0	1,878,366	19,469,765	466,427	3,125,128	0	15,498,817
Apr-11	113,009,610	0	1,654,476	19,443,827	345,493	2,793,024	0	11,367,265
May-11	127,801,792	0	1,575,802	17,752,454	443,556	2,401,167	0	12,024,915
Jun-11	180,207,260	0	1,430,456	25,015,110	400,936	2,460,077	0	8,920,062
Jul-11	236,647,449	0	1,195,381	29,399,241	409,162	2,569,858	0	16,854,651
Aug-11	227,196,377	0	1,018,338	27,740,831	394,476	2,953,547	0	13,299,412
Sep-11	223,224,932	0	1,138,571	26,001,808	493,839	2,692,854	812,112	15,241,043
Oct-11	155,078,123	0	1,231,760	20,835,947	574,705	3,242,210	206,655	14,008,689
Nov-11	116,708,312	0	1,434,835	17,124,373	580,875	3,374,982	206,502	14,312,815
Dec-11	135,927,857	0	1,800,958	17,144,488	465,209	3,599,527	206,574	12,250,840
Jan-12	165,825,664	0	2,217,566	19,544,228	430,427	3,544,680	206,099	10,980,258
Feb-12	127,398,294	0	1,948,744	17,361,858	476,675	3,030,758	212,479	12,857,131
Mar-12	121,880,459	0	1,909,759	16,706,899	469,960	2,990,370	207,074	13,774,207
Apr-12	124,138,698	0	1,672,063	17,779,560	402,992	2,842,761	207,074	15,561,715
May-12	143,194,000	0	1,406,313	19,308,079	434,923	2,857,347	210,326	19,566,575
Jun-12	192,332,890	0	1,295,673	23,102,700	364,535	2,512,204	208,712	15,881,988
Jul-12	229,695,361	0	1,082,190	26,093,602	330,663	2,690,980	209,306	12,227,256
Aug-12	232,973,556	0	1,025,235	25,155,589	380,501	2,885,658	209,310	15,614,948
Sep-12	225,600,006	0	1,107,032	25,195,437	431,465	3,020,579	209,564	13,078,318
Oct-12	151,562,738	0	1,109,314	19,813,134	570,214	3,381,847	209,691	16,659,045
Nov-12	124,675,641	0	1,262,034	17,571,191	542,482	3,528,959	209,629	12,827,748
Dec-12	125,374,686	0	1,430,508	16,041,335	441,437	3,792,588	209,629	11,644,820
Jan-13	168,235,129	0	1,783,422	18,681,399	392,586	3,727,081	210,597	12,192,233
Feb-13	146,108,660	0	1,711,857	18,789,226	465,030	3,214,092	210,597	12,247,335
Mar-13	116,635,157	0	1,374,928	15,515,042	410,852	3,232,609	210,809	11,992,659
Apr-13	112,900,124	0	1,217,843	16,209,889	385,765	2,878,699	210,956	14,460,920
May-13	132,668,298	0	1,137,126	18,254,546	364,642	2,736,188	210,965	17,978,282
Jun-13	200,728,365	0	948,693	22,554,588	356,306	2,538,639	210,965	16,684,213
Jul-13	237,548,121	0	810,010	25,895,735	357,778	2,634,607	210,965	15,090,407
Aug-13	238,343,942	0	832,331	26,793,556	374,017	3,030,042	210,965	19,705,319
Sep-13	217,486,237	0	826,492	24,604,666	399,098	3,050,718	210,965	16,514,587

Note The period January 2010 through December 2020 is historical data
The period January 2021 - January 2022 is forecasted data

EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-7.2. HISTORICAL SALES DATA
SPONSOR. GEORGE NOVELA
PREPARER. ENEDINA SOTO
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-7 2
PAGE 3 OF 15

	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
MONTH	S15	S22	S24	S25	S26	S28	S30	S31
Jan-10	5,877,129	72,772	102,540,281	49,520,668	35,894,555	2,494,551	1,389,542	11,644,071
Feb-10	6,272,782	77,359	90,855,706	45,559,848	18,426,745	2,180,605	1,192,033	10,937,302
Mar-10	4,812,719	121,103	90,238,396	46,371,833	26,339,658	2,204,792	1,592,109	9,298,315
Apr-10	6,250,714	212,948	111,578,454	50,564,817	29,253,040	1,972,722	1,809,741	13,187,740
May-10	5,116,094	377,810	108,253,591	59,446,823	29,082,965	1,868,432	1,669,120	15,072,145
Jun-10	5,831,171	262,486	129,937,658	56,429,161	24,812,208	1,721,490	1,843,807	20,139,447
Jul-10	7,262,552	524,241	137,374,465	63,453,957	29,723,084	1,843,466	2,337,441	25,092,862
Aug-10	7,647,333	417,964	143,415,382	60,491,220	29,119,676	1,883,830	2,223,402	27,324,089
Sep-10	6,582,583	345,273	145,208,216	72,099,298	28,989,073	2,073,669	2,115,617	31,659,060
Oct-10	6,749,326	310,016	118,377,267	56,472,376	30,672,647	2,313,055	2,155,599	24,748,952
Nov-10	3,893,704	180,458	98,601,219	54,913,002	26,899,515	2,430,179	1,965,130	24,166,383
Dec-10	3,692,915	163,057	99,569,177	49,726,696	25,960,306	2,609,399	1,692,310	21,651,273
Jan-11	3,660,760	46,205	100,830,063	51,206,893	24,694,869	2,572,881	1,348,298	23,788,315
Feb-11	3,529,203	115,152	92,859,831	47,844,500	13,935,847	2,207,136	1,714,786	21,814,792
Mar-11	4,624,929	210,053	108,550,710	47,498,782	27,618,170	2,266,148	2,168,874	24,630,628
Apr-11	4,589,665	359,813	107,557,879	58,799,951	30,156,611	1,979,142	2,235,293	25,547,611
May-11	3,874,405	350,907	110,745,197	55,406,787	25,860,602	1,890,566	2,011,478	25,739,238
Jun-11	5,081,179	448,627	144,990,576	60,712,370	28,261,798	1,767,599	2,461,001	37,075,818
Jul-11	4,390,022	429,863	157,922,520	66,087,024	29,822,940	1,862,989	1,942,497	35,889,052
Aug-11	5,202,111	587,522	149,612,949	63,146,931	26,006,855	2,002,178	2,123,167	36,836,656
Sep-11	4,716,622	480,063	155,553,923	65,638,858	28,548,580	2,088,034	2,073,654	32,760,164
Oct-11	4,571,712	320,627	127,031,340	61,292,120	28,697,824	2,340,241	2,155,124	25,743,867
Nov-11	4,376,451	272,179	107,909,209	52,113,312	25,660,691	2,426,811	2,216,265	24,649,392
Dec-11	3,873,770	(204,802)	101,792,138	50,576,296	25,669,875	2,619,484	1,742,157	25,420,450
Jan-12	4,508,171	77,299	108,698,239	51,462,612	29,567,096	2,567,909	1,761,412	23,219,939
Feb-12	4,197,133	101,720	102,368,545	51,479,805	21,817,694	2,246,254	2,378,847	24,400,153
Mar-12	4,319,396	302,257	108,954,792	50,379,788	26,215,947	2,274,018	2,262,168	23,901,229
Apr-12	3,892,481	223,979	107,369,130	56,538,735	28,635,471	2,020,230	2,089,381	26,329,957
May-12	4,221,143	465,443	124,220,868	54,207,496	25,794,968	1,912,689	1,766,673	26,887,787
Jun-12	5,345,938	532,955	144,041,752	63,218,255	27,787,034	1,786,281	1,710,779	35,305,958
Jul-12	5,141,420	435,460	151,364,052	63,164,780	27,538,597	1,894,251	1,399,005	33,462,433
Aug-12	4,754,628	448,879	154,125,446	63,498,719	28,872,805	2,032,407	1,840,071	34,627,893
Sep-12	4,726,503	439,050	164,058,989	63,676,451	33,205,391	2,126,975	3,071,070	31,676,135
Oct-12	5,438,829	444,971	125,036,919	60,751,023	28,930,053	2,381,780	2,339,895	31,876,881
Nov-12	4,559,351	286,435	114,268,452	57,026,481	29,334,976	2,477,714	2,195,554	23,668,959
Dec-12	4,511,083	195,015	100,716,646	51,978,985	25,401,658	2,653,609	1,952,551	23,075,880
Jan-13	4,051,115	143,124	108,397,338	51,488,174	30,543,444	2,606,059	1,887,290	28,169,310
Feb-13	4,607,119	186,603	109,380,615	52,594,727	24,161,725	2,267,059	1,426,401	23,455,699
Mar-13	4,359,584	306,745	97,565,369	51,008,181	21,303,993	2,297,037	1,640,285	22,887,915
Apr-13	4,939,116	519,920	107,242,064	57,447,258	30,710,695	2,053,642	2,052,021	27,000,962
May-13	4,586,488	551,063	121,183,718	54,714,901	25,783,339	1,956,644	1,697,042	24,740,192
Jun-13	4,857,813	672,529	142,758,435	62,064,930	28,381,355	1,807,962	1,793,101	35,412,566
Jul-13	3,670,349	646,712	152,199,064	68,033,065	30,517,577	1,920,425	1,984,831	36,182,184
Aug-13	5,128,482	606,182	155,677,580	66,258,434	29,031,887	2,056,881	1,977,094	36,290,564
Sep-13	4,723,381	572,717	146,566,388	66,225,285	29,096,924	2,153,781	1,669,984	29,693,342

Note The period January 2010 through December 2020 is historical data.
The period January 2021 - January 2022 is forecasted data

EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-7.2. HISTORICAL SALES DATA
SPONSOR: GEORGE NOVELA
PREPARER: ENEDINA SOTO
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-7.2
PAGE 4 OF 15

	(q)	(r)	(s)	(t)	(u)
MONTH	S34	S38	S41	SRGEC	TEXAS
Jan-10	427,836	20,984,242	23,088,138	2,691,030	458,520,055
Feb-10	10,373	20,480,648	22,553,282	2,456,880	383,744,328
Mar-10	15,337	27,441,488	20,497,077	4,032,390	383,293,489
Apr-10	14,657	33,009,418	26,469,361	5,098,590	446,562,203
May-10	9,268	37,024,207	26,240,441	5,926,890	441,940,557
Jun-10	7,830	33,712,278	29,477,157	6,308,940	543,073,029
Jul-10	2,956	41,167,701	15,475,155	5,502,630	586,592,136
Aug-10	6,459	32,508,005	38,299,137	6,501,750	614,422,898
Sep-10	17,423	32,707,538	39,971,952	5,014,350	632,237,379
Oct-10	11,744	28,955,689	28,560,909	4,183,560	499,663,293
Nov-10	625,436	25,247,135	21,245,144	2,684,130	423,651,881
Dec-10	636,691	12,285,265	24,649,276	3,235,290	425,645,801
Jan-11	549,005	19,192,099	11,587,358	3,420,270	433,494,654
Feb-11	11,804	19,074,066	20,205,876	3,157,290	404,838,557
Mar-11	14,731	26,670,310	34,255,719	5,075,220	439,386,487
Apr-11	11,729	30,510,885	23,252,451	5,722,080	439,336,805
May-11	0	29,306,094	25,633,163	6,842,520	449,660,643
Jun-11	15,911	32,976,469	28,643,247	6,781,920	567,650,416
Jul-11	7,861	29,694,799	25,468,989	7,097,790	647,692,088
Aug-11	8,174	31,860,293	34,111,918	7,814,250	631,915,985
Sep-11	7,019	30,876,799	32,700,516	6,134,100	631,183,491
Oct-11	28,336	27,171,894	27,651,885	4,091,910	506,274,969
Nov-11	684,050	26,160,053	26,129,472	3,127,530	429,468,109
Dec-11	738,263	24,222,530	19,247,073	3,391,560	430,484,247
Jan-12	698,818	22,981,965	22,837,148	3,289,110	474,418,640
Feb-12	197,075	25,058,147	23,805,737	3,131,340	424,468,389
Mar-12	12,551	24,349,629	17,663,935	5,386,020	423,960,458
Apr-12	12,829	28,673,104	29,376,655	6,287,130	454,053,945
May-12	7,573	26,710,098	28,045,749	7,082,250	488,300,300
Jun-12	7,582	27,755,374	27,508,263	7,320,840	578,019,713
Jul-12	7,924	26,932,102	25,953,754	6,542,670	616,165,806
Aug-12	8,060	30,710,651	30,036,237	7,742,190	636,942,783
Sep-12	8,322	18,652,316	32,725,601	6,279,990	629,289,194
Oct-12	11,500	27,879,489	26,934,511	4,253,610	509,585,444
Nov-12	306,736	25,446,967	23,552,187	3,177,120	446,918,616
Dec-12	492,369	22,782,497	21,449,968	3,774,510	417,919,774
Jan-13	61,442	24,727,563	22,930,428	3,577,230	483,804,964
Feb-13	8,931	25,196,731	24,322,263	3,317,700	453,672,370
Mar-13	14,175	18,938,681	20,157,104	5,104,808	394,955,933
Apr-13	8,940	27,754,611	24,743,568	5,885,834	438,622,827
May-13	7,540	25,041,194	26,984,586	6,842,624	467,439,378
Jun-13	6,262	27,948,711	26,707,996	7,412,325	583,845,754
Jul-13	5,378	30,689,614	26,256,916	6,473,250	641,126,988
Aug-13	4,873	27,348,411	30,196,293	8,054,700	651,921,553
Sep-13	5,576	24,188,822	32,324,100	5,645,100	605,958,163

Note: The period January 2010 through December 2020 is historical data.
The period January 2021 - January 2022 is forecasted data

EL PASO ELECTRIC COMPANY
 2021 TEXAS RATE CASE FILING
 SCHEDULE O-7 2 HISTORICAL SALES DATA
 SPONSOR GEORGE NOVELA
 PREPARER ENEDINA SOTO
 FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-7 2
 PAGE 5 OF 15

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
MONTH	S01	SEVC	SWH	S02	S07	S08	S09	S11
Oct-13	147,949,414	0	834,852	19,981,464	544,997	3,423,559	211,459	16,281,510
Nov-13	123,024,613	0	1,040,624	17,692,803	592,548	3,545,730	211,459	13,562,308
Dec-13	135,647,736	0	1,199,982	17,224,372	438,896	3,810,966	211,459	11,322,185
Jan-14	164,959,476	0	1,453,221	18,402,804	346,764	3,488,287	212,345	12,735,035
Feb-14	140,677,807	0	1,359,137	18,606,536	488,219	2,944,955	212,345	13,729,592
Mar-14	105,476,014	0	1,056,308	15,661,575	393,461	2,990,542	211,026	12,555,574
Apr-14	110,285,837	0	1,032,265	16,504,103	384,526	2,649,561	212,408	14,425,587
May-14	129,425,804	0	944,317	18,431,168	361,404	2,489,540	212,408	16,914,368
Jun-14	192,465,391	0	774,603	22,396,008	332,647	2,349,503	212,502	18,223,551
Jul-14	256,951,190	0	728,739	27,581,329	339,353	2,470,842	213,199	14,121,222
Aug-14	239,080,166	0	675,993	26,306,166	345,199	(1,763,993)	213,199	13,385,765
Sep-14	209,961,567	0	709,287	24,786,735	454,472	2,800,833	213,160	14,992,455
Oct-14	163,847,038	0	769,208	21,886,125	538,304	3,159,879	213,232	16,016,677
Nov-14	123,043,030	0	803,096	17,357,054	528,382	3,336,755	213,242	12,735,945
Dec-14	134,130,983	0	1,029,156	17,250,079	449,472	3,523,098	214,694	12,398,474
Jan-15	174,756,173	0	1,262,918	19,958,523	416,841	3,362,750	214,694	14,552,887
Feb-15	132,846,200	0	1,089,110	17,373,763	466,705	3,027,238	215,268	12,221,144
Mar-15	119,038,561	0	996,079	17,114,064	421,072	2,939,798	215,240	13,110,265
Apr-15	119,421,398	0	902,392	17,836,922	427,608	2,552,348	215,240	16,867,942
May-15	125,671,392	0	780,320	18,379,656	371,673	2,395,257	215,305	16,010,425
Jun-15	188,977,482	0	704,842	23,236,125	363,511	2,201,323	215,305	15,182,895
Jul-15	265,829,808	0	632,380	29,531,533	364,852	2,344,245	217,627	14,498,917
Aug-15	255,504,089	0	545,036	28,139,474	361,220	2,526,322	217,835	12,562,393
Sep-15	249,042,751	0	565,833	28,708,535	485,880	2,637,160	218,241	11,535,814
Oct-15	191,118,300	0	645,635	24,875,781	568,770	2,949,811	218,241	15,143,293
Nov-15	119,926,627	0	725,199	18,607,624	565,411	3,069,320	218,889	12,050,329
Dec-15	136,900,239	0	922,238	18,813,062	469,080	3,298,475	219,196	14,148,388
Jan-16	170,546,926	0	1,072,290	20,579,643	347,173	3,219,049	218,445	11,954,015
Feb-16	142,840,115	0	1,016,456	20,263,839	489,234	2,808,462	218,454	13,610,157
Mar-16	120,171,892	0	883,149	19,575,600	467,481	2,835,095	218,454	16,961,221
Apr-16	118,387,850	0	815,611	19,283,714	395,851	2,374,684	218,454	10,460,510
May-16	132,773,860	0	729,216	20,848,762	392,797	2,587,111	218,454	11,420,096
Jun-16	207,603,920	0	694,216	25,594,094	409,146	2,212,362	218,864	13,938,719
Jul-16	278,265,607	0	542,343	29,742,242	352,373	2,360,475	219,000	14,213,375
Aug-16	269,757,628	0	487,026	29,754,458	380,946	2,543,314	219,086	13,119,189
Sep-16	230,598,057	0	568,330	27,892,274	484,861	2,669,330	219,086	13,093,487
Oct-16	173,477,083	0	574,285	23,630,803	546,912	3,020,724	219,132	14,008,054
Nov-16	135,108,767	0	622,376	20,300,044	634,199	3,150,717	219,832	15,208,731
Dec-16	139,214,068	0	814,517	19,715,111	463,192	3,411,483	219,832	12,850,311
Jan-17	156,317,331	0	934,583	20,571,429	397,158	3,321,461	220,296	11,725,841
Feb-17	129,654,390	0	829,820	19,304,302	458,668	2,889,322	220,642	11,574,034
Mar-17	127,188,096	0	812,476	20,410,738	484,096	2,929,438	220,661	15,241,006

Note: The period January 2010 through December 2020 is historical data
 The period January 2021 - January 2022 is forecasted data

EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-7 2 HISTORICAL SALES DATA
SPONSOR: GEORGE NOVELA
PREPARER: ENEDINA SOTO
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-7 2
PAGE 6 OF 15

	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
MONTH	S15	S22	S24	S25	S26	S28	S30	S31
Oct-13	5,262,711	483,579	126,774,135	60,554,000	29,144,198	2,406,609	1,979,320	27,617,908
Nov-13	4,811,487	387,022	112,288,566	52,560,325	24,941,335	2,493,203	1,692,205	21,795,924
Dec-13	4,510,471	158,963	103,201,209	53,857,470	27,821,922	2,667,773	1,733,084	24,977,802
Jan-14	5,092,778	196,693	109,415,237	49,514,847	30,195,319	2,631,091	1,247,624	25,139,084
Feb-14	4,271,584	202,221	110,962,656	49,347,075	12,985,791	2,281,778	1,902,565	22,121,246
Mar-14	4,420,800	268,191	98,550,698	50,064,815	23,463,958	2,308,712	1,796,853	21,430,933
Apr-14	4,910,366	690,264	104,498,846	59,377,055	31,215,839	2,056,615	1,843,588	23,907,261
May-14	4,764,472	631,825	117,197,149	52,757,481	26,236,898	1,958,431	1,955,165	23,233,624
Jun-14	4,850,904	789,824	138,418,624	62,554,429	28,865,071	1,798,205	2,221,107	35,874,171
Jul-14	4,694,608	771,441	160,821,696	64,780,556	28,905,812	1,919,922	1,959,963	31,429,238
Aug-14	5,359,108	415,674	153,827,783	62,183,972	26,834,938	2,057,125	1,906,263	25,970,749
Sep-14	4,702,217	621,262	146,931,749	67,150,752	30,289,841	2,142,712	1,883,655	22,733,460
Oct-14	4,758,133	378,808	133,924,861	57,871,399	24,996,967	2,410,326	2,002,228	23,143,261
Nov-14	4,563,926	295,353	111,917,578	56,544,113	27,121,240	2,501,766	2,037,217	23,719,918
Dec-14	1,710,834	157,099	104,447,691	53,272,398	27,600,887	2,703,922	1,880,089	21,724,412
Jan-15	3,801,019	132,675	113,991,544	50,672,088	31,119,447	2,635,146	2,005,528	25,733,423
Feb-15	4,549,690	125,185	102,197,811	54,997,562	25,253,539	2,317,204	1,993,730	20,551,009
Mar-15	4,847,883	396,762	103,810,136	50,054,377	25,590,442	2,328,814	1,727,290	21,276,037
Apr-15	4,919,991	767,522	113,930,289	57,710,030	27,070,661	2,077,488	1,717,876	21,686,400
May-15	4,876,771	758,420	114,000,774	51,576,412	25,469,543	1,957,657	1,650,893	19,053,613
Jun-15	5,178,412	704,481	138,532,824	59,903,776	28,318,125	1,823,053	1,989,647	23,052,666
Jul-15	4,950,871	744,594	163,218,976	63,619,264	37,701,807	1,944,622	1,737,511	23,129,820
Aug-15	4,896,454	566,407	154,890,914	64,674,734	76,412,204	2,074,346	1,988,816	24,600,371
Sep-15	4,129,766	536,549	156,434,906	68,006,247	29,655,273	2,164,808	1,828,783	22,956,270
Oct-15	3,944,680	313,547	141,222,864	56,926,771	24,932,079	2,420,562	1,540,123	20,161,634
Nov-15	5,568,484	221,086	109,011,228	57,734,005	27,342,287	2,514,184	2,050,001	23,748,125
Dec-15	3,866,817	170,935	104,248,673	50,253,758	25,701,441	2,705,334	1,561,037	20,995,029
Jan-16	4,942,512	106,454	109,295,856	49,703,993	30,521,166	2,663,304	1,191,202	23,575,486
Feb-16	5,728,476	129,054	105,481,637	52,147,526	28,298,772	2,310,661	1,717,183	22,823,028
Mar-16	4,910,193	376,487	110,370,059	47,656,338	25,647,787	2,337,770	1,432,772	21,008,967
Apr-16	4,961,061	871,625	111,978,188	55,208,214	28,238,457	2,077,919	1,336,150	20,820,220
May-16	4,999,246	664,735	116,623,308	51,206,443	26,132,388	1,965,195	1,634,278	19,353,949
Jun-16	5,030,926	587,834	146,677,622	60,791,047	28,758,824	1,820,616	1,738,143	23,590,537
Jul-16	4,005,943	768,806	163,831,707	62,801,923	37,171,485	1,935,316	1,645,213	22,692,624
Aug-16	3,600,864	597,956	159,199,182	66,404,297	28,754,829	2,073,586	1,441,869	23,877,244
Sep-16	4,222,196	346,281	155,122,776	64,242,247	29,883,973	2,175,919	1,141,484	22,285,795
Oct-16	4,853,118	358,755	133,542,052	54,281,598	25,922,806	2,443,491	1,334,708	19,781,802
Nov-16	5,268,571	292,201	120,998,733	57,800,695	28,309,822	2,542,835	1,566,329	22,735,817
Dec-16	5,034,596	167,992	110,307,282	52,184,719	28,882,087	2,734,096	1,217,673	22,661,044
Jan-17	5,348,896	101,309	111,031,826	49,599,963	27,132,447	2,674,554	1,640,698	24,248,021
Feb-17	5,344,522	123,977	102,034,491	50,611,741	28,949,946	2,288,494	1,691,470	21,959,331
Mar-17	5,999,185	339,669	113,675,939	51,016,185	27,498,512	2,321,382	1,891,371	22,802,098

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EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-7.2 HISTORICAL SALES DATA
SPONSOR: GEORGE NOVELA
PREPARER: ENEDINA SOTO
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-7.2
PAGE 7 OF 15

	(q)	(r)	(s)	(t)	(u)
MONTH	S34	S38	S41	SRGEC	TEXAS
Oct-13	8,645	27,334,685	27,078,244	3,400,770	501,272,059
Nov-13	185,020	24,171,757	22,939,333	2,568,330	430,504,592
Dec-13	372,390	25,140,804	21,778,004	2,949,990	439,025,478
Jan-14	231,824	20,216,851	20,705,704	3,427,770	469,612,754
Feb-14	11,492	19,617,432	23,947,156	3,239,040	428,908,627
Mar-14	10,570	23,613,435	19,460,133	5,725,050	389,458,648
Apr-14	8,721	25,517,611	22,316,830	5,924,808	427,762,091
May-14	6,012	24,522,020	24,960,743	7,105,645	454,108,474
Jun-14	6,984	31,029,215	28,327,835	7,298,289	578,788,863
Jul-14	4,038	33,425,150	26,444,607	8,022,114	665,585,019
Aug-14	2,776	37,586,211	28,298,693	6,377,208	629,062,995
Sep-14	6,679	35,199,333	32,020,747	4,810,450	602,411,366
Oct-14	7,547	29,299,580	27,417,670	3,619,183	516,260,426
Nov-14	232,168	26,977,125	22,200,151	2,956,332	439,084,391
Dec-14	489,022	23,348,608	19,092,783	3,223,391	428,647,092
Jan-15	462,080	29,602,638	23,233,442	3,299,418	501,213,234
Feb-15	14,871	25,570,256	23,164,077	3,294,940	431,269,302
Mar-15	14,219	24,731,292	19,010,043	5,350,277	412,972,651
Apr-15	15,973	25,782,869	23,205,616	5,822,498	442,931,063
May-15	7,137	26,728,224	23,819,239	7,021,985	440,744,696
Jun-15	7,048	41,412,196	26,519,616	7,659,967	565,983,294
Jul-15	6,756	32,674,866	26,426,606	7,494,909	677,069,964
Aug-15	7,525	(3,679,415)	29,051,459	8,553,825	663,894,009
Sep-15	8,483	39,001,787	33,145,309	6,077,250	657,139,645
Oct-15	9,210	31,200,827	27,781,241	3,145,788	549,119,157
Nov-15	360,789	29,260,671	20,961,021	2,643,152	436,578,432
Dec-15	515,877	23,972,198	19,500,537	2,983,073	431,245,387
Jan-16	569,347	23,565,383	21,472,724	3,322,682	478,867,650
Feb-16	88,780	27,847,776	22,359,406	3,276,881	453,455,897
Mar-16	16,726	22,876,932	20,902,116	5,241,781	423,890,820
Apr-16	14,388	25,648,597	21,198,847	5,760,335	430,050,675
May-16	6,678	28,552,327	23,638,893	7,306,283	451,054,019
Jun-16	7,356	38,636,018	27,029,311	7,600,995	592,940,550
Jul-16	5,963	32,667,440	26,302,997	8,825,556	688,350,388
Aug-16	5,726	38,399,978	28,331,510	6,888,943	675,837,631
Sep-16	8,164	32,629,953	31,885,747	4,146,864	623,616,824
Oct-16	8,451	29,457,435	25,424,966	3,691,530	516,577,705
Nov-16	361,921	27,311,941	23,374,817	2,793,220	468,601,568
Dec-16	604,775	21,605,312	20,717,941	3,231,108	446,037,139
Jan-17	773,733	23,996,026	18,431,377	3,420,704	461,887,653
Feb-17	415,501	25,136,605	20,180,440	3,082,116	426,749,812
Mar-17	12,384	26,914,145	20,404,291	4,418,269	444,579,941

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EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-7.2 HISTORICAL SALES DATA
SPONSOR: GEORGE NOVELA
PREPARER: ENEDINA SOTO
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-7.2
PAGE 8 OF 15

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
MONTH	S01	SEVC	SWH	S02	S07	S08	S09	S11
Apr-17	122,586,996	0	660,061	19,692,675	357,386	2,619,542	220,661	13,656,541
May-17	150,257,200	0	634,749	22,166,568	390,358	2,495,211	220,793	12,643,727
Jun-17	221,869,959	0	605,575	27,919,520	424,568	2,305,993	220,793	15,381,580
Jul-17	282,137,797	0	490,659	32,214,219	330,316	2,459,261	220,527	13,883,557
Aug-17	259,756,752	0	477,066	30,852,598	334,575	2,645,669	220,527	13,138,332
Sep-17	237,400,280	0	483,155	29,648,814	435,819	2,759,324	220,527	14,023,077
Oct-17	186,168,542	0	511,352	26,415,723	518,812	3,086,233	220,527	12,778,773
Nov-17	128,502,221	0	576,782	21,475,556	540,795	3,222,989	222,381	15,866,356
Dec-17	130,298,970	0	686,566	20,216,130	505,995	3,448,039	220,939	12,420,986
Jan-18	162,689,653	0	851,339	21,931,250	457,885	3,367,332	221,020	12,905,365
Feb-18	139,275,009	0	801,735	22,065,942	476,027	2,950,844	221,024	13,477,893
Mar-18	118,686,287	0	697,665	20,262,353	480,745	3,003,898	220,984	13,795,807
Apr-18	126,120,982	0	641,757	22,091,616	376,475	2,684,550	220,997	12,862,735
May-18	155,694,819	0	551,298	23,007,156	450,470	2,540,912	221,415	12,962,636
Jun-18	246,367,818	0	494,730	29,025,510	428,273	2,229,018	222,187	14,474,686
Jul-18	293,888,055	0	456,168	32,172,214	406,348	2,511,878	221,927	15,241,334
Aug-18	281,896,033	278	401,887	30,395,443	420,801	2,705,115	222,545	14,056,824
Sep-18	269,802,812	540	419,183	29,530,868	527,183	2,831,196	222,573	14,075,078
Oct-18	193,874,678	578	442,417	24,330,236	501,802	3,087,964	222,245	14,246,115
Nov-18	124,291,375	945	510,519	18,060,715	607,507	3,194,564	222,412	12,423,854
Dec-18	145,910,183	848	619,486	18,897,210	577,073	3,433,393	223,224	13,427,103
Jan-19	162,022,708	610	679,656	19,034,699	368,602	3,358,129	222,474	12,118,721
Feb-19	143,458,772	774	665,688	19,134,286	554,762	2,927,428	222,912	13,437,478
Mar-19	124,531,695	484	591,894	17,412,536	581,588	2,965,957	223,320	13,322,010
Apr-19	119,942,629	525	536,352	18,000,667	399,525	2,641,379	221,576	15,415,885
May-19	150,099,779	679	464,721	20,659,237	452,831	2,512,623	221,506	16,560,522
Jun-19	199,963,062	605	422,127	23,002,562	399,517	2,321,331	221,065	18,145,799
Jul-19	278,125,991	233	364,235	28,205,950	349,963	2,477,620	221,110	17,499,381
Aug-19	308,731,504	1,675	328,594	29,565,717	364,354	2,684,727	221,204	16,542,207
Sep-19	309,548,190	1,620	351,858	30,813,806	511,474	2,814,133	221,718	16,375,646
Oct-19	204,009,721	3,088	379,140	24,383,437	534,720	3,156,063	221,579	12,827,095
Nov-19	124,300,625	4,103	435,578	18,232,475	594,719	3,285,300	221,251	13,708,836
Dec-19	136,813,040	3,423	529,249	18,481,739	449,133	3,532,776	220,776	12,985,791
Jan-20	174,471,950	5,238	660,758	21,478,884	396,194	3,456,965	219,545	13,774,813
Feb-20	145,583,179	4,134	596,867	19,757,443	481,713	3,013,969	220,983	13,622,683
Mar-20	125,941,874	3,071	538,484	18,831,059	514,786	3,049,397	220,762	12,537,058
Apr-20	127,247,526	6,071	521,063	16,245,764	217,349	2,711,190	220,906	10,889,435
May-20	187,448,540	3,500	437,834	19,034,078	177,775	2,577,889	220,794	12,593,151
Jun-20	263,137,055	4,834	387,162	26,214,452	164,740	2,379,873	220,878	14,328,764
Jul-20	345,583,606	5,580	355,056	32,165,288	205,519	2,532,039	221,318	18,423,961
Aug-20	342,354,392	6,202	304,103	30,699,874	253,973	2,719,591	220,958	16,057,696
Sep-20	314,042,479	4,871	334,796	29,725,286	382,287	2,870,211	221,499	16,098,346
Oct-20	199,923,071	3,376	343,543	22,885,226	329,117	3,216,338	221,203	17,506,687
Nov-20	149,510,290	3,638	388,402	19,385,199	269,644	3,384,940	221,179	15,040,631
Dec-20	151,293,376	2,757	480,307	19,120,557	266,178	3,625,950	221,340	12,456,777
Jan-21	178,287,905	4,859	582,796	20,984,814	309,168	3,513,399	224,217	13,018,611
Feb-21	153,143,660	4,479	548,977	20,476,274	381,181	3,068,283	224,854	13,593,972
Mar-21	131,983,803	4,108	486,250	18,980,129	398,219	3,112,187	224,904	13,307,594
Apr-21	133,462,152	5,170	451,864	18,892,982	239,287	2,773,354	224,368	13,106,169
May-21	175,578,642	4,263	386,317	21,061,637	253,129	2,633,321	224,447	14,076,342
Jun-21	252,802,371	4,717	346,424	26,248,204	232,598	2,390,927	224,587	15,695,385
Jul-21	326,752,936	4,977	310,727	31,093,059	230,696	2,595,487	224,664	17,118,203
Aug-21	332,569,356	5,203	273,504	30,504,725	252,689	2,798,437	224,782	15,606,894
Sep-21	318,999,790	4,740	295,030	30,334,321	349,862	2,938,444	225,149	15,573,185
Oct-21	213,870,164	4,232	316,877	24,100,010	331,015	3,264,161	224,891	14,958,734
Nov-21	141,802,776	4,327	362,715	18,750,356	346,582	3,403,411	224,828	13,782,300
Dec-21	155,087,156	4,020	442,998	19,018,477	307,868	3,654,415	224,996	13,043,028
Jan-22	182,038,067	4,979	523,583	21,394,881	313,357	3,558,561	227,099	13,180,040

Note The period January 2010 through December 2020 is historical data
The period January 2021 - January 2022 is forecasted data

EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-7 2 HISTORICAL SALES DATA
SPONSOR: GEORGE NOVELA
PREPARER: ENEDINA SOTO
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-7 2
PAGE 9 OF 15

	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
MONTH	S15	S22	S24	S25	S26	S28	S30	S31
Apr-17	4,906,232	821,628	111,512,861	53,424,212	30,810,351	2,063,512	1,523,098	19,897,119
May-17	4,511,213	418,626	123,366,513	57,750,842	26,073,170	1,965,020	1,920,730	20,871,281
Jun-17	4,363,424	431,636	148,236,794	61,942,265	36,500,804	1,815,342	1,929,105	23,415,293
Jul-17	4,470,477	460,517	159,943,992	60,813,076	27,197,835	1,928,088	1,776,912	23,197,693
Aug-17	4,868,303	354,413	157,515,865	63,676,363	30,035,342	2,073,738	1,729,063	22,556,808
Sep-17	4,820,778	364,832	149,491,602	65,434,072	29,198,216	2,172,008	1,953,586	23,902,788
Oct-17	5,020,834	326,006	134,860,956	55,768,222	25,004,557	2,427,332	2,072,489	21,069,657
Nov-17	3,282,973	261,422	113,420,377	55,377,325	25,159,412	2,526,253	1,995,405	23,147,230
Dec-17	3,270,910	150,146	104,658,915	49,209,767	25,517,844	2,705,044	1,856,602	22,052,830
Jan-18	3,229,739	148,863	111,420,916	48,255,680	28,506,516	2,644,308	1,618,520	22,865,065
Feb-18	3,283,815	172,981	108,915,495	50,387,776	29,048,313	2,299,295	1,780,088	20,998,124
Mar-18	3,368,972	288,227	103,734,841	50,250,364	24,815,406	2,327,211	1,606,198	19,419,915
Apr-18	4,257,011	735,403	115,988,929	50,289,041	26,718,898	2,076,540	1,707,678	22,926,835
May-18	3,908,302	507,675	123,044,069	52,488,593	27,847,663	1,985,628	1,899,090	22,419,565
Jun-18	3,703,826	519,726	153,237,114	60,217,900	29,960,652	1,827,740	1,797,583	25,777,197
Jul-18	2,879,509	595,924	168,269,010	59,661,902	33,954,985	1,947,574	1,844,156	23,950,735
Aug-18	3,213,459	556,482	160,606,924	63,533,017	29,406,993	2,087,918	1,708,495	24,378,126
Sep-18	3,612,670	548,253	163,465,489	61,414,469	27,414,540	2,181,438	1,848,480	24,188,422
Oct-18	3,580,935	343,955	140,066,819	56,203,054	26,935,692	2,405,531	1,913,395	21,835,762
Nov-18	3,498,144	185,026	110,981,474	53,339,819	26,330,042	2,478,769	1,947,687	20,086,952
Dec-18	2,886,800	163,672	111,453,019	46,521,269	25,307,698	2,595,270	1,771,662	21,291,843
Jan-19	2,491,985	113,358	108,654,222	47,187,494	28,956,519	2,517,107	2,032,885	24,410,689
Feb-19	2,618,981	169,828	112,144,749	51,566,976	31,020,538	2,196,614	1,731,755	22,013,042
Mar-19	2,189,975	334,463	106,203,555	47,323,282	25,623,502	2,215,343	1,590,663	20,020,812
Apr-19	1,449,534	784,170	113,905,937	49,254,635	26,560,846	1,972,788	2,098,990	23,322,775
May-19	1,016,699	640,642	124,733,184	52,668,587	29,388,290	1,878,507	1,998,523	21,158,158
Jun-19	3,262,997	607,264	141,060,062	58,219,091	27,820,828	1,734,297	2,062,442	25,596,223
Jul-19	3,677,125	437,144	157,982,068	56,765,478	28,613,406	1,844,692	1,888,512	27,044,412
Aug-19	3,602,724	478,837	166,572,668	61,218,635	24,827,931	1,967,148	1,474,092	24,623,518
Sep-19	4,282,720	458,759	175,716,005	64,313,797	29,289,959	2,065,256	1,589,481	27,729,755
Oct-19	3,372,929	301,345	145,117,657	57,283,422	28,643,966	2,309,585	1,680,466	23,236,953
Nov-19	3,137,780	245,201	110,551,002	50,814,993	25,683,169	2,400,635	1,928,511	21,668,706
Dec-19	2,939,780	137,882	104,829,338	45,814,338	25,812,592	2,583,261	1,007,205	22,759,090
Jan-20	3,614,651	123,418	115,025,390	48,183,898	24,034,719	2,520,520	2,161,618	26,143,505
Feb-20	3,946,125	123,924	111,830,856	49,955,281	13,557,945	2,192,136	2,132,763	24,885,838
Mar-20	3,671,588	126,090	106,674,904	50,407,606	27,966,732	2,265,699	2,017,026	21,449,603
Apr-20	2,547,359	334,195	99,265,057	48,057,900	29,139,642	1,923,132	1,546,379	20,947,662
May-20	3,316,122	448,956	108,977,737	43,442,490	25,572,459	1,871,866	1,242,856	21,724,279
Jun-20	3,744,890	505,002	135,457,671	51,978,600	28,569,538	1,721,378	1,835,129	25,416,125
Jul-20	3,698,169	562,243	159,703,695	56,097,228	28,447,442	1,829,130	1,840,272	24,378,414
Aug-20	3,770,357	487,427	158,987,925	56,830,774	26,436,437	2,064,967	1,799,318	25,451,643
Sep-20	3,587,400	444,005	160,251,321	60,196,005	28,661,653	2,162,854	1,907,095	22,431,633
Oct-20	3,360,767	427,438	126,534,569	52,914,684	70,011,338	2,418,709	713,296	21,496,801
Nov-20	3,823,551	290,349	109,497,117	52,656,358	(15,292,613)	2,511,557	1,242,311	20,775,347
Dec-20	3,523,795	185,683	102,640,827	46,982,065	27,536,427	2,694,256	1,450,160	25,263,103
Jan-21	3,374,036	115,782	109,002,198	46,873,538	26,217,312	2,606,748	1,872,513	25,176,903
Feb-21	3,557,256	140,443	108,258,116	49,333,058	23,527,836	2,269,460	1,817,798	23,283,488
Mar-21	3,314,368	223,927	102,962,476	47,656,429	25,318,579	2,310,223	1,680,185	20,887,235
Apr-21	2,932,674	560,601	106,857,585	47,655,791	26,607,693	2,026,565	1,714,741	23,065,221
May-21	2,888,522	487,036	115,854,227	48,364,257	26,663,636	1,946,392	1,640,664	22,422,292
Jun-21	3,905,134	497,369	139,610,430	55,668,011	27,834,664	1,792,785	1,828,043	26,356,373
Jul-21	3,778,874	489,574	157,952,826	56,750,510	29,299,737	1,907,315	1,789,210	25,845,550
Aug-21	3,887,107	466,777	158,034,954	58,667,256	25,993,987	2,076,023	1,602,072	25,547,334
Sep-21	4,249,049	444,263	162,311,666	60,689,015	27,532,974	2,174,302	1,718,326	25,497,690
Oct-21	3,779,993	331,931	133,713,314	53,577,384	26,913,152	2,420,417	1,366,748	22,837,944
Nov-21	3,807,959	222,885	107,630,816	50,216,357	25,436,520	2,508,616	1,633,445	21,447,606
Dec-21	3,413,240	148,660	103,639,170	45,190,412	25,388,853	2,674,406	1,356,788	23,766,454
Jan-22	3,393,450	117,699	110,037,761	47,191,097	26,368,165	2,656,275	1,883,287	25,892,636

Note The period January 2010 through December 2020 is historical data.
The period January 2021 - January 2022 is forecasted data

EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-7.2 HISTORICAL SALES DATA
SPONSOR GEORGE NOVELA
PREPARER ENEDINA SOTO
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-7.2
PAGE 10 OF 15

	(q)	(r)	(s)	(t)	(u)
MONTH	S34	S38	S41	SRGEC	TEXAS
Apr-17	11,482	28,074,316	21,377,355	5,456,000	439,672,027
May-17	7,190	31,713,792	23,428,961	8,098,630	488,934,573
Jun-17	6,783	33,888,139	24,909,341	8,163,078	614,329,992
Jul-17	4,289	36,932,535	23,272,833	7,056,781	678,791,364
Aug-17	4,053	39,547,041	26,057,165	7,352,980	663,196,653
Sep-17	5,560	40,572,919	29,529,836	5,737,847	638,155,040
Oct-17	7,639	34,092,666	25,629,790	3,722,812	539,702,922
Nov-17	504,169	20,410,588	21,559,219	2,894,051	440,945,504
Dec-17	777,205	24,559,928	18,216,262	3,483,408	424,256,486
Jan-18	630,288	24,571,602	18,579,812	3,828,499	468,723,652
Feb-18	345,204	28,315,558	20,977,350	3,537,150	449,329,623
Mar-18	14,353	26,610,170	18,814,526	4,364,587	412,762,509
Apr-18	8,315	32,179,283	19,567,069	5,260,385	446,714,499
May-18	6,634	38,302,811	22,937,787	6,432,659	497,209,182
Jun-18	3,946	43,395,324	25,907,883	6,872,998	646,464,111
Jul-18	4,685	35,245,976	23,863,810	7,022,615	704,138,805
Aug-18	4,645	44,487,103	26,696,528	7,092,374	693,870,990
Sep-18	8,162	42,954,235	30,666,512	4,983,664	680,695,767
Oct-18	8,419	34,584,113	25,529,149	3,426,470	553,539,329
Nov-18	337,737	29,620,608	19,436,349	2,843,986	430,398,484
Dec-18	744,785	24,520,193	18,236,571	3,325,848	441,907,150
Jan-19	797,317	29,284,505	17,293,562	3,671,208	465,216,450
Feb-19	686,649	28,502,125	19,811,558	3,534,595	456,399,510
Mar-19	13,381	24,946,095	18,171,562	4,564,114	412,826,231
Apr-19	9,539	29,846,463	18,190,418	5,343,112	429,897,745
May-19	8,695	30,490,229	21,352,998	6,428,460	482,734,870
Jun-19	7,133	35,982,514	21,315,315	6,538,669	568,682,903
Jul-19	7,147	38,189,063	19,856,798	8,226,071	671,776,399
Aug-19	7,240	35,776,695	25,821,842	9,092,867	713,904,179
Sep-19	7,266	38,096,644	31,545,769	5,177,112	740,910,968
Oct-19	9,253	34,054,640	25,169,149	2,940,754	569,634,962
Nov-19	281,013	26,886,714	18,577,431	2,939,628	425,897,670
Dec-19	505,671	20,016,403	16,463,900	3,358,526	419,243,913
Jan-20	266,375	28,001,749	17,117,064	3,364,963	485,022,217
Feb-20	11,336	25,112,652	18,623,790	3,866,177	439,519,794
Mar-20	11,068	29,986,624	17,569,949	4,049,315	427,832,695
Apr-20	8,297	25,501,137	12,163,362	5,022,970	404,516,396
May-20	5,502	27,988,101	12,448,008	6,449,495	475,981,432
Jun-20	6,047	40,594,646	16,187,345	7,450,900	620,305,029
Jul-20	5,683	43,267,963	19,556,791	8,058,483	746,937,880
Aug-20	6,109	43,473,618	21,189,426	8,376,983	741,491,773
Sep-20	6,794	42,085,262	22,540,662	5,400,896	713,355,355
Oct-20	7,469	(16,623,398)	16,768,983	3,802,717	526,261,934
Nov-20	487,287	57,137,222	13,819,447	3,328,412	438,480,268
Dec-20	774,413	25,430,416	13,195,685	4,046,659	441,190,731
Jan-21	441,269	25,883,965	14,760,871	3,448,777	476,699,682
Feb-21	254,021	25,754,619	16,508,541	3,962,475	450,108,790
Mar-21	10,647	25,789,006	15,198,734	4,150,175	417,999,176
Apr-21	7,234	27,678,402	13,599,772	5,148,081	427,009,705
May-21	5,642	31,144,476	15,351,151	6,610,138	487,596,532
Jun-21	4,767	39,611,032	17,307,125	7,636,486	619,997,433
Jul-21	4,837	39,284,258	17,537,378	8,259,202	721,230,020
Aug-21	4,995	41,291,279	20,338,222	8,585,635	728,731,232
Sep-21	6,146	41,145,598	23,261,765	5,535,421	723,286,736
Oct-21	6,910	30,747,936	18,418,100	3,897,435	555,081,347
Nov-21	320,487	22,235,921	14,217,129	3,411,316	431,766,350
Dec-21	577,009	22,162,940	13,161,635	4,147,453	437,409,975
Jan-22	449,045	26,043,070	14,945,093	3,512,927	483,731,072

Note The period January 2010 through December 2020 is historical data
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EL PASO ELECTRIC COMPANY
2021 TEXAS RATE CASE FILING
SCHEDULE O-7.2: HISTORICAL SALES DATA
SPONSOR: GEORGE NOVELA
PREPARER: ENEDINA SOTO
FOR THE TEST YEAR ENDED DECEMBER 31, 2020

SCHEDULE O-7.2
PAGE 11 OF 15

Schedule O-7.2 requires monthly kWh sales at the source (busbar) by rate class and by voltage level for the Texas jurisdiction. EPE does not track or forecast sales at the source or sales by voltage level.