
Part 1 - Appendix 3A
Evergy Missouri West (MO West) Reports

Missouri 4 CSR 240-22.030 (2) Reporting Requirements
Load Analysis and Forecasting

(2)(D) For each major class specified pursuant to subsection (2)(A), the utility shall provide, on a seasonal and annual basis for each year of the historical period --

(2)(D)(1) Its assessment of the historical enduse drivers of energy usage and peak demand, including trends in number of units and energy consumption per unit;

(3)(D)(2) Its assessment fo the weather sensitivity of energy and peak demand; and

(2)(D)(3) Plots illustrating trends materially affecting electricity consumption over the historical period.

Compliance: See Plots 3A-1 through 3A-36 for base-case MO West forecast reports designed to comply with section (2)(D) reporting requirements.

Linked Files:**Work Files**

Folder: Datalyzers/WN Class
 CombineAccrCCOSSales.NDMetrix Project
 ActPeakSumWin
 WNPeakSumWin

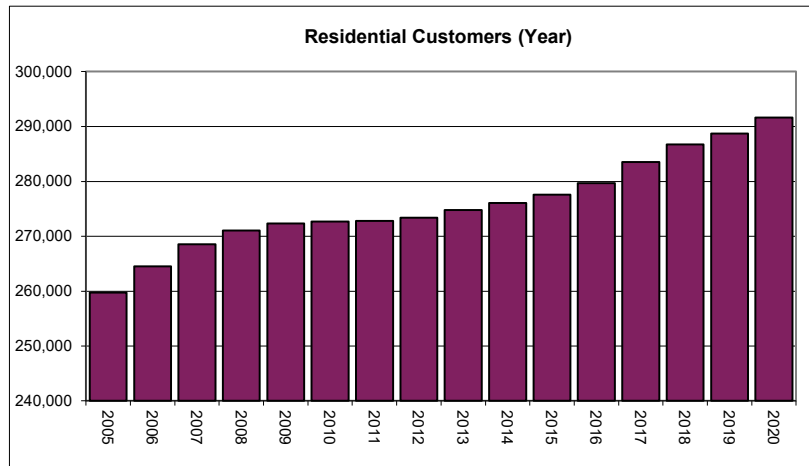
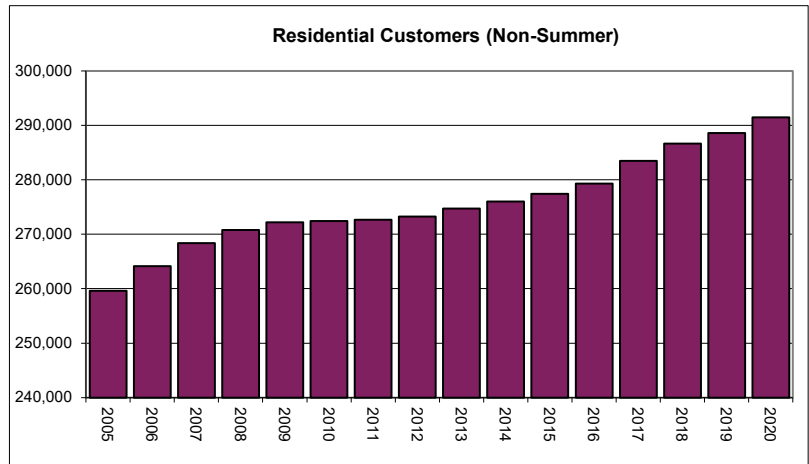
Project Files

IRP_2D_West_Customer.xls
IRP_2D_West_AvgUse
IRP_2D_West_EndUse_AvgUse.xls
IRP_2D_West_PeakPerCust
IRP_2D_West_Peak_EndUse
IRP_2D_West_PeakPerCust_EndUse

Plot 3A-1 MO West Residential Customers

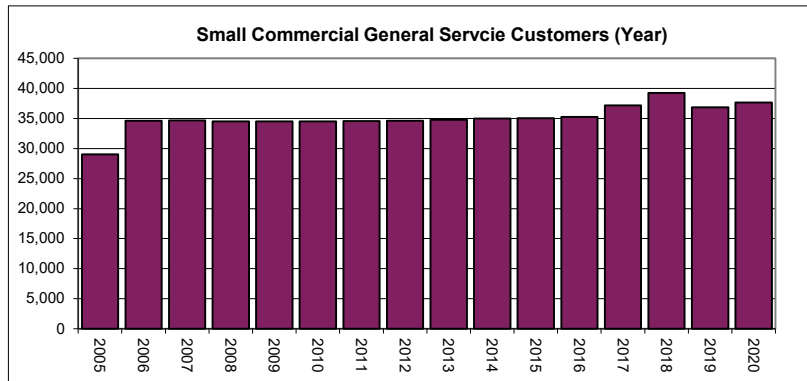
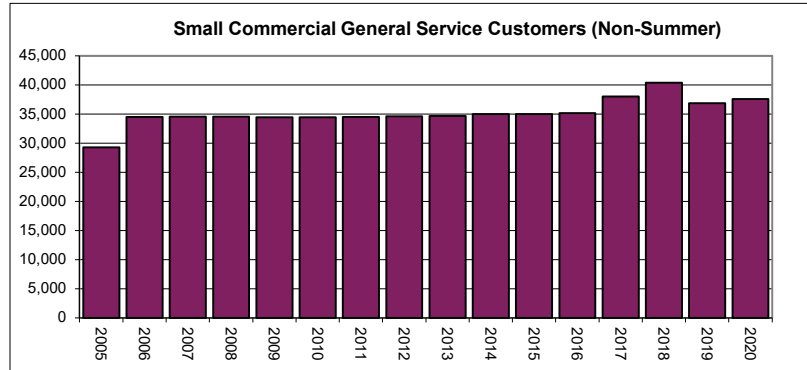
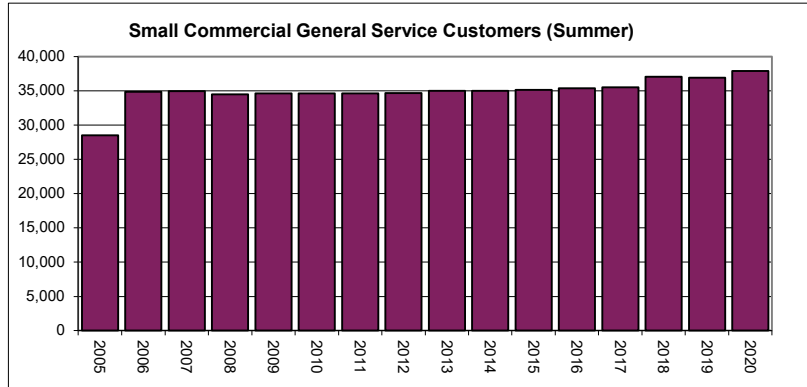
Year	MO West Summer Jun-Sep	MO West Non-Summer Oct-May	MO West Total Jan-Dec
2005	259,987	259,628	259,748
2006	265,302	264,162	264,542
2007	268,853	268,372	268,532
2008	271,648	270,778	271,068
2009	272,602	272,183	272,322
2010	273,133	272,424	272,660
2011	273,081	272,675	272,810
2012	273,628	273,262	273,384
2013	274,956	274,698	274,784
2014	276,197	276,025	276,082
2015	277,911	277,446	277,601
2016	280,366	279,322	279,670
2017	283,786	283,451	283,563
2018	286,974	286,626	286,742
2019	288,916	288,612	288,713
2020	291,989	291,476	291,647

05-'10	0.99%	0.97%	0.97%
10-'15	0.35%	0.37%	0.36%
10-'20	0.99%	0.99%	0.99%



Plot 3A-2 MO West Small Commercial Customers

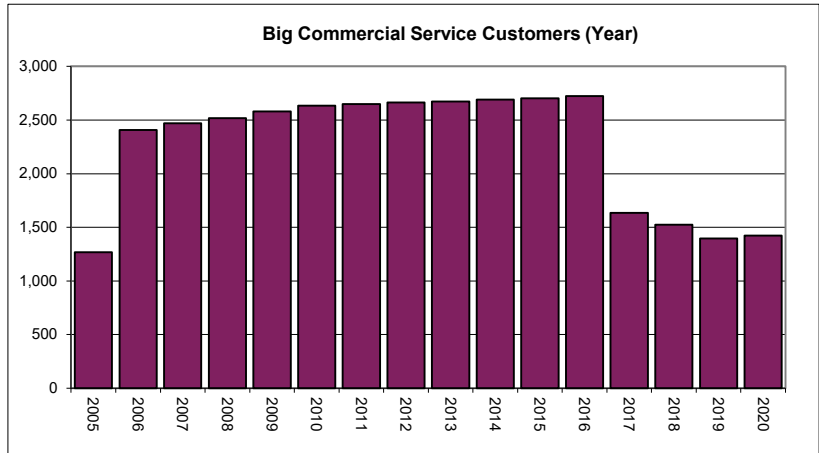
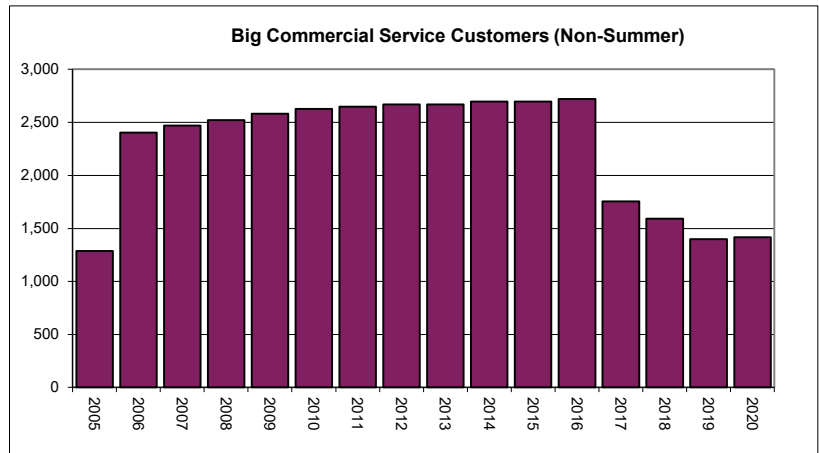
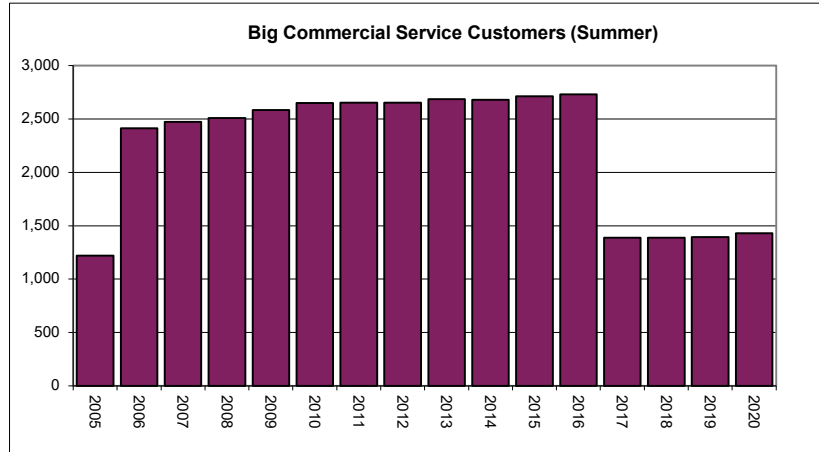
Year	MO West Summer	MO West Non-Summer	MO West Total
	Jun-Sep	Oct-May	Jan -Dec
2005	28,516	29,284	29,028
2006	34,840	34,476	34,598
2007	34,955	34,548	34,683
2008	34,490	34,525	34,513
2009	34,652	34,454	34,520
2010	34,636	34,464	34,521
2011	34,611	34,500	34,537
2012	34,668	34,584	34,612
2013	34,981	34,679	34,780
2014	35,018	34,965	34,982
2015	35,162	35,008	35,059
2016	35,375	35,169	35,238
2017	35,522	37,987	37,166
2018	37,037	40,348	39,245
2019	36,894	36,835	36,855
2020	37,875	37,554	37,661
05-'10	3.97%	3.31%	3.53%
10-'15	0.30%	0.31%	0.31%
10-'20	1.50%	1.41%	1.44%



Plot 3A-3 MO West Big Commercial Customers

Year	MO West Summer	MO West Non-Summer	MO West Total
	Jun-Sep	Oct-May	Jan -Dec
2005	1,221	1,288	1,266
2006	2,414	2,403	2,407
2007	2,471	2,470	2,470
2008	2,509	2,523	2,518
2009	2,583	2,581	2,582
2010	2,649	2,628	2,635
2011	2,651	2,649	2,650
2012	2,652	2,669	2,663
2013	2,684	2,669	2,674
2014	2,679	2,698	2,692
2015	2,711	2,697	2,702
2016	2,731	2,720	2,724
2017	1,389	1,756	1,634
2018	1,388	1,592	1,524
2019	1,395	1,398	1,397
2020	1,429	1,418	1,422

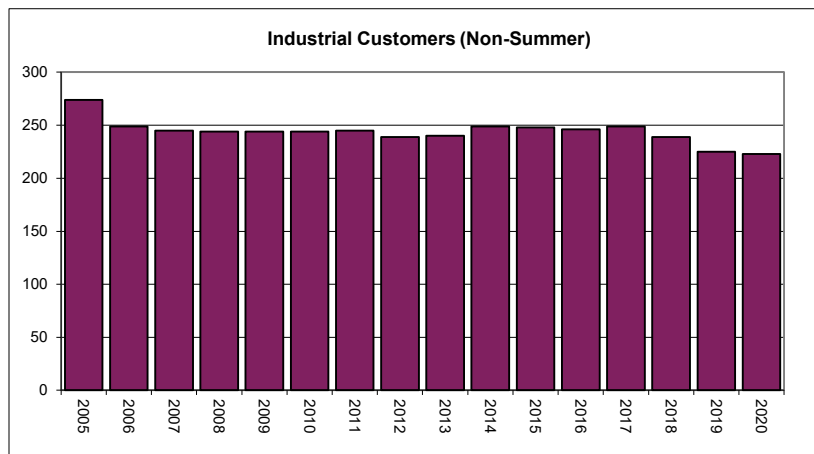
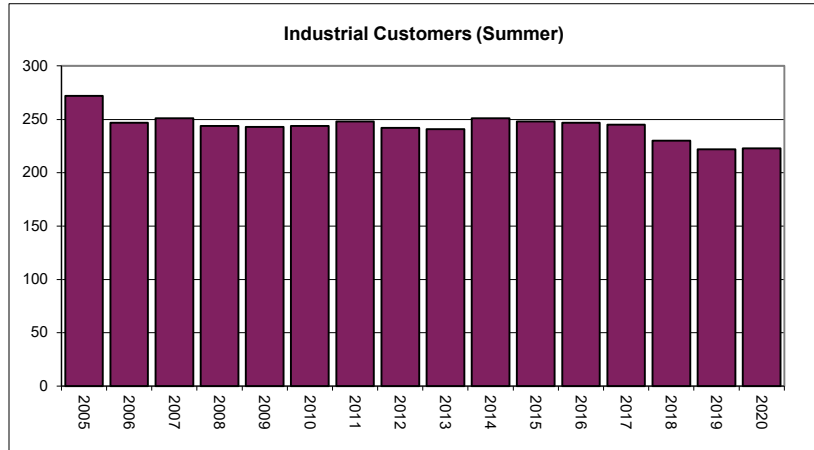
05-'10	16.75%	15.33%	15.79%
10-'15	0.46%	0.52%	0.50%
10-'20	-12.02%	-12.07%	-12.05%



Plot 3A-4 MO West Industrial Customers

Year	MO West Summer	MO West Non-Summer	MO West Total
	Jun-Sep	Oct-May	Jan -Dec
2005	272	274	273
2006	247	249	248
2007	251	245	247
2008	244	244	244
2009	243	244	244
2010	244	244	244
2011	248	245	246
2012	242	239	240
2013	241	240	240
2014	251	249	250
2015	248	248	248
2016	247	246	246
2017	245	249	248
2018	230	239	236
2019	222	225	224
2020	223	223	223

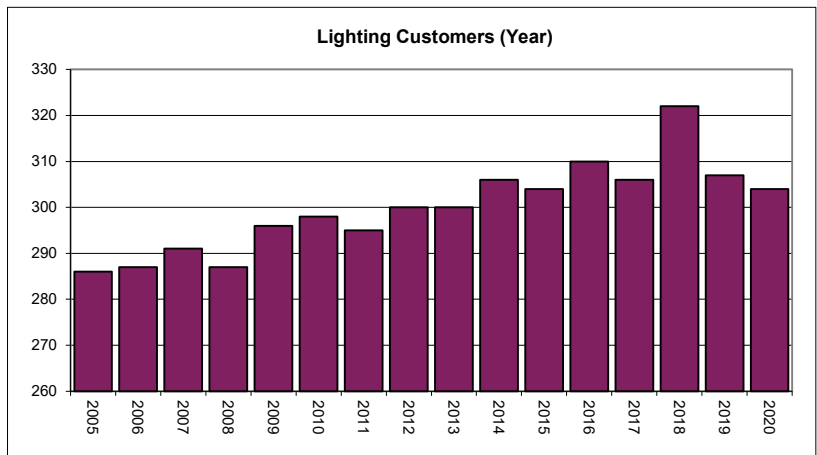
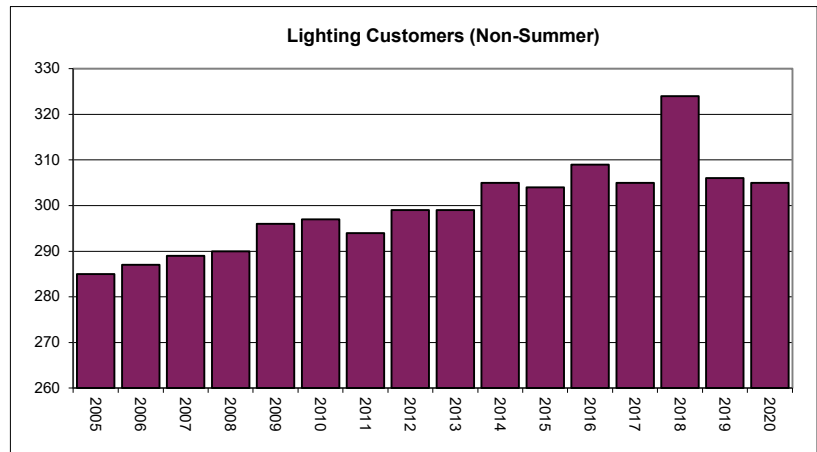
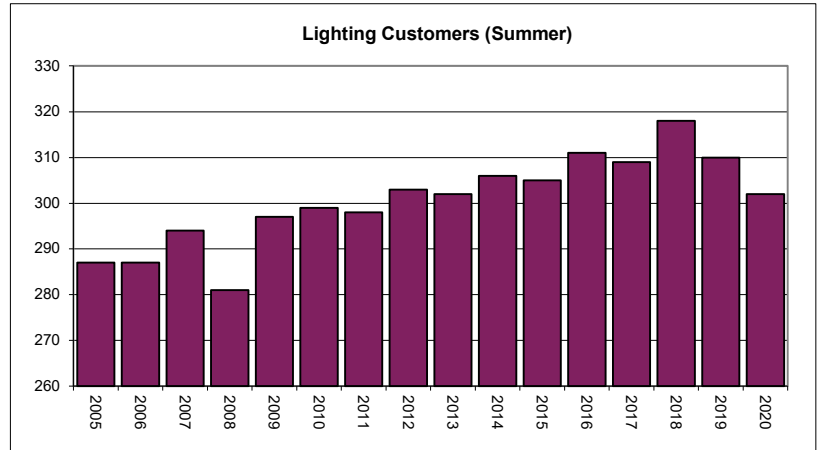
05-'10	-2.15%	-2.29%	-2.22%
10-'15	0.33%	0.33%	0.33%
10-'20	-2.10%	-2.10%	-2.10%



Plot 3A-5 MO West Lighting Customers

Year	MO West	MO West	MO West
	Summer Jun-Sep	Non-Summer Oct-May	Total Jan -Dec
2005	287	285	286
2006	287	287	287
2007	294	289	291
2008	281	290	287
2009	297	296	296
2010	299	297	298
2011	298	294	295
2012	303	299	300
2013	302	299	300
2014	306	305	306
2015	305	304	304
2016	311	309	310
2017	309	305	306
2018	318	324	322
2019	310	306	307
2020	302	305	304

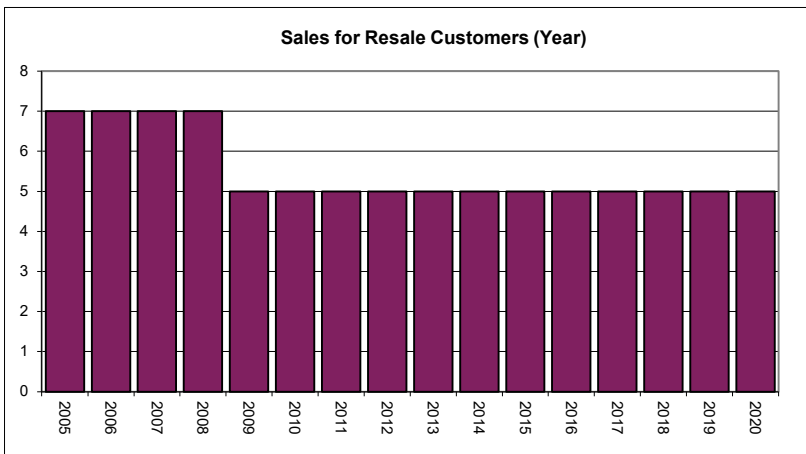
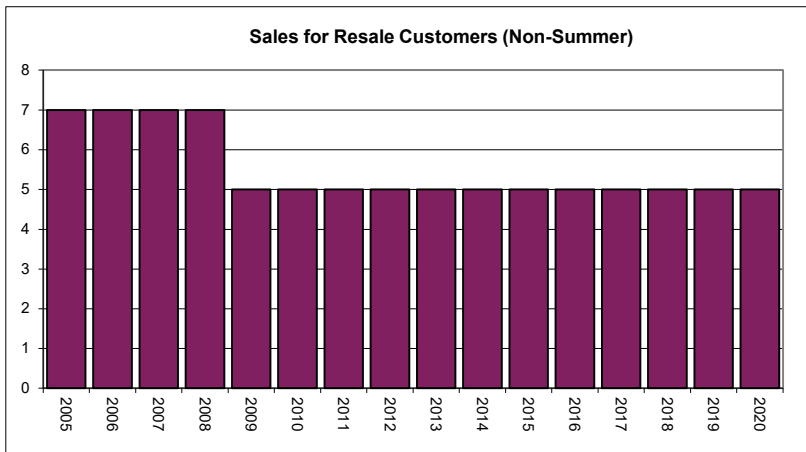
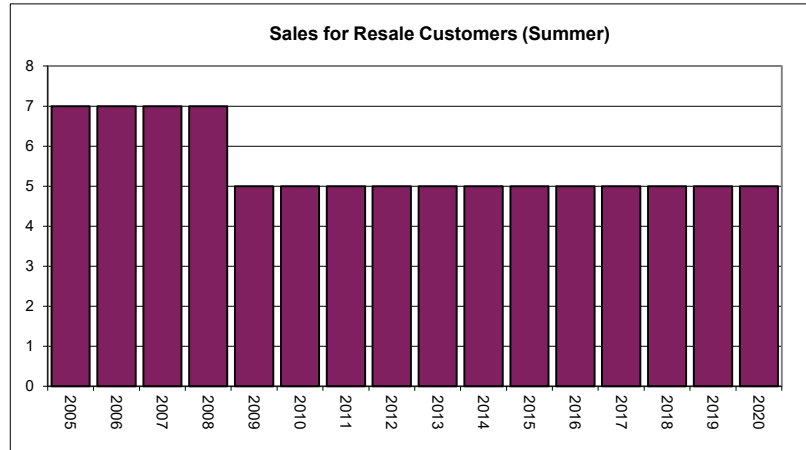
05-'10	0.82%	0.83%	0.83%
10-'15	0.40%	0.47%	0.40%
10-'20	-0.20%	0.07%	0.00%



Plot 3A-6 MO West Sales for Resale Customers

Year	MO West Summer	MO West Non-Summer	MO West Total
	Jun-Sep	Oct-May	Jan -Dec
2005	7	7	7
2006	7	7	7
2007	7	7	7
2008	7	7	7
2009	5	5	5
2010	5	5	5
2011	5	5	5
2012	5	5	5
2013	5	5	5
2014	5	5	5
2015	5	5	5
2016	5	5	5
2017	5	5	5
2018	5	5	5
2019	5	5	5
2020	5	5	5

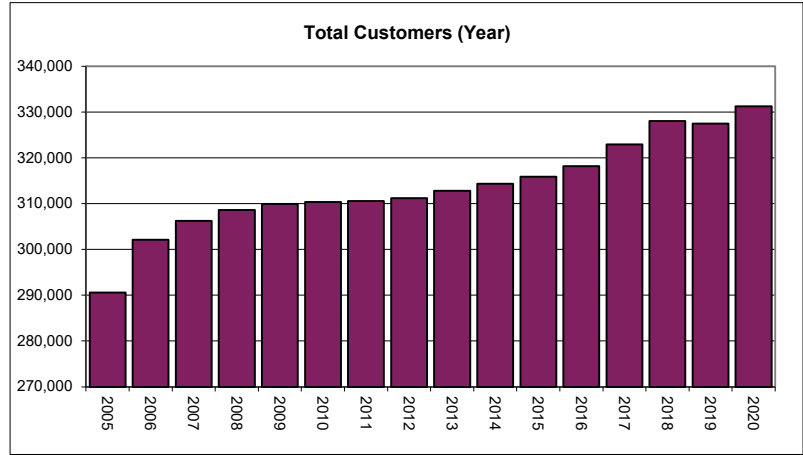
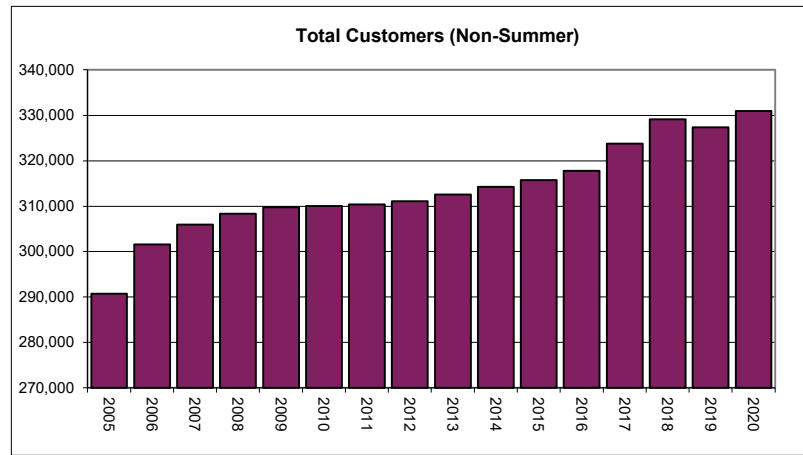
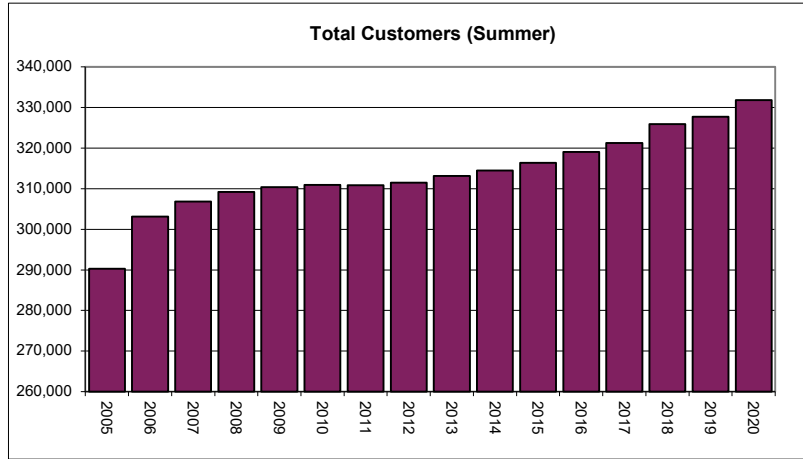
05-'10	-6.51%	-6.51%	-6.51%
10-'15	0.00%	0.00%	0.00%
10-'20	0.00%	0.00%	0.00%



Plot 3A-7 MO West Total Customers

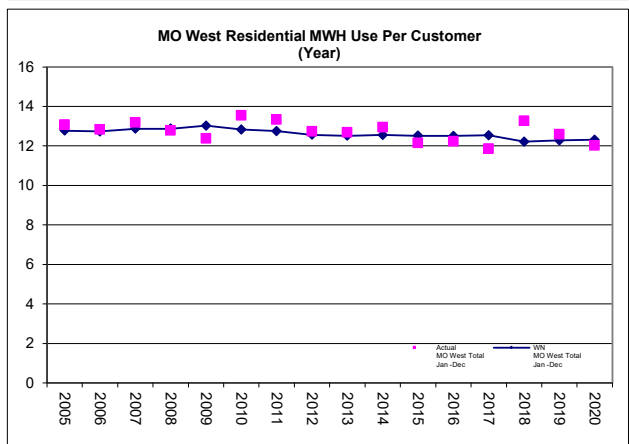
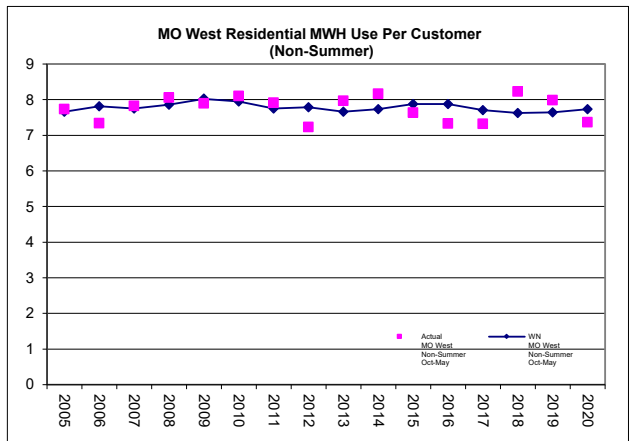
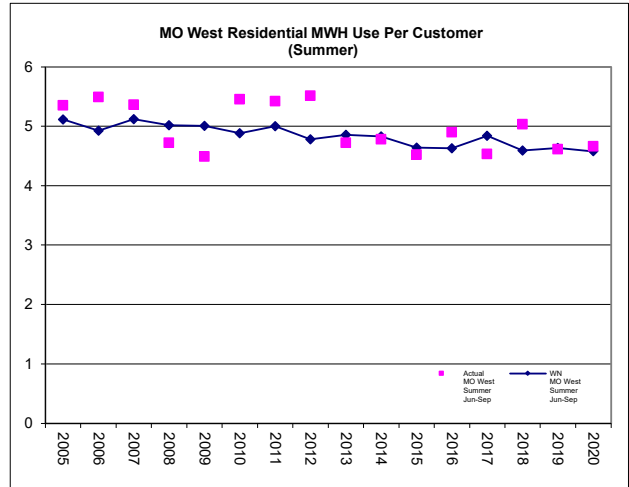
Year	MO West Summer Jun-Sep	MO West Non-Summer Oct-May	MO West Total Jan-Dec
2005	290,290	290,766	290,608
2006	303,097	301,582	302,089
2007	306,831	305,942	306,230
2008	309,179	308,358	308,637
2009	310,382	309,763	309,969
2010	310,966	310,064	310,363
2011	310,894	310,375	310,543
2012	311,498	311,065	311,204
2013	313,169	312,594	312,783
2014	314,456	314,250	314,317
2015	316,342	315,709	315,919
2016	319,035	317,774	318,193
2017	321,256	323,753	322,922
2018	325,952	329,119	328,074
2019	327,742	327,382	327,501
2020	331,823	330,978	331,262

05-'10	1.39%	1.29%	1.32%
10-'15	0.34%	0.36%	0.36%
10-'20	0.96%	0.95%	0.95%



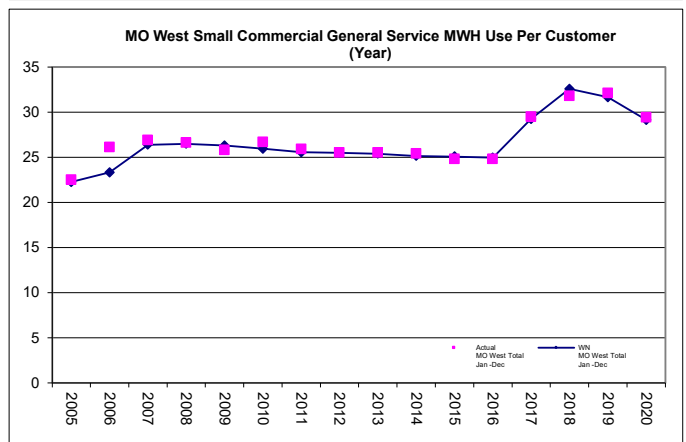
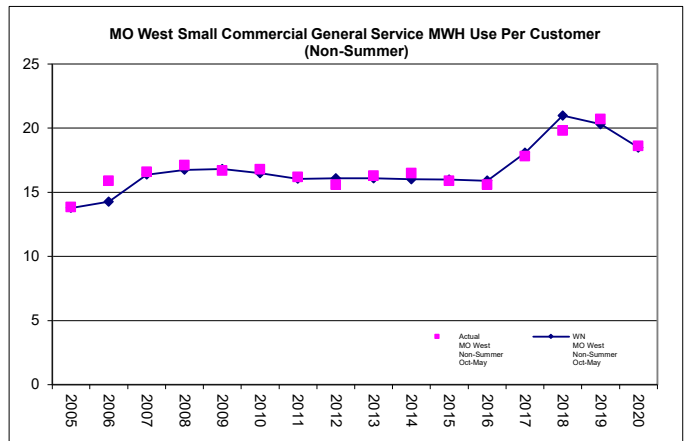
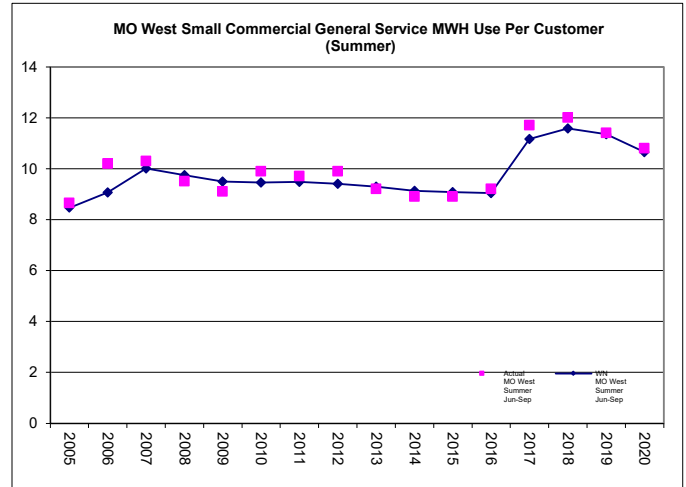
Plot 3A-8 MO West Residential MWH Use Per Customer (Actual vs. Weather Normalized)

Year	Actual	WN	Actual	WN	Actual	WN
	MO West Summer Jun-Sep	MO West Summer Jun-Sep	MO West Non-Summer Oct-May	MO West Non-Summer Oct-May	MO West Total Jan-Dec	MO West Total Jan-Dec
2005	5.35	5.11	7.73	7.66	13.08	12.77
2006	5.49	4.92	7.34	7.82	12.83	12.74
2007	5.36	5.12	7.82	7.75	13.18	12.87
2008	4.72	5.02	8.06	7.85	12.78	12.87
2009	4.49	5.01	7.89	8.02	12.38	13.03
2010	5.45	4.88	8.10	7.95	13.55	12.84
2011	5.42	5.00	7.91	7.75	13.33	12.76
2012	5.51	4.78	7.23	7.79	12.74	12.56
2013	4.72	4.86	7.97	7.66	12.69	12.52
2014	4.78	4.83	8.16	7.73	12.94	12.56
2015	4.52	4.64	7.63	7.9	12.15	12.51
2016	4.90	4.63	7.33	7.9	12.23	12.50
2017	4.53	4.84	7.32	7.7	11.85	12.54
2018	5.03	4.59	8.23	7.63	13.26	12.22
2019	4.61	4.63	7.98	7.64	12.59	12.27
2020	4.66	4.58	7.36	7.73	12.02	12.31
05-'10	0.4%	-0.9%	0.9%	0.7%	0.7%	0.1%
10-'15	-3.7%	-1.0%	-1.2%	-0.2%	-2.2%	-0.5%
15-'20	0.6%	-0.3%	-0.7%	-0.4%	-0.2%	-0.3%



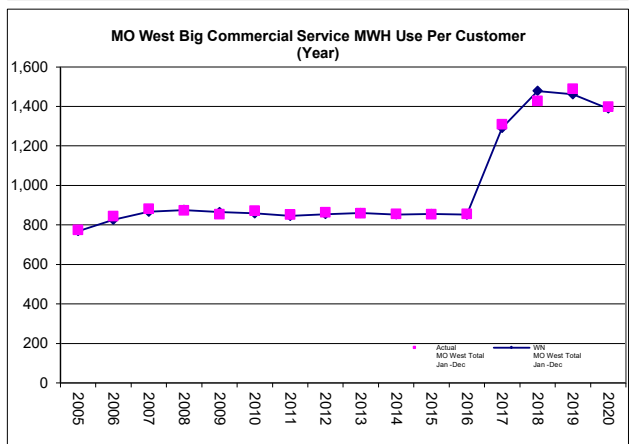
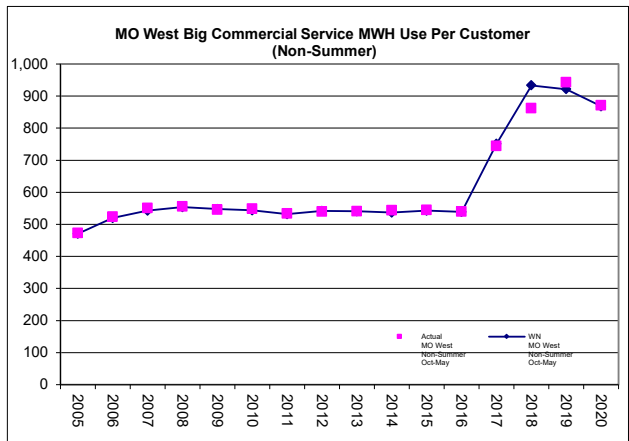
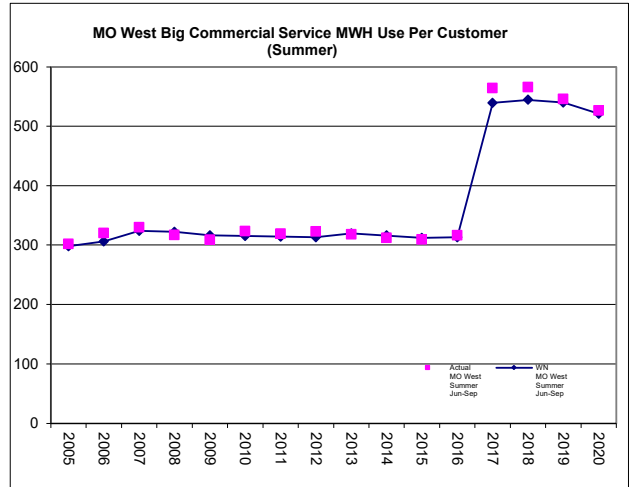
Plot 3A-9 MO West Small Commercial General Service MWH Use Per Customer (Actual vs. Weather Normalized)

Year	Actual	WN	Actual	WN	Actual	WN
	MO West Summer Jun-Sep	MO West Summer Jun-Sep	MO West Non-Summer Oct-May	MO West Non-Summer Oct-May	MO West Total Jan-Dec	MO West Total Jan-Dec
2005	8.65	8.47	13.85	13.79	22.50	22.26
2006	10.20	9.06	15.90	14.26	26.10	23.32
2007	10.30	10.01	16.60	16.38	26.90	26.39
2008	9.50	9.74	17.10	16.75	26.60	26.49
2009	9.10	9.50	16.70	16.82	25.80	26.31
2010	9.90	9.45	16.80	16.49	26.70	25.94
2011	9.70	9.49	16.20	16.06	25.90	25.54
2012	9.90	9.40	15.60	16.08	25.50	25.49
2013	9.20	9.30	16.30	16.10	25.50	25.40
2014	8.90	9.13	16.50	16.02	25.40	25.14
2015	8.90	9.08	15.90	15.99	24.80	25.07
2016	9.20	9.04	15.60	15.90	24.80	24.94
2017	11.70	11.16	17.80	18.1	29.50	29.24
2018	12.00	11.58	19.80	20.99	31.80	32.57
2019	11.40	11.35	20.70	20.31	32.10	31.66
2020	10.80	10.65	18.60	18.49	29.40	29.14
05-'10	2.7%	2.2%	3.9%	3.6%	3.5%	3.1%
10-'15	-2.1%	-0.8%	-1.1%	-0.6%	-1.5%	-0.7%
15-'20	3.9%	3.2%	3.2%	2.9%	3.5%	3.1%



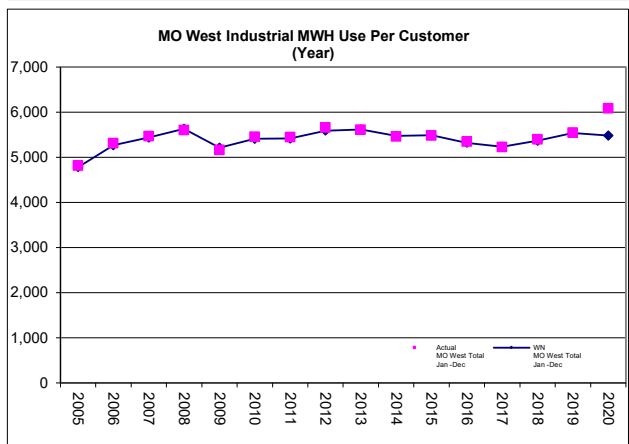
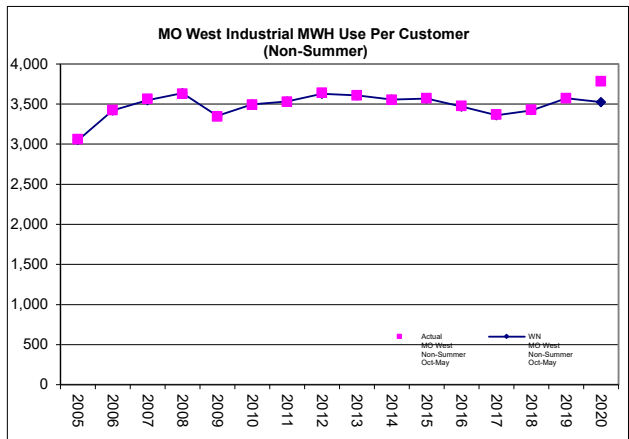
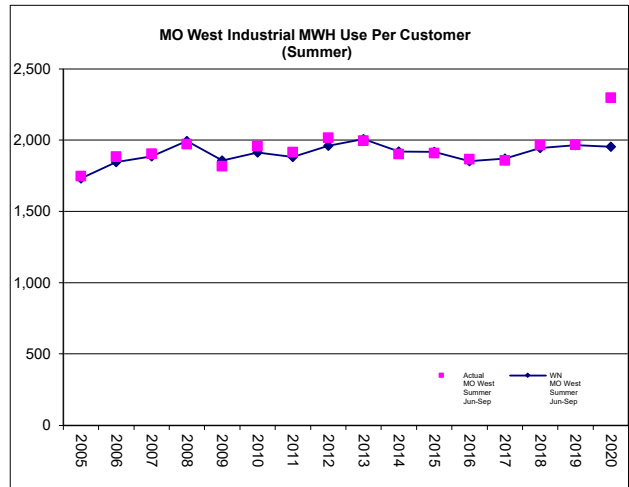
Plot 3A-10 MO West Big Commercial Service MWH Use Per Customer (Actual vs. Weather Normalized)

Year	Actual	WN	Actual	WN	Actual	WN
	MO West Summer Jun-Sep	MO West Summer Jun-Sep	MO West Non-Summer Oct-May	MO West Non-Summer Oct-May	MO West Total Jan -Dec	MO West Total Jan -Dec
2005	302.00	298.00	473.00	471.00	775.00	769.00
2006	319.87	306.00	524.13	520.00	844.00	826.00
2007	329.83	323.72	550.93	543.18	880.76	866.90
2008	316.80	322.44	556.06	553.46	872.86	875.90
2009	308.55	316.52	545.76	548.14	854.31	864.65
2010	323.47	315.07	548.69	543.56	872.16	858.62
2011	318.74	314.35	533.82	531.71	852.56	846.06
2012	322.99	313.21	540.21	541.56	863.20	854.77
2013	317.99	319.67	540.93	540.69	858.92	860.35
2014	312.07	316.05	543.68	537.11	855.75	853.16
2015	309.25	312.25	544.45	542.75	853.70	855.00
2016	316.37	313.26	539.50	538.67	855.87	851.93
2017	564.14	539.1	744.34	751.8	1,308.48	1,290.93
2018	565.94	544.52	861.80	933.91	1,427.74	1,478.43
2019	545.60	539.78	942.53	921.56	1,488.13	1,461.34
2020	526.59	521.28	871.05	868.03	1,397.64	1,389.32
05-'10	1.4%	1.1%	3.0%	2.9%	2.4%	2.2%
10-'15	-0.9%	-0.2%	-0.2%	0.0%	-0.4%	-0.1%
15-'20	11.2%	10.8%	9.9%	9.8%	10.4%	10.2%



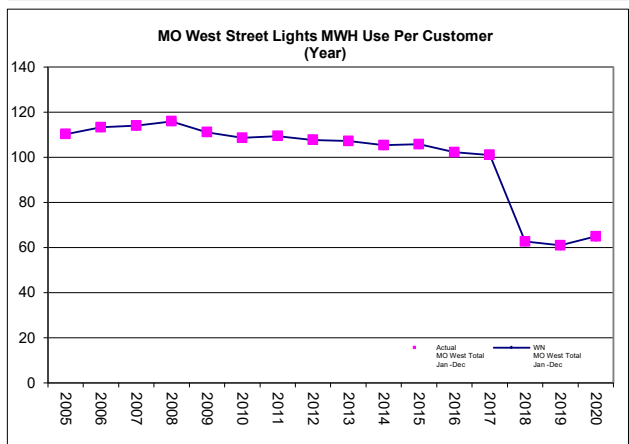
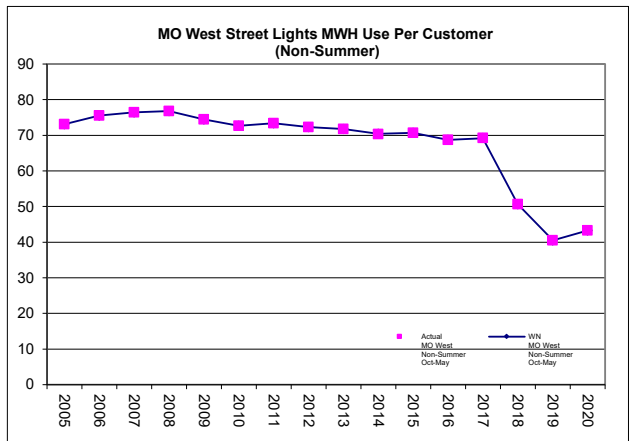
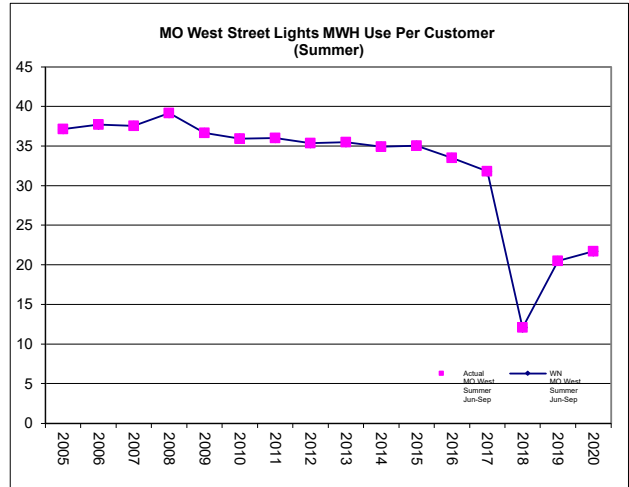
Plot 3A-11 MO West Industrial MWH Use Per Customer (Actual vs. Weather Normalized)

Year	Actual	WN	Actual	WN	Actual	WN
	MO West Summer Jun-Sep	MO West Summer Jun-Sep	MO West Non-Summer Oct-May	MO West Non-Summer Oct-May	MO West Total Jan-Dec	MO West Total Jan-Dec
2005	1,745.73	1,731.18	3,063.29	3,051.63	4,809.02	4,782.81
2006	1,883.73	1,844.44	3,425.23	3,421.26	5,308.96	5,265.71
2007	1,902.80	1,886.42	3,562.51	3,549.23	5,465.31	5,435.65
2008	1,971.78	1,993.74	3,629.05	3,636.47	5,600.83	5,630.21
2009	1,816.13	1,856.80	3,344.12	3,354.63	5,160.25	5,211.43
2010	1,957.46	1,912.35	3,493.63	3,495.87	5,451.09	5,408.22
2011	1,914.31	1,881.86	3,530.19	3,531.12	5,444.50	5,412.98
2012	2,016.97	1,959.35	3,641.35	3,629.28	5,658.32	5,588.63
2013	1,996.65	2,008.10	3,608.34	3,606.83	5,604.99	5,614.93
2014	1,901.50	1,919.29	3,553.10	3,555.10	5,454.60	5,474.39
2015	1,908.51	1,917.17	3,571.34	3,567.45	5,479.85	5,484.62
2016	1,866.55	1,851.6	3,475.97	3,468.5	5,342.52	5,320.09
2017	1,857.29	1,869.1	3,369.05	3,360.8	5,226.34	5,229.92
2018	1,963.74	1,944.63	3,427.13	3,422.7	5,390.87	5,367.36
2019	1,965.55	1,965.13	3,574.17	3,574.62	5,539.72	5,539.75
2020	2,295.76	1,952.94	3,782.74	3,525.40	6,078.50	5,478.35
05-'10	2.3%	2.0%	2.7%	2.8%	2.5%	2.5%
10-'15	-0.5%	0.1%	0.4%	0.4%	0.1%	0.3%
15-'20	3.8%	0.4%	1.2%	-0.2%	2.1%	0.0%



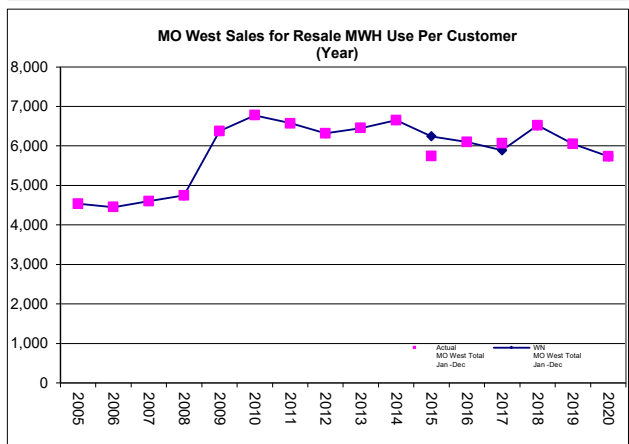
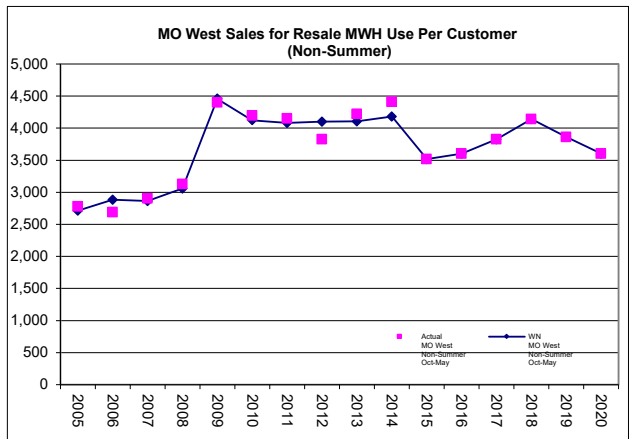
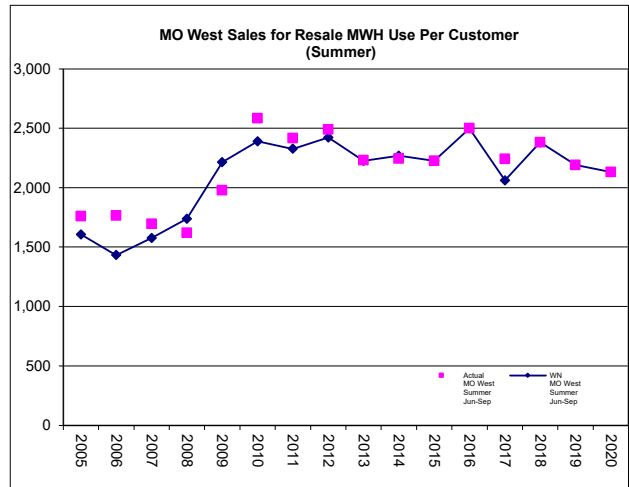
Plot 3A-12 MO West Street Lights MWH Use Per Customer (Actual vs. Weather Normalized)

Year	Actual	WN	Actual	WN	Actual	WN
	MO West Summer Jun-Sep	MO West Summer Jun-Sep	MO West Non-Summer Oct-May	MO West Non-Summer Oct-May	MO West Total Jan -Dec	MO West Total Jan -Dec
2005	37.13	37.13	73.09	73.09	110.22	110.22
2006	37.72	37.72	75.52	75.52	113.24	113.24
2007	37.54	37.54	76.42	76.42	113.95	113.96
2008	39.16	39.16	76.78	76.78	115.92	115.94
2009	36.66	36.66	74.42	74.42	111.09	111.09
2010	35.91	35.91	72.69	72.69	108.60	108.60
2011	36.00	36.00	73.38	73.38	109.38	109.38
2012	35.36	35.36	72.32	72.32	107.66	107.67
2013	35.48	35.48	71.74	71.74	107.21	107.21
2014	34.93	34.93	70.34	70.38	105.31	105.31
2015	35.03	35.03	70.71	70.71	105.73	105.73
2016	33.50	33.50	68.74	68.74	102.24	102.24
2017	31.80	31.80	69.20	69.20	101.00	101.00
2018	12.07	12.07	50.63	50.63	62.70	62.70
2019	20.48	20.48	40.50	40.50	60.98	60.98
2020	21.69	21.69	43.26	43.26	64.95	64.95
05-'10	-0.7%	-0.7%	-0.1%	-0.1%	-0.3%	-0.3%
10-'15	-0.5%	-0.5%	-0.6%	-0.6%	-0.5%	-0.5%
15-'20	-9.1%	-9.1%	-9.4%	-9.4%	-9.3%	-9.3%



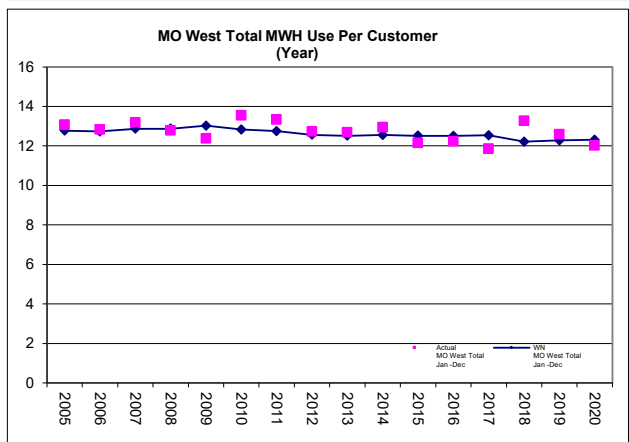
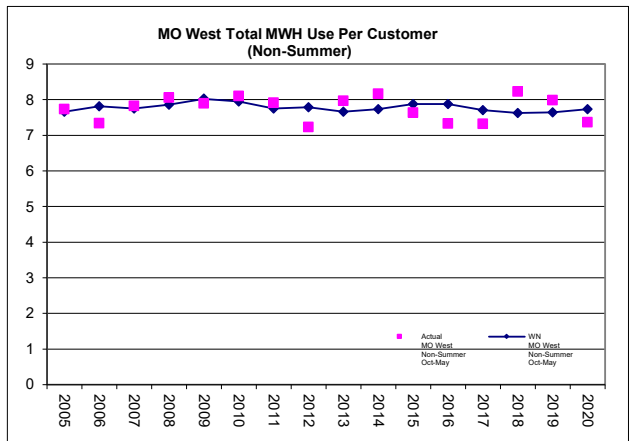
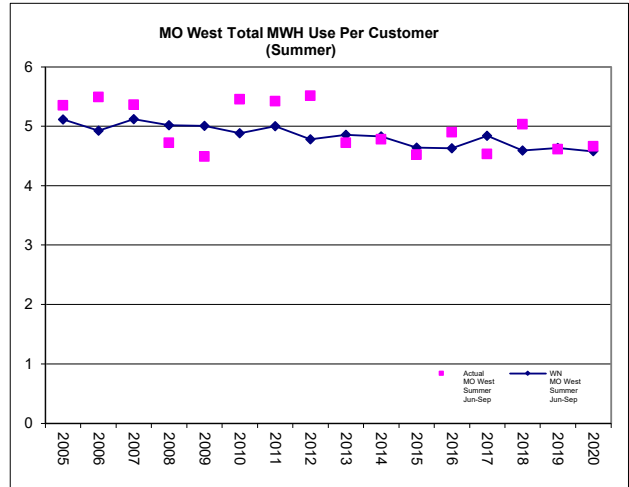
**Plot 3A-13 MO West Sales for Resale MWH Use Per Customer
(Actual vs. Weather Normalized)**

Year	Actual	WN	Actual	WN	Actual	WN
	MO West Summer Jun-Sep	MO West Summer Jun-Sep	MO West Non-Summer Oct-May	MO West Non-Summer Oct-May	MO West Total Jan -Dec	MO West Total Jan -Dec
2005	1,760.60	1,605.11	2,777.68	2,716.13	4,538.28	4,538.28
2006	1,763.87	1,432.64	2,689.90	2,883.36	4,453.77	4,453.77
2007	1,694.68	1,575.79	2,904.04	2,862.92	4,598.72	4,598.72
2008	1,617.87	1,738.05	3,128.82	3,056.97	4,746.69	4,748.00
2009	1,977.47	2,213.65	4,399.65	4,458.21	6,377.12	6,377.12
2010	2,584.29	2,389.75	4,194.89	4,123.93	6,779.18	6,779.19
2011	2,415.93	2,326.30	4,152.37	4,080.64	6,568.30	6,579.43
2012	2,490.40	2,422.14	3,828.68	4,103.33	6,319.08	6,319.07
2013	2,230.37	2,224.99	4,221.07	4,108.31	6,451.44	6,451.45
2014	2,243.41	2,269.37	4,410.47	4,179.23	6,653.88	6,653.88
2015	2,224.21	2,224.21	3,518.23	3,518.23	5,742.44	6,242.42
2016	2,499.47	2,499.47	3,602.51	3,602.51	6,101.98	6,101.97
2017	2,241.18	2,060.06	3,827.85	3,827.85	6,069.03	5,887.91
2018	2,381.33	2,381.33	4,141.12	4,141.12	6,522.45	6,522.45
2019	2,191.59	2,191.59	3,861.68	3,861.68	6,053.27	6,053.27
2020	2,129.93	2,129.93	3,604.36	3,604.36	5,734.29	5,734.29
05-'10	8.0%	8.3%	8.6%	8.7%	8.4%	8.4%
10-'15	-3.0%	-1.4%	-3.5%	-3.1%	-3.3%	-1.6%
15-'20	-0.9%	-0.9%	0.5%	0.5%	0.0%	-1.7%



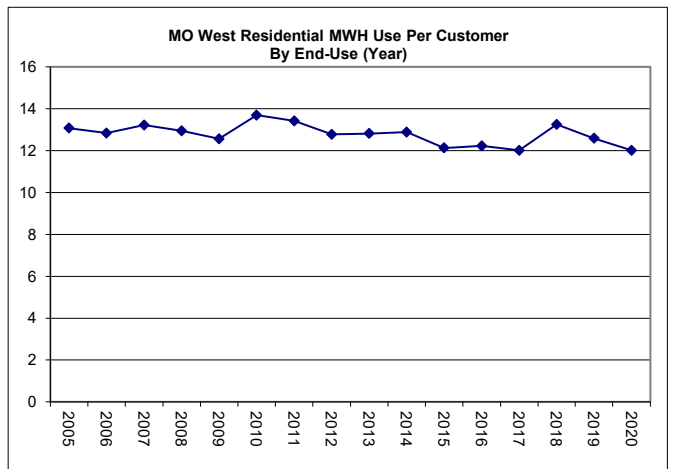
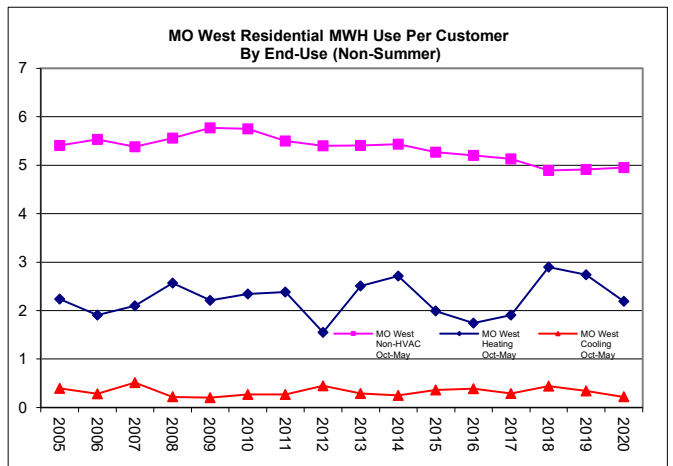
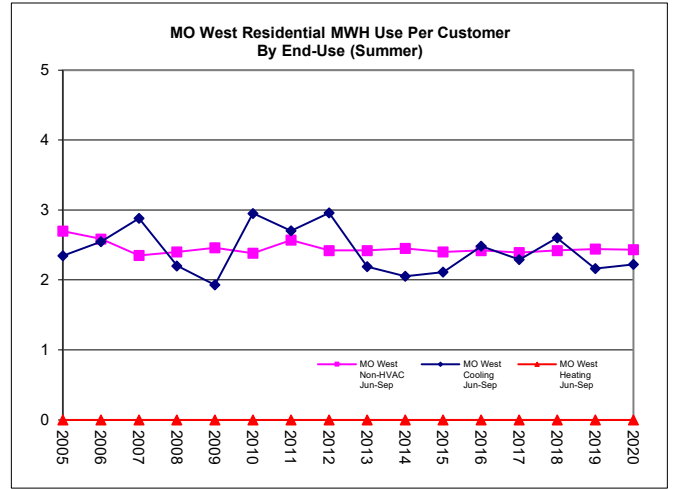
**Plot 3A-14 MO West Total MWH Use Per Customer
(Actual vs. Weather Normalized)**

Year	Actual	WN	Actual	WN	Actual	WN
	MO West Summer Jun-Sep	MO West Summer Jun-Sep	MO West Non-Summer Oct-May	MO West Non-Summer Oct-May	MO West Total Jan-Dec	MO West Total Jan-Dec
2005	5.35	5.11	7.73	7.66	13.08	12.77
2006	5.49	4.92	7.34	7.82	12.83	12.74
2007	5.36	5.12	7.82	7.75	13.18	12.87
2008	4.72	5.02	8.06	7.85	12.78	12.87
2009	4.49	5.01	7.89	8.02	12.38	13.03
2010	5.45	4.88	8.10	7.95	13.55	12.84
2011	5.42	5.00	7.91	7.75	13.33	12.76
2012	5.51	4.78	7.23	7.79	12.74	12.56
2013	4.72	4.86	7.97	7.66	12.69	12.52
2014	4.78	4.83	8.16	7.73	12.94	12.56
2015	4.52	4.64	7.63	7.88	12.15	12.51
2016	4.90	4.63	7.33	7.87	12.23	12.50
2017	4.53	4.84	7.32	7.70	11.85	12.54
2018	5.03	4.59	8.23	7.63	13.26	12.22
2019	4.61	4.63	7.98	7.64	12.59	12.27
2020	4.66	4.58	7.36	7.73	12.02	12.31
05-'10	0.4%	-0.9%	0.9%	0.7%	0.7%	0.1%
10-'15	-3.7%	-1.0%	-1.2%	-0.2%	-2.2%	-0.5%
15-'20	0.6%	-0.3%	-0.7%	-0.4%	-0.2%	-0.3%



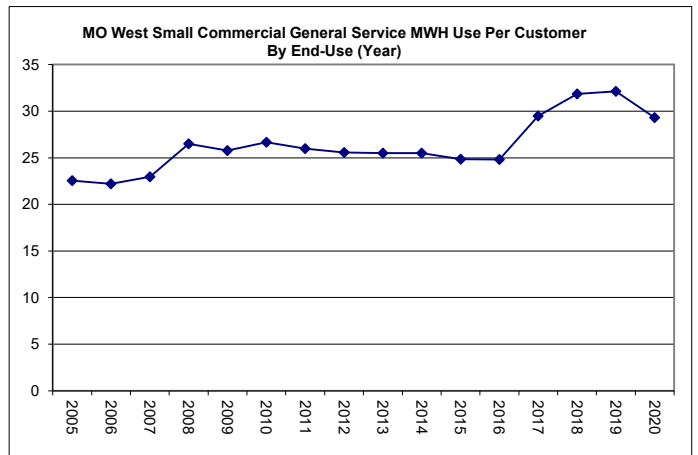
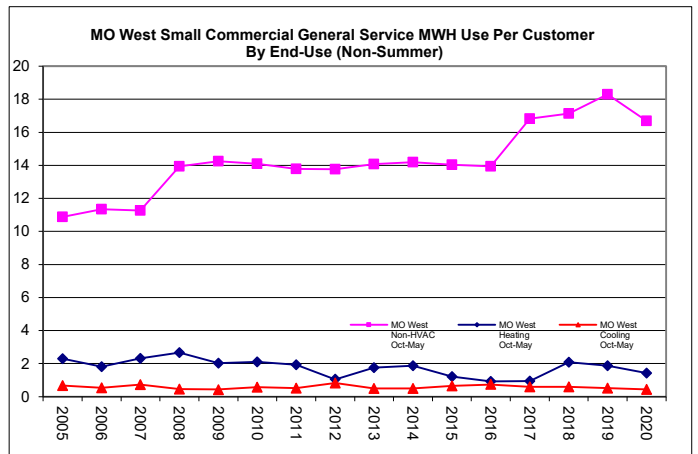
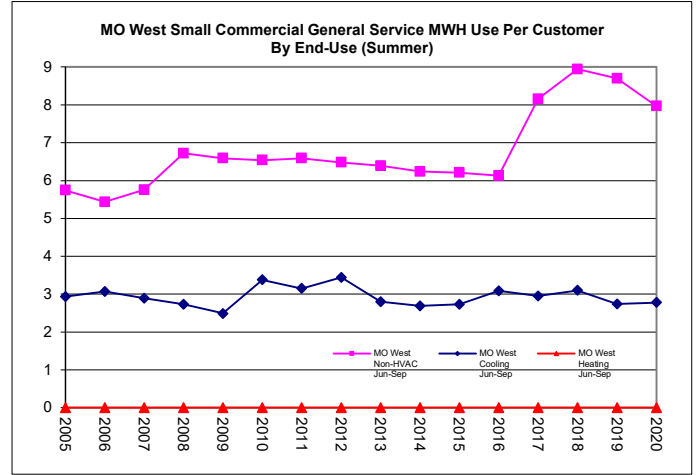
Plot 3A-15 MO West Residential MWH Use Per Customer By End-Use

Year	MO West Cooling Jun-Sep	MO West Cooling Oct-May	MO West Heating Jun-Sep	MO West Heating Oct-May	MO West Non-HVAC Jun-Sep	MO West Non-HVAC Oct-May	MO West Total Jan-Dec
2005	2.35	0.40	-	2.24	2.70	5.41	13.08
2006	2.55	0.28	-	1.91	2.59	5.53	12.85
2007	2.88	0.51	-	2.10	2.35	5.38	13.22
2008	2.20	0.22	-	2.57	2.40	5.56	12.95
2009	1.93	0.20	-	2.21	2.46	5.77	12.57
2010	2.95	0.27	-	2.34	2.38	5.75	13.69
2011	2.70	0.27	-	2.38	2.57	5.50	13.42
2012	2.96	0.45	-	1.55	2.42	5.40	12.78
2013	2.19	0.29	-	2.51	2.42	5.41	12.82
2014	2.05	0.25	-	2.71	2.45	5.43	12.89
2015	2.11	0.36	-	1.99	2.40	5.27	12.13
2016	2.48	0.39	-	1.74	2.42	5.20	12.23
2017	2.29	0.29	-	1.91	2.39	5.13	12.01
2018	2.60	0.44	-	2.90	2.42	4.89	13.25
2019	2.16	0.34	-	2.74	2.44	4.91	12.59
2020	2.22	0.22	-	2.19	2.43	4.95	12.01
05-'10	4.7%	-7.3%	#DIV/0!	0.9%	-2.5%	1.2%	0.9%
10-'15	-6.5%	5.9%	#DIV/0!	-3.2%	0.2%	-1.7%	-2.4%
15-'20	1.0%	-9.4%	#DIV/0!	1.9%	0.2%	-1.2%	-0.2%



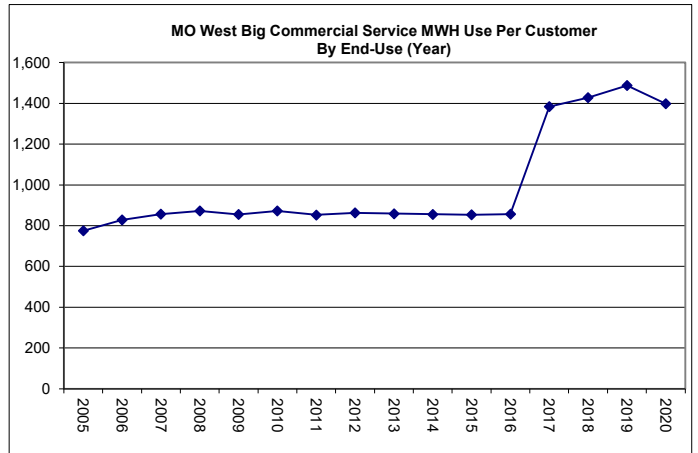
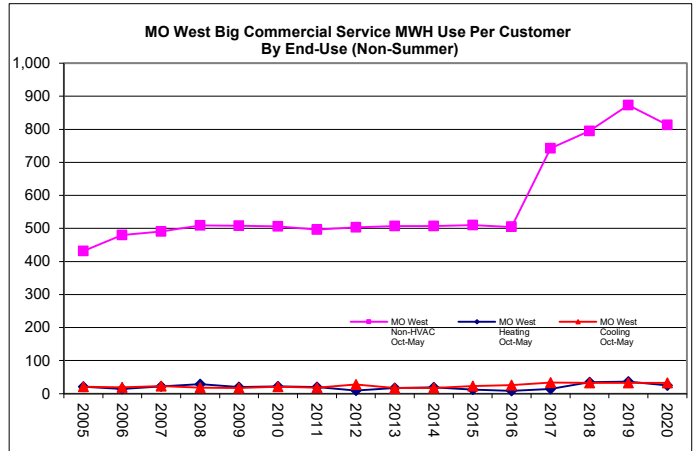
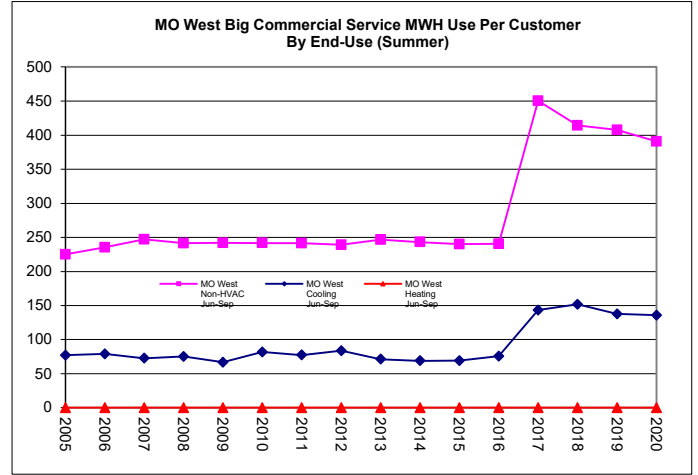
Plot 3A-16 MO West Small Commercial General Service MWH Use Per Customer By End-Use

Year	MO West Cooling Jun-Sep	MO West Cooling Oct-May	MO West Heating Jun-Sep	MO West Heating Oct-May	MO West Non-HVAC Jun-Sep	MO West Non-HVAC Oct-May	MO West Total Jan-Dec
2005	2.94	0.68	-	2.30	5.75	10.88	22.54
2006	3.07	0.55	-	1.82	5.44	11.34	22.21
2007	2.90	0.73	-	2.32	5.76	11.27	22.97
2008	2.73	0.46	-	2.67	6.72	13.93	26.51
2009	2.49	0.43	-	2.02	6.59	14.25	25.78
2010	3.38	0.57	-	2.10	6.54	14.09	26.68
2011	3.15	0.52	-	1.94	6.59	13.78	25.98
2012	3.44	0.83	-	1.05	6.48	13.76	25.56
2013	2.80	0.49	-	1.75	6.39	14.08	25.51
2014	2.69	0.50	-	1.87	6.24	14.19	25.49
2015	2.73	0.65	-	1.22	6.21	14.04	24.85
2016	3.09	0.74	-	0.93	6.13	13.94	24.83
2017	2.95	0.59	-	0.95	8.16	16.83	29.48
2018	3.10	0.60	-	2.09	8.94	17.13	31.86
2019	2.74	0.51	-	1.88	8.70	18.30	32.13
2020	2.78	0.44	-	1.42	7.97	16.69	29.30
05-'10	2.9%	-3.5%	#DIV/0!	-1.8%	2.6%	5.3%	3.4%
10-'15	-4.2%	2.7%	#DIV/0!	-10.3%	-1.0%	-0.1%	-1.4%
15-'20	0.4%	-7.5%	#DIV/0!	3.1%	5.1%	3.5%	3.3%



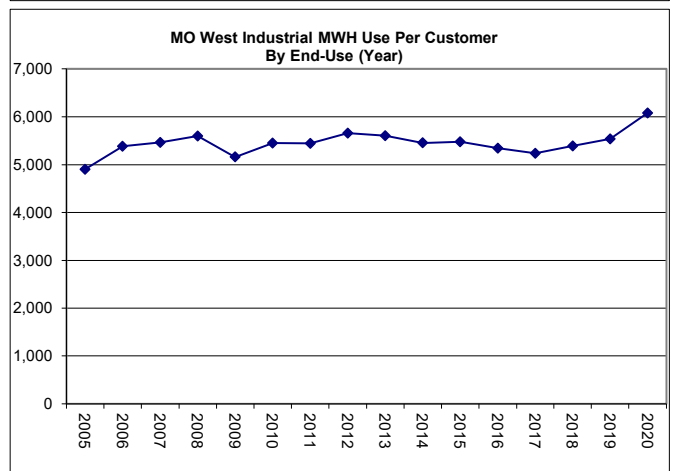
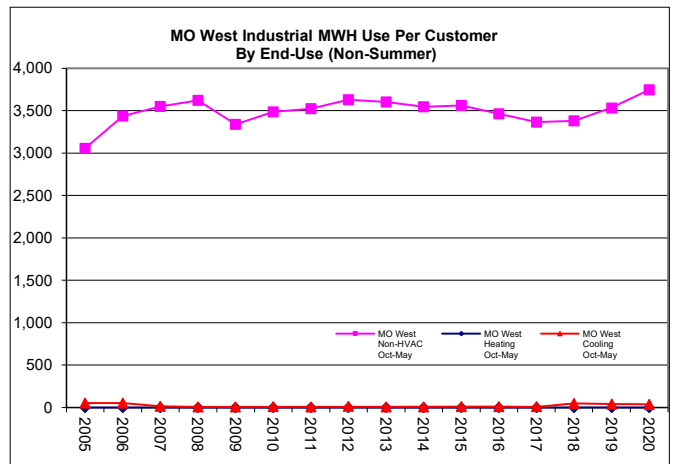
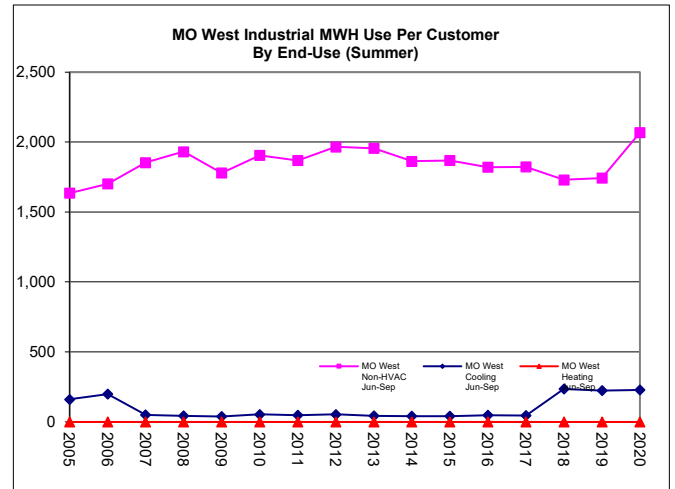
Plot 3A-17 MO West Big Commercial Service MWH Use Per Customer By End-Use

Year	MO West	MO West	MO West	MO West	MO West	MO West	MO West
	Cooling Jun-Sep	Cooling Oct-May	Heating Jun-Sep	Heating Oct-May	Non-HVAC Jun-Sep	Non-HVAC Oct-May	Total Jan-Dec
2005	77.27	21.15	-	20.64	225.13	431.08	775.26
2006	79.06	19.44	-	14.44	235.30	479.93	828.16
2007	72.67	23.13	-	21.99	247.21	490.89	855.88
2008	75.30	17.88	-	28.71	241.50	509.47	872.86
2009	66.64	17.41	-	20.24	241.91	508.11	854.31
2010	81.76	20.80	-	21.58	241.71	506.31	872.16
2011	77.36	18.03	-	19.70	241.38	496.09	852.56
2012	83.74	27.79	-	9.04	239.24	503.38	863.19
2013	71.30	16.64	-	16.97	246.66	507.32	858.89
2014	68.90	17.46	-	19.39	243.17	506.83	855.75
2015	69.03	22.72	-	12.01	240.22	509.72	853.70
2016	75.83	26.11	-	8.63	240.54	504.75	855.86
2017	143.31	33.70	-	14.21	450.45	742.72	1,384.39
2018	151.68	33.12	-	34.32	414.26	794.36	1,427.74
2019	137.82	32.51	-	36.74	407.77	873.28	1,488.12
2020	135.92	32.36	-	25.34	390.66	813.36	1,397.64
05-'10	1.1%	-0.3%	#DIV/0!	0.9%	1.4%	3.3%	2.4%
10-'15	-3.3%	1.8%	#DIV/0!	-11.1%	-0.1%	0.1%	-0.4%
15-'20	14.5%	7.3%	#DIV/0!	16.1%	10.2%	9.8%	10.4%



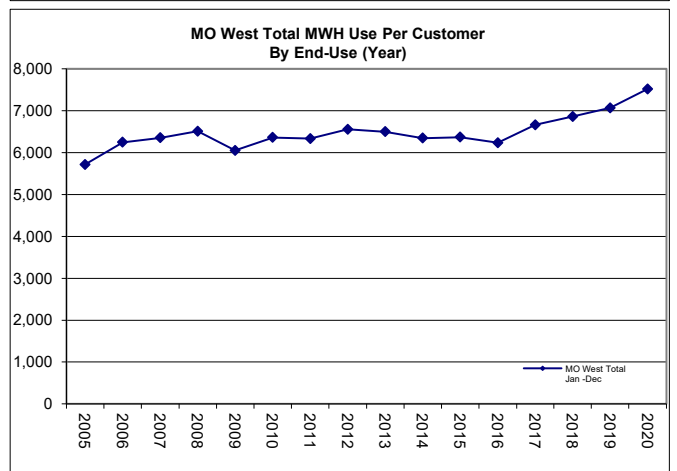
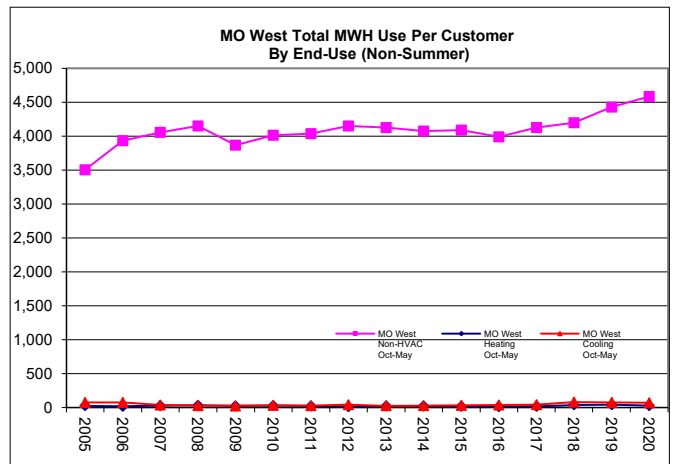
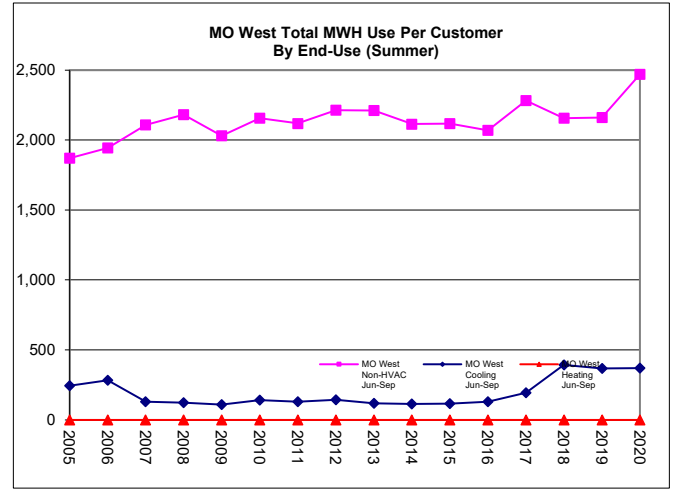
Plot 3A-18 MO West Industrial MWH Use Per Customer By End-Use

Year	MO West Cooling Jun-Sep	MO West Cooling Oct-May	MO West Heating Jun-Sep	MO West Heating Oct-May	MO West Non-HVAC Jun-Sep	MO West Non-HVAC Oct-May	MO West Total Jan-Dec
2005	160.44	51.45	-	-	1,635.48	3,055.51	4,902.87
2006	197.06	52.42	-	-	1,700.11	3,436.15	5,385.74
2007	50.15	13.55	-	-	1,852.65	3,548.96	5,465.31
2008	41.81	7.01	-	-	1,929.96	3,622.04	5,600.82
2009	37.36	6.50	-	-	1,778.78	3,337.62	5,160.26
2010	52.84	8.80	-	-	1,904.62	3,484.82	5,451.08
2011	46.81	7.81	-	-	1,867.50	3,522.38	5,444.50
2012	52.61	12.76	-	-	1,964.36	3,628.59	5,658.32
2013	41.58	7.28	-	-	1,955.07	3,601.07	5,605.00
2014	40.05	7.37	-	-	1,861.45	3,545.73	5,454.60
2015	40.97	9.89	-	-	1,867.54	3,561.45	5,479.85
2016	47.38	11.29	-	-	1,819.17	3,464.68	5,342.52
2017	44.78	8.82	-	-	1,821.08	3,363.29	5,237.97
2018	234.39	46.90	-	-	1,729.35	3,380.23	5,390.87
2019	223.70	41.18	-	-	1,741.84	3,533.00	5,539.72
2020	228.36	35.82	-	-	2,067.40	3,746.92	6,078.50
05-'10	-19.9%	-29.8%	#DIV/0!	#DIV/0!	3.1%	2.7%	2.1%
10-'15	-5.0%	2.4%	#DIV/0!	#DIV/0!	-0.4%	0.4%	0.1%
15-'20	41.0%	29.4%	#DIV/0!	#DIV/0!	2.1%	1.0%	2.1%



Plot 3A-19 MO West Total MWH Use Per Customer By End-Use

Year	MO West Cooling Jun-Sep	MO West Cooling Oct-May	MO West Heating Jun-Sep	MO West Heating Oct-May	MO West Non-HVAC Jun-Sep	MO West Non-HVAC Oct-May	MO West Total Jan -Dec
2005	242.98	73.67	-	25.17	1,869.05	3,502.87	5,713.74
2006	281.73	72.69	-	18.17	1,943.43	3,932.94	6,248.95
2007	128.59	37.92	-	26.41	2,107.97	4,056.50	6,357.38
2008	122.04	25.57	-	33.95	2,180.58	4,151.00	6,513.14
2009	108.42	24.54	-	24.47	2,029.74	3,865.75	6,052.92
2010	140.93	30.44	-	26.02	2,155.25	4,010.97	6,363.61
2011	130.02	26.63	-	24.02	2,118.04	4,037.75	6,336.46
2012	142.75	41.83	-	11.64	2,212.50	4,151.13	6,559.85
2013	117.87	24.70	-	21.23	2,210.54	4,127.88	6,502.22
2014	113.69	25.58	-	23.97	2,113.31	4,072.18	6,348.73
2015	114.84	33.62	-	15.22	2,116.37	4,090.48	6,370.53
2016	128.78	38.53	-	11.30	2,068.26	3,988.57	6,235.44
2017	193.33	43.40	-	17.07	2,282.08	4,127.97	6,663.85
2018	391.77	81.06	-	39.31	2,154.97	4,196.61	6,863.72
2019	366.42	74.54	-	41.36	2,160.75	4,429.49	7,072.56
2020	369.28	68.84	-	28.95	2,468.46	4,581.92	7,517.45
05-'10	-10.3%	-16.2%	#DIV/0!	0.7%	2.9%	2.7%	2.2%
10-'15	-4.0%	2.0%	#DIV/0!	-10.2%	-0.4%	0.4%	0.0%
15-'20	26.3%	15.4%	#DIV/0!	13.7%	3.1%	2.3%	3.4%

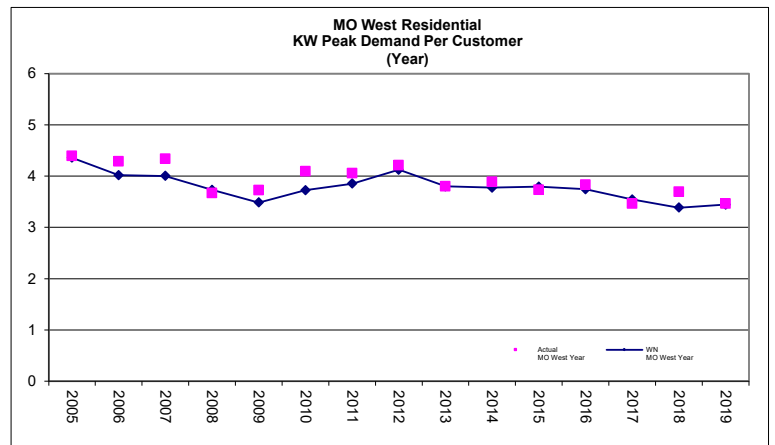
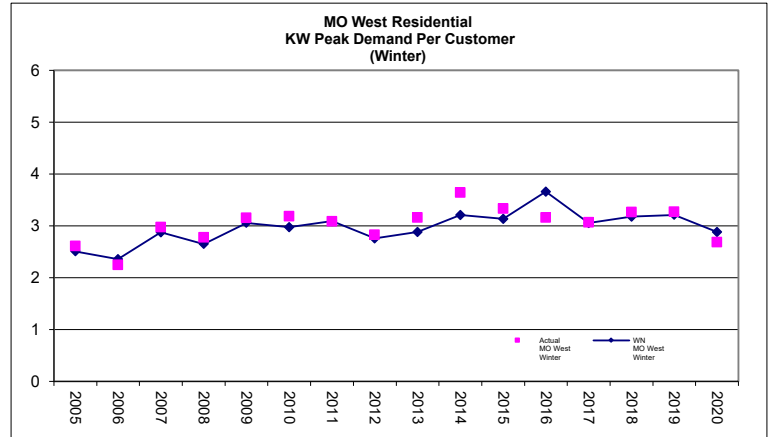
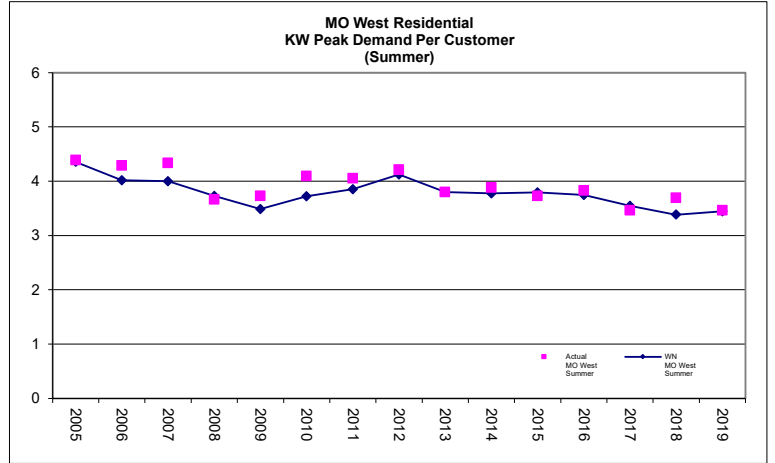


Plot 3A-20 MO West Residential KW Peak Demand Per Customer (Actual vs. Weather Normalized)

Year	Actual MO West Summer	WN MO West Summer	Actual MO West Winter	WN MO West Winter	Actual MO West Year	WN MO West Year
2005	4.4	4.4	2.6	2.5	4.4	4.4
2006	4.3	4.0	2.2	2.4	4.3	4.0
2007	4.3	4.0	3.0	2.9	4.3	4.0
2008	3.7	3.7	2.8	2.7	3.7	3.7
2009	3.7	3.5	3.2	3.1	3.7	3.5
2010	4.1	3.7	3.2	3.0	4.1	3.7
2011	4.1	3.9	3.1	3.1	4.1	3.9
2012	4.2	4.1	2.8	2.8	4.2	4.1
2013	3.8	3.8	3.2	2.9	3.8	3.8
2014	3.9	3.8	3.6	3.2	3.9	3.8
2015	3.7	3.8	3.3	3.1	3.7	3.8
2016	3.8	3.7	3.2	3.7	3.8	3.7
2017	3.5	3.5	3.1	3.1	3.5	3.5
2018	3.7	3.4	3.3	3.2	3.7	3.4
2019	3.5	3.4	3.3	3.2	3.5	3.4
2020		3.6	2.7	2.9		3.6

05-'10	-1.4%	-3.1%	4.1%	3.5%	-1.4%	-3.1%
10-'15	-1.9%	0.4%	0.9%	1.0%	-1.9%	0.4%
15-'20	-100.0%	-1.1%	-4.2%	-1.7%	-100.0%	-1.1%

* 2020 Summer peaks are not include since they are projections.
 The peak month is likely to occur after the June 2020 cut off.
 Winter values for 2020 are included since the 2020 winter peak likely occurred already.

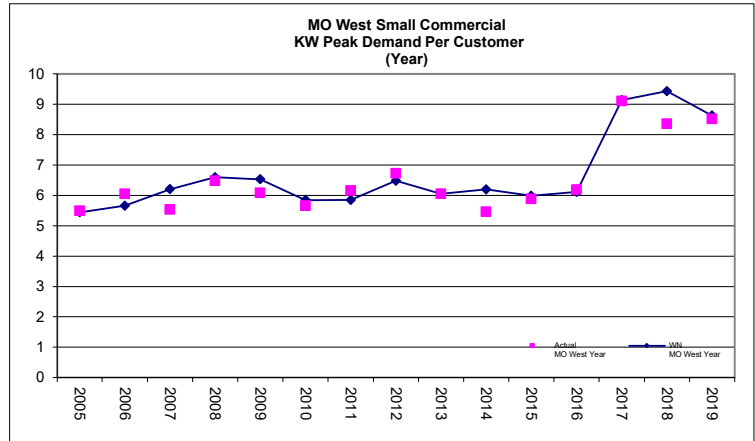
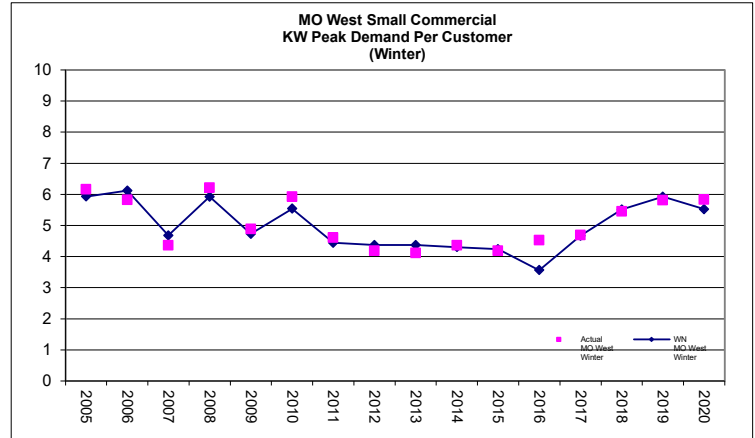
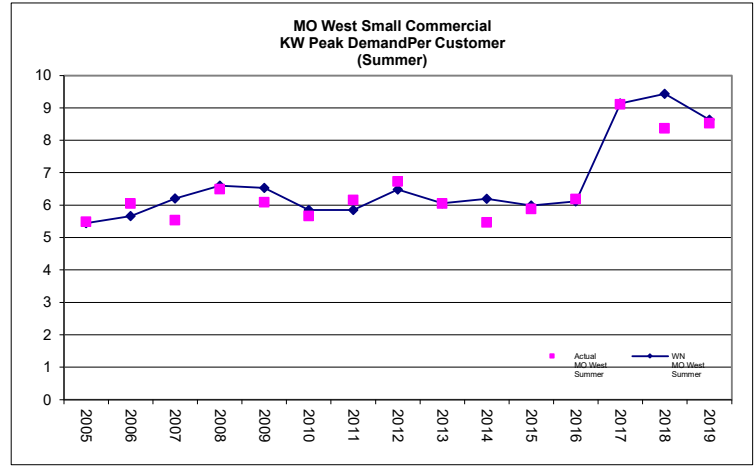


Plot 3A-21 MO Small General Service KW Peak Demand Per Customer (Actual vs. Weather Normalized)

Year	Actual MO West Summer	WN MO West Summer	Actual MO West Winter	WN MO West Winter	Actual MO West Year	WN MO West Year
2005	5.5	5.4	6.2	5.9	5.5	5.4
2006	6.0	5.7	5.8	6.1	6.0	5.7
2007	5.5	6.2	4.4	4.7	5.5	6.2
2008	6.5	6.6	6.2	5.9	6.5	6.6
2009	6.1	6.5	4.9	4.7	6.1	6.5
2010	5.7	5.8	5.9	5.5	5.7	5.8
2011	6.2	5.9	4.6	4.4	6.2	5.9
2012	6.7	6.5	4.2	4.4	6.7	6.5
2013	6.0	6.1	4.1	4.4	6.0	6.1
2014	5.5	6.2	4.4	4.3	5.5	6.2
2015	5.9	6.0	4.2	4.2	5.9	6.0
2016	6.2	6.1	4.5	3.6	6.2	6.1
2017	9.1	9.1	4.7	4.7	9.1	9.1
2018	8.4	9.4	5.5	5.5	8.4	9.4
2019	8.5	8.6	5.8	5.9	8.5	8.6
2020		8.1	5.8	5.5		8.1

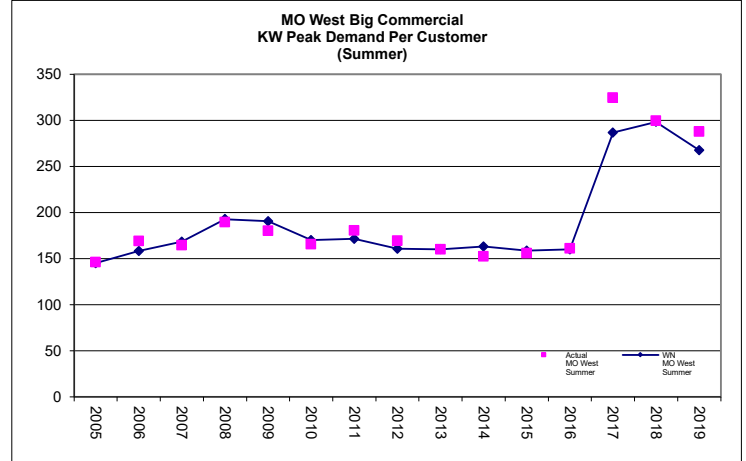
05-'10	0.6%	1.4%	-0.8%	-1.4%	0.6%	1.4%
10-'15	0.8%	0.5%	-6.7%	-5.2%	0.8%	0.5%
15-'20	-100.0%	6.2%	6.9%	5.4%	-100.0%	6.2%

* 2020 Summer peaks are not include since they are projections.
 The peak month is likely to occur after the June 2020 cut off.
 Winter values for 2020 are included since the 2020 winter peak likely occurred already.

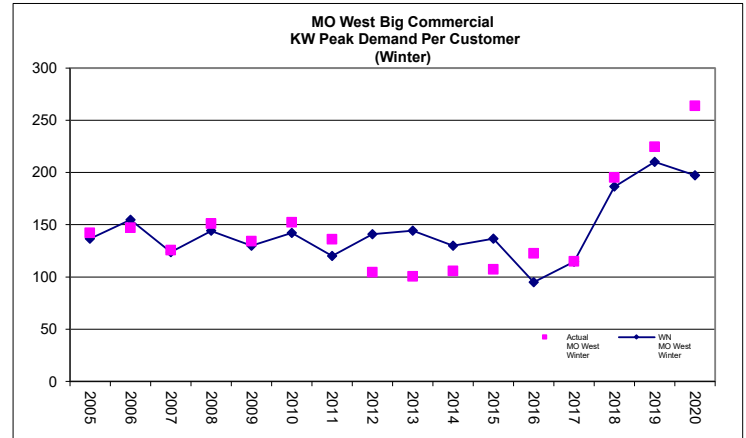


Plot 3A-22 MO West Big Commercial Service KW Peak Demand Per Customer (Actual vs. Weather Normalized)

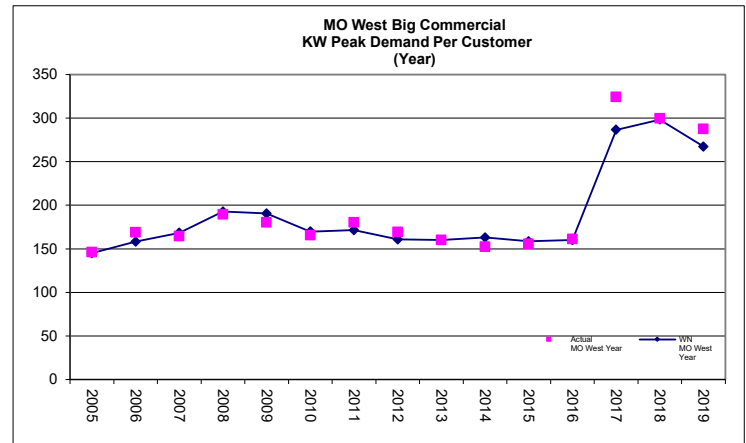
Year	Actual MO West Summer	WN MO West Summer	Actual MO West Winter	WN MO West Winter	Actual MO West Year	WN MO West Year
2005	146.1	145.1	142.0	136.6	146.1	145.1
2006	169.0	158.3	147.0	154.6	169.0	158.3
2007	164.4	168.4	125.6	123.6	164.4	168.4
2008	189.4	192.7	151.0	144.1	189.4	192.7
2009	180.1	190.5	134.0	129.9	180.1	190.5
2010	165.5	169.9	152.1	142.1	165.5	169.9
2011	180.3	171.4	135.8	120.2	180.3	171.4
2012	169.2	160.7	104.3	141.0	169.2	160.7
2013	160.0	160.1	100.3	144.3	160.0	160.1
2014	152.3	163.1	105.5	129.9	152.3	163.1
2015	155.8	158.5	107.2	136.5	155.8	158.5
2016	161.1	160.1	122.5	94.9	161.1	160.1
2017	324.3	286.6	114.9	114.5	324.3	286.6
2018	299.5	298.4	195.0	186.3	299.5	298.4
2019	287.6	267.5	224.3	210.1	287.6	267.5
2020		260.5	263.5	197.1		260.5



05-'10	2.5%	3.2%	1.4%	0.8%	2.5%	3.2%
10-'15	-1.2%	-1.4%	-6.8%	-0.8%	-1.2%	-1.4%
15-'20	-100.0%	10.4%	19.7%	7.6%	-100.0%	10.4%

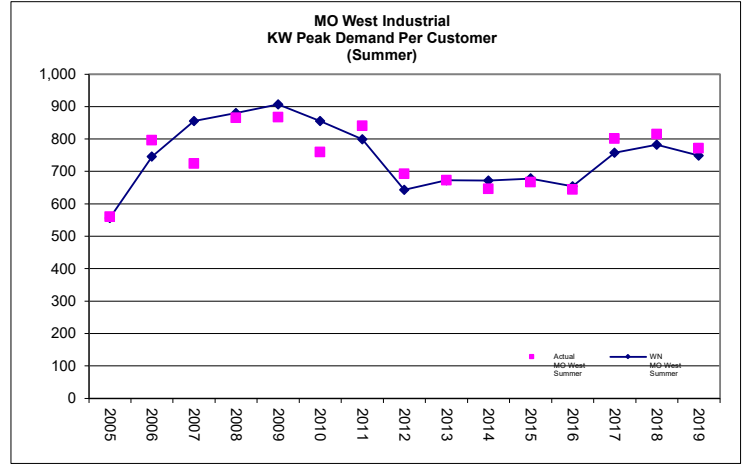


* 2020 Summer peaks are not include since they are projections.
 The peak month is likely to occur after the June 2020 cut off.
 Winter values for 2020 are included since the 2020 winter peak likely occurred already.

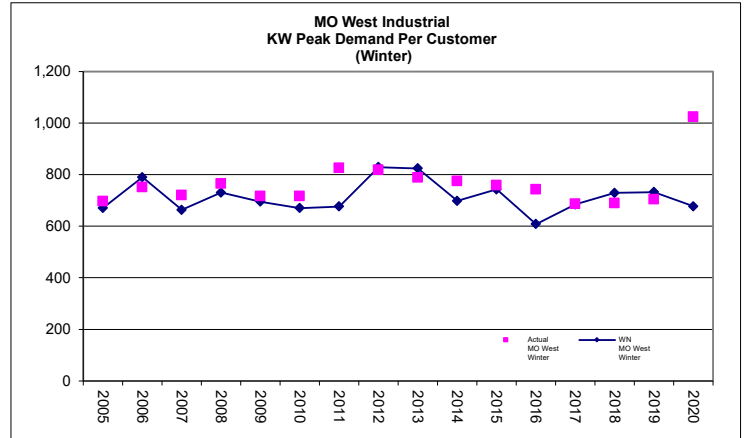


Plot 3A-23 MO West Industrial KW Peak Demand Per Customer (Actual vs. Weather Normalized)

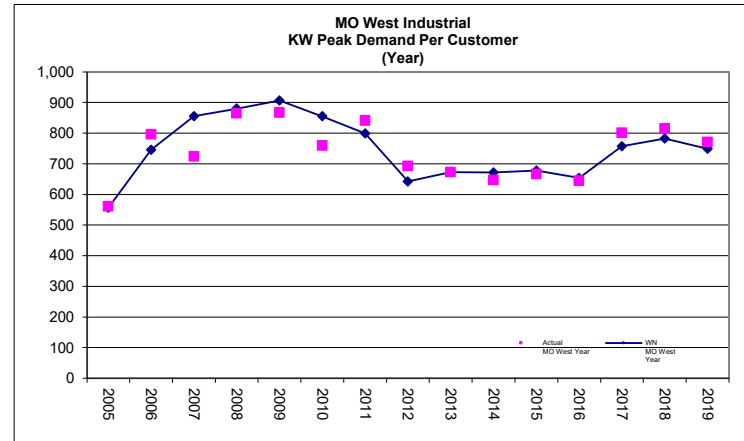
Year	Actual MO West Summer	WN MO West Summer	Actual MO West Winter	WN MO West Winter	Actual MO West Year	WN MO West Year
2005	560.4	556.3	697.3	670.9	560.4	556.3
2006	796.0	745.8	751.3	789.8	796.0	745.8
2007	724.0	855.2	719.9	663.2	724.0	855.2
2008	864.7	879.9	765.4	730.5	864.7	879.9
2009	866.6	906.7	717.0	695.0	866.6	906.7
2010	759.3	854.9	717.0	670.2	759.3	854.9
2011	840.3	798.9	825.6	676.3	840.3	798.9
2012	692.3	642.5	818.7	829.0	692.3	642.5
2013	672.1	672.5	788.8	823.9	672.1	672.5
2014	646.3	671.8	774.9	698.3	646.3	671.8
2015	666.4	678.0	758.4	743.1	666.4	678.0
2016	644.1	654.1	742.8	608.1	644.1	654.1
2017	800.9	757.2	686.7	684.1	800.9	757.2
2018	814.3	782.2	689.3	729.2	814.3	782.2
2019	771.1	748.9	704.4	732.2	771.1	748.9
2020		719.8	1,024.4	677.1		719.8



05-'10	6.3%	9.0%	0.6%	0.0%	6.3%	9.0%
10-'15	-2.6%	-4.5%	1.1%	2.1%	-2.6%	-4.5%
15-'20	-100.0%	1.2%	6.2%	-1.8%	-100.0%	1.2%

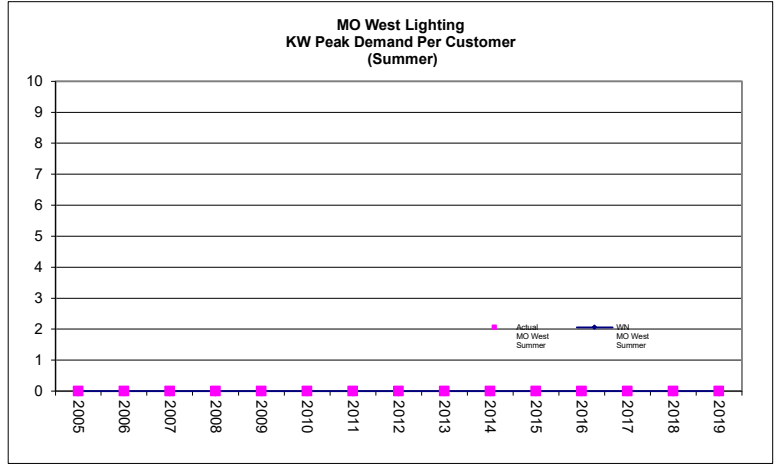


* 2020 Summer peaks are not include since they are projections.
 The peak month is likely to occur after the June 2020 cut off.
 Winter values for 2020 are included since the 2020 winter peak likely occurred already.



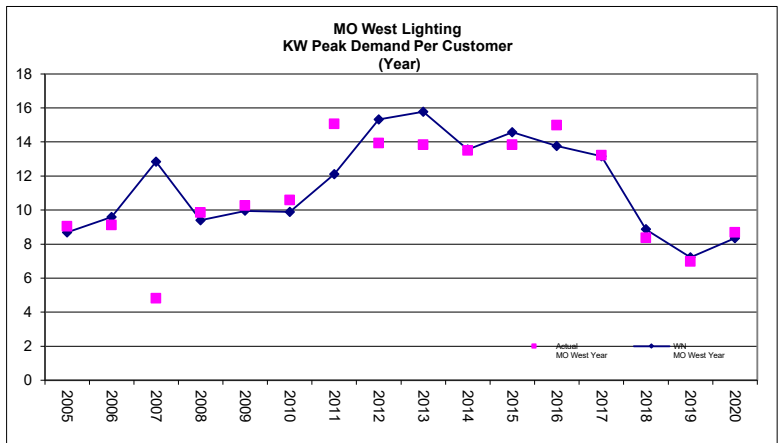
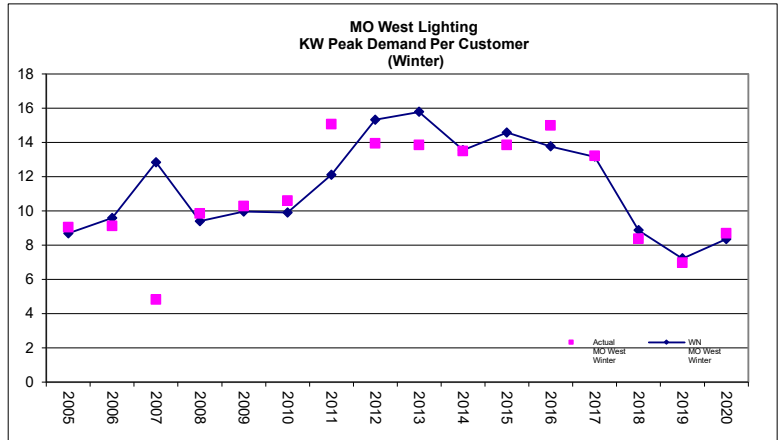
Plot 3A-24 MO West Lighting KW Peak Demand Per Customer (Actual vs. Weather Normalized)

Year	Actual MO West Summer	WN MO West Summer	Actual MO West Winter	WN MO West Winter	Actual MO West Year	WN MO West Year
2005	-	-	9.0	8.7	9.0	8.7
2006	-	-	9.1	9.6	9.1	9.6
2007	-	-	4.8	12.8	4.8	12.8
2008	-	-	9.8	9.4	9.8	9.4
2009	-	-	10.3	10.0	10.3	10.0
2010	-	-	10.6	9.9	10.6	9.9
2011	-	-	15.1	12.1	15.1	12.1
2012	-	-	13.9	15.3	13.9	15.3
2013	-	-	13.8	15.8	13.8	15.8
2014	-	-	13.5	13.5	13.5	13.5
2015	-	-	13.8	14.6	13.8	14.6
2016	-	-	15.0	13.8	15.0	13.8
2017	-	-	13.2	13.2	13.2	13.2
2018	-	-	8.4	8.9	8.4	8.9
2019	-	-	7.0	7.2	7.0	7.2
2020	-	-	8.7	8.3	8.7	8.3



05-'10	#DIV/0!	#DIV/0!	3.2%	2.6%	3.2%	2.6%
10-'15	#DIV/0!	#DIV/0!	5.5%	8.1%	5.5%	8.1%
15-'20	#DIV/0!	#DIV/0!	-8.9%	-10.6%	-8.9%	-10.6%

* 2020 Summer peaks are not include since they are projections.
 The peak month is likely to occur after the June 2020 cut off.
 Winter values for 2020 are included since the 2020 winter peak likely occurred already.

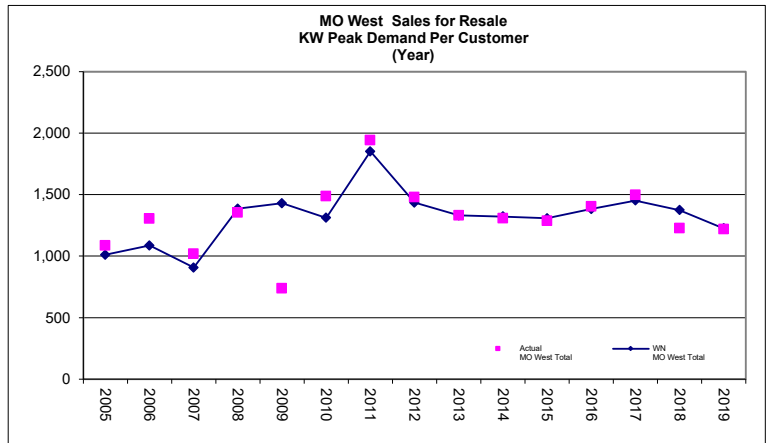
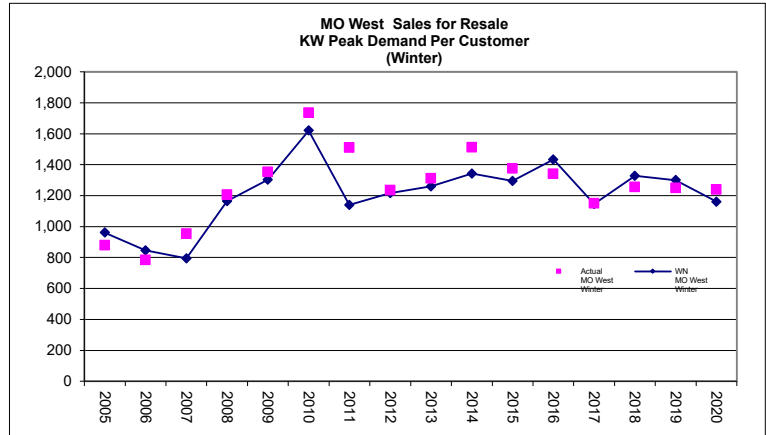
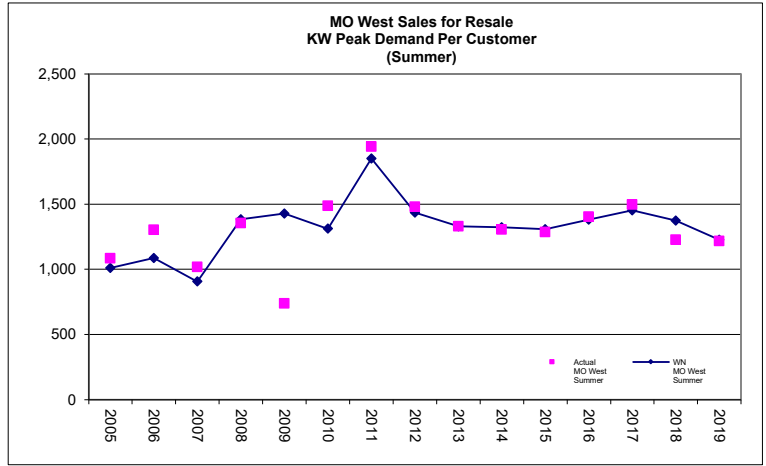


Plot 3A-25 MO West Sales for Resale KW Peak Demand Per Customer (Actual vs. Weather Normalized)

Year	Actual MO West Summer	WN MO West Summer	Actual MO West Winter	WN MO West Winter	Actual MO West Total	WN MO West Total
2005	1,085.3	1,010.7	878.9	961.0	1,085.3	1,010.7
2006	1,304.1	1,087.5	784.7	846.5	1,304.1	1,087.5
2007	1,018.7	906.8	952.9	794.7	1,018.7	906.8
2008	1,354.6	1,384.9	1,206.6	1,164.7	1,354.6	1,384.9
2009	737.1	1,429.3	1,353.0	1,302.7	737.1	1,429.3
2010	1,486.5	1,311.6	1,734.6	1,621.3	1,486.5	1,311.6
2011	1,940.8	1,851.5	1,510.8	1,139.5	1,940.8	1,851.5
2012	1,480.0	1,435.0	1,234.0	1,216.8	1,480.0	1,435.0
2013	1,330.0	1,330.8	1,312.0	1,259.1	1,330.0	1,330.8
2014	1,306.0	1,321.6	1,512.0	1,342.8	1,306.0	1,321.6
2015	1,286.0	1,308.4	1,376.0	1,294.6	1,286.0	1,308.4
2016	1,404.0	1,382.2	1,340.0	1,433.6	1,404.0	1,382.2
2017	1,498.0	1,452.0	1,150.0	1,145.5	1,498.0	1,452.0
2018	1,226.0	1,374.0	1,256.0	1,328.0	1,226.0	1,374.0
2019	1,218.0	1,226.0	1,250.0	1,300.0	1,218.0	1,226.0
2020		1,264.0	1,238.0	1,160.0		1,264.0

05-'10	6.5%	5.4%	14.6%	11.0%	6.5%	5.4%
10-'15	-2.9%	0.0%	-4.5%	-4.4%	-2.9%	0.0%
15-'20	-100.0%	-0.7%	-2.1%	-2.2%	-100.0%	-0.7%

* 2020 Summer peaks are not include since they are projections.
 The peak month is likely to occur after the June 2020 cut off.
 Winter values for 2020 are included since the 2020 winter peak likely occurred already.

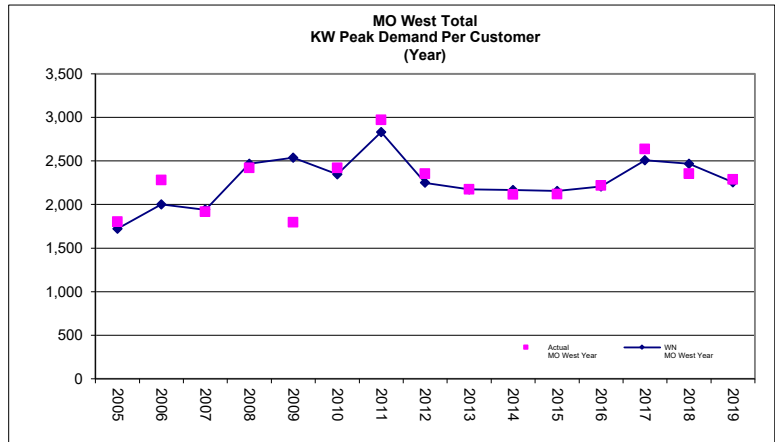
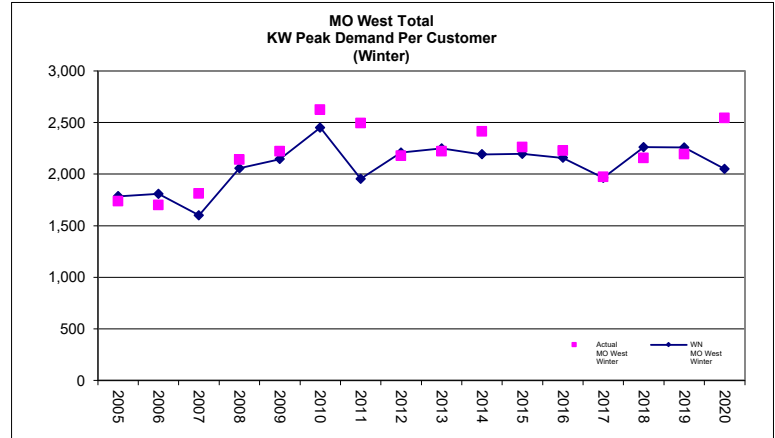
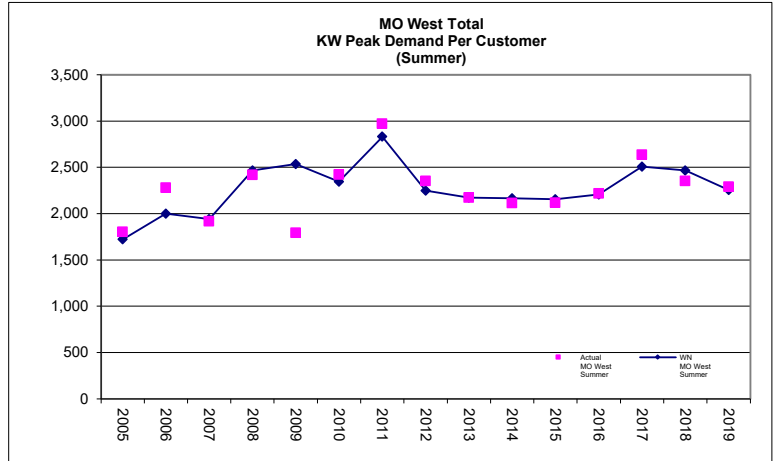


Plot 3A-26 MO West Total KW Peak Demand Per Customer (Actual vs. Weather Normalized)

Year	Actual	WN	Actual	WN	Actual	WN
	MO West Summer	MO West Summer	MO West Winter	MO West Winter	MO West Year	MO West Year
2005	1,801.8	1,721.8	1,736.0	1,785.6	1,801.8	1,721.8
2006	2,279.4	2,001.3	1,700.2	1,808.9	2,279.4	2,001.3
2007	1,916.9	1,940.7	1,810.5	1,601.9	1,916.9	1,940.7
2008	2,418.9	2,468.0	2,141.8	2,057.3	2,418.9	2,468.0
2009	1,793.5	2,536.6	2,222.3	2,145.3	1,793.5	2,536.6
2010	2,421.1	2,346.0	2,623.4	2,452.0	2,421.1	2,346.0
2011	2,971.6	2,831.6	2,494.9	1,955.6	2,971.6	2,831.6
2012	2,352.4	2,248.8	2,178.0	2,209.2	2,352.4	2,248.8
2013	2,171.9	2,173.3	2,222.2	2,250.3	2,171.9	2,173.3
2014	2,113.9	2,166.5	2,413.9	2,192.1	2,113.9	2,166.5
2015	2,117.8	2,154.7	2,262.9	2,196.1	2,117.8	2,154.7
2016	2,219.2	2,206.3	2,228.0	2,157.6	2,219.2	2,206.3
2017	2,635.8	2,508.4	1,972.6	1,964.9	2,635.8	2,508.4
2018	2,351.8	2,467.4	2,157.4	2,261.1	2,351.8	2,467.4
2019	2,288.7	2,254.5	2,194.7	2,258.7	2,288.7	2,254.5
2020		2,256.0	2,543.1	2,051.0		2,256.0

05-'10	6.1%	6.4%	8.6%	6.5%	6.1%	6.4%
10-'15	-2.6%	-1.7%	-2.9%	-2.2%	-2.6%	-1.7%
15-'20	-100.0%	0.9%	2.4%	-1.4%	-100.0%	0.9%

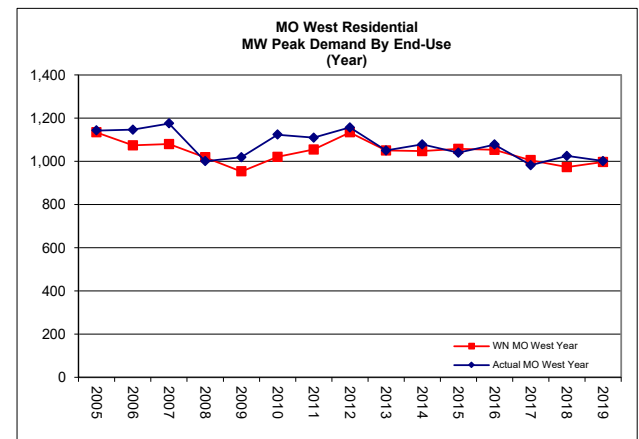
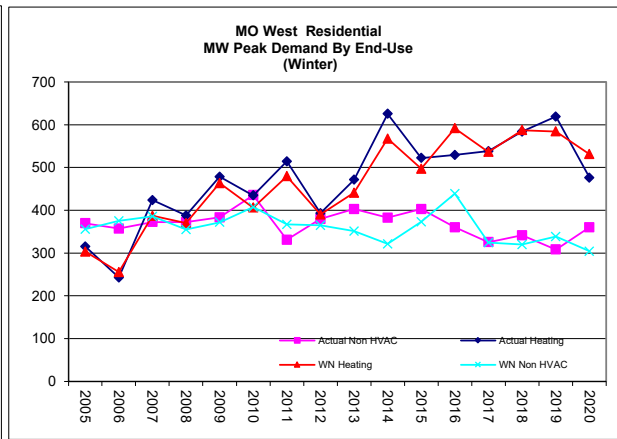
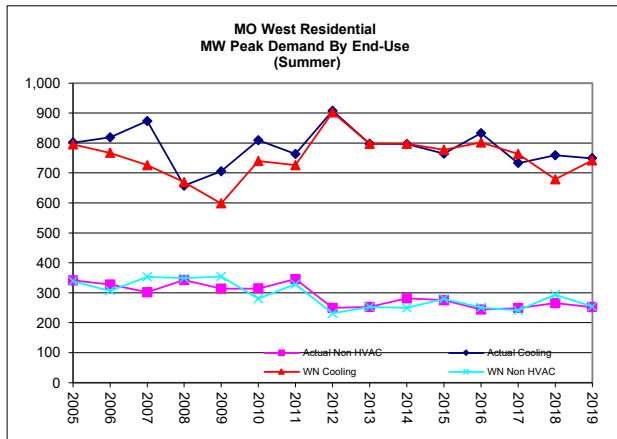
* 2020 Summer peaks are not include since they are projections.
 The peak month is likely to occur after the June 2020 cut off.
 Winter values for 2020 are included since the 2020 winter peak likely occurred already.



Plot 3A-27 MO West Residential MW Peak Demand By End-Use

Year	MO West									
	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	801.2	795.3	315.2	303.3	341.2	338.7	369.6	355.6	1,142.4	1,134.0
2006	818.7	767.1	243.0	255.5	327.4	306.7	357.2	375.5	1,146.1	1,073.8
2007	873.6	726.1	423.7	387.5	302.0	353.2	372.6	385.7	1,175.6	1,079.2
2008	657.8	669.4	387.8	370.1	342.6	348.7	372.0	355.0	1,000.5	1,018.1
2009	705.8	598.5	478.2	463.5	313.3	354.5	383.6	371.8	1,019.1	953.0
2010	809.3	739.9	434.7	406.3	314.0	280.3	435.7	407.2	1,123.4	1,020.2
2011	763.4	725.8	514.2	479.7	345.8	328.8	330.8	367.3	1,109.2	1,054.6
2012	907.8	902.2	393.4	390.2	249.2	231.5	379.5	364.6	1,157.0	1,133.7
2013	797.4	797.9	471.3	440.8	252.4	252.5	402.7	351.6	1,049.8	1,050.5
2014	796.1	797.4	625.5	567.3	281.8	249.7	382.8	321.6	1,077.9	1,047.1
2015	764.1	777.36	522.2	497.2	275.3	280.1	402.9	372.8	1,039.3	1,057.5
2016	832.8	802.12	529.4	591.9	244.5	250.6	360.2	439.0	1,077.3	1,052.7
2017	732.82	763.466	538.5	536.4	248.931	241.2	325.5	324.3	981.8	1,004.7
2018	759.2	679.04	584.2	587.3	265.9	293.4	341.5	320.1	1,025.1	972.5
2019	749.1	742.35	619.0	584.4	252.2	253.9	308.3	338.4	1,001.2	996.2
2020			476.1	531.2			360.2	304.4	-	-

05-'10	0.2%	-1.4%	6.6%	6.0%	-1.6%	-3.7%	3.3%	2.7%	-0.3%	-2.1%
10-'15	-1.1%	1.0%	3.7%	4.1%	-2.6%	0.0%	-1.6%	-1.8%	-1.5%	0.7%
15-'20	-100.0%	-100.0%	-1.8%	1.3%	-100.0%	-100.0%	-2.2%	-4.0%	-100.0%	-100.0%

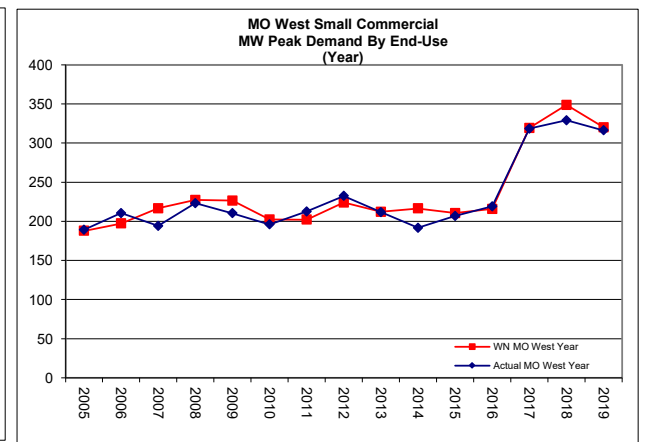
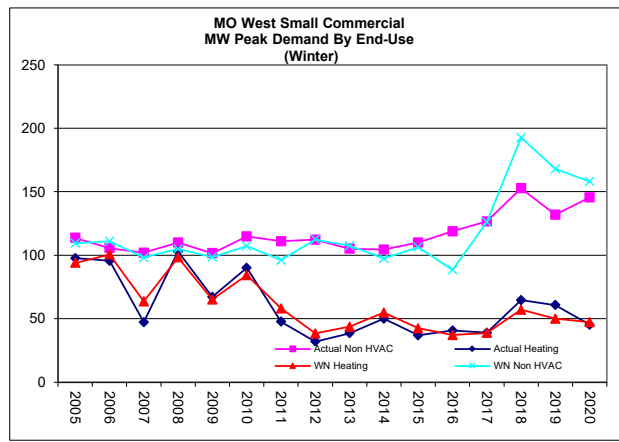
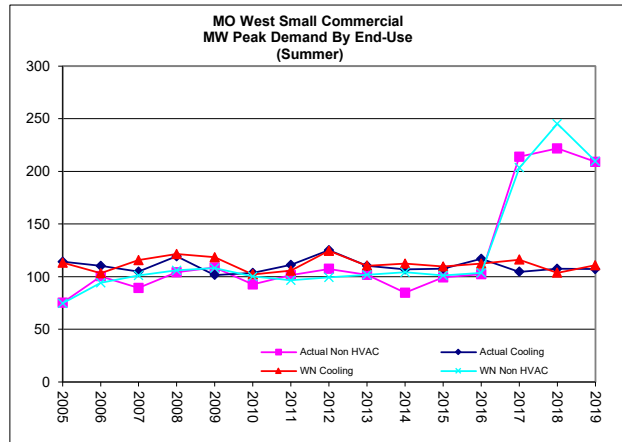


* 2020 Summer peaks are not include since they are projections. The peak month occurred after the June 2020 cut off.
Winter values are include since the peak occurred in January 2020.

Plot 3A-28 MO West Small General Service MW Peak Demand By End-Use

MO West										
Year	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	114.1	113.3	97.7	94.0	75.2	74.7	113.7	109.4	189.3	187.9
2006	110.2	103.3	95.7	100.6	100.3	94.0	105.6	111.0	210.5	197.3
2007	104.8	115.7	47.2	63.6	89.2	101.1	102.0	98.1	194.0	216.8
2008	119.2	121.4	103.0	98.3	104.0	105.9	110.1	105.1	223.3	227.2
2009	101.6	118.4	67.1	65.1	108.7	108.0	101.7	98.5	210.4	226.4
2010	103.5	102.2	90.2	84.3	92.6	100.1	114.8	107.3	196.1	202.3
2011	111.2	105.7	47.6	58.1	101.5	96.5	110.9	96.1	212.6	202.2
2012	125.1	124.6	32.0	38.5	107.3	99.4	112.2	112.4	232.5	224.0
2013	110.3	110.4	38.6	43.7	101.6	101.7	105.1	107.6	211.9	212.0
2014	107.0	112.3	50.0	54.9	84.6	104.1	104.4	97.4	191.6	216.5
2015	107.6	109.5	36.9	42.5	99.3	101.0	110.1	106.4	207.0	210.6
2016	116.9	112.4	40.8	37.3	102.2	103.5	118.9	88.5	219.1	216.0
2017	104.6	116.1	39.0	38.8	213.9	203.4	126.7	126.2	318.5	319.5
2018	107.5	103.7	64.7	57.2	221.8	245.2	152.7	192.7	329.3	348.9
2019	107.2	110.8	60.7	50.1	209.1	209.5	131.9	168.0	316.2	320.3
2020			45.3	47.3			145.6	158.0	-	-

05-10	-1.9%	-2.0%	-1.6%	-2.2%	4.2%	6.0%	0.2%	-0.4%	0.7%	1.5%
10-15	0.8%	1.4%	-16.4%	-12.8%	1.4%	0.2%	-0.8%	-0.2%	1.1%	0.8%
15-20	-100.0%	-100.0%	4.2%	2.1%	-100.0%	-100.0%	5.8%	8.2%	-100.0%	-100.0%

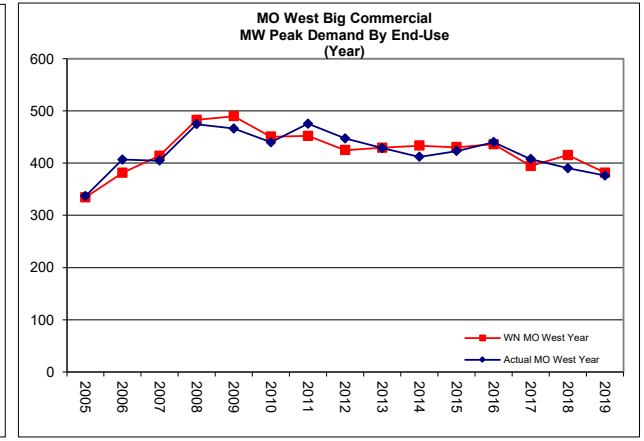
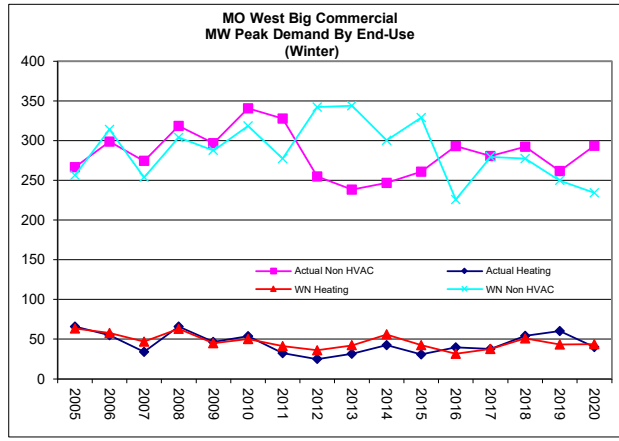
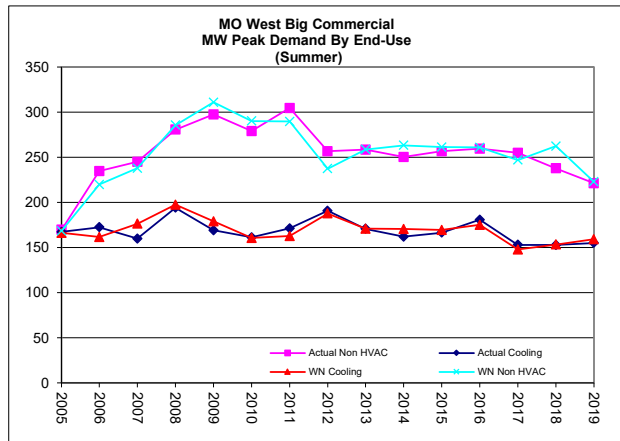


* 2020 Summer peaks are not include since they are projections. The peak month occurred after the June 2020 cut off. Winter values are include since the peak occurred in January 2020.

Plot 3A-29 MO West Big Commercial Service MW Peak Demand By End-Use

Year	MO West									
	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	167.3	166.1	65.9	63.4	169.7	168.4	266.5	256.4	337.0	334.5
2006	172.4	161.5	55.0	57.8	234.6	219.8	298.7	314.0	407.0	381.4
2007	159.8	176.3	34.1	47.0	244.9	237.8	274.3	253.7	404.6	414.1
2008	194.0	197.4	65.9	62.9	280.6	285.5	318.4	303.9	474.6	483.0
2009	169.0	179.0	46.4	45.0	297.3	311.0	296.7	287.6	466.4	490.0
2010	161.1	160.5	53.8	50.3	279.0	290.2	340.7	318.4	440.1	450.6
2011	171.1	162.6	32.4	41.2	304.6	289.6	327.8	277.3	475.6	452.2
2012	190.7	187.7	25.0	35.9	256.6	237.3	254.8	342.1	447.3	424.9
2013	170.6	170.7	31.5	42.2	258.4	258.6	238.3	343.9	429.0	429.3
2014	161.9	170.3	42.5	55.9	250.2	263.2	246.8	300.3	412.0	433.5
2015	166.4	169.3	30.7	42.5	256.6	261.1	260.9	328.9	423.0	430.4
2016	180.6	175.1	39.5	31.7	259.6	260.9	293.1	225.8	440.2	436.0
2017	152.9	147.8	37.7	37.5	254.8	246.8	280.7	279.6	407.7	394.6
2018	152.7	153.3	54.3	51.0	237.6	262.2	292.2	277.5	390.3	415.4
2019	155.0	159.2	60.1	43.4	221.2	222.8	261.7	249.7	376.2	381.9
2020			40.1	43.6			293.3	234.3	-	-

05-'10	-0.8%	-0.7%	-4.0%	-4.5%	10.5%	11.5%	5.0%	4.4%	5.5%	6.1%
10-'15	0.6%	1.1%	-10.6%	-3.3%	-1.7%	-2.1%	-5.2%	0.7%	-0.8%	-0.9%
15-'20	-100.0%	-100.0%	5.4%	0.5%	-100.0%	-100.0%	2.4%	-6.6%	-100.0%	-100.0%

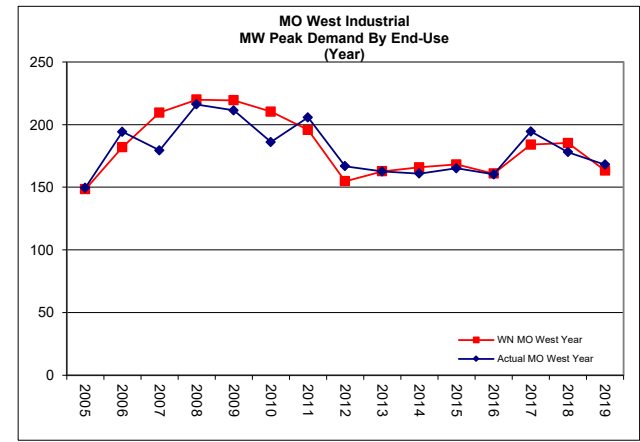
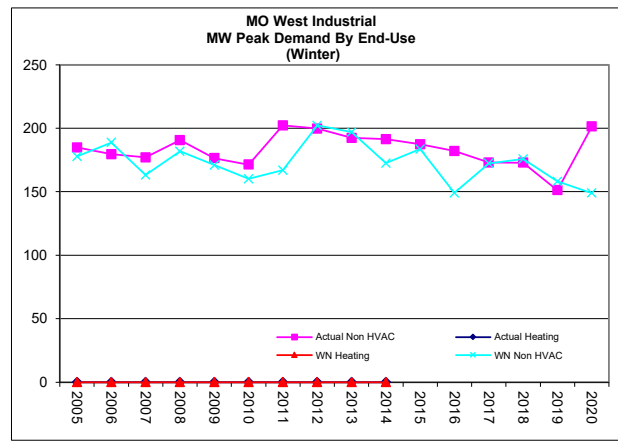
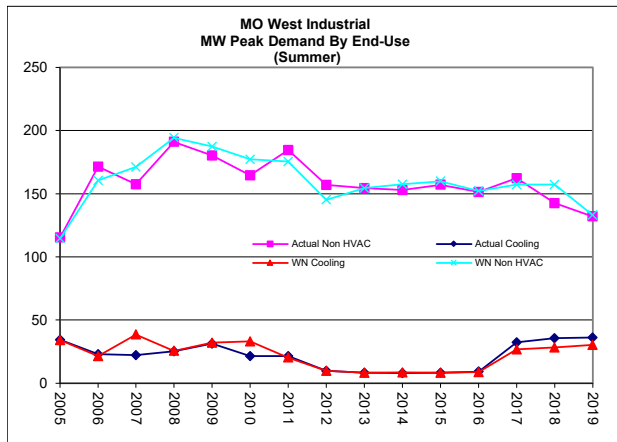


* 2020 Summer peaks are not include since they are projections. The peak month occurred after the June 2020 cut off.
Winter values are include since the peak occurred in January 2020.

Plot 3A-30 MO West Industrial MW Peak Demand By End-Use

MO West										
Year	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	34.3	34.0	-	-	115.3	114.5	184.8	177.8	149.6	148.5
2006	22.9	21.5	-	-	171.3	160.5	188.8	194.2	194.2	182.0
2007	22.1	38.5	-	-	157.5	171.0	177.1	163.1	179.6	209.5
2008	25.2	25.6	-	-	191.0	194.4	190.6	181.9	216.2	220.0
2009	31.3	32.1	-	-	180.2	187.3	176.4	171.0	211.4	219.4
2010	21.5	33.1	-	-	164.6	177.2	171.4	160.2	186.0	210.3
2011	21.3	20.3	-	-	184.5	175.5	202.3	167.0	205.9	195.7
2012	9.8	9.7	-	-	157.0	145.2	199.8	202.3	166.8	154.8
2013	8.2	8.2	-	-	154.4	154.5	192.5	196.9	162.6	162.7
2014	8.0	8.4	-	-	153.0	157.5	191.4	172.5	160.9	165.9
2015	8.2	8.3	-	-	157.1	159.84	187.3	183.5	165.3	168.1
2016	9.1	8.8	-	-	151.3	152.10	182.0	149.0	160.4	160.9
2017	32.4	26.8	-	-	162.2	157.16	173.1	172.4	194.6	184.0
2018	35.6	28.2	-	-	142.5	157.18	172.9	175.7	178.1	185.4
2019	36.1	30.3	-	-	132.0	132.99	151.2	158.2	168.1	163.3
2020							201.6	149.0	-	-

05-'10	-9.0%	-0.5%	#DIV/0!	#DIV/0!	7.4%	9.1%	-1.5%	-2.1%	4.5%	7.2%
10-'15	-17.6%	-24.2%	#DIV/0!	#DIV/0!	-0.9%	-2.0%	1.8%	2.8%	-2.3%	-4.4%
15-'20	-100.0%	-100.0%	#DIV/0!	#DIV/0!	-100.0%	-100.0%	1.5%	-4.1%	-100.0%	-100.0%

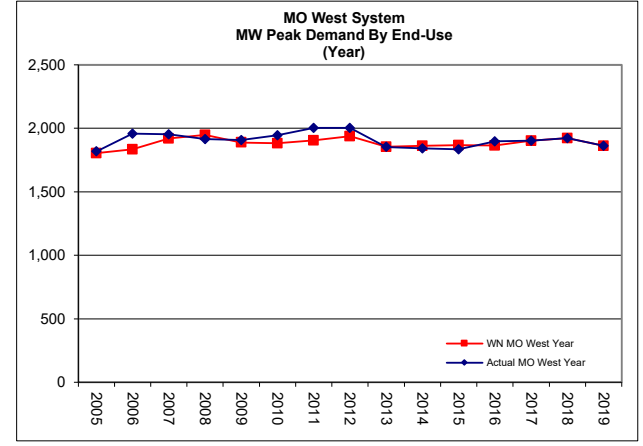
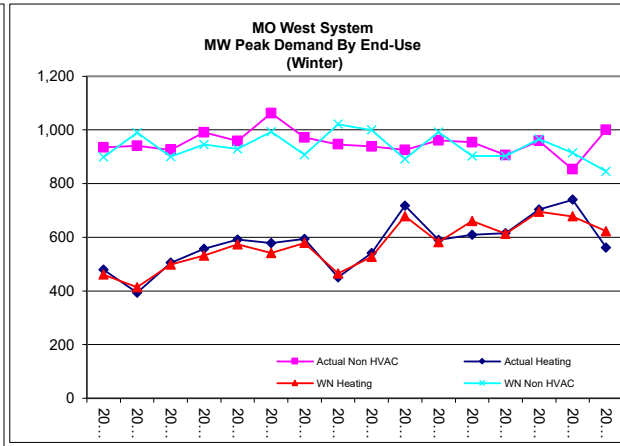
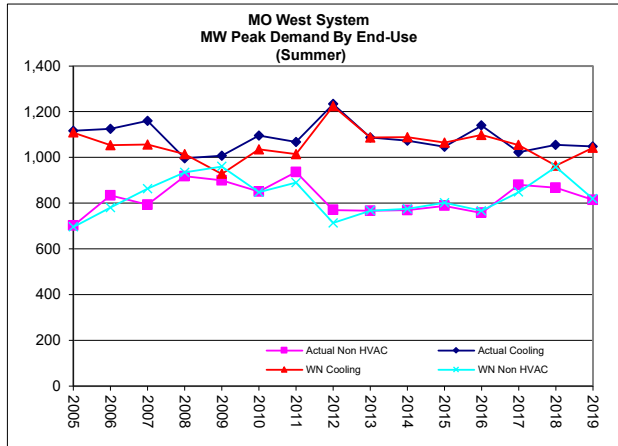


* 2020 Summer peaks are not include since they are projections. The peak month occurred after the June 2020 cut off.
 Winter values are include since the peak occurred in January 2020.

Plot 3A-31 MO West Total MW Peak Demand By End-Use
For classes that have end-use sales

Year	MO West									
	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	1,117.0	1,108.7	478.8	460.7	701.4	696.2	934.5	899.1	1,818.4	1,804.9
2006	1,124.3	1,053.3	393.8	414.0	833.6	781.1	941.1	989.3	1,957.9	1,834.4
2007	1,160.3	1,056.6	505.0	498.1	793.6	863.1	926.0	900.6	1,953.9	1,919.7
2008	996.2	1,013.8	556.7	531.3	918.2	934.4	991.1	945.9	1,914.5	1,948.3
2009	1,007.8	928.1	591.8	573.6	899.5	960.8	958.4	928.9	1,907.3	1,888.9
2010	1,095.4	1,035.7	578.7	540.9	850.2	847.7	1,062.5	993.1	1,945.5	1,883.5
2011	1,066.9	1,014.5	594.2	579.0	936.3	890.3	971.9	907.7	2,003.3	1,904.7
2012	1,233.5	1,224.1	450.4	464.6	770.1	713.3	946.3	1,021.4	2,003.6	1,937.4
2013	1,086.6	1,087.3	541.4	526.7	766.8	767.2	938.7	999.9	1,853.3	1,854.5
2014	1,073.0	1,088.5	718.0	678.1	769.5	774.5	925.4	891.8	1,842.5	1,863.0
2015	1,046.2	1,064.5	589.8	582.2	788.3	802.1	961.1	991.6	1,834.6	1,866.5
2016	1,139.4	1,098.5	609.7	660.9	757.6	767.1	954.2	902.3	1,897.0	1,865.6
2017	1,022.7	1,054.2	615.1	612.7	879.8	848.5	906.0	902.4	1,902.5	1,902.7
2018	1,054.9	964.2	703.2	695.5	867.9	958.0	959.3	966.0	1,922.8	1,922.1
2019	1,047.3	1,042.6	739.8	677.9	814.5	819.2	853.1	914.3	1,861.8	1,861.7
2020	0	0	561.4	622.0	0	0	1,000.7	845.6	-	-

05-'10	-0.4%	-1.4%	3.9%	3.3%	3.9%	4.0%	2.6%	2.0%	1.4%	0.9%
10-'15	-0.9%	0.5%	0.4%	1.5%	-1.5%	-1.1%	-2.0%	0.0%	-1.2%	-0.2%
15-'20	-100.0%	-100.0%	-1.0%	1.3%	-100.0%	-100.0%	0.8%	-3.1%	-100.0%	-100.0%

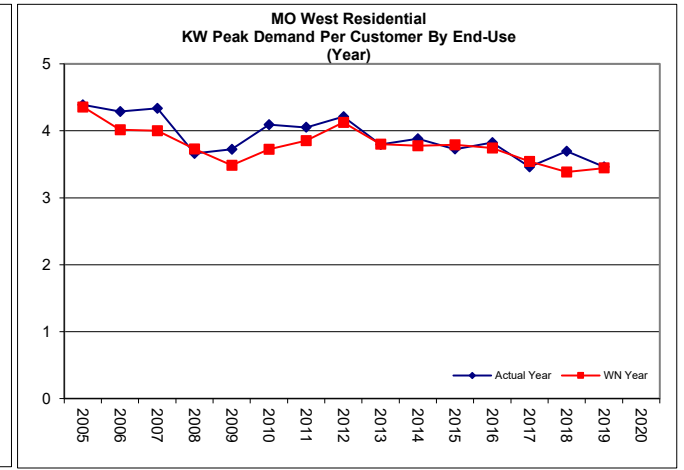
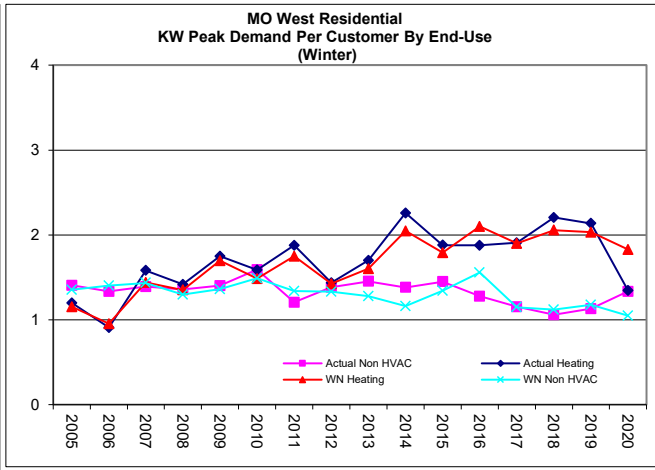
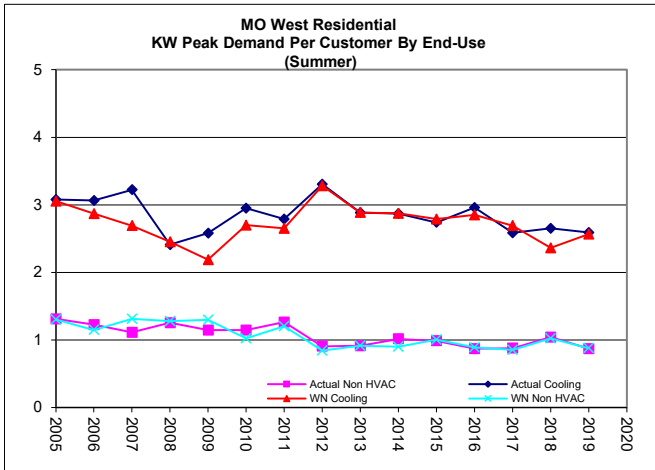


* 2020 Summer peaks are not include since they are projections. The peak month occurred after the June 2020 cut off.
Winter values are include since the peak occurred in January 2020.

Plot 3A-32 MO West Residential KW Peak Demand Per Customer By End-Use

Year	MO West								Year	
	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter			
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	3.1	3.1	1.2	1.2	1.3	1.3	1.4	1.4	4.4	4.4
2006	3.1	2.9	0.9	1.0	1.2	1.1	1.3	1.4	4.3	4.0
2007	3.2	2.7	1.6	1.4	1.1	1.3	1.4	1.4	4.3	4.0
2008	2.4	2.5	1.4	1.4	1.3	1.3	1.4	1.3	3.7	3.7
2009	2.6	2.2	1.8	1.7	1.1	1.3	1.4	1.4	3.7	3.5
2010	2.9	2.7	1.6	1.5	1.1	1.0	1.6	1.5	4.1	3.7
2011	2.8	2.7	1.9	1.8	1.3	1.2	1.2	1.3	4.1	3.9
2012	3.3	3.3	1.4	1.4	0.9	0.8	1.4	1.3	4.2	4.1
2013	2.9	2.9	1.7	1.6	0.9	0.9	1.5	1.3	3.8	3.8
2014	2.9	2.9	2.3	2.0	1.0	0.9	1.4	1.2	3.9	3.8
2015	2.7	2.8	1.9	1.8	1.0	1.0	1.5	1.3	3.7	3.8
2016	3.0	2.9	1.9	2.1	0.9	0.9	1.3	1.6	3.8	3.7
2017	2.6	2.7	1.9	1.9	0.9	0.9	1.2	1.1	3.5	3.5
2018	2.7	2.4	2.2	2.1	1.0	1.0	1.1	1.1	3.7	3.4
2019	2.6	2.6	2.1	2.0	0.9	0.9	1.1	1.2	3.5	3.4
2020			1.3	1.8			1.3	1.0		

05-'10	-0.9%	-2.4%	5.8%	5.2%	-2.7%	-4.7%	2.5%	1.9%	-1.4%	-3.1%
10-'15	-1.5%	0.6%	3.4%	3.8%	-2.9%	-0.4%	-1.9%	-2.1%	-1.9%	0.4%
15-'20	-100.0%	-100.0%	-6.4%	0.4%	-100.0%	-100.0%	-1.6%	-4.8%	-100.0%	-100.0%

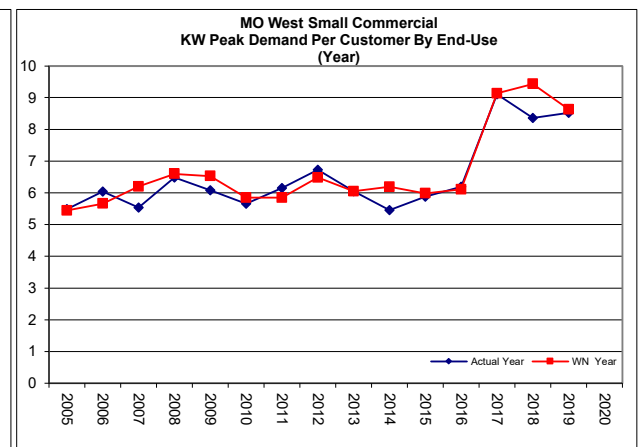
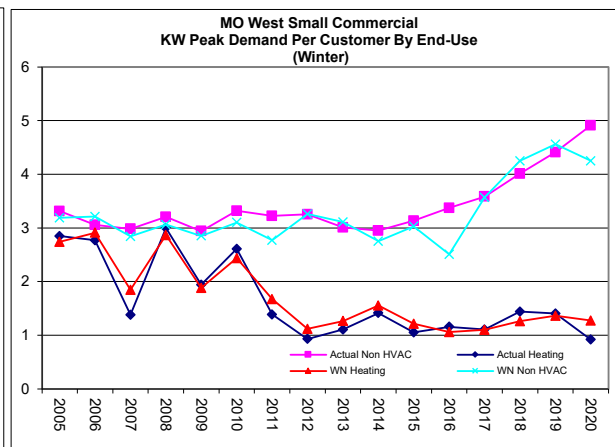
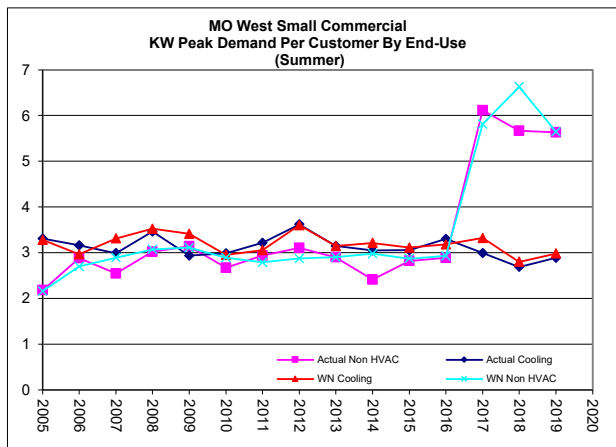


* 2020 Summer peaks are not include since they are projections. The peak month is likely to occur after the June 2020 cut off.
 Winter values for 2020 are included since the 2020 winter peak likely occurred already.

Plot 3A-33 MO West Small General Service KW Peak Demand Per Customer By End-Use

Year	MO West									
	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	3.3	3.3	2.8	2.7	2.2	2.2	3.3	3.2	5.5	5.4
2006	3.2	3.0	2.8	2.9	2.9	2.7	3.1	3.2	6.0	5.7
2007	3.0	3.3	1.4	1.8	2.5	2.9	3.0	2.8	5.5	6.2
2008	3.5	3.5	3.0	2.9	3.0	3.1	3.2	3.1	6.5	6.6
2009	2.9	3.4	1.9	1.9	3.1	3.1	2.9	2.9	6.1	6.5
2010	3.0	3.0	2.6	2.4	2.7	2.9	3.3	3.1	5.7	5.8
2011	3.2	3.1	1.4	1.7	2.9	2.8	3.2	2.8	6.2	5.9
2012	3.6	3.6	0.9	1.1	3.1	2.9	3.3	3.3	6.7	6.5
2013	3.1	3.1	1.1	1.3	2.9	2.9	3.0	3.1	6.0	6.1
2014	3.0	3.2	1.4	1.6	2.4	3.0	3.0	2.8	5.5	6.2
2015	3.1	3.1	1.0	1.2	2.8	2.9	3.1	3.0	5.9	6.0
2016	3.3	3.2	1.2	1.1	2.9	2.9	3.4	2.5	6.2	6.1
2017	3.0	3.3	1.1	1.1	6.1	5.8	3.6	3.6	9.1	9.1
2018	2.7	2.8	1.4	1.3	5.7	6.6	4.0	4.3	8.4	9.4
2019	2.9	3.0	1.4	1.4	5.6	5.6	4.4	4.6	8.5	8.6
2020			0.9	1.3			4.9	4.2		

05-'10	-2.0%	-2.1%	-1.8%	-2.3%	4.2%	6.0%	0.0%	-0.6%	0.6%	1.4%
10-'15	0.5%	1.1%	-16.6%	-13.1%	1.1%	-0.1%	-1.1%	-0.5%	0.8%	0.5%
15-'20	-100.0%	-100.0%	-2.7%	1.0%	-100.0%	-100.0%	9.4%	7.0%	-100%	-100.0%

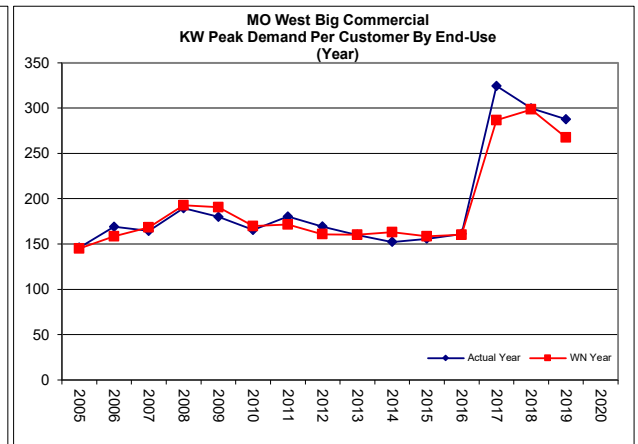
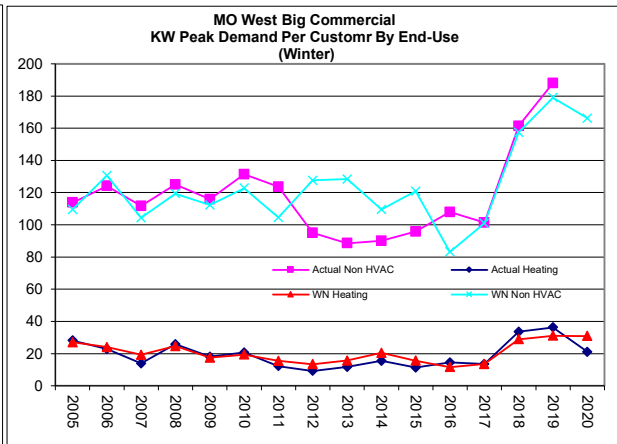
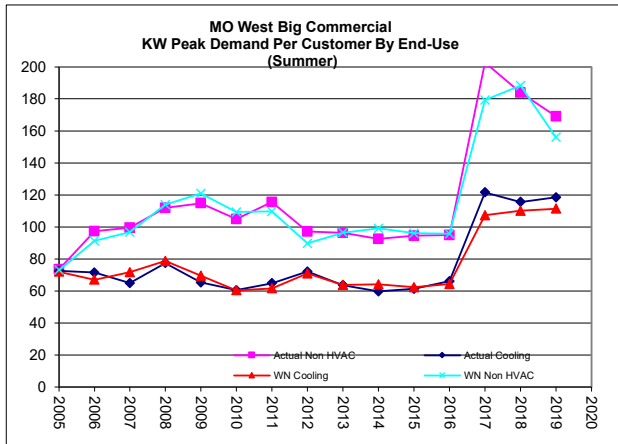


* 2020 Summer peaks are not include since they are projections. The peak month is likely to occur after the June 2020 cut off.
 Winter values for 2020 are included since the 2020 winter peak likely occurred already.

Plot 3A-34 MO West Big Commercial Service KW Peak Demand Per Customer By End-Use

Year	MO West									
	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	72.6	72.0	28.1	27.1	73.6	73.0	113.8	109.5	146.1	145.1
2006	71.6	67.1	22.9	24.0	97.4	91.3	124.2	130.5	169.0	158.3
2007	64.9	71.7	13.9	19.3	99.5	96.7	111.7	104.3	164.4	168.4
2008	77.4	78.8	25.9	24.7	112.0	113.9	125.1	119.4	189.4	192.7
2009	65.3	69.6	18.1	17.6	114.8	120.9	115.9	112.3	180.1	190.5
2010	60.6	60.5	20.7	19.4	104.9	109.4	131.3	122.7	165.5	169.9
2011	64.8	61.7	12.2	15.6	115.5	109.8	123.6	104.6	180.3	171.4
2012	72.1	71.0	9.3	13.4	97.1	89.7	95.0	127.6	169.2	160.7
2013	63.6	63.7	11.7	15.8	96.4	96.4	88.6	128.5	160.0	160.1
2014	59.8	64.1	15.5	20.4	92.5	99.0	90.0	109.5	152.3	163.2
2015	61.3	62.4	11.3	15.6	94.5	96.2	95.9	120.9	155.8	158.5
2016	66.1	64.3	14.6	11.7	95.0	95.8	108.0	83.2	161.1	160.1
2017	121.6	107.3	13.6	13.5	202.7	179.3	101.3	100.9	324.3	286.6
2018	115.6	110.1	33.5	28.9	183.9	188.3	161.4	157.4	299.5	298.4
2019	118.5	111.5	36.3	31.1	169.1	156.0	188.0	179.0	287.6	267.5
2020			21.1	30.9				166.2		

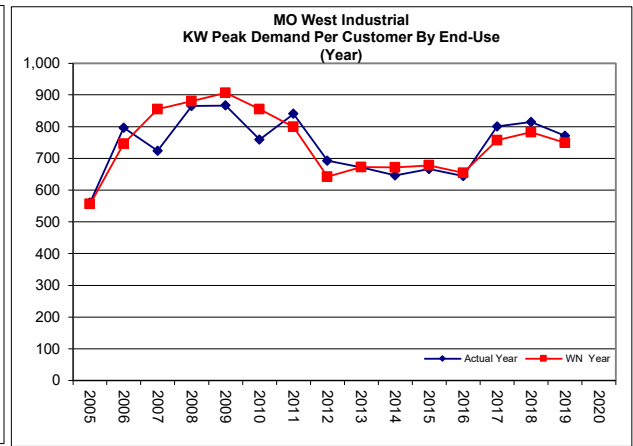
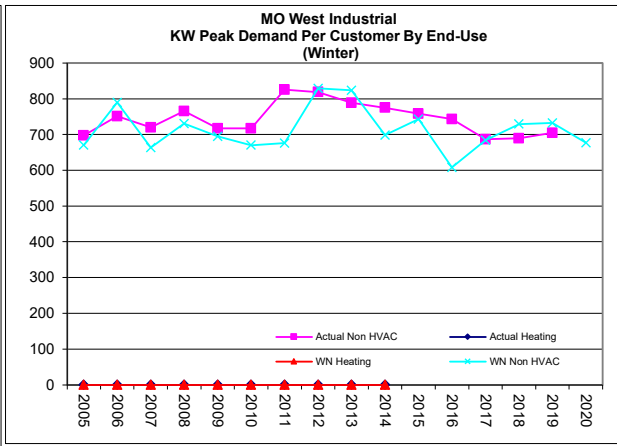
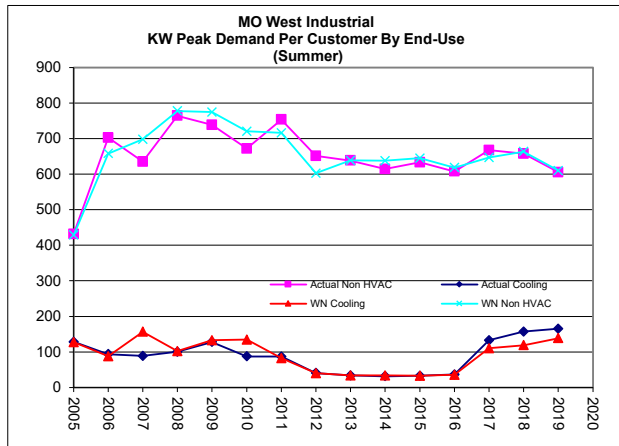
05-10	-3.5%	-3.4%	-5.9%	-6.5%	7.4%	8.4%	2.9%	2.3%	2.5%	3.2%
10-15	0.2%	0.6%	-11.4%	-4.2%	-2.1%	-2.5%	-6.1%	-0.3%	-1.2%	-1.4%
15-20	-100.0%	-100.0%	13.3%	14.7%	-100.0%	-100.0%	-100.0%	6.6%	-100.0%	-100.0%



* 2020 Summer peaks are not include since they are projections. The peak month is likely to occur after the June 2020 cut off.
 Winter values for 2020 are included since the 2020 winter peak likely occurred already.

Plot 3A-35 MO West Industrial KW Peak Demand Per Customer By End-Use

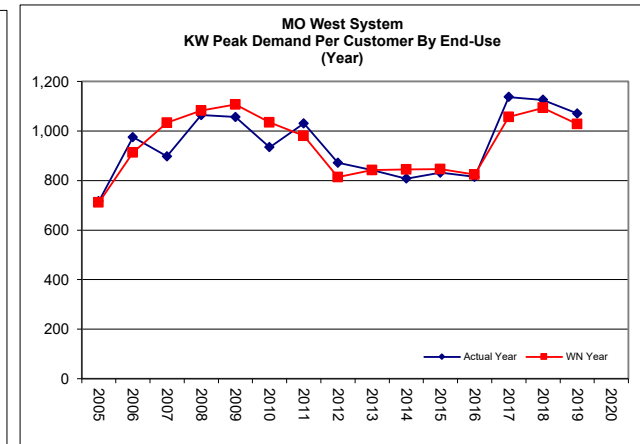
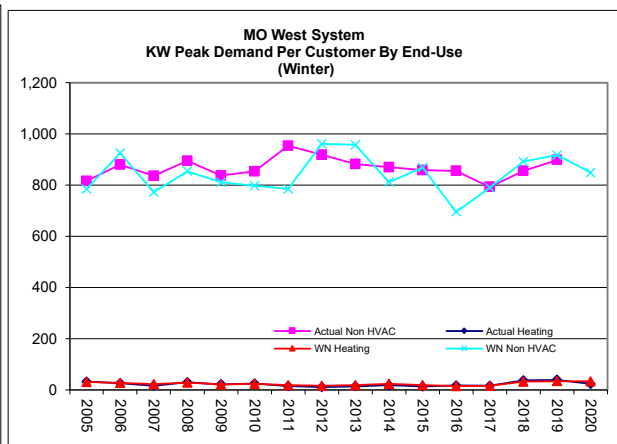
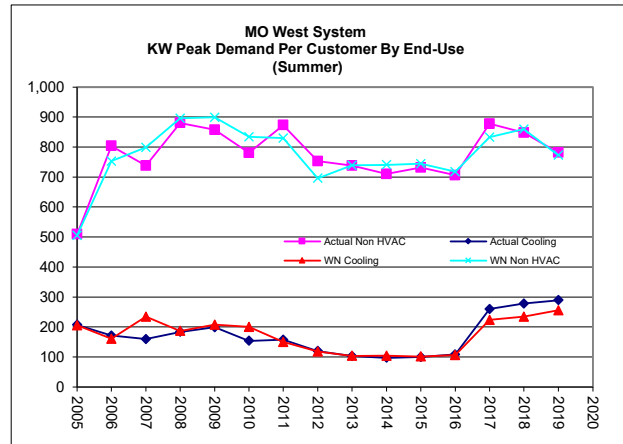
MO West										
Year	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	128.4	127.5	-	-	432.0	428.8	697.3	670.9	560.4	556.3
2006	94.0	88.1	-	-	702.1	657.8	751.3	789.8	796.1	745.9
2007	89.1	157.1	-	-	634.9	698.2	719.9	663.2	724.0	855.3
2008	100.6	102.4	-	-	764.0	777.5	765.4	730.5	864.6	879.9
2009	128.2	132.7	-	-	738.4	774.0	717.0	695.0	866.6	906.7
2010	87.6	134.6	-	-	671.8	720.3	717.0	670.2	759.3	854.9
2011	87.1	82.8	-	-	753.2	716.1	825.6	676.3	840.3	798.9
2012	40.8	40.2	-	-	651.5	602.3	818.7	829.0	692.3	642.5
2013	34.0	34.0	-	-	638.0	638.4	788.8	823.9	672.0	672.4
2014	32.1	34.2	-	-	614.3	637.6	774.9	698.3	646.3	671.8
2015	32.9	33.5	-	-	633.5	644.5	758.4	743.1	666.4	678.0
2016	36.5	35.9	-	-	607.5	618.3	742.8	608.1	644.1	654.2
2017	133.3	110.4	-	-	667.6	646.7	686.7	684.1	800.9	757.1
2018	157.2	119.0	-	-	657.1	663.2	689.3	729.2	814.3	782.2
2019	165.6	138.9	-	-	605.6	610.0	704.4	732.2	771.1	749.0
2020							677.1			
05-'10	-7.4%	1.1%	#DIV/0!	#DIV/0!	9.2%	10.9%	0.6%	0.0%	6.3%	9.0%
10-'15	-17.8%	-24.3%	#DIV/0!	#DIV/0!	-1.2%	-2.2%	1.1%	2.1%	-2.6%	-4.5%
15-'20	-100.0%	-100.0%	#DIV/0!	#DIV/0!	-100.0%	-100.0%	-100.0%	-1.8%	-100.0%	-100.0%



* 2020 Summer peaks are not include since they are projections. The peak month is likely to occur after the June 2020 cut off.
 Winter values for 2020 are included since the 2020 winter peak likely occurred already.

Plot 3A-36 MO West Total KW Peak Demand Per Customer By End-Use
For classes that have end-use sales

Year	MO West									
	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	207.4	205.8	32.2	31.0	509.1	505.3	815.8	784.9	716.4	711.1
2006	171.8	160.9	26.5	27.9	803.6	752.9	879.8	924.9	975.4	913.9
2007	160.2	234.8	16.8	22.6	738.0	799.1	836.0	771.8	898.2	1,033.9
2008	183.9	187.2	30.3	28.9	880.3	895.8	895.0	854.2	1,064.2	1,083.0
2009	198.9	208.0	21.8	21.2	857.5	899.3	837.2	811.5	1,056.4	1,107.3
2010	154.1	200.8	24.9	23.3	780.5	833.6	853.3	797.5	934.6	1,034.4
2011	157.9	150.2	15.5	19.0	872.8	829.9	953.6	785.0	1,030.8	980.1
2012	119.9	118.1	11.7	15.9	752.5	695.7	918.4	961.2	872.4	813.8
2013	103.7	103.7	14.5	18.7	738.2	738.7	881.8	956.8	841.9	842.4
2014	97.8	104.4	19.2	24.0	710.1	740.5	869.3	811.8	808.0	844.9
2015	100.0	101.7	14.2	18.6	731.8	744.5	858.8	868.4	831.8	846.3
2016	108.9	106.2	17.6	14.9	706.3	717.9	855.5	695.4	815.2	824.1
2017	260.5	223.7	16.6	16.5	877.3	832.7	792.8	789.7	1,137.8	1,056.4
2018	278.1	234.2	37.2	32.3	847.7	859.2	855.8	892.0	1,125.8	1,093.4
2019	289.5	256.0	39.8	34.5	781.2	772.6	898.0	916.9	1,070.7	1,028.5
2020			23.3	34.0				848.6		
05-'10	-5.8%	-0.5%	-5.0%	-5.5%	8.9%	10.5%	0.9%	0.3%	5.5%	7.8%
10-'15	-8.3%	-12.7%	-10.6%	-4.4%	-1.3%	-2.2%	0.1%	1.7%	-2.3%	-3.9%
15-'20	-100.0%	-100.0%	10.4%	12.8%	-100.0%	-100.0%	-100.0%	-0.5%	-100.0%	-100.0%



* 2020 Summer peaks are not include since they are projections. The peak month is likely to occur after the June 2020 cut off.
Winter values for 2020 are included since the 2020 winter peak likely occurred already.