
**Part 1 - Appendix 3A
Evergy Metro 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 for 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 Evergy Metro forecast reports designed to comply with section (2)(D) reporting requirements.

Work Files

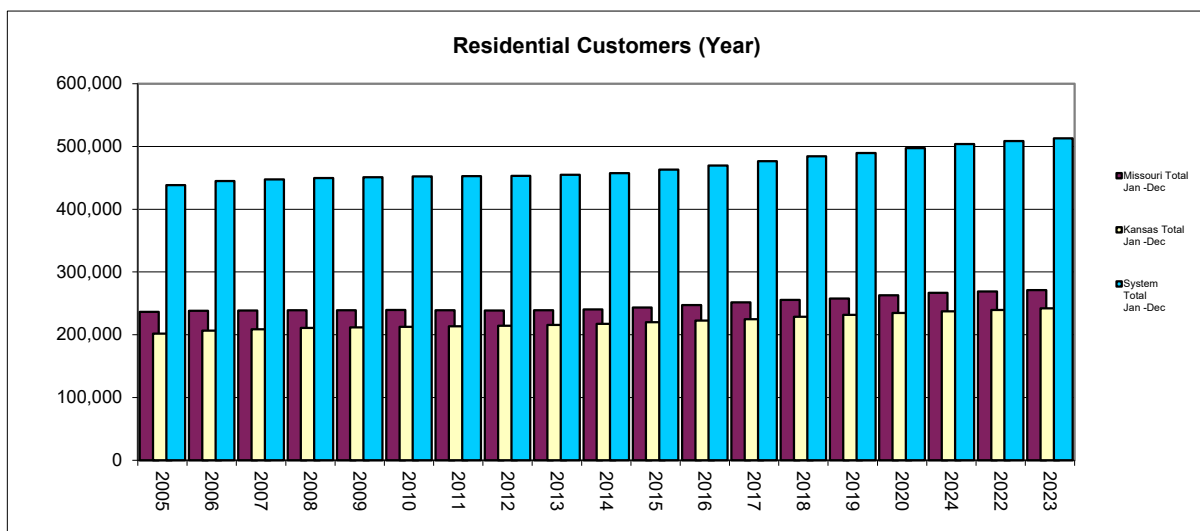
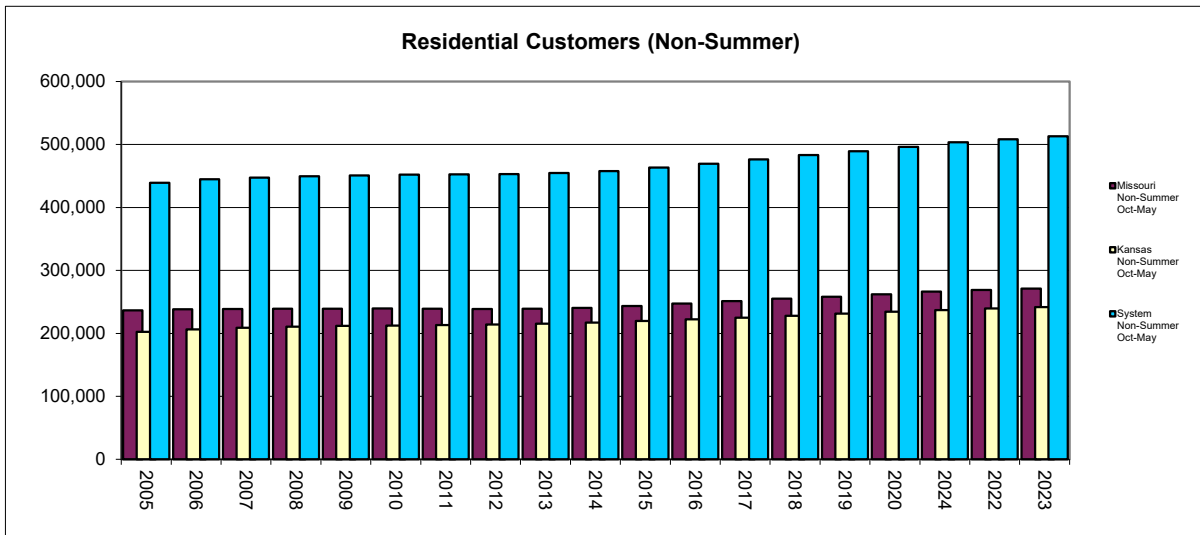
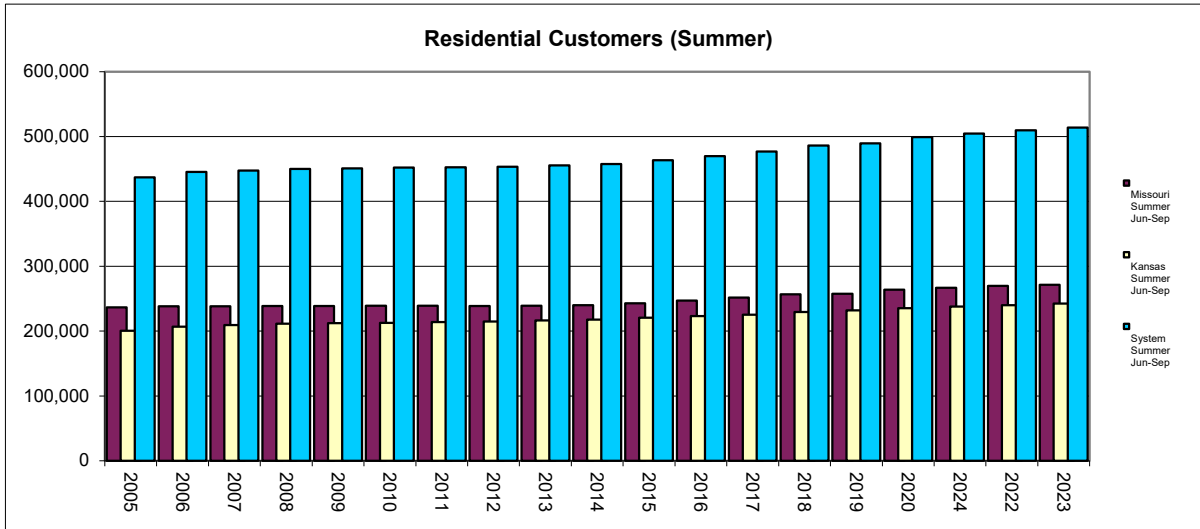
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Project Files

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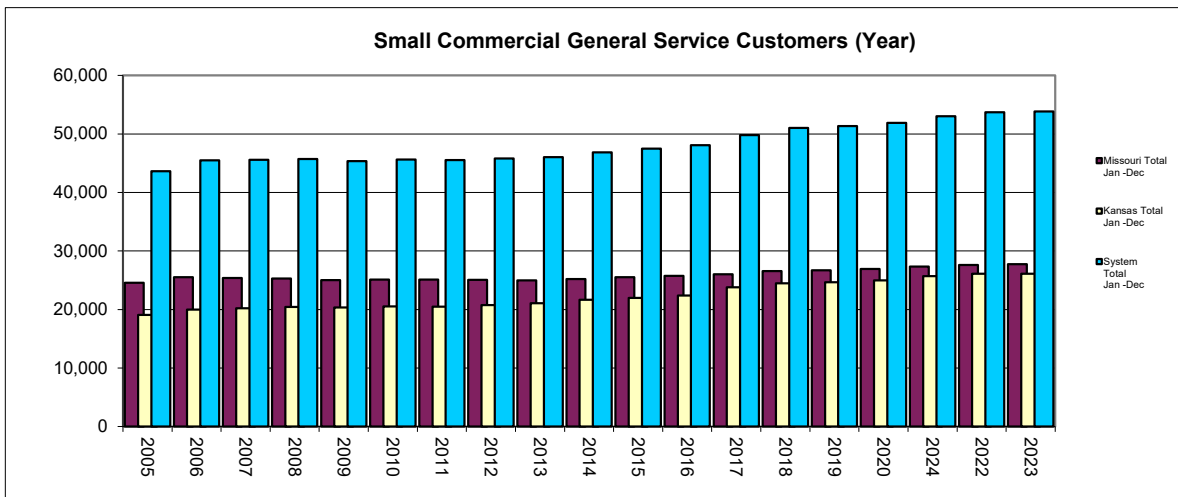
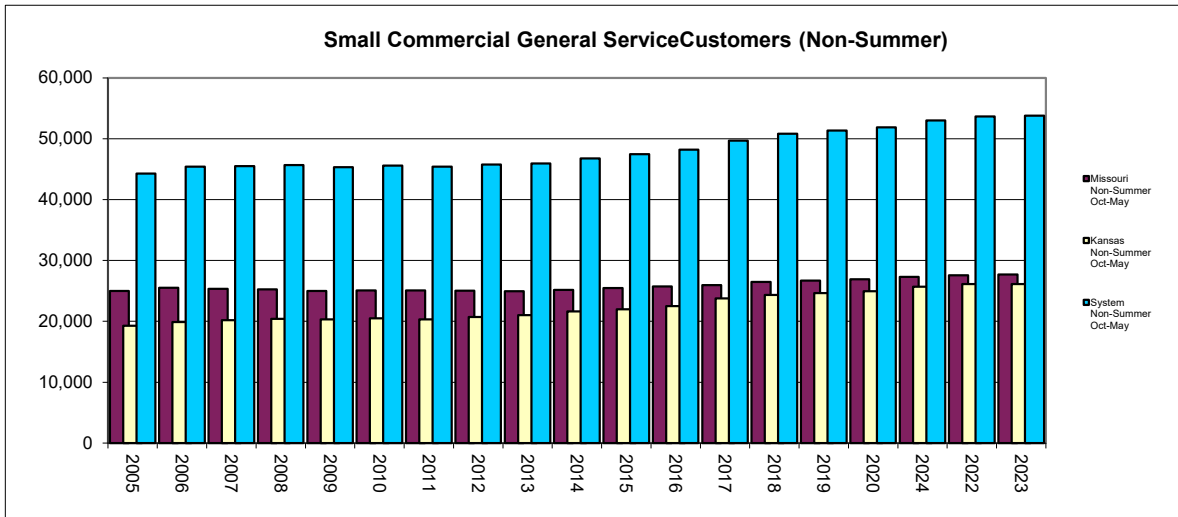
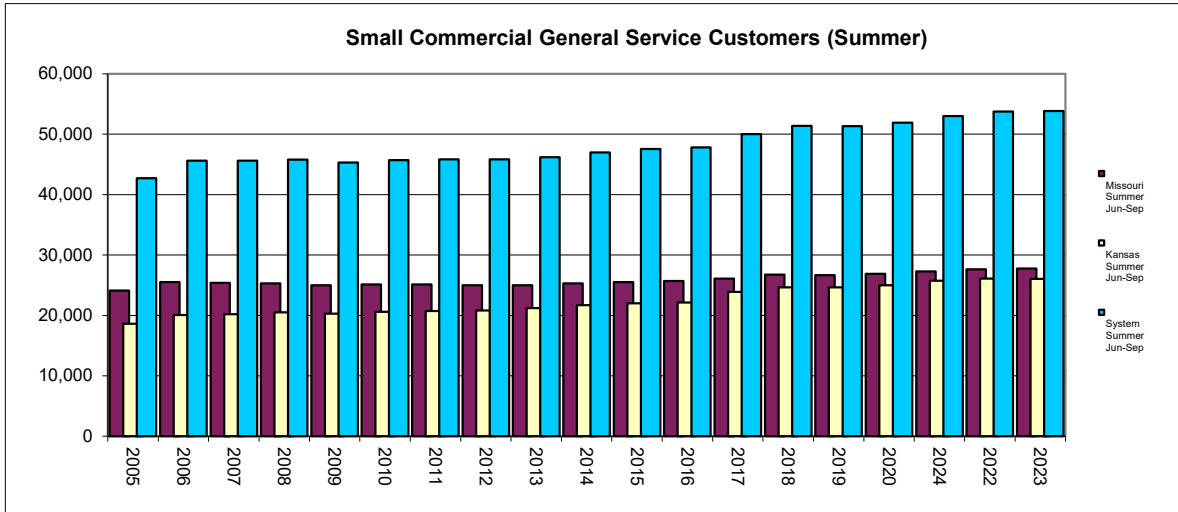
Plot 3A-1: Missouri & Kansas Residential Customers

Year	Missouri Summer Jun-Sep	Missouri Non-Summer Oct-May	Missouri Total Jan -Dec	Kansas Summer Jun-Sep	Kansas Non-Summer Oct-May	Kansas Total Jan -Dec	System Summer Jun-Sep	System Non-Summer Oct-May	System Total Jan -Dec
2005	236,455	236,691	236,612	200,464	202,291	201,682	436,919	438,982	438,294
2006	238,412	238,378	238,389	206,994	206,289	206,524	445,405	444,666	444,913
2007	238,405	238,786	238,659	209,327	208,748	208,941	447,732	447,534	447,600
2008	238,663	239,050	238,921	211,243	210,539	210,774	449,905	449,589	449,694
2009	238,695	239,258	239,070	212,253	211,737	211,909	450,948	450,996	450,980
2010	239,265	239,767	239,600	212,877	212,390	212,552	452,142	452,157	452,152
2011	238,909	239,204	239,105	213,784	213,275	213,445	452,693	452,478	452,550
2012	238,629	238,849	238,776	214,929	214,210	214,449	453,558	453,058	453,225
2013	239,146	239,089	239,108	216,428	215,477	215,794	455,573	454,566	454,902
2014	240,052	240,607	240,422	217,506	217,190	217,295	457,557	457,797	457,717
2015	243,043	243,417	243,292	220,462	219,792	220,015	463,505	463,209	463,308
2016	246,995	247,275	247,181	222,992	222,141	222,425	469,987	469,416	469,606
2017	251,679	251,415	251,503	225,394	224,780	224,985	477,073	476,195	476,488
2018	256,849	255,139	255,709	229,427	227,988	228,468	486,276	483,127	484,177
2019	257,670	258,053	257,925	231,966	231,302	231,524	489,636	489,355	489,449
2020	263,818	262,185	262,729	235,231	234,196	234,541	499,049	496,381	497,270
2024	266,917	266,534	266,662	237,897	237,140	237,392	504,814	503,674	504,054
2022	269,631	268,921	269,158	240,087	239,354	239,598	509,718	508,275	508,756
2023	271,246	271,074	271,131	242,481	241,848	242,059	513,727	512,922	513,190
05-'10	0.24%	0.26%	0.25%	1.21%	0.98%	1.06%	0.69%	0.59%	0.62%
10-'15	0.31%	0.30%	0.31%	0.70%	0.69%	0.69%	0.50%	0.48%	0.49%
15-'20	1.65%	1.50%	1.55%	1.31%	1.28%	1.29%	1.49%	1.39%	1.42%
20-'23	0.93%	1.12%	1.05%	1.02%	1.08%	1.06%	0.97%	1.10%	1.06%



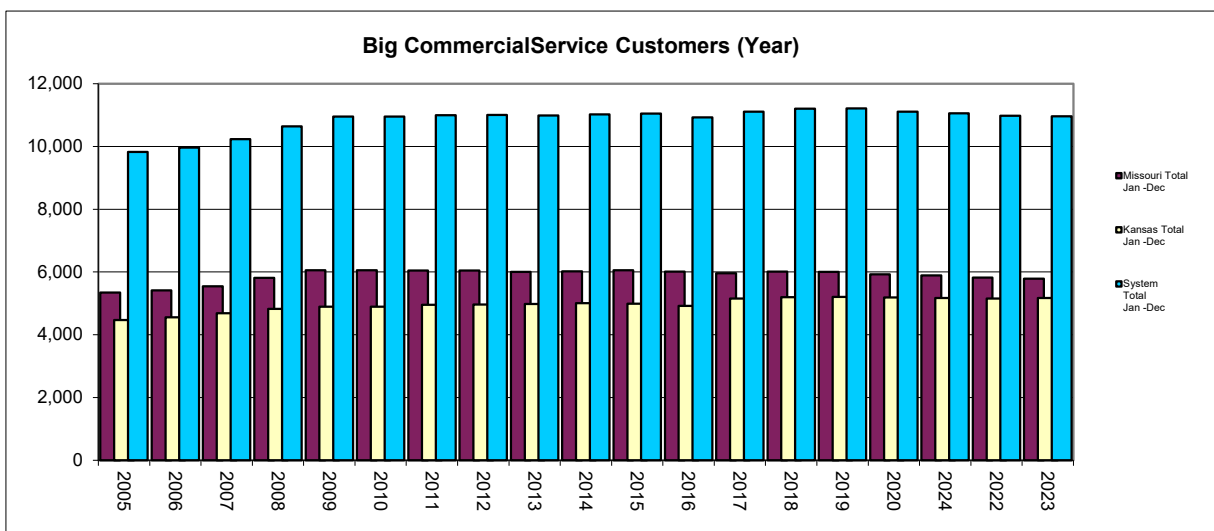
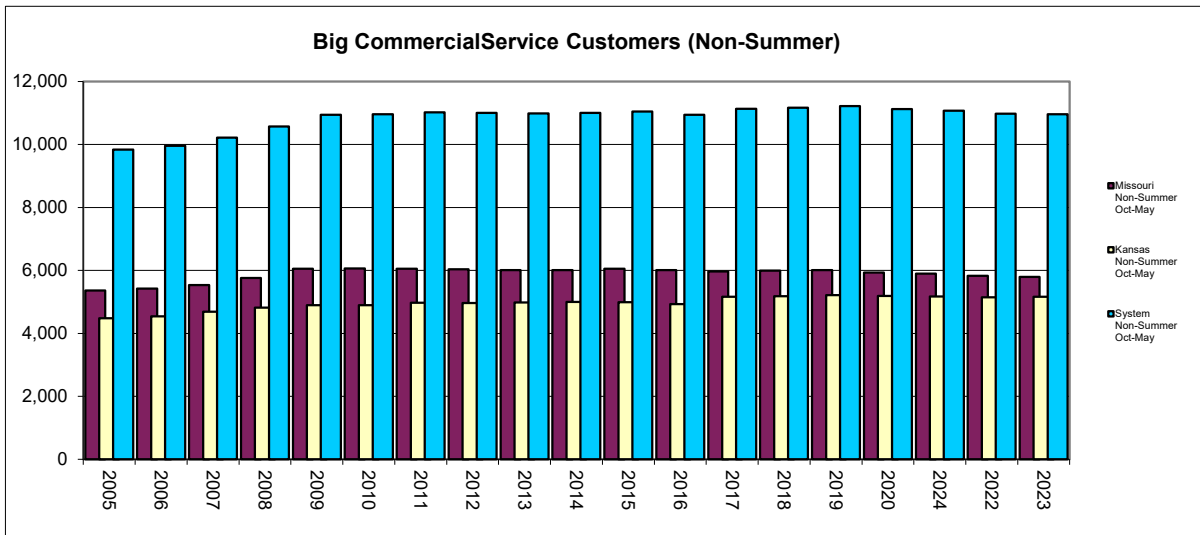
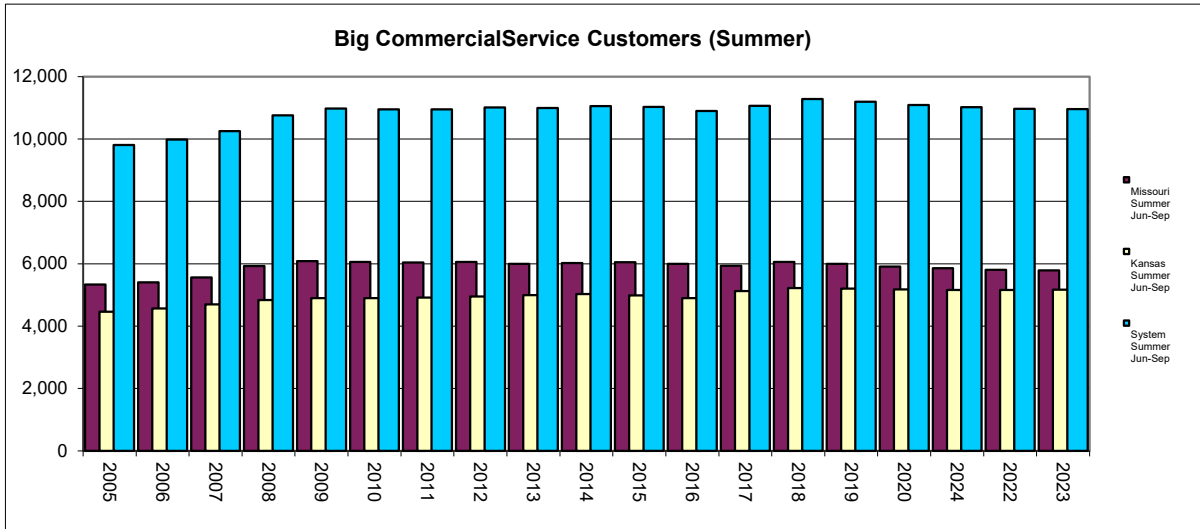
Plot 3A-2: Missouri & Kansas Small Commercial Customers

Year	Missouri	Missouri	Missouri	Kansas	Kansas	Kansas	System	System	System
	Summer Jun-Sep	Non-Summer Oct-May	Total Jan -Dec	Summer Jun-Sep	Non-Summer Oct-May	Total Jan -Dec	Summer Jun-Sep	Non-Summer Oct-May	Total Jan -Dec
2005	24,125	24,999	24,562	18,601	19,279	19,053	42,726	44,278	43,615
2006	25,530	25,503	25,512	20,079	19,901	19,961	45,609	45,405	45,473
2007	25,394	25,341	25,358	20,210	20,190	20,196	45,603	45,531	45,555
2008	25,314	25,255	25,275	20,501	20,408	20,439	45,815	45,663	45,714
2009	25,013	25,007	25,009	20,281	20,343	20,322	45,293	45,350	45,331
2010	25,113	25,078	25,090	20,580	20,512	20,535	45,693	45,590	45,624
2011	25,118	25,069	25,085	20,710	20,345	20,467	45,828	45,414	45,552
2012	25,007	25,055	25,039	20,839	20,731	20,767	45,846	45,786	45,806
2013	24,983	24,938	24,953	21,198	21,016	21,077	46,180	45,954	46,029
2014	25,294	25,159	25,204	21,692	21,633	21,653	46,986	46,792	46,857
2015	25,546	25,482	25,504	22,028	21,972	21,991	47,574	47,455	47,494
2016	25,683	25,738	25,720	22,124	22,488	22,366	47,807	48,226	48,086
2017	26,117	25,963	26,014	23,891	23,754	23,800	50,008	49,717	49,814
2018	26,736	26,464	26,555	24,639	24,358	24,452	51,375	50,822	51,006
2019	26,682	26,703	26,696	24,657	24,638	24,645	51,339	51,341	51,341
2020	26,900	26,923	26,916	25,018	24,942	24,967	51,918	51,865	51,883
2024	27,279	27,328	27,312	25,728	25,688	25,701	53,007	53,016	53,013
2022	27,636	27,558	27,584	26,108	26,121	26,117	53,744	53,679	53,701
2023	27,788	27,712	27,737	26,054	26,112	26,092	53,842	53,824	53,829
05-'10	0.81%	0.06%	0.43%	2.04%	1.25%	1.51%	1.35%	0.59%	0.90%
10-'15	0.34%	0.32%	0.33%	1.37%	1.39%	1.38%	0.81%	0.80%	0.81%
15-'20	1.04%	1.11%	1.08%	2.58%	2.57%	2.57%	1.76%	1.79%	1.78%
20-'23	1.09%	0.97%	1.01%	1.36%	1.54%	1.48%	1.22%	1.24%	1.23%



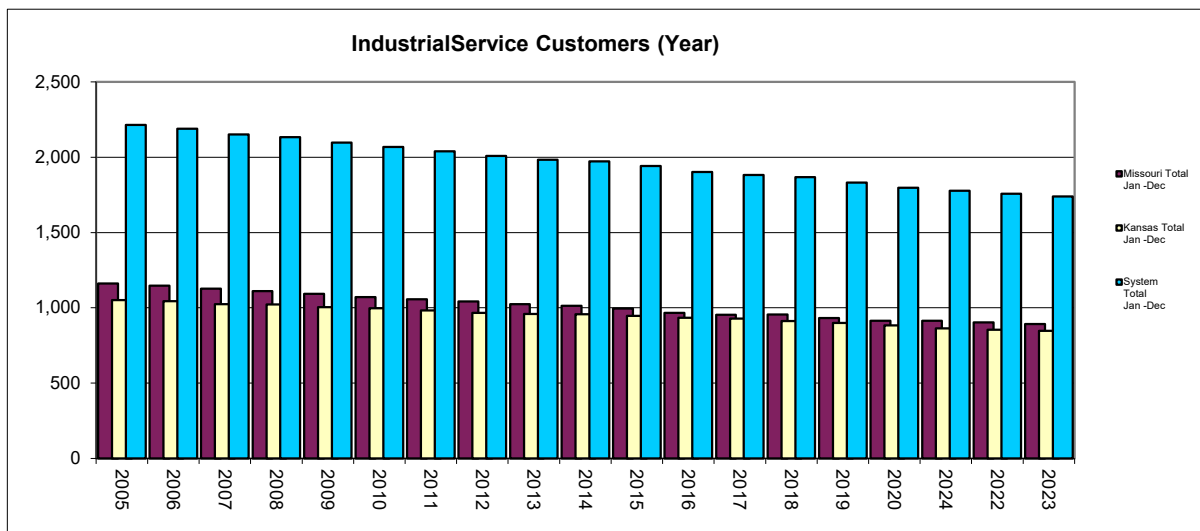
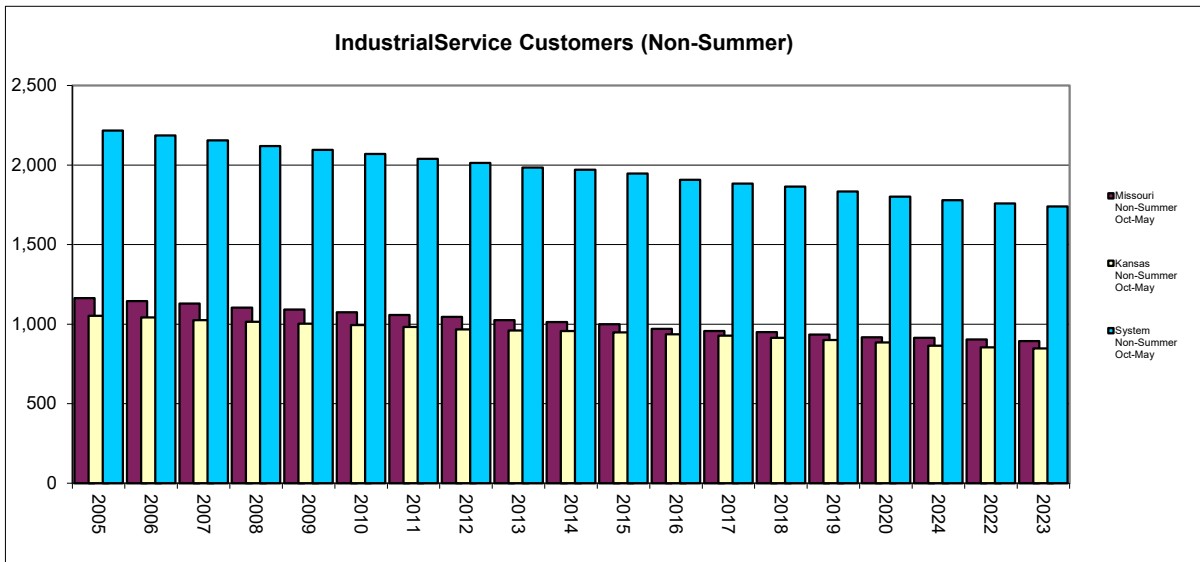
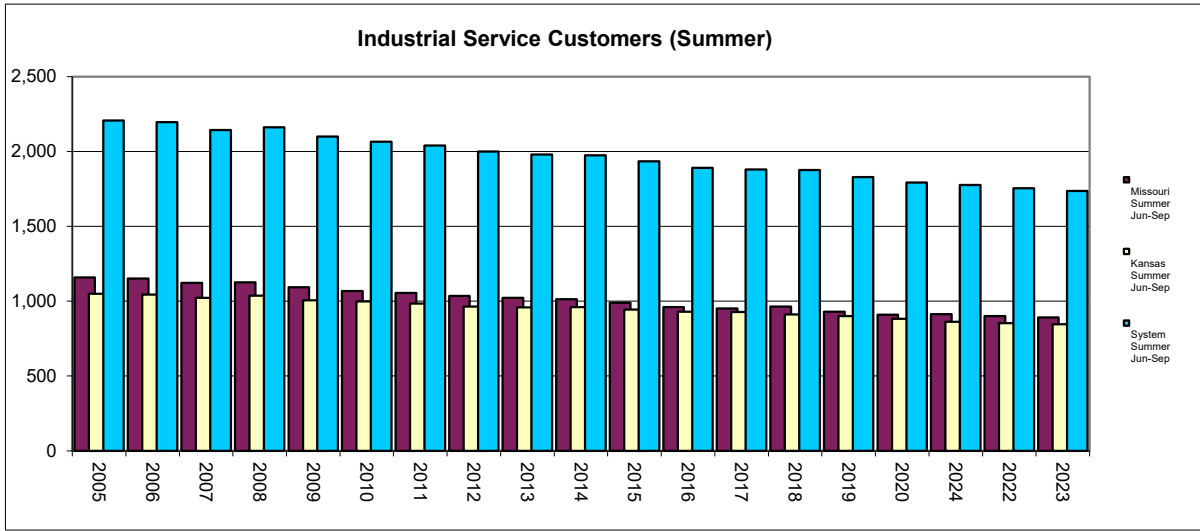
Plot 3A-3: Missouri & Kansas Big Commercial Customers

Year	Missouri Summer Jun-Sep	Missouri Non-Summer Oct-May	Missouri Total Jan -Dec	Kansas Summer Jun-Sep	Kansas Non-Summer Oct-May	Kansas Total Jan -Dec	System Summer Jun-Sep	System Non-Summer Oct-May	System Total Jan -Dec
2005	5,339	5,360	5,349	4,466	4,480	4,473	9,805	9,840	9,822
2006	5,408	5,418	5,415	4,571	4,543	4,552	9,979	9,961	9,967
2007	5,560	5,533	5,542	4,696	4,685	4,689	10,255	10,218	10,230
2008	5,924	5,761	5,815	4,838	4,814	4,822	10,762	10,575	10,637
2009	6,081	6,049	6,060	4,899	4,896	4,897	10,981	10,945	10,957
2010	6,056	6,061	6,059	4,901	4,895	4,897	10,956	10,956	10,956
2011	6,038	6,050	6,046	4,915	4,971	4,952	10,953	11,021	10,998
2012	6,062	6,035	6,044	4,953	4,968	4,963	11,015	11,004	11,007
2013	5,995	6,011	6,006	4,997	4,978	4,984	10,992	10,989	10,990
2014	6,028	6,012	6,017	5,029	4,995	5,007	11,057	11,007	11,024
2015	6,050	6,056	6,054	4,984	4,994	4,991	11,035	11,050	11,045
2016	6,000	6,013	6,009	4,900	4,930	4,920	10,900	10,943	10,929
2017	5,939	5,967	5,958	5,129	5,165	5,153	11,068	11,132	11,111
2018	6,058	5,991	6,013	5,225	5,180	5,195	11,283	11,171	11,208
2019	5,996	6,006	6,003	5,201	5,215	5,210	11,197	11,221	11,213
2020	5,907	5,930	5,922	5,180	5,191	5,187	11,087	11,121	11,109
2024	5,862	5,900	5,887	5,158	5,173	5,168	11,020	11,073	11,055
2022	5,804	5,832	5,823	5,163	5,148	5,153	10,967	10,980	10,976
2023	5,792	5,791	5,791	5,170	5,167	5,168	10,962	10,958	10,959
05-'10	2.55%	2.49%	2.52%	1.87%	1.79%	1.83%	2.25%	2.17%	2.21%
10-'15	-0.02%	-0.02%	-0.02%	0.34%	0.40%	0.38%	0.14%	0.17%	0.16%
15-'20	-0.48%	-0.42%	-0.44%	0.77%	0.78%	0.77%	0.09%	0.13%	0.12%
20-'23	-0.65%	-0.79%	-0.74%	-0.06%	-0.15%	-0.12%	-0.38%	-0.49%	-0.45%



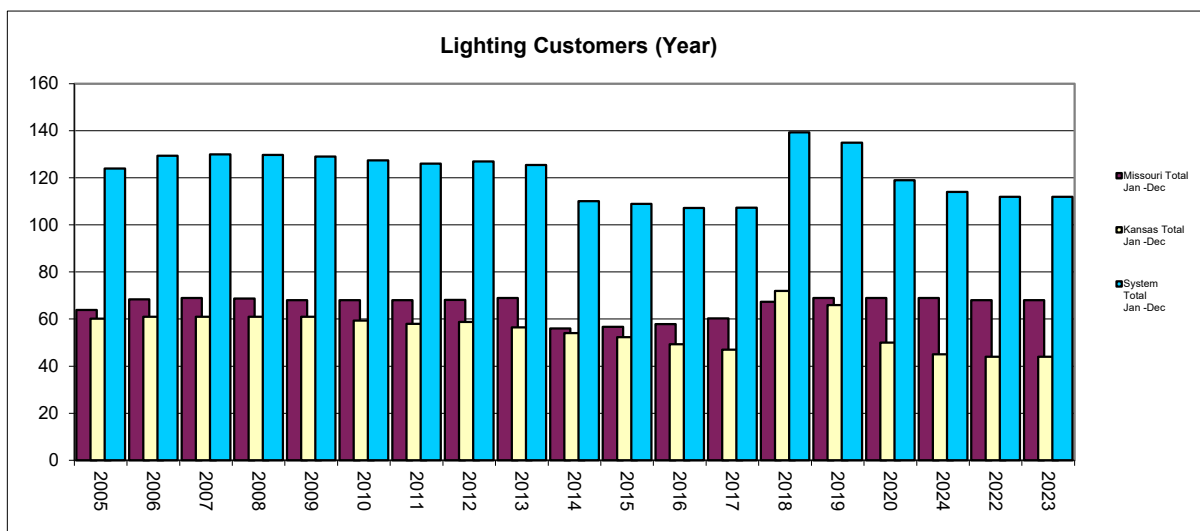
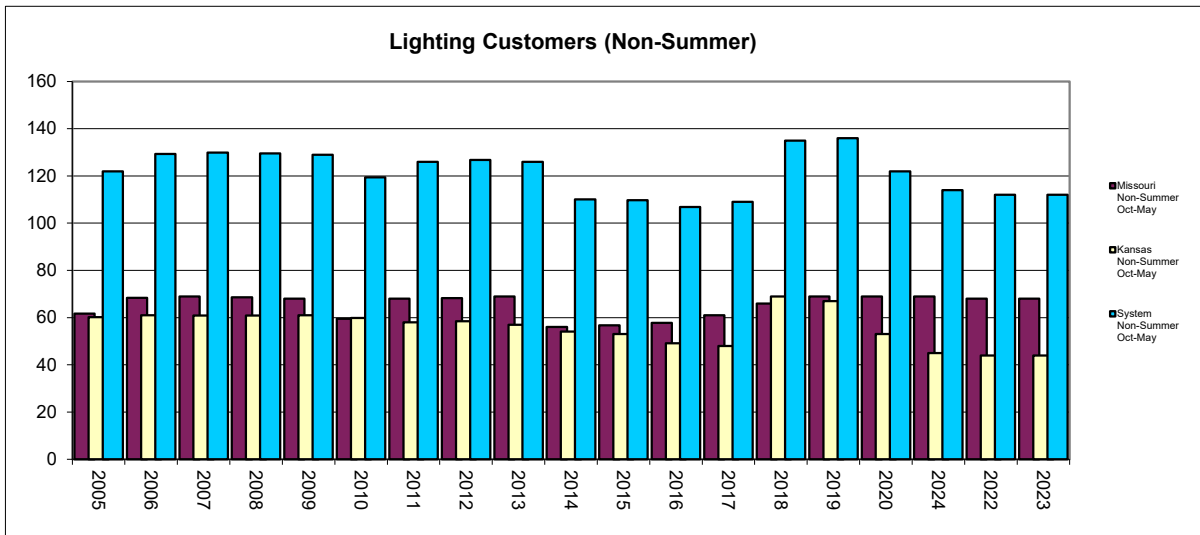
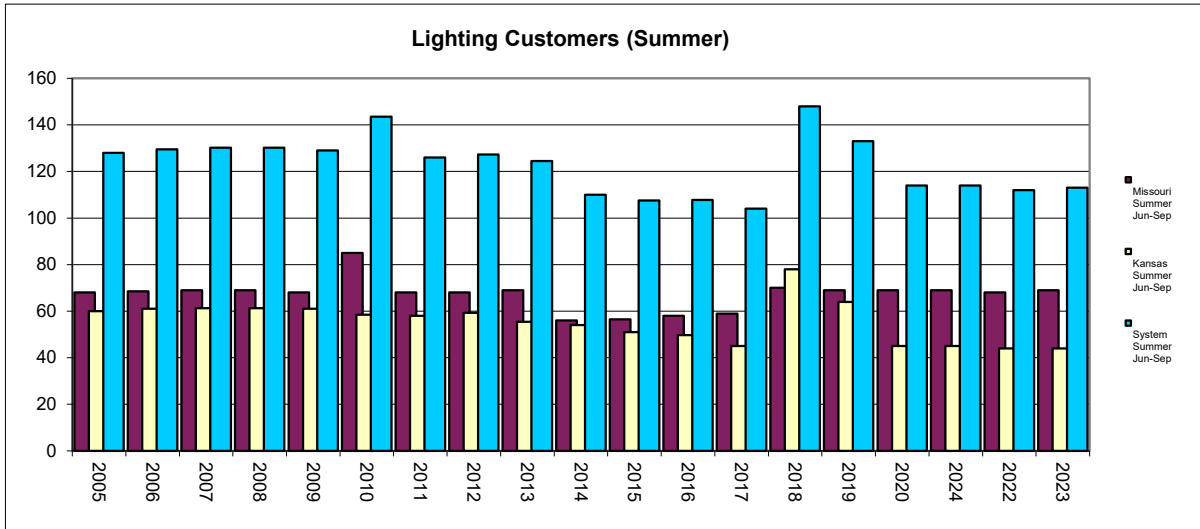
Plot 3A-4: Missouri & Kansas Industrial Customers

Year	Missouri Summer Jun-Sep	Missouri Non-Summer Oct-May	Missouri Total Jan -Dec	Kansas Summer Jun-Sep	Kansas Non-Summer Oct-May	Kansas Total Jan -Dec	System Summer Jun-Sep	System Non-Summer Oct-May	System Total Jan -Dec
2005	1,158	1,164	1,162	1,050	1,053	1,052	2,208	2,217	2,214
2006	1,151	1,144	1,146	1,045	1,043	1,043	2,196	2,186	2,190
2007	1,122	1,130	1,127	1,022	1,025	1,024	2,143	2,155	2,151
2008	1,126	1,104	1,111	1,036	1,015	1,022	2,162	2,120	2,134
2009	1,094	1,092	1,093	1,007	1,003	1,004	2,101	2,095	2,097
2010	1,067	1,074	1,072	999	995	996	2,066	2,069	2,068
2011	1,056	1,057	1,057	984	982	983	2,039	2,039	2,039
2012	1,035	1,045	1,042	964	967	966	1,999	2,013	2,008
2013	1,022	1,025	1,024	958	960	959	1,980	1,984	1,983
2014	1,014	1,014	1,014	960	957	958	1,974	1,970	1,972
2015	991	999	996	944	948	946	1,934	1,946	1,942
2016	961	970	967	930	937	934	1,891	1,907	1,901
2017	952	956	955	928	928	928	1,880	1,884	1,883
2018	965	950	955	911	914	913	1,876	1,864	1,868
2019	929	934	932	900	900	900	1,829	1,834	1,832
2020	910	917	914	883	885	884	1,793	1,802	1,798
2024	913	914	914	863	865	864	1,776	1,779	1,778
2022	900	904	903	854	854	854	1,754	1,758	1,757
2023	891	893	892	846	847	847	1,737	1,740	1,739
05-'10	-1.63%	-1.60%	-1.61%	-0.99%	-1.12%	-1.08%	-1.32%	-1.37%	-1.36%
10-'15	-1.48%	-1.44%	-1.46%	-1.14%	-0.97%	-1.03%	-1.31%	-1.22%	-1.25%
15-'20	-1.68%	-1.69%	-1.70%	-1.32%	-1.36%	-1.35%	-1.50%	-1.53%	-1.53%
20-'23	-0.70%	-0.88%	-0.81%	-1.42%	-1.45%	-1.42%	-1.05%	-1.16%	-1.11%



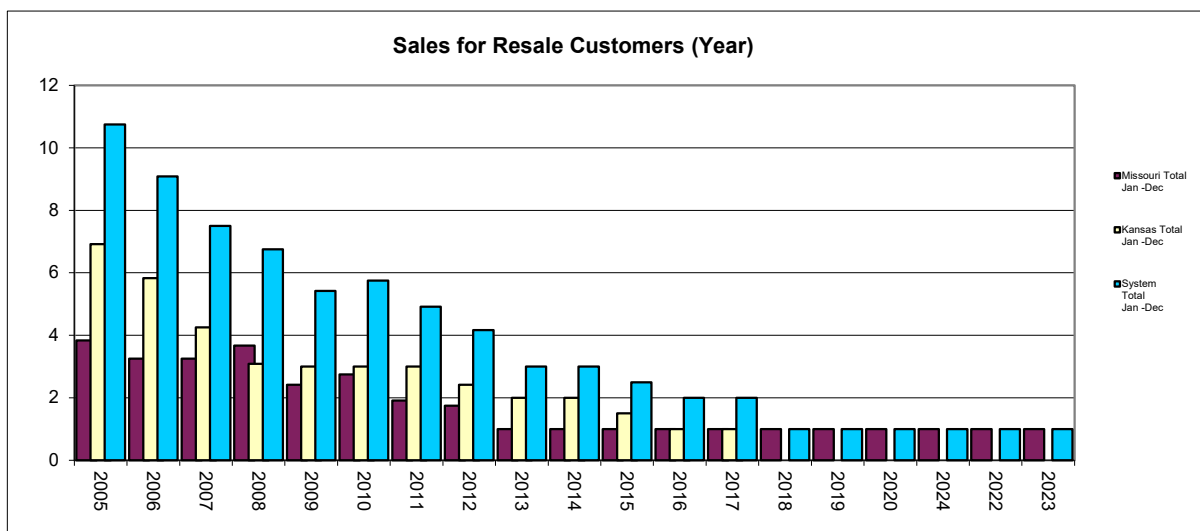
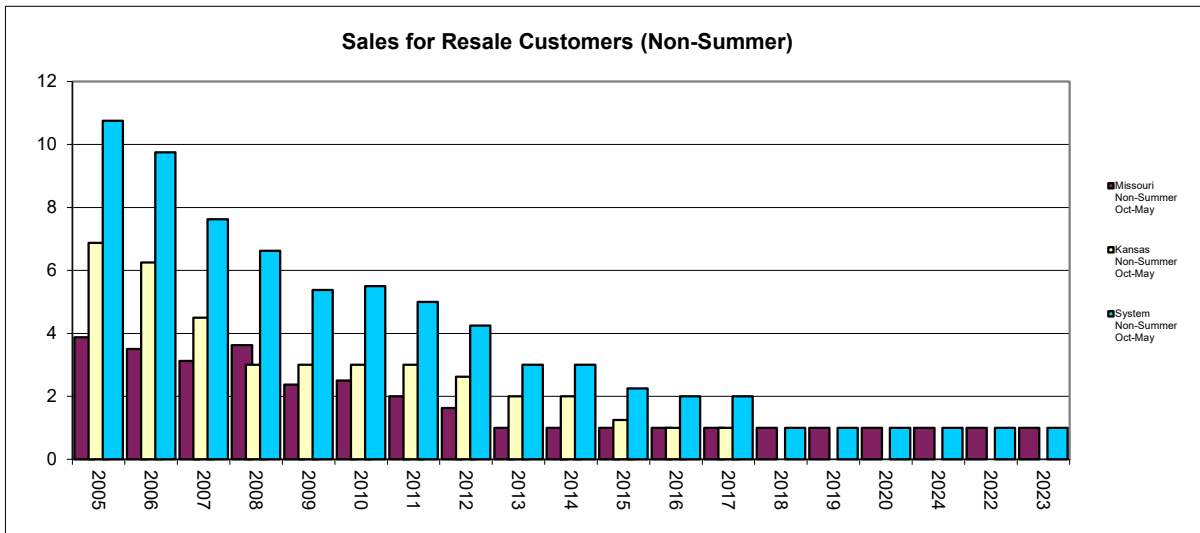
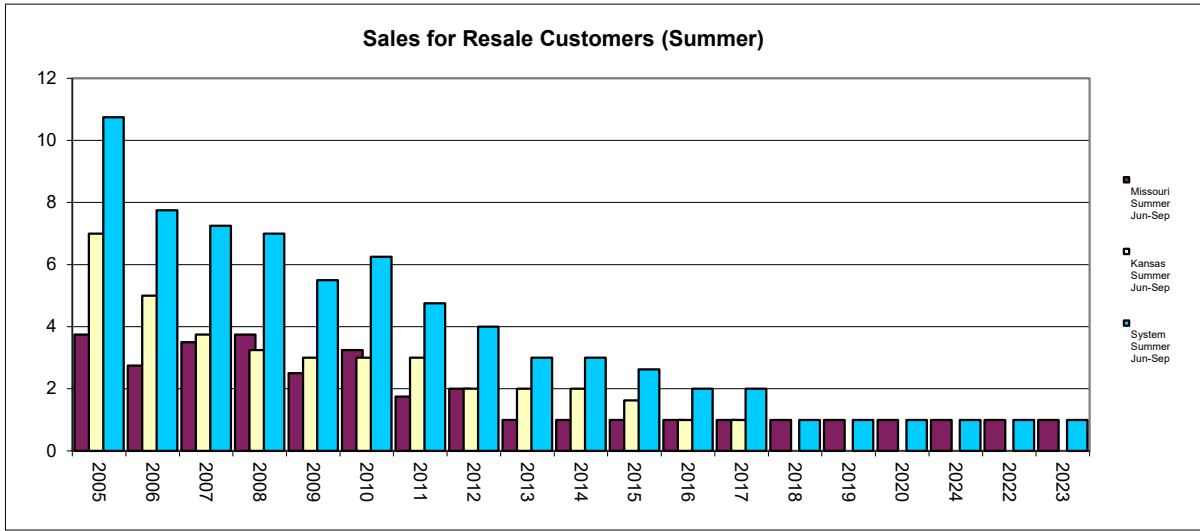
Plot 3A-5: Missouri & Kansas Lighting Customers

Year	Missouri Summer Jun-Sep	Missouri Non-Summer Oct-May	Missouri Total Jan -Dec	Kansas Summer Jun-Sep	Kansas Non-Summer Oct-May	Kansas Total Jan -Dec	System Summer Jun-Sep	System Non-Summer Oct-May	System Total Jan -Dec
2005	68	62	64	60	60	60	128	122	124
2006	69	68	68	61	61	61	130	129	129
2007	69	69	69	61	61	61	130	130	130
2008	69	69	69	61	61	61	130	130	130
2009	68	68	68	61	61	61	129	129	129
2010	85	60	68	59	60	59	144	119	127
2011	68	68	68	58	58	58	126	126	126
2012	68	68	68	59	59	59	127	127	127
2013	69	69	69	56	57	57	125	126	126
2014	56	56	56	54	54	54	110	110	110
2015	57	57	57	51	53	52	108	110	109
2016	58	58	58	50	49	49	108	107	107
2017	59	61	60	45	48	47	104	109	107
2018	70	66	67	78	69	72	148	135	139
2019	69	69	69	64	67	66	133	136	135
2020	69	69	69	45	53	50	114	122	119
2024	69	69	69	45	45	45	114	114	114
2022	68	68	68	44	44	44	112	112	112
2023	69	68	68	44	44	44	113	112	112
05-'10	4.56%	-0.74%	1.27%	-0.51%	-0.12%	-0.25%	2.31%	-0.43%	0.55%
10-'15	-7.84%	-0.94%	-3.58%	-2.71%	-2.41%	-2.51%	-5.61%	-1.67%	-3.07%
15-'20	4.08%	3.99%	4.02%	-2.47%	0.00%	-0.91%	1.18%	2.14%	1.77%
20-'23	0.00%	-0.49%	-0.49%	-0.75%	-6.01%	-4.17%	-0.29%	-2.81%	-2.00%



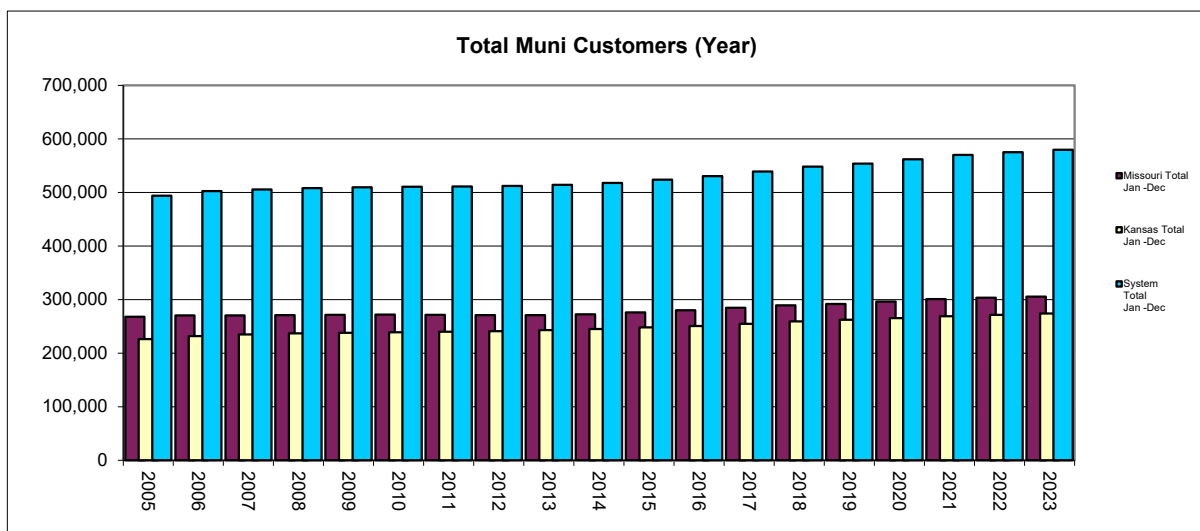
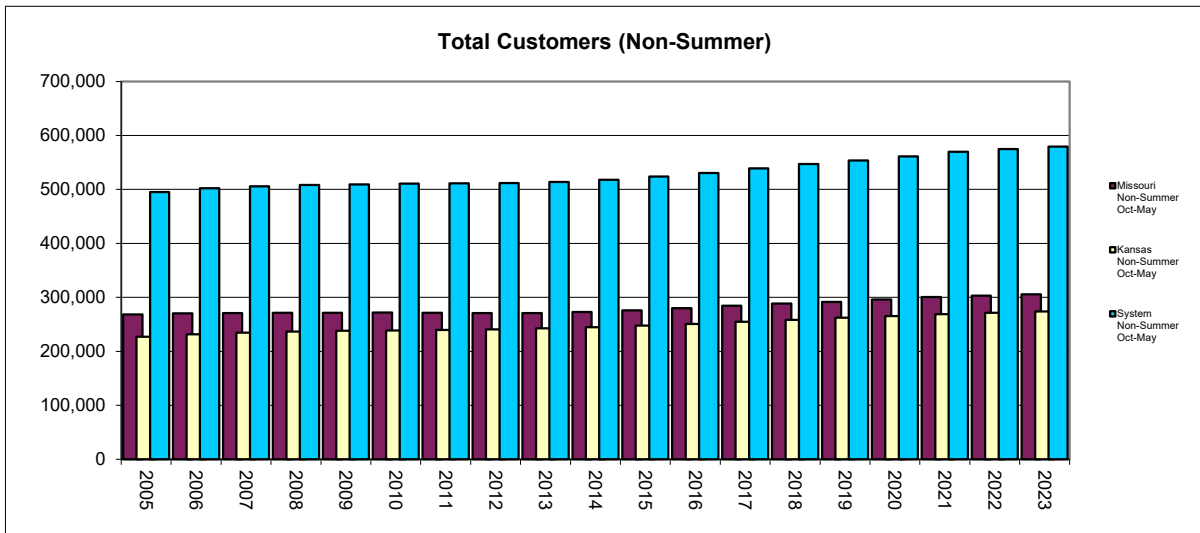
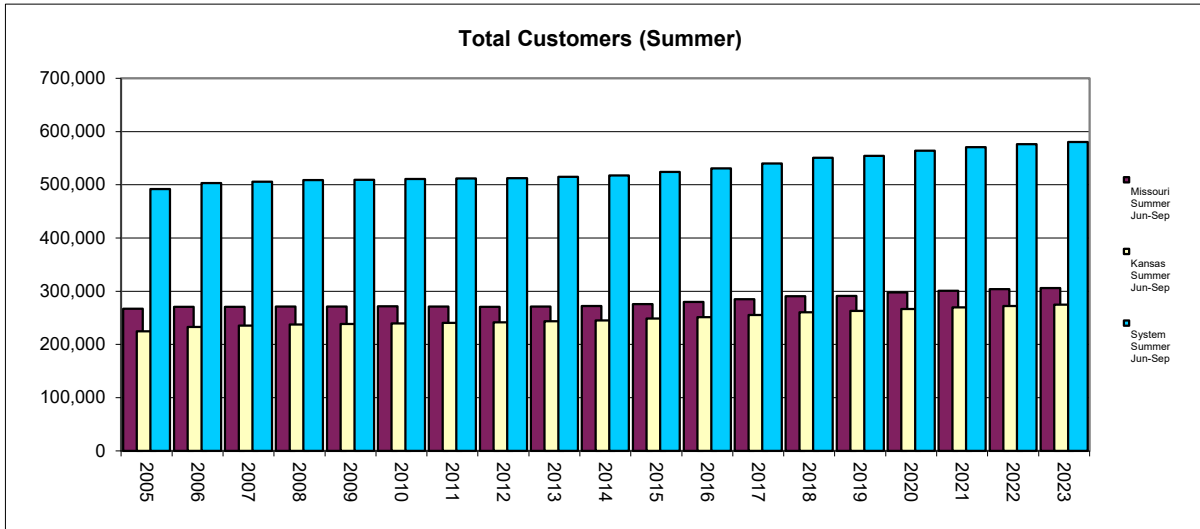
Plot 3A-6: Missouri & Kansas Sales for Resale Customers

Year	Missouri Summer Jun-Sep	Missouri Non-Summer Oct-May	Missouri Total Jan -Dec	Kansas Summer Jun-Sep	Kansas Non-Summer Oct-May	Kansas Total Jan -Dec	System Summer Jun-Sep	System Non-Summer Oct-May	System Total Jan -Dec
2005	4	4	4	7	7	7	11	11	11
2006	3	4	3	5	6	6	8	10	9
2007	4	3	3	4	5	4	7	8	8
2008	4	4	4	3	3	3	7	7	7
2009	3	2	2	3	3	3	6	5	5
2010	3	3	3	3	3	3	6	6	6
2011	2	2	2	3	3	3	5	5	5
2012	2	2	2	2	3	2	4	4	4
2013	1	1	1	2	2	2	3	3	3
2014	1	1	1	2	2	2	3	3	3
2015	1	1	1	2	1	2	3	2	3
2016	1	1	1	1	1	1	2	2	2
2017	1	1	1	1	1	1	2	2	2
2018	1	1	1	0	0	0	1	1	1
2019	1	1	1	0	0	0	1	1	1
2020	1	1	1	0	0	0	1	1	1
2024	1	1	1	0	0	0	1	1	1
2022	1	1	1	0	0	0	1	1	1
2023	1	1	1	0	0	0	1	1	1
05-'10	-2.82%	-8.39%	-6.43%	-15.59%	-15.28%	-15.39%	-10.28%	-12.54%	-11.76%
10-'15	-21.00%	-16.74%	-18.32%	-11.54%	-16.06%	-12.94%	-15.93%	-16.37%	-15.34%
15-'20	0.00%	0.00%	0.00%	-100.00%	-100.00%	-100.00%	-17.55%	-14.97%	-16.74%
20-'23	0.00%	0.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	0.00%



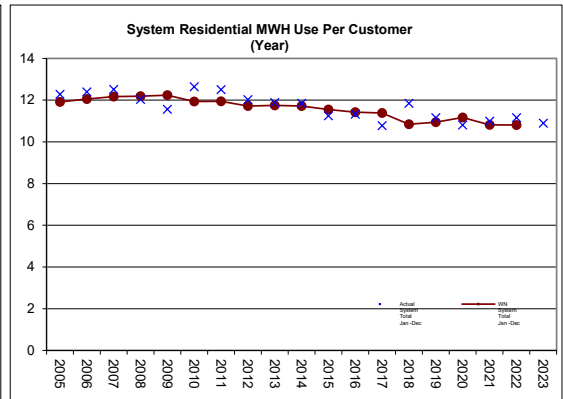
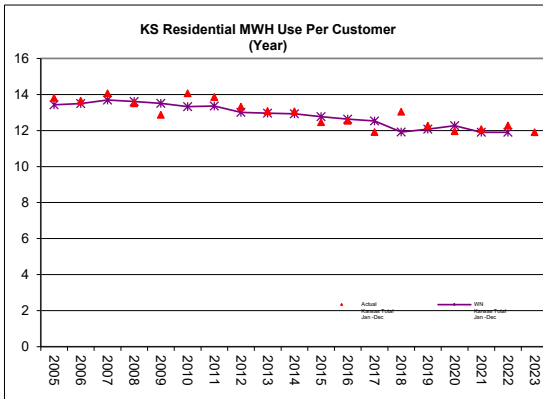
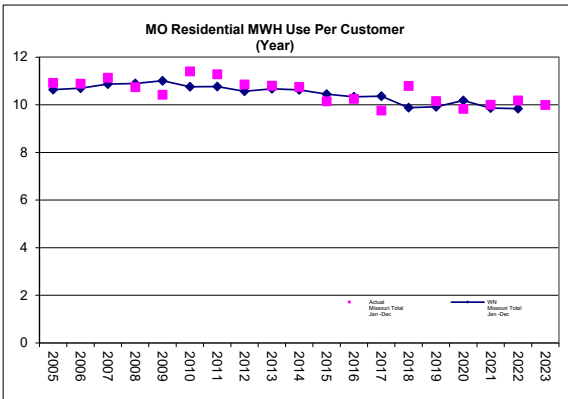
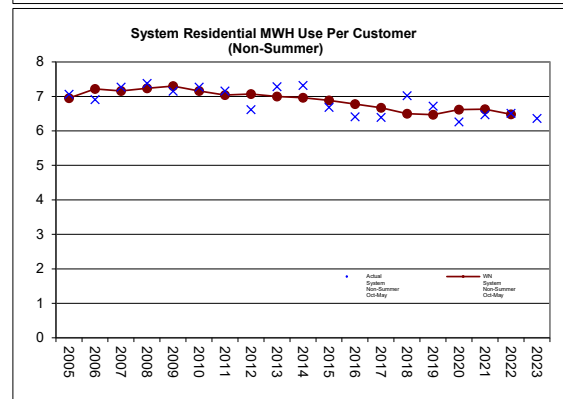
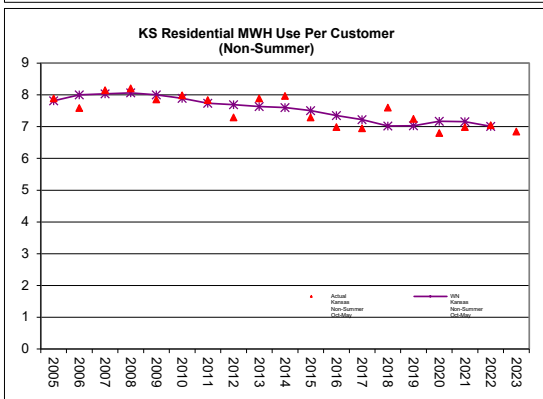
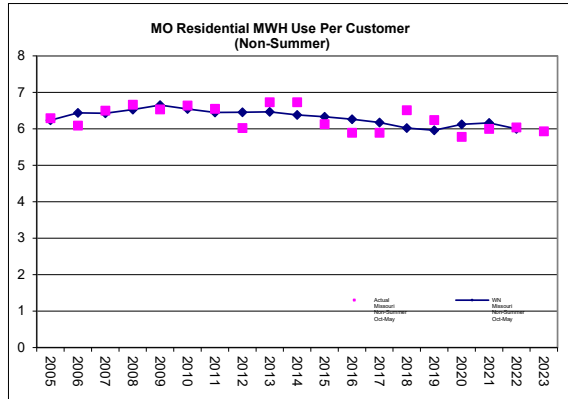
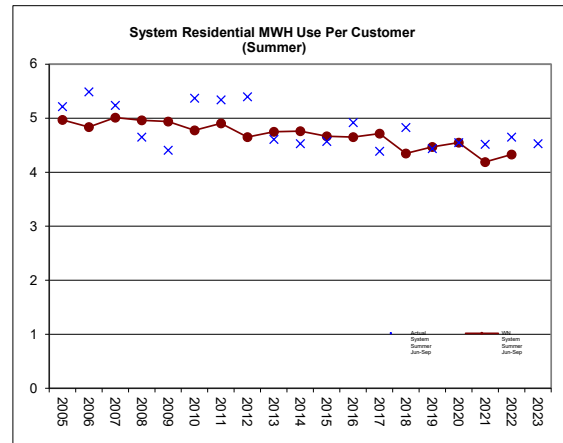
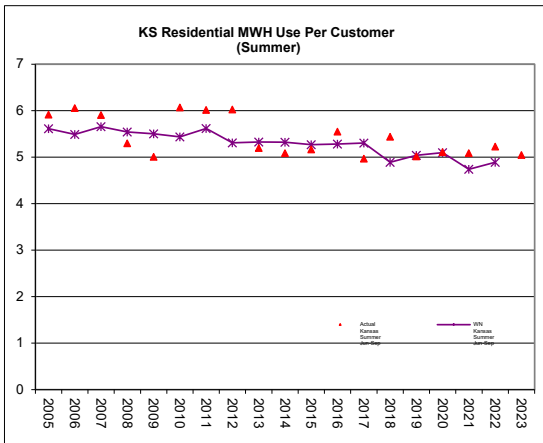
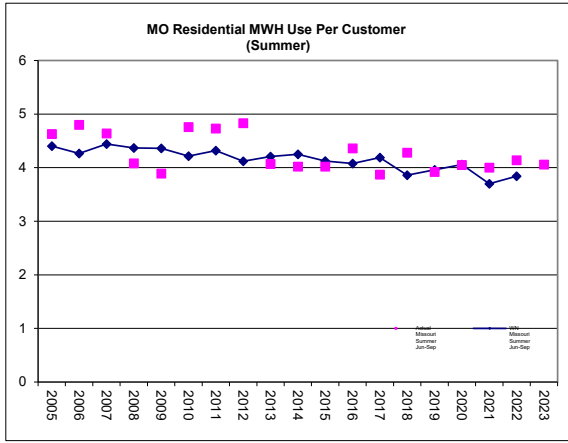
Plot 3A-7: Missouri & Kansas Total Customers

Year	Missouri Summer Jun-Sep	Missouri Non-Summer Oct-May	Missouri Total Jan -Dec	Kansas Summer Jun-Sep	Kansas Non-Summer Oct-May	Kansas Total Jan -Dec	System Summer Jun-Sep	System Non-Summer Oct-May	System Total Jan -Dec
2005	267,149	268,279	267,753	224,647	227,170	226,327	491,796	495,450	494,080
2006	270,572	270,514	270,533	232,755	231,843	232,147	503,326	502,357	502,680
2007	270,552	270,862	270,759	235,319	234,714	234,915	505,871	505,576	505,674
2008	271,099	271,242	271,194	237,683	236,841	237,122	508,782	508,083	508,316
2009	270,953	271,477	271,302	238,504	238,043	238,197	509,457	509,520	509,499
2010	271,588	272,042	271,891	239,418	238,855	239,043	511,006	510,897	510,933
2011	271,191	271,449	271,363	240,454	239,634	239,907	511,644	511,083	511,270
2012	270,804	271,055	270,971	241,745	240,937	241,206	512,549	511,992	512,177
2013	271,214	271,133	271,160	243,638	242,489	242,872	514,852	513,622	514,032
2014	272,443	272,848	272,713	245,244	244,831	244,969	517,687	517,680	517,682
2015	275,687	276,012	275,903	248,470	247,760	247,997	524,157	523,772	523,900
2016	279,698	280,054	279,936	250,997	250,546	250,696	530,695	530,600	530,632
2017	284,747	284,363	284,491	255,388	254,676	254,913	540,135	539,039	539,404
2018	290,679	288,611	289,300	260,280	258,509	259,099	550,959	547,120	548,400
2019	291,347	291,766	291,626	262,788	262,122	262,345	554,135	553,888	553,971
2020	297,605	296,025	296,551	266,357	265,267	265,629	563,962	561,292	562,180
2021	301,041	300,746	300,845	269,691	268,911	269,170	570,732	569,657	570,015
2022	304,040	303,284	303,537	272,256	271,521	271,766	576,296	574,805	575,303
2023	305,787	305,539	305,620	274,595	274,018	274,210	580,382	579,557	579,830
05-'10	0.33%	0.28%	0.31%	1.28%	1.01%	1.10%	0.77%	0.62%	0.67%
10-'15	0.30%	0.29%	0.29%	0.74%	0.73%	0.74%	0.51%	0.50%	0.50%
15-'20	1.54%	1.41%	1.45%	1.40%	1.37%	1.38%	1.47%	1.39%	1.42%
20-'23	0.91%	1.06%	1.01%	1.02%	1.09%	1.07%	0.96%	1.07%	1.04%



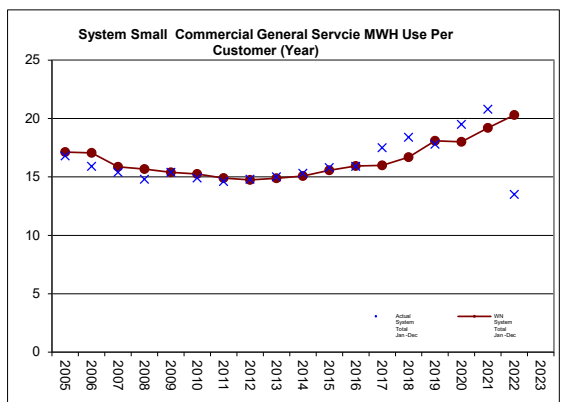
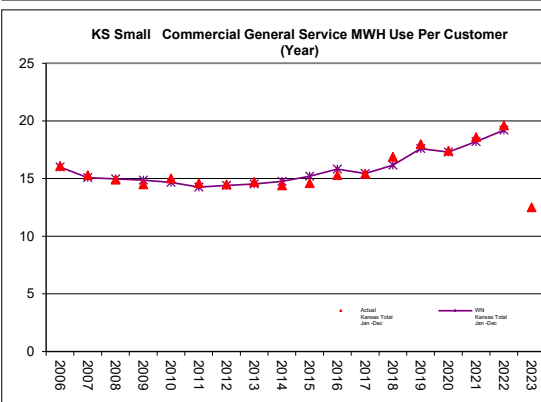
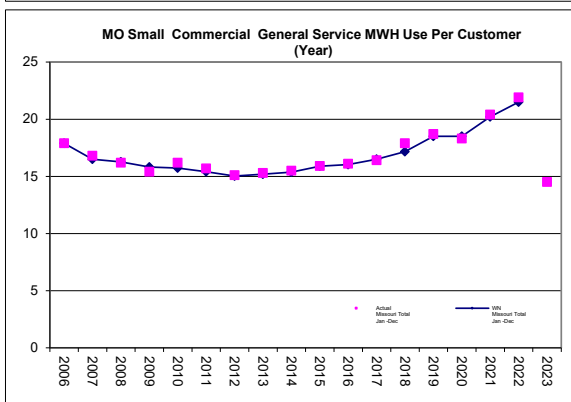
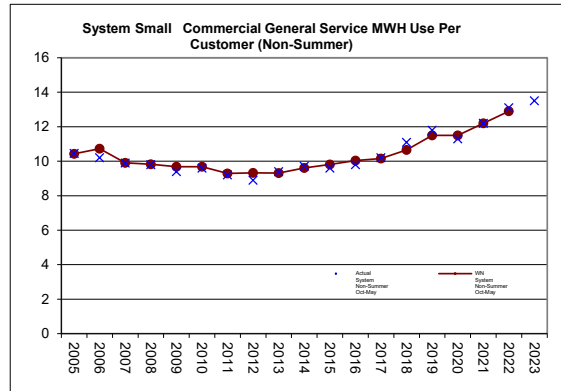
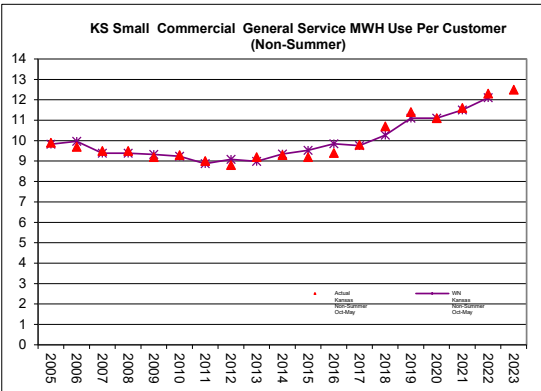
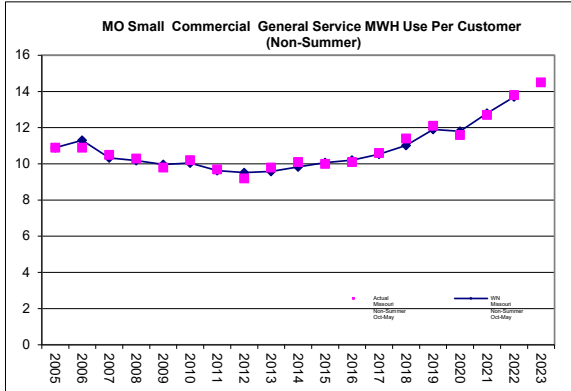
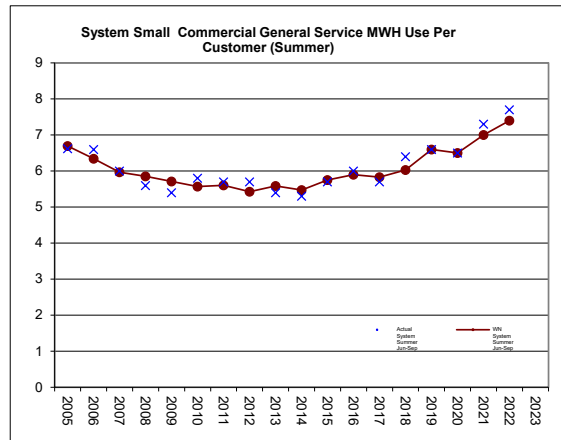
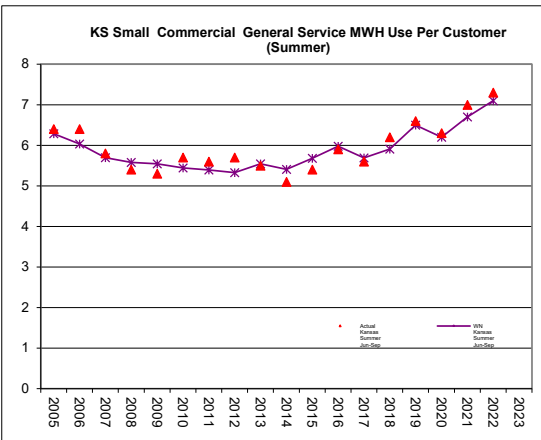
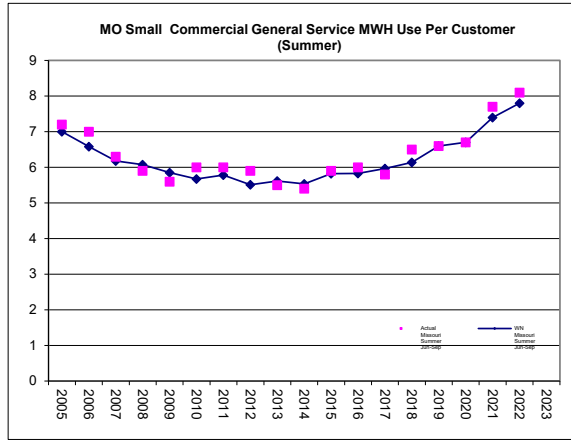
**Plot 3A-8 Missouri & Kansas Residential MWH Use Per Customer
(Actual vs. Weather Normalized)**

Year	Actual Missouri Summer		WN Missouri Non-Summer		Actual Missouri Total		WN Missouri Total		Actual Kansas Summer		WN Kansas Non-Summer		Actual Kansas Total		WN Kansas Total		Actual System Summer		WN System Non-Summer		Actual System Total		WN System Total	
	Jun-Sep	Jun-Sep	Oct-May	Oct-May	Jan-Dec	Jan-Dec	Jun-Sep	Jun-Sep	Oct-May	Oct-May	Jan-Dec	Jan-Dec	Jun-Sep	Jun-Sep	Oct-May	Oct-May	Jan-Dec	Jan-Dec	Jun-Sep	Jun-Sep	Oct-May	Oct-May	Jan-Dec	Jan-Dec
	2005	4.63	4.40	6.29	6.24	10.92	10.64	5.92	5.61	7.89	7.81	13.81	13.43	5.22	4.97	7.06	6.95	12.28	11.92	4.84	4.97	7.22	7.16	12.40
2006	4.80	4.26	6.09	6.44	10.89	10.70	6.06	5.49	7.59	8.00	13.65	13.49	5.49	4.84	6.91	7.22	12.40	12.05	5.01	5.01	7.27	7.16	12.51	12.17
2007	4.64	4.44	6.50	6.42	11.14	10.87	5.91	5.66	8.15	8.04	14.06	13.69	5.24	5.01	7.27	7.16	12.51	12.17	4.96	4.96	7.38	7.23	12.03	12.19
2008	4.08	4.37	6.66	6.52	10.74	10.89	5.30	5.54	8.21	8.06	13.51	13.61	4.65	4.96	7.38	7.23	12.03	12.19	4.94	4.94	7.15	7.30	11.56	12.24
2009	3.89	4.36	6.53	6.65	10.42	11.01	5.01	5.50	7.86	8.00	12.87	13.51	4.41	4.94	7.15	7.30	11.56	12.24	4.78	4.78	7.27	7.16	12.64	11.94
2010	4.76	4.21	6.64	6.54	11.40	10.76	6.07	5.44	7.99	7.89	14.06	13.33	5.37	4.78	7.27	7.16	12.64	11.94	4.90	4.90	7.16	7.04	12.50	11.95
2011	4.73	4.32	6.55	6.45	11.28	10.77	6.02	5.62	7.84	7.74	13.86	13.36	5.34	4.90	7.16	7.04	12.50	11.95	4.65	4.65	6.62	7.07	12.02	11.72
2012	4.83	4.12	6.02	6.45	10.85	10.57	6.03	5.31	7.29	7.69	13.32	13.00	5.40	4.65	6.62	7.07	12.02	11.72	4.75	4.75	7.28	7.00	11.89	11.75
2013	4.07	4.21	6.73	6.47	10.80	10.68	5.20	5.33	7.89	7.63	13.09	12.96	4.61	4.75	7.28	7.00	11.89	11.75	4.76	4.76	7.32	6.96	11.85	11.72
2014	4.02	4.25	6.73	6.38	10.75	10.63	5.09	5.32	7.97	7.60	13.06	12.93	4.53	4.76	7.32	6.96	11.85	11.72	4.67	4.67	6.68	6.89	11.25	11.55
2015	4.02	4.12	6.13	6.33	10.15	10.45	5.17	5.27	7.29	7.50	12.46	12.77	4.57	4.67	6.68	6.89	11.25	11.55	4.65	4.65	6.41	6.78	11.33	11.43
2016	4.36	4.08	5.89	6.26	10.25	10.34	5.55	5.28	6.99	7.35	12.54	12.63	4.92	4.65	6.41	6.78	11.33	11.43	4.72	4.72	6.39	6.67	10.78	11.39
2017	3.87	4.19	5.89	6.17	9.76	10.36	4.97	5.31	6.95	7.22	11.92	12.53	4.39	4.72	6.39	6.67	10.78	11.39	4.35	4.35	7.02	6.50	11.85	10.84
2018	4.28	3.86	6.51	6.02	10.79	9.89	5.44	4.89	7.60	7.02	13.04	11.92	4.83	4.35	7.02	6.50	11.85	10.84	4.47	4.47	6.72	6.47	11.16	10.94
2019	3.92	3.96	6.24	5.96	10.16	9.92	5.02	5.04	7.25	7.03	12.27	12.07	4.44	4.47	6.72	6.47	11.16	10.94	4.55	4.55	6.26	6.62	10.81	11.17
2020	4.05	4.06	5.78	6.12	9.83	10.18	5.11	5.10	6.80	7.17	11.96	12.27	4.55	4.55	6.26	6.62	10.81	11.17	4.19	4.19	6.47	6.63	10.99	10.82
2021	4.00	3.70	6.00	6.16	10.00	9.86	5.09	4.74	6.99	7.16	12.08	11.90	4.52	4.19	6.47	6.63	10.99	10.82	4.33	4.33	6.51	6.48	11.16	10.81
2022	4.14	3.84	6.04	6.00	10.18	9.84	5.23	4.89	7.05	7.01	12.28	11.90	4.65	4.33	6.51	6.48	11.16	10.81	4.33	4.33	6.36	6.36	10.89	10.89
2023	4.06		5.93		9.99		5.05		6.85		11.90		4.53		6.36		10.89							
05-'10	0.6%	-0.9%	1.1%	1.0%	0.9%	0.2%	0.5%	-0.6%	0.3%	0.2%	0.4%	-0.2%	0.6%	-0.8%	0.6%	0.6%	0.6%	0.0%	-0.8%	-0.8%	0.6%	0.6%	0.6%	0.0%
10-'15	-3.3%	-0.4%	-1.6%	-0.7%	-2.3%	-0.6%	-3.2%	-0.6%	-1.8%	-1.0%	-2.4%	-0.8%	-3.2%	-0.5%	-1.7%	-0.8%	-0.7%	-0.8%	-0.5%	-0.5%	-1.7%	-0.8%	-0.7%	-0.8%
15-'23	0.1%	-100.0%	-0.4%	-100.0%	-0.2%	-100.0%	-0.3%	-100.0%	-0.8%	-100.0%	-0.6%	-100.0%	-0.1%	-100.0%	-0.6%	-100.0%	-0.4%	-100.0%	-100.0%	-100.0%	-0.6%	-100.0%	-0.4%	-100.0%



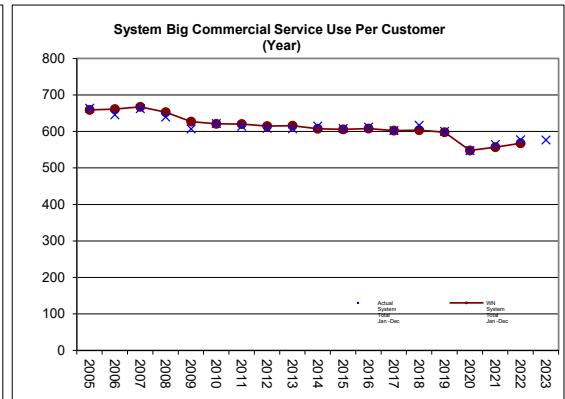
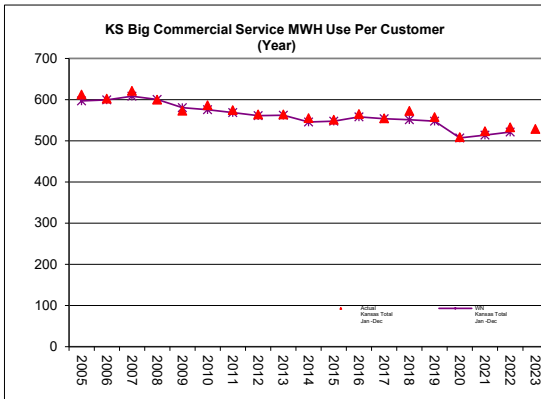
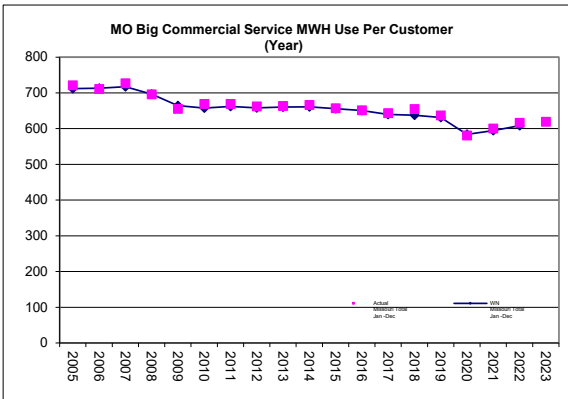
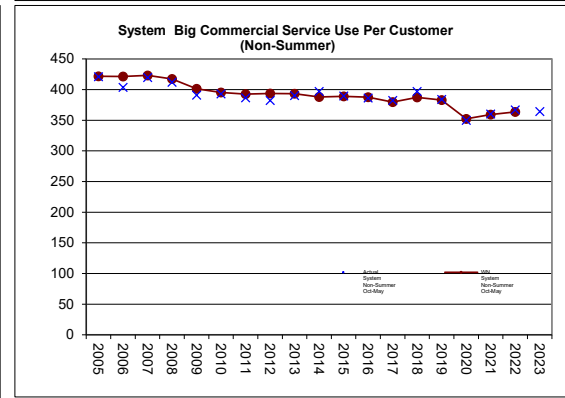
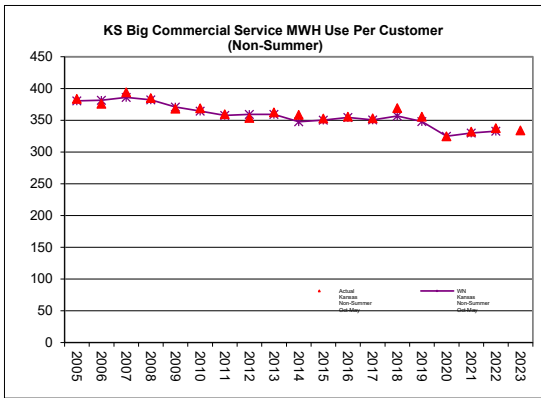
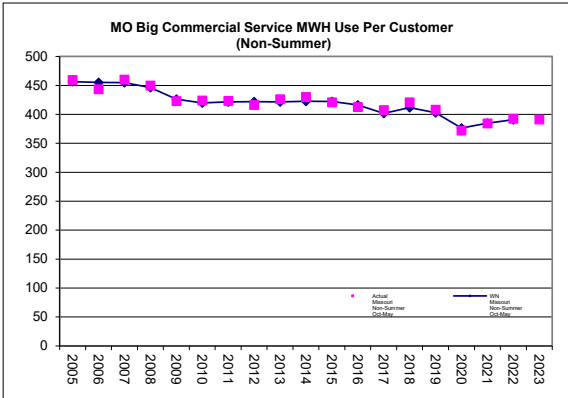
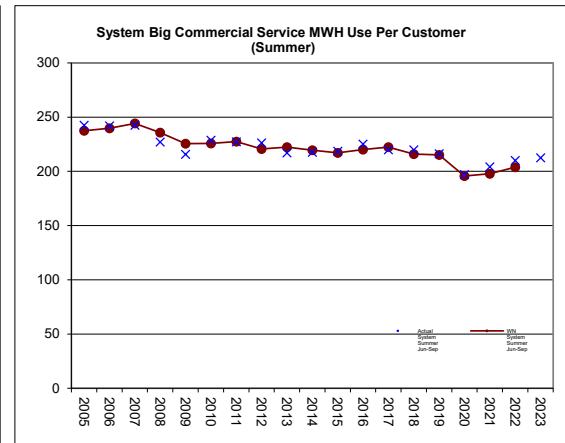
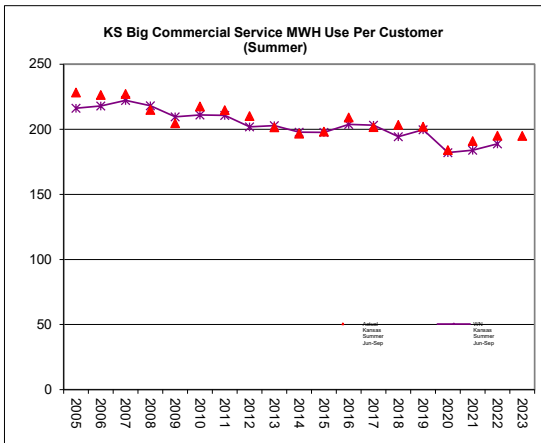
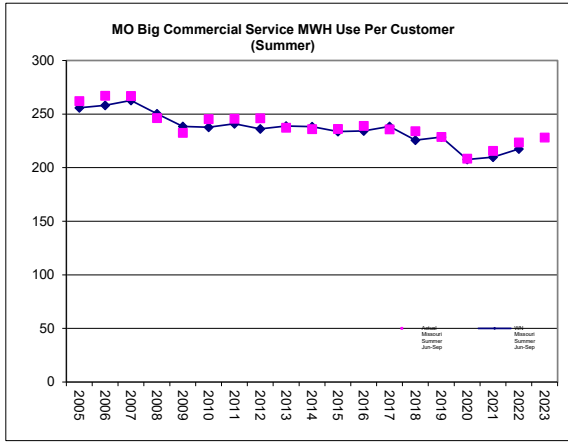
Plot 3A-9 Missouri & Kansas Small Commercial General Service MWH Use Per Customer
 (Actual vs. Weather Normalized)

Year	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
	Missouri Summer Jun-Sep	Missouri Summer Jun-Sep	Missouri Non-Summer Oct-May	Missouri Non-Summer Oct-May	Missouri Total Jan -Dec	Missouri Total Jan -Dec	Kansas Summer Jun-Sep	Kansas Summer Jun-Sep	Kansas Non-Summer Oct-May	Kansas Non-Summer Oct-May	Kansas Total Jan -Dec	Kansas Total Jan -Dec	System Summer Jun-Sep	System Summer Jun-Sep	System Non-Summer Oct-May	System Non-Summer Oct-May	System Total Jan -Dec	System Total Jan -Dec
2005	7.2	7.0	10.9	10.9	18.1	17.9	6.4	6.3	9.9	9.8	16.3	16.1	6.6	6.7	10.5	10.4	17.1	17.1
2006	7.0	6.6	10.9	11.3	17.9	17.9	6.4	6.0	9.7	10.0	16.1	16.0	6.6	6.3	10.2	10.7	16.8	17.1
2007	6.3	6.2	10.5	10.3	16.8	16.5	5.8	5.7	9.5	9.4	15.3	15.1	6.0	6.0	9.9	9.9	15.9	15.9
2008	5.9	6.1	10.3	10.2	16.2	16.3	5.4	5.6	9.5	9.4	14.9	15.0	5.6	5.9	9.8	9.8	15.4	15.7
2009	5.6	5.8	9.8	10.0	15.4	15.8	5.3	5.5	9.2	9.3	14.5	14.9	5.4	5.7	9.4	9.7	14.8	15.4
2010	6.0	5.7	10.2	10.0	16.2	15.7	5.7	5.4	9.3	9.2	15.0	14.7	5.8	5.6	9.6	9.7	15.4	15.3
2011	6.0	5.8	9.7	9.6	15.7	15.4	5.6	5.4	9.0	8.9	14.6	14.3	5.7	5.6	9.2	9.3	14.9	14.9
2012	5.9	5.5	9.2	9.5	15.1	15.0	5.7	5.3	8.8	9.1	14.5	14.4	5.7	5.4	8.9	9.3	14.6	14.7
2013	5.5	5.6	9.8	9.6	15.3	15.2	5.5	5.5	9.2	9.0	14.7	14.5	5.4	5.6	9.4	9.3	14.8	14.9
2014	5.4	5.5	10.1	9.8	15.5	15.4	5.1	5.4	9.3	9.3	14.4	14.8	5.3	5.5	9.7	9.6	15.0	15.1
2015	5.9	5.8	10.0	10.1	15.9	15.9	5.4	5.7	9.2	9.5	14.6	15.2	5.7	5.8	9.6	9.8	15.3	15.6
2016	6.0	5.8	10.1	10.2	16.1	16.0	5.9	6.0	9.4	9.9	15.3	15.8	6.0	5.9	9.8	10.0	15.8	15.9
2017	5.8	6.0	10.6	10.5	16.4	16.5	5.6	5.7	9.8	9.8	15.4	15.4	5.7	5.8	10.2	10.2	15.9	16.0
2018	6.5	6.1	11.4	11.0	17.9	17.2	6.2	5.9	10.7	10.3	16.9	16.2	6.4	6.0	11.1	10.7	17.5	16.7
2019	6.6	6.6	12.1	11.9	18.7	18.5	6.6	6.5	11.4	11.1	18.0	17.6	6.6	6.6	11.8	11.5	18.4	18.1
2020	6.7	6.7	11.6	11.8	18.3	18.5	6.3	6.2	11.1	11.1	17.4	17.3	6.5	6.5	11.3	11.5	17.8	18.0
2021	7.7	7.4	12.7	12.8	20.4	20.2	7.0	6.7	11.6	11.5	18.6	18.2	7.3	7.0	12.2	12.2	19.5	19.2
2022	8.1	7.8	13.8	13.7	21.9	21.5	7.3	7.1	12.3	12.1	19.6	19.2	7.7	7.4	13.1	12.9	20.8	20.3
2023			14.5		14.5				12.5		12.5				13.5		13.5	
05-'10	-3.6%	-4.1%	-1.3%	-1.6%	-2.2%	-2.6%	-2.3%	-2.8%	-1.2%	-1.2%	-1.6%	-1.8%	-2.6%	-3.6%	-1.7%	-1.5%	-2.0%	-2.3%
10-'15	-0.3%	0.5%	-0.4%	0.0%	-0.4%	0.2%	-1.1%	0.9%	-0.2%	0.6%	-0.5%	0.7%	3.1%	3.2%	3.9%	3.3%	-0.1%	0.4%
15-'23	-100.0%	-100.0%	4.8%	-100.0%	-1.1%	-100.0%	-100.0%	-100.0%	3.9%	-100.0%	-1.9%	-100.0%	-100.0%	-100.0%	4.4%	-100.0%	-1.6%	-100.0%



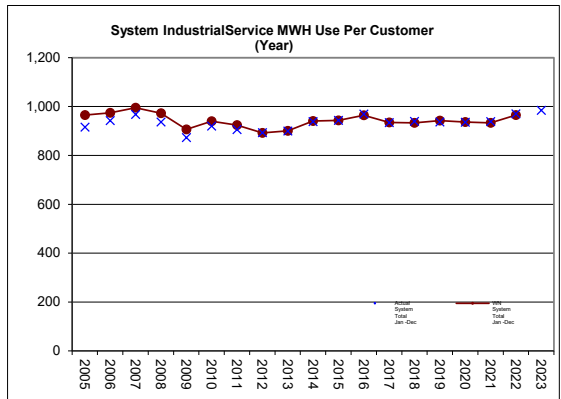
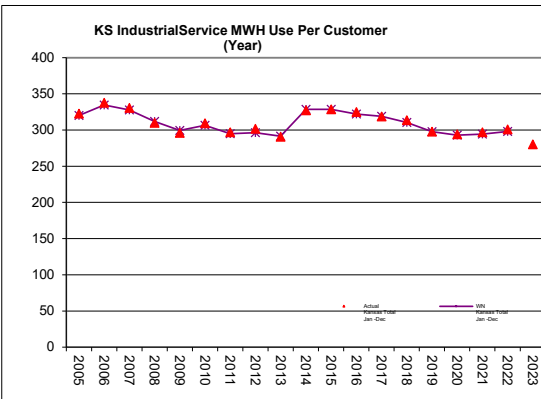
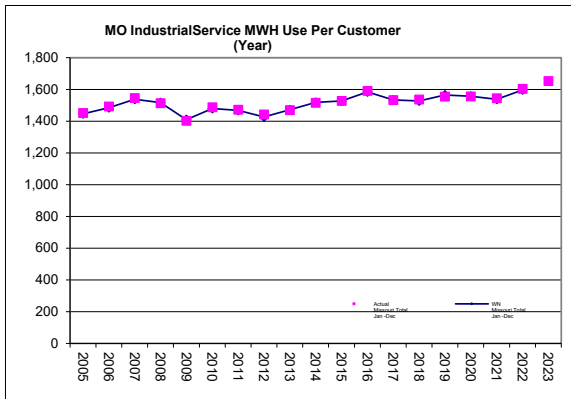
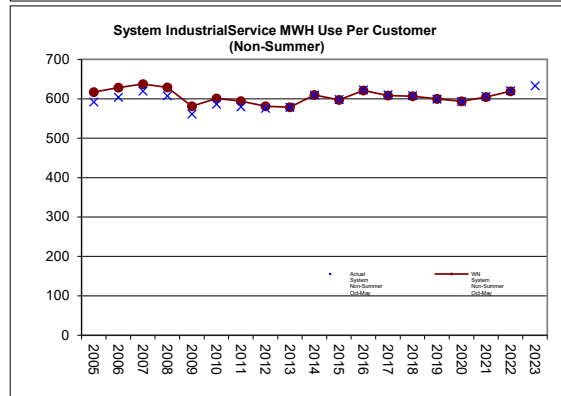
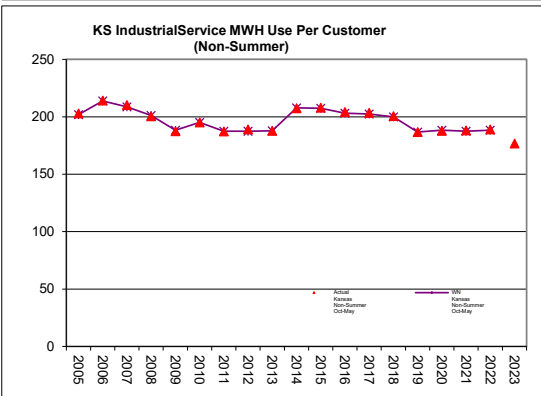
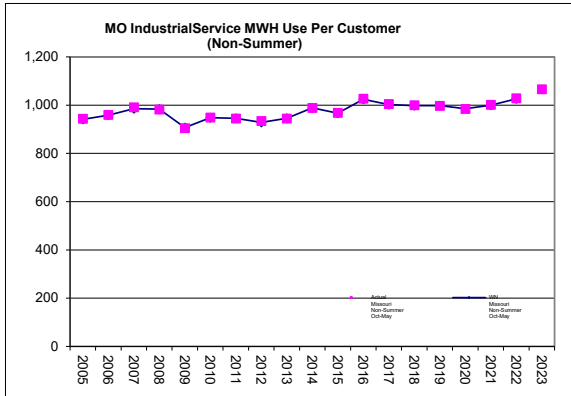
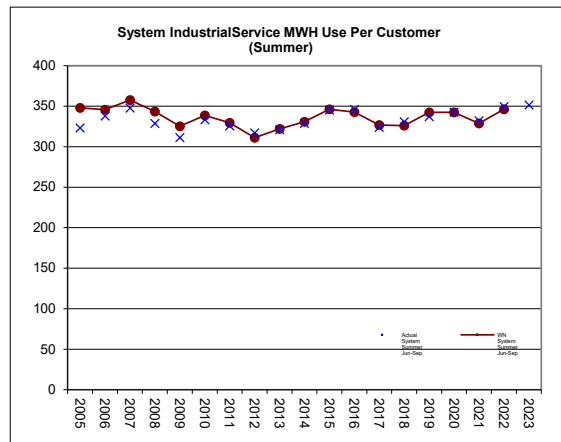
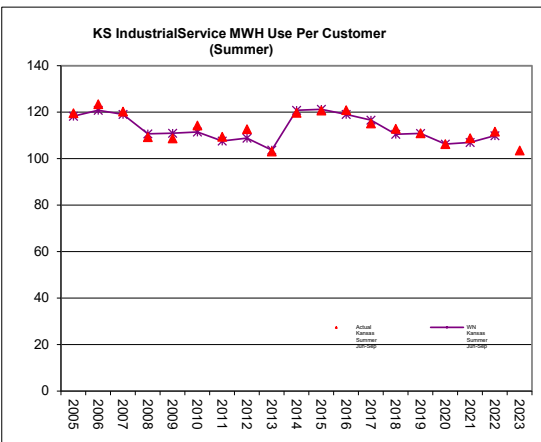
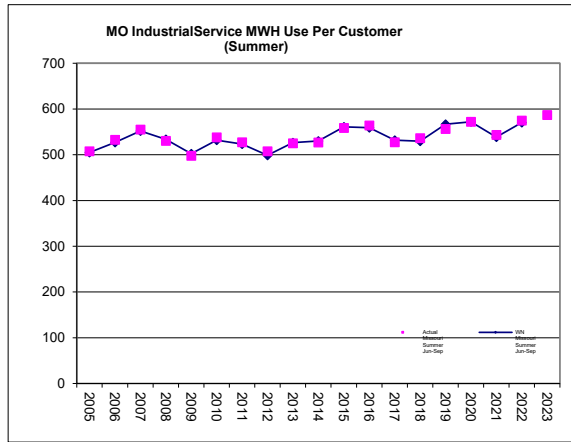
**Plot 3A-10 Missouri & Kansas Big Commercial Service MWH Use Per Customer
(Actual vs. Weather Normalized)**

Year	Actual Missouri Summer		WN Missouri Non-Summer		Actual Missouri Total		WN Missouri Total		Actual Kansas Summer		WN Kansas Non-Summer		Actual Kansas Total		WN Kansas Total		Actual System Summer		WN System Non-Summer		Actual System Total		WN System Total	
	Jun-Sep	Jun-Sep	Oct-May	Oct-May	Jan-Dec	Jan-Dec	Jun-Sep	Jun-Sep	Oct-May	Oct-May	Jan-Dec	Jan-Dec	Jun-Sep	Jun-Sep	Oct-May	Oct-May	Jun-Sep	Jun-Sep	Oct-May	Oct-May	Jan-Dec	Jan-Dec	Jun-Sep	Jun-Sep
2005	262.2	255.9	459.2	456.4	721.4	712.3	228.3	216.2	383.9	380.6	612.1	596.8	242.6	237.6	421.0	421.5	663.6	659.1						
2006	267.2	258.1	443.6	455.1	710.8	713.2	226.4	217.9	375.9	381.3	602.3	599.2	242.0	239.7	403.7	421.4	645.7	661.1						
2007	266.9	262.7	460.2	454.6	727.1	717.4	227.3	222.2	394.0	386.0	621.3	608.2	242.5	244.2	419.8	423.2	662.3	667.4						
2008	246.3	250.3	450.0	446.4	696.3	696.7	214.9	218.1	385.2	382.2	600.1	600.3	227.2	235.8	412.0	417.2	639.2	653.0						
2009	232.5	238.4	422.9	426.1	655.4	664.5	204.7	209.7	368.4	370.9	573.1	580.6	215.8	225.6	390.9	401.4	606.7	627.0						
2010	245.4	237.7	423.9	419.9	669.2	657.6	217.6	211.1	368.9	364.5	586.5	575.5	228.8	225.8	392.9	395.1	621.7	620.9						
2011	245.8	241.0	423.2	421.4	669.0	662.3	214.8	210.8	359.6	357.7	574.4	568.4	227.4	227.4	386.7	392.6	614.1	620.0						
2012	246.1	236.2	416.1	422.1	662.3	658.2	210.3	201.8	353.9	359.3	564.1	561.1	226.3	220.7	382.1	393.7	608.4	614.4						
2013	237.4	238.8	426.0	421.7	663.4	660.5	201.7	202.8	362.5	359.3	564.2	562.1	217.1	222.5	390.3	393.4	607.4	615.9						
2014	235.9	238.3	430.1	422.5	666.0	660.9	196.7	197.8	358.5	347.7	555.2	545.6	217.7	219.5	396.9	387.8	614.6	607.3						
2015	236.2	233.7	421.0	422.3	657.1	656.0	198.2	197.7	352.9	350.2	551.2	547.8	218.6	217.0	389.5	388.9	608.0	605.9						
2016	239.0	234.2	412.6	416.3	651.6	650.5	209.1	203.8	355.8	354.5	564.9	558.3	225.2	220.2	386.4	387.8	611.6	607.9						
2017	235.8	238.5	407.5	401.6	643.3	640.1	201.7	203.2	353.0	350.6	554.7	553.8	220.0	222.4	382.2	379.6	602.2	602.1						
2018	234.1	225.7	420.9	411.8	654.9	637.5	203.5	194.4	369.2	356.7	572.7	551.1	219.9	216.0	396.9	387.3	616.8	603.3						
2019	228.8	228.6	408.0	402.8	636.9	631.4	202.0	199.7	355.8	348.0	557.8	547.7	216.4	215.2	383.8	382.9	600.1	598.0						
2020	208.5	207.6	372.1	376.3	580.6	584.0	184.2	182.2	324.7	324.9	508.9	507.0	197.1	195.7	350.0	352.3	547.1	548.0						
2021	215.8	209.8	384.5	384.9	600.3	594.7	191.0	184.0	332.3	330.0	523.3	514.0	204.2	197.8	360.1	359.2	564.3	557.0						
2022	223.6	217.4	392.6	390.7	616.3	608.2	195.1	188.8	337.6	332.7	532.7	521.6	210.2	204.0	366.9	363.5	577.0	567.5						
2023	228.2		391.2		619.4		194.9		334.0		528.9		212.5		364.3		576.8							
05-'10	-1.3%	-1.5%	-1.6%	-1.7%	-1.5%	-1.6%	-1.0%	-0.5%	-0.8%	-0.9%	-0.9%	-0.7%	-1.2%	-1.0%	-1.4%	-1.3%	-1.3%	-1.2%						
10-'15	-0.8%	-0.3%	-0.1%	0.1%	-0.4%	0.0%	-1.8%	-1.3%	-0.9%	-0.8%	-1.2%	-1.0%	-0.7%	-0.8%	-0.4%	-0.8%	-0.4%	-0.5%						
15-'23	-0.4%	-100.0%	-0.9%	-100.0%	-0.7%	-100.0%	-0.2%	-100.0%	-0.7%	-100.0%	-0.5%	-100.0%	-0.4%	-100.0%	-0.8%	-100.0%	-0.7%	-100.0%						



**Plot 3A-11 Missouri & Kansas Industrial Service MWH Use Per Customer
(Actual vs. Weather Normalized)**

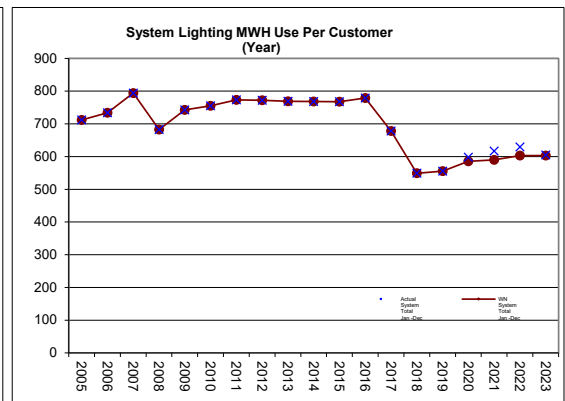
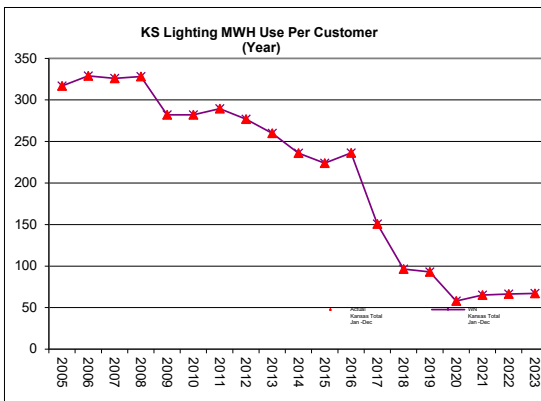
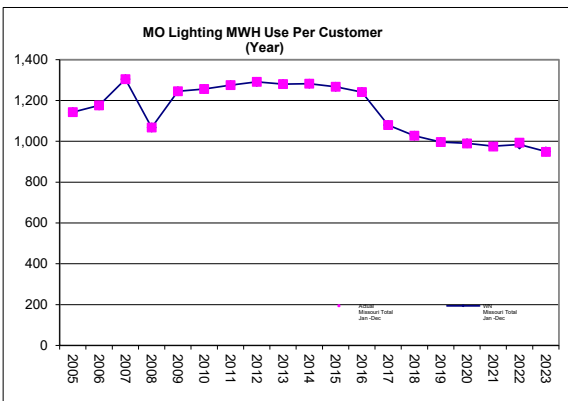
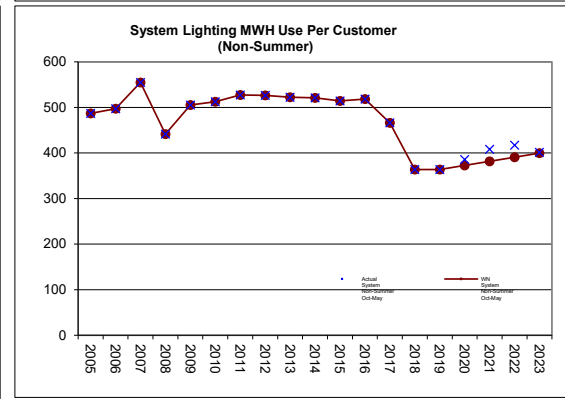
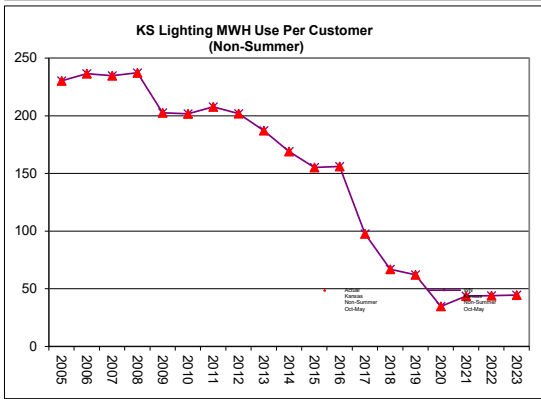
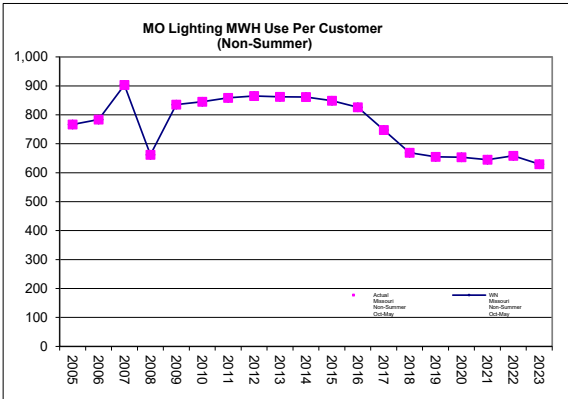
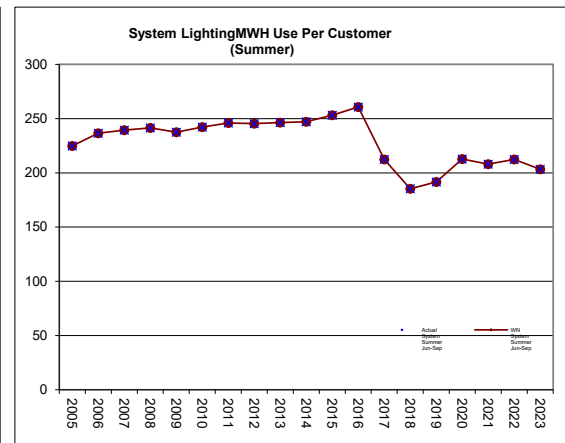
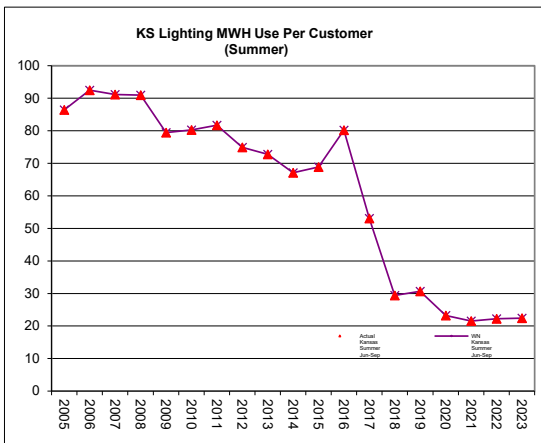
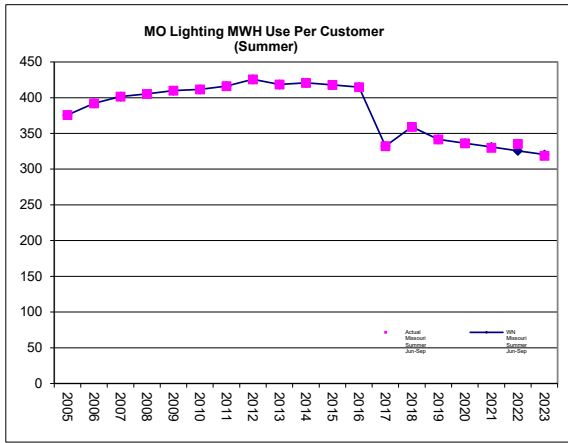
Year	Actual Missouri Summer		WN Missouri Non-Summer		Actual Missouri Total		WN Missouri Total		Actual Kansas Summer		WN Kansas Non-Summer		Actual Kansas Total		WN Kansas Total		Actual System Summer		WN System Non-Summer		Actual System Total		WN System Total	
	Jun-Sep	Jun-Sep	Oct-May	Oct-May	Jan-Dec	Jan-Dec	Jun-Sep	Jun-Sep	Oct-May	Oct-May	Jan-Dec	Jan-Dec	Jun-Sep	Jun-Sep	Oct-May	Oct-May	Jan-Dec	Jan-Dec	Jun-Sep	Jun-Sep	Oct-May	Oct-May	Jan-Dec	Jan-Dec
	2005	507.9	504.9	944.0	941.3	1,451.9	1,446.2	119.6	118.3	203.0	201.9	322.6	320.2	323.3	348.1	592	617.0	915.4	965.1					
2006	532.6	526.7	959.7	958.0	1,492.3	1,484.7	123.5	120.9	214.2	213.8	337.7	334.6	337.9	345.7	604	628.4	942.1	974.2						
2007	554.9	552.0	990.9	985.5	1,545.8	1,537.6	120.3	119.1	210.3	208.6	330.6	327.7	347.7	357.6	620	637.4	967.3	995.1						
2008	530.7	533.6	982.1	984.1	1,512.7	1,517.7	109.3	110.7	200.5	201.1	309.8	311.8	328.7	343.3	608	629.0	936.4	972.3						
2009	497.7	502.4	904.7	907.0	1,402.4	1,409.5	108.7	111.0	187.4	188.4	296.2	299.3	311.3	325.4	561	580.9	872.5	906.3						
2010	538.3	531.9	948.5	947.7	1,486.9	1,479.6	114.3	111.4	195.0	195.1	309.3	306.5	333.3	338.7	586	600.8	919.4	939.5						
2011	527.4	523.3	944.6	945.2	1,471.9	1,468.5	109.5	107.6	187.3	187.4	296.8	295.0	325.8	329.5	580	594.2	905.6	923.8						
2012	507.5	498.8	934.1	928.2	1,441.7	1,427.0	112.7	108.9	189.1	187.4	301.8	296.2	317.2	311.2	576	581.0	893.2	892.1						
2013	525.2	526.5	944.2	945.5	1,469.4	1,471.9	103.1	103.7	187.7	187.8	290.8	291.5	320.9	322.0	578	578.5	899.3	900.5						
2014	527.0	529.9	988.9	988.9	1,515.9	1,518.8	119.8	120.9	207.5	207.7	327.3	328.5	328.9	330.9	609	609.6	938.4	940.5						
2015	558.9	561.0	968.4	966.9	1,527.3	1,527.9	120.7	121.2	208.0	207.5	328.7	328.7	345.1	346.3	598	597.1	943.3	943.5						
2016	563.9	559.3	1,027.0	1,024.6	1,590.9	1,583.9	120.9	119.0	204.2	203.2	325.1	322.2	346.1	342.8	623	621.0	968.8	963.8						
2017	527.6	531.7	1,005.1	1,002.2	1,532.7	1,533.9	115.1	116.6	203.5	202.5	318.6	319.0	323.9	326.7	610	608.3	934.2	935.0						
2018	536.5	529.5	1,000.1	998.0	1,536.6	1,527.6	112.9	110.5	200.6	199.9	313.5	310.5	330.8	326.1	608	606.8	939.0	932.9						
2019	556.5	566.8	997.6	997.8	1,554.1	1,564.6	111.0	110.9	186.6	186.7	297.6	297.6	337.2	342.4	600	599.7	936.7	942.1						
2020	572.1	572.0	984.3	985.3	1,556.4	1,557.2	106.3	106.3	187.8	188.2	294.1	292.9	342.6	342.6	593	593.8	935.7	936.3						
2021	543.4	538.7	1,001.4	999.5	1,544.8	1,538.2	108.8	107.0	188.2	187.5	297.0	294.4	332.2	328.8	606	604.7	938.2	933.6						
2022	574.8	570.2	1,028.4	1,026.2	1,603.2	1,596.4	111.7	109.9	189.1	188.3	300.8	298.2	349.4	346.2	621	619.2	970.2	965.4						
2023	586.7		1,065.8		1,652.5		103.5		176.7		280.2		351.5		633		984.5							
05-'10	1.2%	1.0%	0.1%	0.1%	0.5%	0.5%	-0.9%	-1.2%	-0.8%	-0.7%	-0.8%	-0.9%	0.4%	0.2%	0.5%	0.3%	0.1%	-0.5%						
10-'15	0.8%	1.1%	0.4%	0.4%	0.5%	0.6%	1.1%	1.7%	1.3%	1.2%	1.2%	1.4%	0.7%	0.4%	0.4%	-0.1%	0.5%	0.1%						
15-'23	0.6%	-100.0%	1.2%	-100.0%	1.0%	-100.0%	-1.9%	-100.0%	-2.0%	-100.0%	-2.0%	-100.0%	0.2%	-100.0%	0.7%	-100.0%	0.5%	-100.0%						



**Plot 3A-12 Missouri & Kansas Lighting MWH Use Per Customer
(Actual vs. Weather Normalized)**

Year	Actual Missouri		WN Missouri		Actual Missouri		WN Missouri		Actual Kansas		WN Kansas		Actual System		WN System		Actual System		WN System	
	Summer	Summer	Non-Summer	Non-Summer	Total	Total	Summer	Summer	Non-Summer	Non-Summer	Total	Total	Summer	Summer	Non-Summer	Non-Summer	Total	Total	Total	Total
	Jun-Sep	Jun-Sep	Oct-May	Oct-May	Jan-Dec	Jan-Dec	Jun-Sep	Jun-Sep	Oct-May	Oct-May	Jan-Dec	Jan-Dec	Jun-Sep	Jun-Sep	Oct-May	Oct-May	Jan-Dec	Jan-Dec	Jan-Dec	Jan-Dec
2005	376	376	767	767	1,142.8	1,142.8	86	86	230	230.4	316.8	316.8	225	225	487	487	711.9	711.9	711.9	711.9
2006	392	392	783	783	1,175.5	1,175.5	92	92	237	236.5	329.0	329.0	237	237	497	497	733.9	733.9	733.9	733.9
2007	402	402	903	903	1,304.4	1,304.4	91	91	235	234.8	325.9	325.9	239	239	555	555	794.3	794.3	794.3	794.3
2008	405	405	662	662	1,067.5	1,067.5	91	91	237	237.3	328.3	328.3	241	241	441	441	682.8	682.8	682.8	682.8
2009	410	410	835	835	1,245.0	1,245.0	79	79	203	202.6	282.0	282.0	238	238	505	505	742.9	742.9	742.9	742.9
2010	412	412	845	845	1,256.5	1,256.5	80	80	202	201.7	282.0	282.0	242	242	513	513	754.9	754.9	754.9	754.9
2011	416	416	859	859	1,274.8	1,274.8	82	82	208	207.7	289.4	289.4	246	246	528	528	773.5	773.5	773.5	773.5
2012	426	426	865	865	1,291.1	1,291.1	75	75	202	202.0	276.9	276.9	245	245	526	526	771.8	771.8	771.8	771.8
2013	418	418	862	862	1,280.4	1,280.4	73	73	187	187.2	260.0	260.0	246	246	522	522	768.7	768.7	768.7	768.7
2014	421	421	862	862	1,282.4	1,282.4	67	67	169	169.0	236.1	236.1	247	247	521	521	768.4	768.4	768.4	768.4
2015	418	418	849	849	1,266.8	1,266.8	69	69	155	155.2	224.0	224.0	253	253	514	514	767.5	767.5	767.5	767.5
2016	415	415	826	826	1,240.9	1,240.9	80	80	156	156.1	236.3	236.3	261	261	518	518	778.9	778.9	778.9	778.9
2017	332	332	748	748	1,079.9	1,079.9	53	53	98	97.6	150.7	150.7	212	212	466	466	678.4	678.4	678.4	678.4
2018	359	359	669	669	1,027.9	1,027.9	29	29	67	67	96.4	96.4	185	185	364	364	549.0	549.0	549.0	549.0
2019	342	342	655	655	996.3	996.2	31	31	62	62	92.9	92.9	192	192	364	364	555.6	555.6	555.6	555.6
2020	336	336	654	654	989.8	989.9	23	23	35	35	57.9	57.9	213	213	386	373	598.3	585.5	585.5	585.5
2021	330	331	645	645	974.6	975.8	22	22	44	44	65.2	65.2	208	208	408	382	616.5	589.9	589.9	589.9
2022	335	326	659	659	993.8	984.3	22	22	44	44	66.3	66.3	212	212	417	391	629.5	603.0	603.0	603.0
2023	319	320	630	630	948.5	950.2	22	22	45	45	67.0	67.0	203	203	401	400	604.7	603.0	603.0	603.0
05-'10	1.8%	1.8%	2.0%	2.0%	1.9%	1.9%	-1.5%	-1.5%	-2.6%	-2.6%	-2.3%	-2.3%	1.5%	1.5%	1.0%	1.0%	1.2%	1.2%	1.2%	1.2%
10-'15	0.3%	0.3%	0.1%	0.1%	0.2%	0.2%	-3.0%	-3.0%	-5.1%	-5.1%	-4.5%	-4.5%	0.9%	0.9%	0.1%	0.1%	0.3%	0.3%	0.3%	0.3%
15-'23	-3.3%	-3.3%	-3.7%	-3.7%	-3.6%	-3.5%	-13.1%	-13.1%	-14.4%	-14.4%	-14.0%	-14.0%	-2.7%	-2.7%	-3.1%	-3.1%	-2.9%	-2.9%	-3.0%	-3.0%

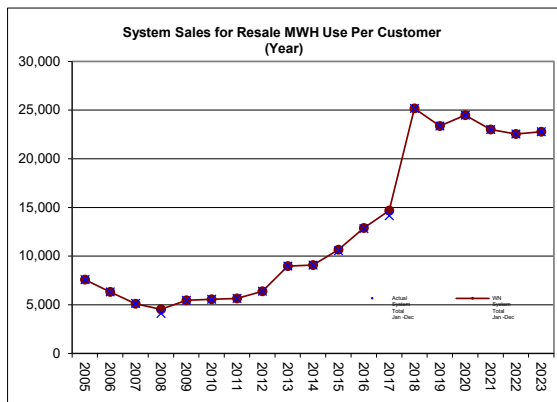
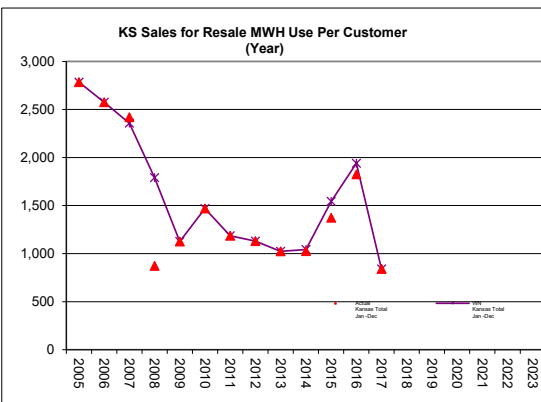
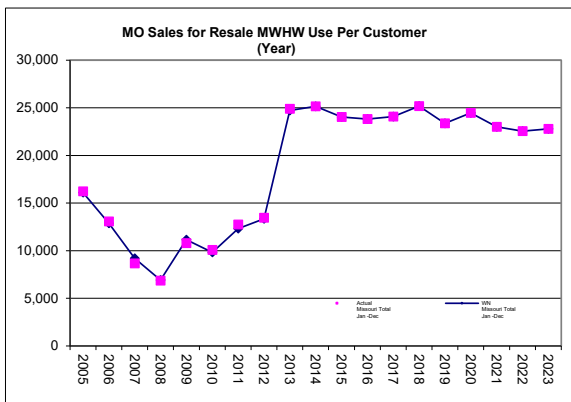
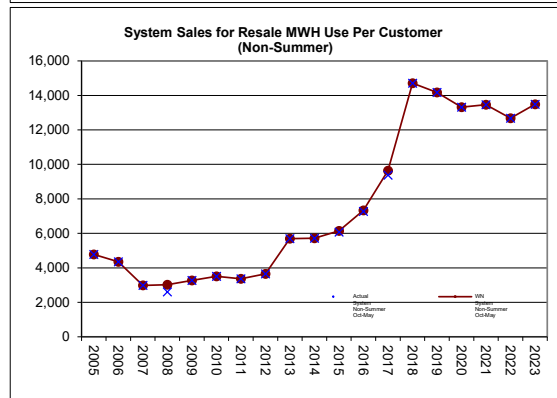
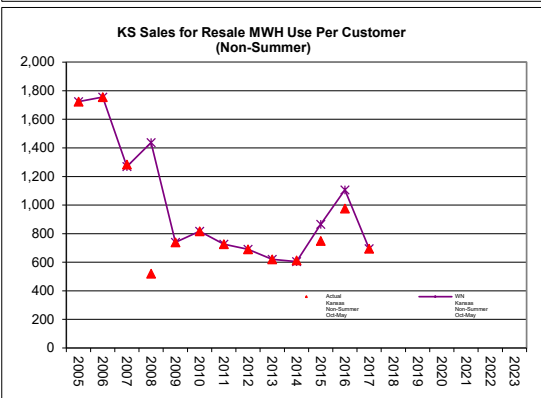
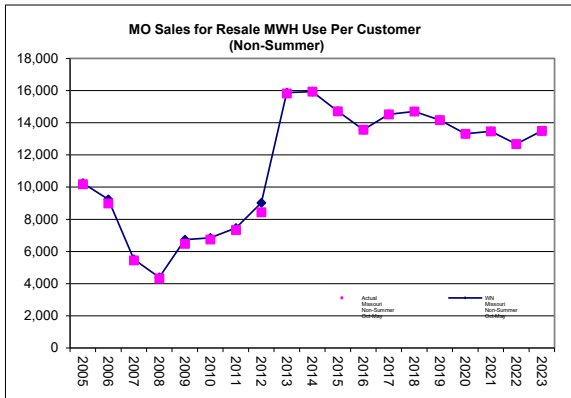
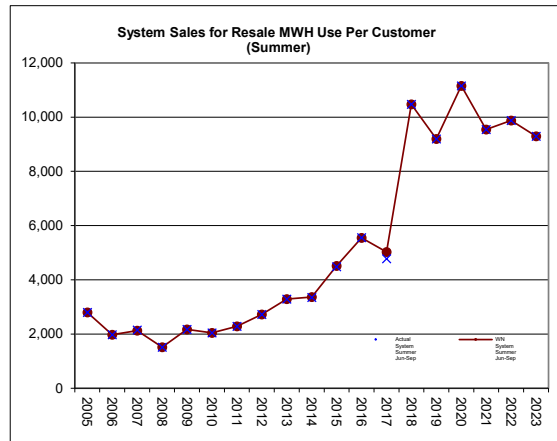
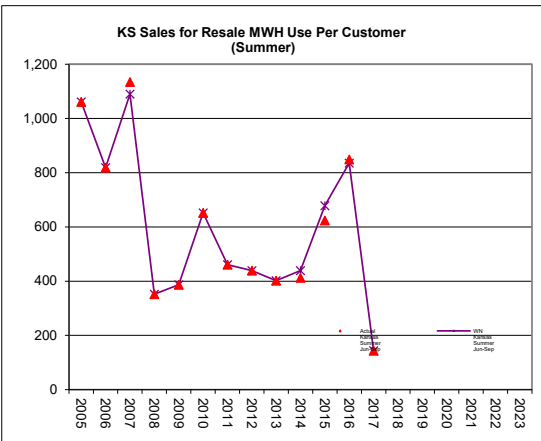
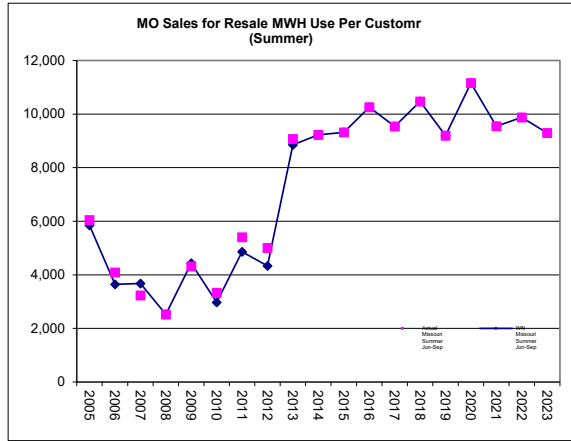
* Decline in Kansas lighting due to sale of lights to city of Olathe as well as LED installation.



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

Year	Actual Missouri Summer		WN Missouri Non-Summer		Actual Missouri Total		WN Missouri Total		Actual Kansas Summer		WN Kansas Non-Summer		Actual Kansas Total		WN Kansas Total		Actual System Summer		WN System Non-Summer		Actual System Total		WN System Total	
	Jun-Sep	Jun-Sep	Oct-May	Oct-May	Jan-Dec	Jan-Dec	Jun-Sep	Jun-Sep	Oct-May	Oct-May	Jan-Dec	Jan-Dec	Jun-Sep	Jun-Sep	Oct-May	Oct-May	Jan-Dec	Jan-Dec	Jun-Sep	Jun-Sep	Oct-May	Oct-May	Jan-Dec	Jan-Dec
2005	6,049.4	5,847.7	10,183.8	10,253.1	16,233.2	16,100.8	1,061.1	1,061.1	1,724.1	1,724.1	2,785.2	2,785.2	2,801.2	2,801.2	4,773.5	4,773.5	7,574.7	7,574.7						
2006	4,087.2	3,646.7	8,990.9	9,239.2	13,078.0	12,885.9	818.9	818.9	1,755.7	1,755.7	2,574.6	2,574.6	1,978.6	1,978.6	4,352.9	4,352.9	6,331.5	6,331.5						
2007	3,230.5	3,675.3	5,442.2	5,516.3	8,672.6	9,191.5	1,134.6	1,089.9	1,284.2	1,269.0	2,418.8	2,358.9	2,146.4	2,123.3	2,988.3	2,979.3	5,134.7	5,102.6						
2008	2,524.5	2,527.0	4,323.5	4,390.0	6,848.0	6,917.0	352.3	352.3	519.6	1,437.7	871.9	1,790.0	1,516.0	1,516.0	2,601.0	3,016.7	4,117.0	4,532.7						
2009	4,317.9	4,431.8	6,479.4	6,728.2	10,797.3	11,160.1	386.6	386.6	738.8	738.8	1,125.4	1,125.3	2,173.6	2,173.6	3,275.3	3,275.3	5,448.9	5,448.9						
2010	3,332.7	2,971.1	6,741.1	6,850.7	10,073.7	9,821.8	651.8	651.8	817.1	817.1	1,468.9	1,468.9	2,045.9	2,045.9	3,509.8	3,509.8	5,555.7	5,555.7						
2011	5,407.7	4,860.9	7,330.6	7,460.2	12,738.4	12,321.1	460.7	460.7	725.7	725.7	1,186.5	1,186.5	2,283.3	2,283.3	3,367.7	3,367.7	5,651.0	5,651.0						
2012	5,006.7	4,333.9	8,441.6	9,026.5	13,448.2	13,360.4	439.0	439.0	690.4	690.4	1,129.4	1,129.4	2,722.8	2,722.8	3,654.1	3,654.1	6,376.9	6,376.9						
2013	9,071.6	8,851.8	15,826.9	15,870.5	24,898.5	24,722.2	401.7	401.7	620.9	620.8	1,022.6	1,022.6	3,291.7	3,291.7	5,689.5	5,689.5	8,981.2	8,981.2						
2014	9,228.9	9,228.9	15,936.2	15,936.2	25,165.1	25,165.1	412.2	438.7	613.4	604.4	1,025.7	1,043.0	3,351.1	3,368.7	5,721.0	5,715.0	9,072.1	9,083.7						
2015	9,315.1	9,315.1	14,718.4	14,718.4	24,033.5	24,033.5	624.1	678.2	749.0	864.7	1,373.2	1,543.0	4,486.8	4,516.8	6,070.7	6,142.3	10,557.5	10,659.2						
2016	10,257.4	10,257.4	13,564.6	13,564.6	23,822.0	23,822.0	849.3	835.4	976.0	1,105.8	1,825.3	1,941.1	5,553.3	5,546.4	7,270.3	7,335.2	12,823.6	12,881.5						
2017	9,538.6	9,538.6	14,530.7	14,530.7	24,069.2	24,069.2	143.7	143.7	695.5	695.5	839.2	839.2	4,777.2	5,027.0	9,370.0	9,640.0	14,147.1	14,666.9						
2018	10,470.1	10,470.1	14,708.9	14,708.9	25,179.0	25,179.0							10,470.1	10,470.1	14,708.9	14,708.9	25,179.0	25,179.0						
2019	9,197.9	9,197.9	14,168.5	14,168.5	23,366.4	23,366.4							9,197.9	9,197.9	14,168.5	14,168.5	23,366.4	23,366.4						
2020	11,156.9	11,156.9	13,315.1	13,315.1	24,472.0	24,472.0							11,156.9	11,156.9	13,315.1	13,315.1	24,472.0	24,472.0						
2021	9,543.9	9,543.9	13,465.7	13,465.7	23,009.6	23,009.6							9,543.9	9,543.9	13,465.7	13,465.7	23,009.6	23,009.6						
2022	9,874.6	9,874.6	12,674.9	12,674.9	22,549.5	22,549.5							9,874.6	9,874.6	12,674.9	12,674.9	22,549.5	22,549.5						
2023	9,296.3	9,296.3	13,488.5	13,488.5	22,784.8	22,784.8							9,296.3	9,296.3	13,488.5	13,488.5	22,784.8	22,784.8						
05-'10	-11.2%	-12.7%	-7.9%	-7.7%	-9.1%	-9.4%	-9.3%	-9.3%	-13.9%	-13.9%	-12.0%	-12.0%	-6.1%	-6.1%	-6.0%	-6.0%	-6.0%	-6.0%						
10-'15	22.8%	25.7%	16.9%	16.5%	19.0%	19.6%	-0.9%	0.8%	-1.7%	1.1%	-1.3%	1.0%	17.0%	17.2%	11.6%	11.8%	13.7%	13.9%						
15-'23	0.0%	0.0%	-1.1%	-1.1%	-0.7%	-0.7%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	9.5%	9.4%	10.5%	10.3%	10.1%	10.0%						

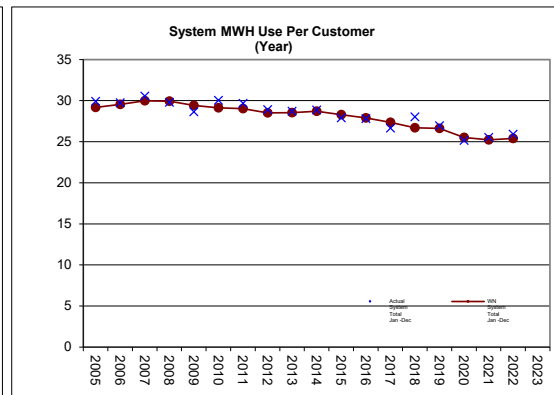
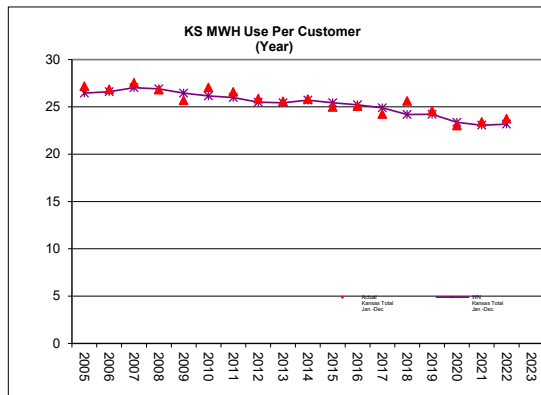
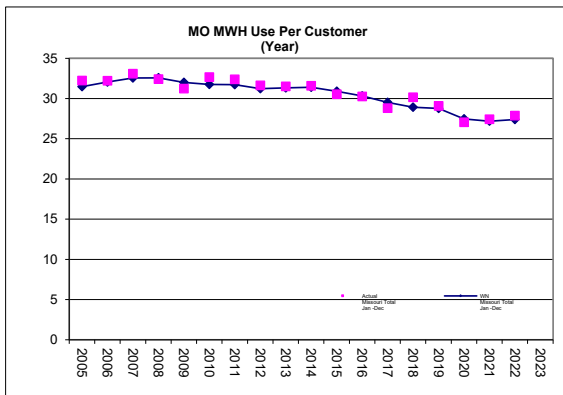
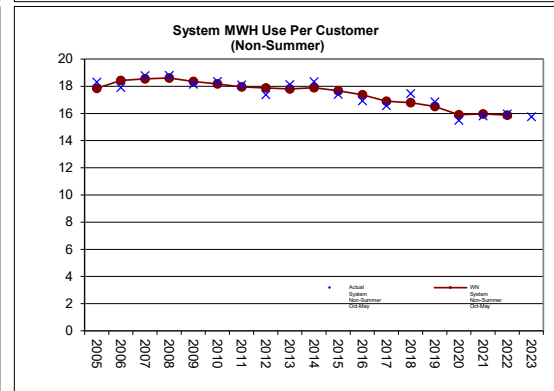
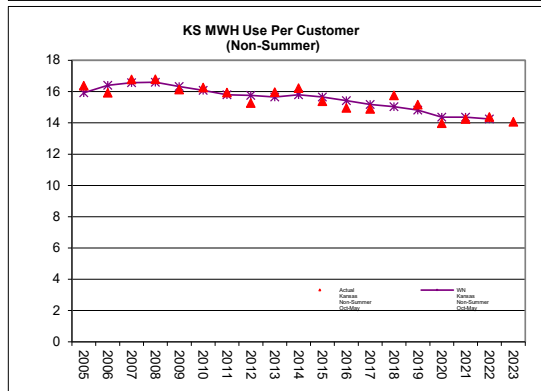
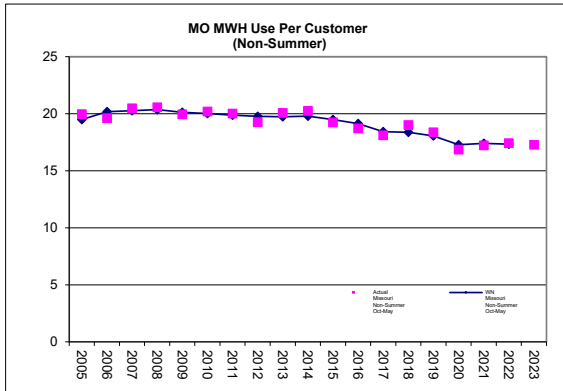
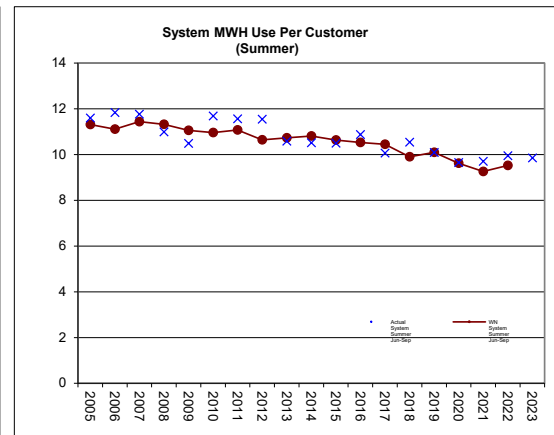
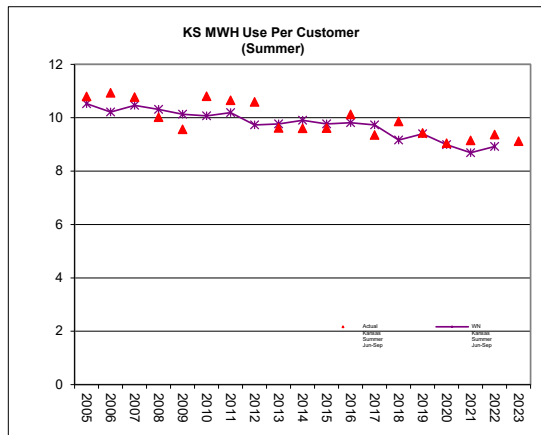
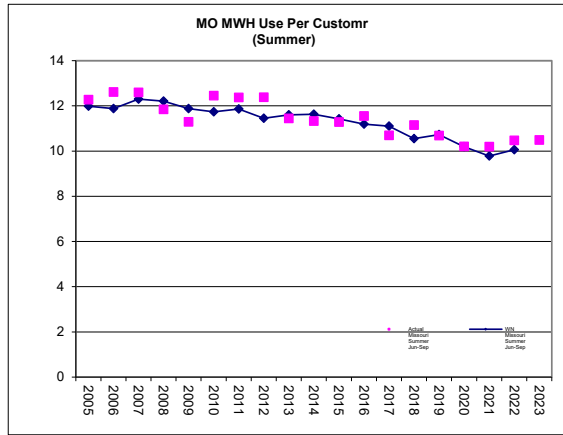
There are no Metro Kansas SFR customers as of July 2017



* Use per customer increased due to loss of customers in MO & KS 2012-2014

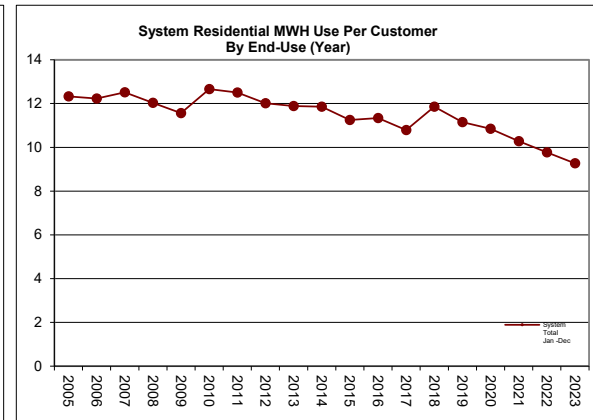
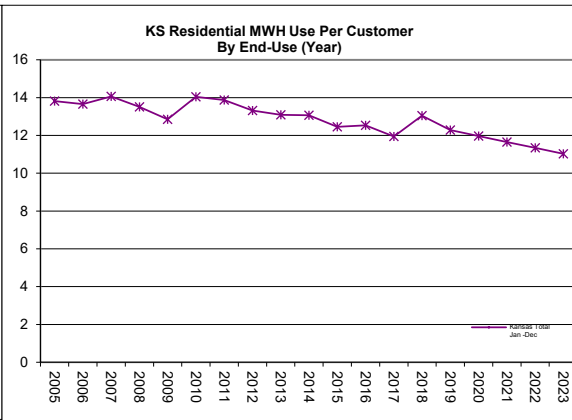
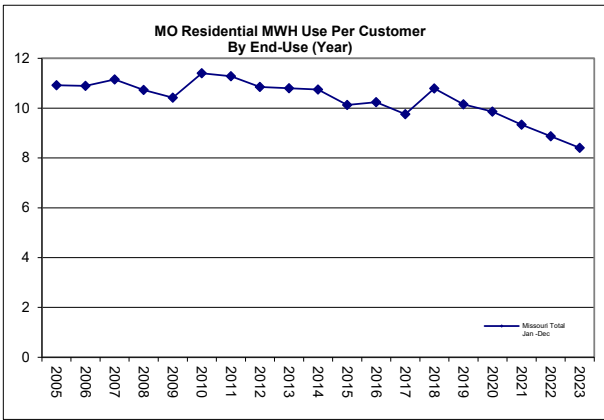
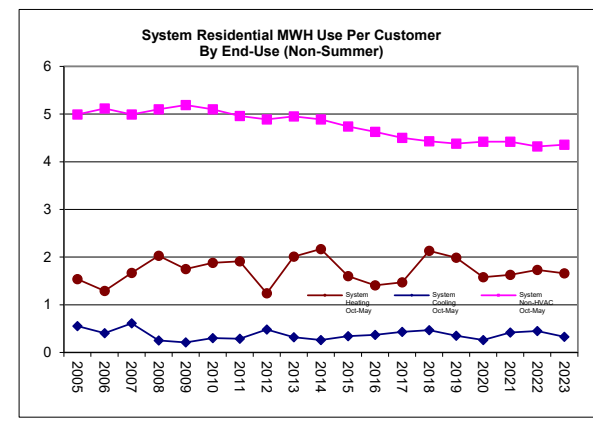
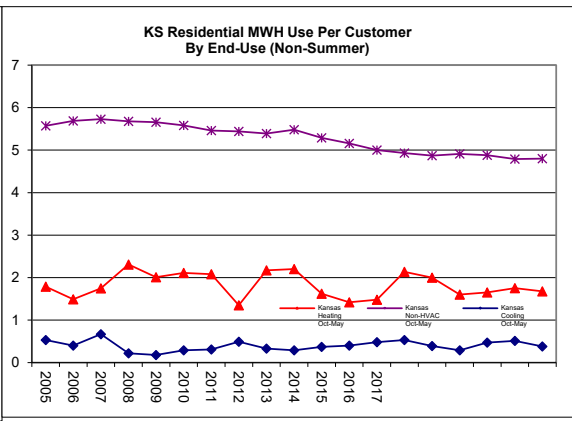
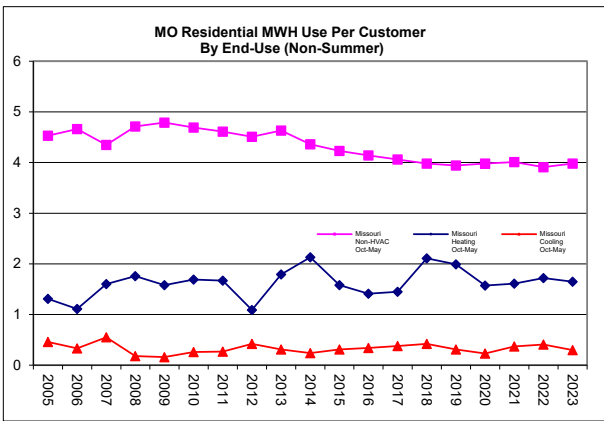
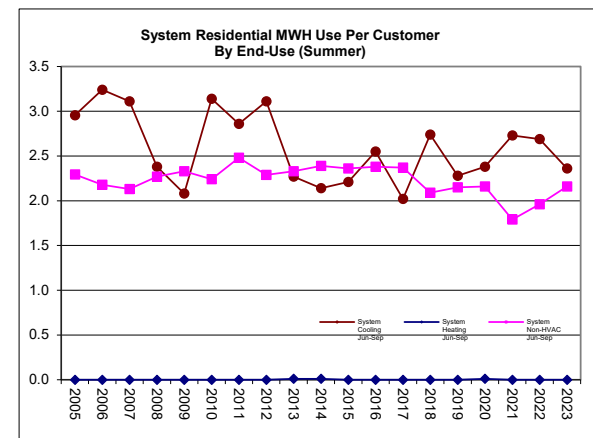
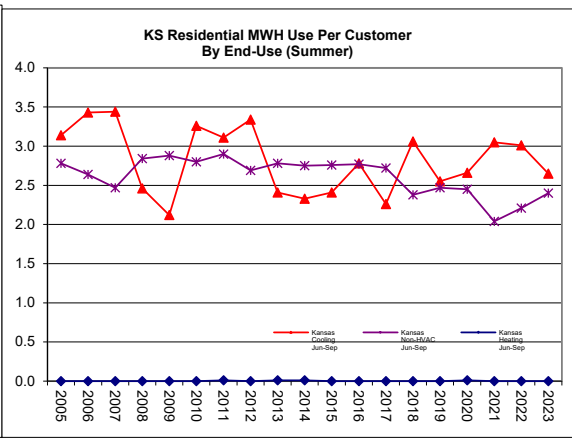
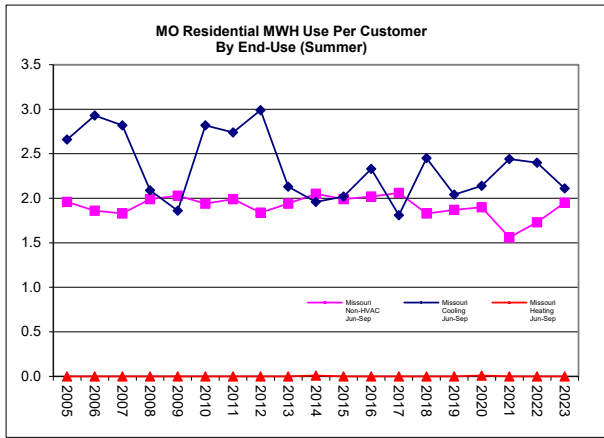
Plot 3A-14 Missouri & Kansas Total MWH Use Per Customer
(Actual vs. Weather Normalized)

Year	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
	Missouri Summer Jun-Sep	Missouri Summer Jun-Sep	Missouri Non-Summer Oct-May	Missouri Non-Summer Oct-May	Missouri Total Jan-Dec	Missouri Total Jan-Dec	Kansas Summer Jun-Sep	Kansas Summer Jun-Sep	Kansas Non-Summer Oct-May	Kansas Non-Summer Oct-May	Kansas Total Jan-Dec	Kansas Total Jan-Dec	System Summer Jun-Sep	System Summer Jun-Sep	System Non-Summer Oct-May	System Non-Summer Oct-May	System Total Jan-Dec	System Total Jan-Dec
2005	12.3	12.0	20.0	19.5	32.2	31.5	10.8	10.5	16.4	15.9	27.2	26.4	11.6	11.3	18.3	17.9	29.9	29.2
2006	12.6	11.9	19.6	20.2	32.2	32.1	10.9	10.2	15.9	16.4	26.9	26.6	11.8	11.1	17.9	18.4	29.7	29.5
2007	12.6	12.3	20.5	20.3	33.1	32.6	10.8	10.5	16.8	16.6	27.6	27.0	11.8	11.4	18.8	18.5	30.5	30.0
2008	11.8	12.2	20.6	20.4	32.4	32.6	10.0	10.3	16.8	16.6	26.8	26.9	11.0	11.3	18.8	18.6	29.8	29.9
2009	11.3	11.9	19.9	20.1	31.2	32.0	9.6	10.1	16.1	16.3	25.7	26.5	10.5	11.1	18.2	18.4	28.6	29.4
2010	12.5	11.7	20.2	20.0	32.7	31.8	10.8	10.1	16.3	16.1	27.1	26.2	11.7	11.0	18.4	18.2	30.0	29.1
2011	12.4	11.9	20.0	19.9	32.4	31.7	10.7	10.2	15.9	15.8	26.6	26.0	11.6	11.1	18.1	18.0	29.7	29.0
2012	12.4	11.5	19.3	19.8	31.6	31.2	10.6	9.7	15.3	15.8	25.9	25.5	11.5	10.6	17.4	17.9	28.9	28.5
2013	11.4	11.6	20.1	19.7	31.5	31.3	9.6	9.8	16.0	15.7	25.6	25.4	10.6	10.7	18.1	17.8	28.7	28.5
2014	11.3	11.6	20.2	19.8	31.6	31.4	9.6	9.9	16.2	15.8	25.8	25.7	10.5	10.8	18.3	17.9	28.9	28.7
2015	11.3	11.4	19.2	19.5	30.5	30.9	9.6	9.8	15.4	15.7	25.0	25.4	10.5	10.6	17.4	17.7	27.9	28.3
2016	11.6	11.2	18.7	19.1	30.3	30.3	10.1	9.8	15.0	15.4	25.1	25.2	10.9	10.5	16.9	17.4	27.8	27.9
2017	10.7	11.1	18.1	18.4	28.8	29.5	9.4	9.7	14.9	15.2	24.2	24.9	10.1	10.5	16.6	16.9	26.6	27.4
2018	11.2	10.6	19.0	18.4	30.2	28.9	9.9	9.2	15.8	15.0	25.6	24.2	10.5	9.9	17.5	16.8	28.0	26.7
2019	10.7	10.7	18.4	18.1	29.1	28.8	9.4	9.4	15.2	14.8	24.6	24.2	10.1	10.1	16.9	16.5	27.0	26.6
2020	10.2	10.2	16.9	17.3	27.1	27.5	9.0	9.0	14.0	14.4	23.0	23.4	9.7	9.6	15.5	15.9	25.1	25.5
2021	10.2	9.8	17.2	17.4	27.4	27.2	9.2	8.7	14.3	14.4	23.4	23.1	9.7	9.3	15.8	16.0	25.5	25.2
2022	10.5	10.1	17.4	17.3	27.9	27.4	9.4	8.9	14.4	14.3	23.8	23.2	10.0	9.5	16.0	15.9	25.9	25.4
2023	10.5		17.3				9.1		14.1				9.9		15.8			
05-'10	0.3%	-0.4%	0.2%	0.5%	0.3%	0.2%	0.0%	-0.9%	-0.1%	0.2%	-0.1%	-0.2%	0.1%	-0.6%	0.1%	0.4%	0.1%	0.0%
10-'15	-2.0%	-0.6%	-1.0%	-0.5%	-1.3%	-0.5%	-2.3%	-0.6%	-1.1%	-0.5%	-1.6%	-0.6%	-2.1%	-0.6%	-1.1%	-0.6%	-1.5%	-0.6%
15-'23	-0.9%	-100.0%	-1.3%	-100.0%	-100.0%	-100.0%	-0.7%	-100.0%	-1.1%	-100.0%	-100.0%	-100.0%	-0.8%	-100.0%	-1.2%	-100.0%	-100.0%	-100.0%



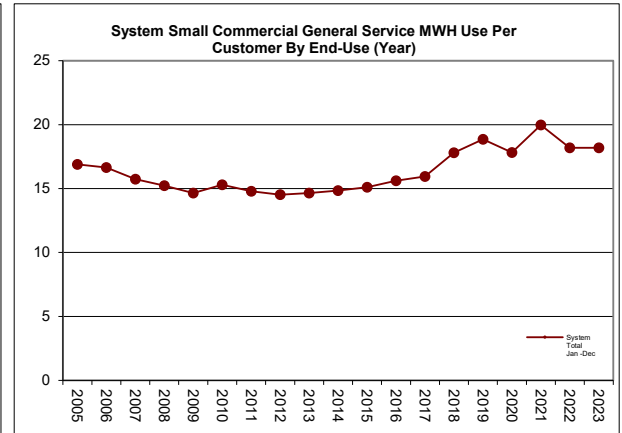
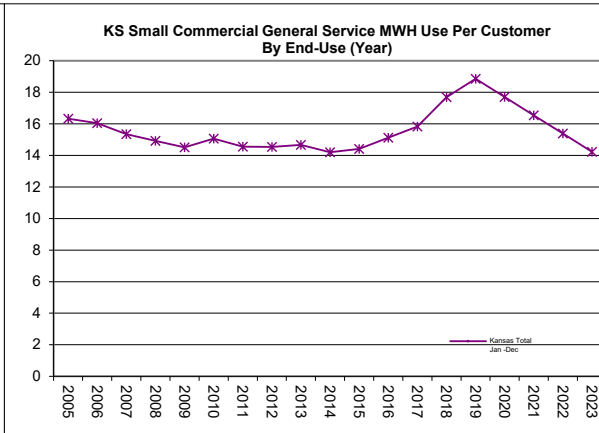
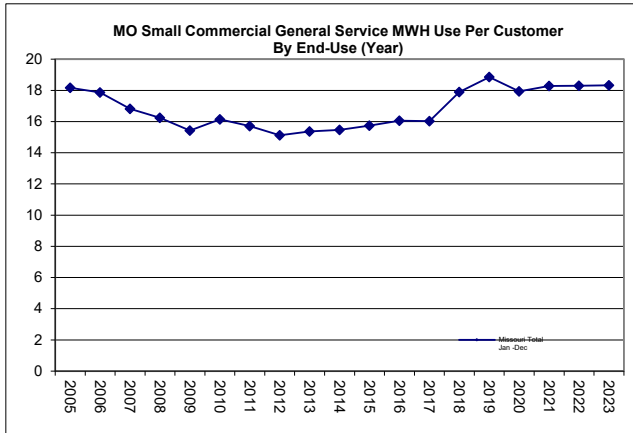
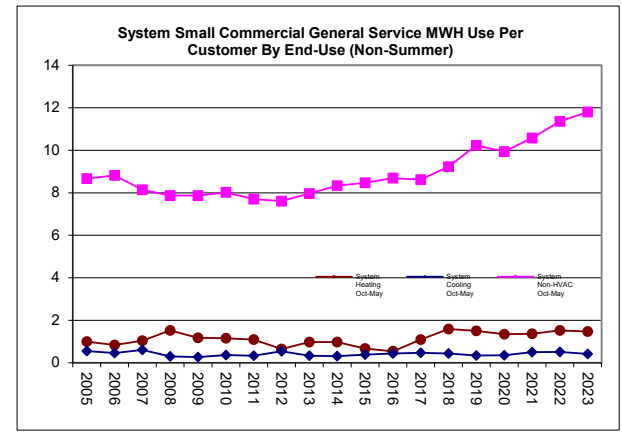
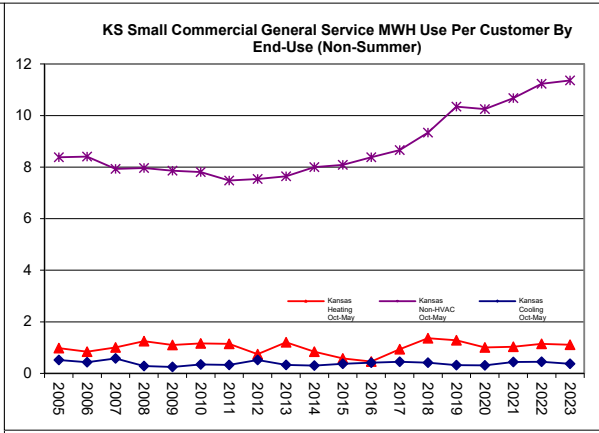
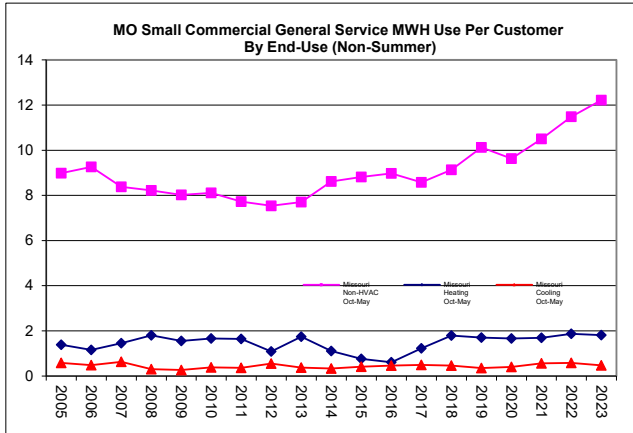
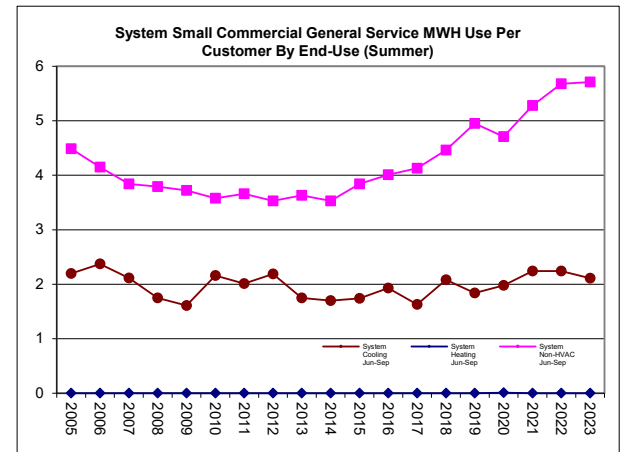
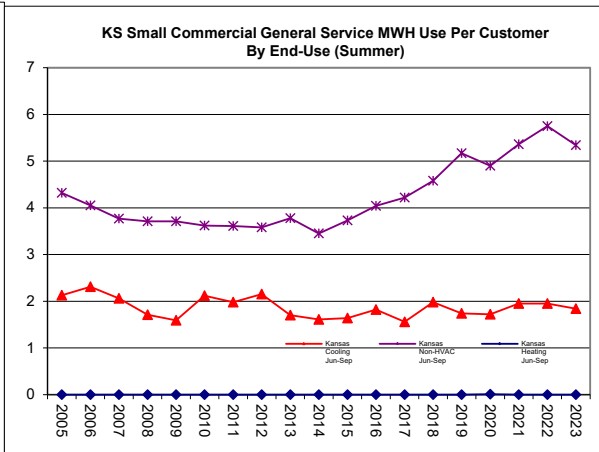
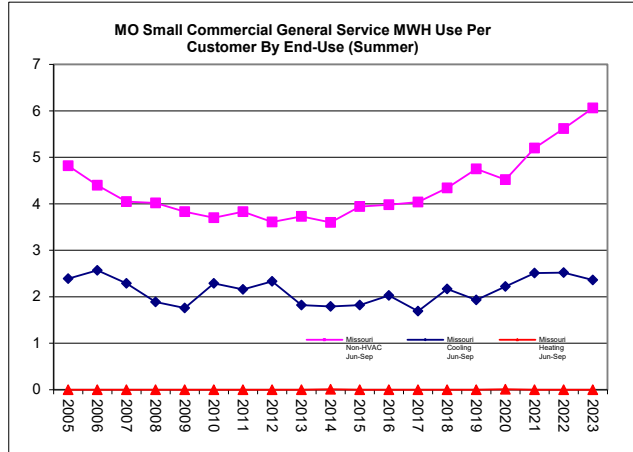
Plot 3A-15 Missouri & Kansas Residential MWH Use Per Customer By End-Use

Year	Missouri							Kansas							System						
	Cooling Jun-Sep	Cooling Oct-May	Heating Jun-Sep	Heating Oct-May	Non-HVAC Jun-Sep	Non-HVAC Oct-May	Total Jan-Dec	Cooling Jun-Sep	Cooling Oct-May	Heating Jun-Sep	Heating Oct-May	Non-HVAC Jun-Sep	Non-HVAC Oct-May	Total Jan-Dec	Cooling Jun-Sep	Cooling Oct-May	Heating Jun-Sep	Heating Oct-May	Non-HVAC Jun-Sep	Non-HVAC Oct-May	Total Jan-Dec
2005	2.7	0.5	0.0	1.3	2.0	4.5	10.9	3.1	0.5	0.0	1.8	2.8	5.6	13.8	3.0	0.6	0.0	1.5	2.3	5.0	12.3
2006	2.9	0.3	0.0	1.1	1.9	4.7	10.9	3.4	0.4	0.0	1.5	2.6	5.7	13.7	3.2	0.4	0.0	1.3	2.2	5.1	12.2
2007	2.8	0.6	0.0	1.6	1.8	4.4	11.2	3.4	0.7	0.0	1.8	2.5	5.7	14.1	3.1	0.6	0.0	1.7	2.1	5.0	12.5
2008	2.1	0.2	0.0	1.8	2.0	4.7	10.7	2.5	0.2	0.0	2.3	2.8	5.7	13.5	2.4	0.3	0.0	2.0	2.3	5.1	12.0
2009	1.9	0.2	0.0	1.6	2.0	4.8	10.4	2.1	0.2	0.0	2.0	2.9	5.7	12.9	2.1	0.2	0.0	1.8	2.3	5.2	11.6
2010	2.8	0.3	0.0	1.7	1.9	4.7	11.4	3.3	0.3	0.0	2.1	2.8	5.6	14.0	3.1	0.3	0.0	1.9	2.2	5.1	12.7
2011	2.7	0.3	0.0	1.7	2.0	4.6	11.3	3.1	0.3	0.0	2.1	2.9	5.5	13.9	2.9	0.3	0.0	1.9	2.5	5.0	12.5
2012	3.0	0.4	0.0	1.1	1.8	4.5	10.9	3.3	0.5	0.0	1.4	2.7	5.4	13.3	3.1	0.5	0.0	1.2	2.3	4.9	12.0
2013	2.1	0.3	0.0	1.8	1.9	4.6	10.8	2.4	0.3	0.0	2.2	2.8	5.4	13.1	2.3	0.3	0.0	2.0	2.3	5.0	11.9
2014	2.0	0.2	0.0	2.1	2.1	4.4	10.8	2.3	0.3	0.0	2.2	2.8	5.5	13.1	2.1	0.3	0.0	2.2	2.4	4.9	11.9
2015	2.0	0.3	0.0	1.6	2.0	4.2	10.1	2.4	0.4	0.0	1.6	2.8	5.3	12.5	2.2	0.3	0.0	1.6	2.4	4.7	11.3
2016	2.3	0.3	0.0	1.4	2.0	4.1	10.2	2.8	0.4	0.0	1.4	2.8	5.2	12.5	2.6	0.4	0.0	1.4	2.4	4.6	11.3
2017	1.8	0.4	0.0	1.5	2.1	4.1	9.8	2.3	0.5	0.0	1.5	2.7	5.0	11.9	2.0	0.4	0.0	1.5	2.4	4.5	10.8
2018	2.5	0.4	0.0	2.1	1.8	4.0	10.8	3.1	0.5	0.0	2.1	2.4	4.9	13.0	2.7	0.5	0.0	2.1	2.1	4.4	11.9
2019	2.0	0.3	0.0	2.0	1.9	3.9	10.2	2.6	0.4	0.0	2.0	2.5	4.9	12.3	2.3	0.4	0.0	2.0	2.2	4.4	11.2
2020	2.1	0.2	0.0	1.6	1.9	4.0	9.9	2.7	0.3	0.0	1.6	2.5	4.9	12.0	2.4	0.3	0.0	1.6	2.2	4.4	10.9
2021	2.4	0.4	0.0	1.6	1.6	4.0	9.3	3.1	0.5	0.0	1.6	2.0	4.9	11.7	2.7	0.4	0.0	1.6	1.8	4.4	10.3
2022	2.4	0.4	0.0	1.7	1.7	3.9	8.9	3.0	0.5	0.0	1.8	2.2	4.8	11.3	2.7	0.5	0.0	1.7	2.0	4.3	9.8
2023	2.1	0.3	0.0	1.7	2.0	4.0	8.4	2.7	0.4	0.0	1.7	2.4	4.8	11.0	2.4	0.3	0.0	1.7	2.2	4.4	9.3
05-'10	1.2%	-10.8%	#DIV/0!	5.2%	-0.2%	0.7%	0.9%	0.8%	-11.4%	#DIV/0!	3.3%	0.1%	0.0%	0.3%	1.2%	-11.5%	#DIV/0!	4.1%	-0.5%	0.4%	0.5%
10-'15	-6.5%	3.6%	#DIV/0!	-1.3%	0.5%	-2.0%	-2.3%	-5.9%	5.0%	#DIV/0!	-5.1%	-0.3%	-1.1%	-2.4%	-6.8%	2.5%	#DIV/0!	-3.2%	1.0%	-1.5%	-2.3%
15-'23	0.5%	-0.4%	#DIV/0!	0.5%	-0.3%	-0.8%	-2.3%	1.2%	0.3%	#DIV/0!	0.4%	-1.7%	-1.2%	-1.5%	0.8%	-0.4%	#DIV/0!	0.5%	-1.1%	-1.0%	-2.4%



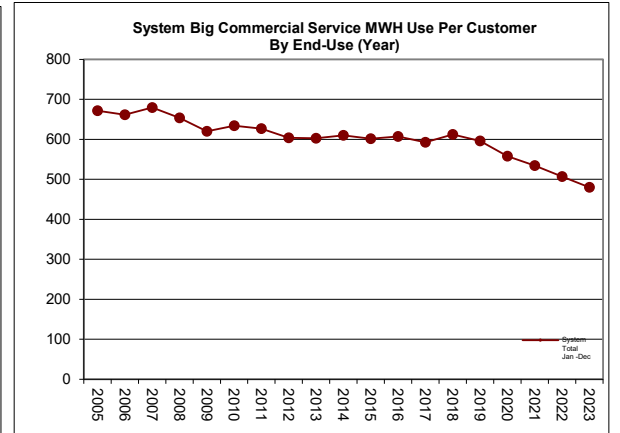
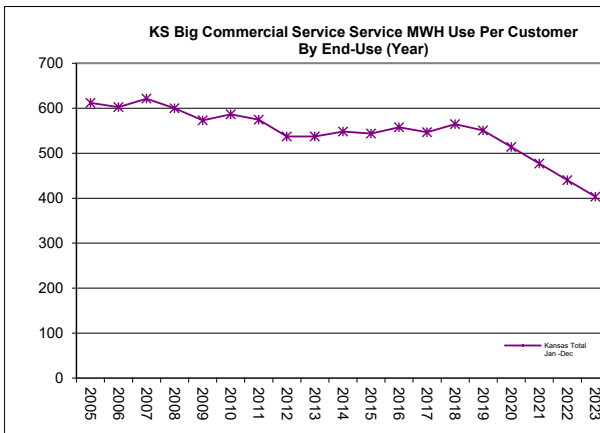
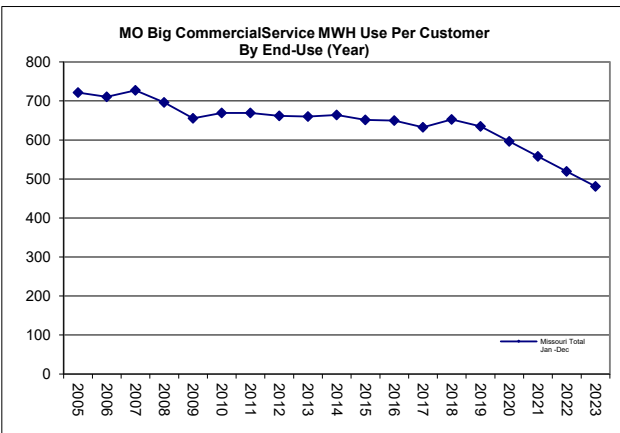
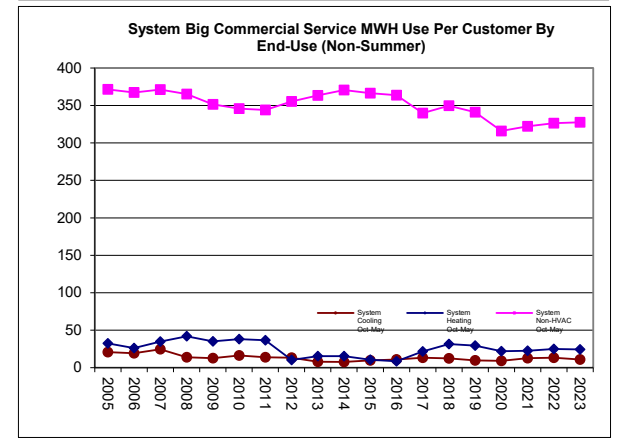
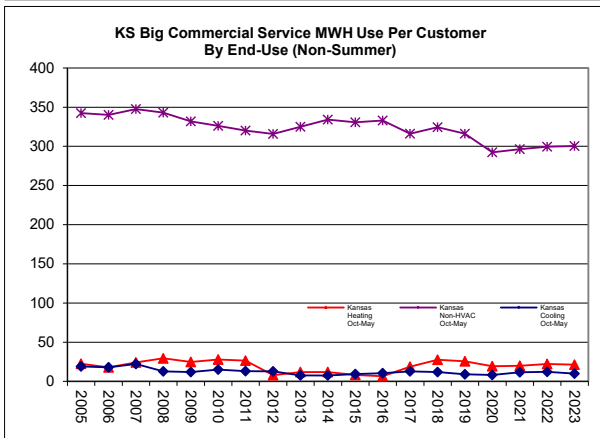
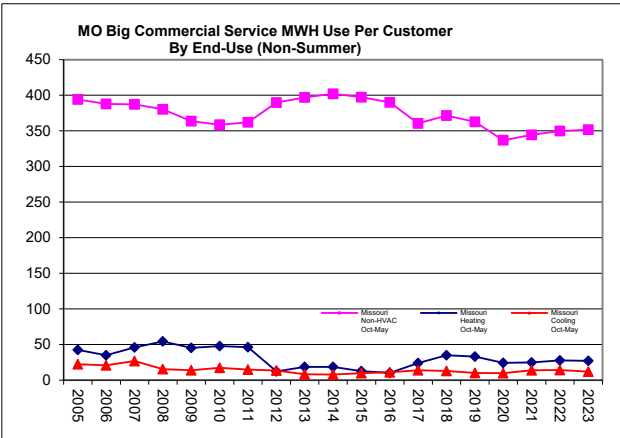
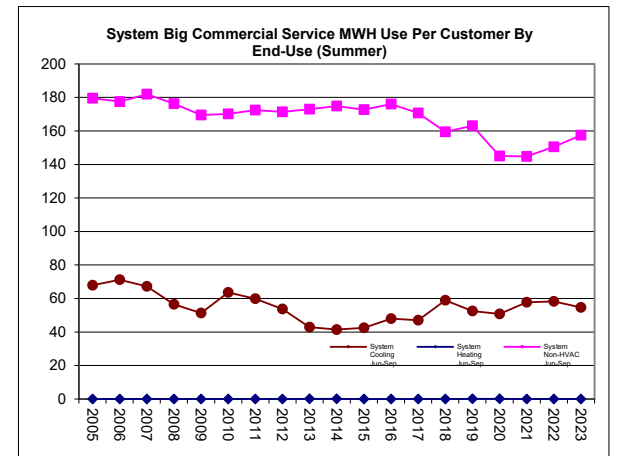
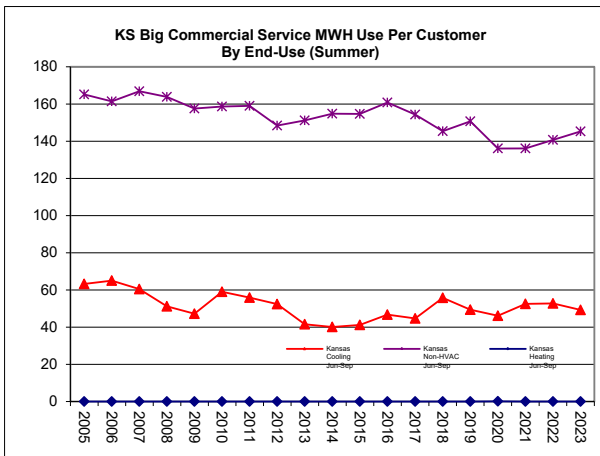
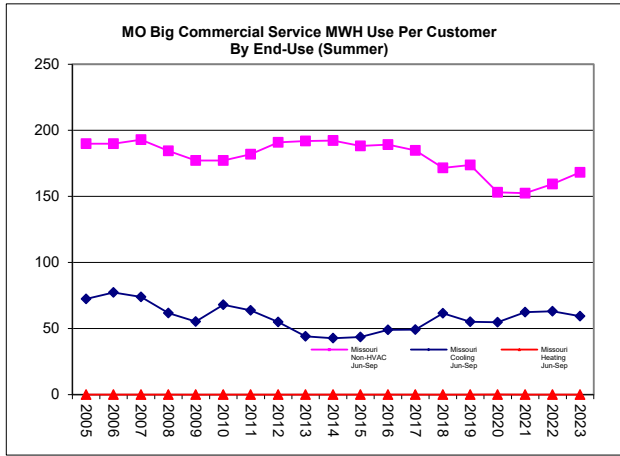
Plot 3A-16 Missouri & Kansas Small Commercial General Service MWH Use Per Customer By End-Use

Year	Missouri Cooling			Missouri Heating			Missouri Non-HVAC			Kansas Cooling			Kansas Heating			Kansas Non-HVAC			System Cooling			System Heating			System Non-HVAC			
	Jun-Sep	Oct-May	Jan-Dec	Jun-Sep	Oct-May	Jan-Dec	Jun-Sep	Oct-May	Jan-Dec	Jun-Sep	Oct-May	Jan-Dec	Jun-Sep	Oct-May	Jan-Dec	Jun-Sep	Oct-May	Jan-Dec	Jun-Sep	Oct-May	Jan-Dec	Jun-Sep	Oct-May	Jan-Dec	Jun-Sep	Oct-May	Jan-Dec	
2005	2.4	0.6	0.0	1.4	4.8	9.0	18.2	2.1	0.5	0.0	1.0	4.3	8.4	16.3	2.2	0.6	0.0	1.0	4.5	8.7	16.9	2.2	0.6	0.0	1.0	4.5	8.7	16.9
2006	2.6	0.5	0.0	1.2	4.4	9.3	17.9	2.3	0.4	0.0	0.8	4.1	8.4	16.0	2.4	0.5	0.0	0.8	4.1	8.8	16.6	2.4	0.5	0.0	0.8	4.1	8.8	16.6
2007	2.3	0.6	0.0	1.5	4.1	8.4	16.8	2.1	0.6	0.0	1.0	3.8	7.9	15.4	2.1	0.6	0.0	1.0	3.8	8.1	15.7	2.1	0.6	0.0	1.0	3.8	8.1	15.7
2008	1.9	0.3	0.0	1.8	4.0	8.2	16.2	1.7	0.3	0.0	1.3	3.7	8.0	14.9	1.8	0.3	0.0	1.5	3.8	7.9	15.2	1.8	0.3	0.0	1.5	3.8	7.9	15.2
2009	1.8	0.3	0.0	1.6	3.8	8.0	15.4	1.6	0.3	0.0	1.1	3.7	7.9	14.5	1.6	0.3	0.0	1.2	3.7	7.9	14.7	1.6	0.3	0.0	1.2	3.7	7.9	14.7
2010	2.3	0.4	0.0	1.7	3.7	8.1	16.1	2.1	0.4	0.0	1.2	3.6	7.8	15.1	2.2	0.4	0.0	1.2	3.6	8.0	15.3	2.2	0.4	0.0	1.2	3.6	8.0	15.3
2011	2.2	0.4	0.0	1.6	3.8	7.7	15.7	2.0	0.3	0.0	1.2	3.6	7.5	14.6	2.0	0.3	0.0	1.1	3.7	7.7	14.8	2.0	0.3	0.0	1.1	3.7	7.7	14.8
2012	2.3	0.6	0.0	1.1	3.6	7.5	15.1	2.2	0.5	0.0	0.8	3.6	7.5	14.5	2.2	0.5	0.0	0.7	3.5	7.6	14.5	2.2	0.5	0.0	0.7	3.5	7.6	14.5
2013	1.8	0.4	0.0	1.7	3.7	7.7	15.4	1.7	0.3	0.0	1.2	3.8	7.6	14.7	1.8	0.3	0.0	1.0	3.6	8.0	14.7	1.8	0.3	0.0	1.0	3.6	8.0	14.7
2014	1.8	0.3	0.0	1.1	3.6	8.6	15.5	1.6	0.3	0.0	0.8	3.5	8.0	14.2	1.7	0.3	0.0	1.0	3.5	8.3	14.9	1.7	0.3	0.0	1.0	3.5	8.3	14.9
2015	1.8	0.4	0.0	0.8	3.9	8.8	15.7	1.6	0.4	0.0	0.6	3.7	8.1	14.4	1.7	0.4	0.0	0.7	3.8	8.5	15.1	1.7	0.4	0.0	0.7	3.8	8.5	15.1
2016	2.0	0.5	0.0	0.6	4.0	9.0	16.1	1.8	0.4	0.0	0.5	4.0	8.4	15.1	1.9	0.4	0.0	0.5	4.0	8.7	15.6	1.9	0.4	0.0	0.5	4.0	8.7	15.6
2017	1.7	0.5	0.0	1.2	4.0	8.6	16.0	1.6	0.5	0.0	0.9	4.2	8.7	15.8	1.6	0.5	0.0	1.1	4.1	8.6	15.9	1.6	0.5	0.0	1.1	4.1	8.6	15.9
2018	2.2	0.5	0.0	1.8	4.3	9.1	17.9	2.0	0.4	0.0	1.4	4.6	9.3	17.7	2.1	0.4	0.0	1.6	4.5	9.2	17.8	2.1	0.4	0.0	1.6	4.5	9.2	17.8
2019	1.9	0.4	0.0	1.7	4.8	10.1	18.9	1.7	0.3	0.0	1.3	5.2	10.3	18.9	1.8	0.3	0.0	1.5	5.0	10.2	18.9	1.8	0.3	0.0	1.5	5.0	10.2	18.9
2020	2.2	0.4	0.0	1.7	4.5	9.6	17.9	1.7	0.3	0.0	1.0	4.9	10.3	17.7	2.0	0.4	0.0	1.4	4.7	9.9	17.8	2.0	0.4	0.0	1.4	4.7	9.9	17.8
2021	2.5	0.6	0.0	1.7	5.2	10.5	18.3	2.0	0.4	0.0	1.0	5.4	10.7	16.5	2.2	0.5	0.0	1.4	5.3	10.6	20.0	2.2	0.5	0.0	1.4	5.3	10.6	20.0
2022	2.5	0.6	0.0	1.9	5.6	11.5	18.3	2.0	0.5	0.0	1.2	5.8	11.2	15.4	2.2	0.5	0.0	1.5	5.7	11.4	18.2	2.2	0.5	0.0	1.5	5.7	11.4	18.2
2023	2.4	0.5	0.0	1.8	6.1	12.2	18.3	1.8	0.4	0.0	1.1	5.3	11.4	14.2	2.1	0.4	0.0	1.5	5.7	11.8	18.2	2.1	0.4	0.0	1.5	5.7	11.8	18.2
05-'10	-0.9%	-8.1%	#DIV/0!	3.6%	-5.2%	-2.0%	-2.3%	-0.1%	-7.6%	#DIV/0!	3.4%	-3.5%	-1.4%	-1.6%	-0.3%	-7.7%	#DIV/0!	3.1%	-4.4%	-1.5%	-2.0%	-0.3%	-7.7%	#DIV/0!	3.1%	-4.4%	-1.5%	-2.0%
10-'15	-4.5%	1.5%	#DIV/0!	-14.5%	1.3%	1.7%	-0.5%	-5.0%	1.1%	#DIV/0!	-12.9%	0.6%	0.7%	-0.9%	-4.2%	1.1%	#DIV/0!	-10.4%	1.4%	1.1%	-0.2%	-4.2%	1.1%	#DIV/0!	-10.4%	1.4%	1.1%	-0.2%
15-'23	3.3%	1.7%	#DIV/0!	11.5%	5.5%	4.2%	1.9%	1.4%	0.0%	#DIV/0!	8.5%	4.6%	4.3%	-0.2%	2.4%	0.9%	#DIV/0!	10.3%	5.1%	4.2%	2.3%	2.4%	0.9%	#DIV/0!	10.3%	5.1%	4.2%	2.3%



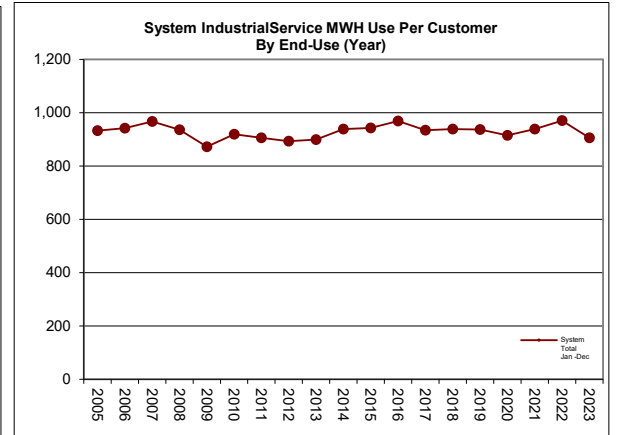
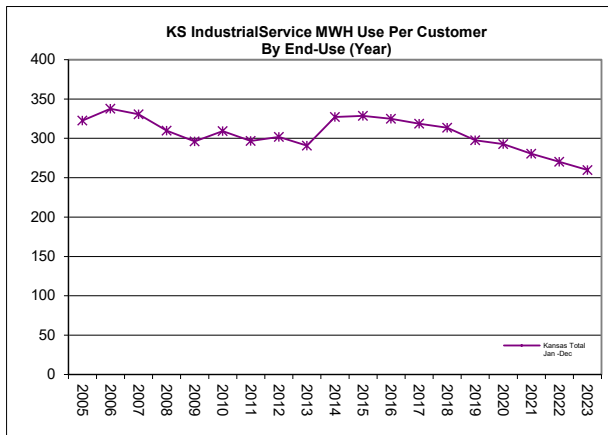
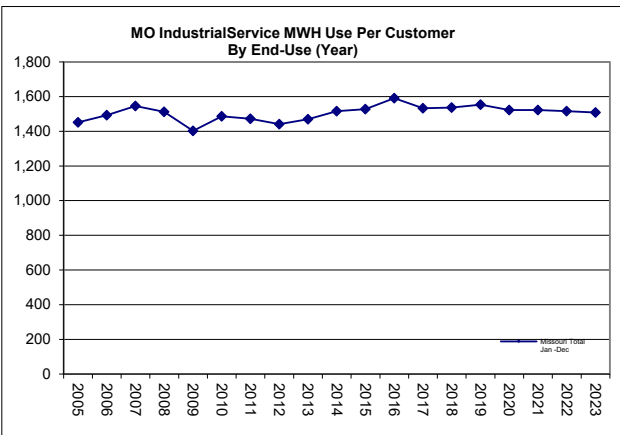
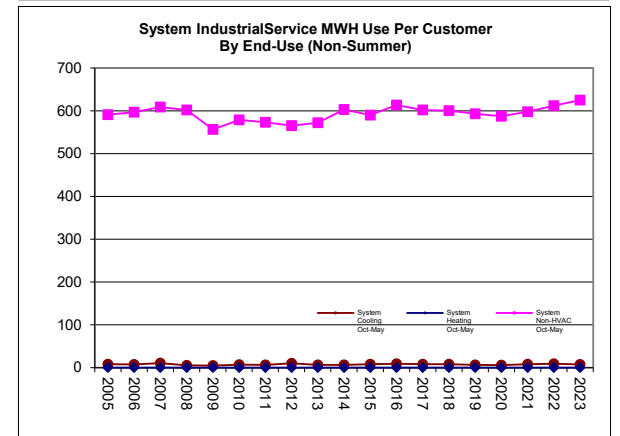
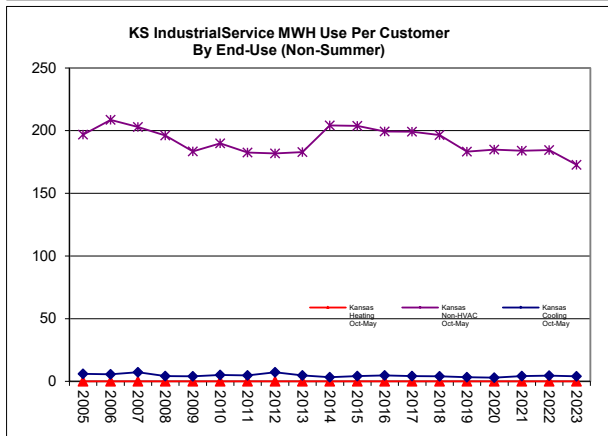
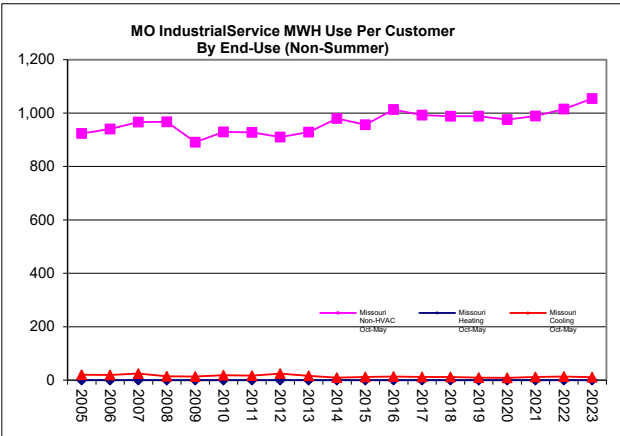
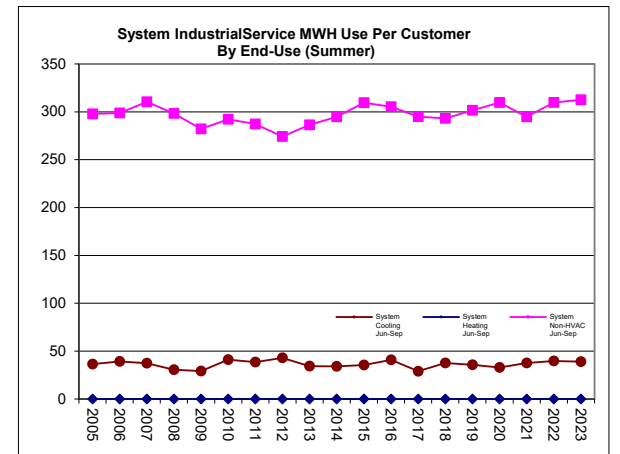
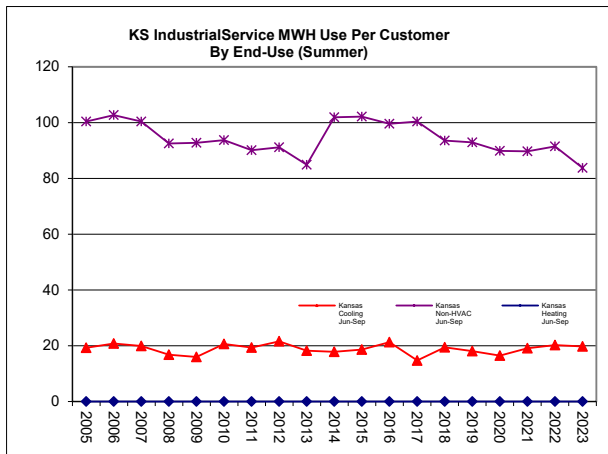
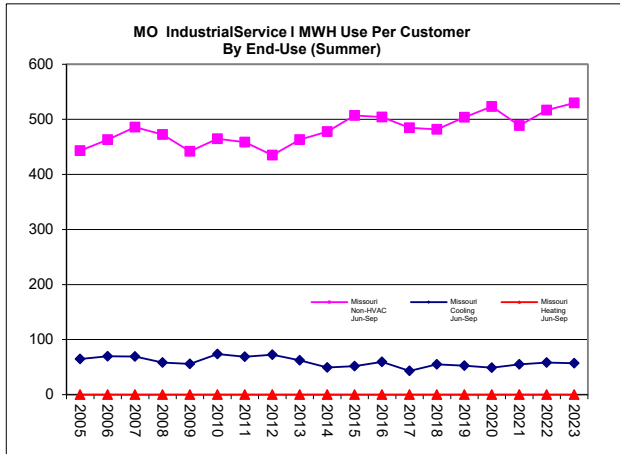
Plot 3A-17 Missouri & Kansas Big Commercial General Service MWH Use Per Customer By End-Use

Year	Missouri	Missouri	Missouri	Missouri	Missouri	Missouri	Missouri	Kansas	Kansas	Kansas	Kansas	Kansas	Kansas	Kansas	System	System	System	System	System	System	System
	Cooling Jun-Sep	Cooling Oct-May	Heating Jun-Sep	Heating Oct-May	Non-HVAC Jun-Sep	Non-HVAC Oct-May	Total Jan-Dec	Cooling Jun-Sep	Cooling Oct-May	Heating Jun-Sep	Heating Oct-May	Non-HVAC Jun-Sep	Non-HVAC Oct-May	Total Jan-Dec	Cooling Jun-Sep	Cooling Oct-May	Heating Jun-Sep	Heating Oct-May	Non-HVAC Jun-Sep	Non-HVAC Oct-May	Total Jan-Dec
2005	72.4	22.5	0.0	42.5	189.8	394.2	721.4	63.2	19.1	0.0	22.4	165.1	342.4	612.1	67.8	20.8	0.0	32.3	179.5	371.4	671.9
2006	77.3	20.9	0.0	34.9	189.9	387.7	710.7	65.0	17.8	0.0	18.0	161.4	340.1	602.3	71.2	19.3	0.0	26.3	177.5	367.2	661.5
2007	73.9	26.9	0.0	45.9	192.9	387.4	727.1	60.4	22.2	0.0	24.2	166.9	347.6	621.3	67.2	24.6	0.0	34.9	181.9	371.2	679.7
2008	61.7	15.4	0.0	54.3	184.5	380.2	696.2	51.2	12.6	0.0	29.4	163.8	343.1	600.1	56.5	14.0	0.0	41.9	176.3	365.4	654.0
2009	55.3	13.8	0.0	45.4	177.2	363.8	655.4	47.2	11.8	0.0	24.7	157.6	331.9	573.1	51.2	12.8	0.0	35.1	169.5	351.6	620.2
2010	68.1	17.4	0.0	47.8	177.3	358.6	669.2	59.0	15.0	0.0	27.8	158.6	326.0	586.5	63.6	16.2	0.0	38.1	170.1	345.9	634.0
2011	63.7	15.0	0.1	46.3	182.0	361.9	668.9	55.8	13.1	0.0	26.5	159.0	320.0	574.4	59.8	14.0	0.0	36.6	172.5	344.2	627.1
2012	54.9	13.5	0.0	12.4	191.0	389.7	661.6	52.3	12.7	0.0	7.8	148.4	315.8	537.1	53.7	13.2	0.0	10.3	171.3	355.5	604.0
2013	44.2	8.2	0.1	18.7	191.9	396.9	659.8	41.6	7.7	0.0	11.7	151.2	325.0	537.2	43.0	8.0	0.0	15.4	173.0	363.5	602.9
2014	42.7	7.9	0.1	18.6	192.3	402.2	663.8	40.1	7.4	0.1	11.7	154.8	334.1	548.1	41.5	7.7	0.1	15.4	174.9	370.6	610.1
2015	43.6	9.8	0.0	12.7	188.2	397.3	651.6	41.2	9.3	0.0	8.1	154.7	330.6	543.9	42.5	9.6	0.0	10.6	172.7	366.4	601.7
2016	49.0	11.1	0.0	10.3	189.2	390.2	649.7	46.8	10.5	0.0	6.5	160.8	333.1	557.7	48.0	10.8	0.0	8.5	176.1	363.8	607.2
2017	49.2	14.1	0.0	23.9	184.9	360.4	632.4	44.7	12.7	0.0	18.9	154.3	316.0	546.6	47.1	13.4	0.0	21.6	170.7	339.8	592.6
2018	61.7	13.1	0.0	35.0	171.6	371.5	652.8	55.8	11.8	0.0	27.5	145.4	324.4	564.8	58.9	12.5	0.0	31.5	159.5	349.6	612.1
2019	55.2	10.1	0.1	33.0	173.8	362.8	634.9	49.4	9.0	0.0	25.7	150.7	316.0	550.8	52.5	9.6	0.1	29.6	163.1	341.1	595.9
2020	54.8	9.7	0.1	24.1	153.0	336.8	596.4	46.1	8.2	0.1	19.3	136.1	292.4	514.0	50.8	9.0	0.1	21.9	145.1	316.0	557.8
2021	62.4	13.8	0.0	24.8	152.5	344.5	558.0	52.6	11.7	0.0	19.9	136.1	296.4	477.1	57.8	12.8	0.0	22.5	144.8	322.0	534.3
2022	63.1	14.3	0.0	27.6	159.3	349.9	519.5	52.7	12.1	0.0	22.1	140.7	299.6	440.3	58.2	13.3	0.0	25.0	150.6	326.3	507.2
2023	59.3	11.9	0.0	27.0	168.2	351.6	481.0	49.3	9.9	0.0	21.3	145.3	300.4	403.5	54.6	10.9	0.0	24.3	157.4	327.4	480.0
05-'10	-1.2%	-5.0%	14.9%	2.4%	-1.4%	-1.9%	-1.5%	-1.3%	-4.7%	#DIV/0!	4.4%	-0.8%	-1.0%	-0.9%	-1.3%	-4.8%	#DIV/0!	3.3%	-1.1%	-1.4%	-1.2%
10-'15	-8.5%	-10.8%	-5.6%	-23.3%	1.2%	2.1%	-0.5%	-6.9%	-9.2%	#DIV/0!	-22.0%	-0.5%	0.3%	-1.5%	-7.8%	-10.0%	#DIV/0!	-22.6%	0.3%	1.2%	-1.0%
15-'23	3.9%	2.4%	-12.8%	9.9%	-1.4%	-1.5%	-3.7%	2.3%	0.8%	-8.3%	12.9%	-0.8%	-1.2%	-3.7%	3.2%	1.7%	-8.3%	11.0%	-1.2%	-1.4%	-2.8%



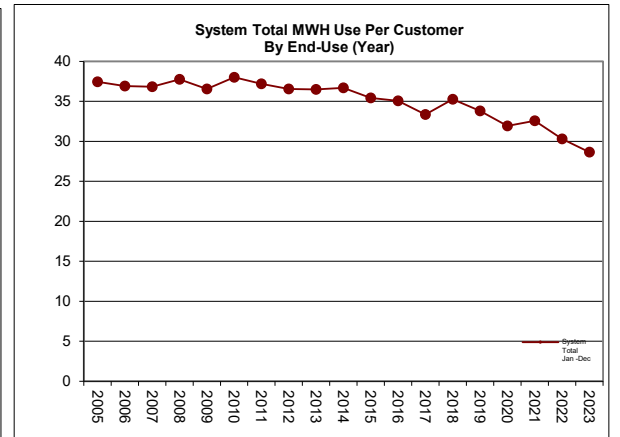
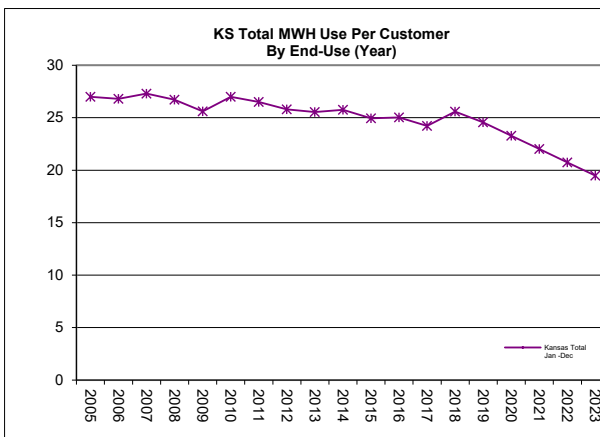
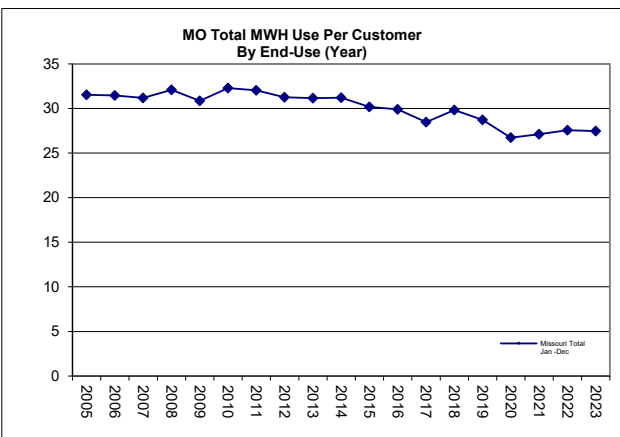
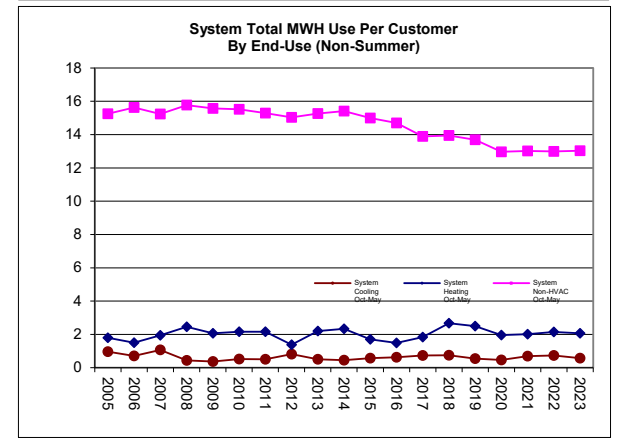
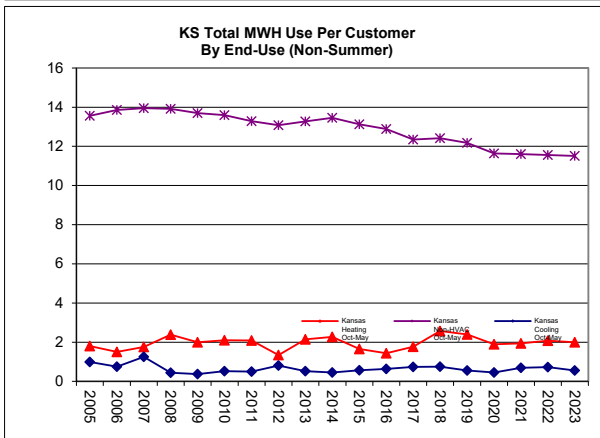
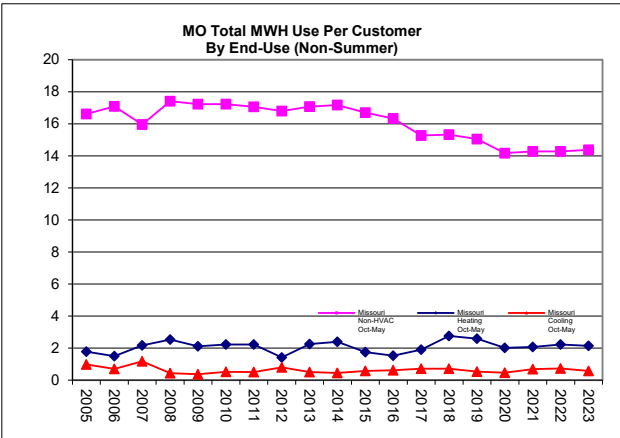
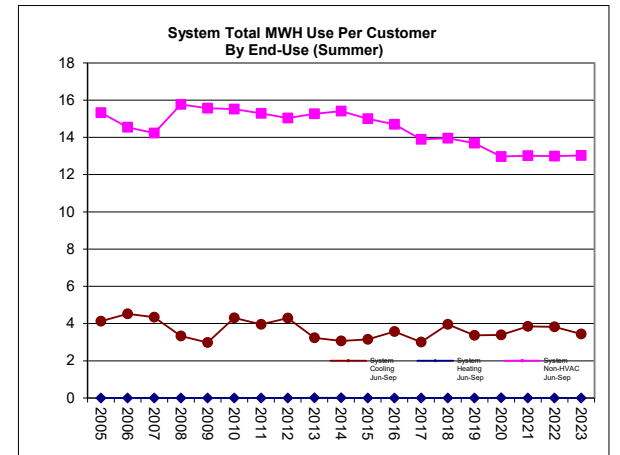
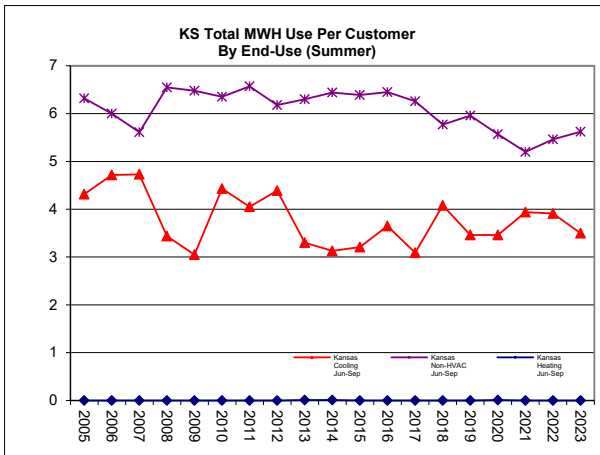
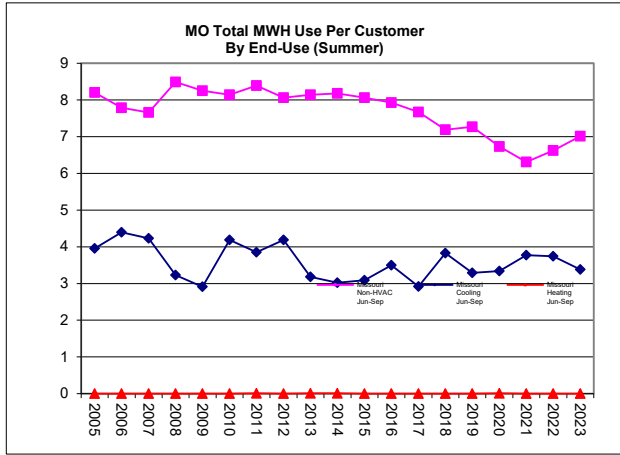
Plot 3A-18 Missouri & Kansas Industrial Service MWH Use Per Customer By End-Use

Year	Missouri	Missouri	Missouri	Missouri	Missouri	Missouri	Missouri	Kansas	Kansas	Kansas	Kansas	Kansas	Kansas	Kansas	System	System	System	System	System	System	System
	Cooling Jun-Sep	Cooling Oct-May	Heating Jun-Sep	Heating Oct-May	Non-HVAC Jun-Sep	Non-HVAC Oct-May	Total Jan-Dec	Cooling Jun-Sep	Cooling Oct-May	Heating Jun-Sep	Heating Oct-May	Non-HVAC Jun-Sep	Non-HVAC Oct-May	Total Jan-Dec	Cooling Jun-Sep	Cooling Oct-May	Heating Jun-Sep	Heating Oct-May	Non-HVAC Jun-Sep	Non-HVAC Oct-May	Total Jan-Dec
2005	65	20	0	0	443	924	1,452	19	6	0	0	100	197	323	36	8	0	0	298	591	933
2006	70	19	0	0	463	940	1,492	21	6	0	0	103	209	338	39	8	0	0	299	597	942
2007	69	25	0	0	486	966	1,546	20	7	0	0	100	203	331	37	11	0	0	310	609	967
2008	58	14	0	0	472	968	1,513	17	4	0	0	93	196	310	31	5	0	0	298	602	936
2009	56	14	0	0	442	891	1,402	16	4	0	0	93	183	296	29	5	0	0	282	556	873
2010	74	19	0	0	465	930	1,487	21	5	0	0	94	190	309	41	7	0	0	292	579	919
2011	69	17	0	0	459	928	1,472	19	5	0	0	90	183	297	39	6	0	0	287	573	906
2012	73	24	0	0	435	910	1,442	22	7	0	0	91	182	302	43	10	0	0	274	566	893
2013	62	16	0	0	463	928	1,469	18	5	0	0	85	183	291	34	6	0	0	286	572	899
2014	49	9	0	0	478	980	1,516	18	3	0	0	102	204	327	34	6	0	0	295	603	938
2015	52	12	0	0	507	957	1,527	19	4	0	0	102	204	329	36	8	0	0	310	590	943
2016	60	13	0	0	504	1,014	1,591	21	5	0	0	100	199	325	41	9	0	0	305	614	969
2017	43	12	0	0	485	993	1,533	15	4	0	0	100	199	319	29	8	0	0	295	602	934
2018	55	12	0	0	482	988	1,537	19	4	0	0	94	197	314	38	8	0	0	293	600	939
2019	53	10	0	0	504	988	1,554	18	3	0	0	93	183	298	36	7	0	0	302	593	937
2020	49	9	0	0	523	976	1,522	16	3	0	0	90	185	293	33	6	0	0	310	587	915
2021	55	12	0	0	489	989	1,523	19	4	0	0	90	184	281	38	8	0	0	295	598	938
2022	58	13	0	0	517	1,015	1,516	20	5	0	0	91	185	270	40	9	0	0	310	612	970
2023	57	11	0	0	530	1,054	1,509	20	4	0	0	84	173	260	39	8	0	0	313	625	906
05-'10	2.6%	-1.5%	#DIV/0!	#DIV/0!	1.0%	0.1%	0.5%	1.4%	-2.9%	#DIV/0!	#DIV/0!	-1.4%	-0.7%	-0.8%	2.5%	-2.6%	#DIV/0!	#DIV/0!	-0.4%	-0.4%	-0.3%
10-'15	-6.8%	-9.2%	#DIV/0!	#DIV/0!	1.8%	0.6%	0.5%	-2.1%	-4.0%	#DIV/0!	#DIV/0!	1.7%	1.4%	1.2%	-2.9%	2.7%	#DIV/0!	#DIV/0!	1.2%	0.4%	0.5%
15-'23	1.2%	-0.2%	#DIV/0!	#DIV/0!	0.5%	1.2%	-0.2%	0.8%	-0.8%	#DIV/0!	#DIV/0!	-2.5%	-2.0%	-2.9%	1.1%	-0.4%	#DIV/0!	#DIV/0!	0.1%	0.7%	-0.5%



Plot 3A-19 Missouri & Kansas Total MWH Use Per Customer By End-Use
 For classes that have end-use sales

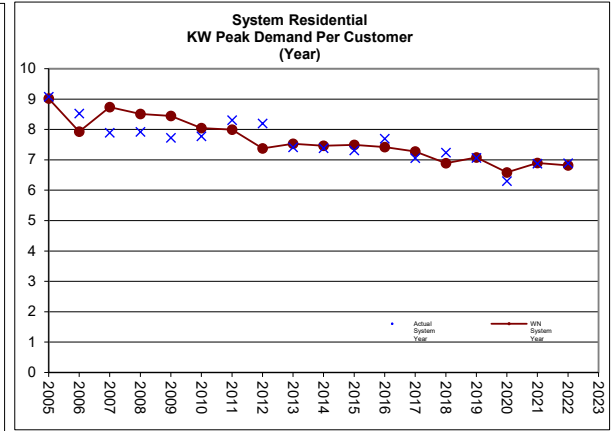
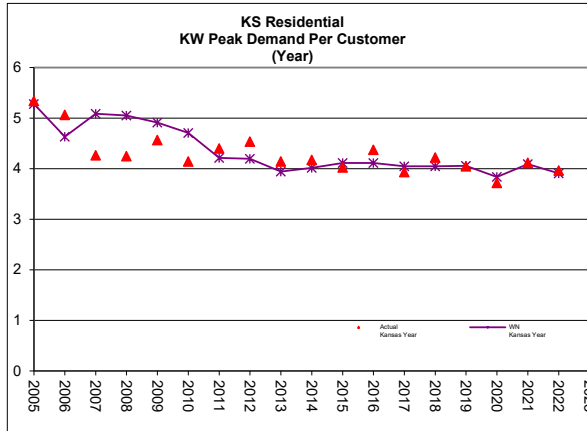
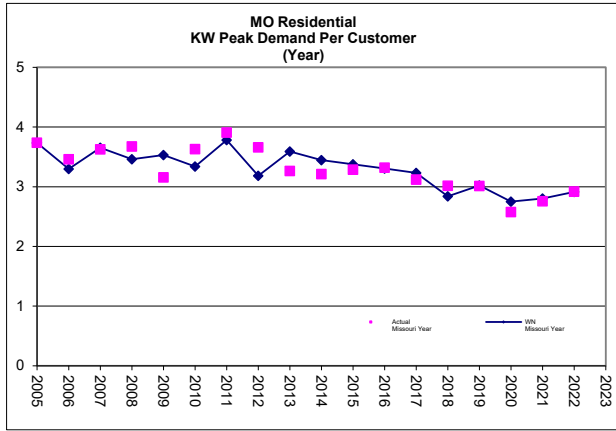
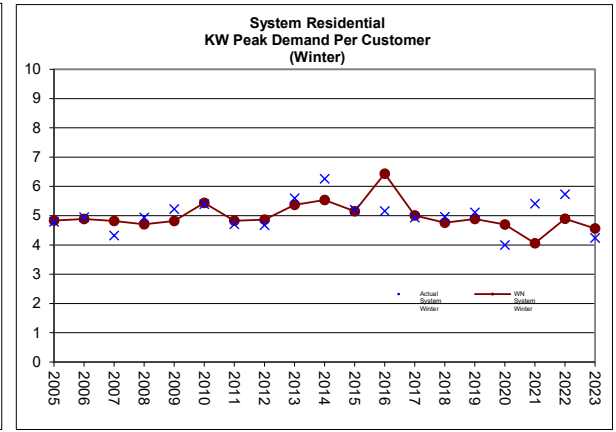
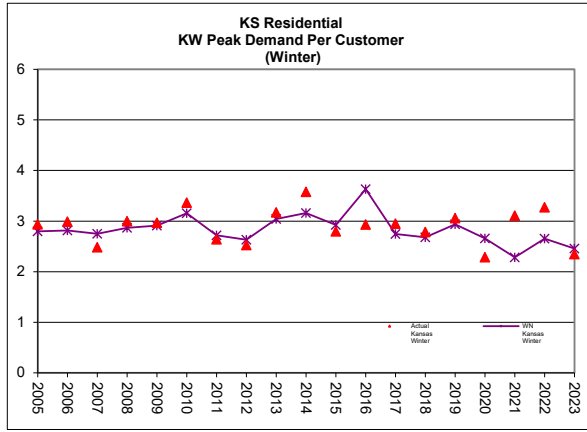
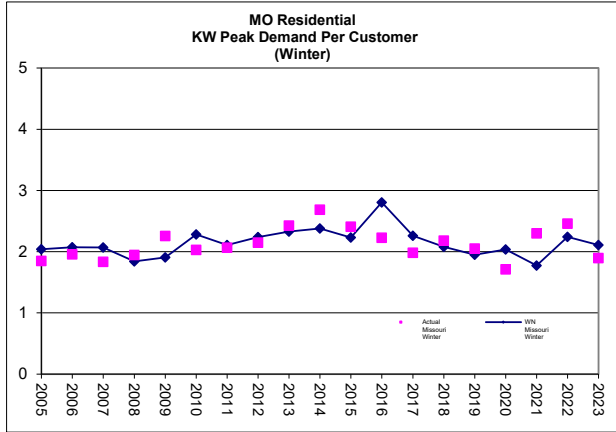
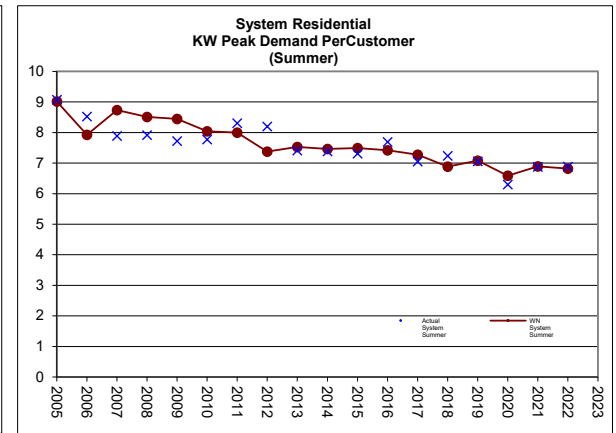
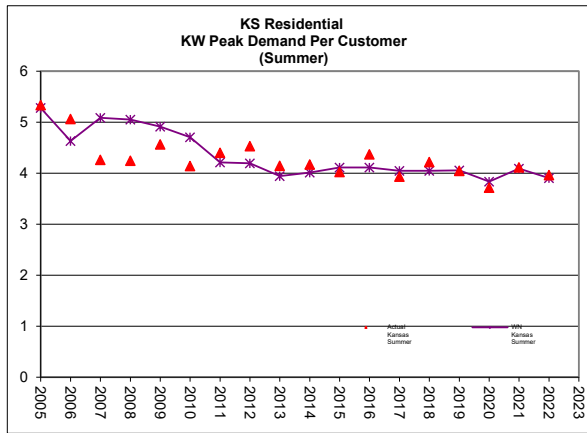
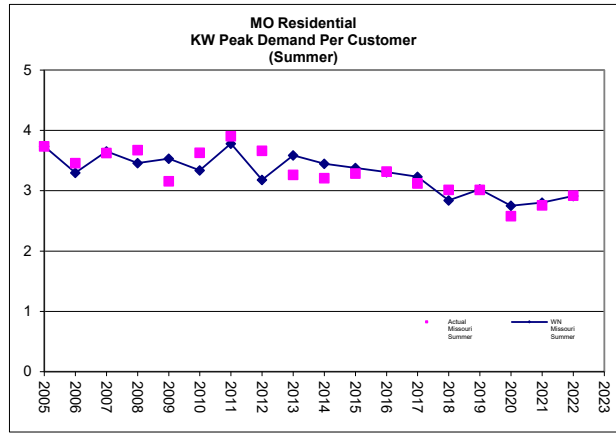
Year	Missouri							Kansas							System						
	Cooling Jun-Sep	Cooling Oct-May	Heating Jun-Sep	Heating Oct-May	Non-HVAC Jun-Sep	Non-HVAC Oct-May	Total Jan-Dec	Cooling Jun-Sep	Cooling Oct-May	Heating Jun-Sep	Heating Oct-May	Non-HVAC Jun-Sep	Non-HVAC Oct-May	Total Jan-Dec	Cooling Jun-Sep	Cooling Oct-May	Heating Jun-Sep	Heating Oct-May	Non-HVAC Jun-Sep	Non-HVAC Oct-May	Total Jan-Dec
2005	4.0	1.0	0.0	1.8	8.2	16.6	31.5	4.3	1.0	0.0	1.8	6.3	13.6	27.0	4.1	1.0	0.0	1.8	15.3	15.2	37.5
2006	4.4	0.7	0.0	1.5	7.8	17.1	31.5	4.7	0.7	0.0	1.5	6.0	13.9	26.8	4.5	0.7	0.0	1.5	14.6	15.6	36.9
2007	4.2	1.2	0.0	2.2	7.7	15.9	31.2	4.7	1.2	0.0	1.8	5.6	14.0	27.3	4.3	1.1	0.0	1.9	14.2	15.2	36.8
2008	3.2	0.4	0.0	2.5	8.5	17.4	32.1	3.4	0.4	0.0	2.4	6.6	13.9	26.7	3.3	0.4	0.0	2.5	15.8	15.8	37.8
2009	2.9	0.4	0.0	2.1	8.3	17.2	30.9	3.1	0.4	0.0	2.0	6.5	13.7	25.6	3.0	0.4	0.0	2.1	15.6	15.6	36.6
2010	4.2	0.5	0.0	2.2	8.1	17.2	32.3	4.4	0.5	0.0	2.1	6.4	13.6	27.0	4.3	0.5	0.0	2.2	15.5	15.5	38.0
2011	3.9	0.5	0.0	2.2	8.4	17.1	32.0	4.1	0.5	0.0	2.1	6.6	13.3	26.5	4.0	0.5	0.0	2.2	15.3	15.3	37.2
2012	4.2	0.8	0.0	1.4	8.1	16.8	31.3	4.4	0.8	0.0	1.3	6.2	13.1	25.8	4.3	0.8	0.0	1.4	15.0	15.0	36.6
2013	3.2	0.5	0.0	2.3	8.1	17.1	31.2	3.3	0.5	0.0	2.1	6.3	13.3	25.5	3.2	0.5	0.0	2.2	15.3	15.3	36.5
2014	3.0	0.5	0.0	2.4	8.2	17.2	31.2	3.1	0.5	0.0	2.3	6.4	13.5	25.8	3.1	0.5	0.0	2.3	15.4	15.4	36.7
2015	3.1	0.6	0.0	1.8	8.1	16.7	30.2	3.2	0.6	0.0	1.7	6.4	13.1	24.9	3.2	0.6	0.0	1.7	15.0	15.0	35.4
2016	3.5	0.6	0.0	1.5	7.9	16.3	29.9	3.7	0.6	0.0	1.4	6.5	12.9	25.0	3.6	0.6	0.0	1.5	14.7	14.7	35.1
2017	2.9	0.7	0.0	1.9	7.7	15.3	28.5	3.1	0.7	0.0	1.8	6.3	12.4	24.2	3.0	0.7	0.0	1.8	13.9	13.9	33.4
2018	3.8	0.7	0.0	2.8	7.2	15.3	29.8	4.1	0.8	0.0	2.6	5.8	12.4	25.6	4.0	0.7	0.0	2.7	14.0	14.0	35.3
2019	3.3	0.5	0.0	2.6	7.3	15.0	28.7	3.5	0.6	0.0	2.4	6.0	12.2	24.6	3.4	0.6	0.0	2.5	13.7	13.7	33.8
2020	3.3	0.5	0.0	2.0	6.7	14.2	26.7	3.5	0.5	0.0	1.9	5.6	11.6	23.3	3.4	0.5	0.0	2.0	13.0	13.0	31.9
2021	3.8	0.7	0.0	2.1	6.3	14.3	27.1	3.9	0.7	0.0	1.9	5.2	11.6	22.0	3.9	0.7	0.0	2.0	13.0	13.0	32.6
2022	3.7	0.7	0.0	2.2	6.6	14.3	27.6	3.9	0.7	0.0	2.1	5.5	11.6	20.8	3.8	0.7	0.0	2.2	13.0	13.0	30.3
2023	3.4	0.6	0.0	2.1	7.0	14.4	27.5	3.5	0.6	0.0	2.0	5.6	11.5	19.5	3.4	0.6	0.0	2.1	13.0	13.0	28.7
05-'10	1.1%	-12.0%	#DIV/0!	4.6%	-0.2%	0.7%	0.5%	0.5%	-12.1%	#DIV/0!	3.1%	0.1%	0.0%	0.0%	0.8%	-11.6%	#DIV/0!	3.8%	0.3%	0.4%	0.3%
10-'15	-5.9%	1.9%	#DIV/0!	-4.6%	-0.2%	-0.6%	-1.3%	-6.2%	1.9%	#DIV/0!	-4.7%	0.1%	-0.7%	-1.6%	-6.0%	1.9%	#DIV/0!	-4.7%	-0.7%	-0.7%	-1.4%
15-'23	1.1%	0.0%	#DIV/0!	2.5%	-1.7%	-1.9%	-1.2%	1.1%	-0.2%	#DIV/0!	2.4%	-1.6%	-1.6%	-3.0%	1.1%	0.0%	#DIV/0!	2.5%	-1.7%	-1.7%	-2.6%



**Plot 3A-20 Missouri & Kansas Residential KW Peak Demand Per Customer
(Actual vs. Weather Normalized)**

Year	Actual Missouri Summer	WN Missouri Summer	Actual Missouri Winter	WN Missouri Winter	Actual Missouri Year	WN Missouri Year	Actual Kansas Summer	WN Kansas Summer	Actual Kansas Winter	WN Kansas Winter	Actual Kansas Year	WN Kansas Year	Actual System Summer	WN System Summer	Actual System Winter	WN System Winter	Actual System Year	WN System Year
2005	3.7	3.7	1.8	2.0	3.7	3.7	5.3	5.3	2.9	2.8	5.3	5.3	9.1	9.0	4.8	4.8	9.1	9.0
2006	3.5	3.3	2.0	2.1	3.5	3.3	5.1	4.6	3.0	2.8	5.1	4.6	8.5	7.9	4.9	4.9	8.5	7.9
2007	3.6	3.7	1.8	2.1	3.6	3.7	4.3	5.1	2.5	2.7	4.3	5.1	7.9	8.7	4.3	4.8	7.9	8.7
2008	3.7	3.5	1.9	1.8	3.7	3.5	4.2	5.1	3.0	2.9	4.2	5.1	7.9	8.5	4.9	4.7	7.9	8.5
2009	3.2	3.5	2.3	1.9	3.2	3.5	4.6	4.9	3.0	2.9	4.6	4.9	7.7	8.4	5.2	4.8	7.7	8.4
2010	3.6	3.3	2.0	2.3	3.6	3.3	4.1	4.7	3.4	3.2	4.1	4.7	7.8	8.0	5.4	5.4	7.8	8.0
2011	3.9	3.8	2.1	2.1	3.9	3.8	4.4	4.2	2.6	2.7	4.4	4.2	8.3	8.0	4.7	4.8	8.3	8.0
2012	3.7	3.2	2.1	2.2	3.7	3.2	4.5	4.2	2.5	2.6	4.5	4.2	8.2	7.4	4.7	4.9	8.2	7.4
2013	3.3	3.6	2.4	2.3	3.3	3.6	4.1	3.9	3.2	3.0	4.1	3.9	7.4	7.5	5.6	5.4	7.4	7.5
2014	3.2	3.4	2.7	2.4	3.2	3.4	4.2	4.0	3.6	3.2	4.2	4.0	7.4	7.5	6.3	5.5	7.4	7.5
2015	3.3	3.4	2.4	2.2	3.3	3.4	4.0	4.1	2.8	2.9	4.0	4.1	7.3	7.5	5.2	5.2	7.3	7.5
2016	3.3	3.3	2.2	2.8	3.3	3.3	4.4	4.1	2.9	3.6	4.4	4.1	7.7	7.4	5.2	6.4	7.7	7.4
2017	3.1	3.2	2.0	2.3	3.1	3.2	3.9	4.0	2.9	2.7	3.9	4.0	7.1	7.3	4.9	5.0	7.1	7.3
2018	3.0	2.8	2.2	2.1	3.0	2.8	4.2	4.0	2.8	2.7	4.2	4.0	7.2	6.9	5.0	4.8	7.2	6.9
2019	3.0	3.0	2.1	2.0	3.0	3.0	4.0	4.1	3.1	2.9	4.0	4.1	7.1	7.1	5.1	4.9	7.1	7.1
2020	2.6	2.8	1.7	2.0	2.6	2.8	3.7	3.8	2.3	2.7	3.7	3.8	6.3	6.6	4.0	4.7	6.3	6.6
2021	2.8	2.8	2.3	1.8	2.8	2.8	4.1	4.1	3.1	2.3	4.1	4.1	6.9	6.9	5.4	4.1	6.9	6.9
2022	2.9	2.9	2.5	2.2	2.9	2.9	4.0	3.9	3.3	2.7	4.0	3.9	6.9	6.8	5.7	4.9	6.9	6.8
2023			1.9	2.1					2.3	2.5					4.2	4.6		
05-'10	-0.6%	-2.2%	1.9%	2.3%	-0.6%	-2.2%	-4.9%	-2.3%	2.7%	2.4%	-4.9%	-2.3%	-3.1%	-2.3%	2.4%	2.4%	-3.1%	-2.3%
10-'15	-2.0%	0.2%	3.5%	-0.5%	-2.0%	0.2%	-0.6%	-2.6%	-3.6%	-1.5%	-0.6%	-2.6%	-1.2%	-1.4%	-0.7%	-1.1%	-1.2%	-1.4%
15-'23	-100.0%	-100.0%	-3.0%	-0.7%	-100.0%	-100.0%	-100.0%	-100.0%	-2.2%	-2.2%	-100.0%	-100.0%	-100.0%	-100.0%	-2.5%	-1.5%	-100.0%	-100.0%

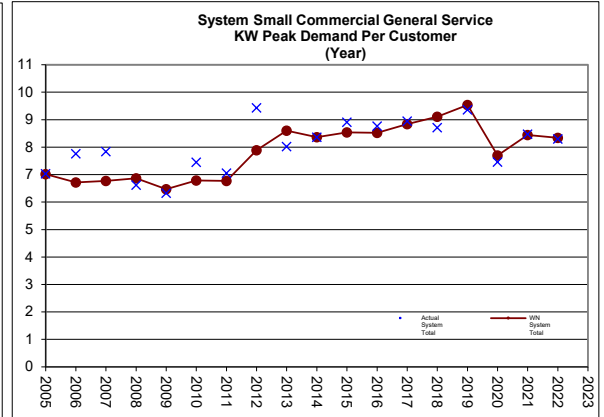
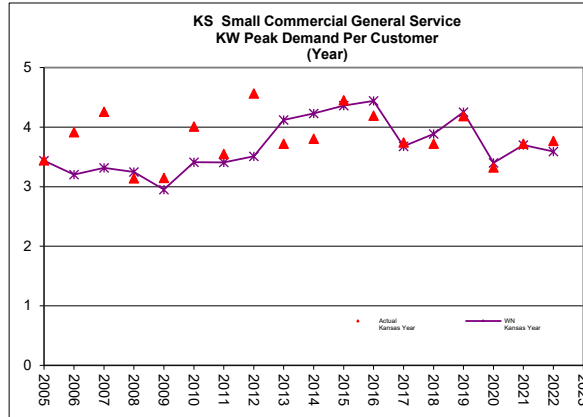
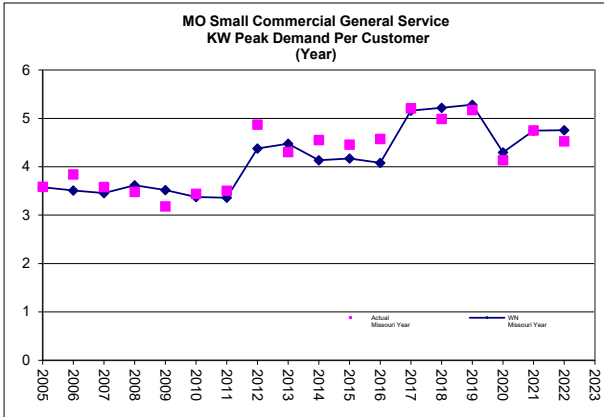
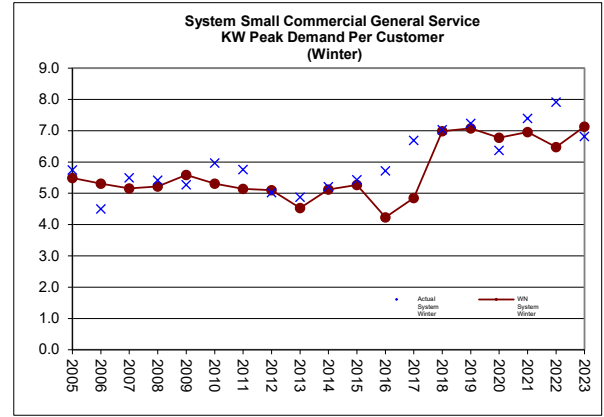
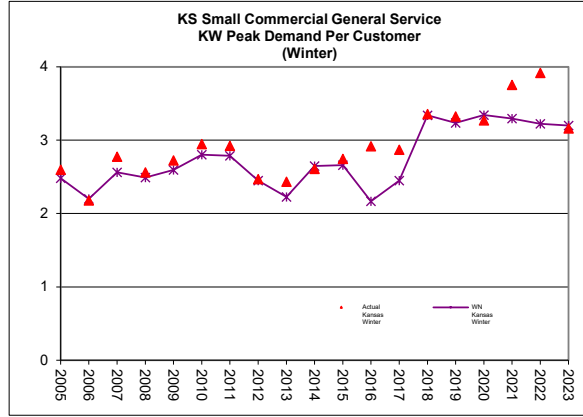
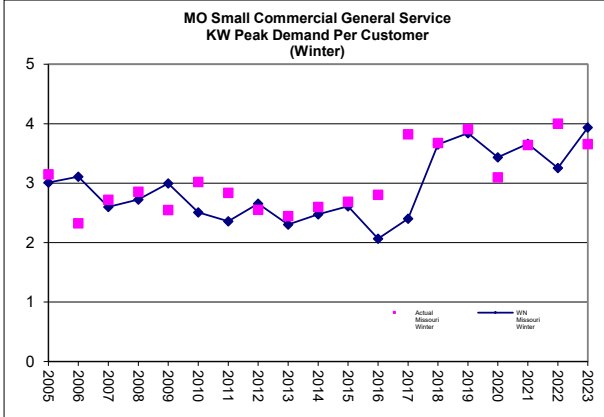
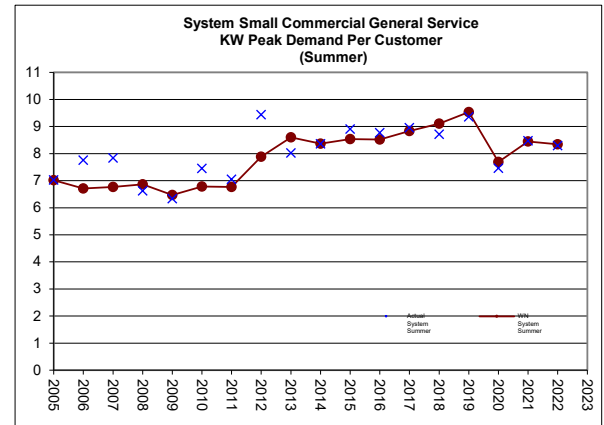
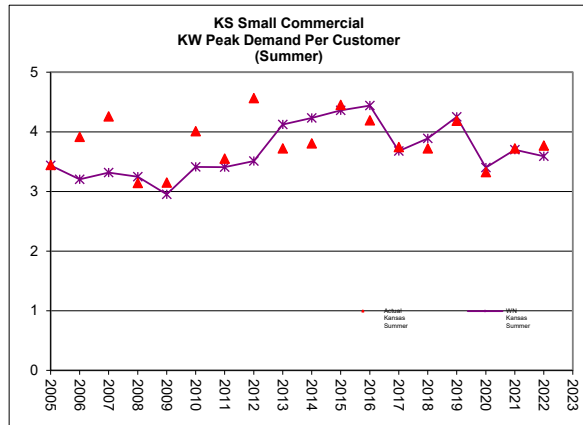
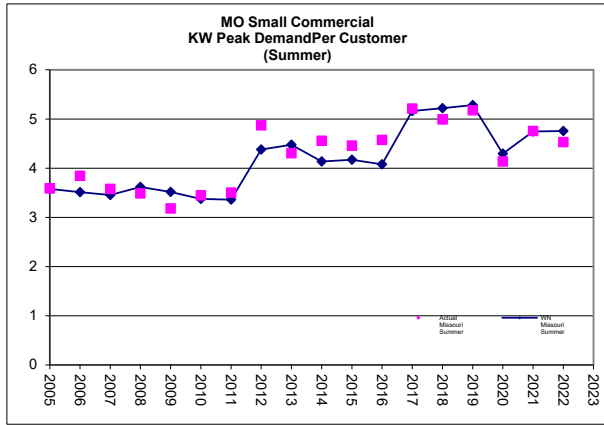
* 2023 Summer peaks are not include since they are projections. The peak month is likely to occur after the June 2023 cut off.
Winter values for 2023 are included since the 2023 winter peak likely occurred already.



**Plot 3A-21 Missouri & Kansas Small Commercial KW Peak Demand Per Customer
(Actual vs. Weather Normalized)**

Year	Actual Missouri Summer	WN Missouri Summer	Actual Missouri Winter	WN Missouri Winter	Actual Missouri Year	WN Missouri Year	Actual Kansas Summer	WN Kansas Summer	Actual Kansas Winter	WN Kansas Winter	Actual Kansas Year	WN Kansas Year	Actual System Summer	WN System Summer	Actual System Winter	WN System Winter	Actual System Total	WN System Total
2005	3.6	3.6	3.2	3.0	3.6	3.6	3.4	3.4	2.6	2.5	3.4	3.4	7.0	7.0	5.7	5.5	7.0	7.0
2006	3.8	3.5	2.3	3.1	3.8	3.5	3.9	3.2	2.2	2.2	3.9	3.2	7.8	6.7	4.5	5.3	7.8	6.7
2007	3.6	3.5	2.7	2.6	3.6	3.5	4.3	3.3	2.8	2.6	4.3	3.3	7.8	6.8	5.5	5.2	7.8	6.8
2008	3.5	3.6	2.9	2.7	3.5	3.6	3.1	3.2	2.6	2.5	3.1	3.2	6.6	6.9	5.4	5.2	6.6	6.9
2009	3.2	3.5	2.6	3.0	3.2	3.5	3.1	3.0	2.7	2.6	3.1	3.0	6.3	6.5	5.3	5.6	6.3	6.5
2010	3.4	3.4	3.0	2.5	3.4	3.4	4.0	3.4	2.9	2.8	4.0	3.4	7.5	6.8	6.0	5.3	7.5	6.8
2011	3.5	3.4	2.8	2.4	3.5	3.4	3.5	3.4	2.9	2.8	3.5	3.4	7.1	6.8	5.8	5.1	7.1	6.8
2012	4.9	4.4	2.6	2.7	4.9	4.4	4.6	3.5	2.5	2.4	4.6	3.5	9.4	7.9	5.0	5.1	9.4	7.9
2013	4.3	4.5	2.4	2.3	4.3	4.5	3.7	4.1	2.4	2.2	3.7	4.1	8.0	8.6	4.9	4.5	8.0	8.6
2014	4.6	4.1	2.6	2.5	4.6	4.1	3.8	4.2	2.6	2.6	3.8	4.2	8.4	8.4	5.2	5.1	8.4	8.4
2015	4.5	4.2	2.7	2.6	4.5	4.2	4.5	4.4	2.7	2.7	4.5	4.4	8.9	8.5	5.4	5.3	8.9	8.5
2016	4.6	4.1	2.8	2.1	4.6	4.1	4.2	4.4	2.9	2.2	4.2	4.4	8.8	8.5	5.7	4.2	8.8	8.5
2017	5.2	5.2	3.8	2.4	5.2	5.2	3.7	3.7	2.9	2.4	3.7	3.7	9.0	8.8	6.7	4.9	9.0	8.8
2018	5.0	5.2	3.7	3.6	5.0	5.2	3.7	3.9	3.4	3.3	3.7	3.9	8.7	9.1	7.0	7.0	8.7	9.1
2019	5.2	5.3	3.9	3.8	5.2	5.3	4.2	4.3	3.3	3.2	4.2	4.3	9.4	9.5	7.2	7.1	9.4	9.5
2020	4.1	4.3	3.1	3.4	4.1	4.3	3.3	3.4	3.3	3.3	3.3	3.4	7.5	7.7	6.4	6.8	7.5	7.7
2021	4.8	4.7	3.6	3.7	4.8	4.7	3.7	3.7	3.8	3.3	3.7	3.7	8.5	8.4	7.4	7.0	8.5	8.4
2022	4.5	4.8	4.0	3.3	4.5	4.8	3.8	3.6	3.9	3.2	3.8	3.6	8.3	8.3	7.9	6.5	8.3	8.3
2023			3.7	3.9					3.2	3.2					6.8	7.1		
05-'10	-0.8%	-1.2%	-0.8%	-3.6%	-0.8%	-1.2%	3.1%	-0.1%	2.6%	2.5%	3.1%	-0.1%	1.2%	-0.7%	0.8%	-0.7%	1.2%	-0.7%
10-'15	5.3%	4.3%	-2.3%	0.8%	5.3%	4.3%	2.1%	5.0%	-1.4%	-1.0%	2.1%	5.0%	3.6%	4.7%	-1.9%	-0.2%	3.6%	4.7%
15-'23	-100.0%	-100.0%	3.9%	5.3%	-100.0%	-100.0%	-100.0%	-100.0%	1.8%	2.3%	-100.0%	-100.0%	-100.0%	-100.0%	2.9%	3.9%	-100.0%	-100.0%

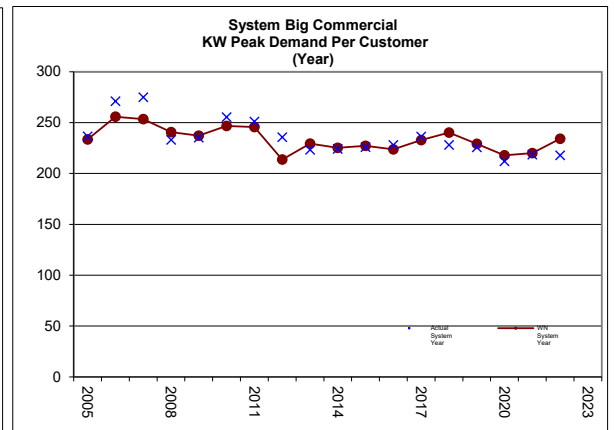
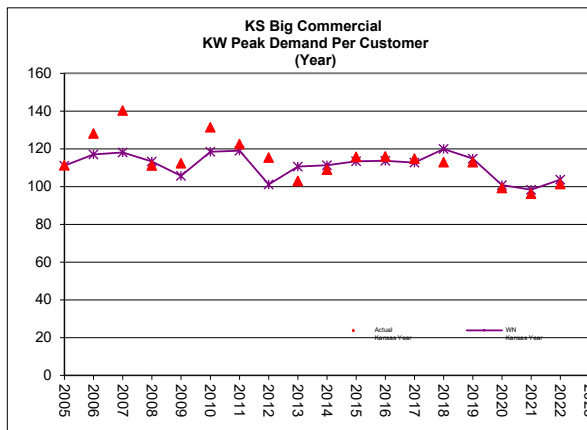
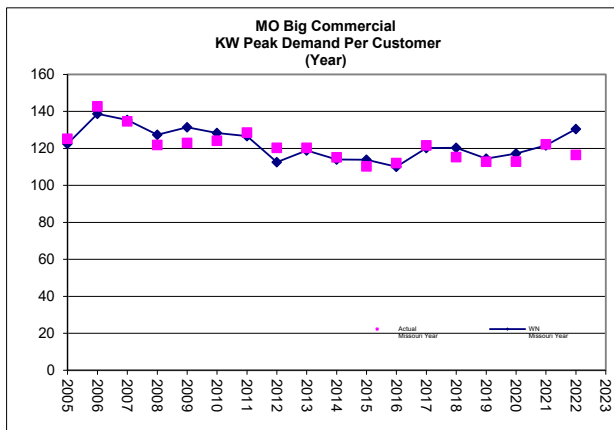
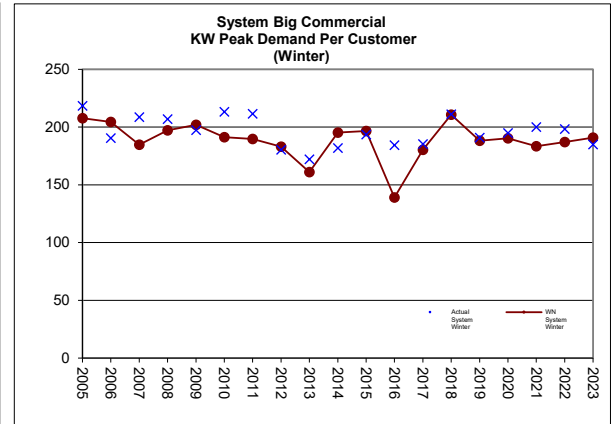
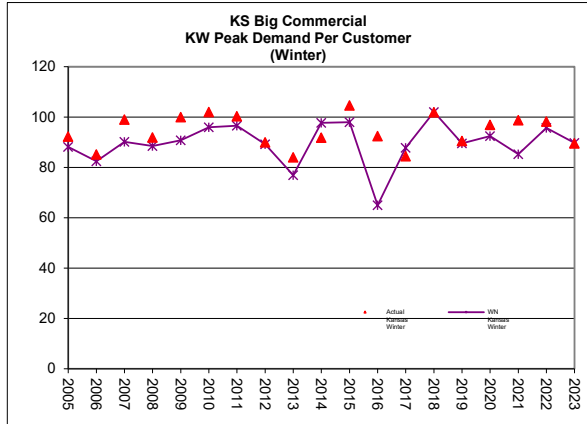
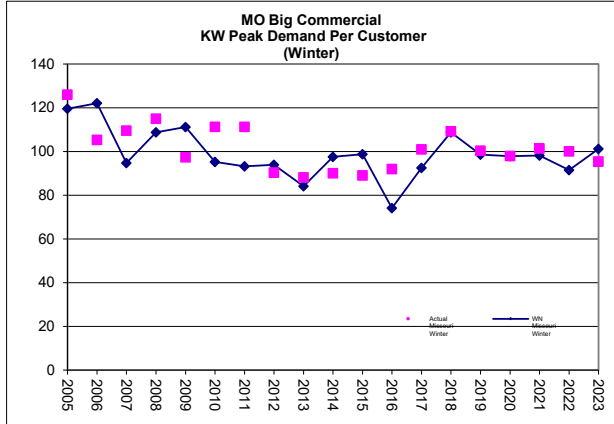
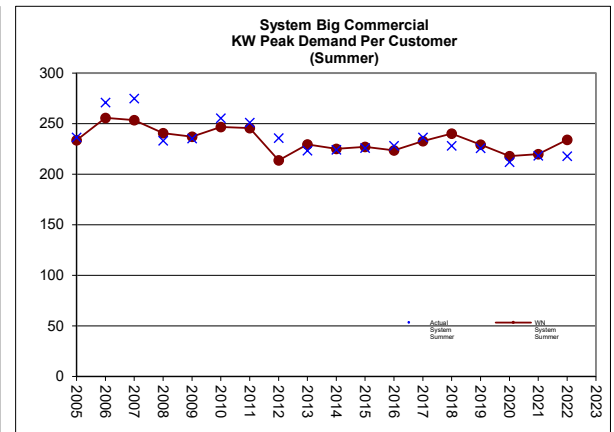
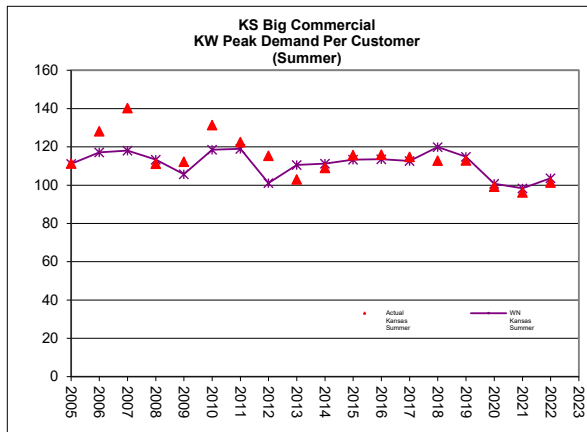
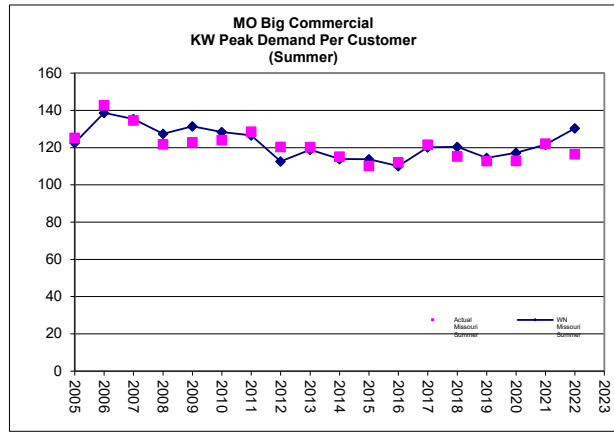
* 2023 Summer peaks are not include since they are projections. The peak month is likely to occur after the June 2023 cut off.
Winter values for 2023 are included since the 2023 winter peak likely occurred already.



**Plot 3A-22 Missouri & Kansas Big Commercial KW Peak Demand Per Customer
(Actual vs. Weather Normalized)**

Year	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
	Missouri Summer	Missouri Summer	Missouri Winter	Missouri Winter	Missouri Year	Missouri Year	Kansas Summer	Kansas Summer	Kansas Winter	Kansas Winter	Kansas Year	Kansas Year	System Summer	System Summer	System Winter	System Winter	System Year	System Year
2005	125.3	122.5	126.1	119.5	125.3	122.5	111.3	111.1	92.3	88.2	111.3	111.1	236.6	233.6	218.4	207.7	236.6	233.6
2006	142.8	138.7	105.3	122.1	142.8	138.7	128.2	117.1	85.1	82.4	128.2	117.1	271.0	255.8	190.4	204.5	271.0	255.8
2007	134.6	135.4	109.6	94.7	134.6	135.4	140.3	118.1	99.0	90.1	140.3	118.1	274.9	253.4	208.6	184.8	274.9	253.4
2008	121.9	127.4	115.0	108.8	121.9	127.4	111.2	113.3	92.0	88.4	111.2	113.3	233.1	240.7	207.0	197.2	233.1	240.7
2009	123.0	131.4	97.3	111.2	123.0	131.4	112.3	105.7	100.0	90.8	112.3	105.7	235.3	237.1	197.3	202.0	235.3	237.1
2010	124.1	128.3	111.3	95.3	124.1	128.3	131.4	118.5	102.0	95.9	131.4	118.5	255.5	246.8	213.3	191.2	255.5	246.8
2011	128.6	126.6	111.3	93.2	128.6	126.6	122.6	119.0	100.3	96.6	122.6	119.0	251.2	245.6	211.6	189.8	251.2	245.6
2012	120.4	112.5	90.3	93.9	120.4	112.5	115.4	101.1	90.0	89.2	115.4	101.1	235.7	213.7	180.3	183.1	235.7	213.7
2013	120.3	118.8	88.2	84.1	120.3	118.8	103.0	110.6	84.0	76.9	103.0	110.6	223.3	229.4	172.2	161.0	223.3	229.4
2014	115.2	113.9	90.1	97.6	115.2	113.9	109.0	111.3	91.8	97.7	109.0	111.3	224.2	225.2	181.9	195.2	224.2	225.2
2015	110.2	113.8	89.0	98.7	110.2	113.8	115.7	113.4	104.6	97.9	115.7	113.4	225.9	227.2	193.6	196.7	225.9	227.2
2016	112.1	110.1	92.0	74.1	112.1	110.1	116.0	113.6	92.5	65.0	116.0	113.6	228.1	223.7	184.5	139.0	228.1	223.7
2017	121.6	120.2	101.0	92.5	121.6	120.2	114.8	112.7	84.5	87.8	114.8	112.7	236.4	232.8	185.4	180.3	236.4	232.8
2018	115.3	120.4	109.3	108.7	115.3	120.4	112.9	119.9	101.9	102.0	112.9	119.9	228.2	240.3	211.1	210.7	228.2	240.3
2019	112.8	114.5	100.3	98.6	112.8	114.5	112.9	114.8	90.5	89.6	112.9	114.8	225.8	229.2	190.8	188.2	225.8	229.2
2020	112.9	117.2	98.0	97.8	112.9	117.2	99.2	100.7	96.9	92.4	99.2	100.7	212.1	217.9	194.8	190.3	212.1	217.9
2021	122.2	121.6	101.3	98.2	122.2	121.6	96.2	98.4	98.7	85.2	96.2	98.4	218.5	220.0	200.1	183.4	218.5	220.0
2022	116.5	130.4	100.1	91.5	116.5	130.4	101.4	103.7	98.2	95.7	101.4	103.7	217.9	234.1	198.3	187.1	217.9	234.1
2023			95.4	101.2					89.5						184.9	190.9		
05-10	-0.2%	0.9%	-2.5%	-4.4%	-0.2%	0.9%	3.4%	1.3%	2.0%	1.7%	3.4%	1.3%	1.6%	1.1%	-0.5%	-1.6%	1.6%	1.1%
10-'15	-2.3%	-2.4%	-4.4%	0.7%	-2.3%	-2.4%	-2.5%	-0.9%	0.5%	0.4%	-2.5%	-0.9%	-2.4%	-1.6%	-1.9%	0.6%	-2.4%	-1.6%
15-23	-100.0%	-100.0%	0.9%	0.3%	-100.0%	-100.0%	-100.0%	-100.0%	-1.9%	-1.1%	-100.0%	-100.0%	-100.0%	-100.0%	-0.6%	-0.4%	-100.0%	-100.0%

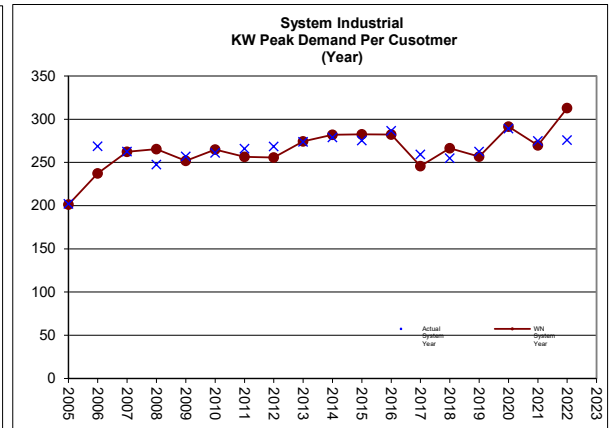
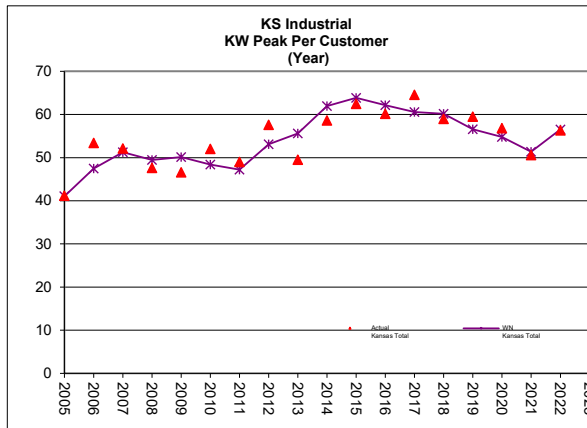
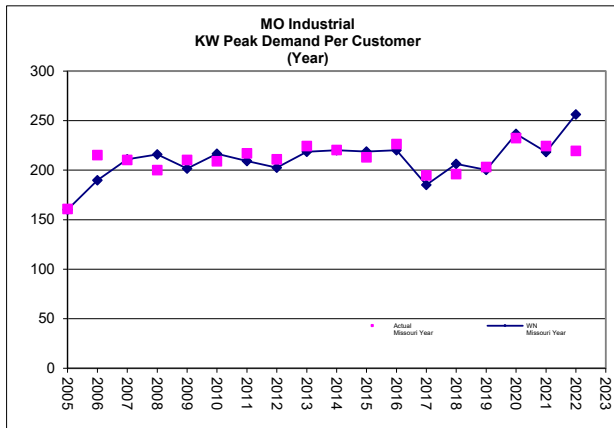
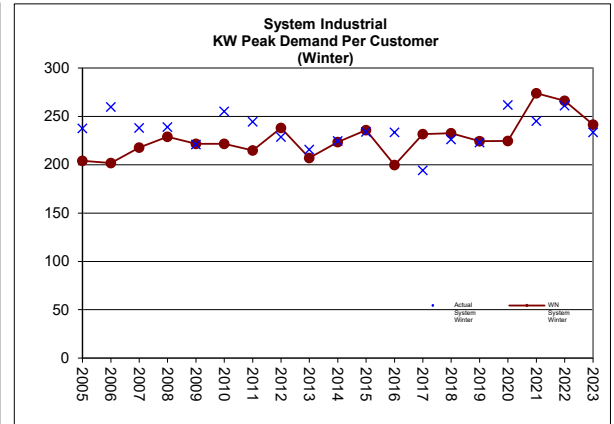
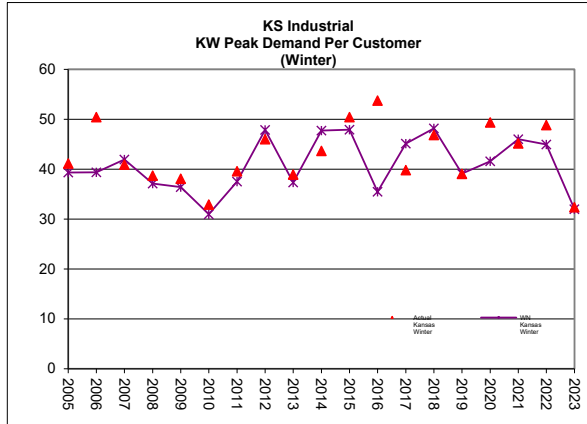
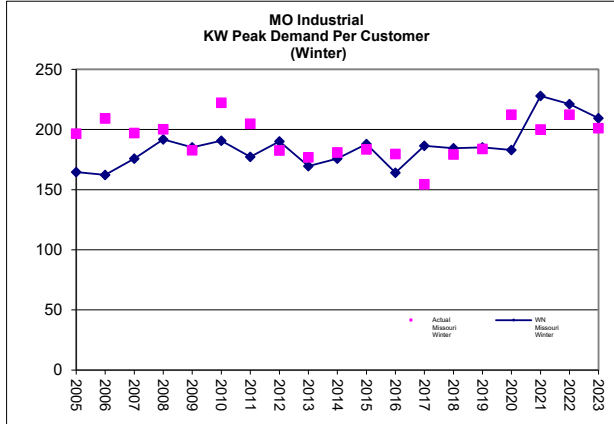
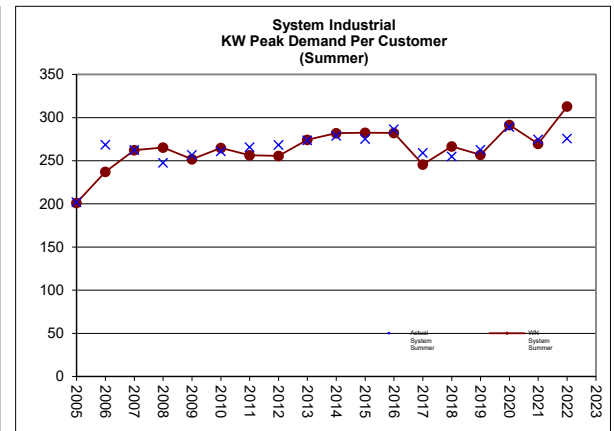
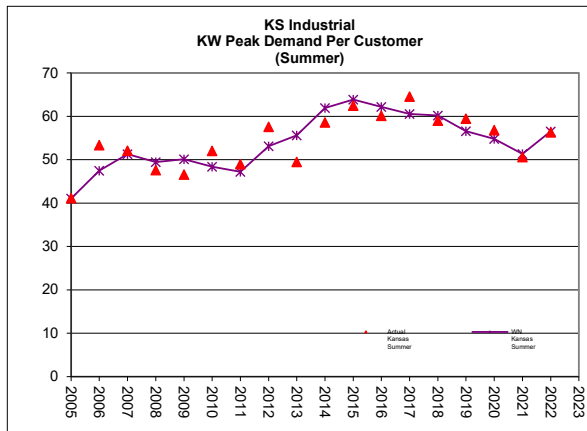
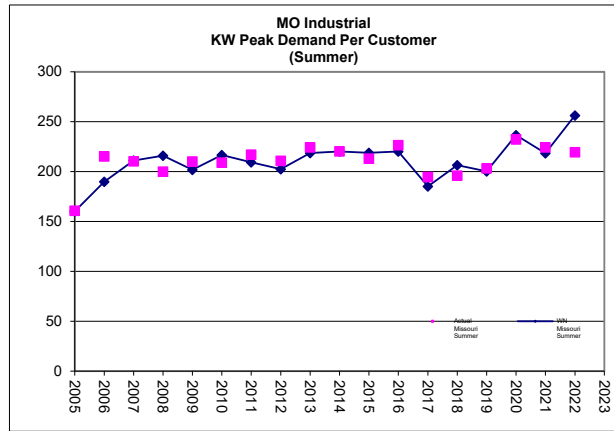
* 2023 Summer peaks are not include since they are projections. The peak month is likely to occur after the June 2023 cut off.
Winter values for 2023 are included since the 2023 winter peak likely occurred already.



**Plot 3A-23 Missouri & Kansas Industrial KW Peak Demand Per Customer
(Actual vs. Weather Normalized)**

Year	Actual		WN		Actual		WN		Actual		WN		Actual		WN		Actual		WN	
	Missouri Summer	Missouri Summer	Missouri Winter	Missouri Winter	Missouri Year	Missouri Year	Kansas Summer	Kansas Summer	Kansas Winter	Kansas Winter	Kansas Total	Kansas Total	System Summer	System Summer	System Winter	System Winter	System Year	System Year		
2005	160.9	160.2	196.5	164.6	160.9	160.2	41.2	41.1	41.1	39.3	41.2	41.1	202.1	201.2	237.7	203.9	202.1	201.2		
2006	215.3	189.7	209.3	162.3	215.3	189.7	53.4	47.5	50.4	39.4	53.4	47.5	268.7	237.2	259.7	201.7	268.7	237.2		
2007	210.4	211.0	197.0	175.7	210.4	211.0	52.1	51.3	40.9	41.9	52.1	51.3	262.5	262.2	238.0	217.7	262.5	262.2		
2008	200.0	215.9	200.2	191.8	200.0	215.9	47.6	49.4	38.7	37.1	47.6	49.4	247.6	265.3	238.9	228.9	247.6	265.3		
2009	210.2	201.7	182.8	185.2	210.2	201.7	46.6	50.1	38.1	36.4	46.6	50.1	256.9	251.9	220.9	221.6	256.9	251.9		
2010	209.1	216.5	222.2	190.6	209.1	216.5	52.0	48.4	32.9	31.0	52.0	48.4	261.1	264.9	255.1	221.6	261.1	264.9		
2011	217.0	209.3	204.8	177.3	217.0	209.3	49.0	47.2	39.6	37.5	49.0	47.2	266.0	256.5	244.4	214.8	266.0	256.5		
2012	210.9	202.5	182.6	190.1	210.9	202.5	57.6	53.1	46.0	47.9	57.6	53.1	268.5	255.6	228.6	238.0	268.5	255.6		
2013	224.3	218.6	176.8	169.6	224.3	218.6	49.5	55.6	38.9	37.3	49.5	55.6	273.8	274.3	215.7	207.0	273.8	274.3		
2014	220.4	220.1	180.9	175.7	220.4	220.1	58.6	61.9	43.7	47.7	58.6	61.9	279.0	282.0	224.6	223.5	279.0	282.0		
2015	213.0	218.7	183.6	187.9	213.0	218.7	62.5	63.9	50.4	47.9	62.5	63.9	275.4	282.6	234.0	235.9	275.4	282.6		
2016	226.5	220.1	179.7	164.2	226.5	220.1	60.1	62.1	53.7	35.5	60.1	62.1	286.6	282.2	233.5	199.6	286.6	282.2		
2017	194.7	185.1	154.5	186.5	194.7	185.1	64.6	60.6	39.8	45.1	64.6	60.6	259.2	245.7	194.3	231.6	259.2	245.7		
2018	196.0	206.4	179.3	184.4	196.0	206.4	59.0	60.2	46.8	48.2	59.0	60.2	255.0	266.5	226.2	232.6	255.0	266.5		
2019	203.2	200.2	184.0	185.2	203.2	200.2	59.5	56.6	39.1	39.1	59.5	56.6	262.7	256.8	223.0	224.3	262.7	256.8		
2020	232.3	236.6	212.4	183.0	232.3	236.6	56.8	54.8	49.4	41.6	56.8	54.8	289.1	291.4	261.7	224.6	289.1	291.4		
2021	224.3	218.4	200.0	227.9	224.3	218.4	50.6	51.3	45.2	46.0	50.6	51.3	274.9	269.8	245.2	273.9	274.9	269.8		
2022	219.6	256.3	212.3	221.1	219.6	256.3	56.3	56.5	48.8	45.0	56.3	56.5	275.9	312.8	261.1	266.1	275.9	312.8		
2023			201.2	209.5					32.4	32.0					233.5	241.5				
05-10	5.4%	6.2%	2.5%	3.0%	5.4%	6.2%	4.8%	3.3%	-4.4%	-4.7%	4.8%	3.3%	5.3%	5.7%	1.4%	1.7%	5.3%	5.7%		
10-15	0.4%	0.2%	-3.7%	-0.3%	0.4%	0.2%	3.7%	5.7%	8.9%	9.1%	3.7%	5.7%	1.1%	1.3%	-1.7%	1.3%	1.1%	1.3%		
15-23	-100.0%	-100.0%	1.1%	1.4%	-100.0%	-100.0%	-100.0%	-100.0%	-5.4%	-4.9%	-100.0%	-100.0%	-100.0%	-100.0%	0.0%	0.3%	-100.0%	-100.0%		

* 2023 Summer peaks are not include since they are projections. The peak month is likely to occur after the June 2023 cut off.
Winter values for 2023 are included since the 2023 winter peak likely occurred already.

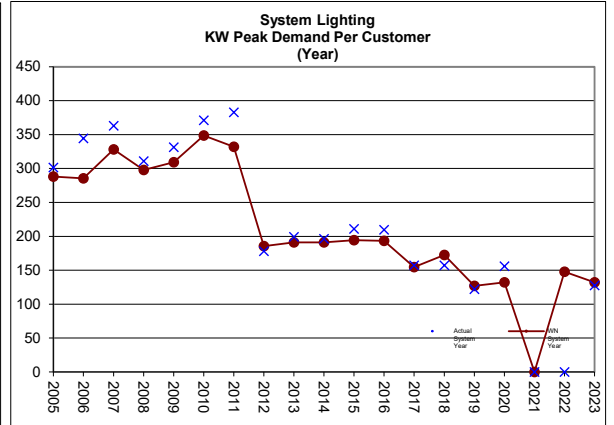
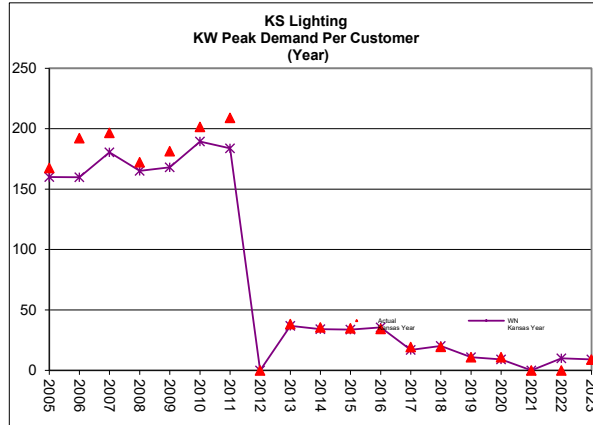
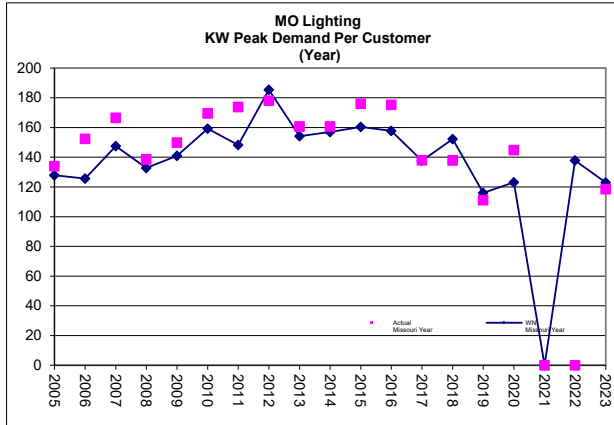
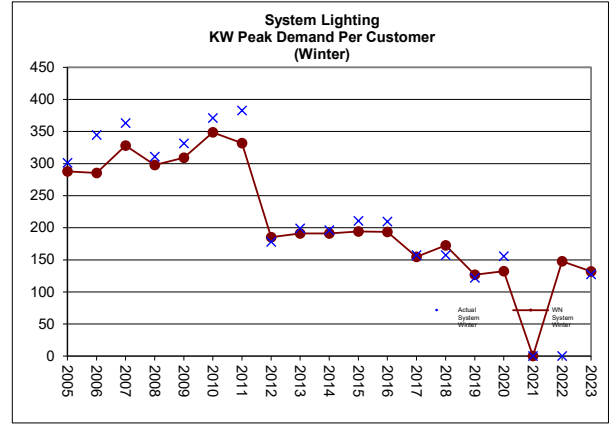
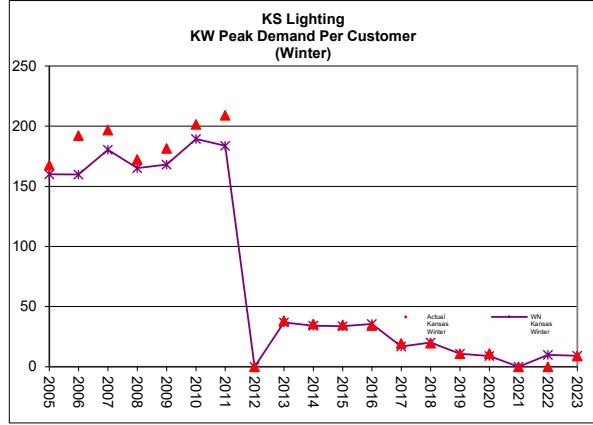
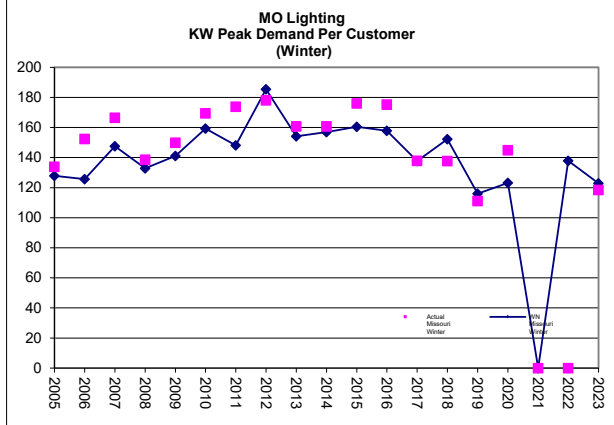
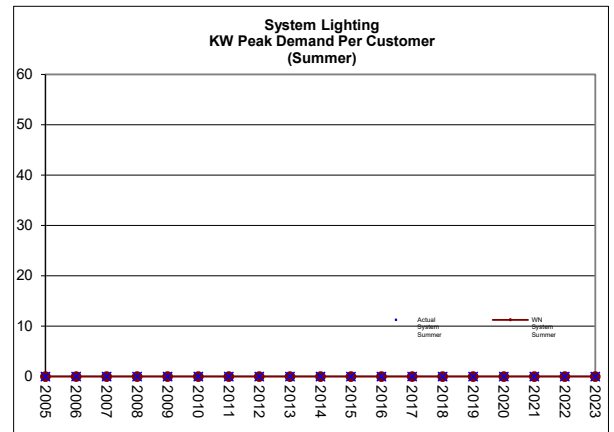
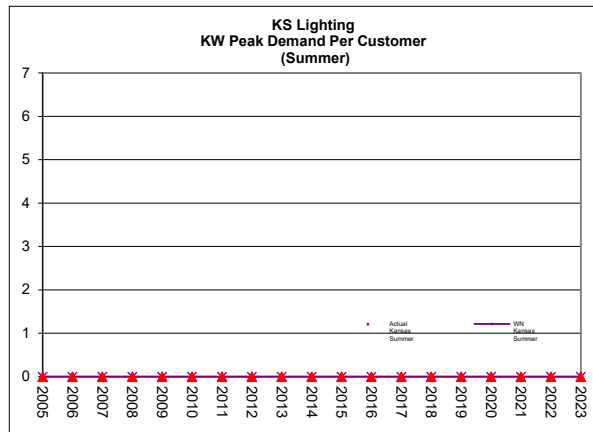
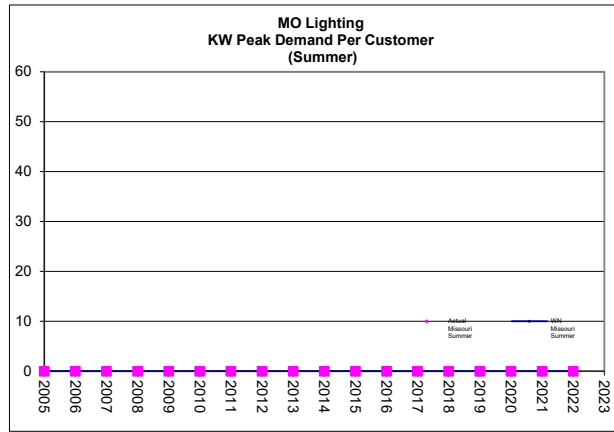


**Plot 3A-24 Missouri & Kansas Lighting KW Peak Demand Per Customer
(Actual vs. Weather Normalized)**

Year	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
	Missouri Summer	Missouri Summer	Missouri Winter	Missouri Winter	Missouri Year	Missouri Year	Kansas Summer	Kansas Summer	Kansas Winter	Kansas Winter	Kansas Year	Kansas Year	System Summer	System Summer	System Winter	System Winter	System Year	System Year
2005	0.0	0.0	133.9	127.9	133.9	127.9	0.0	0.0	167.5	160.0	167.5	160.0	0.0	0.0	301.4	288.0	301.4	288.0
2006	0.0	0.0	152.3	125.6	152.3	125.6	0.0	0.0	192.2	159.8	192.2	159.8	0.0	0.0	344.5	285.4	344.5	285.4
2007	0.0	0.0	166.5	147.5	166.5	147.5	0.0	0.0	196.6	180.5	196.6	180.5	0.0	0.0	363.1	328.0	363.1	328.0
2008	0.0	0.0	138.6	132.8	138.6	132.8	0.0	0.0	172.3	165.2	172.3	165.2	0.0	0.0	310.8	298.0	310.8	298.0
2009	0.0	0.0	149.9	141.0	149.9	141.0	0.0	0.0	181.5	168.1	181.5	168.1	0.0	0.0	331.4	309.1	331.4	309.1
2010	0.0	0.0	169.5	159.3	169.5	159.3	0.0	0.0	201.5	189.4	201.5	189.4	0.0	0.0	371.0	348.6	371.0	348.6
2011	0.0	0.0	173.8	148.2	173.8	148.2	0.0	0.0	209.0	183.7	209.0	183.7	0.0	0.0	382.8	331.9	382.8	331.9
2012	0.0	0.0	178.1	185.4	178.1	185.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	178.1	185.4	178.1	185.4
2013	0.0	0.0	160.7	154.2	160.7	154.2	0.0	0.0	38.4	36.8	38.4	36.8	0.0	0.0	199.1	191.0	199.1	191.0
2014	0.0	0.0	160.7	157.0	160.7	157.0	0.0	0.0	35.6	34.1	35.6	34.1	0.0	0.0	196.4	191.1	196.4	191.1
2015	0.0	0.0	176.0	160.4	176.0	160.4	0.0	0.0	34.8	33.7	34.8	33.7	0.0	0.0	210.8	194.2	210.8	194.2
2016	0.0	0.0	175.4	157.8	175.4	157.8	0.0	0.0	34.3	35.6	34.3	35.6	0.0	0.0	209.7	193.5	209.7	193.5
2017	0.0	0.0	137.9	137.6	137.9	137.6	0.0	0.0	19.4	16.9	19.4	16.9	0.0	0.0	157.3	154.6	157.3	154.6
2018	0.0	0.0	137.8	152.3	137.8	152.3	0.0	0.0	19.6	20.2	19.6	20.2	0.0	0.0	157.3	172.6	157.3	172.6
2019	0.0	0.0	111.1	116.0	111.1	116.0	0.0	0.0	10.8	10.9	10.8	10.9	0.0	0.0	121.9	126.9	121.9	126.9
2020	0.0	0.0	144.9	123.2	144.9	123.2	0.0	0.0	10.9	9.0	10.9	9.0	0.0	0.0	155.8	132.2	155.8	132.2
2021	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2022	0.0	0.0	0.0	137.8	0.0	137.8	0.0	0.0	0.0	9.9	0.0	9.9	0.0	0.0	0.0	147.7	0.0	147.7
2023			118.5	122.9	118.5	122.9	0.0	0.0	8.9	9.2	8.9	9.2	0.0	0.0	127.5	132.1	127.5	132.1
05-'10	#DIV/0!	#DIV/0!	4.8%	4.5%	4.8%	4.5%	#DIV/0!	#DIV/0!	3.8%	3.4%	3.8%	3.4%	#DIV/0!	#DIV/0!	4.2%	3.9%	4.2%	3.9%
10-'15	#DIV/0!	#DIV/0!	0.8%	0.1%	0.8%	0.1%	#DIV/0!	#DIV/0!	-29.6%	-29.2%	-29.6%	-29.2%	#DIV/0!	#DIV/0!	-10.7%	-11.0%	-10.7%	-11.0%
15-'23	#DIV/0!	#DIV/0!	-4.8%	-3.3%	-4.8%	-3.3%	#DIV/0!	#DIV/0!	-15.6%	-15.0%	-15.6%	-15.0%	#DIV/0!	#DIV/0!	-6.1%	-4.7%	-6.1%	-4.7%

* 2023 Summer peaks are not include since they are projections. The peak month is likely to occur after the June 2023 cut off.
Winter values for 2023 are included since the 2023 winter peak likely occurred already.

Drop in KS lighting is due to sale of lights to city of Olathe as well as LED installation

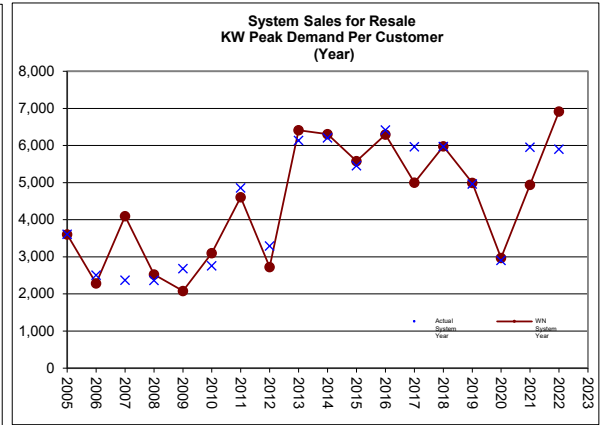
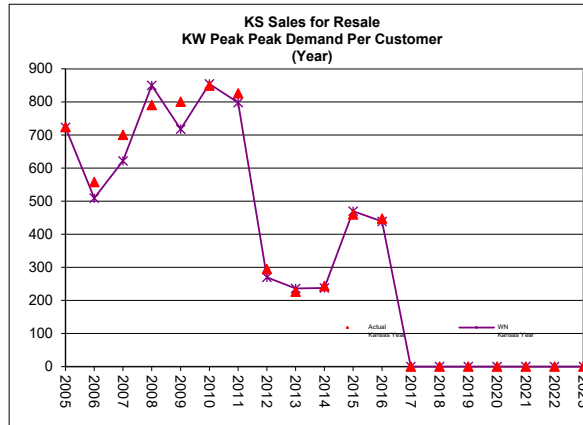
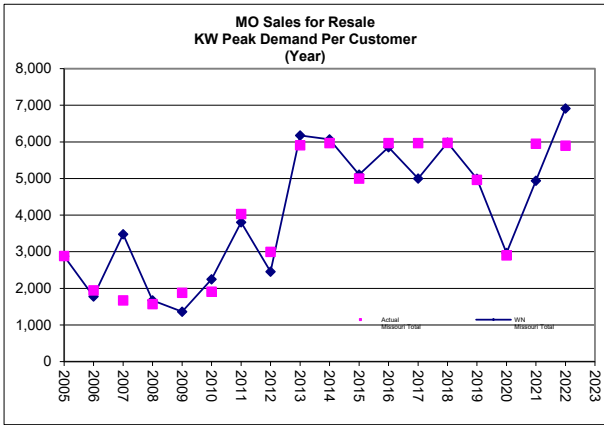
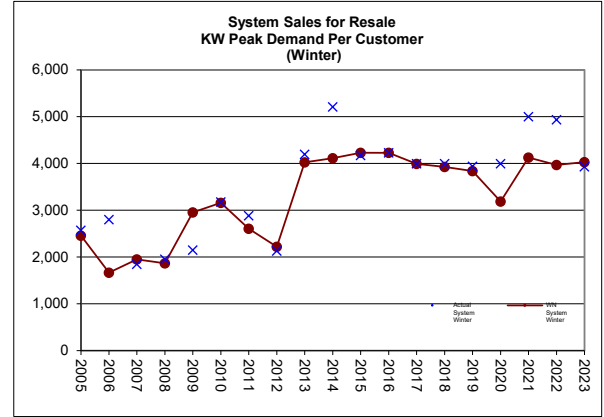
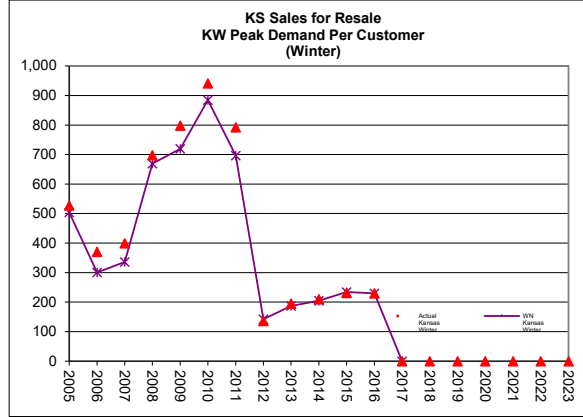
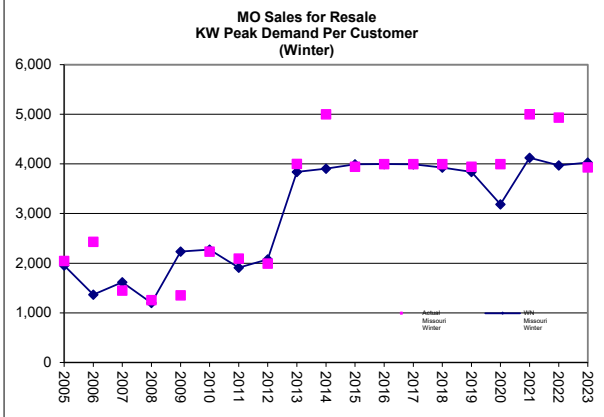
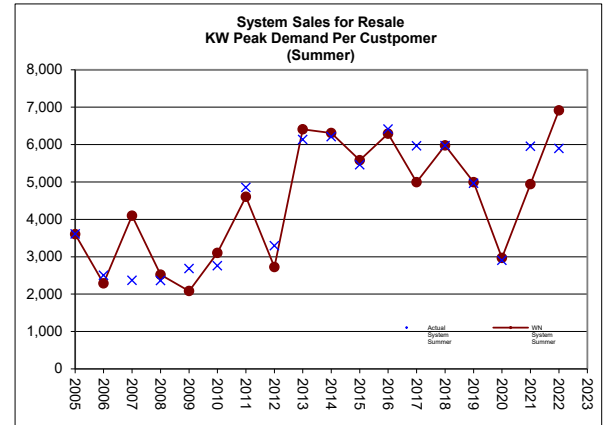
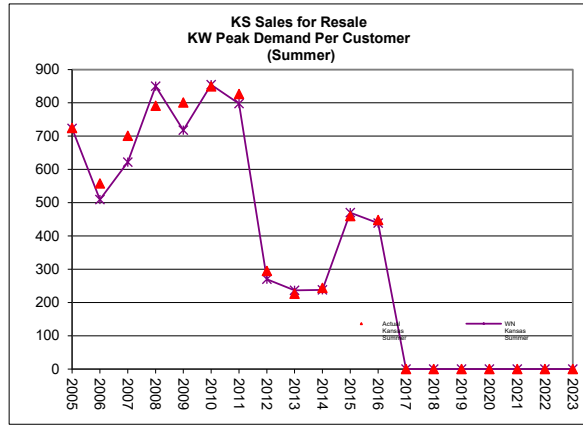
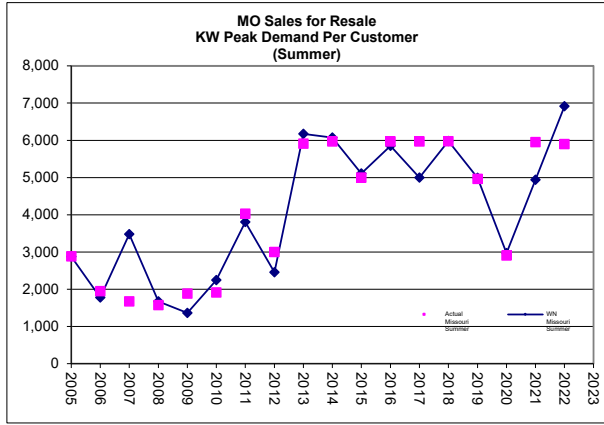


**Plot 3A-25 Missouri & Kansas Sales for Resale KW Peak Demand Per Customer
(Actual vs. Weather Normalized)**

Year	Actual		WN		Actual		WN		Actual		WN		Actual		WN		Actual		WN	
	Missouri Summer	Missouri Summer	Missouri Winter	Missouri Winter	Missouri Total	Missouri Total	Kansas Summer	Kansas Summer	Kansas Winter	Kansas Winter	Kansas Year	Kansas Year	System Summer	System Summer	System Winter	System Winter	System Year	System Year		
2005	2,883.5	2,877.5	2,045.8	1,954.5	2,883.5	2,877.5	724.5	723.0	527.3	503.7	724.5	723.0	3,608.1	3,600.5	2,573.1	2,458.3	3,608.1	3,600.5		
2006	1,945.6	1,776.8	2,431.4	1,366.7	1,945.6	1,776.8	557.9	509.5	370.9	300.5	557.9	509.5	2,503.6	2,286.3	2,802.3	1,667.2	2,503.6	2,286.3		
2007	1,669.9	3,476.2	1,449.8	1,615.6	1,669.9	3,476.2	700.6	621.8	399.2	336.4	700.6	621.8	2,370.5	4,098.0	1,848.9	1,952.0	2,370.5	4,098.0		
2008	1,572.1	1,671.3	1,258.2	1,199.4	1,572.1	1,671.3	791.0	849.7	697.8	669.0	791.0	849.7	2,363.1	2,521.0	1,956.0	1,868.4	2,363.1	2,521.0		
2009	1,880.0	1,362.8	1,351.8	2,235.6	1,880.0	1,362.8	800.8	718.0	798.3	719.4	800.8	718.0	2,680.8	2,080.8	2,150.0	2,955.0	2,680.8	2,080.8		
2010	1,910.4	2,244.7	2,235.2	2,276.1	1,910.4	2,244.7	849.5	854.5	941.4	884.7	849.5	854.5	2,759.9	3,099.2	3,176.6	3,160.8	2,759.9	3,099.2		
2011	4,028.4	3,807.0	2,093.8	1,911.6	4,028.4	3,807.0	826.3	797.8	792.6	696.1	826.3	797.8	4,854.8	4,604.8	2,886.4	2,607.6	4,854.8	4,604.8		
2012	2,998.7	2,453.2	1,994.9	2,076.8	2,998.7	2,453.2	294.9	269.9	136.3	141.9	294.9	269.9	3,293.5	2,723.1	2,131.3	2,218.7	3,293.5	2,723.1		
2013	5,907.9	6,172.6	4,000.5	3,837.5	5,907.9	6,172.6	226.5	236.6	195.0	187.1	226.5	236.6	6,134.4	6,409.2	4,195.5	4,024.5	6,134.4	6,409.2		
2014	5,965.1	6,070.7	5,000.5	3,907.0	5,965.1	6,070.7	243.6	237.8	210.0	205.1	243.6	237.8	6,208.7	6,308.5	5,210.5	4,112.1	6,208.7	6,308.5		
2015	4,997.5	5,108.8	3,942.8	3,993.2	4,997.5	5,108.8	459.8	470.0	231.6	234.6	459.8	470.0	5,457.3	5,578.8	4,174.4	4,227.8	5,457.3	5,578.8		
2016	5,967.7	5,852.5	3,998.1	3,998.1	5,967.7	5,852.5	447.6	438.9	229.9	229.9	447.6	438.9	6,415.2	6,291.5	4,227.9	4,228.0	6,415.2	6,291.5		
2017	5,965.3	4,996.1	3,999.0	3,991.8	5,965.3	4,996.1	0.0	0.0	0.0	0.0	0.0	0.0	5,965.3	4,996.1	3,999.0	3,991.8	5,965.3	4,996.1		
2018	5,971.6	5,979.3	3,995.5	3,926.7	5,971.6	5,979.3	0.0	0.0	0.0	0.0	0.0	0.0	5,971.6	5,979.3	3,995.5	3,926.7	5,971.6	5,979.3		
2019	4,963.3	4,994.5	3,942.7	3,838.2	4,963.3	4,994.5	0.0	0.0	0.0	0.0	0.0	0.0	4,963.3	4,994.5	3,942.7	3,838.2	4,963.3	4,994.5		
2020	2,902.2	2,969.5	3,998.1	3,186.9	2,902.2	2,969.5	0.0	0.0	0.0	0.0	0.0	0.0	2,902.2	2,969.5	3,998.1	3,186.9	2,902.2	2,969.5		
2021	5,951.6	4,941.9	4,999.6	4,124.8	5,951.6	4,941.9	0.0	0.0	0.0	0.0	0.0	0.0	5,951.6	4,941.9	4,999.6	4,124.8	5,951.6	4,941.9		
2022	5,898.4	6,915.0	4,934.9	3,970.9	5,898.4	6,915.0	0.0	0.0	0.0	0.0	0.0	0.0	5,898.4	6,915.0	4,934.9	3,970.9	5,898.4	6,915.0		
2023			3,931.5	4,028.0			0.0	0.0	0.0	0.0	0.0	0.0			3,931.5	4,028.0				
05-'10	-7.9%	-4.8%	1.8%	3.1%	-7.9%	-4.8%	3.2%	3.4%	12.3%	11.9%	3.2%	3.4%	-5.2%	-3.0%	4.3%	5.2%	-5.2%	-3.0%		
10-'15	21.2%	17.9%	12.0%	11.9%	21.2%	17.9%	-11.6%	-11.3%	-24.5%	-23.3%	-11.6%	-11.3%	14.6%	12.5%	5.6%	6.0%	14.6%	12.5%		
15-'23	-100.0%	-100.0%	0.0%	0.1%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-0.7%	-0.6%	-100.0%	-100.0%	

* 2023 Summer peaks are not include since they are projections. The peak month is likely to occur after the June 2023 cut off.
Winter values for 2023 are included since the 2023 winter peak likely occurred already.

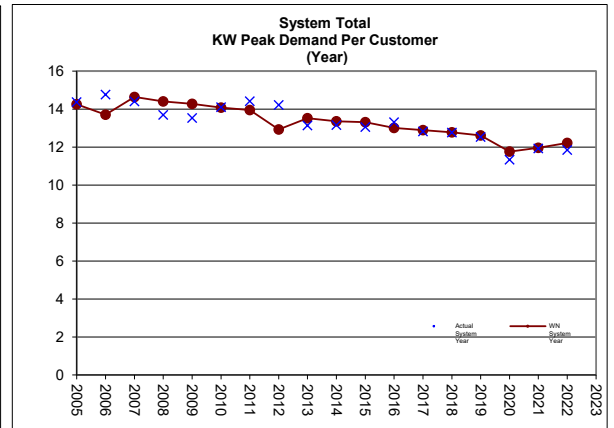
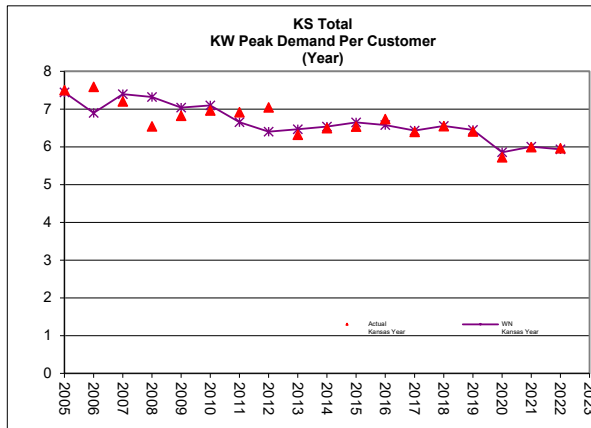
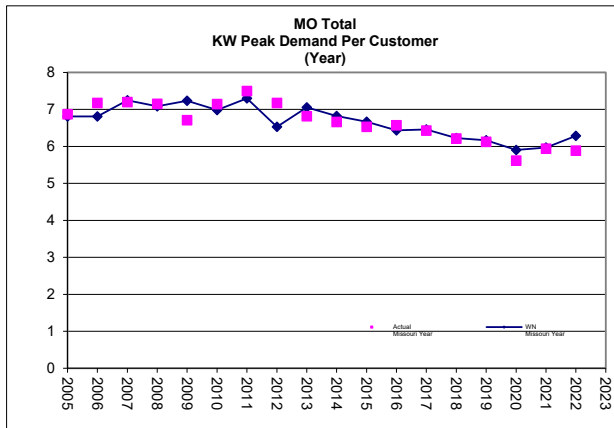
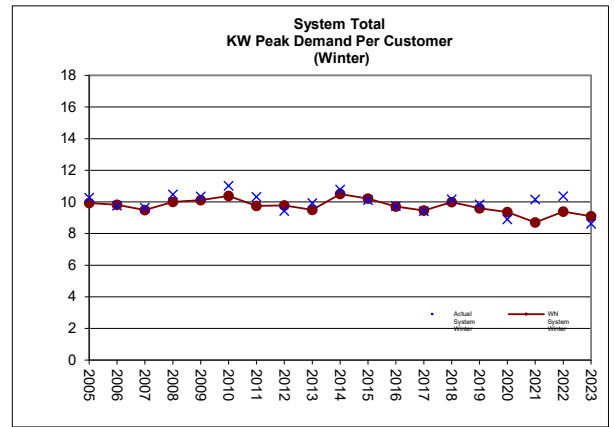
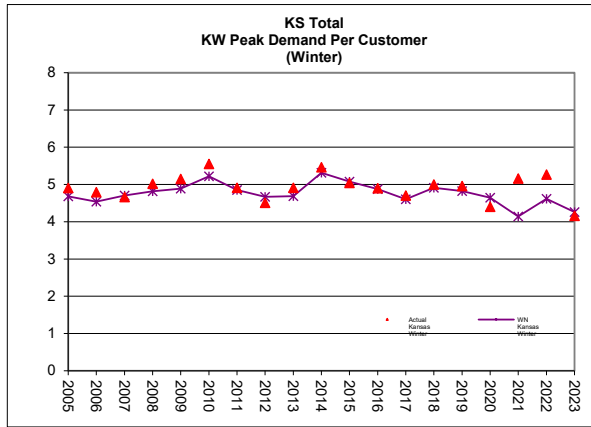
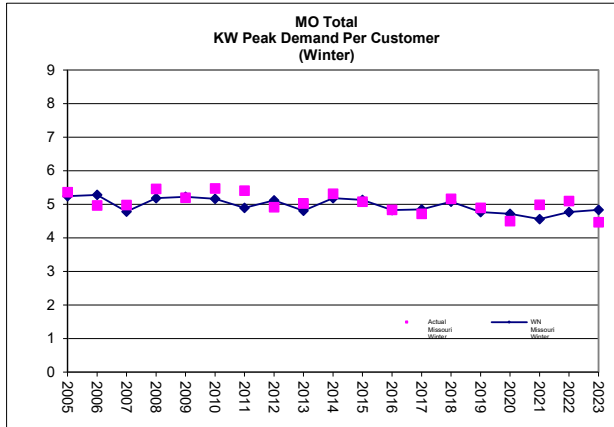
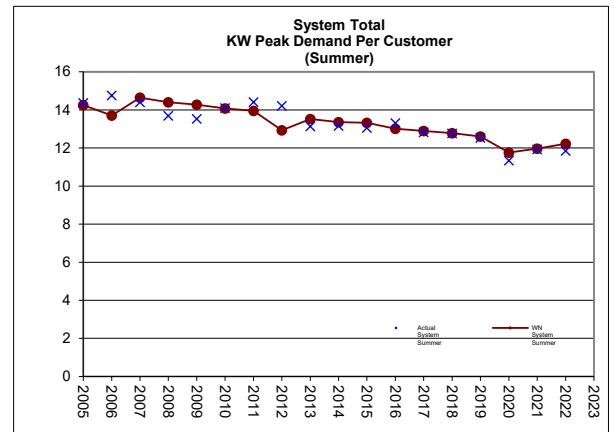
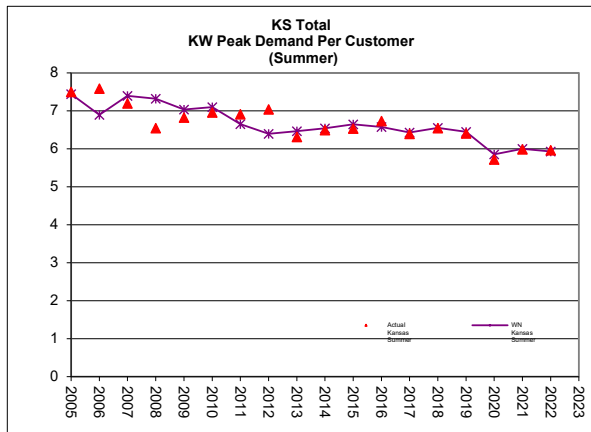
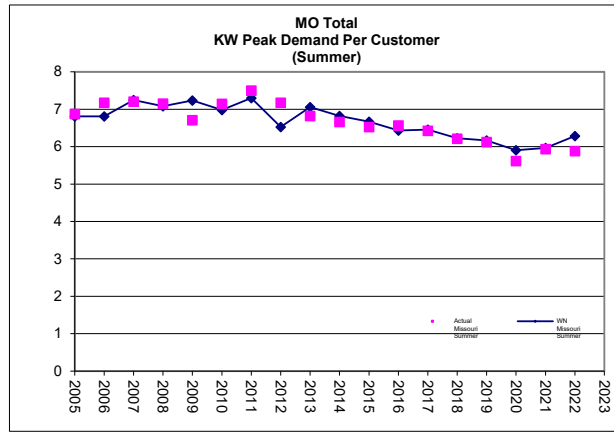
*SFR 2006 winter actual peak occurred in a different month than the weather normalized peak.
Metro Kansas has zero SFR customers as of July 2017



**Plot 3A-26 Missouri & Kansas Total KW Peak Demand Per Customer
(Actual vs. Weather Normalized)**

Year	Actual Missouri Summer	WN Missouri Summer	Actual Missouri Winter	WN Missouri Winter	Actual Missouri Year	WN Missouri Year	Actual Kansas Summer	WN Kansas Summer	Actual Kansas Winter	WN Kansas Winter	Actual Kansas Year	WN Kansas Year	Actual System Summer	WN System Summer	Actual System Winter	WN System Winter	Actual System Year	WN System Year
2005	6.9	6.8	5.4	5.2	6.9	6.8	7.5	7.4	4.9	4.7	7.5	7.4	14.4	14.3	10.3	9.9	14.4	14.3
2006	7.2	6.8	5.0	5.3	7.2	6.8	7.6	6.9	4.8	4.5	7.6	6.9	14.8	13.7	9.8	9.8	14.8	13.7
2007	7.2	7.2	5.0	4.8	7.2	7.2	7.2	7.4	4.7	4.7	7.2	7.4	14.4	14.6	9.6	9.5	14.4	14.6
2008	7.2	7.1	5.5	5.2	7.2	7.1	6.5	7.3	5.0	4.8	6.5	7.3	13.7	14.4	10.5	10.0	13.7	14.4
2009	6.7	7.2	5.2	5.2	6.7	7.2	6.8	7.0	5.2	4.9	6.8	7.0	13.5	14.3	10.3	10.1	13.5	14.3
2010	7.1	7.0	5.5	5.2	7.1	7.0	7.0	7.1	5.6	5.2	7.0	7.1	14.1	14.1	11.0	10.4	14.1	14.1
2011	7.5	7.3	5.4	4.9	7.5	7.3	6.9	6.7	4.9	4.9	6.9	6.7	14.4	14.0	10.3	9.7	14.4	14.0
2012	7.2	6.5	4.9	5.1	7.2	6.5	7.0	6.4	4.5	4.7	7.0	6.4	14.2	12.9	9.4	9.8	14.2	12.9
2013	6.8	7.1	5.0	4.8	6.8	7.1	6.3	6.5	4.9	4.7	6.3	6.5	13.1	13.5	9.9	9.5	13.1	13.5
2014	6.7	6.8	5.3	5.2	6.7	6.8	6.5	6.5	5.5	5.3	6.5	6.5	13.2	13.4	10.8	10.5	13.2	13.4
2015	6.5	6.7	5.1	5.1	6.5	6.7	6.5	6.6	5.0	5.1	6.5	6.6	13.1	13.3	10.1	10.2	13.1	13.3
2016	6.6	6.4	4.8	4.8	6.6	6.4	6.7	6.6	4.9	4.9	6.7	6.6	13.3	13.0	9.7	9.7	13.3	13.0
2017	6.4	6.5	4.7	4.8	6.4	6.5	6.4	6.4	4.7	4.6	6.4	6.4	12.8	12.9	9.4	9.5	12.8	12.9
2018	6.2	6.2	5.2	5.1	6.2	6.2	6.5	6.6	5.0	4.9	6.5	6.6	12.8	12.8	10.2	10.0	12.8	12.8
2019	6.1	6.2	4.9	4.8	6.1	6.2	6.4	6.4	5.0	4.8	6.4	6.4	12.5	12.6	9.9	9.6	12.5	12.6
2020	5.6	5.9	4.5	4.7	5.6	5.9	5.7	5.9	4.4	4.6	5.7	5.9	11.3	11.8	8.9	9.4	11.3	11.8
2021	5.9	6.0	5.0	4.6	5.9	6.0	6.0	6.0	5.2	4.1	6.0	6.0	11.9	12.0	10.1	8.7	11.9	12.0
2022	5.9	6.3	5.1	4.8	5.9	6.3	6.0	5.9	5.3	4.6	6.0	5.9	11.9	12.2	10.4	9.4	11.9	12.2
2023			4.5	4.8					4.2	4.3					8.6	9.1		
05-'10	0.8%	0.5%	0.4%	-0.3%	0.8%	0.5%	-1.5%	-0.9%	2.5%	2.2%	-1.5%	-0.9%	-0.4%	-0.2%	1.4%	0.9%	-0.4%	-0.2%
10-'15	-1.8%	-0.9%	-1.5%	-0.1%	-1.8%	-0.9%	-1.3%	-1.3%	-1.9%	-0.5%	-1.3%	-1.3%	-1.5%	-1.1%	-1.7%	-0.3%	-1.5%	-1.1%
15-'23	-100.0%	-100.0%	-1.6%	-0.7%	-100.0%	-100.0%	-100.0%	-100.0%	-2.4%	-2.2%	-100.0%	-100.0%	-100.0%	-100.0%	-2.0%	-1.4%	-100.0%	-100.0%

* 2023 Summer peaks are not include since they are projections. The peak month is likely to occur after the June 2023 cut off.
Winter values for 2023 are included since the 2023 winter peak likely occurred already.

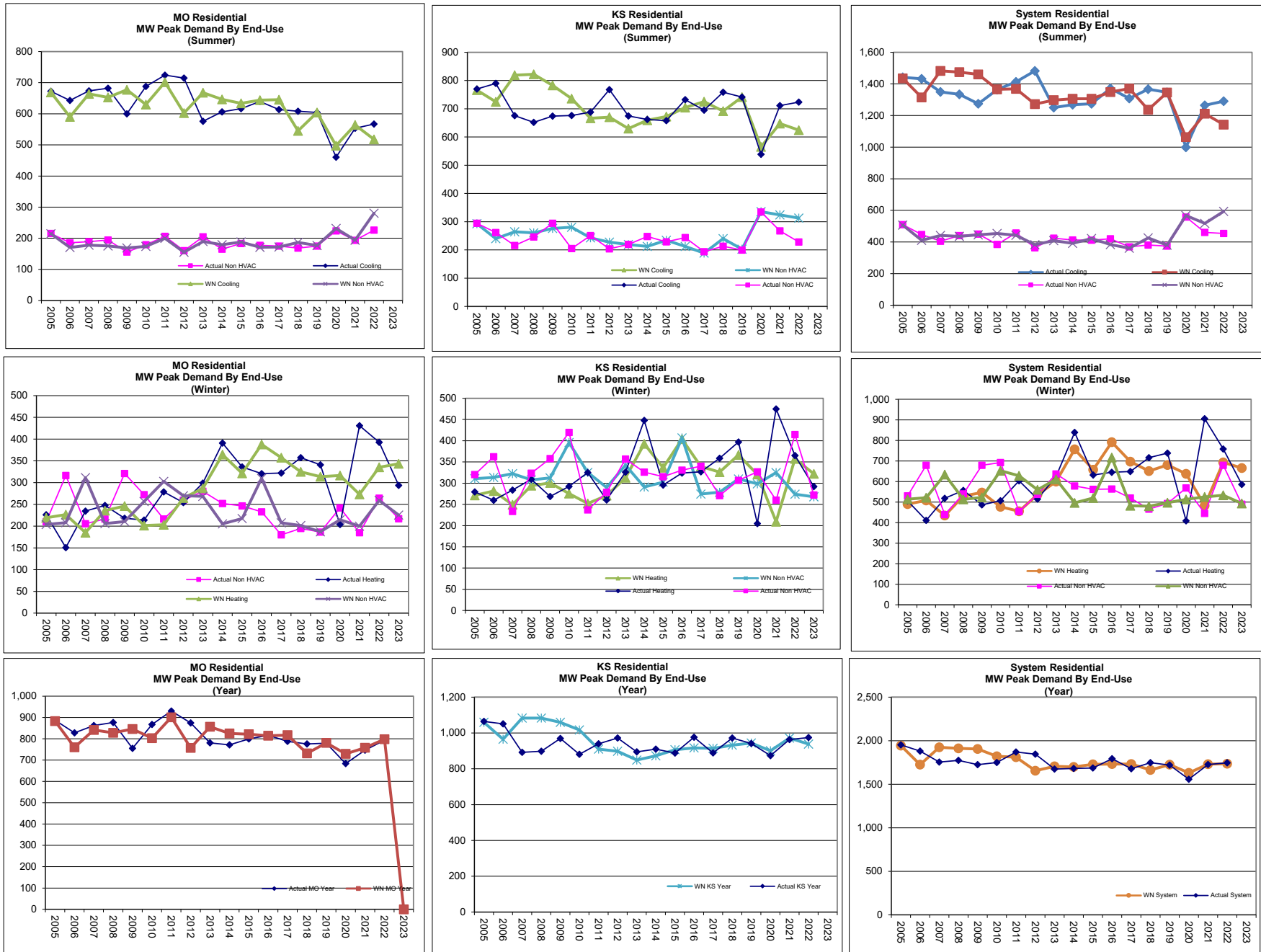


Plot 3A-27 Missouri & Kansas Residential MW Peak Demand By End-Use

Year	Missouri										Kansas									
	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year		Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	672.1	669.0	226.3	219.4	215.3	214.3	210.0	203.7	887.4	883.3	769.8	766.3	279.6	271.1	294.5	293.2	320.3	310.5	1,064.4	1,059.5
2006	642.8	590.2	150.7	226.4	185.6	170.4	316.6	208.2	828.4	760.5	789.7	725.0	259.9	281.6	261.5	240.1	362.4	313.5	1,051.2	965.1
2007	673.7	663.9	234.6	185.1	188.9	177.7	205.6	311.5	862.7	841.6	675.9	818.8	283.9	249.3	216.1	264.2	233.6	322.3	891.9	1,083.0
2008	682.3	652.7	247.6	235.6	194.2	175.4	216.4	205.9	876.5	828.2	652.1	822.2	309.0	294.0	245.9	260.7	323.4	307.7	898.0	1,082.8
2009	599.9	677.2	218.0	246.2	155.5	168.8	321.2	210.3	755.4	846.0	674.3	782.9	268.5	300.6	294.7	276.2	358.1	312.4	968.9	1,059.1
2010	687.9	629.8	213.8	201.4	179.4	173.7	272.5	256.7	867.3	803.5	676.0	735.9	292.3	275.4	205.3	280.7	419.8	395.5	881.3	1,016.5
2011	724.4	701.6	278.6	203.0	206.3	199.8	216.3	302.8	930.6	901.4	688.2	666.6	324.8	252.1	250.8	243.0	237.3	325.5	939.1	909.6
2012	714.7	602.5	254.4	264.8	159.9	155.0	259.3	270.0	874.6	757.6	767.7	670.2	260.3	271.0	203.9	227.7	278.3	289.7	971.6	897.9
2013	576.0	667.7	299.0	286.8	204.8	189.3	280.0	268.6	780.8	857.0	674.5	629.6	326.0	312.8	219.6	219.1	357.0	342.5	894.1	848.7
2014	606.5	646.5	391.0	364.3	165.0	179.1	252.0	205.1	771.5	825.6	662.1	659.7	448.0	392.7	247.6	212.5	326.0	291.1	909.7	872.2
2015	616.7	633.5	336.1	321.4	182.9	188.0	246.4	217.6	799.6	821.5	657.7	672.3	295.7	336.4	228.9	234.0	315.4	302.5	887.6	906.3
2016	639.5	643.8	320.8	387.8	177.0	170.7	232.9	309.9	816.6	814.5	732.0	704.3	323.8	403.8	243.7	212.6	330.8	406.8	975.7	916.9
2017	613.4	645.5	321.9	357.3	175.0	171.9	180.0	207.6	788.4	817.4	695.0	725.4	326.9	339.3	193.9	188.9	339.9	274.4	888.8	914.3
2018	608.1	545.1	357.6	324.9	168.2	186.4	194.8	201.2	776.3	731.5	758.4	691.6	358.6	325.9	213.0	240.2	270.7	278.8	971.4	931.8
2019	604.5	604.3	341.0	313.8	174.7	176.8	186.3	187.1	779.2	781.1	741.5	741.2	397.2	366.5	199.5	202.8	306.5	309.9	941.0	944.0
2020	460.5	497.9	203.9	316.6	223.5	231.6	241.9	214.6	683.9	729.5	538.8	565.2	204.9	320.8	334.7	335.5	326.8	298.5	873.6	900.7
2021	553.5	564.4	431.0	273.3	193.4	193.7	185.0	200.1	746.9	758.1	711.2	647.4	475.0	209.3	267.8	324.2	260.0	324.8	963.7	971.6
2022	567.2	517.6	392.8	335.5	226.1	280.6	264.5	259.1	793.3	798.2	723.5	624.3	365.2	357.4	228.1	313.1	414.5	274.0	974.0	937.5
2023			293.9	343.4			217.2	225.6		0.0			291.9	322.2			272.3	267.9		
05-'10	0.0%	-0.2%	0.7%	-3.3%	-2.6%	-3.7%	-0.4%	8.9%	-0.6%	-1.0%	-2.6%	1.3%	0.3%	-1.7%	-6.0%	-2.1%	-6.1%	0.7%	-3.5%	0.4%
10-'15	-2.2%	0.1%	9.5%	9.8%	0.4%	1.6%	-2.0%	-3.2%	-1.6%	0.4%	-0.5%	-1.8%	0.2%	4.1%	2.2%	-3.6%	-5.6%	-5.2%	0.1%	-2.3%
15-'23	-100.0%	-100.0%	-1.7%	0.8%	-100.0%	-100.0%	-1.6%	0.4%	-100.0%	-100.0%	-100.0%	-100.0%	-0.2%	-0.5%	-100.0%	-100.0%	-1.8%	-1.5%	-100.0%	-100.0%

* 2023 Summer peaks are not include since they are projections. The peak month occurred after the June 2023 cut off.
 Winter values are include since the peak occurred in January 2023.

Year	System									
	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	1,441.9	1,435.4	505.8	490.4	509.8	507.5	530.3	514.2	1,951.7	1,942.8
2006	1,432.5	1,315.1	410.6	508.0	447.1	410.5	679.0	521.6	1,879.6	1,725.6
2007	1,349.6	1,482.7	518.5	434.4	405.0	441.9	439.2	633.8	1,754.6	1,924.6
2008	1,334.3	1,474.9	556.7	529.6	440.1	436.1	539.8	513.5	1,774.5	1,911.0
2009	1,274.1	1,460.1	486.5	546.8	450.2	445.0	679.3	522.7	1,724.3	1,905.0
2010	1,363.9	1,365.7	506.1	476.8	384.7	454.4	692.3	652.2	1,748.6	1,820.0
2011	1,412.6	1,368.2	603.4	455.1	457.1	442.7	453.6	628.2	1,869.7	1,810.9
2012	1,482.3	1,272.7	514.7	535.8	363.8	382.7	537.6	559.7	1,846.2	1,655.4
2013	1,250.5	1,297.3	625.1	599.6	424.4	408.4	637.1	611.1	1,674.9	1,705.7
2014	1,268.6	1,306.2	839.1	757.0	412.6	391.6	578.1	496.2	1,681.2	1,697.8
2015	1,274.4	1,305.8	631.8	657.9	411.8	422.0	561.8	520.1	1,686.2	1,727.8
2016	1,371.6	1,348.0	644.7	791.6	420.7	383.3	563.7	716.7	1,792.3	1,731.4
2017	1,308.4	1,370.9	648.8	696.6	368.9	360.7	519.9	482.0	1,677.3	1,731.7
2018	1,366.5	1,236.7	716.2	650.8	381.2	426.5	465.5	480.0	1,747.7	1,663.2
2019	1,346.0	1,345.5	738.3	680.3	374.2	379.6	492.8	497.0	1,720.3	1,725.1
2020	999.3	1,063.1	408.8	637.4	558.2	567.2	568.7	513.1	1,557.5	1,630.2
2021	1,264.7	1,211.7	905.9	482.6	461.2	517.9	445.0	524.9	1,726.0	1,729.6
2022	1,290.8	1,142.0	758.0	692.9	454.2	593.7	679.0	533.1	1,744.9	1,735.7
2023			585.8	665.6			489.5	493.4		
05-'10	-1.3%	0.7%	0.5%	-2.4%	-4.5%	-2.7%	-3.7%	4.3%	-2.1%	-0.2%
10-'15	-1.3%	-0.9%	4.5%	6.7%	1.4%	-1.5%	-4.1%	-4.4%	-0.7%	-1.0%
15-'23	-100.0%	-100.0%	-0.9%	0.1%	-100.0%	-100.0%	-1.7%	-0.7%	-100.0%	-100.0%



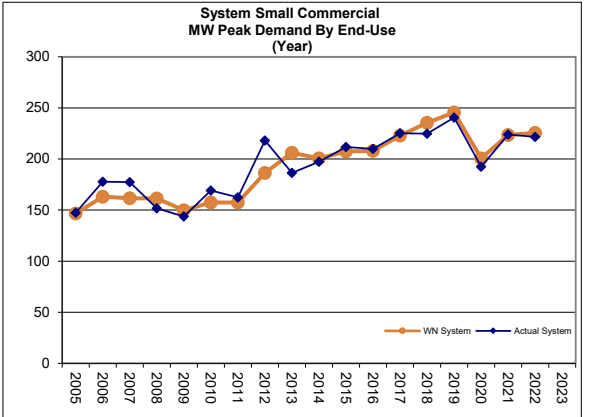
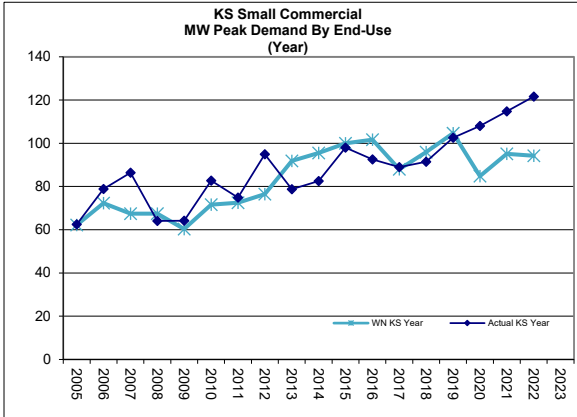
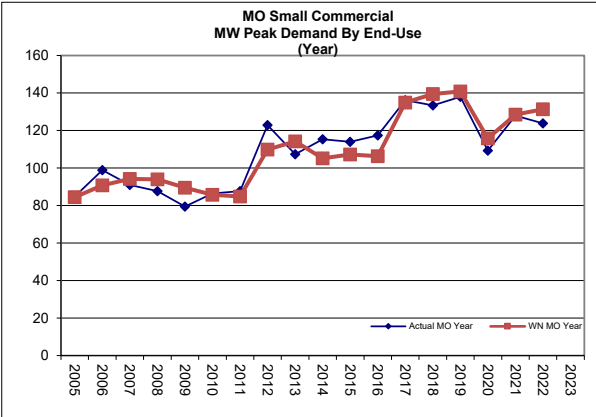
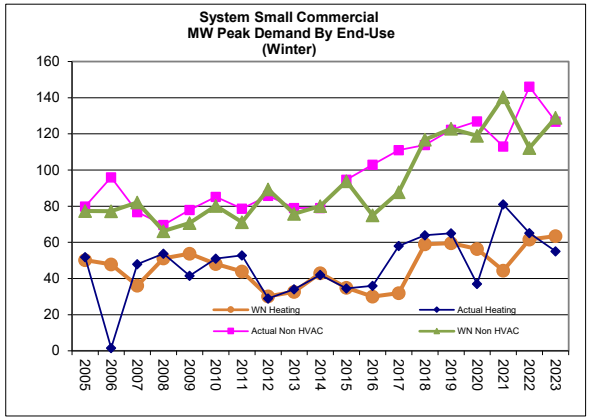
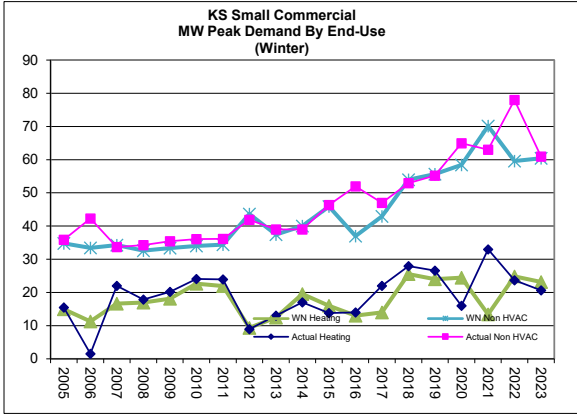
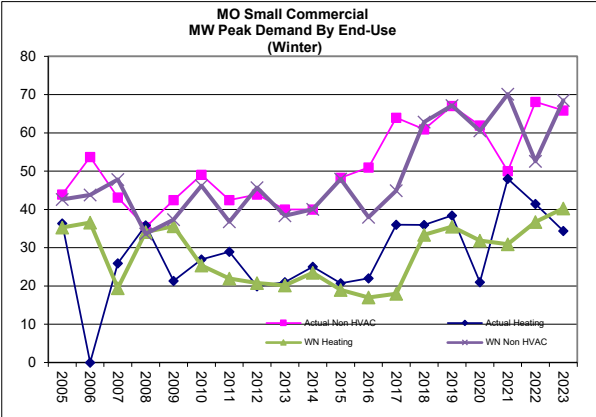
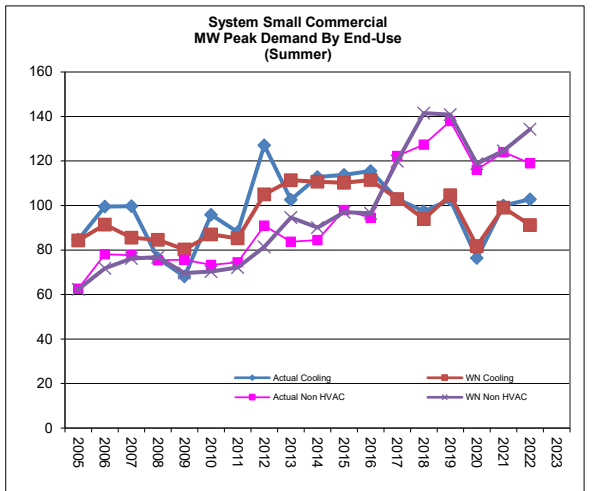
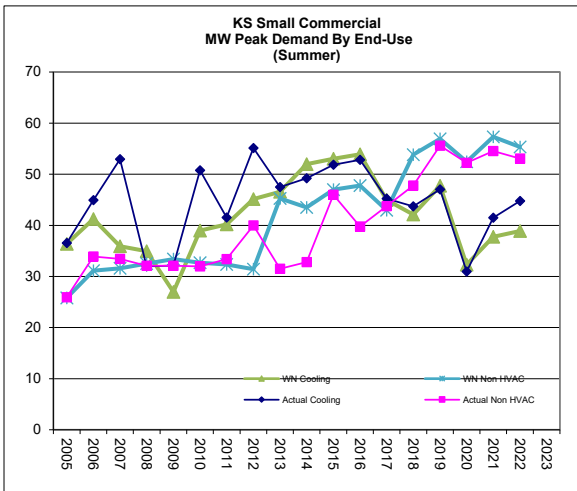
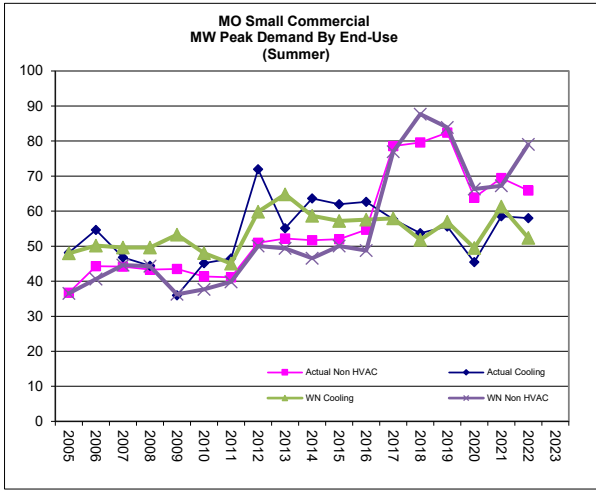
Plot 3A-28 Missouri & Kansas Small Commercial MW Peak Demand By End-Use

Year	Missouri										Kansas									
	Cooling		Heating		Non-HVAC Summ		Non-HVAC Wint		Year		Cooling		Heating		Non-HVAC Summ		Non-HVAC Wint		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	48.2	47.9	36.4	35.3	36.7	36.5	43.9	42.6	84.8	84.5	36.5	36.4	15.4	15.0	25.9	25.8	35.9	34.8	62.5	62.2
2006	54.6	50.2	0.0	36.6	44.3	40.6	53.7	43.8	98.9	90.8	44.9	41.2	1.5	11.3	33.9	31.1	42.3	33.4	78.8	72.4
2007	46.8	49.6	25.9	19.4	44.2	44.6	43.1	47.8	91.0	94.2	52.9	35.9	22.0	16.6	33.4	31.6	33.7	34.3	86.4	67.5
2008	44.4	49.6	35.8	34.1	43.3	44.3	35.3	33.6	87.7	93.9	31.9	34.9	17.8	17.0	32.1	32.5	34.3	32.6	64.0	67.4
2009	35.9	53.3	21.3	35.6	43.5	36.2	42.4	37.4	79.5	89.5	32.1	27.0	20.2	18.1	32.1	33.4	35.4	33.4	64.2	60.3
2010	45.1	48.0	26.9	25.3	41.3	37.7	49.0	46.2	86.5	85.7	50.8	39.0	24.1	22.7	32.0	32.7	36.1	34.0	82.7	71.6
2011	46.5	45.0	28.9	21.9	41.1	39.8	42.5	36.8	87.6	84.9	41.5	40.2	23.9	22.0	33.4	32.3	36.2	34.4	74.9	72.6
2012	72.0	59.9	19.9	20.8	51.0	50.0	43.9	45.7	122.9	109.9	55.1	45.1	9.0	9.3	40.0	31.4	41.9	43.6	95.0	76.5
2013	55.1	64.8	21.0	20.1	52.2	49.4	40.0	38.4	107.3	114.2	47.5	46.6	13.0	12.5	31.5	45.3	39.0	37.4	78.8	91.8
2014	63.6	58.7	25.0	23.4	51.7	46.5	40.0	40.0	115.3	105.2	49.2	52.0	17.0	19.5	32.8	43.5	39.0	40.0	82.5	95.5
2015	62.0	57.2	20.7	19.0	52.0	50.1	48.3	47.9	113.9	107.3	51.9	53.0	13.8	16.0	46.0	47.0	46.3	45.9	98.0	100.0
2016	62.7	57.6	22.0	17.0	54.7	48.8	51.0	38.0	117.4	106.3	52.8	53.9	14.0	13.0	39.8	47.8	52.0	37.0	92.5	101.7
2017	57.7	58.0	36.0	18.0	78.5	76.9	64.0	44.9	136.2	134.9	45.2	45.0	22.0	14.0	43.7	43.0	47.0	42.9	89.0	87.9
2018	53.7	51.8	36.0	33.4	79.6	87.7	60.9	62.8	133.4	139.5	43.7	42.1	28.0	25.5	47.8	53.8	52.9	54.0	91.5	95.9
2019	55.6	56.9	38.4	35.5	82.4	83.9	67.0	67.2	138.0	140.8	47.0	47.7	26.6	24.0	55.6	56.9	55.2	55.7	102.6	104.7
2020	45.5	49.5	21.0	31.9	63.8	66.3	62.0	60.6	109.3	115.8	31.0	32.3	16.0	24.4	52.2	52.5	65.0	58.4	108.0	84.8
2021	58.5	61.3	48.0	30.9	69.4	67.2	50.0	70.1	128.0	128.5	41.5	37.8	33.0	13.4	54.6	57.3	63.0	70.1	114.8	95.1
2022	58.0	52.4	41.5	36.7	65.9	79.0	68.1	52.6	123.9	131.4	44.8	38.9	23.7	24.8	53.1	55.3	78.0	59.6	121.6	94.2
2023			34.4	40.3			65.9	68.5					20.6	23.2			60.9	60.4		
05-'10	-0.6%	0.7%	-6.5%	-11.2%	3.8%	4.1%	-0.4%	2.3%	1.4%	2.2%	7.7%	-0.3%	7.3%	2.1%	5.2%	4.1%	-1.2%	-0.3%	6.7%	1.7%
10-'15	6.5%	3.6%	-5.1%	-5.6%	4.7%	5.8%	-0.3%	0.7%	5.7%	4.6%	0.4%	6.4%	-10.5%	-6.8%	7.5%	7.6%	5.1%	6.2%	3.4%	6.9%
15-'23	-100.0%	-100.0%	6.6%	9.9%	-100.0%	-100.0%	4.0%	4.6%	-100.0%	-100.0%	-100.0%	-100.0%	5.2%	4.8%	-100.0%	-100.0%	3.5%	3.5%	-100.0%	-100.0%

* 2023 Summer peaks are not include since they are projections. The peak month occurred after the June 2023 cut off.
 Winter values are include since the peak occurred in January 2023.

* Small Commercial did not have a coincident peak at the time of the system in 2006 due to the system peak occurring in November.
 The peak usually occurs in January or December

Year	System									
	Cooling		Heating		Non-HVAC Summ		Non-HVAC Wint		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	84.7	84.3	51.8	50.2	62.6	62.3	79.8	77.4	147.3	146.6
2006	99.6	91.4	1.5	47.9	78.2	71.8	96.0	77.2	177.7	163.2
2007	99.8	85.5	47.9	36.1	77.6	76.2	76.8	82.1	177.4	161.7
2008	76.4	84.6	53.7	51.1	75.4	76.8	69.6	66.2	151.8	161.4
2009	68.1	80.3	41.5	53.7	75.6	69.6	77.9	70.7	143.7	149.9
2010	95.9	87.0	51.0	48.0	73.3	70.4	85.1	80.2	169.2	157.4
2011	88.0	85.2	52.8	43.9	74.5	72.2	78.6	71.2	162.5	157.4
2012	127.1	105.0	28.9	30.1	91.0	81.4	85.8	89.3	218.1	186.4
2013	102.6	111.4	34.0	32.6	83.7	94.6	79.0	75.8	186.3	206.0
2014	112.9	110.7	42.0	43.0	84.5	90.0	79.0	80.1	197.4	200.7
2015	113.8	110.2	34.5	34.9	98.0	97.1	94.6	93.8	211.8	207.3
2016	115.5	111.5	36.0	30.0	94.5	96.6	102.9	75.0	210.0	208.0
2017	102.9	102.9	58.0	31.9	122.3	119.9	111.0	87.8	225.2	222.8
2018	97.4	93.9	63.9	58.9	127.4	141.5	113.9	116.8	224.8	235.4
2019	102.6	104.7	65.1	59.5	138.0	140.8	122.2	122.8	240.6	245.5
2020	76.4	81.8	37.0	56.3	116.1	118.8	126.9	119.0	192.5	200.6
2021	100.0	99.1	81.0	44.3	124.0	124.5	113.0	140.2	224.0	223.6
2022	102.8	91.2	65.1	61.5	119.0	134.3	146.1	112.2	221.7	225.6
2023			55.0	63.4			126.8	128.9		
05-'10	3.3%	0.3%	-1.5%	-6.4%	4.4%	4.1%	-0.8%	1.2%	3.8%	2.0%
10-'15	3.5%	4.8%	-7.5%	-6.2%	6.0%	6.6%	2.1%	3.2%	4.6%	5.7%
15-'23	-100.0%	-100.0%	6.0%	7.7%	-100.0%	-100.0%	3.7%	4.0%	-100.0%	-100.0%



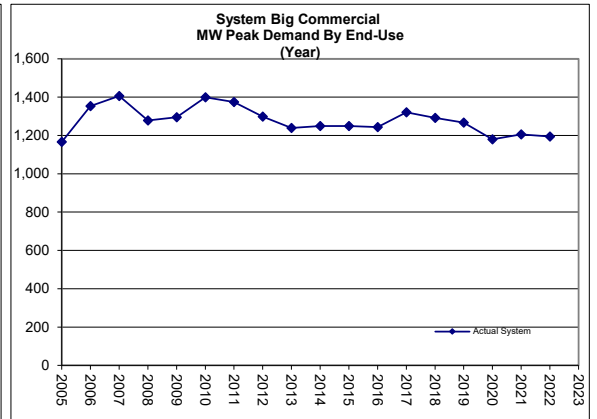
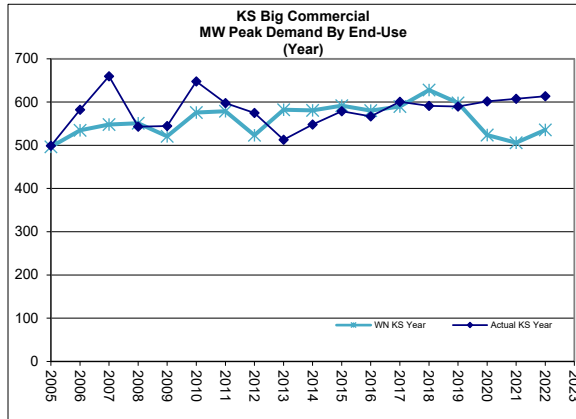
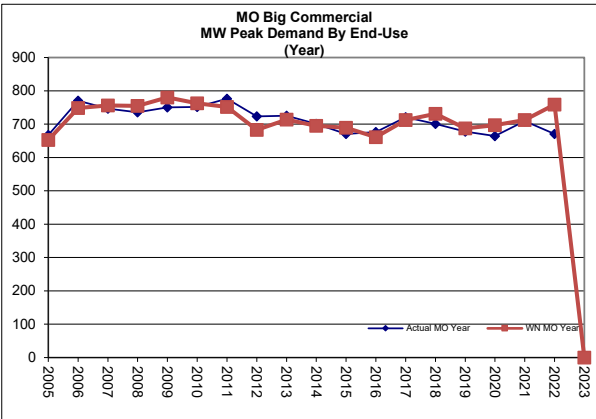
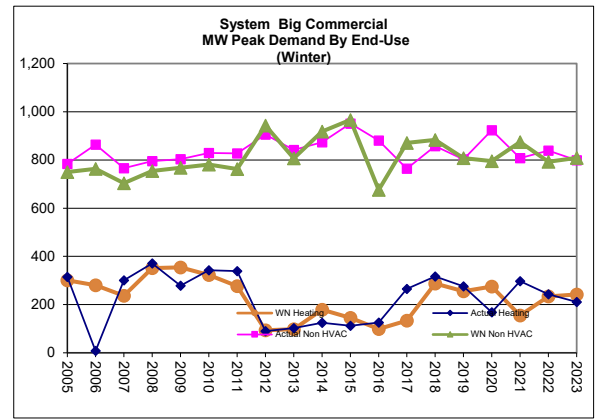
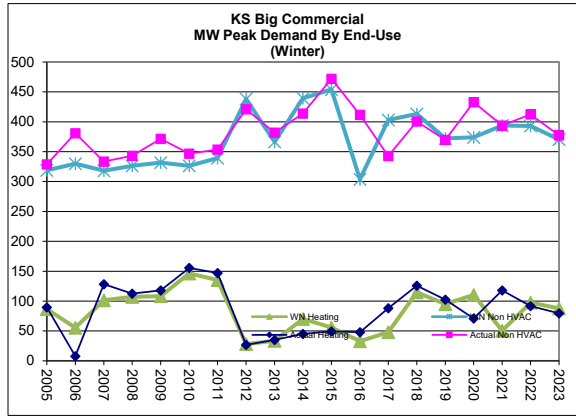
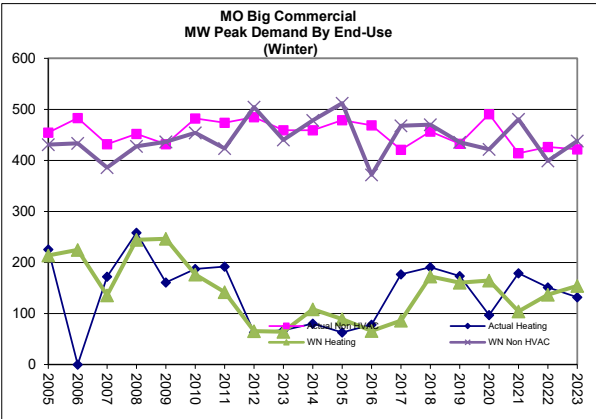
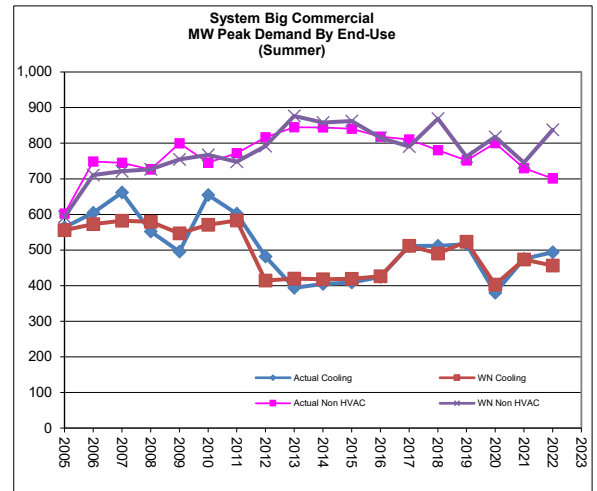
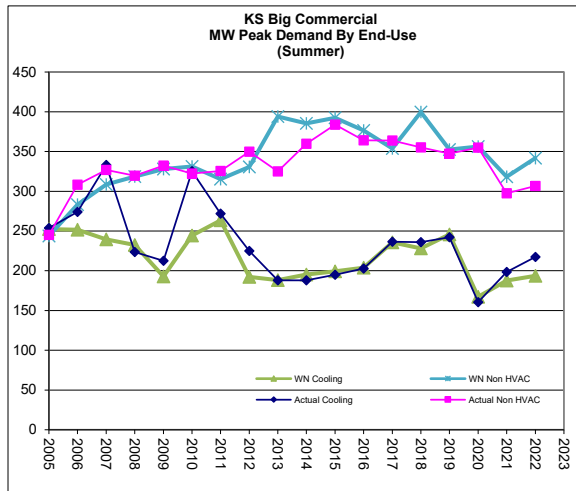
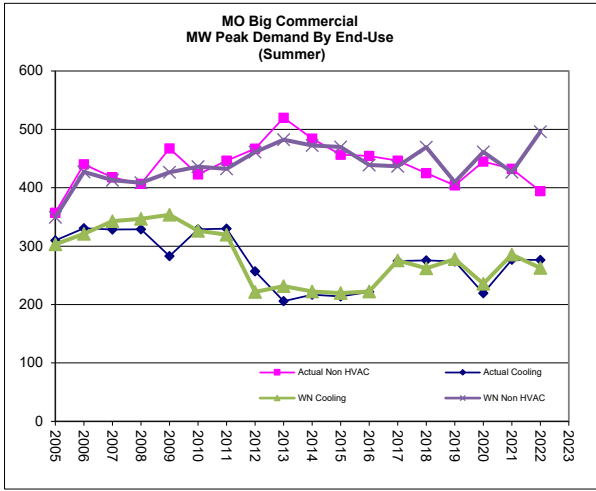
Plot 3A-29 Missouri & Kansas Big Commercial MW Peak Demand By End-Use

Year	Missouri										Kansas									
	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year		Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	309.9	303.1	225.6	213.9	357.3	349.5	454.3	430.8	667.2	652.5	253.7	252.5	89.5	86.8	245.0	243.9	328.9	318.9	498.7	496.4
2006	330.7	321.2	0.0	224.6	440.0	427.4	482.9	433.3	770.7	748.7	274.1	251.6	7.8	55.5	308.4	283.1	380.9	330.0	582.4	534.7
2007	328.6	343.0	172.3	135.6	417.8	413.1	432.0	385.9	746.4	756.1	332.9	239.6	128.2	101.2	326.9	308.5	333.7	318.0	659.8	548.1
2008	329.0	346.8	258.2	244.2	406.8	408.4	452.1	427.6	735.8	755.2	223.5	232.6	112.6	107.1	319.5	318.4	343.2	326.5	543.0	551.0
2009	283.1	353.7	160.8	246.4	467.2	426.6	432.0	436.3	750.3	780.3	212.5	192.8	117.8	108.1	332.2	327.9	371.6	331.7	544.7	520.7
2010	329.0	326.5	187.3	176.4	423.0	435.9	482.2	454.2	752.0	762.4	325.3	244.4	155.4	146.4	322.2	331.3	346.6	326.5	647.5	575.7
2011	330.1	319.7	192.0	141.7	446.4	432.3	474.0	423.3	776.4	752.0	271.9	263.4	147.0	135.0	325.6	315.4	353.5	339.3	597.5	578.8
2012	256.9	221.8	62.8	65.4	466.8	461.2	484.8	504.7	723.7	683.0	224.9	192.3	26.9	28.0	349.8	330.7	420.9	438.2	574.7	523.0
2013	205.8	231.5	67.0	64.3	519.9	482.5	459.1	440.3	725.7	714.0	188.1	188.3	35.0	33.6	324.9	394.0	382.0	366.5	513.0	582.3
2014	216.7	222.6	80.0	108.4	484.2	472.5	459.0	478.6	700.9	695.1	187.9	195.3	45.0	70.3	359.9	385.5	414.0	439.5	547.8	580.8
2015	213.9	219.7	63.1	88.8	456.8	470.0	479.1	512.1	670.7	689.7	194.9	199.2	49.3	55.9	383.8	392.4	472.2	454.2	578.7	591.6
2016	221.8	222.4	78.0	66.0	454.5	438.9	468.8	371.8	676.3	661.3	202.9	203.9	48.0	33.0	364.0	376.5	411.8	303.9	566.9	580.4
2017	274.4	275.8	177.0	85.8	446.4	436.7	420.9	468.0	720.8	712.4	236.6	235.8	88.0	47.9	363.9	353.7	342.9	403.2	600.5	589.5
2018	275.7	262.1	190.8	172.8	425.0	469.4	456.5	470.2	700.7	731.5	235.9	228.2	125.9	114.9	355.3	399.6	400.6	413.3	591.2	627.8
2019	274.0	277.7	173.5	160.2	404.0	409.6	432.7	435.6	678.0	687.2	242.2	245.7	102.5	95.0	347.4	352.6	369.6	372.3	589.6	598.3
2020	219.6	235.6	97.0	164.7	445.0	461.3	490.8	421.7	664.6	696.8	160.6	167.3	71.0	110.5	355.0	356.3	432.8	373.9	601.8	523.6
2021	276.7	285.6	179.0	104.1	432.5	427.0	414.0	480.5	709.2	712.6	198.4	187.8	118.0	50.5	297.6	318.3	394.0	393.9	607.6	506.0
2022	276.2	262.8	151.0	137.0	394.2	495.9	426.4	399.1	670.4	758.7	217.3	193.6	91.8	97.3	306.7	341.8	412.6	393.1	613.5	535.4
2023			131.7	154.1			421.7	438.0		0.0			79.6	87.6			377.4	370.6		
05-'10	1.2%	2.5%	-5.2%	-8.7%	3.2%	3.4%	-1.0%	-2.2%	2.3%	3.0%	5.6%	-1.0%	7.4%	3.1%	5.9%	4.8%	0.3%	-0.1%	5.8%	2.0%
10-'15	-8.2%	-7.6%	-19.6%	-12.8%	1.5%	1.5%	-0.1%	2.4%	-2.3%	-2.0%	-9.7%	-4.0%	-20.5%	-17.5%	3.6%	3.4%	6.4%	6.8%	-2.2%	0.5%
15-'23	-100.0%	-100.0%	9.6%	7.1%	-100.0%	-100.0%	-1.6%	-1.9%	-100.0%	-100.0%	-100.0%	-100.0%	6.2%	5.8%	-100.0%	-100.0%	-2.8%	-2.5%	-100.0%	-100.0%

* 2023 Summer peaks are not include since they are projections. The peak month occurred after the June 2023 cut off.
 Winter values are include since the peak occurred in January 2023.

* Big Commercial did not have a coincident peak at the time of the system in 2006 due to the system peak occurring in November.
 The peak usually occurs in January or December

Year	System									
	Cooling		Heating		Non-HVAC Summ		Non-HVAC Wint		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	563.5	555.6	315.1	300.7	602.4	593.4	783.3	749.8	1,165.9	
2006	604.8	572.8	7.8	280.0	748.4	710.5	863.8	763.3	1,353.1	
2007	661.5	582.6	300.5	236.8	744.6	721.6	765.7	703.9	1,406.2	
2008	552.5	579.3	370.8	351.3	726.3	726.8	795.3	754.1	1,278.8	
2009	495.5	546.5	278.6	354.4	799.4	754.5	803.5	768.0	1,295.0	
2010	654.3	570.9	342.7	322.9	745.2	767.2	828.8	780.8	1,399.5	
2011	602.0	583.1	339.1	276.8	772.0	747.7	827.5	762.7	1,374.0	
2012	481.8	414.1	89.8	93.5	816.6	791.9	905.7	942.8	1,298.4	
2013	393.9	419.7	102.0	97.9	844.8	876.5	841.1	806.8	1,238.7	
2014	404.6	417.9	125.0	178.7	844.1	858.0	873.1	918.1	1,248.7	
2015	408.8	418.9	112.4	144.8	840.6	862.4	951.2	966.3	1,249.4	
2016	424.7	426.3	125.9	99.0	818.6	815.5	880.6	675.7	1,243.3	
2017	511.0	511.6	264.9	133.7	810.3	790.4	763.8	871.2	1,321.3	
2018	511.6	490.3	316.6	287.6	780.3	869.0	857.0	883.5	1,291.9	
2019	516.2	523.4	276.0	255.2	751.4	762.2	802.3	807.9	1,267.6	
2020	380.2	402.9	167.9	275.1	800.0	817.6	923.6	795.7	1,180.2	
2021	475.1	473.4	297.0	154.7	730.1	745.2	807.9	874.4	1,205.2	
2022	493.5	456.4	242.8	234.3	700.9	837.7	838.9	792.2	1,194.4	
2023			211.3	241.7			799.1	808.6		
05-'10	3.3%	1.0%	-0.9%	-4.7%	4.3%	4.0%	-0.5%	-1.3%	3.8%	
10-'15	-9.0%	-6.0%	-20.0%	-14.8%	2.4%	2.4%	2.8%	4.4%	-2.2%	
15-'23	-100.0%	-100.0%	8.2%	6.6%	-100.0%	-100.0%	-2.2%	-2.2%	-100.0%	

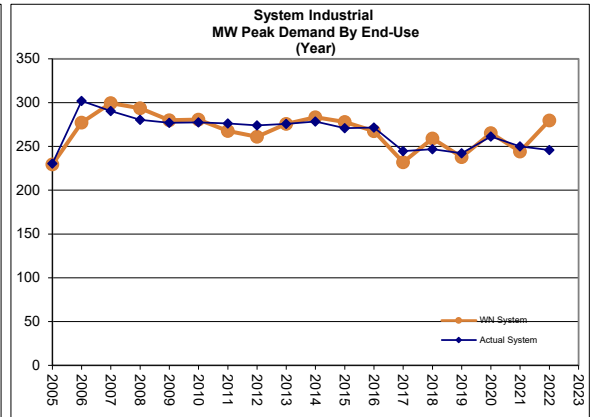
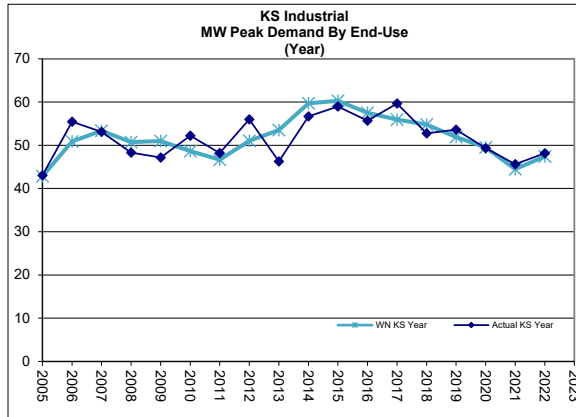
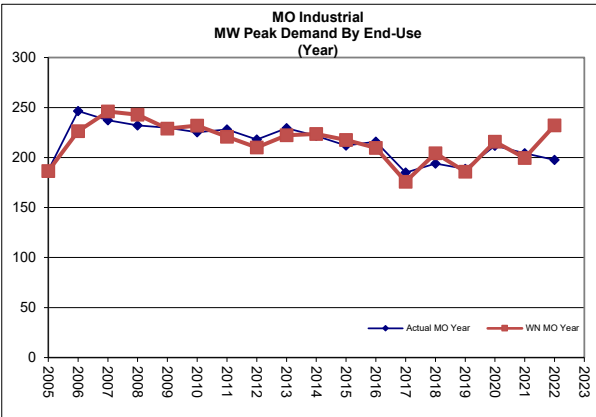
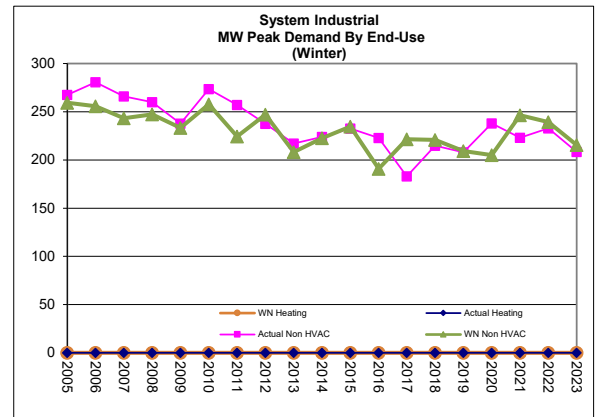
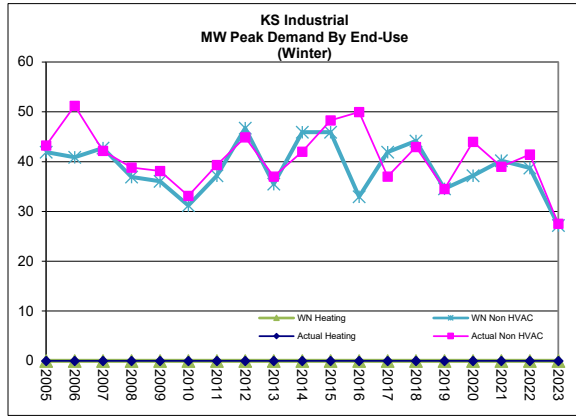
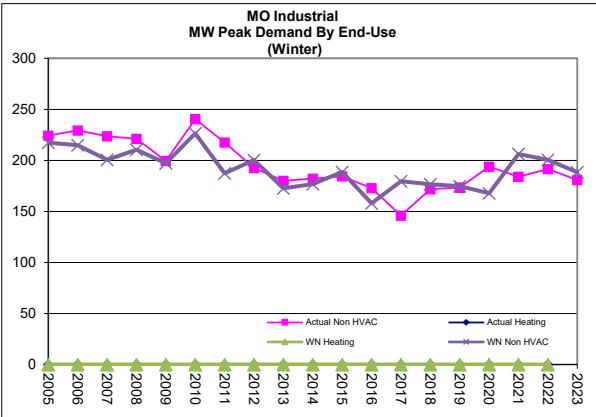
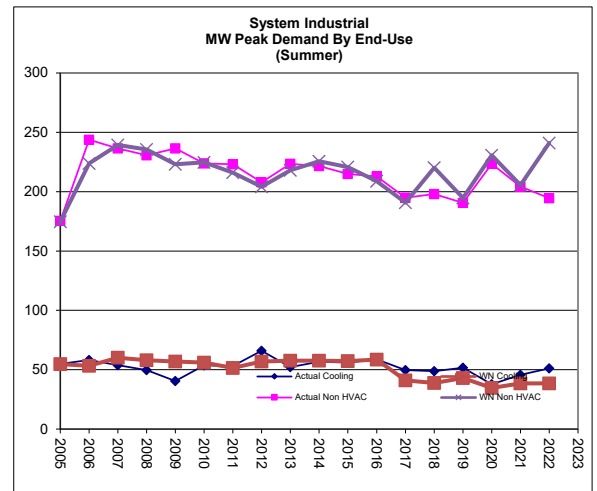
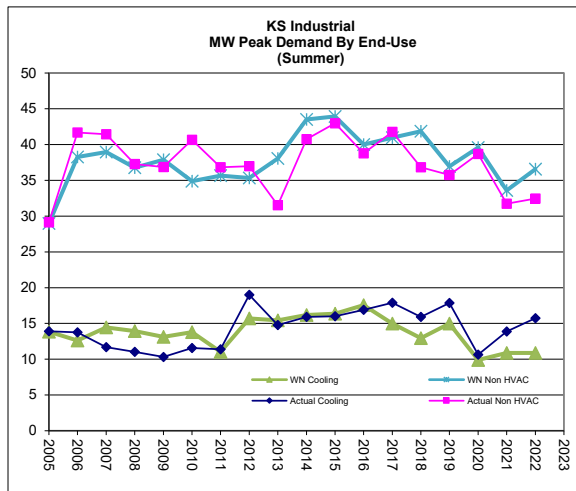
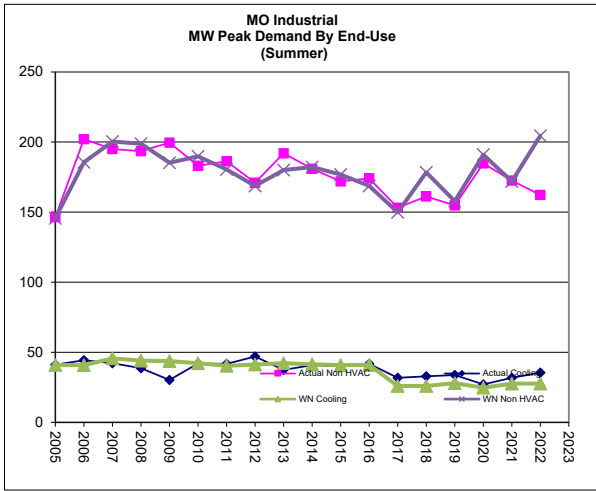


Plot 3A-30 Missouri & Kansas Industrial MW Peak Demand By End-Use

Year	Missouri										Kansas									
	Cooling		Heating		Non-HVAC Summ		Non-HVAC Wint		Year		Cooling		Heating		Non-HVAC Summ		Non-HVAC Wir		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	41.1	40.9	0.0	0.0	146.3	145.7	224.2	217.4	187.4	186.6	13.9	13.9	0.0	0.0	29.1	29.0	43.2	41.9	43.0	42.8
2006	44.4	40.7	0.0	0.0	202.1	185.5	229.3	214.8	246.5	226.3	13.8	12.6	0.0	0.0	41.7	38.3	51.2	40.9	55.4	50.9
2007	42.3	45.7	0.0	0.0	195.1	200.3	223.8	200.5	237.3	246.0	11.7	14.4	0.0	0.0	41.4	38.9	42.2	42.8	53.1	53.4
2008	38.7	44.0	0.0	0.0	193.5	198.9	221.2	210.4	232.2	242.8	11.0	13.9	0.0	0.0	37.3	36.8	38.8	36.9	48.3	50.7
2009	30.2	43.8	0.0	0.0	199.6	185.2	199.5	197.2	229.8	229.0	10.3	13.1	0.0	0.0	36.9	37.9	38.1	36.1	47.2	51.0
2010	42.1	42.2	0.0	0.0	183.1	189.8	240.4	226.5	225.2	232.0	11.6	13.8	0.0	0.0	40.7	34.9	33.1	31.2	52.2	48.7
2011	41.7	40.4	0.0	0.0	186.3	180.5	217.6	187.3	228.1	220.9	11.4	11.0	0.0	0.0	36.8	35.7	39.3	37.2	48.2	46.7
2012	47.0	41.2	0.0	0.0	170.9	168.8	192.5	200.4	217.9	210.0	19.0	15.7	0.0	0.0	37.0	35.3	44.9	46.7	56.0	51.0
2013	37.4	42.2	0.0	0.0	192.0	180.0	180.0	172.7	229.4	222.2	14.8	15.4	0.0	0.0	31.5	38.1	37.0	35.5	46.3	53.5
2014	40.8	41.5	0.0	0.0	180.9	182.1	182.0	176.8	221.7	223.6	15.9	16.2	0.0	0.0	40.8	43.5	42.0	45.9	56.7	59.7
2015	40.0	40.9	0.0	0.0	171.9	176.8	184.3	188.7	211.9	217.6	16.0	16.3	0.0	0.0	43.0	43.9	48.3	45.9	59.0	60.3
2016	41.8	41.0	0.0	0.0	174.1	168.7	172.9	157.9	215.8	209.7	16.9	17.6	0.0	0.0	38.8	40.0	50.0	33.0	55.7	57.6
2017	31.8	26.0	0.0	0.0	153.1	149.9	146.0	179.6	184.9	175.9	17.9	15.0	0.0	0.0	41.8	41.0	37.0	41.9	59.7	56.0
2018	32.8	25.9	0.0	0.0	161.2	178.4	171.8	176.7	194.1	204.3	15.9	13.0	0.0	0.0	36.8	41.9	43.0	44.2	52.7	54.8
2019	33.8	28.0	0.0	0.0	154.9	157.8	173.5	174.6	188.6	185.8	17.9	15.0	0.0	0.0	35.7	37.0	34.5	34.5	53.6	51.9
2020	27.1	24.7	0.0	0.0	184.8	191.0	193.9	167.8	211.9	215.8	10.6	9.9	0.0	0.0	38.7	39.6	44.0	37.2	49.3	49.5
2021	31.7	27.7	0.0	0.0	172.6	172.0	184.0	206.2	204.3	199.7	13.9	10.9	0.0	0.0	31.7	33.6	39.0	40.2	45.6	44.5
2022	35.4	27.7	0.0	0.0	162.2	204.5	191.5	200.5	197.6	232.1	15.7	10.9	0.0	0.0	32.4	36.6	41.5	38.7	48.2	47.4
2023							180.9	188.3					0.0	0.0			27.5	27.2		
05-'10	0.6%	2.2%	#DIV/0!	#DIV/0!	5.9%	6.6%	0.0%	-1.6%	4.8%	5.7%	-3.5%	0.8%	#DIV/0!	#DIV/0!	7.3%	6.1%	-0.5%	0.4%	4.3%	4.5%
10-'15	-1.0%	-0.6%	#DIV/0!	#DIV/0!	-1.3%	-1.4%	-5.2%	-3.6%	-1.2%	-1.3%	6.7%	3.5%	#DIV/0!	#DIV/0!	1.1%	4.7%	7.8%	8.0%	2.5%	4.4%
15-'23	-100.0%	-100.0%	#DIV/0!	#DIV/0!	-100.0%	-100.0%	-0.2%	0.0%	-100.0%	-100.0%	-100.0%	-100.0%	#DIV/0!	#DIV/0!	-100.0%	-100.0%	-6.8%	-6.3%	-100.0%	-100.0%

* 2023 Summer peaks are not include since they are projections. The peak month occurred after the June 2023 cut off.
 Winter values are include since the peak occurred in January 2023.

Year	System									
	Cooling		Heating		Non-HVAC Summ		Non-HVAC Wint		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	55.0	54.8	-	-	175.5	174.7	267.5	259.3	230.5	229.4
2006	58.1	53.4	-	-	243.8	223.8	280.6	255.7	301.9	277.2
2007	53.9	60.1	-	-	236.5	239.3	266.0	243.3	290.4	299.4
2008	49.7	57.9	-	-	230.8	235.6	260.0	247.3	280.5	293.6
2009	40.5	56.9	-	-	236.5	223.1	237.6	233.3	277.0	280.0
2010	53.7	56.0	-	-	223.7	224.7	273.5	257.7	277.4	280.7
2011	53.1	51.4	-	-	223.1	216.1	256.9	224.4	276.3	267.6
2012	66.0	56.9	-	-	207.9	204.1	237.4	247.1	273.9	261.0
2013	52.2	57.6	-	-	223.5	218.1	217.0	208.2	275.7	275.7
2014	56.7	57.7	-	-	221.7	225.6	224.0	222.7	278.4	283.3
2015	56.0	57.2	-	-	214.9	220.7	232.6	234.6	270.9	277.9
2016	58.7	58.5	-	-	212.8	208.7	222.9	190.9	271.5	267.3
2017	49.7	41.0	-	-	194.9	190.9	183.0	221.5	244.6	231.8
2018	48.8	38.9	-	-	198.1	220.2	214.8	220.9	246.8	259.1
2019	51.6	43.0	-	-	190.6	194.8	208.0	209.2	242.2	237.7
2020	37.7	34.6	-	-	223.5	230.6	237.9	205.0	261.2	265.3
2021	45.6	38.5	-	-	204.3	205.6	223.0	246.5	250.0	244.1
2022	51.1	38.5	-	-	194.6	241.0	232.9	239.2	245.8	279.6
2023			-	-			208.4	215.5		
05-'10	-0.4%	1.9%	#DIV/0!	#DIV/0!	6.2%	6.5%	-0.1%	-1.3%	4.7%	5.5%
10-'15	0.8%	0.4%	#DIV/0!	#DIV/0!	-0.8%	-0.4%	-3.2%	-1.9%	-0.5%	-0.2%
15-'23	-100.0%	-100.0%	#DIV/0!	#DIV/0!	-100.0%	-100.0%	-1.4%	-1.1%	-100.0%	-100.0%

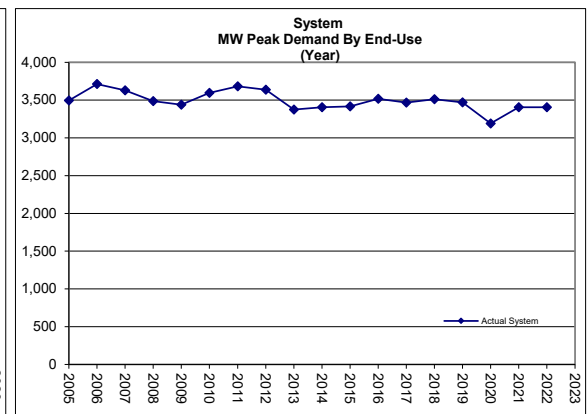
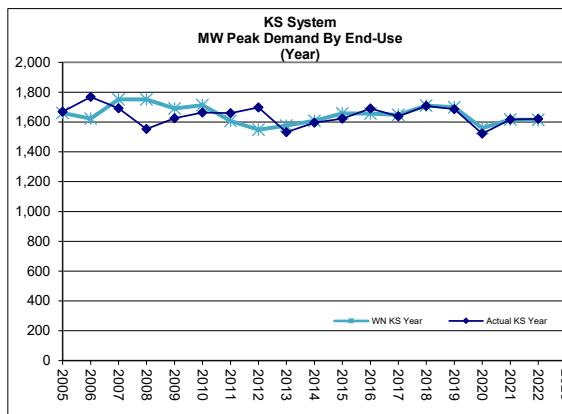
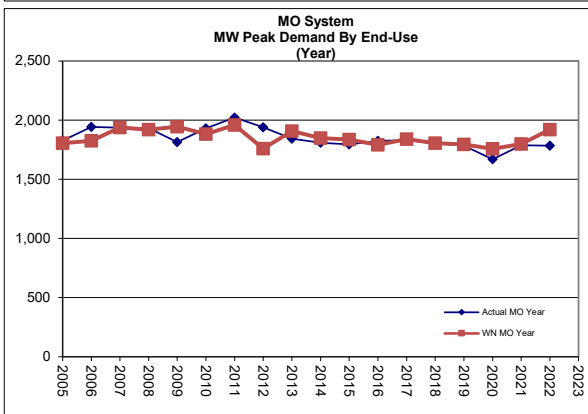
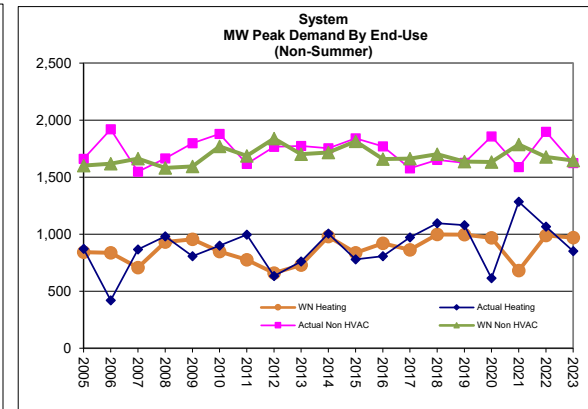
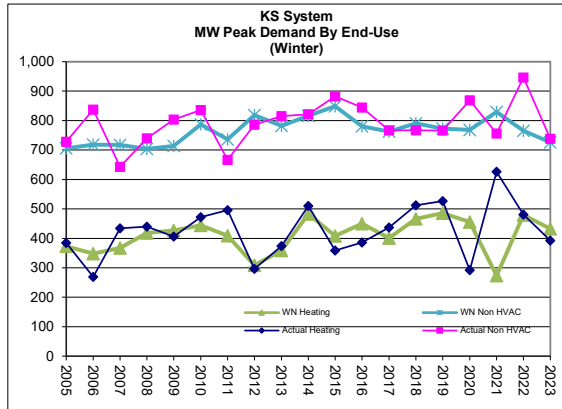
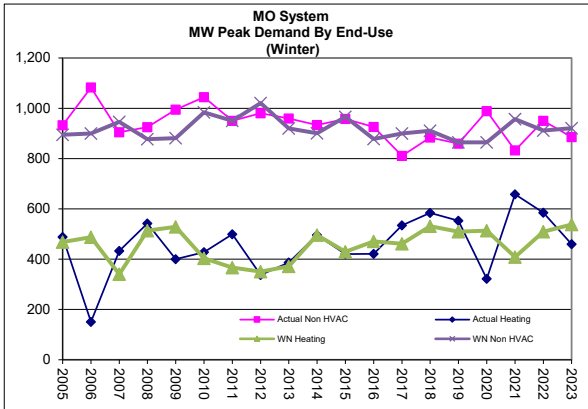
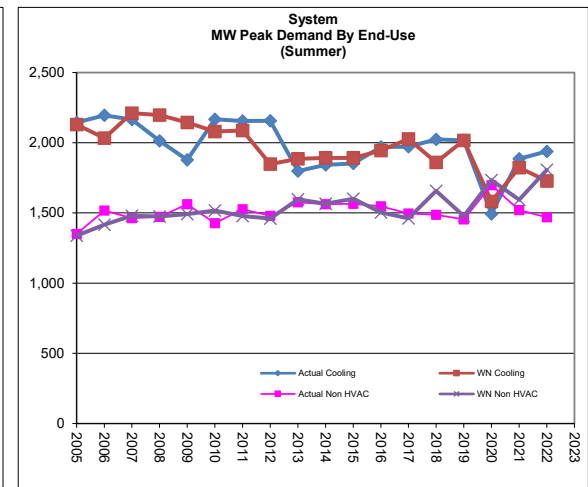
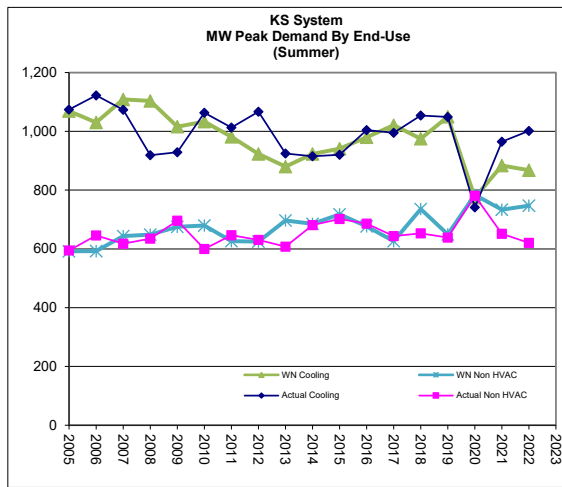
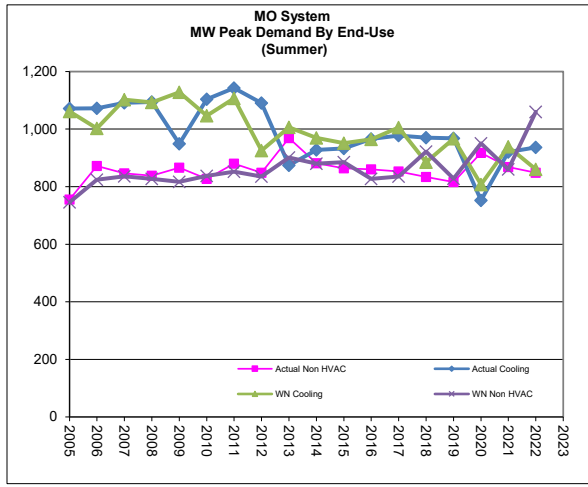


Plot 3A-31 Missouri & Kansas Total MW Peak Demand By End-Use
For classes that have end-use sales

Year	Missouri										Kansas									
	Cooling		Heating		Non-HVAC Summ		Non-HVAC Winte		Year		Cooling		Heating		Non-HVAC Summ		Non-HVAC Winte		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	1,071.2	1,060.9	488.2	468.5	755.6	745.9	932.5	894.5	1,826.8	1,806.9	1,074.0	1,069.1	384.5	372.8	594.6	591.9	728.3	706.1	1,668.6	1,661.0
2006	1,072.5	1,002.3	150.7	487.5	871.9	824.0	1,082.5	900.1	1,944.5	1,826.2	1,122.4	1,030.4	269.2	348.4	645.5	592.6	836.8	717.8	1,767.9	1,623.0
2007	1,091.4	1,102.1	432.9	340.1	846.0	835.8	904.5	945.7	1,937.3	1,937.8	1,073.4	1,108.8	434.0	367.2	617.8	643.2	643.2	717.4	1,691.2	1,752.0
2008	1,094.4	1,093.1	541.7	513.9	837.9	827.0	925.0	877.5	1,932.2	1,920.1	918.5	1,103.6	439.5	418.1	634.8	648.3	739.7	703.7	1,553.3	1,751.9
2009	949.1	1,128.0	400.2	528.2	865.8	816.8	995.1	881.2	1,814.9	1,944.8	929.2	1,015.7	406.4	426.7	695.9	675.4	803.3	713.5	1,625.1	1,691.1
2010	1,104.1	1,046.5	428.1	403.2	826.9	837.2	1,044.1	983.6	1,931.0	1,883.7	1,063.7	1,033.0	471.8	444.4	600.1	679.5	835.7	787.2	1,663.7	1,712.5
2011	1,142.7	1,106.7	499.6	366.7	880.1	852.4	950.4	950.1	2,022.7	1,959.1	1,013.1	981.2	495.8	409.1	646.7	626.3	666.3	736.4	1,659.7	1,607.6
2012	1,090.5	925.3	337.1	351.0	848.6	835.1	980.5	1,020.7	1,939.1	1,760.4	1,066.7	923.4	296.2	308.4	630.7	625.1	786.0	818.2	1,697.4	1,548.4
2013	874.4	1,006.1	387.0	371.3	968.9	901.2	959.1	920.0	1,843.3	1,907.3	924.8	879.9	374.0	358.8	607.5	696.5	815.1	781.9	1,532.3	1,576.3
2014	927.6	969.3	496.0	496.2	881.8	880.3	933.1	900.6	1,809.4	1,849.5	915.2	923.1	510.0	482.5	681.0	685.0	821.1	816.6	1,596.2	1,608.1
2015	932.5	951.3	419.9	429.3	863.6	884.8	958.1	966.3	1,796.1	1,836.1	920.4	940.9	358.8	408.3	701.6	717.3	882.2	848.5	1,622.1	1,658.2
2016	965.8	964.7	420.8	470.8	860.3	827.2	925.6	877.6	1,826.1	1,791.9	1,004.7	979.6	385.8	449.8	686.3	676.9	844.6	780.6	1,691.0	1,656.5
2017	977.3	1,005.2	534.9	461.1	853.0	835.4	810.8	900.1	1,830.4	1,840.6	994.7	1,021.2	436.9	401.2	643.3	626.5	766.8	762.4	1,638.0	1,647.7
2018	970.4	884.9	584.3	531.1	834.0	921.8	884.0	911.0	1,804.4	1,806.7	1,053.9	974.9	512.4	466.3	652.9	735.5	767.1	790.2	1,706.8	1,710.3
2019	967.8	966.9	553.0	509.5	816.0	828.1	859.5	864.6	1,783.8	1,795.0	1,048.6	1,049.6	526.4	485.5	638.3	649.3	765.9	772.4	1,686.9	1,698.9
2020	752.6	807.7	321.8	513.1	917.1	950.2	988.5	864.7	1,669.7	1,757.9	741.0	774.7	291.9	455.7	780.7	783.9	868.6	768.0	1,521.7	1,558.6
2021	920.5	939.0	657.9	408.4	867.9	859.9	832.9	956.9	1,788.4	1,798.8	965.0	883.8	626.0	273.3	651.7	733.4	755.9	829.1	1,616.7	1,617.2
2022	936.9	860.4	585.3	509.3	848.4	1,060.0	950.5	911.3	1,785.2	1,920.4	1,001.3	867.7	480.7	479.5	620.3	746.8	946.5	765.4	1,621.6	1,614.5
2023			460.0	537.7			885.6	920.4					392.2	433.0			738.1	726.0		
05-'10	0.4%	0.8%	-2.4%	-6.2%	2.3%	2.3%	-0.6%	1.1%	1.2%	1.4%	0.0%	0.7%	2.5%	-0.3%	0.8%	1.7%	-2.5%	0.3%	0.3%	1.1%
10-'15	-3.3%	-1.9%	-0.4%	1.3%	0.9%	1.1%	-1.7%	-0.4%	-1.4%	-0.5%	-2.9%	-1.8%	-5.3%	-1.7%	3.2%	1.1%	1.1%	1.5%	-0.5%	-0.6%
15-'23	-100.0%	-100.0%	1.1%	2.9%	-100.0%	-100.0%	-1.0%	-0.6%	-100.0%	-100.0%	-100.0%	-100.0%	1.1%	0.7%	-100.0%	-100.0%	-2.2%	-1.9%	-100.0%	-100.0%

* 2023 Summer peaks are not include since they are projections. The peak month occurred after the June 2023 cut off.
 Winter values are include since the peak occurred in January 2023.

Year	System								
	Cooling		Heating		Non-HVAC Summ		Non-HVAC Winte		Year
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual
2005	2,145.2	2,130.0	872.7	841.3	1,350.2	1,337.8	1,660.8	1,600.6	3,495.4
2006	2,195.0	2,032.7	420.0	835.9	1,517.4	1,416.5	1,919.3	1,617.9	3,712.4
2007	2,164.8	2,210.8	867.0	707.3	1,463.7	1,479.0	1,547.7	1,663.1	3,628.5
2008	2,012.9	2,196.7	981.2	932.0	1,472.7	1,475.3	1,664.7	1,581.2	3,485.5
2009	1,878.3	2,143.7	806.6	955.0	1,561.7	1,492.2	1,798.3	1,594.7	3,439.9
2010	2,167.8	2,079.5	899.9	847.7	1,426.9	1,516.7	1,879.8	1,770.8	3,594.7
2011	2,155.7	2,087.9	995.3	775.8	1,526.8	1,478.8	1,616.7	1,686.5	3,682.5
2012	2,157.2	1,848.7	633.4	659.4	1,479.3	1,460.1	1,766.5	1,839.0	3,636.6
2013	1,799.2	1,886.0	761.1	730.1	1,576.4	1,597.7	1,774.2	1,701.9	3,375.6
2014	1,842.7	1,892.4	1,006.1	978.7	1,562.9	1,565.2	1,754.2	1,717.1	3,405.6
2015	1,853.0	1,892.2	778.7	837.6	1,565.2	1,602.1	1,840.3	1,814.9	3,418.2
2016	1,970.4	1,944.3	806.6	920.6	1,546.6	1,504.1	1,770.1	1,658.2	3,517.1
2017	1,972.0	2,026.4	971.8	862.2	1,496.3	1,461.9	1,577.6	1,662.6	3,468.3
2018	2,024.3	1,859.8	1,096.8	997.4	1,486.9	1,657.3	1,651.1	1,701.2	3,511.2
2019	2,016.4	2,016.6	1,079.3	995.1	1,454.2	1,477.4	1,625.4	1,637.0	3,470.7
2020	1,493.7	1,582.4	613.7	968.8	1,697.8	1,734.2	1,857.1	1,632.8	3,191.4
2021	1,885.5	1,822.8	1,283.9	681.6	1,519.6	1,593.3	1,588.9	1,786.0	3,405.1
2022	1,938.1	1,728.1	1,065.9	988.7	1,468.7	1,806.8	1,897.0	1,676.7	3,406.8
2023			852.2	970.7			1,623.7	1,646.4	
05-'10	0.2%	0.7%	-0.1%	-3.4%	1.6%	2.0%	-1.4%	0.8%	0.8%
10-'15	-3.1%	-1.9%	-2.9%	-0.2%	1.9%	1.1%	-0.4%	0.5%	-1.0%
15-'23	-100.0%	-100.0%	1.1%	1.9%	-100.0%	-100.0%	-1.6%	-1.2%	-100.0%

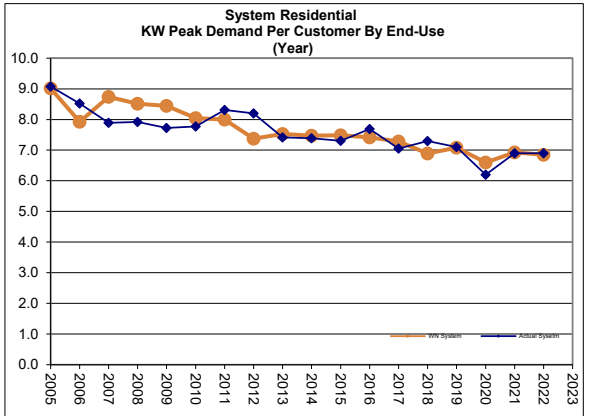
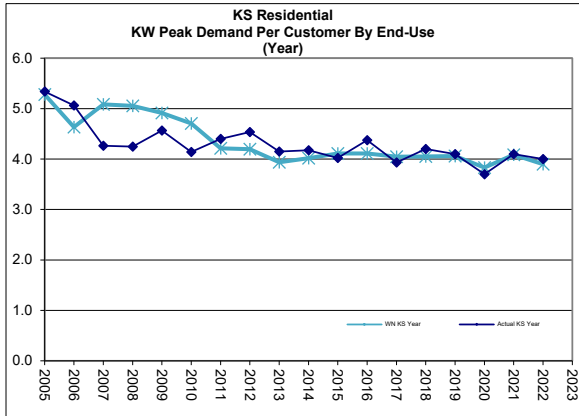
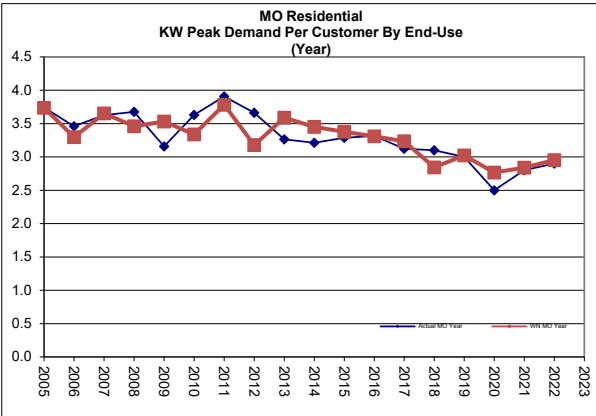
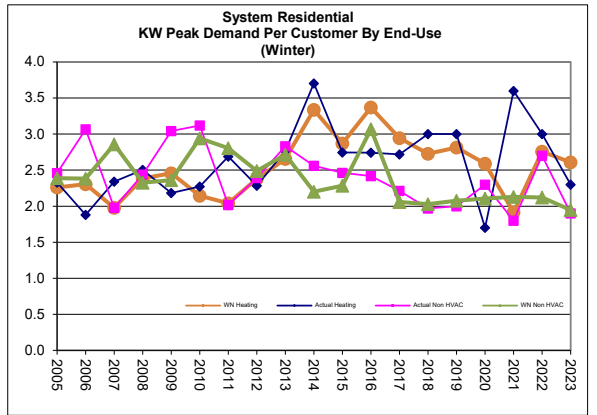
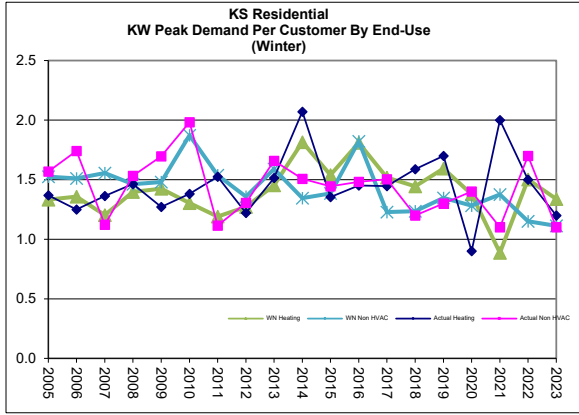
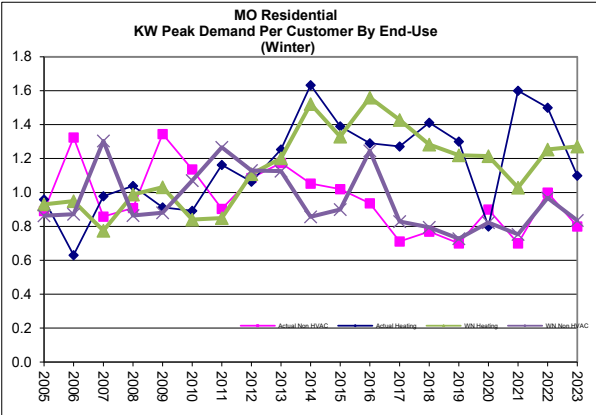
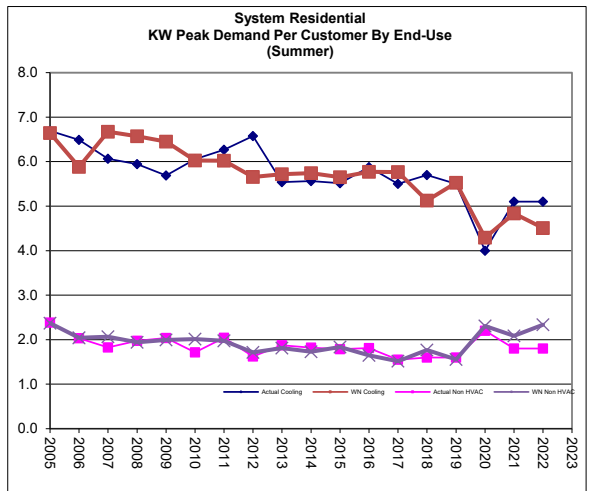
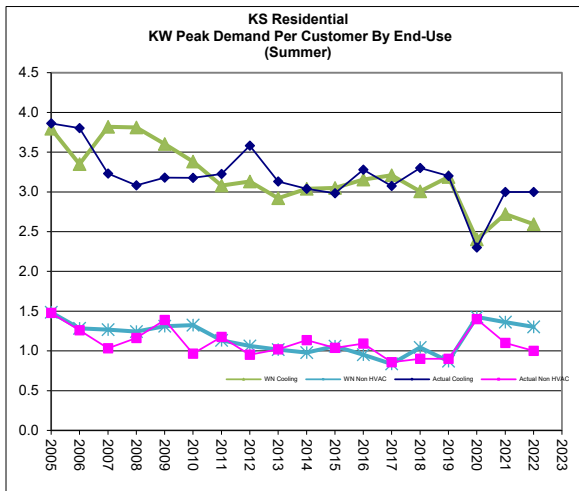
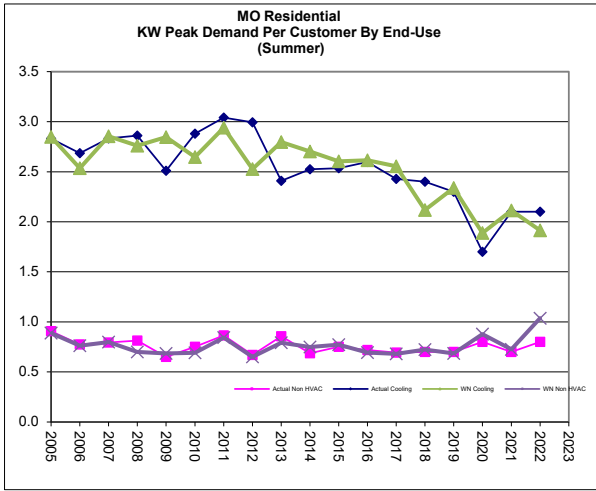


Plot 3A-32 Missouri & Kansas Residential KW Peak Demand Per Customer By End-Use

Year	Missouri											Kansas										
	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year		Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year			
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN		
2005	2.8	2.8	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	3.7	3.7	3.9	3.8	1.4	1.3	1.5	1.5	1.6	1.5	5.3	5.3
2006	2.7	2.5	0.6	0.9	0.8	0.8	0.8	1.3	0.9	3.5	3.3	3.8	3.3	1.2	1.4	1.3	1.3	1.7	1.5	5.1	4.6	
2007	2.8	2.9	1.0	0.8	0.8	0.8	0.9	1.3	0.9	3.6	3.7	3.2	3.8	1.4	1.2	1.0	1.3	1.1	1.6	4.3	5.1	
2008	2.9	2.8	1.0	1.0	0.8	0.7	0.9	0.9	0.9	3.7	3.5	3.1	3.8	1.5	1.4	1.2	1.2	1.5	1.5	4.2	5.1	
2009	2.5	2.8	0.9	1.0	0.7	0.7	1.3	0.9	3.2	3.5	3.2	3.6	1.3	1.4	1.4	1.3	1.7	1.5	4.6	4.9		
2010	2.9	2.6	0.9	0.8	0.8	0.7	1.1	1.1	3.6	3.3	3.2	3.4	1.4	1.3	1.0	1.3	2.0	1.9	4.1	4.7		
2011	3.0	2.9	1.2	0.8	0.9	0.8	0.9	1.3	3.9	3.8	3.2	3.1	1.5	1.2	1.2	1.1	1.1	1.5	4.4	4.2		
2012	3.0	2.5	1.1	1.1	0.7	0.7	1.1	1.1	3.7	3.2	3.6	3.1	1.2	1.3	1.0	1.1	1.3	1.4	4.5	4.2		
2013	2.4	2.8	1.3	1.2	0.9	0.8	1.2	1.1	3.3	3.6	3.1	2.9	1.5	1.5	1.0	1.0	1.7	1.6	4.1	3.9		
2014	2.5	2.7	1.6	1.5	0.7	0.7	1.1	0.9	3.2	3.5	3.0	3.0	2.1	1.8	1.1	1.0	1.5	1.3	4.2	4.0		
2015	2.5	2.6	1.4	1.3	0.8	0.8	1.0	0.9	3.3	3.4	3.0	3.0	1.4	1.5	1.0	1.1	1.4	1.4	4.0	4.1		
2016	2.6	2.6	1.3	1.6	0.7	0.7	0.9	1.2	3.3	3.3	3.3	3.2	1.5	1.8	1.1	1.0	1.5	1.8	4.4	4.1		
2017	2.4	2.6	1.3	1.4	0.7	0.7	0.7	0.8	3.1	3.2	3.1	3.2	1.4	1.5	0.9	0.8	1.5	1.2	3.9	4.0		
2018	2.4	2.1	1.4	1.3	0.7	0.7	0.8	0.8	3.1	2.8	3.3	3.0	1.6	1.4	0.9	1.0	1.2	1.2	4.2	4.1		
2019	2.3	2.3	1.3	1.2	0.7	0.7	0.7	0.7	3.0	3.0	3.2	3.2	1.7	1.6	0.9	0.9	1.3	1.3	4.1	4.1		
2020	1.7	1.9	0.8	1.2	0.8	0.9	0.9	0.8	2.5	2.8	2.3	2.4	0.9	1.4	1.4	1.4	1.3	1.3	3.7	3.8		
2021	2.1	2.1	1.6	1.0	0.7	0.7	0.7	0.8	2.8	2.8	3.0	2.7	2.0	0.9	1.1	1.4	1.1	1.4	4.1	4.1		
2022	2.1	1.9	1.5	1.3	0.8	1.0	1.0	1.0	2.9	3.0	3.0	2.6	1.5	1.5	1.0	1.3	1.7	1.2	4.0	3.9		
2023			1.1	1.3			0.8	0.8					1.2	1.3			1.1	1.1				
05-'10	0.3%	-1.5%	-1.4%	-2.0%	-3.7%	-4.9%	5.0%	4.4%	-0.6%	-2.2%	-3.8%	-2.3%	0.2%	-0.4%	-8.2%	-2.3%	4.8%	4.2%	-4.9%	-2.3%		
10-'15	-2.5%	-0.3%	9.3%	9.6%	0.0%	2.3%	-2.1%	-3.4%	-2.0%	0.2%	-1.3%	-2.0%	-0.4%	3.4%	1.5%	-4.3%	-6.1%	-5.9%	-0.6%	-2.7%		
15-'23	-100.0%	-100.0%	-2.9%	-0.6%	-100.0%	-100.0%	-3.0%	-0.9%	-100.0%	-100.0%	-100.0%	-100.0%	-1.5%	-1.7%	-100.0%	-100.0%	-3.3%	-2.7%	-100.0%	-100.0%		

* 2023 Summer peaks are not include since they are projections. The peak month is likely to occur after the June 2023 cut off.
 Winter values for 2023 are included since the 2023 winter peak likely occurred already.

Year	System									
	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	6.7	6.6	2.3	2.3	2.4	2.4	2.5	2.4	9.1	9.0
2006	6.5	5.9	1.9	2.3	2.0	2.0	3.1	2.4	8.5	7.9
2007	6.1	6.7	2.3	2.0	1.8	2.1	2.0	2.9	7.9	8.7
2008	5.9	6.6	2.5	2.4	2.0	1.9	2.4	2.3	7.9	8.5
2009	5.7	6.4	2.2	2.5	2.0	2.0	3.0	2.4	7.7	8.4
2010	6.1	6.0	2.3	2.1	1.7	2.0	3.1	2.9	7.8	8.0
2011	6.3	6.0	2.7	2.0	2.0	2.0	2.0	2.8	8.3	8.0
2012	6.6	5.7	2.3	2.4	1.6	1.7	2.4	2.5	8.2	7.4
2013	5.5	5.7	2.8	2.7	1.9	1.8	2.8	2.7	7.4	7.5
2014	5.6	5.7	3.7	3.3	1.8	1.7	2.6	2.2	7.4	7.5
2015	5.5	5.7	2.7	2.9	1.8	1.8	2.5	2.3	7.3	7.5
2016	5.9	5.8	2.7	3.4	1.8	1.6	2.4	3.1	7.7	7.4
2017	5.5	5.8	2.7	2.9	1.6	1.5	2.2	2.1	7.1	7.3
2018	5.7	5.1	3.0	2.7	1.6	1.8	2.0	2.0	7.3	6.9
2019	5.5	5.5	3.0	2.8	1.6	1.6	2.0	2.1	7.1	7.1
2020	4.0	4.3	1.7	2.6	2.2	2.3	2.3	2.1	6.2	6.6
2021	5.1	4.8	3.6	1.9	1.8	2.1	1.8	2.1	6.9	6.9
2022	5.1	4.5	3.0	2.8	1.8	2.3	2.7	2.1	6.9	6.8
2023			2.3	2.6			1.9	1.9		
05-'10	-2.0%	-1.9%	-0.5%	-1.1%	-6.4%	-3.2%	4.9%	4.3%	-3.1%	-2.3%
10-'15	-1.8%	-1.3%	3.8%	6.0%	0.8%	-1.9%	-4.6%	-4.9%	-1.2%	-1.4%
15-'20	-100.0%	-100.0%	-2.2%	-1.2%	-100.0%	-100.0%	-3.2%	-2.0%	-100.0%	-100.0%

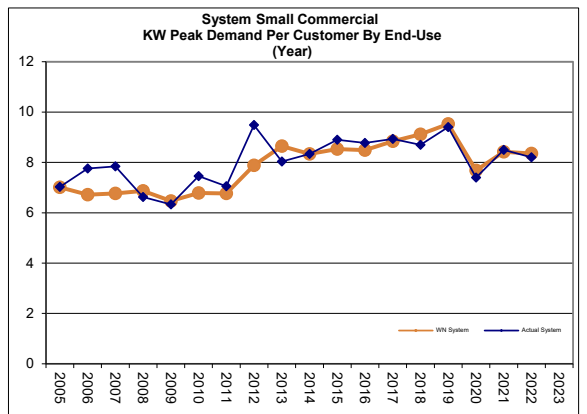
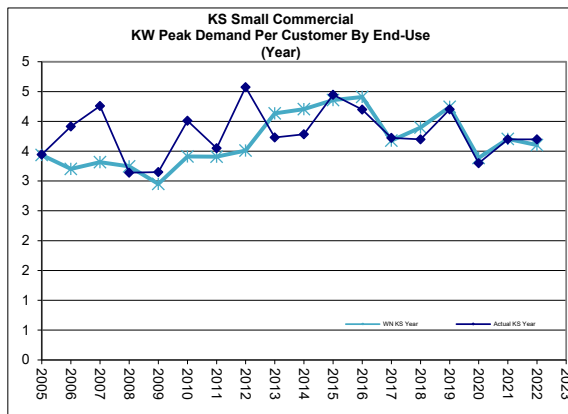
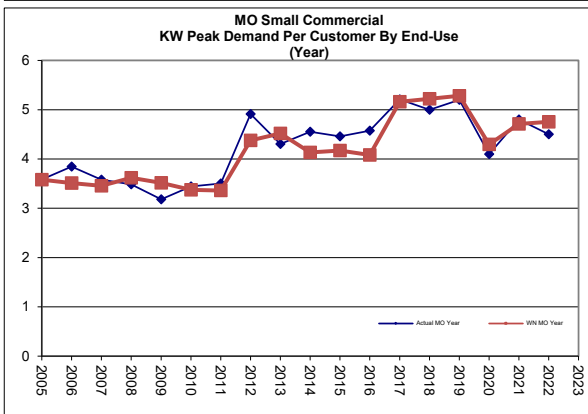
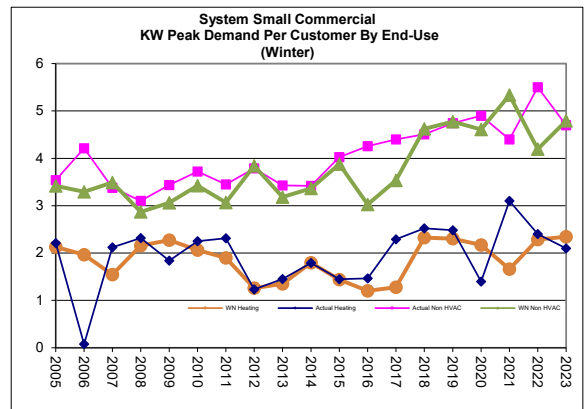
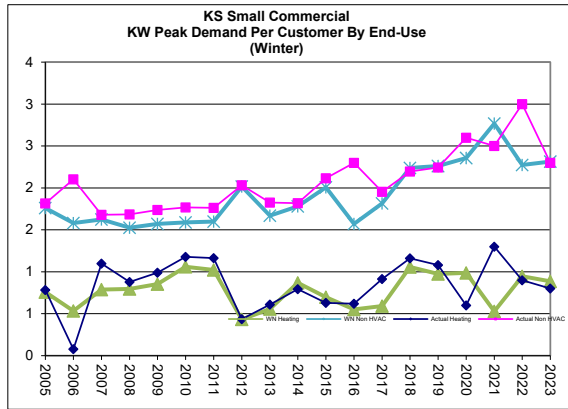
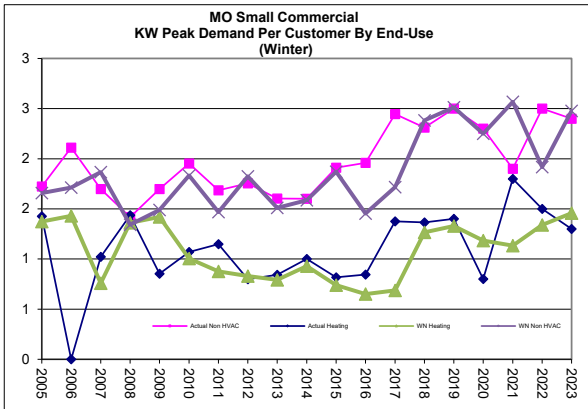
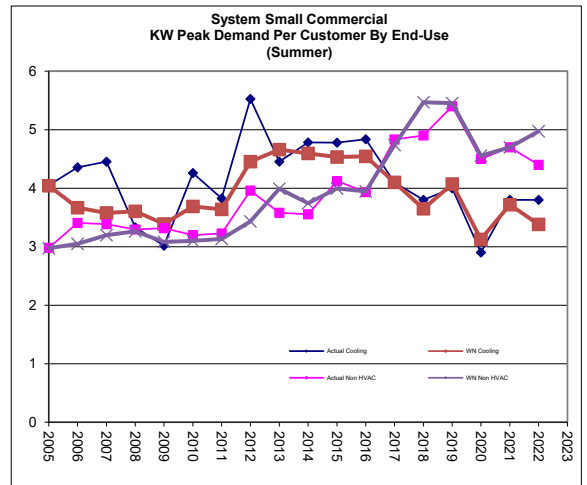
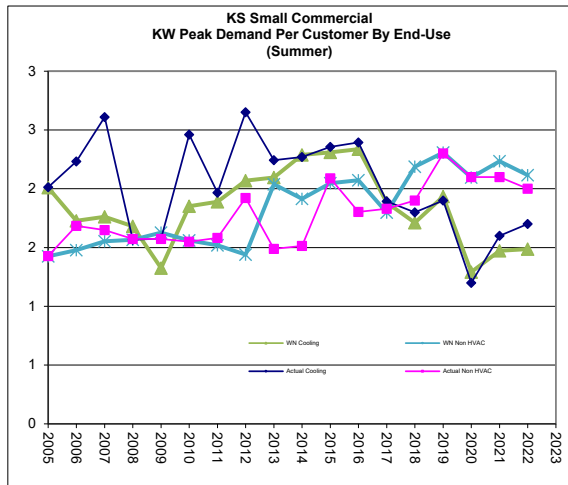
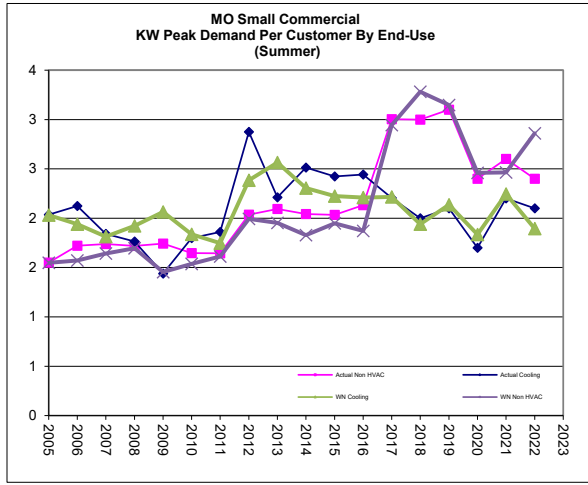


Plot 3A-33 Missouri & Kansas Small Commercial KW Peak Demand Per Customer By End-Use

Year	Missouri										Kansas									
	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year		Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	2.0	2.0	1.4	1.4	1.6	1.5	1.7	1.7	3.6	3.6	2.0	2.0	0.8	0.8	1.4	1.4	1.8	1.8	3.4	3.4
2006	2.1	1.9	0.0	1.4	1.7	1.6	2.1	1.7	3.8	3.5	2.2	1.7	0.1	0.5	1.7	1.5	2.1	1.6	3.9	3.2
2007	1.8	1.8	1.0	0.8	1.7	1.6	1.7	1.9	3.6	3.5	2.6	1.8	1.1	0.8	1.6	1.6	1.7	1.6	4.3	3.3
2008	1.8	1.9	1.4	1.4	1.7	1.7	1.4	1.3	3.5	3.6	1.6	1.7	0.9	0.8	1.6	1.6	1.7	1.5	3.1	3.2
2009	1.4	2.1	0.9	1.4	1.7	1.5	1.7	1.5	3.2	3.5	1.6	1.3	1.0	0.9	1.6	1.6	1.7	1.6	3.1	3.0
2010	1.8	1.8	1.1	1.0	1.6	1.5	2.0	1.8	3.4	3.4	2.5	1.9	1.2	1.1	1.5	1.6	1.8	1.6	4.0	3.4
2011	1.9	1.7	1.1	0.9	1.6	1.6	1.7	1.5	3.5	3.4	2.0	1.9	1.2	1.0	1.6	1.5	1.8	1.6	3.5	3.4
2012	2.9	2.4	0.8	0.8	2.0	2.0	1.8	1.8	4.9	4.4	2.7	2.1	0.4	0.4	1.9	1.4	2.0	2.0	4.6	3.5
2013	2.2	2.6	0.8	0.8	2.1	2.0	1.6	1.5	4.3	4.5	2.2	2.1	0.6	0.6	1.5	2.0	1.8	1.7	3.7	4.1
2014	2.5	2.3	1.0	0.9	2.0	1.8	1.6	1.6	4.6	4.1	2.3	2.3	0.8	0.9	1.5	1.9	1.8	1.8	3.8	4.2
2015	2.4	2.2	0.8	0.7	2.0	1.9	1.9	1.9	4.5	4.2	2.4	2.3	0.6	0.7	2.1	2.0	2.1	2.0	4.4	4.4
2016	2.4	2.2	0.8	0.7	2.1	1.9	2.0	1.5	4.6	4.1	2.4	2.3	0.6	0.6	1.8	2.1	2.3	1.6	4.2	4.4
2017	2.2	2.2	1.4	0.7	3.0	2.9	2.4	1.7	5.2	5.2	1.9	1.9	0.9	0.6	1.8	1.8	2.0	1.8	3.7	3.7
2018	2.0	1.9	1.4	1.3	3.0	3.3	2.3	2.4	5.0	5.2	1.8	1.7	1.2	1.1	1.9	2.2	2.2	2.2	3.7	3.9
2019	2.1	2.1	1.4	1.3	3.1	3.1	2.5	2.5	5.2	5.3	1.9	1.9	1.1	1.0	2.3	2.3	2.2	2.3	4.2	4.2
2020	1.7	1.8	0.8	1.2	2.4	2.5	2.3	2.3	4.1	4.3	1.2	1.3	0.6	1.0	2.1	2.1	2.6	2.4	3.3	3.4
2021	2.2	2.2	1.8	1.1	2.6	2.5	1.9	2.6	4.8	4.7	1.6	1.5	1.3	0.5	2.1	2.2	2.5	2.8	3.7	3.7
2022	2.1	1.9	1.5	1.3	2.4	2.9	2.5	1.9	4.5	4.8	1.7	1.5	0.9	0.9	2.0	2.1	3.0	2.3	3.7	3.6
2023			1.3	1.5			2.4	2.5					0.8	0.9			2.3	2.3		
05-'10	-2.5%	-2.0%	-5.6%	-6.0%	1.2%	-0.1%	2.5%	2.0%	-0.8%	-1.2%	4.1%	-1.6%	8.6%	6.9%	1.6%	1.8%	-0.5%	-2.0%	3.1%	-0.1%
10-'15	6.2%	3.9%	-5.2%	-5.9%	4.3%	4.8%	-0.4%	0.4%	5.3%	4.3%	-0.9%	4.5%	-11.8%	-8.0%	6.2%	5.6%	3.6%	4.8%	2.1%	5.0%
15-'23	-100.0%	-100.0%	6.0%	8.8%	-100.0%	-100.0%	2.9%	3.6%	-100.0%	-100.0%	-100.0%	-100.0%	3.0%	3.0%	-100.0%	-100.0%	1.1%	1.8%	-100.0%	-100.0%

* 2023 Summer peaks are not include since they are projections. The peak month is likely to occur after the June 2023 cut off.
 Winter values for 2023 are included since the 2023 winter peak likely occurred already.

Year	System									
	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	4.0	4.0	2.2	2.1	3.0	3.0	3.5	3.4	7.0	7.0
2006	4.4	3.7	0.1	2.0	3.4	3.0	4.2	3.3	7.8	6.7
2007	4.5	3.6	2.1	1.5	3.4	3.2	3.4	3.5	7.8	6.8
2008	3.3	3.6	2.3	2.2	3.3	3.3	3.1	2.9	6.6	6.9
2009	3.0	3.4	1.8	2.3	3.3	3.1	3.4	3.1	6.3	6.5
2010	4.3	3.7	2.3	2.1	3.2	3.1	3.7	3.4	7.5	6.8
2011	3.8	3.6	2.3	1.9	3.2	3.1	3.4	3.1	7.1	6.8
2012	5.5	4.5	1.2	1.3	4.0	3.4	3.8	3.8	9.5	7.9
2013	4.5	4.7	1.5	1.4	3.6	4.0	3.4	3.2	8.0	8.7
2014	4.8	4.6	1.8	1.8	3.6	3.7	3.4	3.4	8.3	8.3
2015	4.8	4.5	1.4	1.4	4.1	4.0	4.0	3.9	8.9	8.5
2016	4.8	4.5	1.5	1.2	3.9	3.9	4.3	3.0	8.8	8.5
2017	4.1	4.1	2.3	1.3	4.8	4.7	4.4	3.5	8.9	8.8
2018	3.8	3.7	2.5	2.3	4.9	5.5	4.5	4.6	8.7	9.1
2019	4.0	4.1	2.5	2.3	5.4	5.5	4.7	4.8	9.4	9.5
2020	2.9	3.1	1.4	2.2	4.5	4.6	4.9	4.6	7.4	7.7
2021	3.8	3.7	3.1	1.7	4.7	4.7	4.4	5.3	8.5	8.4
2022	3.8	3.4	2.4	2.3	4.4	5.0	5.5	4.2	8.2	8.4
2023			2.1	2.3			4.7	4.8		
05-'10	1.0%	-1.8%	0.4%	-0.6%	1.4%	0.8%	1.0%	0.0%	1.2%	-0.7%
10-'15	2.3%	4.2%	-8.4%	-7.0%	5.2%	5.2%	1.6%	2.5%	3.6%	4.7%
15-'23	-100.0%	-100.0%	4.8%	6.3%	-100.0%	-100.0%	2.0%	2.7%	-100.0%	-100.0%



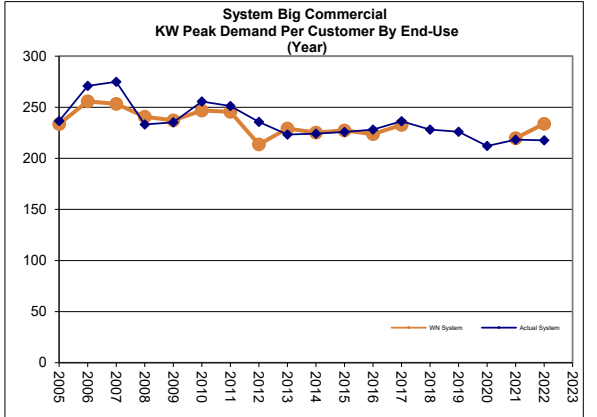
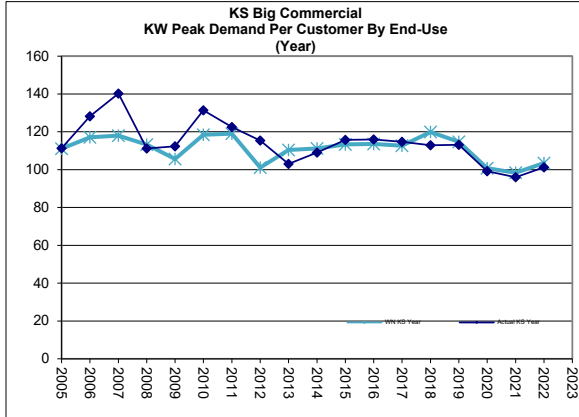
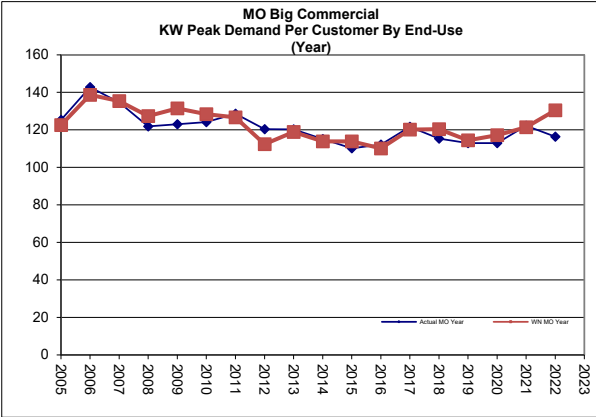
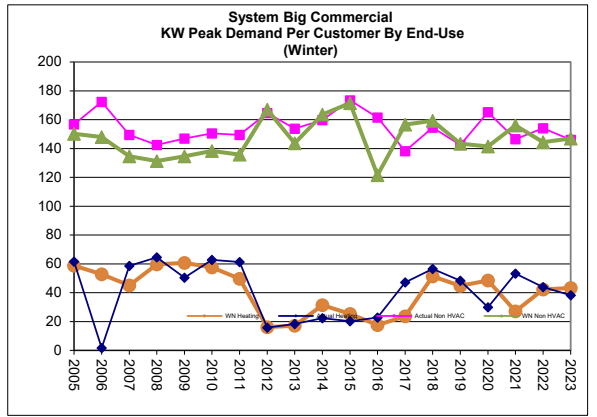
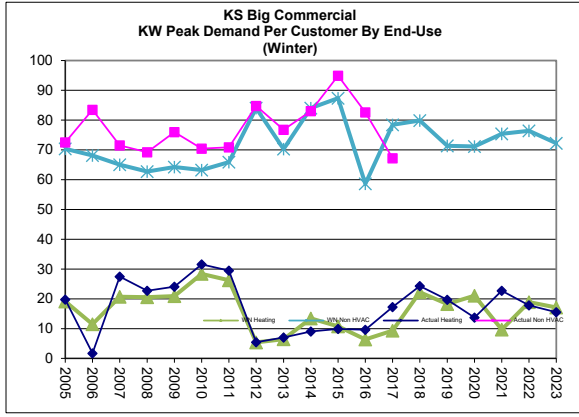
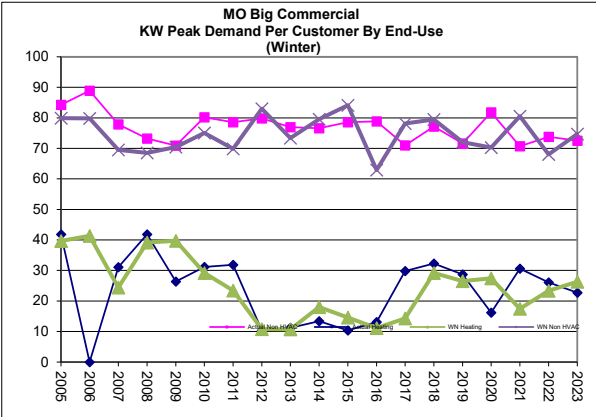
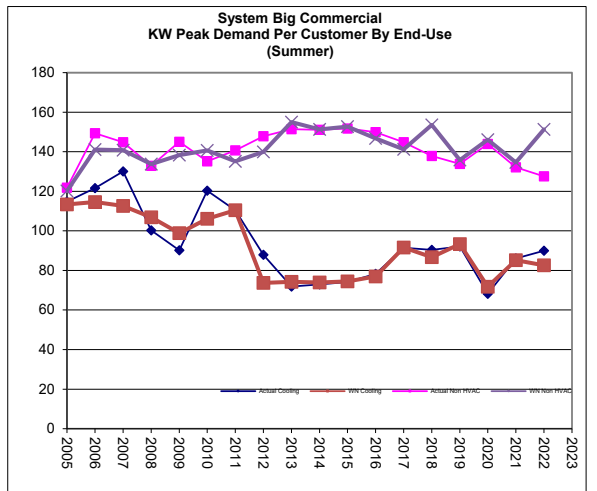
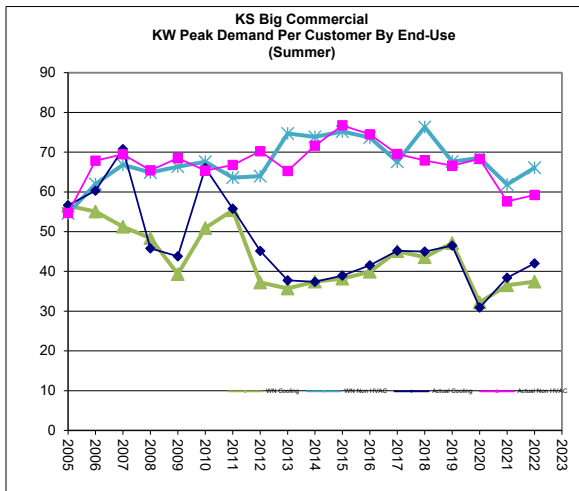
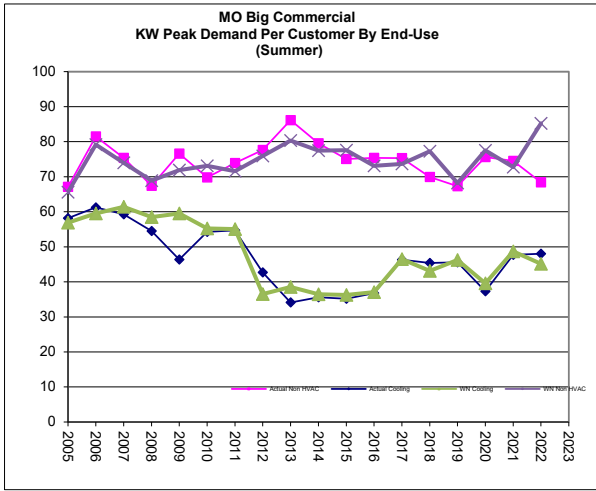
Plot 3A-34 Missouri & Kansas Big Commercial KW Peak Demand Per Customer By End-Use

Year	Missouri										Kansas									
	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year		Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	58.2	56.9	41.8	39.7	67.1	65.6	84.2	79.9	125.3	122.5	56.6	56.5	19.7	19.1	54.7	54.6	72.6	70.3	111.3	111.1
2006	61.3	59.5	0.0	41.4	81.5	79.2	88.9	79.8	142.8	138.7	60.3	55.1	1.7	11.4	67.9	62.0	83.4	68.1	128.2	117.1
2007	59.3	61.4	31.1	24.4	75.4	74.0	77.9	69.5	134.6	135.4	70.8	51.2	27.5	20.7	69.5	66.8	71.5	65.1	140.3	118.1
2008	54.5	58.5	41.8	39.1	67.4	68.9	73.2	68.5	121.9	127.4	45.8	48.4	22.7	20.6	65.5	64.9	69.2	62.7	111.2	113.3
2009	46.4	59.5	26.4	39.8	76.6	71.9	70.9	70.4	123.0	131.4	43.8	39.3	24.1	20.9	68.5	66.4	76.0	64.2	112.3	105.7
2010	54.3	55.2	31.1	29.2	69.8	73.1	80.2	75.1	124.1	128.3	66.0	50.9	31.6	28.4	65.4	67.6	70.4	63.3	131.4	118.5
2011	54.7	55.1	31.8	23.4	73.9	71.6	78.6	69.9	128.6	126.6	55.8	55.4	29.5	26.2	66.8	63.6	70.9	65.9	122.6	119.0
2012	42.7	36.5	10.4	10.8	77.6	75.9	79.9	83.0	120.4	112.4	45.1	37.2	5.4	5.4	70.2	64.0	84.7	84.0	115.4	101.1
2013	34.1	38.5	11.2	10.7	86.2	80.3	76.9	73.3	120.3	118.8	37.8	35.7	7.0	6.4	65.3	74.7	76.8	70.3	103.0	110.4
2014	35.6	36.5	13.4	18.0	79.5	77.4	76.6	79.5	115.1	113.9	37.4	37.4	9.0	13.4	71.6	73.9	83.0	84.0	109.0	111.3
2015	35.1	36.3	10.3	14.6	75.1	77.6	78.5	84.1	110.2	113.8	39.0	38.2	9.9	10.8	76.7	75.2	94.9	87.4	115.7	113.4
2016	36.8	37.0	13.1	11.2	75.4	73.1	78.8	62.9	112.2	110.2	41.5	39.9	9.6	6.4	74.5	73.7	82.6	58.6	116.0	113.6
2017	46.3	46.5	29.8	14.3	75.3	73.7	71.0	78.1	121.6	120.2	45.2	45.1	17.2	9.3	69.6	67.6	67.2	78.5	114.8	112.7
2018	45.4	43.1	32.2	29.2	69.9	77.3	77.2	79.5	115.3	120.4	45.0	43.6	24.3	22.2	67.9	76.3	77.4	79.8	112.9	119.9
2019	45.6	46.2	28.7	26.5	67.3	68.2	71.6	72.1	112.9	114.4	46.5	47.1	19.6	18.2	66.6	67.6	70.9	71.4	113.1	114.8
2020	37.3	39.6	16.2	27.4	75.6	77.5	81.8	70.3	112.9	117.1	30.9	32.2	13.7	21.0	68.3	68.6	83.4	71.2	99.2	100.7
2021	47.7	48.7	30.6	17.5	74.5	72.8	70.7	80.6	122.2	121.4	38.4	36.5	22.7	9.7	57.6	61.9	75.8	75.4	96.0	98.4
2022	48.0	45.2	26.1	23.4	68.4	85.2	73.8	68.0	116.4	130.4	42.0	37.4	17.8	18.9	59.2	66.1	80.2	76.4	101.2	103.5
2023			22.7	26.3			72.5	74.7					15.5	17.1			73.6	72.3		
05-'10	-1.4%	-0.6%	-5.7%	-6.0%	0.8%	2.2%	-1.0%	-1.2%	-0.2%	0.9%	3.1%	-2.1%	9.8%	8.2%	3.6%	4.4%	-0.6%	-2.1%	3.4%	1.3%
10-'15	-8.3%	-8.1%	-19.8%	-12.9%	1.5%	1.2%	-0.4%	2.3%	-2.4%	-2.4%	-10.0%	-5.6%	-20.7%	-17.6%	3.3%	2.2%	6.2%	6.7%	-2.5%	-0.9%
15-'23	-100.0%	-100.0%	10.3%	7.6%	-100.0%	-100.0%	-1.0%	-1.5%	-100.0%	-100.0%	-100.0%	-100.0%	5.8%	6.0%	-100.0%	-100.0%	-3.1%	-2.3%	-100.0%	-100.0%

* 2023 Summer peaks are not include since they are projections. The peak month is likely to occur after the June 2023 cut off.
 Winter values for 2023 are included since the 2023 winter peak likely occurred already.

*System 2006 winter peak occurred in November. Big Commercial class typically does not have heating in November.
 The weather normalized peak occurred in December.

Year	System									
	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	114.8	113.4	61.6	58.8	121.8	120.2	156.8	150.2	236.6	233.6
2006	121.6	114.6	1.7	52.8	149.4	141.2	172.3	147.9	271.0	255.8
2007	130.1	112.6	58.6	45.1	144.9	140.8	149.4	134.6	274.9	253.4
2008	100.3	106.9	64.5	59.7	132.8	133.8	142.4	131.2	233.1	240.7
2009	90.2	98.9	50.5	60.7	145.1	138.3	146.9	134.6	235.3	237.1
2010	120.3	106.1	62.7	57.5	135.2	140.7	150.6	138.3	255.5	246.8
2011	110.4	110.5	61.3	49.6	140.7	135.2	149.4	135.8	251.2	245.6
2012	87.9	73.7	15.8	16.1	147.9	139.9	164.6	167.0	235.7	213.6
2013	71.9	74.2	18.3	17.1	151.4	155.0	153.7	143.6	223.3	229.2
2014	73.0	73.9	22.4	31.5	151.1	151.3	159.6	163.6	224.1	225.2
2015	74.1	74.4	20.3	25.3	151.8	152.8	173.5	171.5	225.9	227.2
2016	78.3	76.9	22.7	17.5	149.9	146.8	161.5	121.5	228.2	223.7
2017	91.5	91.6	47.1	23.6	144.9	141.3	138.2	156.6	236.4	232.9
2018	90.4	86.7	56.6	51.4	137.8	153.6	154.5	159.3	228.2	
2019	92.1	93.4	48.3	44.7	133.9	135.8	142.5	143.4	226.0	
2020	68.2	71.8	29.9	48.5	143.9	146.1	165.2	141.5	212.1	
2021	86.1	85.2	53.3	27.1	132.1	134.6	146.5	155.9	218.2	219.8
2022	90.0	82.6	43.9	42.3	127.6	151.3	154.0	144.4	217.6	233.9
2023			38.2	43.4			146.1	147.0		
05-'10	0.9%	-1.3%	0.4%	-0.4%	2.1%	3.2%	-0.8%	-1.6%	1.6%	1.1%
10-'15	-9.2%	-6.8%	-20.2%	-15.1%	2.3%	1.7%	2.9%	4.4%	-2.4%	-1.6%
15-'23	-100.0%	-100.0%	8.3%	6.9%	-100.0%	-100.0%	-2.1%	-1.9%	-100.0%	-100.0%



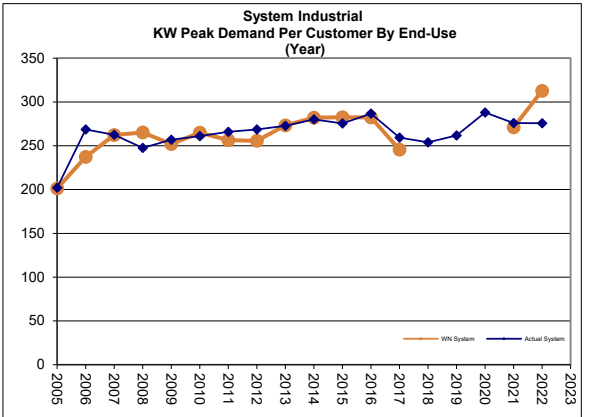
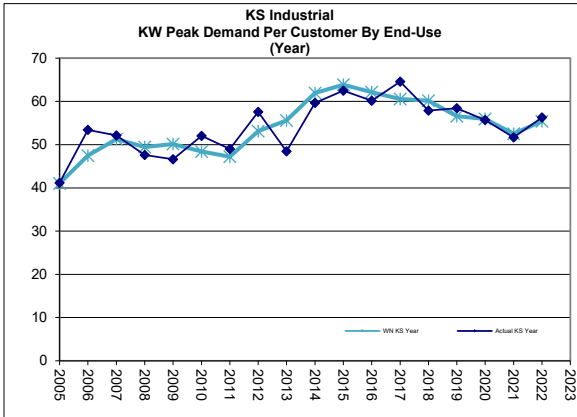
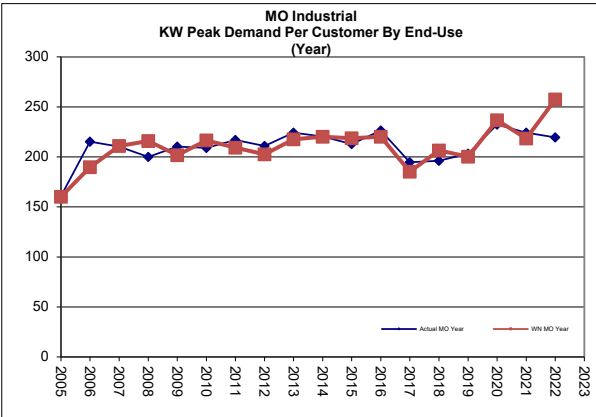
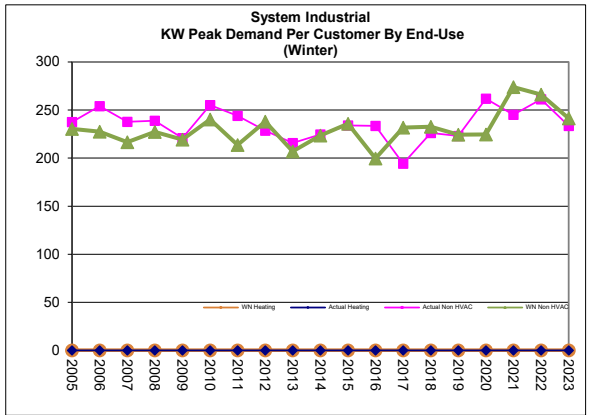
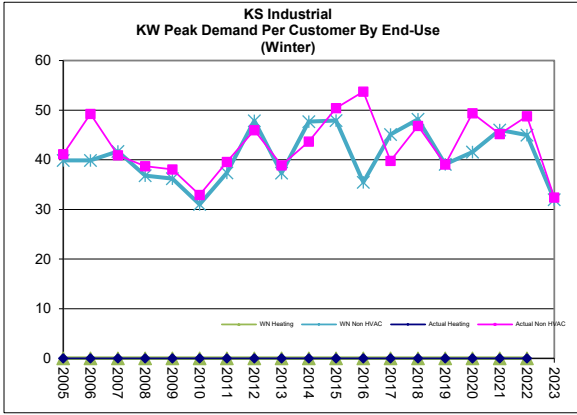
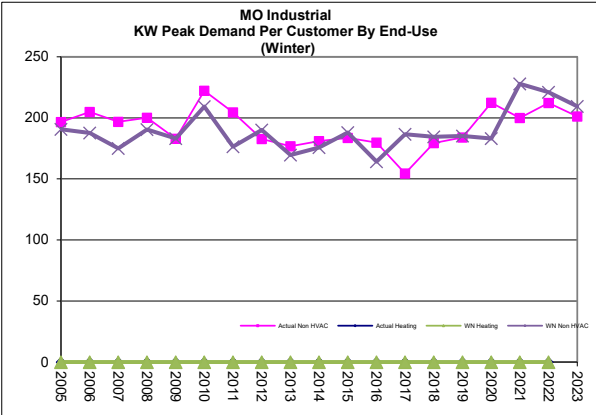
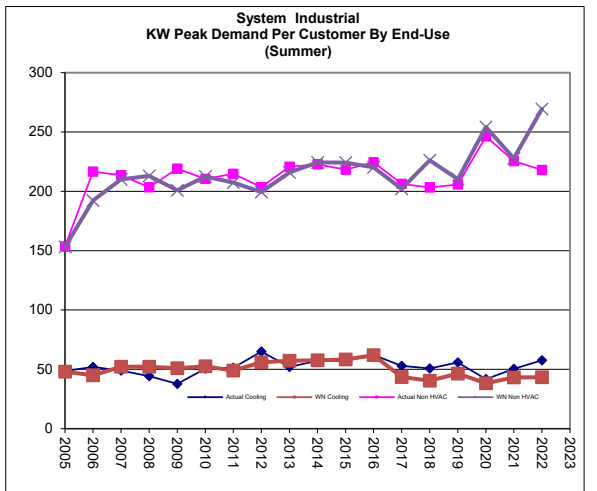
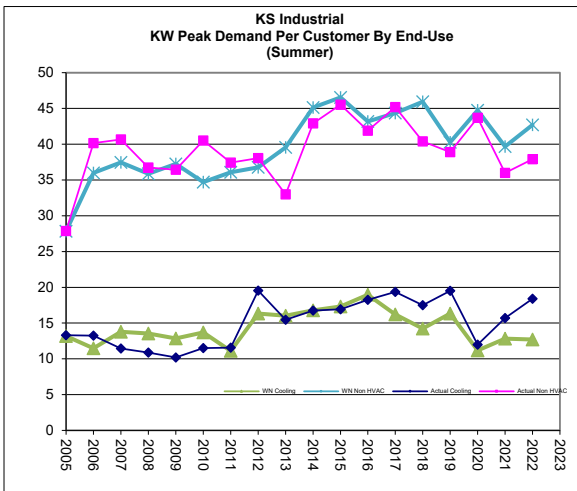
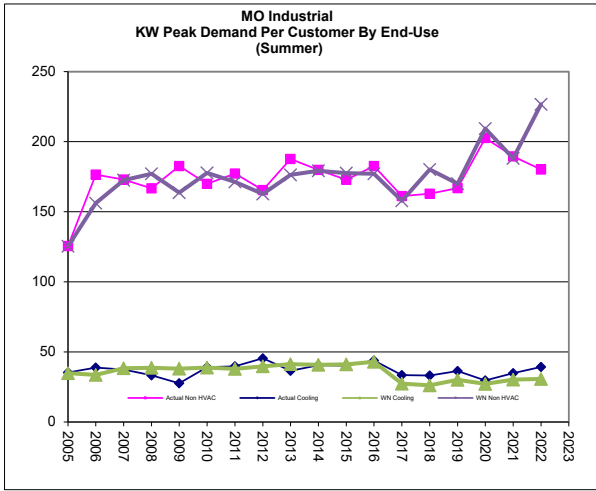
Plot 3A-35 Missouri & Kansas Industrial KW Peak Demand Per Customer By End-Use

Year	Missouri										Kansas									
	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year		Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	35.3	34.8	0.0	0.0	125.6	125.4	196.5	190.5	160.9	160.2	13.3	13.2	0.0	0.0	27.9	27.8	41.1	39.9	41.2	41.0
2006	38.8	33.6	0.0	0.0	176.5	156.1	204.8	187.6	215.3	189.7	13.2	11.5	0.0	0.0	40.1	36.0	49.3	39.9	53.4	47.5
2007	37.5	38.4	0.0	0.0	172.9	172.5	196.8	175.0	210.4	211.0	11.5	13.8	0.0	0.0	40.7	37.5	40.9	41.7	52.1	51.3
2008	33.3	38.7	0.0	0.0	166.7	177.2	200.2	190.4	200.0	215.9	10.9	13.6	0.0	0.0	36.7	35.9	38.7	36.8	47.6	49.4
2009	27.6	38.1	0.0	0.0	182.6	163.7	182.8	183.1	210.2	201.7	10.2	12.9	0.0	0.0	36.4	37.3	38.1	36.2	46.6	50.1
2010	39.1	38.8	0.0	0.0	170.0	177.7	222.2	209.3	209.1	216.5	11.5	13.7	0.0	0.0	40.5	34.7	32.9	31.0	52.0	48.4
2011	39.7	37.9	0.0	0.0	177.3	171.3	204.5	176.3	217.0	209.3	11.6	11.1	0.0	0.0	37.4	36.1	39.6	37.4	49.0	47.2
2012	45.5	39.7	0.0	0.0	165.5	162.8	182.6	190.1	210.9	202.5	19.5	16.3	0.0	0.0	38.0	36.8	46.0	47.9	57.6	53.1
2013	36.6	41.3	0.0	0.0	187.7	176.3	176.8	169.6	224.3	217.6	15.5	16.0	0.0	0.0	33.0	39.6	38.9	37.3	48.5	55.6
2014	40.5	40.8	0.0	0.0	179.9	179.3	180.9	175.7	220.4	220.1	16.7	16.8	0.0	0.0	42.9	45.1	43.7	47.7	59.7	61.9
2015	40.2	41.1	0.0	0.0	172.8	177.7	183.6	187.9	213.0	218.7	16.9	17.3	0.0	0.0	45.5	46.5	50.4	47.9	62.5	63.9
2016	43.8	43.0	0.0	0.0	182.6	177.1	179.7	164.2	226.5	220.1	18.3	19.0	0.0	0.0	41.9	43.2	53.7	35.5	60.1	62.1
2017	33.5	27.3	0.0	0.0	161.2	157.8	154.5	186.5	194.7	185.1	19.4	16.2	0.0	0.0	45.2	44.3	39.8	45.1	64.6	60.6
2018	33.2	26.2	0.0	0.0	162.9	180.2	179.3	184.4	196.1	206.4	17.5	14.2	0.0	0.0	40.4	45.9	46.8	48.2	57.9	60.2
2019	36.4	30.1	0.0	0.0	166.9	170.1	184.0	185.2	203.3	200.2	19.5	16.3	0.0	0.0	38.9	40.3	39.1	39.1	58.4	56.6
2020	29.7	27.1	0.0	0.0	202.6	209.5	212.4	183.0	232.3	236.6	12.0	11.2	0.0	0.0	43.7	44.7	49.4	41.6	55.7	55.9
2021	34.8	30.3	0.0	0.0	189.5	188.2	200.0	227.9	224.3	218.4	15.7	12.8	0.0	0.0	36.0	39.7	45.2	46.0	51.7	52.5
2022	39.3	30.7	0.0	0.0	180.2	226.7	212.3	221.1	219.5	257.4	18.4	12.7	0.0	0.0	37.9	42.7	48.8	45.0	56.3	55.4
2023							201.2	209.5									32.4	32.0		
05-'10	2.1%	2.2%	#DIV/0!	#DIV/0!	6.2%	7.2%	2.5%	1.9%	5.4%	6.2%	-2.9%	0.8%	#DIV/0!	#DIV/0!	7.8%	4.5%	-4.4%	-4.9%	4.8%	3.4%
10-'15	0.5%	1.1%	#DIV/0!	#DIV/0!	0.3%	0.0%	-3.7%	-2.1%	0.4%	0.2%	8.0%	4.8%	#DIV/0!	#DIV/0!	2.4%	6.1%	8.9%	9.1%	3.7%	5.7%
15-'23	-100.0%	-100.0%	#DIV/0!	#DIV/0!	-100.0%	-100.0%	1.2%	1.4%	-100.0%	-100.0%	-100.0%	-100.0%	#DIV/0!	#DIV/0!	-100.0%	-100.0%	-5.4%	-4.9%	-100.0%	-100.0%

* 2023 Summer peaks are not include since they are projections. The peak month is likely to occur after the June 2023 cut off.
 Winter values for 2023 are included since the 2023 winter peak likely occurred already.

*2006 winter peak occurred in Novemeber vs. a typical December or January.

Year	System									
	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	48.6	48.0	-	-	153.5	153.2	237.7	230.4	202.1	201.2
2006	52.0	45.1	-	-	216.6	192.1	254.0	227.5	268.7	237.2
2007	48.9	52.2	-	-	213.6	210.0	237.7	216.7	262.5	262.2
2008	44.2	52.2	-	-	203.4	213.1	238.9	227.2	247.6	265.3
2009	37.8	50.9	-	-	219.0	200.9	220.9	219.4	256.9	251.9
2010	50.6	52.5	-	-	210.5	212.4	255.1	240.3	261.1	264.9
2011	51.3	49.0	-	-	214.7	207.4	244.1	213.7	266.0	256.5
2012	65.0	56.1	-	-	203.5	199.5	228.6	238.0	268.5	255.6
2013	52.0	57.4	-	-	220.7	215.9	215.7	207.0	272.7	273.3
2014	57.3	57.6	-	-	222.8	224.4	224.6	223.5	280.0	282.0
2015	57.1	58.4	-	-	218.3	224.2	234.0	235.9	275.4	282.6
2016	62.1	61.9	-	-	224.5	220.3	233.5	199.6	286.6	282.2
2017	52.9	43.6	-	-	206.4	202.1	194.3	231.6	259.2	245.7
2018	50.7	40.4	-	-	203.3	226.1	226.2	232.6	254.0	
2019	55.9	46.5	-	-	205.8	210.3	223.1	224.3	261.7	
2020	41.7	38.3	-	-	246.3	254.2	261.8	224.6	288.0	
2021	50.5	43.1	-	-	225.5	227.8	245.2	273.9	276.0	270.9
2022	57.7	43.4	-	-	218.1	269.4	261.1	266.1	275.8	312.8
2023			-	-			233.6	241.5		
05-'10	0.8%	1.8%	#DIV/0!	#DIV/0!	6.5%	6.8%	1.4%	0.8%	5.3%	5.7%
10-'15	2.4%	2.1%	#DIV/0!	#DIV/0!	0.7%	1.1%	-1.7%	-0.4%	1.1%	1.3%
15-'23	-100.0%	-100.0%	#DIV/0!	#DIV/0!	-100.0%	-100.0%	0.0%	0.3%	-100.0%	-100.0%



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

Year	Missouri										Kansas									
	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year		Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	98.3	96.6	44.2	42.0	195.2	193.4	283.4	273.0	293.5	290.0	75.8	75.5	21.9	21.2	85.5	85.3	117.1	113.5	161.3	160.8
2006	104.8	97.6	0.6	43.7	260.5	237.7	297.1	270.0	365.3	335.2	79.6	71.6	3.0	13.3	111.0	100.7	136.5	111.1	190.6	172.4
2007	101.4	104.5	33.1	26.0	250.8	248.9	277.3	247.7	352.3	353.5	88.1	70.6	29.9	22.7	112.8	107.1	115.3	110.0	200.9	177.7
2008	92.4	101.8	44.3	41.5	236.6	248.5	275.7	261.2	329.1	350.3	61.3	67.4	25.1	22.8	104.9	103.6	111.2	102.5	166.2	171.0
2009	78.0	102.5	28.2	42.2	261.6	237.7	256.8	255.9	339.6	340.2	58.8	57.1	26.3	23.2	107.9	106.6	117.5	103.5	166.7	163.7
2010	98.1	98.5	33.1	31.0	242.2	253.1	305.4	287.3	340.3	351.6	83.2	69.8	34.1	30.7	108.4	105.2	107.1	97.7	191.6	175.0
2011	99.3	97.7	34.1	25.1	253.7	245.3	285.7	248.9	353.0	343.0	72.5	71.5	32.2	28.4	107.0	102.3	113.3	106.4	179.5	173.8
2012	94.1	81.2	12.2	12.7	245.8	241.3	265.4	276.1	339.9	322.5	70.9	58.7	7.1	7.1	111.1	103.2	134.1	135.3	182.1	161.9
2013	75.3	85.2	13.3	12.7	276.8	259.4	256.6	245.6	352.1	344.6	58.6	56.7	9.2	8.4	100.8	117.3	119.2	110.9	159.4	174.0
2014	81.2	82.3	16.0	20.5	262.1	259.3	260.2	257.7	343.3	341.6	59.4	59.5	11.9	16.1	117.2	121.9	130.0	134.9	176.6	181.4
2015	80.3	82.2	12.6	16.7	250.6	258.0	265.1	274.8	330.9	340.1	61.2	60.9	11.9	13.0	125.4	124.8	148.9	138.7	186.6	185.7
2016	85.7	84.9	15.2	13.4	260.9	252.7	261.5	229.8	346.5	337.6	65.5	64.4	11.7	8.7	119.3	119.9	140.1	97.5	184.7	184.3
2017	84.4	78.6	32.5	16.4	240.2	235.1	228.6	267.2	324.6	313.7	69.6	66.4	19.6	11.4	117.4	114.6	110.5	126.6	187.0	181.0
2018	83.0	73.4	35.0	31.8	236.5	261.4	259.6	267.1	319.5	334.8	67.6	62.5	27.1	24.7	111.1	125.5	127.6	131.5	178.7	188.0
2019	86.4	80.9	31.4	29.1	238.0	242.1	258.8	260.5	324.4	322.9	71.1	68.6	22.4	20.8	108.7	111.1	113.5	114.1	179.8	179.7
2020	70.4	70.5	17.8	29.8	281.4	290.3	297.4	256.4	351.8	360.8	46.4	47.1	15.2	23.4	115.5	116.8	136.8	116.4	161.9	163.9
2021	86.8	83.3	34.0	19.6	267.3	264.1	273.3	311.8	354.1	347.4	58.7	53.5	26.0	11.1	96.8	105.1	124.6	125.5	155.5	158.7
2022	91.5	79.6	29.1	26.0	251.8	315.8	289.6	292.0	343.3	395.5	65.1	54.2	20.2	21.4	100.1	112.2	133.7	124.8	165.2	166.4
2023			25.1	29.0			276.9	287.5					17.5	19.3			109.4	107.7		
05-'10	-0.1%	0.4%	-5.6%	-5.9%	4.4%	5.5%	1.5%	1.0%	3.0%	3.9%	1.9%	-1.5%	9.3%	7.7%	4.9%	4.3%	-1.8%	-2.9%	3.5%	1.7%
10-'15	-3.9%	-3.6%	-17.6%	-11.7%	0.7%	0.4%	-2.8%	-0.9%	-0.6%	-0.7%	-5.9%	-2.7%	-19.0%	-15.8%	3.0%	3.5%	6.8%	7.3%	-0.5%	1.2%
15-'23	-100.0%	-100.0%	9.0%	7.2%	-100.0%	-100.0%	0.5%	0.6%	-100.0%	-100.0%	-100.0%	-100.0%	4.9%	5.1%	-100.0%	-100.0%	-3.8%	-3.1%	-100.0%	-100.0%

* 2023 Summer peaks are not include since they are projections. The peak month is likely to occur after the June 2023 cut off.
 Winter values for 2023 are included since the 2023 winter peak likely occurred already.

Year	System									
	Cooling		Heating		Non-HVAC Summer		Non-HVAC Winter		Year	
	Actual	WN	Actual	WN	Actual	WN	Actual	WN	Actual	WN
2005	174.1	172.1	66.1	63.2	280.6	278.8	400.5	386.5	454.8	450.8
2006	184.4	169.2	3.7	57.1	371.5	338.4	433.6	381.1	555.9	507.6
2007	189.5	175.1	63.0	48.7	363.7	356.1	392.5	357.6	553.1	531.2
2008	153.7	169.3	69.3	64.3	341.5	352.0	386.8	363.7	495.3	521.3
2009	136.7	159.6	54.5	65.4	369.5	344.3	374.2	359.4	506.2	503.9
2010	181.3	168.4	67.2	61.7	350.6	358.2	412.5	385.0	531.9	526.6
2011	171.8	169.2	66.3	53.5	360.7	347.7	399.0	355.3	532.5	516.8
2012	165.0	139.9	19.3	19.8	357.0	344.5	399.4	411.4	521.9	484.4
2013	133.9	141.9	22.5	21.1	377.6	376.7	375.7	356.5	511.5	518.6
2014	140.6	141.8	27.9	36.6	379.3	381.1	390.2	392.6	519.9	523.0
2015	141.5	143.0	24.4	29.7	376.0	382.8	413.9	413.5	517.5	525.8
2016	151.1	149.2	26.9	22.1	380.1	372.6	401.6	327.2	531.3	521.9
2017	154.0	145.0	52.1	27.9	357.6	349.6	339.1	393.8	511.6	494.7
2018	150.6	135.9	62.1	56.4	347.6	386.9	387.2	398.6	498.2	522.8
2019	157.5	149.4	53.8	49.8	346.7	353.2	372.3	374.6	504.2	502.6
2020	116.8	117.5	33.0	53.2	396.9	407.2	434.2	372.8	513.7	524.7
2021	145.5	136.8	60.0	30.7	364.1	369.2	397.9	437.3	509.6	506.1
2022	156.6	133.8	49.3	47.3	351.9	428.0	423.3	416.8	508.5	561.8
2023			42.6	48.3			386.3	395.2		
05-'10	0.8%	-0.4%	0.3%	-0.5%	4.6%	5.1%	0.6%	-0.1%	3.2%	3.2%
10-'15	-4.8%	-3.2%	-18.3%	-13.6%	1.4%	1.3%	0.1%	1.4%	-0.5%	0.0%
15-'23	-100.0%	-100.0%	7.2%	6.3%	-100.0%	-100.0%	-0.9%	-0.6%	-100.0%	-100.0%

