

Exhibit No.:
Issues: Certificate of Convenience
and Necessity
Witness: Daniel I. Beck
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

REBUTTAL TESTIMONY

OF

DANIEL I. BECK

**UNION ELECTRIC COMPANY
d/b/a AMEREN MISSOURI**

CASE NO. EA-2014-0136

*Jefferson City, Missouri
March 2014*

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 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)

Case No. EA-2014-0136

AFFIDAVIT OF DANIEL I. BECK

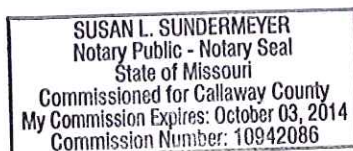
STATE OF MISSOURI)
) ss
COUNTY OF COLE)

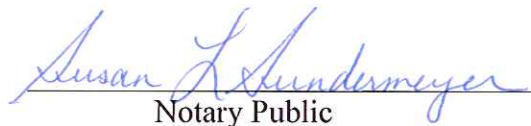
Daniel I. Beck, of lawful age, on his oath states: that he has participated in the preparation of the following Rebuttal Testimony in question and answer form, consisting of 7 pages of Rebuttal Testimony to be presented in the above case, that the answers in the following Rebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.



Daniel I. Beck

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




Notary Public

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REBUTTAL TESTIMONY

OF

DANIEL I. BECK

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

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1 Q. What is Staff's ultimate recommendation to the Commission on Ameren
2 Missouri's request?

3 A. Staff recommends the Commission conditionally approve Ameren Missouri's
4 CCN application for the proposed solar generation facility in O'Fallon, Missouri. The project
5 specifications are shown in Schedule C of the CCN application and drawings for the project
6 are shown as Schedule D of the CCN application.

7 Q. What conditions on approval does Staff recommend the Commission impose?

8 A. Staff recommends the Commission condition the approval of the application
9 on Ameren Missouri's receipt of all required government approvals and permits for the solar
10 facility. Staff also recommends the Commission's Order state that in approving the CCN the
11 Commission is not making any ratemaking determination in this proceeding on the
12 application. Finally, as further discussed in Staff witness Boateng's testimony, Staff
13 recommends the Commission condition the approval of the CCN on Ameren Missouri's use
14 of the depreciation rates and plant account classifications as described therein.

15 **Background**

16 Q. The Application refers to Missouri's Renewable Energy Standard ("RES").
17 Could you explain why the RES is significant to this filing?

18 A. As part of the RES, Ameren Missouri is required to meet specific percentage
19 requirements of its total retail Missouri sales for both renewable energy and solar renewable
20 energy. These requirements increase over time as follows:

Year	REC Percentage	SREC Percentage	Total Percentage
2011-2013	1.96%	0.04%	2%
2014-2017	4.90%	0.10%	5%
2018-2020	9.80%	0.20%	10%
Beginning 2021	14.70%	0.30%	15%

While Ameren Missouri has met its requirements for the first three years, 2011-2013, as the percentages increase Ameren Missouri will be required to find new sources of renewable energy credits (“RECs”) and solar renewable energy credits (“SRECs”) to meet these requirements.

Q. Could you provide an example of how many RECs and SRECs would be required for the year 2014?

A. Yes, but that actual requirement will be based on the actual retail sales for 2014, which will not be known until after the year is completed. As a simple example, I will assume that retail sales for 2014 are equal to Ameren Missouri’s retail sales for 2012, 36,745,908 MW. By applying the 4.90% and 0.10% factors to the retail sales, 1,763,804 RECs and 36,746 SRECs will be required for 2014.

Q. How does your example of 36,746 SRECs compare to the output for the proposed facility?

A. Ameren Missouri’s Application estimates that the proposed facility will produce 7,700 MWh annually and that equates to 9,600 SRECs annually when the in-state bonus of 25% is applied. This would make the proposed facility the largest solar facility in the state, but the output would only provide about 26% of Ameren Missouri’s SRECs needed for 2014.

Q. Does Ameren Missouri have any other sources for SRECs?

1 A. Yes. In Ameren Missouri's first two RES Compliance Filings, it met its
2 SRECs needs with SRECs obtained from both Standard Offer Contracts and from SRECs
3 purchased from other states. (Ameren Missouri also retired SRECs from its solar educational
4 facility on the roof of its headquarters but this was a very small part of its compliance
5 SRECs.) On August 28, 2013, the RES was modified by House Bill 142 (HB 142) and
6 Ameren Missouri began to acquire additional SRECs from solar systems that were operational
7 after August 28, 2013, where the customer generator was paid a rebate of \$2.00 per watt.
8 Ameren Missouri's RES Compliance Report for 2013 is scheduled to be filed on April 15,
9 2014, and Ameren Missouri is expected to begin using SRECs obtained through HB 142 for
10 the recently completed compliance year of 2013.

11 Q. Please describe the size of this proposed project?

12 A. The area where the 18,867 panels would be located is approximately 28.8
13 acres. While the panels would cover much of the 28.8 acres, the easement for an existing 34.5
14 kV sub-transmission line and some unused space (approximately 10 %) also make up the 28.8
15 acres. To put 28.8 acres in perspective, a standard football field is approximately 1.322 acres.

16 **Analysis**

17 Q. What criteria has the Commission recently included for consideration in
18 determining whether to grant CCNs?

19 A. In the Tartan Energy Company case, the Commission's Order listed five
20 criteria to include in the consideration when making a determination on whether a utility's
21 proposal meets the standard of being "necessary or convenient for the public service":

- 22 • Is the service needed?;
- 23 • Is the applicant qualified to provide the service?;

- Does the applicant have the financial ability to provide the service?;
- Is the applicant's proposal economically feasible?; and
- Does the service promote the public interest? ¹

Q. Is there a need for a utility-sized solar facility?

A. Ameren Missouri needs solar renewable energy credits, SRECs, to comply with the Renewable Energy Standard. Ameren Missouri's filing states that this solar generation facility is part of its strategy to comply with Missouri's RES requirement. In 2012 and 2013, the first two years that SRECs were required to comply with the RES, Ameren Missouri met its solar requirements with SRECs from standard offer contracts, SRECs from the solar learning center on the roof of Ameren's General Office Building and from SRECs that were generated in other states. Ameren Missouri maintains that the SRECs generated from the proposed solar facility will limit the need to purchase SRECs that are generated in other states. The solar facility would also diversify Ameren Missouri's renewable generation portfolio with generation located in Missouri.

Q. Is Ameren Missouri qualified to provide the service?

A. Yes. Ameren Missouri currently owns many different types of generation, including coal, nuclear, natural gas and hydropower facilities. In Staff's opinion, the operation of these other facilities is more difficult than the operation of a solar facility, which nearly operates itself. In addition, Ameren Missouri operates transmission and distribution facilities throughout its service territory. Some aspects of a solar generation system resemble an electric distribution system so Ameren Missouri will likely use a mixture of personnel that have both generation and distribution skills. Although Ameren Missouri has been operating it

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). See also Section 393.170, RSMo (2000).

1 solar learning center on the roof of its General Office Building, the proposed facility will be
2 significantly larger and should provide Ameren Missouri with hands-on operation and
3 maintenance skills that could be applied to future utility sized solar generators.

4 Q. Does Ameren Missouri have the financial ability to construct and operate a
5 utility-sized solar facility?

6 A. Yes. This consideration is addressed in the Rebuttal Testimony of Staff
7 witness Boateng.

8 Q. Is the proposed solar facility economically feasible?

9 A. Again, please see the Rebuttal Testimony of Staff witness Boateng.

10 Q. Does the proposed solar facility promote the public interest?

11 A. Yes, in Staff's opinion it does. The solar generation facility will be used to
12 meet the requirements of the RES, which was originally codified as a result of the 2008 ballot
13 initiative, Proposition C. Since that vote, there have been two changes that were made to the
14 RES by the legislature but the basic solar requirements have remained unchanged. The
15 proposed facility will provide SRECs that will help Ameren Missouri achieve the solar
16 requirements. Since the facility is located inside the State of Missouri's borders, the SRECs
17 from this facility will also be subject to the 25% in-state bonus calculations that were also part
18 of the RES.

19 Q. Has Ameren Missouri provided all the information required for approval under
20 Rule 4 CSR 240-3.105?

21 A. No. Ameren Missouri's original filing identified four governmental agencies²
22 from which approval was needed that were not included in the filing but that Ameren
23 Missouri had requested or would soon request. On March 4, 2014, Ameren Missouri's Notice

² Rule 4 CSR 240-3.105(1)(D)2.

Rebuttal Testimony of
Daniel I. Beck

1 of Issued Permits provided certified copies of three of the four required documents. Approval
2 from the Missouri Department of Natural Resources for a Land Disturbance Permit is the only
3 approval that has not yet been submitted. A Land Disturbance Permit is typically applied for
4 just prior to beginning construction. As such, Staff is recommending the Commission grant
5 the CCN conditional upon receiving all required governmental approvals and permits.

6 Q. Does this conclude your rebuttal testimony?

7 A. Yes.

Daniel I. Beck, P.E.

Manager of Engineering Analysis Section
Tariff, Safety, Economic and Engineering Analysis Department
Regulatory Review Division

Missouri Public Service Commission
P.O. Box 360
Jefferson City, MO 65102

I graduated with a Bachelor of Science Degree in Industrial Engineering from the University of Missouri at Columbia. Upon graduation, I was employed by the Navy Plant Representative Office in St. Louis, Missouri as an Industrial Engineer. I began my employment at the Commission in November, 1987, in the Research and Planning Department of the Utility Division (later renamed the Economic Analysis Department of the Policy and Planning Division) where my duties consisted of weather normalization, load forecasting, integrated resource planning, cost-of-service and rate design. In December, 1997, I was transferred to the Tariffs/Rate Design Section of the Commission's Gas Department where my duties include weather normalization, annualization, tariff review, cost-of-service and rate design. Since June 2001, I have been in the Engineering Analysis Section of the Energy Department, which was created by combining the Gas and Electric Departments. I became the Supervisor of the Engineering Analysis Section, Energy Department, Utility Operations Division in November 2005 and my current title is Manager of Engineering Analysis.

I am a Registered Professional Engineer in the State of Missouri. My registration number is E-26953.

**List of Cases in which prepared testimony was presented by:
DANIEL I. BECK**

<u>Company Name</u>	<u>Case No.</u>
Union Electric Company	EO-87-175
The Empire District Electric Company	EO-91-74
Missouri Public Service	ER-93-37
St. Joseph Power & Light Company	ER-93-41
The Empire District Electric Company	ER-94-174
Union Electric Company	EM-96-149
Laclede Gas Company	GR-96-193
Missouri Gas Energy	GR-96-285
Kansas City Power & Light Company	ET-97-113
Associated Natural Gas Company	GR-97-272
Union Electric Company	GR-97-393
Missouri Gas Energy	GR-98-140
Missouri Gas Energy	GT-98-237
Ozark Natural Gas Company, Inc.	GA-98-227
Laclede Gas Company	GR-98-374
St. Joseph Power & Light Company	GR-99-246
Laclede Gas Company	GR-99-315
Utilicorp United Inc. & St. Joseph Light & Power Co.	EM-2000-292
Union Electric Company d/b/a AmerenUE	GR-2000-512
Missouri Gas Energy	GR-2001-292
Laclede Gas Company	GR-2001-629
Union Electric Company d/b/a AmerenUE	GT-2002-70
Laclede Gas Company	GR-2001-629
Laclede Gas Company	GR-2002-356
Union Electric Company d/b/a AmerenUE	GR-2003-0517
Missouri Gas Energy	GR-2004-0209
Atmos Energy Corporation	GR-2006-0387
Missouri Gas Energy	GR-2006-0422
Union Electric Company d/b/a AmerenUE	GR-2007-0003
The Empire District Electric Company	EO-2007-0029/EE-2007-0030
Laclede Gas Company	GR-2007-0208
The Empire District Electric Company	EO-2008-0043
Missouri Gas Utility, Inc.	GR-2008-0060

The Empire District Electric Company	ER-2008-0093
Trigen Kansas City Energy Corporation	HR-2008-0300
Union Electric Company d/b/a AmerenUE	ER-2008-0318
Kansas City Power & Light Company	ER-2009-0089
KCP&L Greater Missouri Operations Company	ER-2009-0090
Missouri Gas Energy	GR-2009-0355
The Empire District Gas Company	GR-2009-0434
Union Electric Company d/b/a AmerenUE	ER-2010-0036
Laclede Gas Company	GR-2010-0171
Atmos Energy Corporation	GR-2010-0192
Kansas City Power & Light Company	ER-2010-0355
KCP&L Greater Missouri Operations Company	ER-2010-0356
Union Electric Company d/b/a Ameren Missouri	GR-2010-0363
Kansas City Power & Light Company	ER-2012-0174
KCP&L Greater Missouri Operations Company	ER-2012-0175
Chaney vs. Union Electric Company	EO-2011-0391
Veatch vs. The Empire District Electric Company	EC-2012-0406
The Empire District Electric Company	ER-2012-0345
KCP&L Greater Missouri Operations Company	ET-2014-0059
Kansas City Power & Light Company	ET-2014-0071
Union Electric Company d/b/a Ameren Missouri	ET-2014-0085
Missouri Gas Energy	GR-2014-0007
Union Electric Company d/b/a Ameren Missouri	EA-2012-0281