

NOTICE OF CONFIDENTIALITY:
PORTION OF THIS DOCUMENT HAS BEEN FILED UNDER SEAL.

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO**

* * * * *

RE: IN THE MATTER OF ADVICE	)	
LETTER NO. 1672-ELECTRIC FILED BY	)	
PUBLIC SERVICE COMPANY OF	)	PROCEEDING NO. 14AL-0660E
COLORADO TO REVISE ITS COLORADO	)	
PUC NO. 7-ELECTRIC TARIFF TO	)	
IMPLEMENT A GENERAL RATE	)	
SCHEDULE ADJUSTMENT AND OTHER	)	
OTHER CHANGES EFFECTIVE	)	
JULY 18, 2014.	)	

IN THE MATTER OF THE APPLICATION OF	)	
PUBLIC SERVICE COMPANY OF	)	
COLORADO FOR APPROVAL OF ITS	)	PROCEEDING NO. 14A-0680E
ARAPAHOE DECOMMISSIONING AND	)	
DISMANTLING PLAN.	)	

REBUTTAL TESTIMONY AND ATTACHMENTS OF JANNELL E. MARKS

ON

BEHALF OF

PUBLIC SERVICE COMPANY OF COLORADO

December 17, 2014

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO**

* * * * *

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SUMMARY OF REBUTTAL TESTIMONY OF JANNELL E. MARKS

Ms. Jannell E. Marks is Director, Sales, Energy and Demand Forecasting of Xcel Energy Services Inc., and has previously submitted Direct Testimony in this proceeding.

In her rebuttal testimony, Ms. Marks provides more current information regarding the performance of the economy and the associated impacts on the 2015 Test Year customer and sales forecast. The Company has updated the customer and sales forecast based on an updated economic forecast and updated actual sales and customer counts through July 2014. The updated customer count forecast is very similar to the initial customer forecast in this proceeding, while the updated retail sales forecast is 0.9 percent higher. Ms. Marks' testimony describes

the factors contributing to this higher forecast, which include improved economic indicators as well as sector-specific growth.

Ms. Marks' testimony also responds to the testimony of Colorado Public Utilities Commission ("CPUC") Staff witness William W. Harris regarding the 2015 Test Year revenues that are based on the billing determinants she supports in this proceeding. Ms. Marks testifies that by updating the customer and sales forecast to include more current information, the concerns raised by Mr. Harris have been addressed.

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REBUTTAL TESTIMONY AND ATTACHMENTS OF JANNELL E. MARKS

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LIST OF ATTACHMENTS

Attachment No. JEM-5	Updated Monthly Test Year Retail MWh Sales and Number of Customers for Each Customer Class
HIGHLY CONFIDENTIAL Attachment No. JEM-5A	Highly Confidential version of Updated Monthly Test Year Retail MWh Sales and Number of Customers for Each Customer Class – Filed Under Seal
Attachment No. JEM-6	Regression Models and Associated Statistics Used in the Company's Updated Projections of Sales
HIGHLY CONFIDENTIAL Attachment No. JEM-6A	Highly Confidential Portion of Regression Models and Associated Statistics Used in the Company's Updated Projections of Sales – Filed Under Seal
Attachment No. JEM-7	Regression Models and Associated Statistics Used in the Company's Updated Projections of Customers
Attachment No. JEM-8	Updated Monthly Test Year MWh Sales and Number of Customers for Each Rate Class
HIGHLY CONFIDENTIAL Attachment No. JEM-8A	Highly Confidential version of Updated Monthly Test Year MWh Sales and Number of Customers for Each Rate Class – Filed Under Seal

GLOSSARY OF ACRONYMS AND DEFINED TERMS

<u>Acronym/Defined Term</u>	<u>Meaning</u>
2015 Test Year	January 1, 2015 through December 31, 2015
CPUC or Commission	Colorado Public Utilities Commission
Public Service or Company	Public Service Company of Colorado

**BEFORE THE PUBLIC UTILITIES COMMISSION
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REBUTTAL TESTIMONY AND ATTACHMENTS OF JANNELL E. MARKS

**I. INTRODUCTION, QUALIFICATIONS, PURPOSE OF TESTIMONY, AND
RECOMMENDATIONS**

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Jannell E. Marks. My business address is 1800 Larimer Street,
Denver, Colorado 80202.

**Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY AND ATTACHMENTS
IN THIS PROCEEDING?**

A. Yes. I submitted Direct Testimony and Attachments in this proceeding on
behalf of Public Service Company of Colorado ("Public Service" or
"Company") as part of the Company's original filing on June 17, 2014.

1 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

2 A. The purpose of my Rebuttal Testimony is to provide more current information
3 regarding the 2015 Test Year (January 1, 2015 through December 31, 2015)
4 billing determinants. In my Direct Testimony, I committed to the Commission
5 and the parties in this case that the Company will make available to parties
6 more current information about the performance of the economy and any
7 associated impacts on Test Year sales as the case progresses through
8 Rebuttal and/or Surrebuttal Testimony. The Company has recently
9 completed updating the 2015 Test Year customer count and sales forecast
10 based on an updated economic forecast and updated actual sales and
11 customer counts through July 2014.

12 In addition, I will respond to the testimony of Commission Staff witness
13 William W. Harris regarding the 2015 Test Year revenues, which are based
14 on the billing determinants that I support in this proceeding. Mr. Harris
15 testifies that the 2015 Test Year revenues are lower than what is likely to
16 actually occur under normal weather conditions for 2015, and lists several
17 factors contributing to his conclusion. In my Rebuttal Testimony, I will explain
18 that by updating the customer and sales forecast to include more current
19 information, the concerns raised by Mr. Harris have been addressed.

20 **Q. ARE YOU SPONSORING ANY ATTACHMENTS AS PART OF YOUR**
21 **REBUTTAL TESTIMONY?**

22 A. Yes. I am sponsoring the public version of Attachment No. JEM-5 and Highly
23 Confidential Attachment No. JEM-5A (updated monthly retail MWh sales and

1 number of customers for each customer class for the 2015 Test Year), both
2 the public version of Attachment No. JEM-6 and Highly Confidential
3 Attachment No. JEM-6A (regression models and associated statistics used in
4 the Company's updated projections of sales), Attachment No. JEM-7
5 (regression models and associated statistics used in the Company's updated
6 projections of customers), and the public version of Attachment No. JEM-8
7 and Highly Confidential Attachment No. JEM-8A (updated monthly 2015 Test
8 Year MWh sales and number of customers for each rate schedule). My
9 highly confidential attachments have been filed under seal.

10 **Q. WHAT RECOMMENDATIONS ARE YOU MAKING IN YOUR REBUTTAL**
11 **TESTIMONY?**

12 A. I recommend that the Commission adopt the Company's updated forecasts of
13 sales and customers, as reflected in Attachment No. JEM-5 and Highly
14 Confidential Attachment No. JEM-5A, for the purpose of determining the
15 revenue requirement and final rates for the Company's 2015 Test Year in this
16 proceeding.

17

1 **Q. WHAT ARE THE DRIVERS OF THE HIGHER SALES FORECAST?**

2 A. The key drivers of the higher sales forecast are improved expectations for
3 economic activity in 2015, combined with better-than-expected actual results
4 in 2014.

5 The current outlook for economic activity in 2015 is stronger than the
6 outlook underlying the 2015 Test Year forecast initially provided in this
7 proceeding, in large part due to updated estimates for 2013 and improved
8 expectations for 2014. For example, Colorado real Gross State Product
9 previously was reported to have increased by 2.2 percent in 2013 and was
10 projected to increase by 2.3 percent in 2014 and 2.6 percent in 2015. These
11 estimates have been revised to be increases of 3.8 percent in 2013, 2.2
12 percent in 2014, and 2.6 percent in 2015. While the 2.6 percent projected
13 annual rate of growth for 2015 remains unchanged from the initial forecast,
14 the revised historical growth in 2013 results in a higher overall level of real
15 Gross State Product in 2015.

16 Another example is Colorado non-farm employment, where 2013
17 results were revised from an increase of 2.4 percent to 3.0 percent, and 2014
18 projections have been revised from an increase of 2.2 percent to 2.8 percent.
19 The forecast for 2015 growth also is slightly better than the initial forecast (2.6
20 percent as compared to the initial forecast of 2.4 percent). The revisions to
21 the 2013 estimates and 2014 and 2015 projections result in the overall level
22 of employment in 2015 being higher than the initial forecast.

1 These higher levels of economic activity are reflected in better-than-
2 expected sales results in 2014 and a higher sales forecast for 2015 in the
3 Commercial and Industrial sector. Weather normalized Commercial and
4 Industrial sales are expected to increase at an average annual rate of 1.0
5 percent from 2013 to 2015, resulting in a 2015 Test Year forecast for this
6 class that is 227,000 MWh or 1.2 percent higher than the initial forecast
7 presented in this proceeding.

8 **Q. ARE THERE FACTORS OTHER THAN ECONOMIC ACTIVITY THAT ARE**
9 **CONTRIBUTING TO THE HIGHER ACTUAL RESULTS AND HIGHER**
10 **FORECAST OF COMMERCIAL AND INDUSTRIAL SALES?**

11 A. Yes. The legalized marijuana industry in Colorado is having an impact on
12 sales in the Commercial and Industrial sector. Electricity sales to marijuana-
13 related businesses in 2014 are projected to be 40 percent higher than the
14 prior year and account for approximately 1.5 percent of Small Commercial
15 and Industrial sales. This equates to an estimated 50,000 MWh more
16 marijuana industry-related sales in 2014 than in 2013, which was not explicitly
17 accounted for in the original forecast presented in this proceeding. The
18 Company expects marijuana-related electricity sales to increase even more in
19 2015, adding another 60,000 MWh to sales growth, on top of the 50,000 MWh
20 of added sales in 2014, for a total increase of around 110,000 MWh. Again,
21 this level of increase was not accounted for in the original forecast presented
22 in this proceeding.

1 **Q. HOW DOES THE RESIDENTIAL SALES FORECAST COMPARE TO THE**
2 **FORECAST PRESENTED IN YOUR DIRECT TESTIMONY?**

3 A. The updated Residential sales forecast is higher than the initial 2015 Test
4 Year forecast due both to higher projected growth in Colorado real personal
5 income and slightly higher than expected levels of housing in the state. The
6 2015 Test Year updated forecast of Residential sales is 39,000 MWh or 0.4
7 percent higher than the initial forecast presented in my Direct Testimony.

8 **Q. PLEASE DESCRIBE THE METHODS USED TO DEVELOP THE UPDATED**
9 **FORECAST OF CUSTOMERS AND SALES.**

10 A. The electric sales and customer forecast was developed using the same
11 methods described in Sections IV and V of my Direct Testimony, with only
12 one change. In the initial filing, the Commercial and Industrial sales forecast
13 model results were adjusted to include the projected new load growth for
14 large customers. In the updated forecast, no adjustments were made to the
15 Commercial and Industrial sales forecast model to include projected new load
16 growth for large customers. This change was made because the projected
17 new load growth for these large customers has not materialized as projected
18 and the Company's account managers have informed us that the customers
19 no longer are expecting this load growth.

20 The regression models and associated statistics used in the Company's
21 updated projections of sales are provided in Attachment No. JEM-6 and
22 Confidential Attachment No. JEM-6A, and the regression models and
23 associated statistics used in the Company's updated projections of customers

1 are provided in Attachment No. JEM-7. These attachments include, by
2 customer class, the models with their summary statistics and output, and
3 descriptions for each variable included in the model.

4 The updated rate schedule level of detail was developed using the
5 same method described in Section VI of my Direct Testimony. Attachment
6 No. JEM-8 and Confidential Attachment No. JEM-8A provide the updated
7 monthly 2015 Test Year customer and sales forecast at the rate schedule
8 level of detail.

9 **Q. DID ANY OTHER PARTIES TO THIS CASE SUBMIT TESTIMONY**
10 **RELATED TO THE CUSTOMER AND SALES FORECAST?**

11 A. No parties submitted testimony about the methodology used to develop the
12 2015 Test Year sales and customer counts. Only Staff witness Mr. Harris
13 submitted testimony regarding the 2015 Test Year sales and customers. I will
14 discuss his testimony in the next section of my rebuttal testimony.

15

1 **III. TEST YEAR BILLING DETERMINANTS**

2 **Q. PLEASE SUMMARIZE MR. HARRIS' TESTIMONY RELATED TO THE 2015**
3 **TEST YEAR BILLING DETERMINANTS PRESENTED IN YOUR DIRECT**
4 **TESTIMONY.**

5 A. Mr. Harris testifies that the revenues provided in the Company's initial filing in
6 this proceeding are lower than what is likely to actually occur under normal
7 weather conditions for 2015 because of better economic conditions and more
8 rapid growth in the number of customers than forecasted by the Company. In
9 support of this conclusion, Mr. Harris cites actual customer count and sales
10 results for 2014 provided by the Company through the discovery process. Mr.
11 Harris also provides an overview of current economic conditions that he says
12 will result in more growth in customer counts and usage than the Company
13 has predicted. Mr. Harris then recommends that the Commission reject the
14 2015 Test Year forecast because it is not known and measurable and the
15 revenues are likely to be higher than estimated by the Company.

16 **Q. DO YOU AGREE WITH MR. HARRIS' CONCLUSIONS AND**
17 **RECOMMENDATIONS?**

18 A. I agree that total actual sales and customer counts in 2014 are higher than
19 was previously forecasted. These higher actual results, along with more
20 current economic indicators, have been incorporated into the updated sales
21 and customer count forecast that I presented in Section III.

22 I do not agree with Mr. Harris' recommendation that the Commission
23 reject the 2015 Test Year forecast because the revenues provided in the

1 Company's official filing are lower than what is likely to actually occur. If a
2 historic test period were used, there is virtually no chance that the actual
3 sales in the period rates are in effect would be the same as during the 2015
4 Test Year. In a period of sales growth, in fact, there is a very good chance
5 that the sales in the 2015 Test Year are lower than what is likely to actually
6 occur during the period rates are in effect. However, this is not a basis to
7 reject a historic test period out of hand. By the same token, the fact that a
8 forecast will not exactly match actuals is not a basis to reject our 2015 Test
9 Year out of hand.

10 **Q. HAS THE COMPANY TAKEN STEPS IN THIS PROCEEDING TO MINIMIZE**
11 **ANY DISCREPANCY BETWEEN ITS FORECAST AND ACTUAL SALES?**

12 A. Yes. In my Direct Testimony, I indicated that the Company would provide
13 more current information about the performance of the economy and any
14 associated impacts on 2015 Test Year sales. I also indicated that should
15 more current information reflect material changes and thereby indicate that
16 adjustments to the 2015 Test Year are needed, the Company will propose
17 appropriate adjustments to its cost of service. The changes to the sales
18 forecast that I have described in Section III indicate that adjustments to the
19 2015 Test Year are needed, and the Company has proposed the appropriate
20 adjustments to its cost of service in Ms. Blair's testimony.

21

1 **Q. WHAT BILLING DETERMINANTS DO YOU RECOMMEND BE USED IN**
2 **THIS PROCEEDING?**

3 A. The Company has updated its sales and customer forecast using current
4 actual data and economic indicators. The forecast was updated using the
5 same methodology as described in my Direct Testimony, with which no
6 parties took issue. Therefore, I recommend that the Commission adopt the
7 Company's updated forecasts of sales and customers for this proceeding.

8

1 **IV. CONCLUSION**

2 **Q. PLEASE SUMMARIZE YOUR REBUTTAL TESTIMONY.**

3 A. My Rebuttal Testimony provides more current information about the
4 performance of the economy and associated impacts on 2015 Test Year
5 sales. The Company's updated sales forecast for 2015 is higher than the
6 forecast initially filed in this case due to improved expectations for economic
7 activity in 2015, combined with better-than-expected actual results in 2014.
8 By incorporating this updated information, the Company has addressed the
9 concern raised by Mr. Harris that the 2015 Test Year revenues in the
10 Company's initial filing likely are too low due to better economic conditions
11 and more rapid growth in the number of customers.

12 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

13 A. Yes.

Public Service Company of Colorado
Updated Test Year Sales and Customers
12 months ending December 31, 2015

Weather Normalized Billing Month Sales (MWh)

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Year</u>	Initial Test Year Forecast	Change
Residential	910,879	723,813	761,979	668,863	596,554	730,676	910,675	887,110	820,641	686,530	611,581	849,684	9,158,985	9,120,213	38,772
Commercial & Industrial	1,703,623	1,488,757	1,622,171	1,549,906	1,466,253	1,646,990	1,782,267	1,759,143	1,735,195	1,632,620	1,484,508	1,680,614	19,552,045	19,325,242	226,803
Other*	24,876	22,194	22,119	19,817	18,436	17,618	18,329	19,526	20,719	22,810	23,854	25,324	255,623	255,098	525
Total Retail	2,639,378	2,234,764	2,406,269	2,238,585	2,081,243	2,395,284	2,711,271	2,665,778	2,576,554	2,341,961	2,119,943	2,555,622	28,966,653	28,700,554	266,099

Number of Customers

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Average</u>	Initial Test Year Forecast	Change
Residential	1,201,750	1,202,874	1,204,007	1,205,147	1,206,295	1,207,451	1,208,615	1,209,786	1,210,966	1,212,152	1,213,346	1,214,545	1,208,078	1,206,878	1,199
Commercial & Industrial	157,828	157,914	158,004	158,097	158,194	158,290	158,391	158,490	158,591	158,693	158,797	158,901	158,349	158,212	137
Other*	53,793	53,772	53,752	53,733	53,714	53,695	53,677	53,659	53,642	53,625	53,609	53,593	53,689	53,021	667
Total Retail	1,413,371	1,414,560	1,415,763	1,416,977	1,418,203	1,419,436	1,420,683	1,421,935	1,423,199	1,424,470	1,425,752	1,427,039	1,420,116	1,418,111	2,005

*The "Other" category is comprised of the Street Lighting, Public Authority and Interdepartmental customer classes.

Variable	Description	Definition
AvgRes_Use	historical residential average use per customer (kWh)	(Residential [sales] / Billed ResCust)*1000
Cooling	residential cooling SAE (Statistically Adjusted End-use) variable	Res_Cool * CoolUse
Heating	residential heating SAE (Statistically Adjusted End-use) variable	Res_Heat * HeatUse
Base	residential base SAE (Statistically Adjusted End-use) variable	Res_Other * BaseUse
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
Jun	Monthly seasonal variable for month of June	= 1 if month is June, = 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
Dec	Monthly seasonal variable for month of December	= 1 if month is December, = 0 for all other months
Residential	historical residential billed sales (MWh)	from company records
BilledResCust	historical residential billed customers	from company records and forecast model
Pers_Income	Colorado personal income (\$million)	from Global Insight, Inc.
Households	Colorado households (000)	from Global Insight, Inc.
CPI_CO	consumer price index for Colorado	from Global Insight, Inc.
Index_2005	CPI_CO indexed to the 2005 level	CPI_CO / 1.984
Res_RevperkWh	Quarterly Average Price (cents per kWh) excluding Service and Facility fees	average of the monthly prices for the 3 months in the quarter
Res_RevperkWh05	real average price (deflated by the indexed CPI)(cents per kWh)	Res_RevperkWh / Index_2005
ResPrice	residential price variable (cents per kWh)	3 month moving average of Res_RevperkWh05
Population	Colorado population (000)	from Global Insight, Inc.
CDD_Fcst	actual and forecasted cooling degree days	Actual CDD 2004 - Jul 2014, Normal CDD Aug 2014 - 2015
HDD_Fcst	actual and forecasted heating degree days	Actual HDD 2004 - Jul 2014, Normal HDD Aug 2014 - 2015
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_Other	residential saturation/efficiency index for electric base uses	from Itron, Inc. updated with PSCo customer saturations
Hlight	monthly hours of daylight	from company records
HeatUse	residential heating utilization variable	$(ResPrice^{-0.15}) * (Reallnc_PerHH^{0.2}) * (HH_Size^{0.01}) * HDD_Fcst$
CoolUse	residential cooling utilization variable	$(ResPrice^{-0.15}) * (Reallnc_PerHH^{0.2}) * (HH_Size^{0.01}) * CDD_Fcst$
BaseUse	residential base utilization variable	$(ResPrice^{-0.15}) * (Reallnc_PerHH^{0.2}) * (HH_Size^{0.01}) * (Hlight^{-0.2})$
Reallnc_PerHH	real income per household (\$million)	$(Pers_Income / Households * 1000) / Index_2005$
HH_Size	household size (persons per household)	Population / Households

Variable	Coefficient	StdErr	T-Stat	P-Value
Cooling	0.085	0.005	16.395	0.00%
Heating	0.019	0.001	13.201	0.00%
Base	268.204	5.415	49.528	0.00%
Feb	-95.007	6.373	-14.907	0.00%
Mar	-93.795	7.102	-13.206	0.00%
Apr	-100.708	8.109	-12.419	0.00%
May	-89.025	8.695	-10.238	0.00%
Jun	-43.322	8.282	-5.231	0.00%
Sep	-18.289	7.593	-2.409	1.76%
Oct	-104.167	9.967	-10.451	0.00%
Nov	-120.032	9.178	-13.078	0.00%
Dec	-41.286	6.684	-6.177	0.00%
AR(1)	0.294	0.093	3.151	0.21%

Model Statistics

Iterations	13
Adjusted Observations	126
Deg. of Freedom for Error	113
R-Squared	0.966
Adjusted R-Squared	0.962
AIC	5.769
BIC	6.062
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-529.23
Model Sum of Squares	929,312.99
Sum of Squared Errors	32,822.09
Mean Squared Error	290.46
Std. Error of Regression	17.04
Mean Abs. Dev. (MAD)	11.77
Mean Abs. % Err. (MAPE)	1.85%
Durbin-Watson Statistic	2.059
Durbin-H Statistic	#NA
Ljung-Box Statistic	22.42
Prob (Ljung-Box)	0.5543
Skewness	0.504
Kurtosis	6.765
Jarque-Bera	79.766
Prob (Jarque-Bera)	0.0000

Forecast Statistics

Forecast Observations	0
Mean Abs. Dev. (MAD)	0.00
Mean Abs. % Err. (MAPE)	0.00%
Avg. Forecast Error	0.00
Mean % Error	0.00%
Root Mean-Square Error	0.00
Theil's Inequality Coefficient	0.0000
-- Bias Proportion	0.00%
-- Variance Proportion	0.00%
-- Covariance Proportion	0.00%

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2004	1	739.989				
2004	2	650.076	650.672	-0.597	-0.001	-0.035
2004	3	635.122	606.767	28.354	0.045	1.664
2004	4	528.271	536.490	-8.219	-0.016	-0.482
2004	5	596.874	522.732	74.142	0.124	4.350
2004	6	589.943	573.199	16.745	0.028	0.982
2004	7	622.094	630.592	-8.498	-0.014	-0.499
2004	8	642.953	660.612	-17.659	-0.027	-1.036
2004	9	602.426	592.878	9.548	0.016	0.560
2004	10	533.313	519.567	13.746	0.026	0.807
2004	11	540.992	549.636	-8.644	-0.016	-0.507
2004	12	684.932	690.786	-5.854	-0.009	-0.343
2005	1	762.756	769.214	-6.458	-0.008	-0.379
2005	2	618.500	630.838	-12.338	-0.020	-0.724
2005	3	604.115	597.663	6.453	0.011	0.379
2005	4	588.752	565.188	23.565	0.040	1.383
2005	5	536.603	542.962	-6.360	-0.012	-0.373
2005	6	576.204	568.986	7.218	0.013	0.424
2005	7	743.199	712.189	31.010	0.042	1.820
2005	8	769.230	784.680	-15.450	-0.020	-0.907
2005	9	653.182	672.006	-18.824	-0.029	-1.105
2005	10	557.512	532.428	25.084	0.045	1.472
2005	11	552.454	548.060	4.394	0.008	0.258
2005	12	703.355	711.077	-7.722	-0.011	-0.453
2006	1	738.831	744.330	-5.499	-0.007	-0.323
2006	2	631.655	642.492	-10.837	-0.017	-0.636
2006	3	619.994	626.110	-6.115	-0.010	-0.359
2006	4	560.530	549.667	10.862	0.019	0.637
2006	5	521.834	526.839	-5.005	-0.010	-0.294
2006	6	658.892	633.498	25.393	0.039	1.490
2006	7	729.278	718.253	11.026	0.015	0.647
2006	8	778.615	797.575	-18.961	-0.024	-1.113
2006	9	635.147	640.021	-4.874	-0.008	-0.286
2006	10	536.713	537.986	-1.273	-0.002	-0.075
2006	11	592.491	571.963	20.528	0.035	1.204
2006	12	703.372	698.978	4.394	0.006	0.258
2007	1	818.666	806.765	11.901	0.015	0.698
2007	2	670.420	698.918	-28.498	-0.043	-1.672
2007	3	623.247	611.590	11.657	0.019	0.684
2007	4	569.083	561.996	7.088	0.012	0.416
2007	5	551.620	540.274	11.345	0.021	0.666
2007	6	584.195	581.804	2.391	0.004	0.140
2007	7	786.903	744.703	42.200	0.054	2.476
2007	8	817.112	818.822	-1.710	-0.002	-0.100
2007	9	727.466	700.407	27.059	0.037	1.588
2007	10	561.782	553.128	8.654	0.015	0.508
2007	11	568.740	564.734	4.006	0.007	0.235
2007	12	709.168	708.061	1.106	0.002	0.065
2008	1	812.787	817.341	-4.553	-0.006	-0.267
2008	2	687.547	678.951	8.597	0.013	0.504
2008	3	612.785	615.474	-2.689	-0.004	-0.158
2008	4	588.621	593.226	-4.605	-0.008	-0.270
2008	5	530.182	543.198	-13.016	-0.025	-0.764
2008	6	574.705	584.551	-9.846	-0.017	-0.578
2008	7	734.679	736.954	-2.274	-0.003	-0.133
2008	8	788.607	789.929	-1.322	-0.002	-0.078
2008	9	669.898	647.201	22.696	0.034	1.332
2008	10	524.783	535.365	-10.582	-0.020	-0.621

ResAvgUse Err

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2008	11	548.148	543.765	4.383	0.008	0.257
2008	12	699.767	697.144	2.623	0.004	0.154
2009	1	773.309	772.849	0.460	0.001	0.027
2009	2	636.946	631.068	5.877	0.009	0.345
2009	3	590.812	597.084	-6.272	-0.011	-0.368
2009	4	580.541	574.305	6.236	0.011	0.366
2009	5	539.171	528.733	10.438	0.019	0.612
2009	6	547.402	558.538	-11.135	-0.020	-0.653
2009	7	673.805	655.644	18.161	0.027	1.066
2009	8	684.056	683.622	0.435	0.001	0.025
2009	9	645.641	658.432	-12.792	-0.020	-0.751
2009	10	559.789	551.769	8.019	0.014	0.471
2009	11	578.678	571.181	7.497	0.013	0.440
2009	12	733.271	720.188	13.083	0.018	0.768
2010	1	796.556	791.028	5.528	0.007	0.324
2010	2	665.121	660.139	4.982	0.007	0.292
2010	3	628.329	636.140	-7.811	-0.012	-0.458
2010	4	560.704	565.210	-4.506	-0.008	-0.264
2010	5	520.296	534.918	-14.623	-0.028	-0.858
2010	6	611.028	587.020	24.008	0.039	1.409
2010	7	727.573	713.956	13.617	0.019	0.799
2010	8	756.571	758.238	-1.667	-0.002	-0.098
2010	9	682.754	682.954	-0.200	-0.000	-0.012
2010	10	555.411	533.085	22.326	0.040	1.310
2010	11	551.448	559.147	-7.699	-0.014	-0.452
2010	12	699.999	694.707	5.292	0.008	0.311
2011	1	777.509	775.597	1.912	0.002	0.112
2011	2	677.563	664.040	13.523	0.020	0.793
2011	3	610.591	623.867	-13.276	-0.022	-0.779
2011	4	549.068	551.052	-1.984	-0.004	-0.116
2011	5	543.032	548.093	-5.061	-0.009	-0.297
2011	6	579.709	587.111	-7.402	-0.013	-0.434
2011	7	725.375	709.869	15.506	0.021	0.910
2011	8	807.891	822.136	-14.246	-0.018	-0.836
2011	9	708.847	730.678	-21.831	-0.031	-1.281
2011	10	535.596	552.539	-16.943	-0.032	-0.994
2011	11	569.683	578.090	-8.406	-0.015	-0.493
2011	12	712.141	714.989	-2.849	-0.004	-0.167
2012	1	762.714	769.315	-6.601	-0.009	-0.387
2012	2	651.077	662.586	-11.509	-0.018	-0.675
2012	3	595.507	613.483	-17.976	-0.030	-1.055
2012	4	535.833	535.104	0.729	0.001	0.043
2012	5	522.592	536.124	-13.531	-0.026	-0.794
2012	6	623.858	633.792	-9.934	-0.016	-0.583
2012	7	851.638	832.094	19.544	0.023	1.147
2012	8	783.544	842.798	-59.254	-0.076	-3.477
2012	9	700.788	709.531	-8.743	-0.012	-0.513
2012	10	534.751	561.041	-26.290	-0.049	-1.543
2012	11	561.197	573.055	-11.859	-0.021	-0.696
2012	12	671.186	685.763	-14.577	-0.022	-0.855
2013	1	787.145	785.456	1.689	0.002	0.099
2013	2	642.036	641.796	0.241	0.000	0.014
2013	3	625.634	623.028	2.606	0.004	0.153
2013	4	598.397	594.797	3.600	0.006	0.211
2013	5	542.537	559.685	-17.148	-0.032	-1.006
2013	6	600.703	599.064	1.639	0.003	0.096
2013	7	780.350	764.832	15.518	0.020	0.911
2013	8	708.782	749.937	-41.154	-0.058	-2.415

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2013	9	740.772	732.885	7.887	0.011	0.463
2013	10	534.118	557.109	-22.991	-0.043	-1.349
2013	11	556.149	561.198	-5.049	-0.009	-0.296
2013	12	707.365	705.738	1.626	0.002	0.095
2014	1	759.835	767.983	-8.148	-0.011	-0.478
2014	2	681.436	650.561	30.876	0.045	1.812
2014	3	624.103	617.961	6.142	0.010	0.360
2014	4	534.974	564.099	-29.125	-0.054	-1.709
2014	5	510.394	519.214	-8.821	-0.017	-0.518
2014	6	570.960	568.063	2.897	0.005	0.170
2014	7	700.501	713.783	-13.283	-0.019	-0.779
2014	8		736.364			
2014	9		687.322			
2014	10		550.571			
2014	11		562.420			
2014	12		709.533			
2015	1		764.790			
2015	2		639.688			
2015	3		612.413			
2015	4		563.983			
2015	5		529.036			
2015	6		586.531			
2015	7		728.285			
2015	8		742.952			
2015	9		687.157			
2015	10		549.300			
2015	11		566.166			
2015	12		707.728			

Variable	Description
GSxStandby (GS)	historical commercial-industrial billed sales (MWh)
GS_Cool	commercial-industrial cooling SAE (Statistically Adjusted End-use) variable
GS_Base	commercial-industrial base SAE (Statistically Adjusted End-use) variable
Jan	Monthly seasonal variable for month of January
Feb	Monthly seasonal variable for month of February
Mar	Monthly seasonal variable for month of March
Apr	Monthly seasonal variable for month of April
May	Monthly seasonal variable for month of May
Jun	Monthly seasonal variable for month of June
Jul	Monthly seasonal variable for month of July
Aug	Monthly seasonal variable for month of August
Sep	Monthly seasonal variable for month of September
Oct	Monthly seasonal variable for month of October
Nov	Monthly seasonal variable for month of November
Dec	Monthly seasonal variable for month of December
Jul04	Binary variable for July 2004
CRSPH2	CRS billing system implementation - phase 2
BillCycleDays	average number of days billed each month
GS_RevperkWh	Monthly average price (cents per kWh)
GS_RevperkWh05	real average price (cents per kWh)
GSPrice	3-month moving average of real average price (cents per kWh)
CPI_CO	consumer price index for Colorado
Index_2005	CPI_CO indexed to the 2005 level
GDP_CO	Colorado gross state product (\$billion)
JPGDP	U S - Chained Price Index, Gross Domestic Product
GDP_Index2005	JPGDP indexed to the 2005 level
CO_GSP2005	real GDP_CO (deflated by indexed JPGDP)(\$billion)
CDD_Fcst	actual and forecasted cooling degree days
Com_Cool	C & I saturation/efficiency index for electric cooling
Com_Other	C & I saturation/efficiency index for electric base uses
Hlight	monthly hours of daylight

Definition
from company records
$(GSP_{Price}^{-0.25}) * (CO_GSP2005^{0.3}) * CDD_Fcst * Com_Cool$
$(GSP_{Price}^{-0.25}) * (CO_GSP2005^{0.6}) * (Hlight^{-0.2}) * Com_Other$
= 1 if month is January, = 0 for all other months
= 1 if month is February, = 0 for all other months
= 1 if month is March, = 0 for all other months
= 1 if month is April, = 0 for all other months
= 1 if month is May, = 0 for all other months
= 1 if month is June, = 0 for all other months
= 1 if month is July, = 0 for all other months
= 1 if month is August, = 0 for all other months
= 1 if month is September, = 0 for all other months
= 1 if month is October, = 0 for all other months
= 1 if month is November, = 0 for all other months
= 1 if month is December, = 0 for all other months
= 1 for July 2004, = 0 for all other months
= 1 beginning in May 2004, = 0 before that
developed from company records
from company records
$GS_RevperkWh / Index_2005$
=average(GS_RevperkWh05,3)
from Global Insight, Inc.
$CPI_CO / 1.984$
from Global Insight, Inc.
from Global Insight, Inc.
$=(JPGDP/100) / 0.99996$
$=GDP_CO / GDP_Index2005$
Actual CDD 1999 - Jul 2014, Normal Aug 2014 - Dec 2015
from Itron, Inc.
from Itron, Inc.
Calculated from National Oceanic and Atmospheric Administration data

Variable	Coefficient	StdErr	T-Stat	P-Value
GS_Cool	9.446	4.158	2.272	2.43%
GS_Base	3980.529	398.570	9.987	0.00%
Jan	-826730.863	166403.963	-4.968	0.00%
Feb	-862127.156	159568.774	-5.403	0.00%
Mar	-808332.466	157705.375	-5.126	0.00%
Apr	-832121.813	155243.101	-5.360	0.00%
May	-802552.290	153063.762	-5.243	0.00%
Jun	-764068.671	154048.449	-4.960	0.00%
Jul	-669574.410	151650.208	-4.415	0.00%
Aug	-639597.728	153062.196	-4.179	0.01%
Sep	-706941.154	153989.691	-4.591	0.00%
Oct	-817905.999	158881.551	-5.148	0.00%
Nov	-873398.099	159143.538	-5.488	0.00%
Dec	-866654.105	164682.879	-5.263	0.00%
Jul04	-375122.841	50891.033	-7.371	0.00%
CRSPH2	93554.186	8655.491	10.809	0.00%
BillCycleDays	30999.759	2952.188	10.501	0.00%

Model Statistics

Iterations	1
Adjusted Observations	187
Deg. of Freedom for Error	170
R-Squared	0.889
Adjusted R-Squared	0.878
AIC	21.627
BIC	21.921
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-2,270.46
Model Sum of Squares	3,073,918,249,382.72
Sum of Squared Errors	384,893,007,359.99
Mean Squared Error	2,264,076,513.88
Std. Error of Regression	47,582.31
Mean Abs. Dev. (MAD)	31,473.50
Mean Abs. % Err. (MAPE)	2.11%
Durbin-Watson Statistic	1.781
Durbin-H Statistic	#NA
Ljung-Box Statistic	84.72
Prob (Ljung-Box)	0.0000
Skewness	-1.223
Kurtosis	6.728
Jarque-Bera	154.915
Prob (Jarque-Bera)	0.0000

Forecast Statistics

Forecast Observations	0
Mean Abs. Dev. (MAD)	0.00
Mean Abs. % Err. (MAPE)	0.00%
Avg. Forecast Error	0.00
Mean % Error	0.00%
Root Mean-Square Error	0.00
Theil's Inequality Coefficient	0.0000
-- Bias Proportion	0.00%
-- Variance Proportion	0.00%
-- Covariance Proportion	0.00%

Year	Month	Actual	Pred	Resid	%Resid	StdResid
1999	1	1,379,917.965	1,381,049.637	-1,131.672	-0.08%	-0.024
1999	2	1,308,699.264	1,316,082.408	-7,383.144	-0.56%	-0.155
1999	3	1,239,385.488	1,260,607.358	-21,221.870	-1.71%	-0.446
1999	4	1,248,011.683	1,222,874.397	25,137.286	2.01%	0.528
1999	5	1,253,505.579	1,229,753.196	23,752.383	1.89%	0.499
1999	6	1,233,060.183	1,302,623.016	-69,562.833	-5.64%	-1.462
1999	7	1,539,120.072	1,466,071.552	73,048.520	4.75%	1.535
1999	8	1,617,337.215	1,584,604.907	32,732.308	2.02%	0.688
1999	9	1,375,091.828	1,460,529.976	-85,438.148	-6.21%	-1.796
1999	10	1,285,724.551	1,285,260.861	463.690	0.04%	0.010
1999	11	1,212,870.621	1,248,901.290	-36,030.669	-2.97%	-0.757
1999	12	1,443,834.073	1,393,015.404	50,818.669	3.52%	1.068
2000	1	1,375,898.441	1,449,668.287	-73,769.846	-5.36%	-1.550
2000	2	1,315,051.505	1,328,082.767	-13,031.262	-0.99%	-0.274
2000	3	1,286,224.851	1,327,177.502	-40,952.651	-3.18%	-0.861
2000	4	1,288,215.083	1,293,357.219	-5,142.136	-0.40%	-0.108
2000	5	1,294,509.393	1,293,128.329	1,381.064	0.11%	0.029
2000	6	1,385,314.870	1,393,082.919	-7,768.049	-0.56%	-0.163
2000	7	1,525,852.677	1,522,921.594	2,931.083	0.19%	0.062
2000	8	1,573,246.284	1,583,188.190	-9,941.906	-0.63%	-0.209
2000	9	1,528,415.637	1,538,794.189	-10,378.552	-0.68%	-0.218
2000	10	1,433,140.672	1,406,050.878	27,089.794	1.89%	0.569
2000	11	1,370,168.434	1,355,043.193	15,125.241	1.10%	0.318
2000	12	1,453,483.452	1,445,131.639	8,351.813	0.57%	0.176
2001	1	1,458,157.686	1,486,978.165	-28,820.479	-1.98%	-0.606
2001	2	1,395,378.184	1,387,832.157	7,546.027	0.54%	0.159
2001	3	1,388,281.116	1,415,587.595	-27,306.479	-1.97%	-0.574
2001	4	1,330,939.373	1,339,267.215	-8,327.842	-0.63%	-0.175
2001	5	1,346,572.056	1,335,523.095	11,048.961	0.82%	0.232
2001	6	1,427,794.806	1,420,819.827	6,974.979	0.49%	0.147
2001	7	1,543,834.032	1,565,173.830	-21,339.798	-1.38%	-0.448
2001	8	1,585,255.362	1,617,385.221	-32,129.859	-2.03%	-0.675
2001	9	1,546,896.286	1,562,511.057	-15,614.771	-1.01%	-0.328
2001	10	1,441,742.985	1,432,332.857	9,410.128	0.65%	0.198
2001	11	1,393,215.043	1,405,186.855	-11,971.812	-0.86%	-0.252
2001	12	1,484,300.982	1,481,489.802	2,811.180	0.19%	0.059
2002	1	1,433,686.231	1,504,254.704	-70,568.473	-4.92%	-1.483
2002	2	1,390,473.084	1,408,107.309	-17,634.225	-1.27%	-0.371
2002	3	1,394,982.295	1,433,761.939	-38,779.644	-2.78%	-0.815
2002	4	1,353,756.675	1,353,337.350	419.325	0.03%	0.009
2002	5	1,361,570.818	1,350,905.161	10,665.657	0.78%	0.224
2002	6	1,427,813.627	1,444,737.394	-16,923.767	-1.19%	-0.356
2002	7	1,593,553.296	1,586,102.748	7,450.548	0.47%	0.157
2002	8	1,624,256.473	1,625,196.724	-940.251	-0.06%	-0.020
2002	9	1,565,046.336	1,569,616.922	-4,570.586	-0.29%	-0.096
2002	10	1,459,208.913	1,436,067.087	23,141.826	1.59%	0.486
2002	11	1,349,987.021	1,382,867.169	-32,880.148	-2.44%	-0.691
2002	12	1,466,051.014	1,485,116.487	-19,065.472	-1.30%	-0.401
2003	1	1,490,511.869	1,534,015.858	-43,503.989	-2.92%	-0.914
2003	2	1,385,643.362	1,412,416.551	-26,773.189	-1.93%	-0.563
2003	3	1,415,438.647	1,429,785.467	-14,346.820	-1.01%	-0.302
2003	4	1,341,761.408	1,340,969.355	792.053	0.06%	0.017
2003	5	1,378,390.662	1,371,752.389	6,638.273	0.48%	0.140
2003	6	1,450,240.161	1,423,673.743	26,566.418	1.83%	0.558
2003	7	1,534,760.442	1,516,963.795	17,796.647	1.16%	0.374
2003	8	1,594,827.606	1,599,561.903	-4,734.297	-0.30%	-0.099
2003	9	1,587,480.484	1,546,950.636	40,529.848	2.55%	0.852
2003	10	1,404,091.565	1,384,570.289	19,521.276	1.39%	0.410

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2003	11	1,401,093.258	1,357,837.683	43,255.575	3.09%	0.909
2003	12	1,447,090.909	1,427,594.454	19,496.455	1.35%	0.410
2004	1	1,493,146.990	1,430,522.962	62,624.028	4.19%	1.316
2004	2	1,402,857.136	1,324,840.258	78,016.878	5.56%	1.640
2004	3	1,410,855.712	1,337,612.898	73,242.814	5.19%	1.539
2004	4	1,356,473.091	1,267,269.194	89,203.896	6.58%	1.875
2004	5	1,444,326.946	1,599,044.229	-154,717.283	-10.71%	-3.252
2004	6	1,513,086.765	1,547,314.122	-34,227.357	-2.26%	-0.719
2004	7	1,226,461.448	1,226,461.448	-0.000	-0.00%	-0.000
2004	8	1,785,254.452	1,682,343.752	102,910.700	5.76%	2.163
2004	9	1,653,112.320	1,606,227.055	46,885.265	2.84%	0.985
2004	10	1,341,831.226	1,479,573.555	-137,742.329	-10.27%	-2.895
2004	11	1,501,838.269	1,413,620.049	88,218.220	5.87%	1.854
2004	12	1,370,820.552	1,572,356.252	-201,535.700	-14.70%	-4.236
2005	1	1,531,879.568	1,562,159.282	-30,279.714	-1.98%	-0.636
2005	2	1,342,106.205	1,428,591.195	-86,484.990	-6.44%	-1.818
2005	3	1,515,663.710	1,519,813.177	-4,149.467	-0.27%	-0.087
2005	4	1,309,235.944	1,461,616.672	-152,380.728	-11.64%	-3.202
2005	5	1,416,069.843	1,423,335.050	-7,265.207	-0.51%	-0.153
2005	6	1,491,450.599	1,569,362.413	-77,911.814	-5.22%	-1.637
2005	7	1,427,889.313	1,611,399.412	-183,510.099	-12.85%	-3.857
2005	8	1,815,294.768	1,784,566.936	30,727.832	1.69%	0.646
2005	9	1,616,653.473	1,653,717.491	-37,064.018	-2.29%	-0.779
2005	10	1,456,189.723	1,502,982.956	-46,793.233	-3.21%	-0.983
2005	11	1,382,583.581	1,434,583.625	-52,000.044	-3.76%	-1.093
2005	12	1,467,731.404	1,525,851.332	-58,119.928	-3.96%	-1.221
2006	1	1,572,638.883	1,611,164.874	-38,525.991	-2.45%	-0.810
2006	2	1,321,429.984	1,424,599.072	-103,169.088	-7.81%	-2.168
2006	3	1,549,218.468	1,542,915.954	6,302.514	0.41%	0.132
2006	4	1,314,948.491	1,371,335.811	-56,387.320	-4.29%	-1.185
2006	5	1,501,190.776	1,457,415.477	43,775.299	2.92%	0.920
2006	6	1,628,171.199	1,576,519.702	51,651.497	3.17%	1.086
2006	7	1,610,464.238	1,592,855.963	17,608.275	1.09%	0.370
2006	8	1,765,882.184	1,771,691.439	-5,809.255	-0.33%	-0.122
2006	9	1,546,950.009	1,577,651.778	-30,701.769	-1.98%	-0.645
2006	10	1,526,756.650	1,526,317.516	439.134	0.03%	0.009
2006	11	1,412,282.128	1,423,959.883	-11,677.755	-0.83%	-0.245
2006	12	1,424,636.981	1,460,719.272	-36,082.291	-2.53%	-0.758
2007	1	1,739,609.027	1,675,738.965	63,870.062	3.67%	1.342
2007	2	1,449,587.501	1,439,557.976	10,029.525	0.69%	0.211
2007	3	1,511,165.770	1,528,400.395	-17,234.625	-1.14%	-0.362
2007	4	1,443,388.108	1,439,141.531	4,246.577	0.29%	0.089
2007	5	1,514,926.546	1,514,460.548	465.998	0.03%	0.010
2007	6	1,584,019.661	1,553,459.825	30,559.836	1.93%	0.642
2007	7	1,705,315.123	1,700,454.450	4,860.673	0.29%	0.102
2007	8	1,839,172.791	1,826,795.790	12,377.001	0.67%	0.260
2007	9	1,599,371.490	1,612,538.832	-13,167.342	-0.82%	-0.277
2007	10	1,620,532.138	1,633,911.778	-13,379.640	-0.83%	-0.281
2007	11	1,475,743.628	1,490,602.215	-14,858.587	-1.01%	-0.312
2007	12	1,524,173.167	1,521,254.789	2,918.378	0.19%	0.061
2008	1	1,714,738.430	1,725,047.230	-10,308.800	-0.60%	-0.217
2008	2	1,553,351.103	1,528,923.696	24,427.407	1.57%	0.513
2008	3	1,479,122.735	1,495,637.133	-16,514.398	-1.12%	-0.347
2008	4	1,564,341.284	1,569,744.297	-5,403.013	-0.35%	-0.114
2008	5	1,509,078.499	1,493,216.350	15,862.149	1.05%	0.333
2008	6	1,558,771.551	1,583,065.676	-24,294.125	-1.56%	-0.511
2008	7	1,765,375.288	1,766,422.417	-1,047.129	-0.06%	-0.022
2008	8	1,670,125.662	1,744,413.253	-74,287.591	-4.45%	-1.561

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2008	9	1,730,268.031	1,673,201.730	57,066.301	3.30%	1.199
2008	10	1,615,268.565	1,594,224.685	21,043.880	1.30%	0.442
2008	11	1,392,903.638	1,379,621.115	13,282.523	0.95%	0.279
2008	12	1,586,809.451	1,525,902.483	60,906.968	3.84%	1.280
2009	1	1,644,364.049	1,607,477.600	36,886.449	2.24%	0.775
2009	2	1,409,725.306	1,412,238.825	-2,513.519	-0.18%	-0.053
2009	3	1,528,493.722	1,495,643.146	32,850.576	2.15%	0.690
2009	4	1,472,424.922	1,437,679.056	34,745.866	2.36%	0.730
2009	5	1,403,041.086	1,385,263.837	17,777.249	1.27%	0.374
2009	6	1,544,936.481	1,546,388.480	-1,452.000	-0.09%	-0.031
2009	7	1,645,278.130	1,671,631.608	-26,353.479	-1.60%	-0.554
2009	8	1,628,919.760	1,649,226.058	-20,306.298	-1.25%	-0.427
2009	9	1,603,859.355	1,645,275.867	-41,416.512	-2.58%	-0.870
2009	10	1,531,362.518	1,549,654.640	-18,292.122	-1.19%	-0.384
2009	11	1,373,667.030	1,392,902.645	-19,235.615	-1.40%	-0.404
2009	12	1,629,407.385	1,597,527.715	31,879.669	1.96%	0.670
2010	1	1,588,822.049	1,585,587.069	3,234.980	0.20%	0.068
2010	2	1,441,162.940	1,444,482.348	-3,319.408	-0.23%	-0.070
2010	3	1,612,195.406	1,567,906.375	44,289.030	2.75%	0.931
2010	4	1,480,890.210	1,477,764.536	3,125.674	0.21%	0.066
2010	5	1,385,374.571	1,382,758.233	2,616.338	0.19%	0.055
2010	6	1,619,132.566	1,572,269.478	46,863.088	2.89%	0.985
2010	7	1,672,163.628	1,643,586.715	28,576.913	1.71%	0.601
2010	8	1,729,782.484	1,716,921.929	12,860.555	0.74%	0.270
2010	9	1,701,429.053	1,636,842.006	64,587.046	3.80%	1.357
2010	10	1,558,718.236	1,484,075.122	74,643.114	4.79%	1.569
2010	11	1,469,754.755	1,415,656.895	54,097.860	3.68%	1.137
2010	12	1,559,845.560	1,512,756.139	47,089.421	3.02%	0.990
2011	1	1,690,781.847	1,612,515.653	78,266.194	4.63%	1.645
2011	2	1,488,051.577	1,425,785.041	62,266.536	4.18%	1.309
2011	3	1,579,066.535	1,554,075.179	24,991.355	1.58%	0.525
2011	4	1,453,732.366	1,398,200.914	55,531.451	3.82%	1.167
2011	5	1,447,602.958	1,467,388.845	-19,785.887	-1.37%	-0.416
2011	6	1,613,886.150	1,572,093.296	41,792.854	2.59%	0.878
2011	7	1,641,317.323	1,615,789.159	25,528.164	1.56%	0.537
2011	8	1,821,377.716	1,801,486.617	19,891.099	1.09%	0.418
2011	9	1,738,308.804	1,678,552.789	59,756.015	3.44%	1.256
2011	10	1,542,138.690	1,517,244.510	24,894.179	1.61%	0.523
2011	11	1,463,278.237	1,451,290.197	11,988.040	0.82%	0.252
2011	12	1,588,854.127	1,536,888.977	51,965.149	3.27%	1.092
2012	1	1,673,368.975	1,645,295.229	28,073.746	1.68%	0.590
2012	2	1,554,108.083	1,499,323.648	54,784.435	3.53%	1.151
2012	3	1,520,800.585	1,539,355.840	-18,555.255	-1.22%	-0.390
2012	4	1,450,082.978	1,450,984.965	-901.987	-0.06%	-0.019
2012	5	1,583,602.531	1,518,655.775	64,946.756	4.10%	1.365
2012	6	1,630,948.264	1,577,315.282	53,632.982	3.29%	1.127
2012	7	1,761,831.896	1,740,332.139	21,499.757	1.22%	0.452
2012	8	1,834,817.460	1,835,789.698	-972.238	-0.05%	-0.020
2012	9	1,616,296.576	1,625,262.543	-8,965.967	-0.55%	-0.188
2012	10	1,658,000.177	1,636,918.923	21,081.254	1.27%	0.443
2012	11	1,486,455.770	1,499,183.989	-12,728.219	-0.86%	-0.267
2012	12	1,548,965.512	1,533,252.049	15,713.463	1.01%	0.330
2013	1	1,736,555.121	1,729,022.312	7,532.809	0.43%	0.158
2013	2	1,476,471.452	1,496,100.129	-19,628.677	-1.33%	-0.413
2013	3	1,503,535.349	1,492,265.502	11,269.847	0.75%	0.237
2013	4	1,602,315.258	1,583,735.531	18,579.728	1.16%	0.390
2013	5	1,538,435.876	1,542,618.762	-4,182.886	-0.27%	-0.088
2013	6	1,529,116.378	1,554,507.296	-25,390.919	-1.66%	-0.534

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2013	7	1,823,628.997	1,787,641.808	35,987.189	1.97%	0.756
2013	8	1,725,047.309	1,787,425.109	-62,377.800	-3.62%	-1.311
2013	9	1,685,773.994	1,707,280.803	-21,506.809	-1.28%	-0.452
2013	10	1,648,871.804	1,654,392.756	-5,520.952	-0.33%	-0.116
2013	11	1,420,838.796	1,455,423.404	-34,584.608	-2.43%	-0.727
2013	12	1,633,166.284	1,610,314.059	22,852.225	1.40%	0.480
2014	1	1,755,004.308	1,738,583.610	16,420.697	0.94%	0.345
2014	2	1,519,136.983	1,476,270.288	42,866.695	2.82%	0.901
2014	3	1,577,082.364	1,570,967.292	6,115.071	0.39%	0.129
2014	4	1,541,508.933	1,544,747.762	-3,238.829	-0.21%	-0.068
2014	5	1,490,938.310	1,503,917.176	-12,978.866	-0.87%	-0.273
2014	6	1,592,896.237	1,593,407.027	-510.790	-0.03%	-0.011
2014	7	1,765,728.953	1,768,766.219	-3,037.266	-0.17%	-0.064
2014	8		1,748,353.882			
2014	9		1,742,858.407			
2014	10		1,663,388.076			
2014	11		1,427,462.256			
2014	12		1,679,240.519			
2015	1		1,709,255.345			
2015	2		1,497,127.923			
2015	3		1,630,703.541			
2015	4		1,561,741.184			
2015	5		1,478,371.170			
2015	6		1,659,397.571			
2015	7		1,797,165.647			
2015	8		1,771,284.729			
2015	9		1,749,431.372			
2015	10		1,646,302.445			
2015	11		1,495,420.177			
2015	12		1,692,171.897			

Variable	Description	Definition
Interdept	historical interdepartmental billed sales (MWh)	from company records
Dec08	Binary variable for December 2008	Binary Variable Dec 08 = 1, otherwise = 0
Jun12	Binary variable for June 2012	Binary Variable Jun 12 = 1, otherwise = 0
Feb12	Binary variable for February 2012	Binary Variable Feb 12 = 1, otherwise = 0
Jun10	Binary variable for June 2010	Binary Variable Jun 10 = 1, otherwise = 0
Feb11	Binary variable for February 2011	Binary Variable Feb 11 = 1, otherwise = 0
Sep10	Binary variable for September 2010	Binary Variable Sep 10 = 1, otherwise = 0
Jan	Monthly seasonal variable for month of January	Binary Variable Jan = 1, otherwise = 0
Feb	Monthly seasonal variable for month of February	Binary Variable Feb = 1, otherwise = 0
Mar	Monthly seasonal variable for month of March	Binary Variable Mar = 1, otherwise = 0
Apr	Monthly seasonal variable for month of April	Binary Variable Apr = 1, otherwise = 0
May	Monthly seasonal variable for month of May	Binary Variable May = 1, otherwise = 0
Jun	Monthly seasonal variable for month of June	Binary Variable Jun = 1, otherwise = 0
Jul	Monthly seasonal variable for month of July	Binary Variable Jul = 1, otherwise = 0
Aug	Monthly seasonal variable for month of August	Binary Variable Aug = 1, otherwise = 0
Sep	Monthly seasonal variable for month of September	Binary Variable Sep = 1, otherwise = 0
Oct	Monthly seasonal variable for month of October	Binary Variable Oct = 1, otherwise = 0
Nov	Monthly seasonal variable for month of November	Binary Variable Nov = 1, otherwise = 0
Dec	Monthly seasonal variable for month of December	Binary Variable Dec = 1, otherwise = 0
Jan09	Binary variable for January 2009	Binary Variable Jan 09 = 1, otherwise = 0
AR(1)	First order autoregressive term	

Variable	Coefficient	StdErr	T-Stat	P-Value
Dec08	-251.403	62.471	-4.024	0.01%
Jun12	-137.654	56.232	-2.448	1.62%
Feb12	179.510	56.206	3.194	0.19%
Jun10	-176.265	56.591	-3.115	0.24%
Feb11	144.626	56.569	2.557	1.22%
Sep10	-130.244	56.108	-2.321	2.24%
Jan	368.221	26.458	13.917	0.00%
Feb	282.832	26.110	10.832	0.00%
Mar	330.226	24.410	13.528	0.00%
Apr	234.361	24.298	9.645	0.00%
May	276.903	24.252	11.418	0.00%
Jun	161.987	25.632	6.320	0.00%
Jul	127.159	24.223	5.249	0.00%
Aug	164.167	25.078	6.546	0.00%
Sep	170.858	26.130	6.539	0.00%
Oct	215.126	25.481	8.443	0.00%
Nov	248.029	25.513	9.722	0.00%
Dec	301.614	26.453	11.402	0.00%
Jan09	297.846	62.550	4.762	0.00%
AR(1)	-0.594	0.083	-7.137	0.00%

Model Statistics

Iterations	6
Adjusted Observations	114
Deg. of Freedom for Error	94
R-Squared	0.767
Adjusted R-Squared	0.720
AIC	8.407
BIC	8.887
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-620.95
Model Sum of Squares	1,184,538.50
Sum of Squared Errors	359,416.92
Mean Squared Error	3,823.58
Std. Error of Regression	61.84
Mean Abs. Dev. (MAD)	43.46
Mean Abs. % Err. (MAPE)	30.18%
Durbin-Watson Statistic	1.746
Durbin-H Statistic	#NA
Ljung-Box Statistic	32.38
Prob (Ljung-Box)	0.1178
Skewness	0.007
Kurtosis	3.582
Jarque-Bera	1.610
Prob (Jarque-Bera)	0.4471

Forecast Statistics

Forecast Observations	0
Mean Abs. Dev. (MAD)	0.00
Mean Abs. % Err. (MAPE)	0.00%
Avg. Forecast Error	0.00
Mean % Error	0.00%
Root Mean-Square Error	0.00
Theil's Inequality Coefficient	0.0000
-- Bias Proportion	0.00%
-- Variance Proportion	0.00%
-- Covariance Proportion	0.00%

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2005	1	237.707				
2005	2	320.195	360.308	-40.113	-0.125	-0.649
2005	3	302.785	308.046	-5.261	-0.017	-0.085
2005	4	242.948	250.651	-7.703	-0.032	-0.125
2005	5	308.918	271.805	37.113	0.120	0.600
2005	6	207.949	142.982	64.967	0.312	1.051
2005	7	134.364	99.875	34.489	0.257	0.558
2005	8	195.057	159.890	35.167	0.180	0.569
2005	9	176.718	152.521	24.197	0.137	0.391
2005	10	172.159	211.647	-39.488	-0.229	-0.639
2005	11	253.968	273.535	-19.567	-0.077	-0.316
2005	12	269.656	298.088	-28.432	-0.105	-0.460
2006	1	321.633	387.192	-65.559	-0.204	-1.060
2006	2	309.585	310.487	-0.902	-0.003	-0.015
2006	3	426.077	314.345	111.732	0.262	1.807
2006	4	150.357	177.462	-27.105	-0.180	-0.438
2006	5	291.887	326.769	-34.882	-0.120	-0.564
2006	6	227.283	153.092	74.191	0.326	1.200
2006	7	98.215	88.398	9.817	0.100	0.159
2006	8	191.383	181.349	10.034	0.052	0.162
2006	9	166.481	154.702	11.779	0.071	0.190
2006	10	182.100	217.724	-35.624	-0.196	-0.576
2006	11	222.649	267.634	-44.985	-0.202	-0.727
2006	12	411.916	316.680	95.236	0.231	1.540
2007	1	230.485	302.743	-72.258	-0.314	-1.169
2007	2	434.565	364.595	69.970	0.161	1.132
2007	3	327.568	240.154	87.414	0.267	1.414
2007	4	311.259	235.939	75.320	0.242	1.218
2007	5	278.648	231.254	47.394	0.170	0.766
2007	6	331.782	160.951	170.831	0.515	2.763
2007	7	51.104	26.365	24.739	0.484	0.400
2007	8	182.287	209.315	-27.028	-0.148	-0.437
2007	9	195.650	160.101	35.549	0.182	0.575
2007	10	188.028	200.408	-12.380	-0.066	-0.200
2007	11	221.844	264.115	-42.271	-0.191	-0.684
2007	12	220.960	317.158	-96.198	-0.435	-1.556
2008	1	547.307	416.099	131.208	0.240	2.122
2008	2	71.364	176.522	-105.158	-1.474	-1.701
2008	3	554.940	455.759	99.181	0.179	1.604
2008	4	49.613	100.965	-51.352	-1.035	-0.830
2008	5	498.121	386.573	111.548	0.224	1.804
2008	6	15.029	30.666	-15.637	-1.040	-0.253
2008	7	263.625	214.397	49.228	0.187	0.796
2008	8	30.038	83.157	-53.119	-1.768	-0.859
2008	9	203.187	250.480	-47.293	-0.233	-0.765
2008	10	182.501	195.934	-13.433	-0.074	-0.217
2008	11	235.950	267.396	-31.446	-0.133	-0.509
2008	12	55.668	57.381	-1.713	-0.031	-0.028
2009	1	665.713	662.827	2.886	0.004	0.047
2009	2	278.180	283.042	-4.862	-0.017	-0.079
2009	3	235.254	332.988	-97.734	-0.415	-1.581
2009	4	267.353	290.739	-23.386	-0.087	-0.378
2009	5	226.139	257.318	-31.179	-0.138	-0.504
2009	6	181.189	192.121	-10.932	-0.060	-0.177
2009	7	158.711	115.760	42.951	0.271	0.695
2009	8	134.553	145.437	-10.884	-0.081	-0.176
2009	9	110.354	188.437	-78.083	-0.708	-1.263
2009	10	222.949	251.042	-28.093	-0.126	-0.454

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2009	11	265.421	243.385	22.036	0.083	0.356
2009	12	287.222	291.290	-4.068	-0.014	-0.066
2010	1	364.642	376.764	-12.122	-0.033	-0.196
2010	2	268.801	284.956	-16.155	-0.060	-0.261
2010	3	213.949	338.555	-124.606	-0.582	-2.015
2010	4	230.357	303.386	-73.029	-0.317	-1.181
2010	5	138.028	279.279	-141.251	-1.023	-2.284
2010	6	45.144	68.161	-23.017	-0.510	-0.372
2010	7	130.659	91.885	38.774	0.297	0.627
2010	8	162.465	162.089	0.376	0.002	0.006
2010	9	14.817	41.624	-26.807	-1.809	-0.434
2010	10	275.599	230.440	45.159	0.164	0.730
2010	11	216.817	212.131	4.686	0.022	0.076
2010	12	301.390	320.142	-18.752	-0.062	-0.303
2011	1	465.211	368.354	96.857	0.208	1.566
2011	2	404.922	369.882	35.040	0.087	0.567
2011	3	284.575	343.604	-59.029	-0.207	-0.955
2011	4	282.311	261.461	20.850	0.074	0.337
2011	5	254.761	248.438	6.323	0.025	0.102
2011	6	117.492	175.131	-57.639	-0.491	-0.932
2011	7	81.971	153.572	-71.601	-0.873	-1.158
2011	8	180.840	190.991	-10.151	-0.056	-0.164
2011	9	172.000	160.960	11.040	0.064	0.179
2011	10	194.643	214.448	-19.805	-0.102	-0.320
2011	11	298.458	260.188	38.270	0.128	0.619
2011	12	308.638	271.678	36.960	0.120	0.598
2012	1	331.487	364.051	-32.564	-0.098	-0.527
2012	2	499.195	484.147	15.048	0.030	0.243
2012	3	283.000	308.349	-25.349	-0.090	-0.410
2012	4	241.492	262.396	-20.904	-0.087	-0.338
2012	5	222.987	272.669	-49.682	-0.223	-0.803
2012	6	39.000	56.338	-17.338	-0.445	-0.280
2012	7	147.660	118.452	29.208	0.198	0.472
2012	8	180.000	151.997	28.003	0.156	0.453
2012	9	180.919	161.459	19.460	0.108	0.315
2012	10	258.919	209.153	49.766	0.192	0.805
2012	11	237.000	222.032	14.968	0.063	0.242
2012	12	266.610	308.161	-41.551	-0.156	-0.672
2013	1	369.660	389.000	-19.340	-0.052	-0.313
2013	2	273.874	281.977	-8.103	-0.030	-0.131
2013	3	328.886	335.544	-6.658	-0.020	-0.108
2013	4	274.600	235.157	39.443	0.144	0.638
2013	5	235.845	253.016	-17.171	-0.073	-0.278
2013	6	113.528	186.360	-72.832	-0.642	-1.178
2013	7	160.364	155.926	4.438	0.028	0.072
2013	8	172.056	144.455	27.601	0.160	0.446
2013	9	216.332	166.174	50.158	0.232	0.811
2013	10	242.029	188.131	53.898	0.223	0.872
2013	11	290.368	232.059	58.309	0.201	0.943
2013	12	334.999	276.480	58.519	0.175	0.946
2014	1	319.294	348.403	-29.109	-0.091	-0.471
2014	2	367.112	311.876	55.236	0.150	0.893
2014	3	300.504	280.195	20.309	0.068	0.328
2014	4	319.869	252.005	67.864	0.212	1.098
2014	5	297.931	226.143	71.788	0.241	1.161
2014	6	36.910	149.504	-112.594	-3.051	-1.821
2014	7	39.365	201.408	-162.043	-4.116	-2.621
2014	8		216.283			

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2014	9		139.920			
2014	10		233.491			
2014	11		237.127			
2014	12		308.086			
2015	1		364.379			
2015	2		285.112			
2015	3		328.872			
2015	4		235.165			
2015	5		276.425			
2015	6		162.270			
2015	7		126.991			
2015	8		164.266			
2015	9		170.799			
2015	10		215.161			
2015	11		248.008			
2015	12		301.626			

Variable	Description	Definition
Residential	calendar month customer count - historical data	from company records
HstockMA12	12-month moving average of Housing Stock	=Average(HSTOCKCO,12)
CRSPH1	CRS billing system implementation - phase 1	= 1 beginning in June 2003, = 0 before that
CRSPH2	CRS billing system implementation - phase 2	= 1 beginning in May 2004, = 0 before that
HSTOCKCO	Colorado Housing stock - historical and forecast (000)	from Global Insight, Inc.
AR(1)	First order autoregressive term	

Variable	Coefficient	StdErr	T-Stat	P-Value
HstockMA12	529.640	5.086	104.143	0.00%
CRSPH1	-4290.825	1539.499	-2.787	0.59%
CRSPH2	-10097.742	1537.046	-6.570	0.00%
AR(1)	0.985	0.006	153.906	0.00%

Model Statistics

Iterations	8
Adjusted Observations	174
Deg. of Freedom for Error	170
R-Squared	0.999
Adjusted R-Squared	0.999
AIC	14.684
BIC	14.757
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-1,520.44
Model Sum of Squares	511,388,883,637.28
Sum of Squared Errors	396,221,845.43
Mean Squared Error	2,330,716.74
Std. Error of Regression	1,526.67
Mean Abs. Dev. (MAD)	964.39
Mean Abs. % Err. (MAPE)	0.09%
Durbin-Watson Statistic	1.766
Durbin-H Statistic	#NA
Ljung-Box Statistic	42.38
Prob (Ljung-Box)	0.0117
Skewness	2.974
Kurtosis	24.540
Jarque-Bera	3620.271
Prob (Jarque-Bera)	0.0000

Forecast Statistics

Forecast Observations	0
Mean Abs. Dev. (MAD)	0.00
Mean Abs. % Err. (MAPE)	0.00%
Avg. Forecast Error	0.00
Mean % Error	0.00%
Root Mean-Square Error	0.00
Theil's Inequality Coefficient	0.0000
-- Bias Proportion	0.00%
-- Variance Proportion	0.00%
-- Covariance Proportion	0.00%

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2000	1	998,754.000				
2000	2	1,002,144.000	1,000,033.249	2,110.751	0.002	1.383
2000	3	1,003,325.000	1,003,408.452	-83.452	-0.000	-0.055
2000	4	1,004,013.000	1,004,608.068	-595.068	-0.001	-0.390
2000	5	1,005,869.000	1,005,322.188	546.812	0.001	0.358
2000	6	1,005,953.000	1,007,179.962	-1,226.962	-0.001	-0.804
2000	7	1,007,523.000	1,007,292.448	230.552	0.000	0.151
2000	8	1,007,911.000	1,008,868.455	-957.455	-0.001	-0.627
2000	9	1,010,937.000	1,009,307.511	1,629.489	0.002	1.067
2000	10	1,014,626.000	1,012,345.104	2,280.896	0.002	1.494
2000	11	1,017,508.000	1,016,036.056	1,471.944	0.001	0.964
2000	12	1,019,961.000	1,018,961.313	999.687	0.001	0.655
2001	1	1,023,211.000	1,021,464.852	1,746.148	0.002	1.144
2001	2	1,024,514.000	1,024,754.160	-240.160	-0.000	-0.157
2001	3	1,024,937.000	1,026,110.979	-1,173.979	-0.001	-0.769
2001	4	1,025,970.000	1,026,601.651	-631.651	-0.001	-0.414
2001	5	1,027,646.000	1,027,693.679	-47.679	-0.000	-0.031
2001	6	1,027,803.000	1,029,398.625	-1,595.625	-0.002	-1.045
2001	7	1,029,403.000	1,029,607.755	-204.755	-0.000	-0.134
2001	8	1,030,019.000	1,031,238.349	-1,219.349	-0.001	-0.799
2001	9	1,032,449.000	1,031,875.971	573.029	0.001	0.375
2001	10	1,035,831.000	1,034,300.091	1,530.909	0.001	1.003
2001	11	1,038,563.000	1,037,661.722	901.278	0.001	0.590
2001	12	1,040,029.000	1,040,367.265	-338.265	-0.000	-0.222
2002	1	1,043,671.000	1,041,825.571	1,845.429	0.002	1.209
2002	2	1,044,908.000	1,045,426.670	-518.670	-0.000	-0.340
2002	3	1,045,896.000	1,046,639.350	-743.350	-0.001	-0.487
2002	4	1,048,160.000	1,047,606.145	553.855	0.001	0.363
2002	5	1,048,389.000	1,049,829.029	-1,440.029	-0.001	-0.943
2002	6	1,048,652.000	1,050,070.325	-1,418.325	-0.001	-0.929
2002	7	1,050,004.000	1,050,344.815	-340.815	-0.000	-0.223
2002	8	1,050,559.000	1,051,691.571	-1,132.571	-0.001	-0.742
2002	9	1,051,843.000	1,052,252.985	-409.985	-0.000	-0.269
2002	10	1,052,326.000	1,053,532.099	-1,206.099	-0.001	-0.790
2002	11	1,053,546.000	1,054,022.014	-476.014	-0.000	-0.312
2002	12	1,058,082.000	1,055,228.580	2,853.420	0.003	1.869
2003	1	1,059,729.000	1,059,700.649	28.351	0.000	0.019
2003	2	1,060,835.000	1,061,326.910	-491.910	-0.000	-0.322
2003	3	1,062,745.000	1,062,445.730	299.270	0.000	0.196
2003	4	1,062,849.000	1,064,356.372	-1,507.372	-0.001	-0.987
2003	5	1,062,851.000	1,064,488.243	-1,637.243	-0.002	-1.072
2003	6	1,060,183.000	1,060,196.773	-13.773	-0.000	-0.009
2003	7	1,062,968.750	1,061,791.959	1,176.791	0.001	0.771
2003	8	1,067,180.145	1,064,531.988	2,648.157	0.002	1.735
2003	9	1,065,909.311	1,068,673.263	-2,763.952	-0.003	-1.810
2003	10	1,072,673.000	1,067,414.526	5,258.474	0.005	3.444
2003	11	1,075,688.000	1,074,068.444	1,619.556	0.002	1.061
2003	12	1,078,394.000	1,077,048.483	1,345.517	0.001	0.881
2004	1	1,080,610.000	1,079,723.915	886.085	0.001	0.580
2004	2	1,083,496.000	1,081,916.470	1,579.530	0.001	1.035
2004	3	1,084,108.000	1,084,788.971	-680.971	-0.001	-0.446

ResCust Err

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2004	4	1,084,889.000	1,085,421.839	-532.839	-0.000	-0.349
2004	5	1,076,271.000	1,076,123.447	147.553	0.000	0.097
2004	6	1,089,560.000	1,077,640.611	11,919.389	0.011	7.807
2004	7	1,088,713.000	1,090,789.206	-2,076.206	-0.002	-1.360
2004	8	1,088,226.000	1,090,015.719	-1,789.719	-0.002	-1.172
2004	9	1,086,525.000	1,089,584.133	-3,059.133	-0.003	-2.004
2004	10	1,085,204.000	1,087,957.158	-2,753.158	-0.003	-1.803
2004	11	1,083,352.000	1,086,704.727	-3,352.727	-0.003	-2.196
2004	12	1,083,870.000	1,084,917.298	-1,047.298	-0.001	-0.686
2005	1	1,085,849.000	1,085,464.181	384.819	0.000	0.252
2005	2	1,086,004.000	1,087,450.100	-1,446.100	-0.001	-0.947
2005	3	1,085,795.000	1,087,641.646	-1,846.646	-0.002	-1.210
2005	4	1,085,908.000	1,087,474.814	-1,566.814	-0.001	-1.026
2005	5	1,086,477.000	1,087,625.245	-1,148.245	-0.001	-0.752
2005	6	1,084,974.000	1,088,200.108	-3,226.108	-0.003	-2.113
2005	7	1,083,878.000	1,086,734.007	-2,856.007	-0.003	-1.871
2005	8	1,085,114.000	1,085,668.511	-554.511	-0.001	-0.363
2005	9	1,084,991.000	1,086,909.854	-1,918.854	-0.002	-1.257
2005	10	1,087,105.000	1,086,812.622	292.378	0.000	0.192
2005	11	1,089,125.000	1,088,918.521	206.479	0.000	0.135
2005	12	1,091,072.000	1,090,947.767	124.233	0.000	0.081
2006	1	1,093,730.000	1,092,905.263	824.737	0.001	0.540
2006	2	1,095,369.000	1,095,563.173	-194.173	-0.000	-0.127
2006	3	1,097,977.000	1,097,183.380	793.620	0.001	0.520
2006	4	1,099,253.000	1,099,757.588	-504.588	-0.000	-0.331
2006	5	1,102,050.000	1,101,019.538	1,030.462	0.001	0.675
2006	6	1,102,604.000	1,103,793.384	-1,189.384	-0.001	-0.779
2006	7	1,102,900.000	1,104,357.943	-1,457.943	-0.001	-0.955
2006	8	1,105,606.000	1,104,668.244	937.756	0.001	0.614
2006	9	1,107,091.000	1,107,336.787	-245.787	-0.000	-0.161
2006	10	1,110,653.000	1,108,802.382	1,850.618	0.002	1.212
2006	11	1,112,407.000	1,112,313.234	93.766	0.000	0.061
2006	12	1,113,293.000	1,114,017.595	-724.595	-0.001	-0.475
2007	1	1,114,945.000	1,114,866.295	78.705	0.000	0.052
2007	2	1,116,573.000	1,116,468.663	104.337	0.000	0.068
2007	3	1,118,074.000	1,118,056.915	17.085	0.000	0.011
2007	4	1,118,836.000	1,119,519.473	-683.473	-0.001	-0.448
2007	5	1,119,161.000	1,120,253.578	-1,092.578	-0.001	-0.716
2007	6	1,118,683.000	1,120,563.483	-1,880.483	-0.002	-1.232
2007	7	1,119,279.000	1,120,082.003	-803.003	-0.001	-0.526
2007	8	1,121,500.000	1,120,657.799	842.201	0.001	0.552
2007	9	1,121,575.000	1,122,840.397	-1,265.397	-0.001	-0.829
2007	10	1,124,364.000	1,122,908.993	1,455.007	0.001	0.953
2007	11	1,124,988.000	1,125,650.205	-662.205	-0.001	-0.434
2007	12	1,126,019.000	1,126,260.614	-241.614	-0.000	-0.158
2008	1	1,128,206.000	1,127,271.502	934.498	0.001	0.612
2008	2	1,128,873.000	1,129,420.559	-547.559	-0.000	-0.359
2008	3	1,129,038.000	1,130,070.332	-1,032.332	-0.001	-0.676
2008	4	1,129,193.000	1,130,225.279	-1,032.279	-0.001	-0.676
2008	5	1,129,686.000	1,130,369.974	-683.974	-0.001	-0.448
2008	6	1,129,051.000	1,130,851.328	-1,800.328	-0.002	-1.179

ResCust Err

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2008	7	1,129,607.000	1,130,221.372	-614.372	-0.001	-0.402
2008	8	1,134,953.000	1,130,764.092	4,188.908	0.004	2.744
2008	9	1,137,365.000	1,136,028.595	1,336.405	0.001	0.875
2008	10	1,139,447.000	1,138,403.124	1,043.876	0.001	0.684
2008	11	1,140,307.000	1,140,452.360	-145.360	-0.000	-0.095
2008	12	1,142,106.000	1,141,278.436	827.564	0.001	0.542
2009	1	1,143,341.000	1,143,028.767	312.233	0.000	0.205
2009	2	1,143,251.000	1,144,223.047	-972.047	-0.001	-0.637
2009	3	1,144,991.000	1,144,104.345	886.655	0.001	0.581
2009	4	1,145,399.000	1,145,787.333	-388.333	-0.000	-0.254
2009	5	1,145,102.000	1,146,157.755	-1,055.755	-0.001	-0.692
2009	6	1,146,015.000	1,145,845.395	169.605	0.000	0.111
2009	7	1,145,742.000	1,146,724.271	-982.271	-0.001	-0.643
2009	8	1,146,301.000	1,146,434.561	-133.561	-0.000	-0.087
2009	9	1,146,796.000	1,146,937.700	-141.700	-0.000	-0.093
2009	10	1,148,474.000	1,147,376.918	1,097.082	0.001	0.719
2009	11	1,149,311.000	1,148,980.386	330.614	0.000	0.217
2009	12	1,150,181.000	1,149,814.724	366.276	0.000	0.240
2010	1	1,152,270.000	1,150,681.583	1,588.417	0.001	1.040
2010	2	1,153,358.000	1,152,749.055	608.945	0.001	0.399
2010	3	1,154,935.000	1,153,831.715	1,103.285	0.001	0.723
2010	4	1,154,699.000	1,155,396.027	-697.027	-0.001	-0.457
2010	5	1,155,163.000	1,155,174.749	-11.749	-0.000	-0.008
2010	6	1,156,812.000	1,155,623.321	1,188.679	0.001	0.779
2010	7	1,156,467.000	1,157,238.739	-771.739	-0.001	-0.506
2010	8	1,157,221.000	1,156,890.004	330.996	0.000	0.217
2010	9	1,157,289.000	1,157,663.436	-374.436	-0.000	-0.245
2010	10	1,157,862.000	1,157,761.570	100.430	0.000	0.066
2010	11	1,159,354.000	1,158,357.421	996.579	0.001	0.653
2010	12	1,159,953.000	1,159,820.816	132.184	0.000	0.087
2011	1	1,161,212.000	1,160,404.465	807.535	0.001	0.529
2011	2	1,162,005.000	1,161,637.920	367.080	0.000	0.240
2011	3	1,162,773.000	1,162,424.049	348.951	0.000	0.229
2011	4	1,162,985.000	1,163,185.505	-200.505	-0.000	-0.131
2011	5	1,163,256.000	1,163,399.306	-143.306	-0.000	-0.094
2011	6	1,163,175.000	1,163,683.054	-508.054	-0.000	-0.333
2011	7	1,162,924.000	1,163,620.245	-696.245	-0.001	-0.456
2011	8	1,163,932.000	1,163,390.133	541.867	0.000	0.355
2011	9	1,163,607.000	1,164,392.853	-785.853	-0.001	-0.515
2011	10	1,164,575.000	1,164,082.719	492.281	0.000	0.322
2011	11	1,165,328.000	1,165,046.081	281.919	0.000	0.185
2011	12	1,166,567.000	1,165,811.681	755.319	0.001	0.495
2012	1	1,167,758.000	1,167,056.173	701.827	0.001	0.460
2012	2	1,168,658.000	1,168,253.620	404.380	0.000	0.265
2012	3	1,170,079.000	1,169,178.663	900.337	0.001	0.590
2012	4	1,170,338.000	1,170,617.282	-279.282	-0.000	-0.183
2012	5	1,170,511.000	1,170,911.887	-400.887	-0.000	-0.263
2012	6	1,170,492.000	1,171,133.093	-641.093	-0.001	-0.420
2012	7	1,170,835.000	1,171,165.803	-330.803	-0.000	-0.217
2012	8	1,171,682.000	1,171,555.653	126.347	0.000	0.083
2012	9	1,171,869.000	1,172,437.227	-568.227	-0.000	-0.372

ResCust Err

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2012	10	1,173,759.000	1,172,669.292	1,089.708	0.001	0.714
2012	11	1,174,860.000	1,174,579.170	280.830	0.000	0.184
2012	12	1,176,356.000	1,175,714.811	641.189	0.001	0.420
2013	1	1,178,232.000	1,177,240.049	991.951	0.001	0.650
2013	2	1,179,260.000	1,179,140.111	119.889	0.000	0.079
2013	3	1,180,108.000	1,180,188.834	-80.834	-0.000	-0.053
2013	4	1,180,758.000	1,181,060.584	-302.584	-0.000	-0.198
2013	5	1,181,078.000	1,181,737.632	-659.632	-0.001	-0.432
2013	6	1,181,305.000	1,182,075.748	-770.748	-0.001	-0.505
2013	7	1,182,006.000	1,182,322.362	-316.362	-0.000	-0.207
2013	8	1,182,494.000	1,183,035.912	-541.912	-0.000	-0.355
2013	9	1,182,767.000	1,183,539.263	-772.263	-0.001	-0.506
2013	10	1,184,294.000	1,183,830.946	463.054	0.000	0.303
2013	11	1,185,507.000	1,185,357.781	149.219	0.000	0.098
2013	12	1,187,308.000	1,186,570.776	737.224	0.001	0.483
2014	1	1,189,178.000	1,188,362.908	815.092	0.001	0.534
2014	2	1,190,421.000	1,190,223.014	197.986	0.000	0.130
2014	3	1,191,823.000	1,191,466.018	356.982	0.000	0.234
2014	4	1,192,525.000	1,192,865.644	-340.644	-0.000	-0.223
2014	5	1,193,376.000	1,193,575.861	-199.861	-0.000	-0.131
2014	6	1,194,113.000	1,194,435.992	-322.992	-0.000	-0.212
2014	7	1,195,176.000	1,195,183.914	-7.914	-0.000	-0.005
2014	8		1,196,252.983			
2014	9		1,197,337.145			
2014	10		1,198,428.465			
2014	11		1,199,526.924			
2014	12		1,200,634.074			
2015	1		1,201,749.896			
2015	2		1,202,874.372			
2015	3		1,204,006.666			
2015	4		1,205,146.760			
2015	5		1,206,294.635			
2015	6		1,207,450.561			
2015	7		1,208,614.521			
2015	8		1,209,786.497			
2015	9		1,210,965.753			
2015	10		1,212,152.271			
2015	11		1,213,346.037			
2015	12		1,214,545.475			

Variable	Description
GS	calendar month customer count - historical data
MA12_NRCO	12 month moving average of Colorado Resident Population
Trendvar	Linear trend variable

Definition

from company records

=Average(NRCO,12)

Dec 1989=1, Dec 1990=2, ... Dec 2004=16, ...Dec 2015=27

Variable	Coefficient	StdErr	T-Stat	P-Value
MA12_NRCO	37.323	0.193	193.152	0.00%
Trendvar	-1620.197	45.908	-35.292	0.00%
AR(1)	0.715	0.062	11.484	0.00%

Model Statistics

Iterations	8
Adjusted Observations	126
Deg. of Freedom for Error	123
R-Squared	0.994
Adjusted R-Squared	0.994
AIC	11.439
BIC	11.507
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-896.47
Model Sum of Squares	1,936,774,798.05
Sum of Squared Errors	11,161,873.06
Mean Squared Error	90,746.94
Std. Error of Regression	301.24
Mean Abs. Dev. (MAD)	178.72
Mean Abs. % Err. (MAPE)	0.12%
Durbin-Watson Statistic	1.943
Durbin-H Statistic	#NA
Ljung-Box Statistic	21.20
Prob (Ljung-Box)	0.6270
Skewness	1.364
Kurtosis	22.055
Jarque-Bera	1945.279
Prob (Jarque-Bera)	0.0000

Forecast Statistics

Forecast Observations	0
Mean Abs. Dev. (MAD)	0.00
Mean Abs. % Err. (MAPE)	0.00%
Avg. Forecast Error	0.00
Mean % Error	0.00%
Root Mean-Square Error	0.00
Theil's Inequality Coefficient	0.0000
-- Bias Proportion	0.00%
-- Variance Proportion	0.00%
-- Covariance Proportion	0.00%

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2004	1	144,367.000				
2004	2	143,695.000	144,538.488	-843.488	-0.006	-2.800
2004	3	146,086.000	144,060.887	2,025.113	0.014	6.723
2004	4	146,082.000	145,773.773	308.227	0.002	1.023
2004	5	144,364.000	145,774.942	-1,410.942	-0.010	-4.684
2004	6	144,808.000	144,551.925	256.075	0.002	0.850
2004	7	144,948.000	144,875.408	72.592	0.001	0.241
2004	8	145,088.000	144,982.323	105.677	0.001	0.351
2004	9	145,152.000	145,090.028	61.972	0.000	0.206
2004	10	145,002.000	145,144.178	-142.178	-0.001	-0.472
2004	11	144,426.000	145,046.109	-620.109	-0.004	-2.059
2004	12	144,147.000	144,644.266	-497.266	-0.003	-1.651
2005	1	144,222.000	144,455.549	-233.549	-0.002	-0.775
2005	2	144,384.000	144,520.709	-136.709	-0.001	-0.454
2005	3	144,494.000	144,648.870	-154.870	-0.001	-0.514
2005	4	144,476.000	144,740.642	-264.642	-0.002	-0.879
2005	5	144,749.000	144,741.690	7.310	0.000	0.024
2005	6	144,905.000	144,956.921	-51.921	-0.000	-0.172
2005	7	144,955.000	145,090.814	-135.814	-0.001	-0.451
2005	8	145,344.000	145,151.235	192.765	0.001	0.640
2005	9	145,421.000	145,456.399	-35.399	-0.000	-0.118
2005	10	145,327.000	145,540.829	-213.829	-0.001	-0.710
2005	11	145,576.000	145,505.332	70.668	0.000	0.235
2005	12	145,556.000	145,717.456	-161.456	-0.001	-0.536
2006	1	145,875.000	145,739.607	135.393	0.001	0.449
2006	2	145,632.000	146,006.474	-374.474	-0.003	-1.243
2006	3	146,023.000	145,873.950	149.050	0.001	0.495
2006	4	145,965.000	146,197.071	-232.071	-0.002	-0.770
2006	5	146,403.000	146,201.545	201.455	0.001	0.669
2006	6	146,573.000	146,553.401	19.599	0.000	0.065
2006	7	146,571.000	146,713.281	-142.281	-0.001	-0.472
2006	8	146,931.000	146,749.819	181.181	0.001	0.601
2006	9	147,012.000	147,044.785	-32.785	-0.000	-0.109
2006	10	147,410.000	147,139.906	270.094	0.002	0.897
2006	11	147,416.000	147,461.292	-45.292	-0.000	-0.150
2006	12	147,386.000	147,502.030	-116.030	-0.001	-0.385
2007	1	147,569.000	147,516.651	52.349	0.000	0.174
2007	2	147,781.000	147,683.179	97.821	0.001	0.325
2007	3	148,135.000	147,870.049	264.951	0.002	0.880
2007	4	148,325.000	148,158.059	166.941	0.001	0.554
2007	5	148,755.000	148,328.436	426.564	0.003	1.416
2007	6	148,962.000	148,671.979	290.021	0.002	0.963
2007	7	149,205.000	148,856.266	348.734	0.002	1.158
2007	8	149,475.000	149,066.468	408.532	0.003	1.356
2007	9	149,300.000	149,296.154	3.846	0.000	0.013
2007	10	149,440.000	149,207.865	232.135	0.002	0.771
2007	11	149,359.000	149,344.963	14.037	0.000	0.047
2007	12	149,179.000	149,324.239	-145.239	-0.001	-0.482
2008	1	149,317.000	149,232.915	84.085	0.001	0.279
2008	2	149,271.000	149,369.123	-98.123	-0.001	-0.326
2008	3	149,309.000	149,373.964	-64.964	-0.000	-0.216

CICust Err

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2008	4	149,568.000	149,439.041	128.959	0.001	0.428
2008	5	149,824.000	149,662.302	161.698	0.001	0.537
2008	6	149,994.000	149,882.099	111.901	0.001	0.371
2008	7	150,203.000	150,040.164	162.836	0.001	0.541
2008	8	150,507.000	150,225.865	281.135	0.002	0.933
2008	9	150,630.000	150,479.230	150.770	0.001	0.500
2008	10	150,780.000	150,602.939	177.061	0.001	0.588
2008	11	150,791.000	150,745.702	45.298	0.000	0.150
2008	12	150,826.000	150,788.828	37.172	0.000	0.123
2009	1	150,940.000	150,848.861	91.139	0.001	0.303
2009	2	150,824.000	150,965.122	-141.122	-0.001	-0.468
2009	3	151,035.000	150,916.684	118.316	0.001	0.393
2009	4	151,144.000	151,101.779	42.221	0.000	0.140
2009	5	151,188.000	151,213.694	-25.694	-0.000	-0.085
2009	6	151,359.000	151,278.236	80.764	0.001	0.268
2009	7	151,383.000	151,433.137	-50.137	-0.000	-0.166
2009	8	151,439.000	151,482.501	-43.501	-0.000	-0.144
2009	9	151,413.000	151,554.214	-141.214	-0.001	-0.469
2009	10	151,615.000	151,566.838	48.162	0.000	0.160
2009	11	151,621.000	151,742.005	-121.005	-0.001	-0.402
2009	12	151,687.000	151,776.487	-89.487	-0.001	-0.297
2010	1	151,830.000	151,853.377	-23.377	-0.000	-0.078
2010	2	151,913.000	151,984.827	-71.827	-0.000	-0.238
2010	3	152,166.000	152,072.800	93.200	0.001	0.309
2010	4	152,287.000	152,281.799	5.201	0.000	0.017
2010	5	152,332.000	152,395.908	-63.908	-0.000	-0.212
2010	6	152,541.000	152,455.473	85.527	0.001	0.284
2010	7	152,500.000	152,631.861	-131.861	-0.001	-0.438
2010	8	152,626.000	152,629.083	-3.083	-0.000	-0.010
2010	9	152,714.000	152,745.274	-31.274	-0.000	-0.104
2010	10	152,772.000	152,833.868	-61.868	-0.000	-0.205
2010	11	152,769.000	152,900.585	-131.585	-0.001	-0.437
2010	12	152,727.000	152,923.262	-196.262	-0.001	-0.652
2011	1	152,660.000	152,917.628	-257.628	-0.002	-0.855
2011	2	152,621.000	152,893.691	-272.691	-0.002	-0.905
2011	3	153,011.000	152,889.345	121.655	0.001	0.404
2011	4	153,235.000	153,191.285	43.715	0.000	0.145
2011	5	153,370.000	153,374.115	-4.115	-0.000	-0.014
2011	6	153,533.000	153,494.515	38.485	0.000	0.128
2011	7	153,624.000	153,634.969	-10.969	-0.000	-0.036
2011	8	153,753.000	153,723.982	29.018	0.000	0.096
2011	9	153,739.000	153,840.263	-101.263	-0.001	-0.336
2011	10	153,823.000	153,854.360	-31.360	-0.000	-0.104
2011	11	153,670.000	153,938.576	-268.576	-0.002	-0.892
2011	12	153,490.000	153,853.467	-363.467	-0.002	-1.207
2012	1	153,566.000	153,749.125	-183.125	-0.001	-0.608
2012	2	153,588.000	153,827.884	-239.884	-0.002	-0.796
2012	3	154,028.000	153,868.170	159.830	0.001	0.531
2012	4	154,404.000	154,207.397	196.603	0.001	0.653
2012	5	154,673.000	154,500.957	172.043	0.001	0.571
2012	6	154,734.000	154,719.805	14.195	0.000	0.047

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2012	7	154,800.000	154,790.518	9.482	0.000	0.031
2012	8	154,909.000	154,865.379	43.621	0.000	0.145
2012	9	154,735.000	154,971.571	-236.571	-0.002	-0.785
2012	10	154,937.000	154,876.011	60.989	0.000	0.202
2012	11	154,723.000	155,049.849	-326.849	-0.002	-1.085
2012	12	154,962.000	154,926.860	35.140	0.000	0.117
2013	1	155,191.000	155,128.326	62.674	0.000	0.208
2013	2	155,250.000	155,323.224	-73.224	-0.000	-0.243
2013	3	155,556.000	155,397.177	158.823	0.001	0.527
2013	4	155,838.000	155,648.308	189.692	0.001	0.630
2013	5	156,165.000	155,882.866	282.134	0.002	0.937
2013	6	156,360.000	156,148.019	211.981	0.001	0.704
2013	7	156,470.000	156,318.766	151.234	0.001	0.502
2013	8	156,612.000	156,428.713	183.287	0.001	0.608
2013	9	156,515.000	156,561.134	-46.134	-0.000	-0.153
2013	10	156,587.000	156,522.546	64.454	0.000	0.214
2013	11	156,148.000	156,604.648	-456.648	-0.003	-1.516
2013	12	156,035.000	156,320.904	-285.904	-0.002	-0.949
2014	1	156,032.000	156,269.993	-237.993	-0.002	-0.790
2014	2	155,940.000	156,297.484	-357.484	-0.002	-1.187
2014	3	156,234.000	156,260.960	-26.960	-0.000	-0.089
2014	4	156,635.000	156,500.124	134.876	0.001	0.448
2014	5	157,098.000	156,815.505	282.495	0.002	0.938
2014	6	157,354.000	157,175.223	178.777	0.001	0.593
2014	7	157,550.000	157,386.745	163.255	0.001	0.542
2014	8		157,555.172			
2014	9		157,587.217			
2014	10		157,638.348			
2014	11		157,702.997			
2014	12		157,777.645			
2015	1		157,859.447			
2015	2		157,946.367			
2015	3		158,037.186			
2015	4		158,130.863			
2015	5		158,226.654			
2015	6		158,324.256			
2015	7		158,423.287			
2015	8		158,523.476			
2015	9		158,624.798			
2015	10		158,727.113			
2015	11		158,830.322			
2015	12		158,934.344			

Variable	Description	Definition
StreetLight	calendar month customer count - historical data	from company records

Variable	Coefficient	StdErr	T-Stat	P-Value
Simple	0.956	0.095	10.084	0.000
Trend	-0.085	0.019	-4.570	0.000
Damp Factor	0.975	0.009	103.766	0.000

Model Statistics		Forecast Statistics	
Iterations	47	Forecast Observations	0
Adjusted Observations	139	Mean Abs. Dev. (MAD)	0.00
Deg. of Freedom for Error	136	Mean Abs. % Err. (MAPE)	0.00%
R-Squared	0.998	Avg. Forecast Error	0.00
Adjusted R-Squared	0.998	Mean % Error	0.00%
AIC	11.033	Root Mean-Square Error	0.000
BIC	11.096	Theil's Inequality Coefficient	0.0000
F-Statistic	#NA	-- Bias Proportion	0.00%
Prob (F-Statistic)	#NA	-- Variance Proportion	0.00%
Log-Likelihood	-961.01	-- Covariance Proportion	0.00%
Model Sum of Squares	3,366,955,924		
Sum of Squared Errors	8,236,890		
Mean Squared Error	60,565.37		
Std. Error of Regression	246.10		
Mean Abs. Dev. (MAD)	156.53		
Mean Abs. % Err. (MAPE)	0.26%		
Durbin-Watson Statistic	2.014		
Durbin-H Statistic	0.000		
Ljung-Box Statistic	18.15		
Prob (Ljung-Box)	0.7957		
Skewness	0.171		
Kurtosis	9.141		
Jarque-Bera	219.1		
Prob (Jarque-Bera)	0.0000		

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2003	1	68,567.000	68,575.657	-8.657	-0.000	-0.035
2003	2	68,565.000	68,433.197	131.803	0.002	0.536
2003	3	68,606.000	68,417.887	188.113	0.003	0.764
2003	4	68,677.000	68,444.968	232.032	0.003	0.943
2003	5	68,651.000	68,499.386	151.614	0.002	0.616
2003	6	68,598.000	68,469.008	128.992	0.002	0.524
2003	7	68,731.000	68,411.090	319.910	0.005	1.300
2003	8	69,501.000	68,514.785	986.215	0.014	4.007
2003	9	68,162.000	69,182.209	-1,020.209	-0.015	-4.145
2003	10	68,250.000	68,019.060	230.940	0.003	0.938
2003	11	68,259.000	68,038.507	220.493	0.003	0.896
2003	12	68,395.000	68,035.427	359.573	0.005	1.461
2004	1	68,449.000	68,142.051	306.949	0.004	1.247
2004	2	68,451.000	68,179.837	271.163	0.004	1.102
2004	3	68,514.000	68,168.187	345.813	0.005	1.405
2004	4	68,508.000	68,207.141	300.859	0.004	1.223
2004	5	68,577.000	68,186.424	390.576	0.006	1.587
2004	6	68,974.000	68,228.087	745.913	0.011	3.031
2004	7	68,528.000	68,558.447	-30.447	-0.000	-0.124
2004	8	68,134.000	68,158.378	-24.378	-0.000	-0.099
2004	9	67,757.000	67,775.233	-18.233	-0.000	-0.074
2004	10	67,534.000	67,408.320	125.680	0.002	0.511
2004	11	66,988.000	67,177.675	-189.675	-0.003	-0.771
2004	12	66,742.000	66,669.257	72.743	0.001	0.296
2005	1	66,589.000	66,414.069	174.931	0.003	0.711
2005	2	66,342.000	66,250.727	91.273	0.001	0.371
2005	3	66,337.000	66,008.326	328.674	0.005	1.336
2005	4	65,844.000	65,974.961	-130.961	-0.002	-0.532
2005	5	65,572.000	65,521.123	50.877	0.001	0.207
2005	6	65,308.000	65,245.244	62.756	0.001	0.255
2005	7	64,888.000	64,983.770	-95.770	-0.001	-0.389
2005	8	64,423.000	64,586.288	-163.288	-0.003	-0.664
2005	9	63,742.000	64,144.797	-402.797	-0.006	-1.637
2005	10	63,473.000	63,513.370	-40.370	-0.001	-0.164
2005	11	62,957.000	63,237.787	-280.787	-0.004	-1.141
2005	12	62,915.000	62,760.507	154.493	0.002	0.628
2006	1	62,601.000	62,692.317	-91.317	-0.001	-0.371
2006	2	62,442.000	62,401.694	40.306	0.001	0.164
2006	3	62,259.000	62,238.754	20.246	0.000	0.082
2006	4	61,957.000	62,060.013	-103.013	-0.002	-0.419
2006	5	61,707.000	61,776.506	-69.506	-0.001	-0.282
2006	6	61,424.000	61,535.141	-111.141	-0.002	-0.452
2006	7	61,065.000	61,267.128	-202.128	-0.003	-0.821
2006	8	60,830.000	60,932.183	-102.183	-0.002	-0.415
2006	9	60,604.000	60,704.430	-100.430	-0.002	-0.408
2006	10	60,407.000	60,489.553	-82.553	-0.001	-0.335
2006	11	60,359.000	60,301.272	57.728	0.001	0.235
2006	12	60,294.000	60,245.242	48.758	0.001	0.198
2007	1	60,353.000	60,179.514	173.486	0.003	0.705
2007	2	60,272.000	60,222.041	49.959	0.001	0.203
2007	3	59,620.000	60,145.540	-525.540	-0.009	-2.135

StLtCust Err

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2007	4	60,630.000	59,563.608	1,066.392	0.018	4.333
2007	5	60,363.000	60,421.044	-58.044	-0.001	-0.236
2007	6	60,516.000	60,211.964	304.036	0.005	1.235
2007	7	60,318.000	60,328.733	-10.733	-0.000	-0.044
2007	8	59,731.000	60,149.690	-418.690	-0.007	-1.701
2007	9	59,183.000	59,618.025	-435.025	-0.007	-1.768
2007	10	59,060.000	59,108.562	-48.562	-0.001	-0.197
2007	11	58,658.000	58,974.795	-316.795	-0.005	-1.287
2007	12	58,526.000	58,611.891	-85.891	-0.001	-0.349
2008	1	58,423.000	58,478.079	-55.079	-0.001	-0.224
2008	2	58,302.000	58,379.385	-77.385	-0.001	-0.314
2008	3	58,326.000	58,266.652	59.348	0.001	0.241
2008	4	58,574.000	58,280.901	293.099	0.005	1.191
2008	5	58,622.000	58,496.414	125.586	0.002	0.510
2008	6	58,484.000	58,543.380	-59.380	-0.001	-0.241
2008	7	58,470.000	58,420.017	49.983	0.001	0.203
2008	8	58,103.000	58,398.899	-295.899	-0.005	-1.202
2008	9	58,348.000	58,072.282	275.718	0.005	1.120
2008	10	58,141.000	58,271.395	-130.395	-0.002	-0.530
2008	11	58,035.000	58,094.157	-59.157	-0.001	-0.240
2008	12	58,162.000	57,991.036	170.964	0.003	0.695
2009	1	58,226.000	58,095.515	130.485	0.002	0.530
2009	2	58,283.000	58,152.380	130.620	0.002	0.531
2009	3	58,695.000	58,200.675	494.325	0.008	2.009
2009	4	58,680.000	58,559.344	120.656	0.002	0.490
2009	5	58,508.000	58,553.958	-45.958	-0.001	-0.187
2009	6	58,153.000	58,395.904	-242.904	-0.004	-0.987
2009	7	58,203.000	58,071.665	131.335	0.002	0.534
2009	8	58,302.000	58,097.100	204.900	0.004	0.833
2009	9	58,391.000	58,179.071	211.929	0.004	0.861
2009	10	58,463.000	58,253.742	209.258	0.004	0.850
2009	11	58,424.000	58,312.398	111.602	0.002	0.453
2009	12	58,338.000	58,272.311	65.689	0.001	0.267
2010	1	58,213.000	58,186.738	26.262	0.000	0.107
2010	2	58,151.000	58,065.052	85.948	0.001	0.349
2010	3	58,114.000	57,997.240	116.760	0.002	0.474
2010	4	57,971.000	57,953.323	17.677	0.000	0.072
2010	5	57,841.000	57,817.113	23.887	0.000	0.097
2010	6	57,682.000	57,688.733	-6.733	-0.000	-0.027
2010	7	57,568.000	57,535.354	32.646	0.001	0.133
2010	8	57,413.000	57,420.671	-7.671	-0.000	-0.031
2010	9	57,221.000	57,271.660	-50.660	-0.001	-0.206
2010	10	57,054.000	57,089.077	-35.077	-0.001	-0.143
2010	11	56,914.000	56,927.502	-13.502	-0.000	-0.055
2010	12	56,804.000	56,790.799	13.201	0.000	0.054
2011	1	56,673.000	56,681.644	-8.644	-0.000	-0.035
2011	2	56,554.000	56,555.303	-1.303	-0.000	-0.005
2011	3	56,543.000	56,439.008	103.992	0.002	0.423
2011	4	56,508.000	56,417.976	90.024	0.002	0.366
2011	5	56,411.000	56,379.417	31.583	0.001	0.128
2011	6	56,335.000	56,285.554	49.446	0.001	0.201

StLtCust Err

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2011	7	56,183.000	56,207.913	-24.913	-0.000	-0.101
2011	8	56,075.000	56,064.245	10.755	0.000	0.044
2011	9	55,826.000	55,956.794	-130.794	-0.002	-0.531
2011	10	55,728.000	55,727.307	0.693	0.000	0.003
2011	11	55,537.000	55,626.073	-89.073	-0.002	-0.362
2011	12	55,509.000	55,448.609	60.391	0.001	0.245
2012	1	55,343.000	55,411.543	-68.543	-0.001	-0.279
2012	2	55,270.000	55,258.989	11.011	0.000	0.045
2012	3	55,400.000	55,183.781	216.219	0.004	0.879
2012	4	54,836.000	55,289.725	-453.725	-0.008	-1.844
2012	5	54,675.000	54,793.645	-118.645	-0.002	-0.482
2012	6	54,490.000	54,628.926	-138.926	-0.003	-0.565
2012	7	54,451.000	54,457.124	-6.124	-0.000	-0.025
2012	8	54,486.000	54,413.754	72.246	0.001	0.294
2012	9	54,323.000	54,440.506	-117.506	-0.002	-0.477
2012	10	54,360.000	54,296.210	63.790	0.001	0.259
2012	11	54,305.000	54,320.984	-15.984	-0.000	-0.065
2012	12	54,324.000	54,271.648	52.352	0.001	0.213
2013	1	54,333.000	54,284.335	48.665	0.001	0.198
2013	2	54,395.000	54,290.554	104.446	0.002	0.424
2013	3	54,468.000	54,342.807	125.193	0.002	0.509
2013	4	54,470.000	54,406.127	63.873	0.001	0.260
2013	5	54,527.000	54,407.135	119.865	0.002	0.487
2013	6	54,520.000	54,453.642	66.358	0.001	0.270
2013	7	53,698.000	54,445.400	-747.400	-0.014	-3.037
2013	8	53,705.000	53,720.242	-15.242	-0.000	-0.062
2013	9	53,596.000	53,696.618	-100.618	-0.002	-0.409
2013	10	53,674.000	53,599.581	74.419	0.001	0.302
2013	11	53,482.000	53,664.014	-182.014	-0.003	-0.740
2013	12	53,640.000	53,497.886	142.114	0.003	0.577
2014	1	53,658.000	53,630.188	27.812	0.001	0.113
2014	2	53,672.000	53,651.077	20.923	0.000	0.085
2014	3	53,739.000	53,663.858	75.142	0.001	0.305
2014	4	53,597.000	53,722.689	-125.689	-0.002	-0.511
2014	5	53,783.000	53,599.803	183.197	0.003	0.744
2014	6	53,748.000	53,757.771	-9.771	-0.000	-0.040
2014	7	53,838.000	53,732.432	105.568	0.002	0.429
2014	8		53,809.383			
2014	9		53,785.988			
2014	10		53,763.171			
2014	11		53,740.920			
2014	12		53,719.220			
2015	1		53,698.056			
2015	2		53,677.417			
2015	3		53,657.288			
2015	4		53,637.658			
2015	5		53,618.514			
2015	6		53,599.844			
2015	7		53,581.636			
2015	8		53,563.878			
2015	9		53,546.561			

StLtCust Err

Year	Month	Actual	Pred	Resid	%Resid	StdResid
2015	10		53,529.672			
2015	11		53,513.201			
2015	12		53,497.137			

Sales by Rate - Revenue Month, KWh

	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
CO_E_R_TIER_1	905,718,991	719,492,298	757,414,383	665,422,846	593,941,865	619,045,388	556,695,149	489,323,462	482,008,731	544,237,531	608,696,240	845,250,400
CO_E_R_TIER_2	-	-	-	-	-	108,864,710	351,352,490	395,148,995	336,226,277	139,785,869	-	-
CO_E_R_MED	-	-	-	-	-	645,281	884,782	861,359	708,535	328,579	-	-
CO_E_RAL	286,044	245,847	240,242	205,883	182,945	171,576	183,019	205,809	223,057	257,364	274,475	297,339
CO_E_RD	4,874,117	4,074,386	4,324,726	3,234,214	2,429,102	1,949,443	1,559,817	1,570,243	1,473,906	1,920,739	2,610,201	4,136,457
CO_E_C	124,416,990	107,112,604	118,884,902	104,232,139	94,329,002	106,492,274	120,545,575	119,192,068	113,716,146	104,126,327	90,287,468	118,234,498
CO_E_CAL	1,098,178	941,756	921,867	789,570	700,753	658,062	702,076	788,247	855,585	987,093	1,052,052	1,139,546
CO_E_NMTR	2,639,348	2,803,182	2,934,761	2,612,076	2,083,087	2,411,701	2,158,744	2,255,755	2,280,964	2,186,966	2,254,306	2,282,579
CO_E_PG_SM	55,621,445	43,124,152	48,766,911	46,978,967	44,532,790	48,437,341	55,205,107	51,245,848	51,426,831	49,538,596	43,737,230	51,061,548
CO_E_PLL	453,630	383,062	379,309	324,375	285,361	270,276	288,899	320,837	351,124	405,223	429,870	465,177
CO_E_PST_SM												
CO_E_SG_SM	938,315,876	792,129,690	902,725,771	840,668,530	791,815,954	914,095,817	1,026,006,186	998,390,417	979,673,457	905,593,514	796,887,668	918,741,025
CO_E_SGL_SM	229,657	226,247	262,749	231,340	230,941	341,357	310,148	352,129	271,787	265,053	259,136	278,879
CO_E_SPVTOU_ONP_SM	1,826	(1,876)	-	-	4,839	252,161	427,210	631,083	636,194	531,284	48,201	-
CO_E_SPVTOU_OFFP_SM	1,659,925	2,139,097	2,826,710	2,736,211	2,755,530	2,827,872	1,015,694	1,892,179	2,166,986	2,490,777	3,963,994	5,230,938
CO_E_STOU_ONP_SM												
CO_E_STOU_OFFP_SM												
CO_E_TG_SM	-	-	-	-	-	-	-	-	-	-	-	-
CO_E_TST_SM												
CO_E_PG_LG	242,024,200	221,925,753	228,341,597	226,098,845	215,134,579	242,983,387	241,608,508	246,907,464	252,106,683	240,716,065	226,072,884	248,478,969
CO_E_PST_LG												
CO_E_PTOU_ON_LG												
CO_E_PTOU_OFF_LG												
CO_E_SG_LG	103,438,206	89,582,751	99,328,704	94,476,510	86,606,476	98,194,693	104,790,376	103,011,752	99,574,949	99,171,580	91,922,392	102,613,533
CO_E_SGL_LG	-	-	-	-	-	-	-	-	-	-	-	-
CO_E_SPVTOU_ONP_LG												
CO_E_SPVTOU_OFFP_LG												
CO_E_STOU_ONP_LG												
CO_E_STOU_OFFP_LG												
CO_E_TG_LG	225,973,452	222,605,356	209,676,568	226,917,114	223,566,646	225,291,404	225,615,926	226,845,730	227,118,801	222,076,472	221,526,907	226,726,377
CO_E_TST_LG												
CO_E_PE_COL	885,979	760,179	776,749	690,384	639,553	611,320	645,773	691,212	728,629	814,927	843,506	901,739
CO_E_PE_SL	15,610,203	13,225,460	13,078,292	11,194,106	9,869,453	9,349,762	9,978,626	11,089,824	12,118,603	13,959,672	14,813,039	16,033,448
CO_E_PE_SLU	356,908	305,921	305,921	254,934	254,934	203,947	254,934	254,934	305,921	305,921	356,908	356,908
CO_E_PE_SSL												
CO_E_PE_TSL	2,006,476	2,006,476	2,006,476	2,006,476	2,006,476	2,006,476	2,006,476	2,006,476	2,006,476	2,006,476	2,006,476	2,006,476
CO_E_PE_MI	65,857	66,857	67,857	68,857	69,857	70,857	71,857	72,857	73,857	74,857	75,857	76,857
CO_E_PE_MSL	18,494	18,116	14,886	15,006	12,936	11,935	11,512	13,290	14,392	15,308	16,226	16,989
CO_E_SCS7												
CO_E_C_IDS												
CO_E_PG_IDS												
CO_E_SG_IDS												
Total IDS & SCS7	5,931,098	5,810,804	5,868,267	5,586,231	5,582,100	5,363,617	5,359,741	5,397,002	5,470,290	5,632,515	5,741,751	5,930,683
Sum of all other highlighted rows	7,750,770	5,785,618	7,121,578	3,840,510	4,207,338	4,733,605	3,592,659	7,309,506	5,016,090	4,531,983	6,066,635	5,361,735

Customers by Rate - Active Service Counts

Rate Schedules	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
CO_E_R	1,196,211	1,197,349	1,198,496	1,199,650	1,200,812	1,201,102	1,202,293	1,203,486	1,204,686	1,206,739	1,207,947	1,209,160
CO_E_R_MED	-	-	-	-	-	880	867	859	853	-	-	-
CO_E_RAL	4,355	4,343	4,331	4,319	4,307	4,295	4,283	4,271	4,259	4,247	4,235	4,223
CO_E_RCPP	-	-	-	-	-	-	-	-	-	-	-	-
CO_E_RD	1,184	1,182	1,180	1,178	1,176	1,174	1,172	1,170	1,168	1,166	1,164	1,162
CO_E_RPTR	-	-	-	-	-	-	-	-	-	-	-	-
CO_E_RTOU	-	-	-	-	-	-	-	-	-	-	-	-
CO_E_C	109,069	109,129	109,192	109,257	109,323	109,391	109,460	109,529	109,599	109,670	109,742	109,814
CO_E_CAL	7,347	7,351	7,355	7,359	7,364	7,368	7,373	7,378	7,382	7,387	7,392	7,397
CO_E_NMTR	769	769	770	770	771	771	772	772	773	773	774	774
CO_E_PG_SM	400	400	400	400	401	401	401	401	402	402	402	402
CO_E_PLL	546	546	546	546	546	546	546	546	546	546	546	546
CO_E_PST_SM	-	-	-	-	-	-	-	-	-	-	-	-
CO_E_SG_SM	38,965	38,987	39,009	39,033	39,056	39,080	39,105	39,130	39,155	39,180	39,206	39,232
CO_E_SGL_SM	327	327	327	327	328	328	328	328	328	329	329	329
CO_E_SPVTOU_SM	65	65	65	65	65	65	65	65	65	65	65	65
CO_E_STOU_SM	-	-	-	-	-	-	-	-	-	-	-	-
CO_E_TG_SM	-	-	-	-	-	-	-	-	-	-	-	-
CO_E_TST_SM	6	6	6	6	6	6	6	6	6	6	6	6
CO_E_PG_LG	165	165	165	165	165	165	166	166	166	166	166	166
CO_E_PST_LG	5	5	5	5	5	5	5	5	5	5	5	5
CO_E_PTOU_LG	-	-	-	-	-	-	-	-	-	-	-	-
CO_E_SG_LG	138	138	138	138	138	138	138	138	138	138	138	139
CO_E_SGL_LG	-	-	-	-	-	-	-	-	-	-	-	-
CO_E_SPVTOU_LG	1	1	1	1	1	1	1	1	1	1	1	1
CO_E_STOU_LG	-	-	-	-	-	-	-	-	-	-	-	-
CO_E_TG_LG_020	1	1	1	1	1	1	1	1	1	1	1	1
CO_E_TG_LG_030	1	1	1	1	1	1	1	1	1	1	1	1
CO_E_TG_LG_040	1	1	1	1	1	1	1	1	1	1	1	1
CO_E_TG_LG_200	1	1	1	1	1	1	1	1	1	1	1	1
CO_E_TG_LG_250	1	1	1	1	1	1	1	1	1	1	1	1
CO_E_TG_LG_260	1	1	1	1	1	1	1	1	1	1	1	1
CO_E_TG_LG_270	1	1	1	1	1	1	1	1	1	1	1	1
CO_E_TG_LG_320	-	-	-	-	-	-	-	-	-	-	-	-
CO_E_TG_LG_330	1	1	1	1	1	1	1	1	1	1	1	1
CO_E_TG_LG_370	1	1	1	1	1	1	1	1	1	1	1	1
CO_E_TG_LG_410	1	1	1	1	1	1	1	1	1	1	1	1
CO_E_TG_LG_420	1	1	1	1	1	1	1	1	1	1	1	1
CO_E_TG_LG_520	1	1	1	1	1	1	1	1	1	1	1	1
CO_E_TG_LG_530	1	1	1	1	1	1	1	1	1	1	1	1
CO_E_TG_LG_540	1	1	1	1	1	1	1	1	1	1	1	1
CO_E_TG_LG_550	1	1	1	1	1	1	1	1	1	1	1	1
CO_E_TG_LG_570	1	1	1	1	1	1	1	1	1	1	1	1
CO_E_TG_LG_580	1	1	1	1	1	1	1	1	1	1	1	1
CO_E_TG_LG_STORY	-	-	-	-	-	-	-	-	-	-	-	-
CO_E_TG_LG_590 (Climax WTP)	1	1	1	1	1	1	1	1	1	1	1	1
CO_E_TST_LG	7	7	7	7	7	7	7	7	7	7	7	7
CO_E_PE_COL	67	67	67	67	67	67	67	67	67	67	67	67

CO_E_PE_SL	581	581	581	581	581	581	581	581	581	581	581	581
CO_E_PE_SLU	52,739	52,718	52,698	52,679	52,660	52,641	52,623	52,605	52,588	52,571	52,555	52,539
CO_E_PE_SSL	2	2	2	2	2	2	2	2	2	2	2	2
CO_E_PE_TSL	161	161	161	161	161	161	161	161	161	161	161	161
CO_E_PE_MI	101	101	101	101	101	101	101	101	101	101	101	101
CO_E_PE_MSL	58	58	58	58	58	58	58	58	58	58	58	58
CO_E_SCS7	50	50	50	50	50	50	50	50	50	50	50	50
CO_E_C_IDS	28	28	28	28	28	28	28	28	28	28	28	28
CO_E_PG_IDS	1	1	1	1	1	1	1	1	1	1	1	1
CO_E_SG_IDS	5	5	5	5	5	5	5	5	5	5	5	5