



OFFICE OF THE CITY AUDITOR
COLORADO SPRINGS, COLORADO

13-13
Proposed
Community Solar
Garden Program
Expansion Tariff

August 2013



OFFICE OF THE CITY AUDITOR

COLORADO SPRINGS, COLORADO

13-13 Community Solar Garden Expansion Tariff Audit

August 2013

Purpose

The purpose of our review was to provide City Council with information about estimated costs and potential customer impacts related to the proposed solar garden expansion tariff. We verified these estimates. We also followed up on the recommendations from our Community Solar Garden Audit report on the pilot program.

Highlights

We concluded that:

- The \$4.8 million estimated net present value program cost presented to Utilities Board may be understated based on recent rate increases.
- The customer credit portion of the program was accurately calculated based on the 2013 cost of service study.
- We concluded that overall, audit recommendations and policy considerations from our previous reports had been addressed.

The City Auditor's Office performed a review of the Community Solar Garden pilot program and issued a report in February 2013. In April 2013, City Council approved a solar garden expansion tariff. That tariff was subsequently rescinded. On May 22, 2013, the Utilities Board directed Colorado Springs Utilities to revise the program. Key changes from the rescinded tariff included developer selection by a request for proposal (RFP) process and a change to a cost of service based rate for customer credits.

Colorado Springs Utilities estimated the Net Present Value of the proposed program to be \$4.8 million, assuming an annual electric utility bill increase of 3%; we determined that 3% may not reflect recent rate increases and therefore, program costs may be understated. Electric bill rate increases

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Recommendations

1. Future program cost calculations should utilize historical data and disclose the sensitivity of cost to key assumptions.

Management Response

Colorado Springs Utilities management generally agreed with our observation. Please see their detail response in the following report.

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(Highlights continued from page 1)

from 2008 to 2013 on average were as follows.

Typical Bill	Residential	Commercial	Industrial
Compound Annual Growth Rate from 2008 to 2013	6.58%	4.77%	3.26%

Source: Colorado Springs Utilities – Electric Cost of Service Studies for 2008 and 2013, including adjustment to ECA for 2013 figures

Based on the proposed expansion tariff, draft program documents and information provided, the recommendations from our pilot program audit had been implemented or were not applicable due to program changes.

The Solar Garden Program Expansion tariff was based on policy direction from City Council to promote solar energy within the community and, therefore, the program costs were not the basis for this tariff.



Office of the City Auditor

Public Report

Date: August 9, 2013

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

Re: 13-13 Proposed Community Solar Garden Program Expansion Tariff

We conducted a review of the proposed Solar Garden Expansion Tariff submitted to City Council under City Code section 12.1.107C, which was supported by a previously approved cost of service study. The purpose of our review was to provide City Council with information about estimated costs and potential customer impacts related to the proposed solar garden expansion tariff. We verified these estimates. We also followed up on the recommendations from our Community Solar Garden Audit report on the pilot program.

We concluded that:

- The estimated net present value of the program cost of \$4.8 million presented to Utilities Board on June 19 may have been understated based on recent rate increases,
- The customer credit portion of the program was accurately calculated based on the 2013 cost of service study, and
- The audit recommendations and policy considerations from our previous reports had been addressed.

One observation is listed in the attached report. As always, feel free to contact me if you have any questions.

Respectfully,

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

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

Jerry Forte, Chief Executive Officer, Colorado Springs Utilities
Bill Cherrier, Chief Planning and Financial Officer, Colorado Springs Utilities
Bruce McCormick, Chief Energy Services Officer, Colorado Springs Utilities
John Romero, General Manager, Energy Acquisition, Engineering, and Planning
Henry Henderson, Interim Manager, Financial Planning and Pricing, Colorado Springs Utilities
Dave Maier, Manager, Enterprise Risk Management, Colorado Springs Utilities
Patricia Van Meter, Lead Analyst, Enterprise Risk Management, Colorado Springs Utilities
Chris Melcher, City Attorney



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Proposed Community Solar Garden Expansion Tariff

REPORT DETAILS

PURPOSE AND SCOPE

We conducted a review of the proposed Solar Garden Expansion Tariff submitted to City Council under City Code section 12.1.107C, which was supported by a previously approved cost of service study. The purpose of our review was to provide City Council with information about estimated costs and potential customer impacts related to the proposed solar garden expansion tariff. We verified these estimates. We followed up on the recommendations from our Community Solar Garden Audit report on the pilot program.

BACKGROUND AND AUDIT RESULTS

The Community Solar Garden program was designed to allow customers who did not own their home or did not wish to make a significant investment in rooftop panels to participate in the solar energy incentive program. Under the tariff, customers received a monthly bill credit, which was calculated based on the customer's portion of the energy generated by the solar garden during the previous month (customer credit.)

On September 27, 2011, City Council approved a Community Solar Garden Bill Credit (Pilot Program) tariff for 2 Megawatts (MW) total capacity. The Office of the City Auditor (OCA) performed a compliance review of the tariff and program requirements for the pilot program and issued a report in February 2013. The report provided recommendations for improvements and considerations for future gardens.

On April 9, 2013, City Council approved a tariff (Expansion Program) which expanded the solar garden program for a total of 10 MW over three years with a net present value estimated by Colorado Springs Utilities of \$21,999,481. The program included a first come, first served developer selection process with a requirement of 80% subscription, a blended rate for customer credit, and a Performance Based Incentive (PBI) set by the tariff for each of the three years. The PBI was to be paid based on generation during the previous month rather than the one-time incentive payment structure in the Pilot Program. The OCA performed a review of the tariff, which included three policy considerations and one observation. On April 23, 2013, that tariff was rescinded by City Council.

On May 22, 2013, the Utilities Board directed Colorado Springs Utilities staff to revise the program and related tariff. Significant differences between the proposed program and the previously rescinded tariff were:

- This Expansion Program is for up to 2 MW of capacity, instead of 10 MW over three years.
- The PBI credit will be based on a rate proposed by the developer(s) selected through a Request for Proposal (RFP) process. The PBI credit will be paid for 20 years. In the previous program, the PBI was specified as \$.0807 for the 2013 program. It was reduced for 2014 and 2015 programs.



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- The customer credit portion of the incentive is based on the 2013 electric cost of service study and reflects a different cost of service for each customer class. The previous program tariff used the same blended rate for all customer classes.

Colorado Springs Utilities provided City Council/Utilities Board with an estimate of the subsidy for the program over the next 20 years. The City Auditor's Office performed a review of this estimate. More details can be found at Observation 1.

The Office of the City Auditor's report on the Solar Garden Pilot program issued in February 2013 provided seven recommendations for consideration in future solar garden programs. The proposed tariff included information about an RFP process to be used to award the 2 MW of expansion capacity to a developer or developers. The 'rulemaking' related to details of the program was in process during our review. While these rulemaking documents were still subject to change, we noted that all audit recommendations had been implemented or were no longer applicable due to program changes.

CONCLUSION

We concluded that:

- The \$4.8 million estimated net present value program cost presented to Utilities Board may be understated based on recent rate increases.
- The customer credit portion of the program was accurately calculated based on the 2013 cost of service study.
- The audit recommendations and policy considerations from our previous reports had been addressed.

The following report includes one observation and recommendation to improve future programs.



Office of the City Auditor

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OBSERVATIONS, RECOMMENDATIONS AND RESPONSES

OBSERVATION 1 – ESTIMATED PROGRAM COST DEPENDS ON FUTURE RATE INCREASES AND MAY BE UNDERSTATED

Colorado Springs Utilities estimated the net present value (NPV) of the program cost to be approximately \$4.8 million, assuming an annual electric utility bill increase of 3%; we determined that 3% may not reflect recent rate trends. Solar garden program expansion is based on policy direction from City Council to promote solar energy within the community. The program cost or subsidy could result in increased rates, including rates for customers who do not participate in the program.

Colorado Springs Utilities staff provided an analysis of program costs and identified the net present value of the program cost to be \$4,846,975, which could also be called the amount of estimated subsidy to the program. We analyzed this information to determine if the key assumptions appeared reasonable. It appeared that the initial estimated program cost may be understated.

Key assumptions included:

- 4% discount rate to compute net present value
- 3% increase for non-fuel rates

The 4% discount rate is comparable to current borrowing costs and assumes that borrowing costs will not increase significantly over the 20 year life of the program. This assumption appears reasonable.

We compared the 3% rate increase assumption to rate increases related to electric service for Colorado Springs Utilities customers over the last five years. We noted that electric rate increases over the last five years have been greater than 3% as follows:

Typical Bill	Residential	Commercial	Industrial
Compound Annual Growth Rate from 2008 to 2013	6.58%	4.77%	3.26%

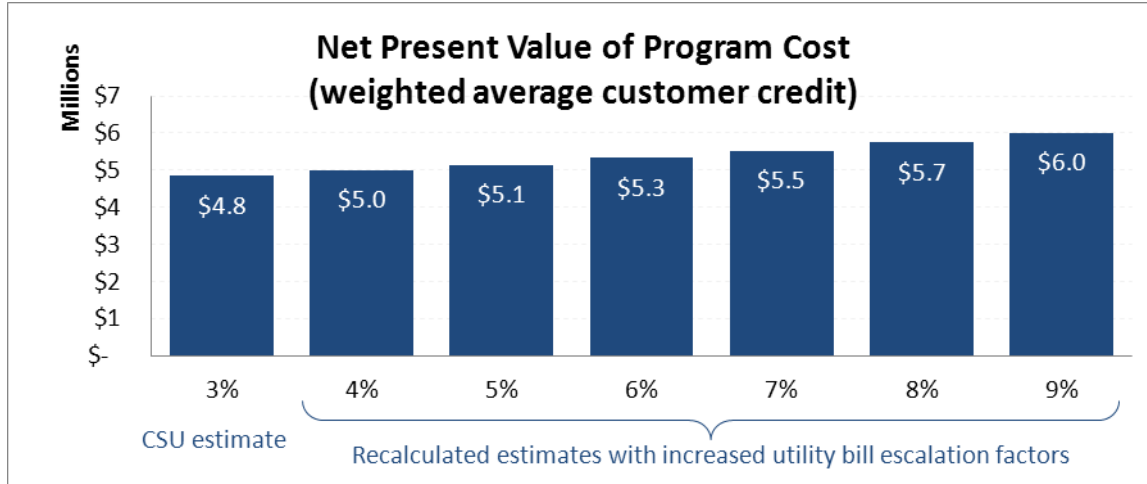
Source: Colorado Springs Utilities – Electric Cost of Service Studies for 2008 and 2013, including adjustment to ECA for 2013 figures



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Using a range of 3-9% rate increases, the net present value of the estimated subsidy would be as follows:



Source: Colorado Springs Utilities and OCA analysis

Colorado Springs Utilities provided an estimate of the impact of the program cost on customer classes based on a 3% annual rate increase. The OCA computed estimates based on 6% and 9% increases, as follows:

Estimated average annual increase in the typical bill over the life of the program due to solar garden project	Utility bill assumed rate increases		
	3%	6%	9%
Residential	\$ 0.60	\$ 0.67	\$ 0.77
Commercial	\$ 6.00	\$ 6.69	\$ 7.68
Industrial	\$ 399.67	\$ 445.75	\$ 512.17
Large Industrial	\$ 2,188.22	\$ 2,440.49	\$ 2,804.14
	<i>CSU estimate</i>	<i>Recalculated estimates with increased utility bill escalation</i>	

Source: Colorado Springs Utilities and Office of the City Auditor analysis

We noted Colorado Springs Utilities program cost calculation also included an assumption that rate classes would participate at a rate equivalent to their percentage contribution to total electric revenues (weighted average customer credit). We found this assumption to be reasonable, and determined that a change in customer participation mix would not have a significant impact on program costs. The program cost calculation also included an assumed PBI rate, which will be determined as a result of the upcoming RFP process. The actual PBI rate may differ from the estimate used, but we found the PBI rate assumption to be reasonable.



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AUDITOR'S RECOMMENDATION

In future program cost calculations, Colorado Springs Utilities should:

- Utilize historical data to estimate future costs
- Disclose the sensitivity of cost to key assumptions such as future rate increases.

COLORADO SPRINGS UTILITIES RESPONSE

Colorado Springs Utilities agrees that the range of program costs and bill impacts is dependent on future electric rate increases. For impact evaluation purposes, we believe the range to most likely be in the 3 to 6 percent areas. While use of historical increase data may be helpful, future conditions and anticipated system requirements are also relevant in the challenging process of trying to predict what increases over a twenty year period might be.

CITY COUNCIL'S OFFICE OF THE CITY AUDITOR

COLORADO SPRINGS, COLORADO

About our Office

The mission of the Office of the City Auditor is to provide City Council with an independent, objective and comprehensive auditing program for operations of the City. Our auditing program includes:

- Evaluating the adequacy of financial controls, records and operations
- Evaluating the effectiveness and efficiency of organizational operations
- Providing Council, management and employees objective analysis, appraisals, and recommendations for improving systems and activities

The Office of the City Auditor is responsible for auditing the systems used by the City of Colorado Springs and its enterprises, including Colorado Springs Utilities. We perform a variety of audits for these entities, including financial audits, performance audits, contract audits, construction audits, and information system audits. We also perform follow-up on a periodic basis to monitor and ensure management actions have been effectively implemented.

Authorization and Organizational Placement

Our audits are conducted under the authority of Chapter 1, Article 2, Part 7 of the Colorado Springs City Code, and more specifically parts 703, 705 and 706 of the Code. The Office of the City Auditor is structured in a manner to provide organizational independence from the entities it audits. This independence is accomplished by the City Auditor being appointed by and reporting directly to the City Council.

Audit Standards

The audit was conducted in a manner that meets or exceeds the International Standards for the Professional Practice of Internal Auditing, a part of the Professional Practices Framework promulgated by the Institute of Internal Auditors, with the exception of the requirements under standards 1312 and 1321 to obtain an external quality assurance review once every five years. We do not believe this non-compliance impacted the quality of our audit.

The audit included interviews with appropriate personnel and such tests of records and other supporting documentation as deemed necessary in the circumstances. We reviewed the internal control structure and compliance tests. Sufficient competent evidential matter was gathered to support our conclusions.