



# Office of the City Auditor

## 2014 Electric and Gas Rate Review

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Date: November 7, 2013

To: President King, President Pro-Tem Bennett, and Members of City Council

Re: 2014 Electric and Gas Rate Case Filing Report

We have reviewed the 2014 Electric and Gas Rate Case filing, including Cost of Service Studies and tariffs submitted by Colorado Springs Utilities. The filings are scheduled to be heard during a Public Hearing on November 12, 2013.

Our review focused on the accuracy and consistency of the methodology used to develop the proposed rate changes. The Cost of Service Studies were examined for each rate, for compliance with the tariff and agreement to the appropriate supporting documentation. Key assumptions such as operations and maintenance expenses and customer volumes represented budgeted or forecasted amounts and were reviewed for reasonableness. The scope of our review does not extend to review of budget assumptions or forecast data.

### CONCLUSION

We conclude that the methodology used in the Cost of Service Study (COSS) was accurately calculated and consistent with prior years. However, we observed the calculated COSS was adjusted to develop the proposed rates. Observations 1 and 2 provide additional details to the adjustments made by Colorado Springs Utilities. Additionally, we have provided one Opportunity for Improvement in rate development. Details can be found beginning on Page 4 of this report.

- Several customers received rates that were either significantly more or less than the cost of service. Three proposed electric rates were not in compliance with rate balancing guidance per the 2014 Electric Rate Report Appendix.
- Opportunities existed to formalize representation for the residential and small commercial classes. Additional rate options could be considered for these rate classes to reduce peak load and associated costs.

### TRENDS AND BACKGROUND INFORMATION

#### Cost of Service Study

The COSS is a mathematical model that is designed to classify costs into broad categories so they can be allocated based on service characteristics (e.g., for the electric service, these are supply, transmission, distribution, and customer). Costs are then allocated to customer classes based on the service characteristics of each class, as follows:

- Schedule 1 represents the total revenue Colorado Springs Utilities needs to generate in the coming year to cover operations and maintenance expenses, debt service, and meet financial metrics.



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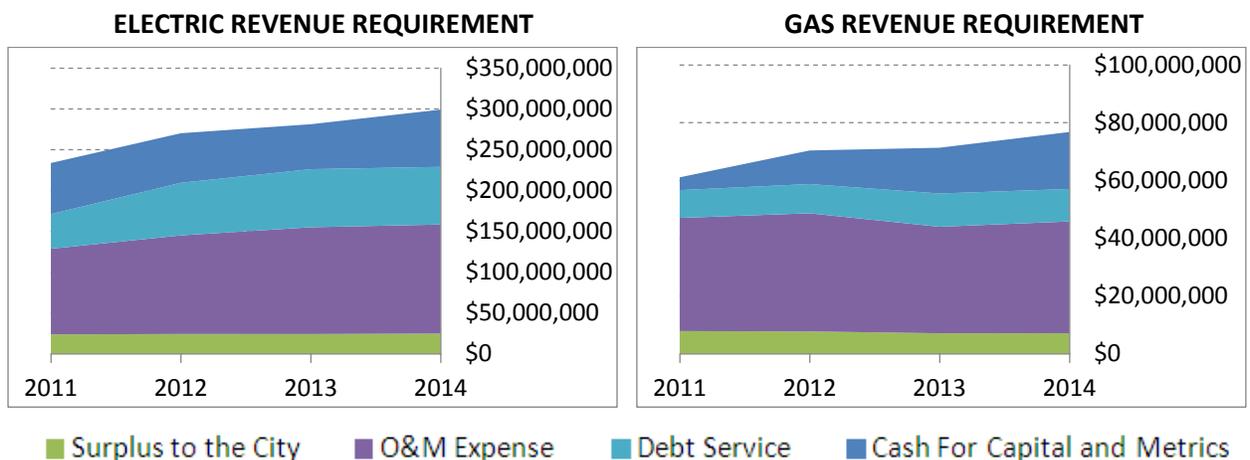
- Schedules 2 through 9 allocate costs considering the cost center, cost type and the way customer classes utilize the service.
- The calculated revenue needed for the coming year summarized by each customer class was reported on Schedule 9. This schedule in total agrees to the amount on Schedule 1 for annual revenue required.
- The proposed rates on Schedule 10 indicate rates designed to recover costs by individual customer class, and are structured to recover costs through customer charges, demand charges, and on- and off-peak charges. These charges vary by customer class. Schedule 10 includes a total by customer class that would agree to the totals on Schedule 9.

The proposed rates on Schedule 10 utilize forecast consumption units for the year by customer type. Accuracy of forecast units is significant in the development of cost allocation and rates. Higher forecast units will result in a decreased rate to achieve the needed revenue, and lower forecast units will result in a higher derived rate.

### Electric and Gas Rate Trends

- Over a three year period, base electric revenue requirements increased 12% or \$30 million, while forecasted consumption increased 2%. The proposed 2014 electric revenue requirement increased 7.48% over 2013. Of this amount, 2.98% represents growth in forecasted consumption, while 4.5% represents increases to tariff rates.
- Gas revenue requirements over a three year period have increased 6.8%, or \$4.7 million, and forecasted consumption increased 1.9%. The proposed 2014 gas revenue requirement increased 5.38% over 2013. Of this amount, 2.48% represents growth in forecasted consumption, while 2.90% represents increases to tariff rates.

The following charts present an overview of Electric and Gas nonfuel total revenue requirements by type of expenditure per COSS Schedule 1 over the last three years and proposed for 2014.



Source: Colorado Springs Utilities Electric & Gas Rate Filing, COSS Schedule 1



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### OTHER CONSIDERATIONS

**Surplus:** Per Resolution 131-10, effective January 1, 2010, City Council fixed electric and gas surplus rates for transfers to the City General Fund at \$.006173 and \$.391539 per unit delivered within the City, respectively.

**Prior Report Recommendation:** The City Auditor's Office report on the 2013 Electric and Gas Rate Cases stated that the small commercial rate class should be separate from residential, as in prior years. Colorado Springs Utilities 2014 Rate Reports state that these classes remain combined while load data is obtained for 2013, then will track and report the classes separately starting in 2014.

**Streetlight:** The Electric COSS includes calculated costs for the streetlight service. We did not review the budget, assumptions or costs for streetlights, as this was not within the scope of our review.

**Financial Metrics:** We compared the financial metrics per the 2014 financial forecast to prior years and determined that target metrics were in the range indicated by published rating agency guidelines and did not change from the prior year.

### OBSERVATIONS, RECOMMENDATIONS AND RESPONSES

#### OBSERVATION 1 – ELECTRIC RATE BALANCING ADJUSTMENT TO CALCULATED AMOUNTS WAS SIGNIFICANT

- Some Commercial and Industrial classes obtained a significant reduced rate from calculated amounts.
  - Industrial ETC, E8T and ELG customers received a combined rate reduction of approximately \$10 million. (See chart on Page 5 for more details.)
  - Residential Commercial ETL and E2C customers received increases of approximately \$10 million combined.
- Colorado Springs Utilities Rate Reports did not include details of rate balancing by customer class.

The COSS as described in the background of this report was the tool used to methodically determine annual revenue required to recover from each customer class. Residential, Commercial General, and Industrial Time of Day were examples of different customer classes. Each customer class represented different usage patterns for utility service and costs are apportioned accordingly. The COSS Schedule 9 summarizes the total calculated revenue required for each customer class. However, since 2011, Colorado Springs Utilities has adjusted these calculated amounts when designing rates as shown on Schedule 10. We noted that for the 2011 COSS, rates were balanced between rates within the industrial



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class. Beginning with the 2012 COSS, rates were balanced between customer classes, resulting in increases for residential and certain commercial customers.

For example, the 2014 COSS calculated a revenue requirement increase for residential/small commercial (E1R/E1C) customers was \$129,791,680 on Schedule 9. However, the balancing adjustments increased the revenue requirements for this class by \$5,029,039 for a total revenue requirement of \$134,820,719 shown on Schedule 10, resulting in a higher rate. The calculated revenue requirement increase was .46%. After balancing adjustments, the increase in revenue requirement for the Residential General class was 3.9%. Rate Balancing by customer class for 2014 is provided in the chart on the Page 5 of this report.

Rate stability, economic development rates, and possible changes in customer usage patterns were noted as reasons why these changes could occur. However, the Office of the City Auditor has not noted movement to eliminate or reduce these significant adjustments. Continued trends where adjusted rates exceed cost of service could be considered subsidization between customer classes. Appendices B and C provide the 2012 and 2013 rate adjustments.

The following chart summarizes the adjusted amounts used in Schedule 10 and the calculated Schedule 9 amounts, as well as the net adjustments and percentage impacts for reference:

2014 Rate Balancing Breakout	Revenue Requirements from Schedule 10	Revenue Requirements from Schedule 9	Rate Balancing Difference	% Rate Balanced	Number of customers
Residential General (E1R/E1C)	\$134,820,719	\$129,791,680	\$5,029,039	3.9%	201,377
Residential Time-of-Day (ETR)	27,394	24,187	3,207	13.3%	21
Commercial General (E2C)	38,947,136	36,075,738	2,871,398	8.0%	13,508
Commercial TOD General (ETC)	328,854	480,831	(151,977)	-31.6%	79
Commercial TOD 1000 kWh/Day Min (ETL)	58,540,510	55,859,115	2,681,395	4.8%	1,186
Industrial TOD 500 kW Min (E8T)	28,493,653	33,188,679	(4,695,026)	-14.1%	181
Commercial Transmission Voltage – TOD (ETX)*	2,644,761	3,119,580	(474,819)	-15.2%	2
Industrial TOD 4000 kW Min (E8S)	2,474,849	2,496,983	(22,134)	-0.9%	2
Industrial Service (ELG)	8,338,058	13,368,515	(5,030,457)	-37.6%	6
Traffic Signals (E2T)	211,484	205,615	5,869	2.9%	646
Street Lighting (E7S)	3,718,793	3,718,793	-	-	238
Department of Defense (ECD)	12,040,319	12,256,814	(216,495)	-1.8%	4
Wheeling (ECW)	891,406	891,406	-	-	4
<b>Total Revenue Requirement</b>	<b>\$291,477,936</b>	<b>\$291,477,936</b>	<b>-</b>	<b>-</b>	

\* ETX represents two Colorado Springs Utilities accounts, Front Range Power and Otero Water.

See Appendix D for additional information on 2012-2014 trends.



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## AUDITOR'S RECOMMENDATION

Colorado Springs Utilities Rate Reports should disclose details of rate balancing dollars between rate classes when adjustments between classes are significant.

## COLORADO SPRINGS UTILITIES RESPONSE

In general Utilities agrees with this recommendation. Utilities agrees to include a table in future Electric Service Reports showing the details of the rate balancing dollars between rate classes

The 2014 Electric Service Report, Utilities discussed rate balancing and the drivers behind rate balancing. There were several factors contributing to the past few years' rate balancing, such as: (1) the apparent demand shifting between classes creating the need for a more robust load study, (2) the increase in system peak demands and (3) customers switching from one rate class to another. These factors lead to various shifts in revenue requirements between rate classes on a yearly basis if left unaddressed by rate design. Utilities recognizes the need to mitigate the potential rate volatility from utilizing the results of a more robust load study, and studying a potential change in generation demand allocation factors. Over time, these factors contributing to the cost fluctuation should stabilize which will mitigate the need for the rate balancing strategy. In the meantime, the rate balancing policy to be implemented in 2014 will guide Utilities toward a by-class revenue structure that more closely represents the cost of service. The policy will strive to collect revenues for each class that is within a range of 95% - 105% of the cost to serve the classes by 2016 (within 3 years).

It is important to note that although rate balancing has mitigated the impact of rate increases to certain industrial classes, the classes have experienced significant rate increases in recent years and again experience increases above the system average again in 2014. The table below summarizes the non-fuel rate changes for the major rate classes over the past four years:

2011 - 2014 Rate Increase Percentages				
Rate Class	2011	2012	2013	2014
Residential (E1R)	9.2%	15.1%	5.0%	4.4%
Commercial (E2C)	7.3%	22.6%	9.0%	0.0%
Industrial (ETL)	9.5%	5.0%	3.5%	5.5%
Industrial (E8T)	4.6%	22.3%	5.3%	10.8%
Industrial (ETX)	9.6%	5.3%	5.6%	14.5%
Industrial (E8S)	2.9%	22.5%	6.1%	10.8%
Industrial (ELG)	8.3%	19.0%	4.9%	4.8%
<b>System Average</b>	<b>7.5%</b>	<b>14.2%</b>	<b>5.0%</b>	<b>4.5%</b>

Note: 2012 increases include shift of capacity charge from fuel to non-ECA rates



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**OBSERVATION 2 – THREE ELECTRIC RATES DID NOT COMPLY WITH RATE REPORT APPENDIX GUIDANCE**

- Three rate classes were not in compliance with the rate balancing guidance of setting rates at 85%-115% of the calculated cost of service per the 2014 Electric Service Report Appendix.

The Office of the City Auditor’s 2013 Rate Report recommended that Colorado Springs Utilities develop specific guidance for balancing rates to customer classes. A balancing strategy which adjusted the calculated rate higher or lower from one rate class to another was part of rate development for the Electric Service for the past several years. In October 2013, Colorado Springs Utilities developed guidance prescribing rate balancing limitations, which was submitted as an Appendix to the 2014 Electric Service Report. The Appendix stated that these guidelines were in place to stabilize rates during the transition period while reviewing more appropriate demand allocation methodologies. See also Appendix A to this report for the complete guidelines presented in Colorado Springs Utilities Rate Report. Guidelines included:

- Revenues for each class could be 85%-115% of calculated cost per the COSS
- A requirement to move toward tightening up to 95-105% of the cost of service within three years.

The proposed revenues for three rate classes were not within the limits of 85% to 115% of calculated costs. The tolerances specified and the actual revenue requirements after balancing for these rates in the 2014 Electric COSS were:

**RATE CLASSES NOT WITHIN BALANCING GUIDANCE**

Rate Class	Calculated costs per cost of service study (Schedule 9)	Proposed rates per Cost of Service Study (Schedule 10)	Calculated Rate as a percentage of cost	Number of service agreements/customers
ETC <sup>1</sup>	\$480,831	\$328,854	68.4%	79
ETX <sup>2</sup>	\$3,119,580	\$2,644,761	84.8%	2
ELG <sup>3</sup>	\$13,368,518	\$8,338,058	62.4%	6

<sup>1</sup> Time of Day rate for customers with average daily usage between 33kWh and 1,000kWh.

<sup>2</sup> Colorado Springs Utilities Otero pumping station and Front Range Power were the two customers for this rate.

<sup>3</sup> Available to customers with maximum demand of 4,000 KW with an annual load factor of 75% or greater.

For the combined residential and small commercial classes, the 85% to 115% guideline could allow rates to recover as much as \$20 million more or less than indicated in the COSS, which was 7% of the total electric service revenue requirement. This range appeared excessive.



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### AUDITOR'S RECOMMENDATION

Colorado Springs Utilities should ensure all rates comply with the stated guidance. Colorado Springs Utilities may want to consider revisions to the 2014 Electric Report Appendix, which provides rate balancing guidance.

### COLORADO SPRINGS UTILITIES RESPONSE

At the recommendation of the OCA, Utilities developed a rate balancing strategy that ultimately strives to stabilize rates over time. In order to achieve this, four guiding principles were established which are listed in Appendix A of this Report. Increases should generally fall within the limitations set out in principals i and/or ii of the policy. Pricing policies must be broad enough to accommodate the complexities that exist in developing a complete portfolio of rates, at times situations can occur when specific rate classes fall outside one or more of the general guidelines. The cases where this existed in this filing are detailed below.

With a 2014 system average increase of 4.5%, guideline ii above limits the increase for each rate class to a maximum increase of 14.5%. The 14.5% limitation prevented some of the rate classes in this filing from meeting the 85%-115% range under guideline i. Specifically, the proposed rates for the ETX (Industrial – Transmission Voltage) rate class include the maximum allowable increase of 14.5%. At 84.8%, with reasonable rounding the ETX rate class also fell within the bottom range of guideline i. In an effort to maintain the proper relationships between on and off peak commodity rates, rate class ETC (a commercial time of day optional rate) was increased 13.93% which admittedly falls slightly (0.57% or about \$1,642) below the 14.5% threshold.

Finally, in addition to being the primary economic development rate schedule for Colorado Springs, ELG (Large Power and Light) rates are developed to reflect the benefits that significantly higher load factors provide the electric system, the most notable benefit being the deferment of short and long-term capital investments. The ELG proposed rates result in a 4.8% increase which is slightly higher than the system average. Although rates were not increased up to the guideline ii maximum, ELG rates must be developed in conjunction with the rates under the standard Industrial service (E8S) to ensure efficient utilization of the electric system is rewarded in the pricing signals.

The rate balancing guidelines adhere to the overarching industry practice for ratemaking which include not only consideration of cost of service but also maximum utilization of Utilities assets, stable rates, reasonable distribution of costs to customer classes, and promotion of economic development within the service territory. (Garfield 137).<sup>1</sup> It is Utilities' belief that this policy is a reasonable starting point to move each class' revenue to more closely reflect the cost of service while also avoiding rate shock for any particular class. Utilities' response is to maintain the current policy as stated in the Electric

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<sup>1</sup> Garfield, Paul and Wallace Lovejoy. Public Utility Economics. Englewood Cliffs: Prentice–Hall 1964. Print.



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Report but agrees to continue to assess the rate balancing guidelines and will provide revisions as appropriate.

### OPPORTUNITY FOR IMPROVEMENT– CONSIDER FORMALIZED REPRESENTATION AND RATE OPTIONS FOR SMALL RATEPAYER CLASSES

- Residential and small commercial customers did not have formalized representation similar to regulated utility customers.
- We noted a continued trend toward greater rate increases for residential and certain commercial classes than calculated in the cost of service. Limited rate options were available for these classes to incent customers to reduce peak load and potentially reduce costs and associated rates.

Per the 2014 COSS, there were approximately 201,000 electric residential and small commercial customers. This customer class comprised 92% of electric customers, and 46% of forecasted 2014 Electric Revenues. The Consumer Counsel Office represented regulated utility residential, small business, and agricultural consumers as a class in electric and natural gas rate proceedings before the Public Service Commission. This specific representation was not available to municipal utility customers. The Office of the City Auditor reviews cost of service studies on behalf of City Council and noted practices that affect residential and small commercial ratepayers, but does not represent a specific customer class.

Colorado Springs Utilities utilized multiple channels to communicate with residential and small commercial customers about rate changes including social media, traditional news reports, bill stuffers included in mailings, presentations to groups such as homeowner associations, and e-newsletters. Additionally, small ratepayers may contact elected Council Members about questions or concerns on rate proceedings, or attend hearings.

Colorado Springs Utilities indicated they believe residential and small commercial ratepayers' share of peak electric load is increasing, due in part to increased air conditioning use. Small ratepayer classes would continue to see increasing rates, and could be impacted proportionately more than other classes if these load patterns are confirmed. As the largest customer class, residential and small commercial customers have the greatest potential for reducing demand in the future.

Colorado Springs Utilities offered rebates and renewable energy programs to assist customers with conservation efforts. However, limited rate options were available to small customers to provide incentives to reduce load at peak times. Colorado Springs Utilities offers one residential time of day rate option (ETR); however, per Schedule 10 of the 2014 COSS, only 21 customers participated in this rate.



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### AUDITOR'S RECOMMENDATION

Colorado Springs Utilities could consider:

- Formalizing input and representation from small ratepayer classes, such as through a consumer advisory board. Alternatively, the Utilities Policy Advisory Committee could be asked to study and report to City Council best practices for small ratepayer representation in the municipal utility environment.
- Review of the rate options available to residential and small commercial customers, as well as ways to increase participation in these rate options to reduce peak load and associated costs.

Please contact me if you have any questions regarding this report. I plan to attend the rate hearing on November 12.

Respectfully,

A handwritten signature in black ink, appearing to read "Denny L. Nester".

Denny L. Nester, MBA CPA CIA CFE CGFM CGAP  
City Auditor

cc: Jerry Forte, Chief Executive Officer  
Bill Cherrier, Chief Financial Planning and Financial Officer  
Dede Jones, General Manager, Financial Services  
Henry Henderson, Interim Manager, Financial Planning and Pricing  
Steve Berman, Manager, Financial Forecasting, Reporting and Budgeting  
Dave Maier, Manager, Enterprise Risk Management



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### APPENDIX A

Colorado Springs Utilities rate balancing follows industry practice and adheres to the objectives of (1) recovery of adequate revenues as identified in the COSS, (2) maximum utilization of Utilities assets, (3) stable rates, (4) reasonable distribution of costs to customer classes, and (5) promotion of economic development within the service territory. (Garfield 137).<sup>2</sup>

In order to achieve these five principles, Utilities is employing the following rate balancing guidelines to stabilize rates during the transition period while reviewing more appropriate demand allocation methodologies:

- i. Optimize revenue to cost of service ratios of each class to within the range of 85%-115%.
- ii. Limit class increase to ten percentage points over the system average.
- iii. Any under-recovered revenues distributed among remaining rate classes while maintaining the first two guidelines.
- iv. Move toward tightening up the revenue to cost of service ratios of each class to within the range of 95%-105% within 3 years.

### APPENDIX B

2013 Rate Balancing Breakout Rate Class Categorization	Revenue Requirements from Schedule 10	Revenue Requirements from Schedule 9	Rate Balancing Difference	% Rate Balanced
Residential General (E1R/E1C)	\$129,063,307	\$121,676,306	\$7,387,001	6.1%
Residential Time-of-Day (ETR)	24,816	22,278	2,538	11.4%
Commercial General (E2C)	36,235,761	36,552,780	(317,019)	-0.9%
Commercial TOD General (ETC)	35,776	36,987	(1,211)	-3.3%
Commercial TOD 1000 kWh/Day Min (ETL)	51,731,938	48,712,067	3,019,871	6.2%
Commercial Transmission Voltage - TOD (ETX)*	2,276,912	2,666,127	(389,215)	-14.6%
Industrial TOD 500 kW Min (E8T)	25,538,946	31,216,675	(5,677,729)	-18.2%
Industrial TOD 4000 kW Min (E8S)	2,681,283	2,736,647	(55,364)	-2.0%
Industrial Service (ELG)	8,471,824	12,471,493	(3,999,669)	-32.1%
Traffic Signals (E2T)	212,017	211,976	41	-
Street Lights (E7S)	1,972,767	1,972,767	-	-
Contract Service - DOD (ECD)	12,113,188	12,082,192	30,995	0.3%
Contract Service - Wheeling (ECW)	831,658	831,658	-	-
<b>Total Revenue Requirement</b>	<b>\$271,190,191</b>	<b>\$271,189,952</b>	<b>\$240</b>	

\* ETX represents two Colorado Springs Utilities accounts, Front Range Power and Otero Water.

<sup>2</sup> Garfield, Paul and Wallace Lovejoy. Public Utility Economics. Englewood Cliffs: Prentice-Hall 1964. Print.



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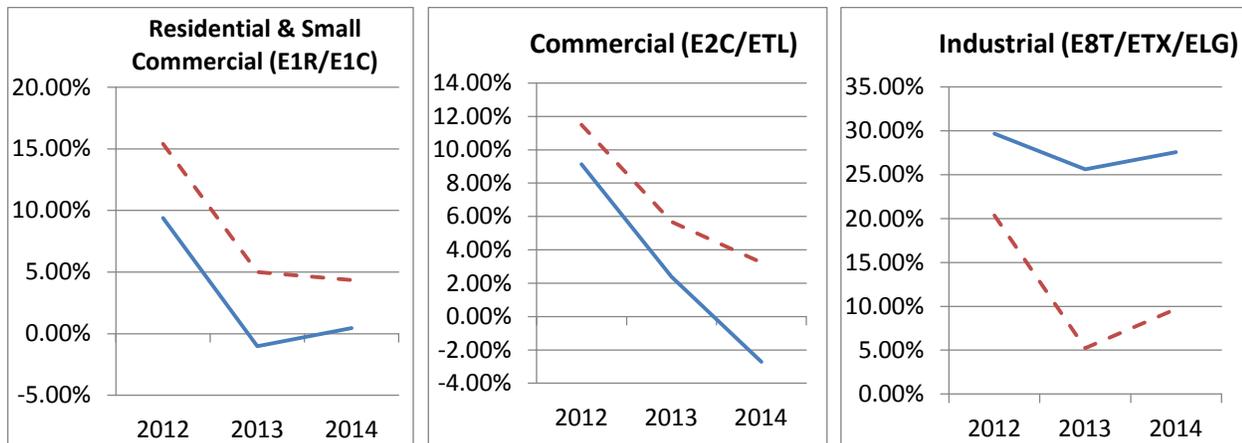
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### APPENDIX C

2012 Rate Balancing Breakout Rate Class Categorization	Revenue Requirements from Schedule 10	Revenue Requirements from Schedule 9	Rate Balancing Difference	% Rate Balanced
Residential General (E1R)	\$123,761,934	\$118,340,181	\$5,421,753	4.6%
Residential Time-of-Day (ETR)	19,443	19,443	-	-
Commercial General (E2C)	31,758,019	32,758,021	(1,000,002)	-3.1%
Commercial TOD General (ETC)	31,116	19,305	11,811	61.2%
Commercial TOD 1000 kWh/Day Min (ETL)	46,665,076	44,651,971	2,013,105	4.5%
Commercial Transmission Voltage - TOD (ETX)*	2,280,033	2,280,033	-	-
Industrial TOD 500 kW Min (E8T)	27,377,035	31,141,206	(3,764,171)	-12.1%
Industrial TOD 4000 kW Min (E8S)	3,623,898	3,063,525	560,373	18.3%
Industrial Service (ELG)	8,909,830	12,152,698	(3,242,868)	-26.7%
Traffic Signals (E2T)	208,366	208,366	-	-
Street Lights (E7S)	3,408,374	3,408,374	-	-
Contract Service - DOD (ECD)	12,152,675	12,152,675	-	-
Contract Service - Wheeling (ECW)	1,055,644	1,055,644	-	-
<b>Total Revenue Requirement</b>	<b>\$261,251,443</b>	<b>\$261,251,442</b>	<b>-</b>	

\* ETX represents two Colorado Springs Utilities accounts, Front Range Power and Otero Water.

### APPENDIX D



Source: Auditor calculated by using S9 and S10 from 2012, 2013 and 2014 Cost of Service Study.

— Calculated Rate Percent Increase or (Decrease)     
 - - - Balanced Rate Percent Increase or (Decrease)