

Exhibit No.:
Issue: *Costs associated with
proposed solar project*
Witness: *Kofi A. Boateng*
Sponsoring Party: *MoPSC Staff*
Type of Exhibit: *Rebuttal Testimony*
Case No.: *EA-2014-0136*
Date Testimony Prepared: *March 17, 2014*

MISSOURI PUBLIC SERVICE COMMISSION

REGULATORY REVIEW DIVISION

UTILITY SERVICES - AUDITING

REBUTTAL TESTIMONY

OF

KOFI A. BOATENG

UNION ELECTRIC COMPANY

D/B/A

AMEREN MISSOURI

CASE NO. EA-2014-0136

Jefferson City, Missouri
March 2014

1 A. It is my responsibility to assist with audits and examinations of the books
2 and records of utility companies operating under the Commission's jurisdiction within the
3 state of Missouri.

4 Q. Have you previously filed testimony before this Commission?

5 A. Yes. I have been assigned to a number of formal rate cases and small
6 informal rate cases since my employment began with the Commission. A listing of the cases
7 in which I have previously filed either testimony or recommendations before this
8 Commission is provided in Schedule 1, which is attached to this rebuttal testimony.

9 Q. With reference to Case No. EA-2014-0136, have you participated in the
10 review of Union Electric Company d/b/a Ameren Missouri's ("Ameren Missouri" or
11 "the Company") application for permission, approval, and a certificate of public convenience
12 and necessity ("CCN") to construct, install, own, operate, maintain and otherwise control and
13 manage a solar generation facility in O'Fallon, Missouri?

14 A. Yes, in conjunction with other members of the Commission Staff ("Staff").

15 Q. Please summarize your rebuttal testimony in this proceeding.

16 A. In this testimony, I discuss Ameren Missouri's CCN application for the
17 construction of the proposed photovoltaic ("PV") solar generation facility in O'Fallon,
18 Missouri. I also explain certain aspects of Staff's recommendation to the Commission
19 regarding the CCN application, related to Ameren Missouri's financial ability to provide the
20 service and whether the proposed project is economically feasible. Staff witness Daniel I.
21 Beck will address in his rebuttal testimony all engineering and operational aspects of the
22 Company's CCN application in this proceeding.

23 Q. What is the purpose of this CCN application by Ameren Missouri?

1 A. Ameren Missouri requests the Commission's authority to construct, own,
2 operate and maintain a PV solar generation facility in O'Fallon, Missouri. Photovoltaic solar
3 technology utilizes PV cells to convert sunlight directly into electricity. PV cells are made
4 of semiconductors and can provide large amounts of power for the electric grid.
5 The Company's proposed solar project involves the construction of a 5.7MW- direct current
6 ("DC") solar facility that will produce approximately 7,700 megawatt-hours ("MWh") of
7 solar energy per year; on average, enough to power about 650 average-size homes. Ameren
8 Missouri states that construction of this energy facility exemplifies its commitment and long
9 history of incorporating renewable energy resources into its generation portfolio.
10 Additionally, the Company anticipates using this renewable power generation to comply with
11 the provisions of Missouri's Renewable Energy Standard ("RES"); in particular, the portion
12 of the portfolio requirement that requires at least two percent of the Company's renewable
13 energy resources to come from solar resources.

14 Q. What is the Missouri Renewable Energy Standard?

15 A. In November 2008, Missouri voters enacted Proposition C, a public ballot
16 initiative that repealed the state's existing voluntary renewable energy and energy efficiency
17 objective, and created expanded, mandatory renewable electricity standards for the major
18 investor-owned utilities in the state. This enactment was later codified as Section 393.1030
19 RSMo. The policy of the RES is discussed more in the testimony of staff witness Beck.

20 Q. What is Staff's recommendation to the Commission regarding this CCN
21 application by Ameren Missouri?

1 A. Staff recommends that the Commission conditionally approve Ameren
2 Missouri's CCN application for the proposed photovoltaic solar generation facility in
3 O'Fallon, Missouri.

4 Q. How did Staff arrive at its recommendation?

5 A. Staff has analyzed Ameren Missouri's CCN application and its ability to meet
6 the "Tartan Energy Criteria". The Commission established five criteria in the Tartan Energy
7 Company case to include in the consideration when making a determination in application
8 cases.¹ The Commission has utilized these criteria in several rate cases in determining
9 whether a utility's proposal meets the standard of being "necessary or convenient for the
10 public service"²:

- 11 1) There must be a need for the service;
- 12 2) The applicant must be qualified to provide the proposed service;
- 13 3) The applicant must have the financial ability to provide the service;
- 14 4) The applicant's proposal must be economically feasible; and
- 15 5) The service must promote public interest

16 Q. Which of these criteria do you address in this testimony?

17 A. As indicated earlier, I address items #3 and #4, in my rebuttal testimony.
18 Staff witness Beck will address items #1, #2, and #5.

19 Q. Does Staff believe that the Company has the financial ability to provide the
20 proposed service?

21 A. Yes. Staff believes that Ameren Missouri has the financial ability to
22 construct, operate manage and control the proposed 5.7 MC-DC photovoltaic solar

¹ *In the Matter of the Application of Tartan Energy Company, LLC, d/b/a Southern Missouri Gas Company*,
3 Mo P.S.C. 3d 173, 177 (1994).

² Section 393.170 RSMo. 2000.

1 generation facility. Ameren Missouri has indicated that it will adequately finance the solar
2 project with a combination of existing funds and indebtedness. In response to Staff Data
3 Request No. 19, the Company indicated that it will finance the solar project with its
4 \$500 million commercial paper program, which is backed by its access to its \$1 billion
5 Missouri revolving credit facility. This credit facility was recently approved by the
6 Commission in Case No. EF-2014-0094. In addition, Staff's review of the cost estimates for
7 the proposed solar energy project are relatively small in comparison to some other major
8 construction projects that Ameren Missouri has successfully completed in the past few years.

9 Q. How has Ameren Missouri complied with the renewable energy standard
10 since its inception?

11 A. During the early years of RES compliance, Ameren Missouri met the
12 requirements through the purchase of solar renewable energy credits (SRECs) from third
13 party brokers, which represented generation facilities predominately located in California and
14 Florida. In 2010, the Company completed the installation of a solar array at its General
15 Office Building to generate additional solar energy for inclusion in its renewable resource
16 portfolio, and to meet the solar renewable energy standard. In 2011, Ameren Missouri began
17 purchasing SRECs from its customers who installed solar facilities on their homes and/or
18 businesses and who accepted the standard offer contract to sell those SREC.

19 Q. What are some of the factors that drove the Company to construct a utility
20 scale solar generation facility?

21 A. Based upon Staff's review of the Application as well as responses to data
22 requests, Ameren Missouri is asserting that the Company is building on its prior success and
23 knowledge gained from the small scale solar facility at its office building, and determined to

1 utilize that knowledge to construct a utility scale solar generation facility. Staff also
2 understands that the Company is driven by the anticipated increase in solar panel prices due
3 to ongoing international trade disputes between the U.S. and China and the European Union
4 and China that have resulted in the strict tariff rates being placed on panels manufactured in
5 China. Panels manufactured in China represent the bulk of the global supply. The
6 construction of the solar facility also serves to diversify the Company's solar portfolio in an
7 effort to meet the solar and renewable statutes. Additionally, the current Federal Investment
8 Tax Credit (ITC) of 30% associated with solar development will be reduced to 10% during
9 2016. As such, Ameren Missouri determined that now is a favorable time to construct a
10 utility scale solar energy facility.

11 Q. How much does Ameren Missouri anticipate receiving as a qualified
12 ITC amount?

13 A. Ameren Missouri anticipates qualifying for about 30% ITC, once the solar
14 facility becomes operational. The Company responded to Staff in Staff Data Request No. 14
15 that the anticipated ITC will be in the range of \$4.2 to \$4.9 million.

16 Q. Does Staff believe that the photovoltaic solar energy facility is
17 economically feasible?

18 A. Yes. Staff believes that the project is economically feasible. Ameren
19 Missouri has provided analysis and cost studies to Staff that indicate the Company has
20 sufficiently evaluated the necessary capital costs and ongoing operating costs associated with
21 the proposed project. Staff believes Ameren Missouri has the wherewithal to own, operate,
22 control and maintain the proposed solar facility throughout the facility's expected life.

1 In addition, Staff will have the opportunity to review and evaluate all of these costs in a
2 future Ameren Missouri rate case before any such costs are included in customer rates.

3 Q. How will this capital investment be recovered from the rate payers in the
4 future?

5 A. The project cost will be recorded as plant in service. Recovery of the cost
6 of this plant in service addition will be addressed in the next general rate case as part of
7 Ameren Missouri's overall request to recover depreciation expense in customer rates. For
8 the interim time period until the next rate case, the Company has proposed the following
9 depreciation rates for the computation of depreciation expense associated with this plant
10 addition in response to Staff Data Request Nos. 15, 16 and 17:

Account	Description	Depreciation%	Net Salvage %
340	Land and Land Rights	0.00	0
341	Structures and Improvements	2.31	(2)
344	Solar Generation	5.00	0
345	Accessory Electric Equipment	2.59	(2)
346	Miscellaneous Other Production Plant	3.81	(2)

17 Q. Does Staff agree with the Company's proposed plant account classifications
18 and depreciation rates for use during this interim period?

19 A. Yes, Staff agrees with the Company's proposed plant account classifications
20 and depreciation rates for use during this interim period, and will review the records during
21 the next rate case. When reviewed in a future rate case, Staff may propose alternate account
22 record keeping and/or depreciation rates.

1 Q. What conditions are you recommending the Commission place on the
2 approval of Ameren Missouri's application?

3 A. As described further in Staff witness Beck's testimony, Staff recommends the
4 Commission condition the approval of the application on Ameren Missouri's receipt of all
5 required government approvals and permits for the solar facility. Staff also recommends the
6 Commission's Order state that in approving the CCN the Commission is not making any
7 ratemaking determination in this proceeding on the application. Finally, Staff recommends
8 the Commission condition the approval of the CCN on Ameren Missouri's use of the
9 depreciation rates and plant account classifications as provided herein.

10 Q. Does this conclude your rebuttal testimony?

11 A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Union)
Electric Company d/b/a Ameren Missouri for) Case No. EA-2014-0136
Permission and Approval and a Certificate of)
Public Convenience and Necessity Authorizing)
It to Construct, Install, Own, Operate, Maintain)
and Otherwise Control and Manage Solar)
Generation Facilities in O'Fallon, Missouri)

AFFIDAVIT OF KOFI AGYENIM BOATENG, CPA, CIA

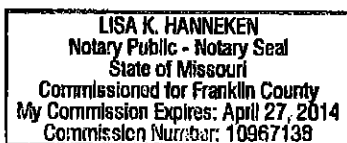
STATE OF MISSOURI)
)
COUNTY OF ST LOUIS) ss.

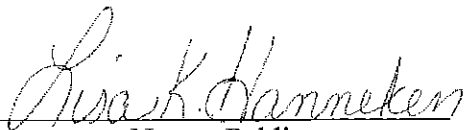
Kofi Agyenim Boateng, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Rebuttal Testimony in question and answer form, consisting of 8 pages to be presented in the above case; that the answers in the foregoing Rebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.



KOFI AGYENIM BOATENG

Subscribed and sworn to before me this 17th day of March, 2014.





Notary Public

KOFI A. BOATENG

EDUCATIONAL BACKGROUND AND EXPERIENCE

In May 2004, I received a Master's of Business Administration (MBA) degree with emphasis in Accounting from Lincoln University in Jefferson City, Missouri. I graduated from Ho Polytechnic, Ghana in September 2000, and received a Higher National Diploma (HND) in Accountancy. I commenced employment with the Missouri Public Service Commission Staff (Staff) in my current position of Utility Regulatory Auditor in September of 2004. Prior to employment with the Commission, I worked with the Missouri Department of Revenue, Scholastic Group, Inc., ACS-BPS (Ghana) Limited, and the Controller & Accountant General's Department, Ghana.

I am a Certified Public Accountant (CPA) licensed in the state of Missouri. I also hold Certified Internal Auditor (CIA), and Certified Fraud Examiner (CFE) designations. I am a member of the American Institute of Certified Public Accountants (AICPA), Missouri Society of Certified Public Accountants (MSCPA), The Institute of Internal Auditors (The IIA), and the Association of Certified Fraud Examiners (ACFE).

I have actively participated and assisted with audits and examinations of the books and records of utility companies operating under the Commission's jurisdiction within the state of Missouri in both formal and informal rate cases. I have also filed and given testimony before the Missouri Public Service Commission.

CASE PROCEEDING PARTICIPATION**KOFI A. BOATENG**

PARTICIPATION		
COMPANY	CASE NO.	FILING TYPE/ISSUES
Peaceful Valley Service Company	SR-2014-0153 WR-2014-0154	Issues: Water Availability Charge; Tap on/Connection Fees; Electricity Expense; Outside Services; System Repairs & Maintenance; Property & Liability Insurance; Property Taxes; Income Taxes. Submitted Staff Memo. Still Pending
Lincoln County Sewer & Water, LLC	SR-2013-0321 WR-2013-0322	Staff Cost of Service Report (Surrebuttal & Evidentiary Hearing) Issues: Chemical Expense; Electricity Expense; Outside Services; Testing Expense; Telephone & Internet Expense; Office Building Expense
Laclede Gas Company/Missouri Gas Energy (MGE)	GM-2013-0254	Acquisition Case (Stipulated)
Laclede Gas Company	GR-2013-0171	Issues: Prepaid Pension Asset; OPEB; Incentive Compensation, Pension & OPEB Expense; SERP. (No Staff Cost of Service Report or Testimony filed)
Cedar Green Land Acquisition, LLC	WA-2013-0117	Certificate of Convenience and Necessity (CCN) application – Staff Memo. Stipulation & Agreement.
Union Electric Company d/b/a Ameren Missouri	ER-2012-0166	Staff Cost of Service Report (Direct, Rebuttal, & Surrebuttal): Maryland Height Energy Ctr. Plant; Entergy Case – Legal Fees & Refunds; Leases; Injuries & Damages; Insurance Expense; SO ₂ Tracker Adj.; Corporate Allocation; Storm Costs-Annualization & Amortization; Cash Working Capital (CWC)
Atmos Energy Corporation/Liberty Energy (Midstates) Corporation	GM-2012-0037	Acquisition Case
Union Electric Company d/b/a Ameren Missouri	ER-2011-0028	Staff Cost of Service Report (Direct & Rebuttal): Electric Revenue (Customer Growth), MISO Day Revenues & Expenses; Gross Receipt Taxes (GRT); Pension & OPEB Trackers & Expenses; Uncollectible Accounts, FAC Elimination; and Unbilled Revenues (All Stipulated)

CASE PROCEEDING PARTICIPATION**KOFI A. BOATENG**

PARTICIPATION		
COMPANY	CASE NO.	FILING TYPE/ISSUES
Union Electric Company d/b/a AmerenUE	GR-2010-0363	Direct Report: Gas Revenues (growth), Other Revenues, Pension & OPEB Expense, Incentive Compensation, Gross Receipt Taxes, Unbilled Revenues
KMB Utility Corporation	SR-2010-0345 WR-2010-0346	Staff Memorandum/ Expenses
Union Electric Company d/b/a AmerenUE	GO-2010-0257	Staff Recommendation: Infrastructure System Replacement Surcharge (ISRS) Application
Union Electric Company d/b/a AmerenUE	ER-2010-0036	Direct Report: Electric Revenues (growth), Other Revenues – MISO related Revenues and Expenses, Bad Debt, Pension & OPEB, Incentive Compensation
Kansas City Power & Light Company	ER-2009-0089	Direct Report: Electric Revenues (growth), Other Revenues, Bad Debt Expense, Forfeited Discount, Gross Receipt Taxes, Electronic Card Acceptance Program, Fly Ash Sales
KCP&L Greater Missouri Operation Company – MPS & L&P	ER-2009-0090	Direct Report: Electric Revenues (growth), Other Revenues, Bad Debt Expense, Forfeited Discount, Gross Receipt Taxes, Electronic Card Acceptance Program, Inter-Company Off-System Sales Revenue and Off-System Fuel & Purchased Power
Missouri-American Water Company	WR-2008-0311	Testimony: Revenues, Gross Receipt Taxes, Bad Debt Expense, Chemical Expense, Uncountable-For-Water
Gladlo Water & Sewer Company	WR-2009-0418 SR-2009-0419	Staff Memorandum
Missouri Gas Utility	GR-2008-0060	Testimony: Materials & Supplies, Gas Inventory, Prepayments, Customer Deposits, Payroll, Advertising, Property Taxes, Rate Case Expense.
Roy-L Utilities, Inc.	QS-2008-0001 QW-2008-0002	Staff Memorandum

CASE PROCEEDING PARTICIPATION**KOFI A. BOATENG**

PARTICIPATION		
COMPANY	CASE NO.	FILING TYPE/ISSUES
Laclede Gas Company	GR-2007-0208	Testimony: Customer Deposits, Payroll & Payroll Taxes, Incentive Compensation, Dues & Donations, Miscellaneous Expenses, Lobbying, Equity Plan, Directors' Fees, and Customer Deposit Interest
Bilyeu Water Co. LLC	WA-2007-0270	Certificate Case: No Staff Memorandum
Aquila, Inc., d/b/a Aquila Networks-MPS and Aquila Networks-L&P	ER-2007-0004	Testimony: Materials and Supplies, Prepayments, Customer Deposits, Advertising, Dues & Donations, Postage, PSC Assessment, Rate Case Expense, Customer Deposit Interest Expense
Gladlo Water & Sewer Company	QS-2007-0001 QW-2007-0002	Staff Memorandum (Case Still Pending)
Algonquin Water Resources of Missouri, LLC	WR-2006-0425	Testimony: Revenues, Electric Expense, Office Rents, Postage, Telephone Expense, Rate Case Expense
The Empire District Electric Company	ER-2006-0315	Testimony: Plant and Depreciation, Reserve, Cash Working Capital, Property Taxes, Advertising, Dues and Donations, Outside Services, Banking Fees, Promotional Giveaways, Transmission Billing Adjustment, Maintenance
New Florence Telephone Company	TC-2006-184	Stipulation and Agreement
Cedar Green Land Acquisition, LLC	WA-2013-0117 SA-2013-0354	Certificate Case (Still Pending)
Suburban Water and Sewer Company	WR-2005-0455	Staff Memorandum
Noel Water Company, Inc.	WR-2005-0452	Staff Memorandum
Aquila, Inc., d/b/a Aquila Networks-L&P	HR-2005-0450	Testimony: Materials and Supplies, Prepayments, Customer Deposits, Customer Deposits Interests, Customer Advances, PSC Assessments, Rate Case Expense
Aquila, Inc., d/b/a Aquila Networks-MPS and Aquila Networks-L&P	ER-2005-0436	Testimony: Materials and Supplies, Prepayments, PSC Assessments, Rate Case Expense

CASE PROCEEDING PARTICIPATION

KOFI A. BOATENG

PARTICIPATION		
COMPANY	CASE NO.	FILING TYPE/ISSUES
Public Service Commission of the State of Missouri v. Cass County Telephone Company Limited Partnership	TC-2005-0357	Stipulation and Agreement
Southtown Utilities, Inc.	WA-2005-0268	Staff Memorandum
Aqua Missouri Company, Inc. (Water and Sewer)	QS-2005-0008 QW-2005-0009 QS-2005-0010 QW-2005-0011	Staff Memorandum