

Variable	Description	Definition
Res_UPC_Native	historical residential average use per customer (kWh) with solar generation added back	$((\text{Residential [sales]} + \text{Residential [solar]}) / \text{Billed ResCust}) * 1000$
Cooling	residential cooling SAE variable	$\text{Res_Cool} * \text{Cool_Use}$
Heating	residential heating SAE variable	$\text{Res_Heat} * \text{Heat_Use}$
Base	residential base SAE variable	$\text{Res_Base} * \text{Base_Use}$
Jan	Monthly seasonal variable for month of January	= 1 if month is January, = 0 for all other months
Feb	Monthly seasonal variable for month of February	= 1 if month is February, = 0 for all other months
Mar	Monthly seasonal variable for month of March	= 1 if month is March, = 0 for all other months
Jun	Monthly seasonal variable for month of June	= 1 if month is June, = 0 for all other months
Jul	Monthly seasonal variable for month of July	= 1 if month is July, = 0 for all other months
Aug	Monthly seasonal variable for month of August	= 1 if month is August, = 0 for all other months
Sep	Monthly seasonal variable for month of September	= 1 if month is September, = 0 for all other months
Dec	Monthly seasonal variable for month of December	= 1 if month is December, = 0 for all other months
GMI_CO_E_WP_x_Cool	Google Mobility Index of Work Places for Colorado interacted with residential cooling	$\text{GMI_CO_E_WP} * \text{Cool_Use}$
Shift_COVID	Binary variable from May 2020 to December 2021	= 1 for May and June 2020, = 0.10 for July 2020 to December 2021
Outlier_2021Dec	Binary variable for December 2021	= 1 for December 2021, = 0 for all other months
AR(1)	AR(1)	First order autoregressive term
AR(2)	AR(2)	Second order autoregressive term
Residential	historical residential billed sales (MWh)	from company records
ActualResCust	historical residential actual customers	from company records and forecast model
Real_Personal_Income	PSCo service territory personal income (\$million)	from IHS Markit
Households	PSCo service territory households (000)	from IHS Markit
Household_Size	average population per household	population/households
HH_Income	Income per household (\$000)	$\text{Real_Personal_Income} / \text{Households}$
GMI_CO_E_WP	Google Mobility Index of Work Places for Colorado	from Google and forecast model
ResPrice	residential price variable (cents per kWh)	from company records and forecast model
Population	PSCo service territory population (000)	from IHS Markit
HDD	actual and forecasted heating degree days	Actual HDD Jan 2003 - Dec 2020, Normal HDD Jan 2021- Dec 2022
CDD	actual and forecasted cooling degree days	Actual CDD Jan 2003 - Dec 2020, Normal CDD Jan 2021 - Dec 2022
HDD_Index	indexed actual and forecasted heating degree days	$\text{HDD} / \text{Total 2015 HDDs}$
CDD_Index	indexed actual and forecasted cooling degree days	$\text{CDD} / \text{Total 2015 CDDs}$
Res_Heat	residential saturation/efficiency index for electric heating	from Itron, Inc. updated with PSCo customer saturations
Res_Cool	residential saturation/efficiency index for electric cooling	from Itron, Inc. updated with PSCo customer saturations
Res_Base	residential saturation/efficiency index for electric base uses	from Itron, Inc. updated with PSCo customer saturations
Heat_Use	residential heating utilization variable	$(\text{HH_Size_Index}^{0.25}) * (\text{HH_Income_Index}^{0.2}) * (\text{Electric_Price_Index}^{-0.15}) * \text{HDD_Index}$
Cool_Use	residential cooling utilization variable	$(\text{HH_Size_Index}^{0.25}) * (\text{HH_Income_Index}^{0.2}) * (\text{Electric_Price_Index}^{-0.15}) * \text{CDD_Index}$
Base_Use	residential base utilization variable	$(\text{HH_Size_Index}^{0.46}) * (\text{HH_Income_Index}^{0.1}) * (\text{Electric_Price_Index}^{-0.15}) * \text{Billing_Days} / 30.44$
HH_Size_Index	households indexed to July 2015	$\text{Households} / \text{Households(July, 2015)}$
HH_Income_Index	household income indexed to July 2015	$\text{HH_Income} / \text{HH_Income(July, 2015)}$
Electric_Price_Index	electric price indexed to July 2015	$\text{ResPrice} / \text{ResPrice(July, 2015)}$
Billing_Days	average number of consumption days billed for	from company records
SAE	statistically adjusted end-use	

Variable	Coefficient	StdErr	T-Stat	P-Value	Definition
XHeat	0.766	0.064	11.967	0.00%	Residential Heating Component (Actual History with Normal Weather Forecast)
XCool	0.716	0.049	14.558	0.00%	Residential Cooling Component (Actual History with Normal Weather Forecast)
XOther	0.986	0.015	64.011	0.00%	Residential NonHVAC Component (Actual History with Normal Weather Forecast)
Jan	98.058	8.779	11.170	0.00%	
Feb	35.436	8.073	4.390	0.00%	
Mar	28.681	6.968	4.116	0.01%	
Jun	58.773	6.176	9.517	0.00%	
Jul	123.829	10.471	11.825	0.00%	
Aug	90.161	13.508	6.675	0.00%	
Sep	32.668	10.354	3.155	0.19%	
Dec	54.846	6.718	8.164	0.00%	
GMI_CO_E_WP_x_Cool	-3.766	1.056	-3.565	0.05%	
Shift_COVID	34.201	15.003	2.280	2.39%	
Outlier_2021Dec	-40.558	19.083	-2.125	3.51%	
AR(1)	0.256	0.078	3.281	0.13%	
AR(2)	0.200	0.077	2.595	1.03%	

Model Statistics	
Iterations	17
Adjusted Observations	178
Deg. of Freedom for Error	162
R-Squared	0.968
Adjusted R-Squared	0.965
AIC	6.015
BIC	6.301
F-Statistic	
Prob (F-Statistic)	
Log-Likelihood	-771.94
Model Sum of Squares	1,851,259.77
Sum of Squared Errors	60,921.16
Mean Squared Error	376.06
Std. Error of Regression	19.39
Mean Abs. Dev. (MAD)	14.61
Mean Abs. % Err. (MAPE)	2.27%
Durbin-Watson Statistic	2.058
Durbin-H Statistic	
Ljung-Box Statistic	34.38
Prob (Ljung-Box)	0.0782
Skewness	0.268
Kurtosis	3.410
Jarque-Bera	3.379
Prob (Jarque-Bera)	0.1846

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2007	6	590.475				
2007	7	793.017				
2007	8	890.225	886.296	3.928	0.004	0.203
2007	9	666.300	685.003	-18.703	-0.028	-0.964
2007	10	618.874	637.027	-18.153	-0.029	-0.936
2007	11	544.207	549.423	-5.216	-0.010	-0.269
2007	12	648.672	658.857	-10.185	-0.016	-0.525
2008	1	855.340	847.435	7.905	0.009	0.408
2008	2	692.397	680.817	11.579	0.017	0.597
2008	3	608.256	622.080	-13.824	-0.023	-0.713
2008	4	632.746	631.475	1.271	0.002	0.066
2008	5	534.482	553.640	-19.158	-0.036	-0.988
2008	6	580.190	614.837	-34.647	-0.060	-1.787
2008	7	776.469	791.801	-15.332	-0.020	-0.791
2008	8	770.437	788.921	-18.484	-0.024	-0.953
2008	9	673.038	644.268	28.770	0.043	1.484
2008	10	578.272	580.239	-1.967	-0.003	-0.101
2008	11	479.379	494.572	-15.193	-0.032	-0.783
2008	12	712.655	674.209	38.445	0.054	1.983
2009	1	786.321	780.454	5.867	0.007	0.303
2009	2	616.764	610.463	6.301	0.010	0.325
2009	3	621.798	624.339	-2.540	-0.004	-0.131
2009	4	588.363	572.376	15.987	0.027	0.824
2009	5	527.598	513.113	14.485	0.027	0.747
2009	6	575.847	602.630	-26.783	-0.047	-1.381
2009	7	710.895	706.776	4.119	0.006	0.212
2009	8	693.815	664.943	28.873	0.042	1.489
2009	9	658.927	624.371	34.556	0.052	1.782
2009	10	582.465	580.067	2.398	0.004	0.124
2009	11	537.873	509.128	28.745	0.053	1.482
2009	12	749.501	714.661	34.839	0.046	1.797
2010	1	776.256	795.022	-18.766	-0.024	-0.968
2010	2	652.076	641.474	10.603	0.016	0.547
2010	3	695.492	689.379	6.113	0.009	0.315
2010	4	588.291	597.923	-9.632	-0.016	-0.497
2010	5	502.606	514.066	-11.460	-0.023	-0.591
2010	6	651.189	639.657	11.532	0.018	0.595
2010	7	734.312	752.428	-18.117	-0.025	-0.934
2010	8	806.245	781.252	24.994	0.031	1.289
2010	9	686.990	676.082	10.909	0.016	0.563
2010	10	566.130	557.834	8.296	0.015	0.428
2010	11	535.064	528.134	6.930	0.013	0.357
2010	12	678.910	674.621	4.289	0.006	0.221
2011	1	784.702	794.946	-10.244	-0.013	-0.528
2011	2	659.281	636.341	22.940	0.035	1.183
2011	3	666.115	678.558	-12.443	-0.019	-0.642
2011	4	532.936	537.795	-4.859	-0.009	-0.251
2011	5	556.674	551.437	5.237	0.009	0.270
2011	6	609.058	629.347	-20.289	-0.033	-1.046
2011	7	692.915	719.116	-26.201	-0.038	-1.351

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2011	8	912.935	845.269	67.666	0.074	3.489
2011	9	718.733	735.027	-16.294	-0.023	-0.840
2011	10	543.789	579.228	-35.440	-0.065	-1.828
2011	11	553.429	531.342	22.088	0.040	1.139
2011	12	681.293	677.922	3.371	0.005	0.174
2012	1	781.962	789.905	-7.943	-0.010	-0.410
2012	2	657.425	652.576	4.849	0.007	0.250
2012	3	624.667	643.140	-18.473	-0.030	-0.953
2012	4	519.796	522.847	-3.051	-0.006	-0.157
2012	5	558.590	533.638	24.951	0.045	1.287
2012	6	633.388	640.848	-7.460	-0.012	-0.385
2012	7	866.187	873.031	-6.844	-0.008	-0.353
2012	8	867.064	906.051	-38.987	-0.045	-2.010
2012	9	648.346	666.529	-18.183	-0.028	-0.938
2012	10	592.156	590.179	1.977	0.003	0.102
2012	11	538.635	523.256	15.379	0.029	0.793
2012	12	618.308	625.349	-7.041	-0.011	-0.363
2013	1	842.422	828.936	13.486	0.016	0.695
2013	2	626.677	635.848	-9.171	-0.015	-0.473
2013	3	611.619	614.643	-3.024	-0.005	-0.156
2013	4	630.242	635.572	-5.330	-0.008	-0.275
2013	5	580.813	581.904	-1.091	-0.002	-0.056
2013	6	579.035	606.566	-27.531	-0.048	-1.420
2013	7	841.456	829.988	11.468	0.014	0.591
2013	8	751.578	793.916	-42.338	-0.056	-2.183
2013	9	713.814	700.581	13.233	0.019	0.682
2013	10	600.078	611.109	-11.031	-0.018	-0.569
2013	11	517.055	499.408	17.648	0.034	0.910
2013	12	682.361	688.391	-6.031	-0.009	-0.311
2014	1	821.657	791.970	29.687	0.036	1.531
2014	2	618.851	608.159	10.692	0.017	0.551
2014	3	636.501	629.174	7.327	0.012	0.378
2014	4	588.181	565.216	22.965	0.039	1.184
2014	5	509.927	513.397	-3.470	-0.007	-0.179
2014	6	590.370	576.638	13.732	0.023	0.708
2014	7	754.263	759.933	-5.669	-0.008	-0.292
2014	8	711.029	730.279	-19.250	-0.027	-0.993
2014	9	616.022	612.730	3.292	0.005	0.170
2014	10	582.184	554.540	27.645	0.047	1.426
2014	11	485.410	452.634	32.776	0.068	1.690
2014	12	714.798	689.662	25.137	0.035	1.296
2015	1	790.559	795.130	-4.571	-0.006	-0.236
2015	2	551.101	587.361	-36.260	-0.066	-1.870
2015	3	679.704	641.558	38.147	0.056	1.967
2015	4	546.520	555.421	-8.901	-0.016	-0.459
2015	5	490.875	487.234	3.641	0.007	0.188
2015	6	609.338	603.557	5.781	0.009	0.298
2015	7	769.827	760.628	9.199	0.012	0.474
2015	8	754.392	761.956	-7.563	-0.010	-0.390
2015	9	697.702	691.478	6.224	0.009	0.321

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2015	10	589.641	573.896	15.745	0.027	0.812
2015	11	480.555	481.454	-0.899	-0.002	-0.046
2015	12	714.561	689.579	24.983	0.035	1.288
2016	1	755.939	769.552	-13.613	-0.018	-0.702
2016	2	625.103	630.690	-5.587	-0.009	-0.288
2016	3	643.776	650.360	-6.583	-0.010	-0.339
2016	4	544.670	541.096	3.573	0.007	0.184
2016	5	531.195	521.035	10.160	0.019	0.524
2016	6	655.950	622.602	33.348	0.051	1.720
2016	7	782.785	756.683	26.102	0.033	1.346
2016	8	859.457	858.666	0.791	0.001	0.041
2016	9	637.533	665.742	-28.209	-0.044	-1.455
2016	10	531.111	521.053	10.058	0.019	0.519
2016	11	497.292	486.117	11.175	0.022	0.576
2016	12	632.927	654.302	-21.375	-0.034	-1.102
2017	1	805.065	772.697	32.368	0.040	1.669
2017	2	586.099	581.465	4.635	0.008	0.239
2017	3	623.350	642.714	-19.364	-0.031	-0.999
2017	4	501.877	489.840	12.036	0.024	0.621
2017	5	537.525	519.296	18.229	0.034	0.940
2017	6	643.978	614.984	28.994	0.045	1.495
2017	7	745.837	750.396	-4.559	-0.006	-0.235
2017	8	801.467	797.358	4.109	0.005	0.212
2017	9	633.900	653.669	-19.769	-0.031	-1.019
2017	10	551.931	561.064	-9.133	-0.017	-0.471
2017	11	517.950	501.965	15.985	0.031	0.824
2017	12	591.582	618.451	-26.869	-0.045	-1.386
2018	1	759.778	768.122	-8.344	-0.011	-0.430
2018	2	589.118	592.802	-3.684	-0.006	-0.190
2018	3	653.191	659.433	-6.242	-0.010	-0.322
2018	4	528.215	557.840	-29.625	-0.056	-1.528
2018	5	540.979	533.536	7.444	0.014	0.384
2018	6	653.674	635.188	18.486	0.028	0.953
2018	7	819.496	816.508	2.988	0.004	0.154
2018	8	803.390	821.326	-17.936	-0.022	-0.925
2018	9	634.597	633.959	0.639	0.001	0.033
2018	10	600.873	620.913	-20.039	-0.033	-1.033
2018	11	524.221	537.095	-12.874	-0.025	-0.664
2018	12	620.573	656.689	-36.116	-0.058	-1.862
2019	1	751.992	754.682	-2.690	-0.004	-0.139
2019	2	592.221	594.317	-2.096	-0.004	-0.108
2019	3	649.439	654.432	-4.992	-0.008	-0.257
2019	4	562.171	579.488	-17.317	-0.031	-0.893
2019	5	517.809	534.336	-16.527	-0.032	-0.852
2019	6	513.930	538.103	-24.173	-0.047	-1.247
2019	7	746.036	739.861	6.175	0.008	0.318
2019	8	846.682	801.442	45.240	0.053	2.333
2019	9	691.345	701.657	-10.312	-0.015	-0.532
2019	10	588.860	600.165	-11.306	-0.019	-0.583
2019	11	506.016	503.399	2.616	0.005	0.135

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2019	12	669.980	706.084	-36.105	-0.054	-1.862
2020	1	728.706	738.134	-9.428	-0.013	-0.486
2020	2	581.240	598.645	-17.406	-0.030	-0.898
2020	3	655.824	677.334	-21.510	-0.033	-1.109
2020	4	577.359	581.035	-3.676	-0.006	-0.190
2020	5	520.229	525.165	-4.937	-0.009	-0.255
2020	6	699.546	694.639	4.907	0.007	0.253
2020	7	856.147	843.596	12.551	0.015	0.647
2020	8	831.319	877.788	-46.469	-0.056	-2.396
2020	9	761.990	755.804	6.185	0.008	0.319
2020	10	580.434	573.392	7.042	0.012	0.363
2020	11	508.635	516.384	-7.749	-0.015	-0.400
2020	12	687.797	677.660	10.137	0.015	0.523
2021	1	729.406	747.436	-18.030	-0.025	-0.930
2021	2	606.895	611.395	-4.500	-0.007	-0.232
2021	3	719.529	701.003	18.526	0.026	0.955
2021	4	580.634	592.247	-11.613	-0.020	-0.599
2021	5	506.176	501.267	4.908	0.010	0.253
2021	6	672.243	650.940	21.303	0.032	1.099
2021	7	805.785	803.718	2.067	0.003	0.107
2021	8	873.768	869.739	4.029	0.005	0.208
2021	9	763.188	751.202	11.986	0.016	0.618
2021	10	542.471	571.216	-28.745	-0.053	-1.482
2021	11	484.211	493.659	-9.448	-0.020	-0.487
2021	12	587.353	588.983	-1.631	-0.003	-0.084
2022	1	718.952	720.106	-1.154	-0.002	-0.060
2022	2	588.077	594.768	-6.692	-0.011	-0.345
2022	3	717.208	688.060	29.149	0.041	1.503
2022	4	536.101	554.590	-18.489	-0.034	-0.953
2022	5	497.655	506.225	-8.571	-0.017	-0.442
2022	6		614.284			
2022	7		743.165			
2022	8		828.453			
2022	9		687.448			
2022	10		532.371			
2022	11		497.135			
2022	12		661.289			
2023	1		734.695			
2023	2		586.840			
2023	3		668.712			
2023	4		513.202			
2023	5		522.592			
2023	6		614.202			
2023	7		740.520			
2023	8		817.428			
2023	9		655.080			
2023	10		551.482			
2023	11		500.631			
2023	12		664.955			

Variable	Description	Definition
Sales	historical commercial sales with solar generation added back	Commercial [sales] + Commercial [solar]
Cooling	commercial cooling SAE variable	Com_Cool * Cool_Use
Heating	commercial heating SAE variable	Com_Heat * Heat_Use
Base	commercial base SAE variable	Com_Base * Base_Use
Feb	Monthly seasonal variable for month of February	= 1 if month is February, = 0 for all other months
Apr	Monthly seasonal variable for month of April	= 1 if month is April, = 0 for all other months
May	Monthly seasonal variable for month of May	= 1 if month is May, = 0 for all other months
Nov	Monthly seasonal variable for month of November	= 1 if month is November, = 0 for all other months
GMI_X_Cool	Average of Workplace and Retail Google Mobility Index interacted with cooling use	Cool_Use * (GMI_CO_E_WP + GMI_CO_E_RET) / 2
GMI_X_Heat	Average of Workplace and Retail Google Mobility Index interacted with heating use	Heat_Use * (GMI_CO_E_WP + GMI_CO_E_RET) / 2
Outlier_Lockdown SMA(1)	Binary variable reflecting initial COVID lockdowns SMA(1)	= 1 for May and June 2020 Seasonal moving average correction term
CI_Cust	historical commercial and industrial customers	from company records and forecast model
Output	Combined real Gross Metro Product for metros in PSCo service territory	from IHS Markit
GMI_CO_E_WP	Google Mobility Index of Work Places for Colorado	from Google and forecast model
GMI_CO_E_RET	Google Mobility Index of Retail Establishments for Colorado	from Google and forecast model
ComPrice	commercial price variable (cents per kWh)	from company records and forecast model
ma_Price	12 month moving average of commercial price variable	ma(ComPrice,12)
HDD	actual and forecasted heating degree days	Actual HDD Jan 2006 - Dec 2020, Normal HDD Jan 2021- Dec 2022
CDD	actual and forecasted cooling degree days	Actual CDD Jan 2006 - Dec 2020, Normal CDD Jan 2021 - Dec 2022
HDD_Index	indexed actual and forecasted heating degree days	(0.75*HDD + 0.25*Lag (HDD, 1))/Total 2004 HDDs
CDD_Index	indexed actual and forecasted cooling degree days	(0.75*CDD + 0.25*Lag (CDD, 1))/Total 2004 CDDs
Com_Heat	commercial saturation/efficiency index for electric heating	from Itron, Inc. updated with PSCo customer saturations
Com_Cool	commercial saturation/efficiency index for electric cooling	from Itron, Inc. updated with PSCo customer saturations
Com_Base	commercial saturation/efficiency index for electric base uses	from Itron, Inc. updated with PSCo customer saturations
Heat_Use	commercial heating utilization variable	(ComPrice_Index^-0.15) * (ComOutput_Index^0.25) * HDD_Index
Cool_Use	commercial cooling utilization variable	(ComPrice_Index^-0.15) * (ComOutput_Index^0.25) * CDD_Index
Base_Use	commercial base utilization variable	(ComPrice_Index^-0.15) * (ComOutput_Index^0.25) * Billing_Days/30.44
ComPrice_Index	Price indexed to July 2004	ma(ComPrice)/ma(ComPrice)(July, 2004)
ComOutput_Index	output indexed to July 2004	Output/Output(July, 2004)
Billing_Days	average number of consumption days billed for	from company records
SAE	statistically adjusted end-use	

Variable	Coefficient	StdErr	T-Stat	P-Value
CI_Custs	4.640	0.246	18.868	0.00%
XHeat	0.655	0.082	7.967	0.00%
XCool	1.032	0.068	15.168	0.00%
XOther	0.458	0.027	16.690	0.00%
GMI_X_Cool	30893.818	5676.940	5.442	0.00%
GMI_X_Heat	8564.590	1467.537	5.836	0.00%
Outlier_Lockdown	-105333.310	24822.118	-4.244	0.00%
Feb	-71516.491	13874.440	-5.155	0.00%
Apr	-76312.804	12763.195	-5.979	0.00%
May	-59139.439	13386.646	-4.418	0.00%
Nov	-69896.269	13692.443	-5.105	0.00%
SMA(1)	0.271	0.081	3.352	0.10%

Model Statistics

Iterations	13
Adjusted Observations	180
Deg. of Freedom for Error	168
R-Squared	0.908
Adjusted R-Squared	0.901
AIC	20.995
BIC	21.208
F-Statistic	
Prob (F-Statistic)	
Log-Likelihood	-2,133.00
Model Sum of Squares	2,029,470,867,900.86
Sum of Squared Errors	206,818,477,164.77
Mean Squared Error	1,231,062,364.08
Std. Error of Regression	35,086.50
Mean Abs. Dev. (MAD)	26,164.37
Mean Abs. % Err. (MAPE)	1.87%
Durbin-Watson Statistic	1.960
Durbin-H Statistic	
Ljung-Box Statistic	104.79
Prob (Ljung-Box)	0.0000
Skewness	-0.359
Kurtosis	3.583
Jarque-Bera	6.426
Prob (Jarque-Bera)	0.0402

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2007	6	1,405,392.010	1,417,085.825	-11,693.815	-0.83%	-0.333
2007	7	1,539,248.486	1,551,334.121	-12,085.635	-0.79%	-0.344
2007	8	1,670,567.394	1,691,904.765	-21,337.371	-1.28%	-0.608
2007	9	1,431,676.990	1,506,306.033	-74,629.043	-5.21%	-2.127
2007	10	1,454,927.714	1,491,670.989	-36,743.274	-2.53%	-1.047
2007	11	1,304,951.871	1,299,821.466	5,130.404	0.39%	0.146
2007	12	1,356,580.751	1,407,217.083	-50,636.332	-3.73%	-1.443
2008	1	1,539,437.650	1,557,255.532	-17,817.882	-1.16%	-0.508
2008	2	1,368,527.416	1,361,648.111	6,879.305	0.50%	0.196
2008	3	1,308,980.697	1,385,125.343	-76,144.647	-5.82%	-2.170
2008	4	1,369,685.003	1,379,132.379	-9,447.376	-0.69%	-0.269
2008	5	1,325,301.517	1,326,426.990	-1,125.473	-0.08%	-0.032
2008	6	1,369,279.564	1,415,986.089	-46,706.525	-3.41%	-1.331
2008	7	1,579,848.775	1,574,400.782	5,447.993	0.34%	0.155
2008	8	1,490,589.081	1,600,833.602	-110,244.521	-7.40%	-3.142
2008	9	1,537,091.375	1,485,317.066	51,774.309	3.37%	1.476
2008	10	1,430,456.757	1,434,406.160	-3,949.403	-0.28%	-0.113
2008	11	1,181,729.567	1,238,008.348	-56,278.781	-4.76%	-1.604
2008	12	1,431,399.155	1,422,494.224	8,904.931	0.62%	0.254
2009	1	1,472,314.703	1,483,420.865	-11,106.162	-0.75%	-0.317
2009	2	1,246,866.779	1,292,018.077	-45,151.297	-3.62%	-1.287
2009	3	1,369,824.397	1,385,088.181	-15,263.784	-1.11%	-0.435
2009	4	1,301,335.985	1,308,461.181	-7,125.196	-0.55%	-0.203
2009	5	1,242,110.789	1,273,060.428	-30,949.639	-2.49%	-0.882
2009	6	1,392,388.348	1,380,600.639	11,787.709	0.85%	0.336
2009	7	1,450,959.748	1,459,470.233	-8,510.485	-0.59%	-0.243
2009	8	1,455,042.587	1,411,557.906	43,484.682	2.99%	1.239
2009	9	1,431,246.114	1,461,904.648	-30,658.535	-2.14%	-0.874
2009	10	1,347,762.642	1,406,404.320	-58,641.678	-4.35%	-1.671
2009	11	1,225,885.910	1,215,925.013	9,960.898	0.81%	0.284
2009	12	1,457,596.618	1,460,760.130	-3,163.512	-0.22%	-0.090
2010	1	1,406,661.537	1,440,236.911	-33,575.375	-2.39%	-0.957
2010	2	1,249,023.006	1,278,094.745	-29,071.738	-2.33%	-0.829
2010	3	1,422,358.519	1,438,968.829	-16,610.310	-1.17%	-0.473
2010	4	1,283,796.737	1,311,279.171	-27,482.434	-2.14%	-0.783
2010	5	1,193,259.040	1,246,673.419	-53,414.379	-4.48%	-1.522

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2010	6	1,428,509.964	1,425,925.821	2,584.144	0.18%	0.074
2010	7	1,483,429.403	1,478,805.726	4,623.678	0.31%	0.132
2010	8	1,546,126.921	1,570,202.344	-24,075.423	-1.56%	-0.686
2010	9	1,501,295.951	1,487,981.405	13,314.546	0.89%	0.379
2010	10	1,379,249.867	1,365,410.661	13,839.205	1.00%	0.394
2010	11	1,268,319.735	1,257,233.835	11,085.900	0.87%	0.316
2010	12	1,383,250.929	1,403,217.748	-19,966.820	-1.44%	-0.569
2011	1	1,495,915.021	1,443,172.393	52,742.628	3.53%	1.503
2011	2	1,291,138.694	1,270,115.478	21,023.215	1.63%	0.599
2011	3	1,402,176.478	1,413,378.795	-11,202.318	-0.80%	-0.319
2011	4	1,262,159.656	1,231,416.399	30,743.257	2.44%	0.876
2011	5	1,274,689.794	1,277,719.519	-3,029.725	-0.24%	-0.086
2011	6	1,403,805.535	1,389,161.371	14,644.164	1.04%	0.417
2011	7	1,451,091.166	1,423,697.292	27,393.874	1.89%	0.781
2011	8	1,611,286.271	1,601,077.135	10,209.136	0.63%	0.291
2011	9	1,534,965.687	1,527,846.752	7,118.934	0.46%	0.203
2011	10	1,342,763.429	1,385,941.686	-43,178.257	-3.22%	-1.231
2011	11	1,284,505.125	1,257,330.012	27,175.113	2.12%	0.775
2011	12	1,387,491.597	1,388,261.059	-769.462	-0.06%	-0.022
2012	1	1,470,584.451	1,455,799.837	14,784.614	1.01%	0.421
2012	2	1,340,085.208	1,300,113.885	39,971.323	2.98%	1.139
2012	3	1,337,007.962	1,377,606.910	-40,598.948	-3.04%	-1.157
2012	4	1,250,239.950	1,248,174.829	2,065.121	0.17%	0.059
2012	5	1,388,095.031	1,292,262.861	95,832.171	6.90%	2.731
2012	6	1,425,546.106	1,404,510.473	21,035.633	1.48%	0.600
2012	7	1,557,460.421	1,579,707.945	-22,247.525	-1.43%	-0.634
2012	8	1,626,617.844	1,648,447.674	-21,829.830	-1.34%	-0.622
2012	9	1,409,298.898	1,457,621.322	-48,322.424	-3.43%	-1.377
2012	10	1,453,729.302	1,407,350.636	46,378.666	3.19%	1.322
2012	11	1,274,050.565	1,253,079.702	20,970.863	1.65%	0.598
2012	12	1,346,669.185	1,341,933.286	4,735.898	0.35%	0.135
2013	1	1,526,771.707	1,491,531.274	35,240.433	2.31%	1.004
2013	2	1,274,442.020	1,288,620.412	-14,178.392	-1.11%	-0.404
2013	3	1,314,892.304	1,332,762.474	-17,870.170	-1.36%	-0.509
2013	4	1,392,034.690	1,341,487.415	50,547.275	3.63%	1.441
2013	5	1,333,526.090	1,344,840.621	-11,314.531	-0.85%	-0.322

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2013	6	1,323,226.468	1,364,621.557	-41,395.089	-3.13%	-1.180
2013	7	1,615,087.636	1,531,350.983	83,736.653	5.18%	2.387
2013	8	1,517,572.843	1,522,013.283	-4,440.440	-0.29%	-0.127
2013	9	1,478,497.560	1,478,864.831	-367.271	-0.02%	-0.010
2013	10	1,441,401.102	1,446,655.986	-5,254.883	-0.36%	-0.150
2013	11	1,218,132.688	1,220,529.244	-2,396.556	-0.20%	-0.068
2013	12	1,422,157.274	1,406,011.286	16,145.988	1.14%	0.460
2014	1	1,535,926.402	1,498,249.294	37,677.108	2.45%	1.074
2014	2	1,308,046.044	1,267,260.147	40,785.897	3.12%	1.162
2014	3	1,383,829.302	1,382,739.793	1,089.508	0.08%	0.031
2014	4	1,328,653.149	1,309,541.025	19,112.124	1.44%	0.545
2014	5	1,292,923.593	1,266,544.039	26,379.554	2.04%	0.752
2014	6	1,375,043.985	1,342,164.462	32,879.523	2.39%	0.937
2014	7	1,559,346.680	1,502,565.788	56,780.892	3.64%	1.618
2014	8	1,491,153.375	1,472,955.105	18,198.270	1.22%	0.519
2014	9	1,468,853.494	1,431,228.607	37,624.887	2.56%	1.072
2014	10	1,435,212.408	1,402,709.936	32,502.472	2.26%	0.926
2014	11	1,193,898.507	1,184,524.111	9,374.396	0.79%	0.267
2014	12	1,494,685.599	1,439,029.783	55,655.816	3.72%	1.586
2015	1	1,524,175.340	1,480,814.010	43,361.329	2.84%	1.236
2015	2	1,261,529.052	1,267,557.207	-6,028.155	-0.48%	-0.172
2015	3	1,475,634.890	1,422,021.060	53,613.831	3.63%	1.528
2015	4	1,317,963.974	1,301,377.386	16,586.588	1.26%	0.473
2015	5	1,262,261.689	1,252,498.017	9,763.672	0.77%	0.278
2015	6	1,395,241.994	1,399,769.795	-4,527.801	-0.32%	-0.129
2015	7	1,541,312.258	1,500,011.507	41,300.751	2.68%	1.177
2015	8	1,518,357.889	1,510,708.248	7,649.641	0.50%	0.218
2015	9	1,536,498.412	1,510,388.064	26,110.348	1.70%	0.744
2015	10	1,442,438.872	1,423,765.558	18,673.314	1.29%	0.532
2015	11	1,237,066.101	1,223,592.058	13,474.043	1.09%	0.384
2015	12	1,484,762.994	1,456,624.176	28,138.818	1.90%	0.802
2016	1	1,472,658.878	1,467,318.067	5,340.811	0.36%	0.152
2016	2	1,334,270.426	1,310,318.633	23,951.793	1.80%	0.683
2016	3	1,436,126.124	1,456,519.665	-20,393.541	-1.42%	-0.581
2016	4	1,281,893.384	1,289,633.031	-7,739.647	-0.60%	-0.221
2016	5	1,276,660.083	1,294,719.407	-18,059.324	-1.41%	-0.515

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2016	6	1,459,046.521	1,412,284.025	46,762.496	3.21%	1.333
2016	7	1,526,120.301	1,479,880.116	46,240.185	3.03%	1.318
2016	8	1,652,779.122	1,613,812.640	38,966.482	2.36%	1.111
2016	9	1,502,597.158	1,485,347.688	17,249.470	1.15%	0.492
2016	10	1,383,235.014	1,377,474.879	5,760.135	0.42%	0.164
2016	11	1,299,883.278	1,256,643.425	43,239.853	3.33%	1.232
2016	12	1,419,310.487	1,421,735.737	-2,425.250	-0.17%	-0.069
2017	1	1,548,642.221	1,506,016.495	42,625.726	2.75%	1.215
2017	2	1,291,972.412	1,292,601.059	-628.647	-0.05%	-0.018
2017	3	1,479,294.944	1,449,800.351	29,494.594	1.99%	0.841
2017	4	1,264,714.288	1,253,714.723	10,999.565	0.87%	0.313
2017	5	1,375,209.858	1,315,078.463	60,131.395	4.37%	1.714
2017	6	1,454,166.360	1,435,567.599	18,598.761	1.28%	0.530
2017	7	1,500,386.883	1,494,024.610	6,362.272	0.42%	0.181
2017	8	1,602,793.680	1,590,465.098	12,328.582	0.77%	0.351
2017	9	1,499,791.058	1,488,984.669	10,806.389	0.72%	0.308
2017	10	1,395,340.693	1,430,765.773	-35,425.080	-2.54%	-1.010
2017	11	1,289,072.955	1,294,369.384	-5,296.429	-0.41%	-0.151
2017	12	1,371,411.580	1,405,407.418	-33,995.838	-2.48%	-0.969
2018	1	1,554,313.332	1,511,064.613	43,248.719	2.78%	1.233
2018	2	1,307,540.473	1,304,226.498	3,313.975	0.25%	0.094
2018	3	1,451,477.439	1,473,583.053	-22,105.614	-1.52%	-0.630
2018	4	1,293,161.385	1,323,008.315	-29,846.931	-2.31%	-0.851
2018	5	1,375,867.537	1,351,115.432	24,752.106	1.80%	0.705
2018	6	1,439,823.408	1,446,613.675	-6,790.267	-0.47%	-0.194
2018	7	1,594,876.140	1,555,619.007	39,257.133	2.46%	1.119
2018	8	1,614,714.216	1,601,701.536	13,012.680	0.81%	0.371
2018	9	1,435,098.392	1,462,384.657	-27,286.266	-1.90%	-0.778
2018	10	1,507,615.447	1,479,253.571	28,361.876	1.88%	0.808
2018	11	1,316,998.628	1,311,805.982	5,192.646	0.39%	0.148
2018	12	1,394,135.434	1,437,319.426	-43,183.991	-3.10%	-1.231
2019	1	1,524,661.410	1,525,017.628	-356.218	-0.02%	-0.010
2019	2	1,307,549.856	1,326,868.358	-19,318.502	-1.48%	-0.551
2019	3	1,406,386.785	1,466,149.517	-59,762.732	-4.25%	-1.703
2019	4	1,376,227.327	1,359,191.677	17,035.649	1.24%	0.486
2019	5	1,347,763.018	1,360,435.586	-12,672.568	-0.94%	-0.361

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2019	6	1,312,813.137	1,359,732.876	-46,919.738	-3.57%	-1.337
2019	7	1,540,222.313	1,537,126.477	3,095.836	0.20%	0.088
2019	8	1,612,374.027	1,621,165.367	-8,791.340	-0.55%	-0.251
2019	9	1,530,656.329	1,545,313.196	-14,656.867	-0.96%	-0.418
2019	10	1,463,467.930	1,493,948.086	-30,480.156	-2.08%	-0.869
2019	11	1,247,257.040	1,290,008.662	-42,751.622	-3.43%	-1.218
2019	12	1,512,050.790	1,503,015.994	9,034.796	0.60%	0.258
2020	1	1,517,943.039	1,502,875.097	15,067.942	0.99%	0.429
2020	2	1,279,898.152	1,334,811.203	-54,913.051	-4.29%	-1.565
2020	3	1,493,117.299	1,429,445.392	63,671.907	4.26%	1.815
2020	4	1,224,587.768	1,245,362.693	-20,774.925	-1.70%	-0.592
2020	5	1,137,775.010	1,124,118.202	13,656.809	1.20%	0.389
2020	6	1,261,764.497	1,297,284.344	-35,519.847	-2.82%	-1.012
2020	7	1,517,555.878	1,458,738.654	58,817.223	3.88%	1.676
2020	8	1,452,279.906	1,506,664.035	-54,384.130	-3.74%	-1.550
2020	9	1,493,549.758	1,466,818.750	26,731.008	1.79%	0.762
2020	10	1,350,245.710	1,377,581.397	-27,335.687	-2.02%	-0.779
2020	11	1,206,931.016	1,240,429.621	-33,498.605	-2.78%	-0.955
2020	12	1,412,705.152	1,402,571.914	10,133.237	0.72%	0.289
2021	1	1,399,455.354	1,403,240.947	-3,785.593	-0.27%	-0.108
2021	2	1,232,604.520	1,239,648.179	-7,043.659	-0.57%	-0.201
2021	3	1,499,380.514	1,465,996.996	33,383.518	2.23%	0.951
2021	4	1,306,074.617	1,324,317.237	-18,242.620	-1.40%	-0.520
2021	5	1,201,553.584	1,286,661.217	-85,107.633	-7.08%	-2.426
2021	6	1,437,531.540	1,437,527.330	4.210	0.00%	0.000
2021	7	1,496,540.929	1,495,745.482	795.447	0.05%	0.023
2021	8	1,581,354.534	1,539,627.115	41,727.419	2.64%	1.189
2021	9	1,515,480.543	1,528,990.026	-13,509.483	-0.89%	-0.385
2021	10	1,322,696.566	1,415,383.226	-92,686.660	-7.01%	-2.642
2021	11	1,265,630.205	1,276,689.656	-11,059.452	-0.87%	-0.315
2021	12	1,342,347.958	1,441,629.668	-99,281.710	-7.40%	-2.830
2022	1	1,492,209.221	1,455,689.938	36,519.284	2.45%	1.041
2022	2	1,343,366.910	1,307,505.825	35,861.085	2.67%	1.022
2022	3	1,517,490.360	1,515,648.700	1,841.660	0.12%	0.052
2022	4	1,300,284.839	1,323,955.986	-23,671.147	-1.82%	-0.675
2022	5	1,280,064.286	1,295,971.957	-15,907.671	-1.24%	-0.453

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2022	6		1,444,793.049			
2022	7		1,468,051.647			
2022	8		1,596,810.350			
2022	9		1,509,933.335			
2022	10		1,389,579.992			
2022	11		1,294,088.676			
2022	12		1,438,212.261			
2023	1		1,490,454.111			
2023	2		1,328,818.378			
2023	3		1,507,608.503			
2023	4		1,298,872.085			
2023	5		1,350,293.899			
2023	6		1,453,890.182			
2023	7		1,483,637.132			
2023	8		1,598,263.860			
2023	9		1,496,360.994			
2023	10		1,450,923.049			
2023	11		1,310,998.830			
2023	12		1,482,425.459			

Variable	Description	Definition
CONST	Constant variable	
Jan	Monthly seasonal variable for month of March	= 1 if month is January, = 0 for all other months
Feb	Monthly seasonal variable for month of March	= 1 if month is February, = 0 for all other months
Mar	Monthly seasonal variable for month of March	= 1 if month is March, = 0 for all other months
Apr	Monthly seasonal variable for month of April	= 1 if month is April, = 0 for all other months
May	Monthly seasonal variable for month of May	= 1 if month is May, = 0 for all other months
Jun	Monthly seasonal variable for month of June	= 1 if month is June, = 0 for all other months
Jul	Monthly seasonal variable for month of July	= 1 if month is July, = 0 for all other months
Aug	Monthly seasonal variable for month of August	= 1 if month is August, = 0 for all other months
Sep	Monthly seasonal variable for month of September	= 1 if month is September, = 0 for all other months
Oct	Monthly seasonal variable for month of October	= 1 if month is October, = 0 for all other months
Nov	Monthly seasonal variable for month of November	= 1 if month is November, = 0 for all other months
Jan2013	Binary variable for January 2013	= 1 for Jan 2013, = 0 for all other months
Feb2013	Binary variable for February 2013	= 1 for Feb 2013, = 0 for all other months
Feb2016	Binary variable for February 2016	= 1 for Feb 2016, = 0 for all other months
Nov2019	Binary variable for November 2019	= 1 for Nov 2019, = 0 for all other months
Dec2019	Binary variable for December 2019	= 1 for Dec 2019, = 0 for all other months
Jan2020	Binary variable for January 2020	= 1 for Jan 2020, = 0 for all other months
Feb2020	Binary variable for February 2020	= 1 for Feb 2020, = 0 for all other months
SAR(1)	SAR(1)	First order seasonal autoregressive term
MA(1)	MA(1)	first order moving average term
StreetLight	Street Light Sales	from company records
Population_ElecST	PSCo service territory population	from IHS
Intensity_Light	Commercial lighting intensity from SAE models	from Itron

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	-49819.986	9922.024	-5.021	0.00%
Intensity_Light	12836.324	1463.269	8.772	0.00%
Population_ElecST	11.967	2.044	5.853	0.00%
Jan	1968.626	244.054	8.066	0.00%
Feb	1417.473	312.605	4.534	0.00%
Mar	-778.594	308.347	-2.525	1.26%
Apr	-1002.248	306.928	-3.265	0.14%
May	-2786.283	302.090	-9.223	0.00%
Jun	-4231.260	297.832	-14.207	0.00%
Jul	-4730.840	300.142	-15.762	0.00%
Aug	-4222.554	299.664	-14.091	0.00%
Sep	-3271.278	299.037	-10.939	0.00%
Oct	-2420.254	298.802	-8.100	0.00%
Nov	-759.542	223.134	-3.404	0.09%
Jan2013	-3276.315	226.853	-14.442	0.00%
Feb2013	-9215.488	223.505	-41.232	0.00%
Feb2016	678.505	178.442	3.802	0.02%
Nov2019	5236.876	225.441	23.229	0.00%
Dec2019	3912.379	262.572	14.900	0.00%
Jan2020	-20667.921	261.689	-78.979	0.00%
Feb2020	10361.306	223.547	46.350	0.00%
AR(1)	0.613	0.044	13.993	0.00%
AR(2)	0.606	0.066	9.202	0.00%

Model Statistics

Iterations	22
Adjusted Observations	168
Deg. of Freedom for Error	145
R-Squared	0.992
Adjusted R-Squared	0.991
AIC	11.333
BIC	11.761
F-Statistic	815.594
Prob (F-Statistic)	0.0000
Log-Likelihood	-1,167.34
Model Sum of Squares	1,320,402,069.29
Sum of Squared Errors	10,670,322.76
Mean Squared Error	73,588.43
Std. Error of Regression	271.27
Mean Abs. Dev. (MAD)	188.21
Mean Abs. % Err. (MAPE)	1.35%
Durbin-Watson Statistic	1.562
Durbin-H Statistic	
Ljung-Box Statistic	141.19
Prob (Ljung-Box)	0.0000
Skewness	-0.165
Kurtosis	4.637
Jarque-Bera	19.533
Prob (Jarque-Bera)	0.0001

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2007	6	12,175.505				
2007	7	11,795.032				
2007	8	12,439.762				
2007	9	13,173.349				
2007	10	14,309.914				
2007	11	15,973.183				
2007	12	16,755.912				
2008	1	17,923.960				
2008	2	17,560.406				
2008	3	15,290.650				
2008	4	15,285.795				
2008	5	13,532.983				
2008	6	12,380.348	12580.06009	-199.7120889	-0.016131379	-0.736206381
2008	7	11,962.316	12053.99409	-91.67808665	-0.007663908	-0.337956469
2008	8	12,491.183	12732.93088	-241.7478762	-0.019353481	-0.891164525
2008	9	13,575.989	13481.27972	94.709279	0.006976234	0.34913047
2008	10	14,568.509	14732.87165	-164.3626493	-0.01128205	-0.605896377
2008	11	16,115.971	16259.48504	-143.5140405	-0.008905082	-0.529041346
2008	12	17,095.423	17067.2556	28.1674046	0.001647658	0.103834591
2009	1	18,219.539	18248.4823	-28.94330168	-0.001588586	-0.10669481
2009	2	17,799.615	17800.03304	-0.418040096	-2.34859E-05	-0.001541037
2009	3	15,523.581	15597.88575	-74.30475362	-0.004786573	-0.273912481
2009	4	15,496.398	15488.52658	7.871421557	0.000507952	0.029016725
2009	5	13,800.946	13791.55217	9.393826223	0.000680665	0.034628824
2009	6	12,016.003	12543.3642	-527.3612018	-0.043888238	-1.94403195
2009	7	12,078.317	11785.77395	292.5430478	0.024220514	1.078412727
2009	8	12,675.796	12819.63212	-143.836118	-0.011347305	-0.530228633
2009	9	13,706.935	13605.29627	101.638727	0.007415132	0.374674762
2009	10	14,063.828	14707.92581	-644.0978076	-0.045798186	-2.374362606
2009	11	16,266.924	15865.56539	401.3586095	0.024673295	1.479543732
2009	12	17,162.087	17410.73523	-248.6482323	-0.014488228	-0.916601574
2010	1	18,162.037	18047.85889	114.1781119	0.006286636	0.42089918
2010	2	17,663.306	17809.0537	-145.7476971	-0.008251439	-0.537275361
2010	3	15,489.616	15418.3793	71.23670307	0.004598997	0.262602608
2010	4	15,288.671	15451.01985	-162.3488518	-0.010618899	-0.598472838
2010	5	14,074.588	13601.5522	473.0361575	0.033609236	1.743771443

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2010	6	12,317.187	12359.00194	-41.81493662	-0.003394845	-0.154144015
2010	7	11,893.175	11916.98033	-23.80532968	-0.002001596	-0.087754505
2010	8	12,516.149	12516.95728	-0.808277472	-6.45788E-05	-0.002979584
2010	9	13,476.159	13555.9724	-79.81340224	-0.005922563	-0.294219225
2010	10	14,439.244	14081.561	357.6830039	0.024771588	1.318540661
2010	11	16,157.889	16364.04695	-206.1579535	-0.012758966	-0.75996802
2010	12	17,006.050	16889.94941	116.1005851	0.006827017	0.427986068
2011	1	18,233.391	18162.23009	71.16091241	0.00390278	0.262323218
2011	2	17,236.232	17643.95938	-407.7273779	-0.02365525	-1.503021168
2011	3	15,546.739	15199.52481	347.2141948	0.022333571	1.279949086
2011	4	15,340.756	15479.59203	-138.8360269	-0.009050142	-0.511796604
2011	5	13,449.811	13772.93086	-323.1198627	-0.024024119	-1.19112922
2011	6	12,370.915	12044.40545	326.5095495	0.026393323	1.203624753
2011	7	11,842.265	12005.13116	-162.8661599	-0.013752957	-0.600379811
2011	8	12,537.346	12307.06091	230.2850947	0.01836793	0.848908832
2011	9	13,518.531	13522.31178	-3.780782121	-0.000279674	-0.013937243
2011	10	14,438.562	14320.44132	118.1206807	0.008180917	0.435432824
2011	11	16,132.813	16111.19636	21.61663938	0.001339918	0.079686252
2011	12	15,840.079	16887.00248	-1046.923476	-0.066093324	-3.859314412
2012	1	18,158.909	17410.59558	748.3134244	0.041209162	2.758536655
2012	2	17,717.077	17692.8741	24.2029046	0.001366078	0.089220101
2012	3	15,342.170	15388.80328	-46.63328056	-0.003039549	-0.171906062
2012	4	15,278.047	15149.86245	128.1845548	0.008390114	0.472531671
2012	5	13,553.472	13429.99443	123.4775656	0.009110401	0.455180115
2012	6	12,240.064	12232.10127	7.96273329	0.000650547	0.029353331
2012	7	11,802.922	11669.6956	133.2264019	0.011287578	0.491117627
2012	8	12,447.129	12393.76004	53.36896271	0.004287652	0.196736067
2012	9	13,318.000	13339.91075	-21.9107546	-0.001645199	-0.08077046
2012	10	14,406.441	14212.67009	193.770905	0.013450297	0.714305165
2012	11	16,128.527	16049.5507	78.97629985	0.004896684	0.291133382
2012	12	16,783.720	16119.1637	664.5563012	0.039595292	2.44977954
2013	1	15,060.450	15153.2569	-92.8069036	-0.006162293	-0.34211767
2013	2	8,339.117	8296.134118	42.98288226	0.005154369	0.158449458
2013	3	15,179.444	15313.07676	-133.6327621	-0.008803535	-0.492615608
2013	4	15,038.493	15104.97337	-66.48036879	-0.00442068	-0.245069149
2013	5	13,273.820	13423.40168	-149.5816843	-0.011268925	-0.551408736

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2013	6	11,893.048	12034.21488	-141.1668808	-0.011869697	-0.520388921
2013	7	11,468.609	11603.49203	-134.8830257	-0.011761062	-0.497224503
2013	8	12,086.045	12224.2424	-138.1974004	-0.01143446	-0.509442411
2013	9	13,045.029	13149.50051	-104.4715054	-0.00800853	-0.385117342
2013	10	14,082.039	14191.67344	-109.6344396	-0.007785409	-0.404149666
2013	11	15,866.455	15912.69052	-46.23551869	-0.002914042	-0.170439777
2013	12	16,712.844	16672.21304	40.63095946	0.002431122	0.149779474
2014	1	17,919.958	18071.26624	-151.308238	-0.00844356	-0.557773397
2014	2	17,441.069	17285.94246	155.1265421	0.008894325	0.571848959
2014	3	15,191.169	15190.27196	0.897042511	5.90503E-05	0.003306802
2014	4	15,026.572	14942.33941	84.23258644	0.005605576	0.310509834
2014	5	13,276.782	13252.94126	23.84074039	0.001795672	0.087885041
2014	6	11,993.815	11846.19323	147.6217696	0.012308158	0.544183826
2014	7	11,595.093	11502.13969	92.95331127	0.008016608	0.342657379
2014	8	12,145.612	12079.87342	65.73857931	0.005412537	0.242334662
2014	9	13,176.369	13054.02356	122.3454448	0.009285217	0.451006735
2014	10	14,239.932	14088.8257	151.1063029	0.010611448	0.557028996
2014	11	15,900.546	15876.32037	24.22562685	0.001523572	0.089303863
2014	12	16,916.386	16646.51688	269.869118	0.015953119	0.994828945
2015	1	18,068.082	18154.7508	-86.6688019	-0.00479679	-0.319490549
2015	2	17,560.166	17470.54851	89.61748611	0.005103453	0.330360398
2015	3	15,259.745	15384.77488	-125.0298785	-0.008193445	-0.460902466
2015	4	15,109.815	15119.00842	-9.193417175	-0.00060844	-0.033890049
2015	5	13,305.770	13443.81682	-138.0468177	-0.010374959	-0.508887311
2015	6	12,054.596	12030.25869	24.33731182	0.002018924	0.089715572
2015	7	11,559.490	11703.04251	-143.5525091	-0.012418585	-0.529183154
2015	8	12,175.060	12145.95134	29.10865972	0.002390843	0.107304376
2015	9	13,241.346	13263.01447	-21.66846694	-0.001636425	-0.079877306
2015	10	14,301.147	14225.56266	75.58434165	0.005285194	0.278629476
2015	11	16,010.553	15957.4403	53.11270297	0.003317356	0.195791407
2015	12	16,972.138	16872.36247	99.77552804	0.005878784	0.36780638
2016	1	18,156.086	18257.66257	-101.5765682	-0.005594629	-0.374445624
2016	2	18,704.102	18301.5328	402.5692048	0.021523044	1.484006396
2016	3	16,246.724	15680.39844	566.3255589	0.034857831	2.087667764
2016	4	16,081.159	15613.76598	467.3930193	0.029064635	1.722968925
2016	5	14,135.392	13768.8336	366.5584044	0.025931959	1.351258393

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2016	6	12,761.519	12392.58376	368.9352373	0.028909978	1.360020203
2016	7	12,250.975	11908.29598	342.6790162	0.027971571	1.263230882
2016	8	12,952.187	12477.27238	474.9146215	0.036666751	1.750696097
2016	9	13,953.017	13590.1563	362.8606951	0.026005895	1.337627384
2016	10	14,959.419	14512.01308	447.4059158	0.029907974	1.649289694
2016	11	16,831.274	16265.3627	565.9113023	0.033622606	2.086140674
2016	12	17,629.438	17231.8672	397.5707971	0.02255153	1.465580572
2017	1	18,880.592	18517.60463	362.9877778	0.019225444	1.338095854
2017	2	18,393.335	18212.51765	180.8172472	0.009830585	0.666553597
2017	3	15,971.640	16172.03296	-200.3929783	-0.0125468	-0.73871637
2017	4	15,632.051	15755.29942	-123.2484227	-0.007884341	-0.454335417
2017	5	13,710.074	13938.55287	-228.4788659	-0.016665035	-0.842250461
2017	6	12,338.644	12497.14411	-158.5001149	-0.012845829	-0.58428509
2017	7	11,746.393	12055.79224	-309.3992433	-0.026339936	-1.140550371
2017	8	12,390.623	12614.73747	-224.1144723	-0.018087426	-0.826161828
2017	9	13,429.380	13670.66346	-241.2834554	-0.017966835	-0.889452513
2017	10	14,434.456	14629.81409	-195.3581035	-0.013534151	-0.720156116
2017	11	16,204.405	16469.73611	-265.3311081	-0.016374011	-0.978100303
2017	12	16,995.689	17233.08886	-237.399523	-0.01396822	-0.875135023
2018	1	18,227.983	18334.56474	-106.581738	-0.005847149	-0.392896374
2018	2	17,805.050	17927.14305	-122.0930454	-0.006857214	-0.450076305
2018	3	15,420.366	15607.20552	-186.8395205	-0.012116413	-0.688753735
2018	4	15,205.427	15306.86819	-101.4411927	-0.006671381	-0.373946584
2018	5	13,401.807	13501.81536	-100.0083622	-0.007462304	-0.368664685
2018	6	12,076.335	12109.81077	-33.47577057	-0.002772014	-0.123403025
2018	7	11,556.016	11602.05785	-46.0418531	-0.003984232	-0.16972586
2018	8	12,239.801	12193.15256	46.6484354	0.003811209	0.171961928
2018	9	13,131.540	13262.64501	-131.1050115	-0.009983978	-0.483297464
2018	10	14,270.420	14108.26861	162.1513933	0.011362763	0.597744939
2018	11	15,986.850	16022.57194	-35.72193679	-0.002234457	-0.131683154
2018	12	16,896.164	16690.03352	206.1305539	0.012199843	0.759867016
2019	1	18,149.464	17993.42457	156.0393601	0.008597464	0.575213915
2019	2	17,708.518	17496.71641	211.8015914	0.011960436	0.78077238
2019	3	15,358.048	15225.99083	132.0571681	0.008598565	0.486807435
2019	4	15,255.158	14959.08827	296.0697288	0.019407844	1.091413267
2019	5	13,440.361	13279.05198	161.3090209	0.012001837	0.594639669

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2019	6	11,715.512	11846.02663	-130.5146332	-0.011140327	-0.481121129
2019	7	11,196.440	11176.85843	19.58157311	0.001748911	0.072184309
2019	8	11,616.476	11903.19396	-286.7179617	-0.024682009	-1.056939487
2019	9	12,526.192	12650.39135	-124.1993529	-0.009915172	-0.457840868
2019	10	13,402.515	13795.98107	-393.4660711	-0.02935763	-1.450449163
2019	11	20,355.213	20581.42577	-226.2127413	-0.011113258	-0.833896758
2019	12	20,129.393	20225.82158	-96.4285756	-0.004790436	-0.35546838
2020	1	-3,453.969	-3184.33089	-269.6381136	0.078066165	-0.993977384
2020	2	26,839.987	27269.6073	-429.6203039	-0.016006725	-1.583725906
2020	3	13,939.094	14529.80754	-590.7135388	-0.042378187	-2.177570115
2020	4	13,746.493	14304.91203	-558.4190342	-0.040622654	-2.058521637
2020	5	12,067.239	12516.15865	-448.9199789	-0.03720155	-1.654871043
2020	6	11,006.307	10953.64534	52.66166239	0.00478468	0.194128718
2020	7	10,393.622	10741.01001	-347.3880136	-0.033423191	-1.280589841
2020	8	10,958.978	10933.38084	25.59715918	0.002335725	0.094359796
2020	9	11,883.393	12065.17772	-181.7847247	-0.015297375	-0.670120046
2020	10	12,716.997	12782.31302	-65.31602333	-0.00513612	-0.240776978
2020	11	14,163.380	14532.1868	-368.8071682	-0.026039489	-1.359548097
2020	12	15,146.469	15303.68169	-157.2128506	-0.010379505	-0.579539798
2021	1	16,058.135	16497.74096	-439.6059591	-0.027375904	-1.620536413
2021	2	15,513.329	15654.60885	-141.2798454	-0.009106997	-0.520805346
2021	3	13,641.471	13422.72573	218.7456997	0.016035345	0.806370715
2021	4	13,581.476	13424.73361	156.742864	0.01154093	0.577807269
2021	5	11,700.184	11667.18979	32.99420943	0.002819974	0.121627828
2021	6	10,690.657	10386.13964	304.5173629	0.028484439	1.122554107
2021	7	10,356.293	9977.661939	378.6308709	0.036560464	1.395761592
2021	8	10,687.181	10577.42041	109.7605934	0.010270304	0.404614711
2021	9	11,591.820	11363.35625	228.4633098	0.019709012	0.842193116
2021	10	12,356.024	12289.61107	66.41255124	0.005374913	0.244819151
2021	11	13,880.412	13733.6323	146.7792864	0.010574563	0.541078148
2021	12	14,654.908	14691.09659	-36.18858997	-0.002469384	-0.133403396
2022	1	15,557.072	15732.62198	-175.5499623	-0.011284255	-0.647136601
2022	2	15,254.286	15114.51774	139.7684513	0.009162569	0.515233836
2022	3	13,344.625	13323.55465	21.07034532	0.001578939	0.077672427
2022	4	13,159.438	13139.96486	19.47313939	0.001479785	0.071784585
2022	5	11,671.799	11314.60523	357.1937704	0.030603146	1.316737181

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2022	6		10361.9566			
2022	7		9767.392947			
2022	8		10187.63786			
2022	9		11131.02603			
2022	10		11948.63369			
2022	11		13547.64393			
2022	12		14338.73338			
2023	1		15450.53805			
2023	2		15073.7381			
2023	3		13075.01153			
2023	4		12897.03496			
2023	5		11316.09822			
2023	6		9975.171541			
2023	7		9438.896314			
2023	8		9913.992043			
2023	9		10880.90331			
2023	10		11732.87701			
2023	11		13375.11702			
2023	12		14172.93804			

Variable	Description	Definition
CONST	Constant variable	
Jan	Monthly seasonal variable for month of January	= 1 if month is January, = 0 for all other months
Feb	Monthly seasonal variable for month of February	= 1 if month is February, = 0 for all other months
Mar	Monthly seasonal variable for month of March	= 1 if month is March, = 0 for all other months
Apr	Monthly seasonal variable for month of April	= 1 if month is April, = 0 for all other months
May	Monthly seasonal variable for month of May	= 1 if month is May, = 0 for all other months
Oct	Monthly seasonal variable for month of October	= 1 if month is October, = 0 for all other months
Nov	Monthly seasonal variable for month of November	= 1 if month is November, = 0 for all other months
Dec	Monthly seasonal variable for month of December	= 1 if month is December, = 0 for all other months
Sep2014	Binary variable for September 2014	= 1 for September 2014, = 0 for all other months
Feb2017	Binary variable for February 2017	= 1 for February 2017, = 0 for all other months
Jan2019	Binary variable for January 2019	= 1 for January 2019, = 0 for all other months
2019Feb	Binary variable for February 2019	= 1 for February 2019, = 0 for all other months
2021Apr	Binary variable for April 2021	= 1 for April 2021, = 0 for all other months
AR(1)	AR(1)	First order autoregressive term
Interdept	Interdepartmental Sales (Mwh)	from company records

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	155.117	9.673	16.037	0.00%
Jan	276.988	28.219	9.816	0.00%
Feb	183.464	28.955	6.336	0.00%
Mar	170.649	27.629	6.177	0.00%
Apr	124.673	27.633	4.512	0.00%
May	73.500	27.414	2.681	0.81%
Oct	55.739	27.369	2.037	4.33%
Nov	101.609	26.963	3.768	0.02%
Dec	149.810	27.625	5.423	0.00%
2014Sep	553.169	89.330	6.192	0.00%
2017Feb	-259.225	91.351	-2.838	0.51%
2019Jan	-296.822	96.116	-3.088	0.24%
2019Feb	245.848	96.227	2.555	1.15%
2021Apr	2134.289	91.094	23.430	0.00%
AR(1)	-0.353	0.072	-4.877	0.00%

Model Statistics

Iterations	10
Adjusted Observations	179
Deg. of Freedom for Error	164
R-Squared	0.818
Adjusted R-Squared	0.802
AIC	9.158
BIC	9.425
F-Statistic	52.634
Prob (F-Statistic)	0.0000
Log-Likelihood	-1,058.65
Model Sum of Squares	6,456,131.32
Sum of Squared Errors	1,436,872.29
Mean Squared Error	8,761.42
Std. Error of Regression	93.60
Mean Abs. Dev. (MAD)	68.13
Mean Abs. % Err. (MAPE)	63.24%
Durbin-Watson Statistic	1.878
Durbin-H Statistic	
Ljung-Box Statistic	47.69
Prob (Ljung-Box)	0.0028
Skewness	-0.140
Kurtosis	3.807
Jarque-Bera	5.442
Prob (Jarque-Bera)	0.0658

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2007	6	331.782				
2007	7	51.104	92.682	-41.578	-81.36%	-0.444
2007	8	182.287	191.876	-9.589	-5.26%	-0.102
2007	9	195.650	145.514	50.136	25.63%	0.536
2007	10	188.028	196.531	-8.503	-4.52%	-0.091
2007	11	221.844	264.793	-42.949	-19.36%	-0.459
2007	12	220.960	317.254	-96.294	-43.58%	-1.029
2008	1	547.307	461.779	85.528	15.63%	0.914
2008	2	71.364	297.868	-226.504	-317.39%	-2.420
2008	3	554.940	420.202	134.738	24.28%	1.439
2008	4	49.613	198.798	-149.185	-300.70%	-1.594
2008	5	498.121	309.963	188.158	37.77%	2.010
2008	6	15.029	59.872	-44.843	-298.38%	-0.479
2008	7	263.625	204.625	59.000	22.38%	0.630
2008	8	30.038	116.769	-86.731	-288.74%	-0.927
2008	9	203.187	199.320	3.867	1.90%	0.041
2008	10	182.501	193.868	-11.367	-6.23%	-0.121
2008	11	235.950	266.747	-30.797	-13.05%	-0.329
2008	12	55.668	312.269	-256.601	-460.95%	-2.741
2009	1	665.713	520.195	145.518	21.86%	1.555
2009	2	278.180	256.022	22.158	7.97%	0.237
2009	3	235.254	347.112	-111.858	-47.55%	-1.195
2009	4	267.353	311.777	-44.424	-16.62%	-0.475
2009	5	226.139	233.012	-6.873	-3.04%	-0.073
2009	6	181.189	155.992	25.197	13.91%	0.269
2009	7	158.711	145.902	12.809	8.07%	0.137
2009	8	134.553	153.846	-19.293	-14.34%	-0.206
2009	9	110.354	162.384	-52.030	-47.15%	-0.556
2009	10	222.949	226.676	-3.727	-1.67%	-0.040
2009	11	265.421	252.452	12.969	4.89%	0.139
2009	12	287.222	301.854	-14.632	-5.09%	-0.156
2010	1	364.642	438.362	-73.720	-20.22%	-0.788
2010	2	268.801	362.423	-93.622	-34.83%	-1.000
2010	3	213.949	350.426	-136.477	-63.79%	-1.458
2010	4	230.357	319.307	-88.950	-38.61%	-0.950
2010	5	138.028	246.087	-108.059	-78.29%	-1.154

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2010	6	45.144	187.131	-141.987	-314.52%	-1.517
2010	7	130.659	193.982	-63.323	-48.46%	-0.677
2010	8	162.465	163.760	-1.295	-0.80%	-0.014
2010	9	14.817	152.520	-137.703	-929.36%	-1.471
2010	10	275.599	260.439	15.160	5.50%	0.162
2010	11	216.817	233.845	-17.028	-7.85%	-0.182
2010	12	301.390	319.031	-17.641	-5.85%	-0.188
2011	1	465.211	433.355	31.856	6.85%	0.340
2011	2	404.922	326.881	78.041	19.27%	0.834
2011	3	284.575	302.320	-17.745	-6.24%	-0.190
2011	4	282.311	294.347	-12.036	-4.26%	-0.129
2011	5	254.761	227.726	27.035	10.61%	0.289
2011	6	117.492	145.877	-28.385	-24.16%	-0.303
2011	7	81.971	168.413	-86.442	-105.45%	-0.924
2011	8	180.840	180.967	-0.127	-0.07%	-0.001
2011	9	172.000	146.026	25.974	15.10%	0.277
2011	10	194.643	204.889	-10.246	-5.26%	-0.109
2011	11	298.458	262.456	36.002	12.06%	0.385
2011	12	308.638	290.178	18.460	5.98%	0.197
2012	1	331.487	430.793	-99.306	-29.96%	-1.061
2012	2	499.195	374.140	125.055	25.05%	1.336
2012	3	283.000	269.003	13.997	4.95%	0.150
2012	4	241.492	294.903	-53.411	-22.12%	-0.571
2012	5	222.987	242.152	-19.165	-8.59%	-0.205
2012	6	39.000	157.106	-118.106	-302.84%	-1.262
2012	7	147.660	196.153	-48.493	-32.84%	-0.518
2012	8	180.000	157.752	22.248	12.36%	0.238
2012	9	180.919	146.323	34.596	19.12%	0.370
2012	10	258.919	201.737	57.182	22.08%	0.611
2012	11	237.000	239.740	-2.740	-1.16%	-0.029
2012	12	266.610	311.898	-45.288	-16.99%	-0.484
2013	1	369.660	445.646	-75.986	-20.56%	-0.812
2013	2	273.874	360.649	-86.775	-31.68%	-0.927
2013	3	328.886	348.633	-19.747	-6.00%	-0.211
2013	4	274.600	278.687	-4.087	-1.49%	-0.044
2013	5	235.845	230.451	5.394	2.29%	0.058

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2013	6	113.528	152.562	-39.034	-34.38%	-0.417
2013	7	160.364	169.814	-9.450	-5.89%	-0.101
2013	8	172.056	153.262	18.794	10.92%	0.201
2013	9	216.332	149.130	67.202	31.06%	0.718
2013	10	242.029	189.222	52.807	21.82%	0.564
2013	11	290.368	245.709	44.659	15.38%	0.477
2013	12	334.999	293.037	41.962	12.53%	0.448
2014	1	319.294	421.477	-102.183	-32.00%	-1.092
2014	2	367.112	378.449	-11.337	-3.09%	-0.121
2014	3	300.504	315.682	-15.178	-5.05%	-0.162
2014	4	319.869	288.717	31.152	9.74%	0.333
2014	5	297.931	214.453	83.478	28.02%	0.892
2014	6	36.910	130.621	-93.711	-253.89%	-1.001
2014	7	39.365	196.892	-157.527	-400.17%	-1.683
2014	8	45.118	196.024	-150.906	-334.47%	-1.612
2014	9	743.683	747.160	-3.477	-0.47%	-0.037
2014	10	208.185	198.346	9.839	4.73%	0.105
2014	11	316.364	257.670	58.694	18.55%	0.627
2014	12	329.839	283.850	45.989	13.94%	0.491
2015	1	347.497	423.301	-75.804	-21.81%	-0.810
2015	2	298.103	368.482	-70.379	-23.61%	-0.752
2015	3	270.470	340.071	-69.601	-25.73%	-0.744
2015	4	243.225	299.332	-56.107	-23.07%	-0.599
2015	5	30.193	241.539	-211.346	-699.98%	-2.258
2015	6	308.607	225.241	83.366	27.01%	0.891
2015	7	198.802	100.872	97.930	49.26%	1.046
2015	8	208.226	139.678	68.548	32.92%	0.732
2015	9	206.692	136.347	70.345	34.03%	0.752
2015	10	143.826	192.629	-48.803	-33.93%	-0.521
2015	11	250.311	280.415	-30.104	-12.03%	-0.322
2015	12	302.006	307.194	-5.188	-1.72%	-0.055
2016	1	322.975	433.137	-110.162	-34.11%	-1.177
2016	2	320.878	377.148	-56.270	-17.54%	-0.601
2016	3	270.609	332.022	-61.413	-22.69%	-0.656
2016	4	250.879	299.283	-48.404	-19.29%	-0.517
2016	5	161.730	238.834	-77.104	-47.67%	-0.824

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2016	6	70.770	178.755	-107.985	-152.59%	-1.154
2016	7	157.104	184.925	-27.821	-17.71%	-0.297
2016	8	170.511	154.414	16.097	9.44%	0.172
2016	9	169.101	149.676	19.425	11.49%	0.208
2016	10	240.221	205.914	34.307	14.28%	0.367
2016	11	36.337	246.348	-210.011	-577.95%	-2.244
2016	12	535.964	382.814	153.150	28.57%	1.636
2017	1	407.882	350.455	57.427	14.08%	0.614
2017	2	36.373	87.916	-51.543	-141.71%	-0.551
2017	3	486.802	340.956	145.846	29.96%	1.558
2017	4	263.376	222.878	40.498	15.38%	0.433
2017	5	212.048	234.418	-22.370	-10.55%	-0.239
2017	6	112.192	160.972	-48.780	-43.48%	-0.521
2017	7	142.512	170.287	-27.775	-19.49%	-0.297
2017	8	221.665	159.571	62.094	28.01%	0.663
2017	9	44.175	131.598	-87.423	-197.90%	-0.934
2017	10	372.329	250.064	122.265	32.84%	1.306
2017	11	286.639	199.660	86.979	30.34%	0.929
2017	12	32.722	294.355	-261.633	-799.56%	-2.795
2018	1	667.438	528.304	139.134	20.85%	1.486
2018	2	348.059	255.412	92.647	26.62%	0.990
2018	3	381.845	322.416	59.429	15.56%	0.635
2018	4	316.649	259.971	56.678	17.90%	0.606
2018	5	290.767	215.591	75.176	25.85%	0.803
2018	6	168.726	133.152	35.574	21.08%	0.380
2018	7	129.167	150.307	-21.140	-16.37%	-0.226
2018	8	102.699	164.287	-61.588	-59.97%	-0.658
2018	9	78.743	173.641	-94.898	-120.52%	-1.014
2018	10	201.768	237.847	-36.079	-17.88%	-0.385
2018	11	329.802	259.938	69.864	21.18%	0.746
2018	12	397.898	279.101	118.797	29.86%	1.269
2019	1	71.009	102.426	-31.417	-44.24%	-0.336
2019	2	696.041	607.144	88.897	12.77%	0.950
2019	3	34.777	286.321	-251.544	-723.31%	-2.687
2019	4	602.712	382.627	220.085	36.52%	2.351
2019	5	102.602	114.494	-11.892	-11.59%	-0.127

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2019	6	432.056	199.651	232.405	53.79%	2.483
2019	7	318.194	57.244	260.950	82.01%	2.788
2019	8	131.924	97.484	34.440	26.11%	0.368
2019	9	67.615	163.313	-95.698	-141.53%	-1.022
2019	10	118.988	241.780	-122.792	-103.20%	-1.312
2019	11	344.522	289.193	55.329	16.06%	0.591
2019	12	504.852	273.899	230.953	45.75%	2.467
2020	1	466.336	361.450	104.886	22.49%	1.121
2020	2	439.181	326.483	112.698	25.66%	1.204
2020	3	427.075	290.213	136.862	32.05%	1.462
2020	4	306.979	243.986	62.993	20.52%	0.673
2020	5	226.908	219.008	7.900	3.48%	0.084
2020	6	202.913	155.721	47.192	23.26%	0.504
2020	7	125.052	138.225	-13.173	-10.53%	-0.141
2020	8	201.587	165.742	35.845	17.78%	0.383
2020	9	223.279	138.694	84.585	37.88%	0.904
2020	10	119.752	186.767	-67.015	-55.96%	-0.716
2020	11	252.642	288.923	-36.281	-14.36%	-0.388
2020	12	382.093	306.370	75.723	19.82%	0.809
2021	1	418.555	404.834	13.721	3.28%	0.147
2021	2	374.123	343.370	30.753	8.22%	0.329
2021	3	370.150	313.205	56.945	15.38%	0.608
2021	4	2,367.562	2,398.393	-30.831	-1.30%	-0.329
2021	5	332.296	245.056	87.240	26.25%	0.932
2021	6	220.157	118.476	101.681	46.19%	1.086
2021	7	259.375	132.131	127.244	49.06%	1.359
2021	8	227.330	118.271	109.059	47.97%	1.165
2021	9	217.875	129.596	88.279	40.52%	0.943
2021	10	205.625	188.677	16.948	8.24%	0.181
2021	11	264.053	258.574	5.479	2.07%	0.059
2021	12	314.391	302.337	12.054	3.83%	0.129
2022	1	419.805	428.760	-8.955	-2.13%	-0.096
2022	2	387.589	342.928	44.661	11.52%	0.477
2022	3	448.490	308.446	140.044	31.23%	1.496
2022	4	300.280	236.418	63.862	21.27%	0.682
2022	5	238.231	221.376	16.855	7.08%	0.180

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2022	6		151.719			
2022	7		156.317			
2022	8		154.692			
2022	9		155.267			
2022	10		210.803			
2022	11		256.744			
2022	12		304.920			
2023	1		432.107			
2023	2		338.580			
2023	3		325.766			
2023	4		279.790			
2023	5		228.617			
2023	6		155.117			
2023	7		155.117			
2023	8		155.117			
2023	9		155.117			
2023	10		210.856			
2023	11		256.726			
2023	12		304.927			