

MEMORANDUM

TO: Missouri Public Service Commission Case File
Case No. EO-2016-0286, Ameren Missouri Renewable Energy Standard Compliance
Report for Calendar Year 2015

FROM: Claire M. Eubanks, P.E., Energy Unit – Engineering Analysis

/s/ Dan Beck June 24, 2016 /s/ Bob Berlin June 24, 2016
Utility Operations / Date Staff Counsel’s Office / Date

SUBJECT: Staff Report and Conclusion on Ameren Missouri’s 2015 Renewable Energy Standard
Compliance Report

DATE: June 24, 2016

SUMMARY

The Staff has reviewed the Union Electric Company d/b/a Ameren Missouri (Ameren or Company) 2015 RES Compliance Report and Amended 2015 RES Compliance Report. Ameren did not initially file the information required by 4 CSR 240-20.100(8)(A)1J, 4 CSR 240-20.100(8)(A)1O, or 4 CSR 240-20.100(8)(A)1P, however, Ameren has included the required information in its Amended 2015 RES Compliance Report.

Staff has utilized the North American Renewables Registry (NAR) to independently verify the retirement of the RECs by the Company. Ameren has retired sufficient RECs to satisfy the 2015 non-solar RES requirements. For compliance with the 2015 solar RES requirements, Staff recommends the Commission grant Ameren a variance from 4 CSR 240-20.100(3)(A) to allow Ameren to offset the unintentional retirement of 2013 and 2014 vintage double-counted S-RECs¹ from Ameren’s newly

¹ During 2015, Ameren self-initiated a review of its customer-generated S-RECs, discovering 157 customer-generated projects which they had not yet certified with the Division of Energy, 34 instances where they unintentionally double-counted customer-generator projects, and various inconsistencies in their estimation of S-RECs. The double-counting of projects impacted vintages of S-RECs which were partially or completely retired for 2014 and 2015 compliance. To offset the double-counted S-RECs Ameren deducted S-RECs from the 2015 Reconciliation asset prior to reporting the generation to NAR so that the quantity of S-RECs being carried forward for future compliance is appropriate. This netting method conflicts with the requirement of 4 CSR 240-20.100(3)(A) requirement that S-REC creation be linked to the associated renewable energy resource because the S-RECs reflect adjustments caused by their other customer-generation resources. Additionally, Ameren did not fully register all their customer-generated S-RECs associated with the 2015 Reconciliation projects into the tracking system.

certified 2015 Reconciliation asset.² Ameren has agreed to make adjustments to the active 2015 vintage S-RECs which will maintain the link between the renewable energy resource and REC creation.

Additionally, Ameren unintentionally retired double-counted S-RECs for 2014 compliance. Staff recommends the Commission grant Ameren a variance from 4 CSR 240-20.100(3)(A) for the 2014 compliance period to allow Ameren to offset the unintentional retirement of 2013 and 2014 vintage double-counted S-RECs from Ameren's newly certified 2015 Reconciliation asset. Because Ameren undertook the reconciliation effort during the fall of 2015, the netting occurred outside the period for 2014 compliance.³ Staff recommends the Commission grant Ameren a variance from 4 CSR 240-20.100(3)(J) to allow Ameren to retire S-RECs outside the 2014 compliance year. For additional information regarding Staff's concerns and recommendations regarding the 2015 reconciliation effort, please refer to page 11 of this memorandum.

OVERVIEW

On April 15, 2016, Ameren filed its Renewable Energy Standard (RES) Compliance Report (Compliance Report) for calendar year 2015 (Case No. EO-2016-0286), in accordance with 4 CSR 240-20.100(8), Electric Utility Renewable Energy Standard Requirements, Annual RES Compliance Report and RES Compliance Plan. This rule states, in part, "Each electric utility shall file an RES compliance report no later than April 15 to report on the status of both its compliance with the RES and its compliance plan as described in this section for the most recently completed calendar year." Subparagraphs 4 CSR 240-20.100(8)(A)1. A. through P. provide the minimum requirements for the Compliance Report. Subsection 4 CSR 240-20.100(8)(D) requires that Staff examine the Company's Compliance Report and file a report within forty-five (45) days of the filing.

Staff utilized the North American Renewables Registry (NAR) to independently verify the retirement of the RECs and S-RECs by the Company.

²*Ameren Customer Solar <10 kW – 2015 Reconciliation* (GEN2204) aggregates 157 customer-generators certified by Division of Energy in 2015.

³4 CSR 240-20.100(3)(J)

DISCUSSION

Staff reviewed the Company's Compliance Report and its Amended Compliance Report in accordance with the established requirements to verify the Compliance Report contains the information required. The results of this review are detailed below, with appropriate rule subparagraphs A. through P. identified and quoted.

A. "Total retail electric sales for the utility, as defined by this rule:"

The Company provided the total retail electric sales for 2015 expressed as total megawatt-hours (MWh) sold to Ameren consumers consistent with the amount listed within the 2015 FERC Form 1 submitted in EFIS on April 15, 2016, of 35,875,728 MWh⁴.

B. "Total jurisdictional revenue from the total retail electric sales to Missouri customers as measured at the customers' meters;"

The Company provided the total retail electric sales for 2015 expressed as annual operating revenues (dollars) from Ameren consumers. This amount (\$3,209,918,425⁵) is consistent with the 2015 FERC Form 1 filed with the Commission on April 15, 2016.

C. "Total retail electric sales supplied by renewable energy resources, as defined by section 393.1025(5), RSMo, including the sources of the energy;"

The Company utilized four (4) company-owned renewable energy generating facilities during 2014: the Keokuk Hydroelectric Generation Station ("Keokuk"), the Maryland Heights Renewable Energy Center ("MHREC"); the O'Fallon Renewable Energy Center ("OREC"), and the GOB ("GOB"). The Company also acquired energy through a power purchase agreement ("PPA") with Pioneer Prairie II Wind Farm ("Pioneer Prairie"). The total amount of energy generated in 2015 for the above listed renewable energy facilities was ** _____

_____ **.

⁴ Page 301 of 2015 FERC form 1, Line 10

⁵ Page 300 of 2015 FERC form 1, Line 10 - Total Sales to Ultimate Consumers and Line 9 – Gross Receipts Tax Removal.

D. “The number of RECs and S-RECs created by electrical energy produced by renewable energy resources owned by the electric utility. For the electrical energy produced by these utility-owned renewable energy resources, the value of the energy created. For the RECs and S-RECs, a calculated REC or S-REC value for each source and each category of REC;”

The Company reported the following information on Pages 7 and 8 of its Compliance Report:

Facility	Number of RECs	Compliance Equivalency for In-State⁶	Value of Energy	Value of RECs (\$/REC)
Keokuk	946,011	n/a	\$20,509,518	Not assigned
GOB	89	111	Not assigned	Not assigned
MHREC	63,880	79,850	** _____ **	Not assigned
OREC	7,408	9,260	\$197,995	Not assigned

The Company reported that the Company-owned Keokuk facility generated 946,011MWhs in 2015 and the value of the energy was \$20,509,518. The value is based on the locational marginal pricing (LMP) through Midcontinent Independent System Operator (MISO). The Company does not assign a cost or value for the RECs produced, due to the restrictive nature of using hydroelectric RECs, and the RECs created by this facility are a benefit to Missouri ratepayers since capital and operational costs for Keokuk are already part of the rate structure of the Company’s annual revenue requirement. Additionally, the Company does not assign a value to RECs created by renewable generation assets that have been fully placed into rate base. Ameren treats the RECs as a government incentive.⁷ Staff believes there is a value to

⁶ Renewable resources located in Missouri, qualifies for the one and twenty-five hundredths (1.25) credit multiplier allowed by statute and regulation; 393.1030.1., RSMo; 4 CSR 240-20.100(3)(G)

⁷ Response to Staff Data Request 4

the RECs and S-RECs created by the Company’s owned generation though that value is not transparent.

The GOB produced 89 MWh in calendar year 2015. The full output of this facility is consumed on site at the Company’s headquarters building, therefore no values for the energy or S-RECs have been assigned.

The MHREC produced 63,880 MWhs during calendar year 2015. The Company reported the value of RECs produced by the MHREC as ** _____ **, which is based on the heat rate of the generators and the contract purchase price of methane.

Ameren’s utility-scale solar facility, OREC, became operational in 2014 and Division of Energy certified it as a resource in April 2015. OREC produced 7,408 MWhs during calendar year 2015 and the value of the energy was \$197,995. The value is based on the locational marginal pricing (LMP) through Midcontinent Independent System Operator (MISO).

E. “The number of RECs acquired, sold, transferred, or retired by the utility during the calendar year;”

The Company provided the following information regarding the number of RECs acquired and retired during the calendar year:

	Number of RECs (Compliance Equivalency)	Number of S-RECs (Compliance Equivalency)
Acquired	** _____ **	61,012
	(n/a)	(76,265)
Retired	1,732,879	28,701 (see discussion below)
	(1,757,911)	(35,876)

The Company did not report any RECs sales or transfers in 2015.

Non-Solar Renewable Energy Credits:

The Company acquired ** _____ ** 2015 vintage RECs through a PPA with Pioneer Prairie.

Staff verified that the Company retired 1,313,261 Keokuk RECs (2012-2014 Vintage), 319,490 Pioneer Prairie RECs (2012 Vintage), and 125,160 MHREC RECs⁸ (2012-2013 Vintage) to meet the non-solar requirement of 1,757,911 RECs⁹. These RECs were registered and retired in the electronic tracking system¹⁰ utilized for compliance purposes. In accordance with statute and regulation, a qualified facility produced these RECs and they were banked and utilized appropriately.¹¹

Solar Renewable Energy Credits:

The Company acquired approximately 61,012 S-RECs from its customers through Standard Offer Contracts and as a condition of receiving a solar rebate. The customer-generated S-RECs qualify for the in-state credit multiplier.

The solar requirement for 2015 is 35,876 S-RECs¹². The Company retired 900 OREC S-RECs¹³ (2014 Vintage) and 34,976 customer-generator S-RECs¹⁴ (2013-2014 Vintage). A portion of the 34,976 retired customer-generator S-RECs are associated with double-counted projects and other estimation errors Ameren discovered in their self-initiated internal review. The Company netted the impacts of its internal review with S-RECs of the same vintage generated by its newly certified 157 projects which are aggregated into its *Ameren Customer Solar <10 kW – 2015 Reconciliation* asset. See further discussion below, Staff

⁸ 100,128 RECs with a compliance equivalency of 125,160 RECs

⁹ Pursuant to 4 CSR 240-20.100(1)(R)2., the amount of RECs necessary is determined by calculating five percent (5%) of the Company's total retail sales, less the solar requirement.

¹⁰ North American Renewables Registry: <http://narecs.com/>

¹¹ Qualified facility per 393.1025.(5), RSMo and 4 CSR 240-20.100(1)(N); Banked RECs per 393.1030.2., RSMo and 4 CSR 240-20.100(1)(M).

¹² Pursuant to 4 CSR 240-20.100(1)(R)5.B., the amount of S-RECs necessary is determined by calculating one-tenth percent (0.1%) of the Company's total retail sales.

¹³ 720 S-RECs with a compliance equivalency of 900 S-RECs

¹⁴ 27,981 S-RECs with a compliance equivalency of 34,976 S-RECs

will also note the quantity of S-RECs being carried forward to future calendar years is accurate.

F. “The source of all RECs acquired during the calendar year;”

The Company acquired RECs from Pioneer Prairie and its customer-generators during 2015.

G. “The identification, by source and serial number, or some other identifier sufficient to establish the vintage and source of the REC, of any RECs that have been carried forward to a future calendar year;”

The Company provided a listing of RECs carried forward for future year(s) as Exhibit 1 of the Compliance Report. Exhibit 1 includes the serial numbers for RECs generated by Keokuk, MHREC, Pioneer Prairie, OREC, and aggregated S-RECs.¹⁵ The Company provided additional information supporting the S-RECs being carried forward from the GOB.

The identification of Ameren’s carried forward S-RECs as listed by source and serial number¹⁶, pages 17-21 of Ameren’s 2015 Compliance Report, will be inaccurate due to adjustments being made to address Staff’s concerns with the 2015 Reconciliation effort, however, the total quantity being carried forward will remain the same.

H. “An explanation of how any gains or losses from sale or purchase of RECs for the calendar year have been accounted for in any rate adjustment mechanism that was in effect for the utility;”

The Company did not incur any gains or losses associated with REC purchases or sales. No RECs were sold and all RECs purchased will be utilized for future compliance purposes.

¹⁵ Aggregated S-RECs include customer generated S-RECs and the GOB

¹⁶ 4 CSR 240-20.100(8)(A)1.G Ameren chose to report by serial number. The rule allows some other identifier sufficient to establish the vintage and source of the REC.

I. “For acquisition of electrical energy and/or RECs from a renewable energy resource that is not owned by the electric utility, the following information for each resource that has a rated capacity of ten (10) kW or greater:

“(I) Facility name, location (city, state), and owner;”

The Company provided the necessary information for Pioneer Prairie.

“(II) That the energy was derived from an eligible renewable energy technology and that the renewable attributes of the energy have not been used to meet the requirements of any other local or state mandate;”

The Company provided an affidavit for Pioneer Prairie as Exhibit 2 of the Compliance Report which indicates it was derived from an eligible technology and that the renewable attributes have not been used for other purposes.

“(III) The renewable energy technology utilized at the facility;”

The affidavit for Pioneer Prairie includes the technology type used.

“(IV) The dates and amounts of all payments from the electric utility to the owner of the facility;”

The dates and amounts for the payments to Pioneer Prairie were provided in Exhibit 3 of the Compliance Report.

“(V) All meter readings used for the calculation of the payments referenced in part (IV) of this paragraph;”

The required meter readings for Pioneer Prairie were provided in Exhibit 3 of the Compliance Report.

J. “For acquisition of electrical energy and/or RECs from a customer-generator:”

“(I) Location (zip code);”

“(II) Name of aggregated subaccount in which RECs are being tracked in;”

“(III) Interconnection date”

“(IV) Annual estimated or measured generation; and”

“(V) The start and end date of any estimated or measured RECs being acquired;”

The Company provided the required information in its Amended 2015 RES Compliance Report, Exhibit 7.

K. “The total number of customers that applied and received a solar rebate in accordance with section (4) of this rule;”

The Company paid 115 solar rebates during calendar year 2015. Staff notes that the Company has not yet paid solar rebates equaling the stipulated cap of \$91.9 million, which was expected to be completed during 2014. The Company has sent emails to customers who are in the reservation queue but not yet installed solar electric systems.¹⁷

L. “The total number of customers that were denied a solar rebate and the reason(s) for denial;”

The company stated that no customers were denied a solar rebate. Please note that some customers who applied for a solar rebate may not have been offered one due to the spending limit stipulated in Case No. ET-2014-0085.

¹⁷ Response to Staff Data Request 6

- M. “The amount expended by the electric utility for solar rebates, including the price and terms of future S-REC contracts associated with the facilities that qualified for the solar rebates;”**

The Company paid \$3,526,939 in solar rebates for calendar year 2015.

The Company provided information regarding the Standard Offer Contract tariff that was in effect prior to House Bill 142 and included the funds paid to customers in 2015 for past Standard Offer Contracts. Additionally, the Company included the Solar Rebate Tariff in Exhibit 4 of the Compliance Report. However, Staff notes this exhibit is not the Company’s currently effective tariff.

- N. “An affidavit documenting the electric utility’s compliance with the RES compliance plan as described in this section during the calendar year;”**

The Company filed the Affidavit referenced in the compliance report as Exhibit 6.

- O. “If compliance was not achieved, an explanation why the electric utility failed to meet the RES.”**

Ameren has achieved compliance with the 2015 non-solar RES requirements. See discussion below on Ameren’s 2015 reconciliation of S-RECs. Staff recommends the Commission grant Ameren a variance from 4 CSR 240-20.100(3)(A) to allow the adjustments found during the Company’s self-initiated internal review to be netted within the *Ameren Customer Solar <10 kW – 2015 Reconciliation* asset for the 2013 and 2014 vintages.

- P. “A calculation of its actual calendar year retail rate impact.”**

The Company provided a calculation of its actual calendar year retail rate impact in its Amended 2015 RES Compliance Report.

Ameren’s 2015 Reconciliation Effort

During 2015, Ameren conducted a comprehensive self-initiated internal review of its customer-generated S-RECs. Ameren discovered 157 customer-generated projects which they had not yet certified with the Division of Energy, 34 instances where they unintentionally double-counted customer generator projects, and certain other factors associated with Ameren’s accounting of SRECs. ** _____

_____ ** A listing of Ameren’s customer generator aggregated assets registered in NAR is provided in Table 1.

As allowed by 4 CSR 240-20.100(3)(K), the Company performs its own REC aggregation of S-RECs generated by the GOB and customer-generator solar facilities. However, in accordance with 4 CSR 240-20.100(3)(A) the REC creation is linked to the associated renewable energy resource and the utility complies with the requirement through registration in the Commission-approved tracking system, the North American Renewables Registry (NAR). First the small generators are aggregated together and registered into NAR as one asset. Per the NAR operating procedures, the Company groups the units such that their aggregated nameplate capacity is less than 1 MW. However, NAR has allowed Ameren to register their non-metered customer generators by operational year, exceeding the 1 MW aggregated capacity limit. For systems larger than 10 kW the tracking system collects project and unit level information for each generating unit and verifies that the aggregated nameplate capacity is less than 1 MW. For systems less than 10 kW in size the Company is not required by the NAR administrator to provide project level detail for each unique project, provided it is approved by the Division of Energy and that the Company maintains all records and estimates and makes them available upon request. Once the assets are aggregated and registered in NAR, the Company self-reports the generation. That data must

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pass the NAR feasibility test and if no other resolution is needed, NAR creates a certificate. For systems that are larger than 10 kW, the Company supports its self-reported generation with metered data. For systems less than 10 kW, the Company supports its self-reported generation with estimates utilizing PVWatts.

To address the unintentional double-counting of S-RECs¹⁹, Ameren removed an equivalent number of S-RECs from the 2013, 2014, and 2015 vintages of their newly created asset *Ameren Customer Solar <10 kW – 2015 Reconciliation* (NAR identification: GEN2204) prior to reporting the estimated generation to NAR. Below is a list of Staff's concerns with Ameren's correction method and an explanation on how Ameren's June 23, 2016 supplemental filing addresses those concerns.

Staff Concerns Addressed by Ameren's Supplemental Filing and Recommendation

1. The netting offsets the unintentional retirement of double-counted S-RECs, however, it occurred outside the period allowed for retirement for compliance year 2014.²⁰ The allowed period for 2014 compliance retirement is during calendar year 2014 or during the months of January through March 2015. For 2015 compliance, the netting occurred during the compliance period.
 - o Staff acknowledges that Ameren took the initiative to review the customer-generated S-RECs and make adjustments to its S-REC balance to address the unintentional retirement and other inconsistencies. Staff recommends the Commission grant Ameren a waiver from 4 CSR 240-20.100(3)(J) to allow Ameren to retire S-RECs outside the 2014 compliance year.

¹⁹ And other inconsistencies discovered in Ameren's self-initiated review

²⁰ 4 CSR 240-20.100(3)(J) Note the rule revision effective November 30, 2015 extended the period from March to April 15.

2. This correction method conflicts with the requirement that S-REC creation is linked to the associated renewable energy resource²¹ because the S-RECs associated with the *Ameren Customer Solar <10 kW – 2015 Reconciliation* asset reflects positive and negative adjustments caused by their other customer-generation resources.²² Additionally, Ameren asserts the proposed revision registers the S-RECs in the Commissions approved REC tracking system and therefore satisfies the last sentence of 4 CSR 240-20.100(3)(A). However, Ameren has not registered all S-RECs associated with the *Ameren Customer Solar <10 kW – 2015 Reconciliation* asset in the tracking system for the 2013 and 2014 vintages because they deducted S-RECs associated with other projects prior to registration.

- Ameren has agreed to address the negative adjustments for the 2015 vintage by transferring those S-RECs to the NAR administrator for forced retirement and will address positive adjustments by the creation of S-RECs associated with the appropriate resources. This process ensures that the active 2015 vintage S-RECs are linked with the associated renewable resource and that the double-counted S-RECs are not reflected in the tracking system. Because the 2013 and 2014 S-RECs were completely or partially exhausted for compliance in 2014 and 2015, adjustments are more burdensome to complete at this time and would require coordination between Ameren, Staff, and the NAR administrator. Staff is comfortable with Ameren’s method of netting within the *Ameren Customer Solar <10 kW – 2015 Reconciliation* asset for the 2013 and 2014 vintages because the impact to the Company’s remaining S-REC balance is the same and because Ameren has agreed to address the adjustments for the active 2015 vintage and

²¹ 4 CSR 240-20.100(3)(A)

²² **

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future vintages. Staff would also note there are alternative methods of addressing the adjustments within the tracking system such that the S-RECs are linked with the associated renewable resource and that the double-counted S-RECs are not reflected in the tracking system. However, the effort involved would not change Ameren's current S-REC balance, therefore, Staff recommends the Commission grant Ameren a variance from 4 CSR 240-20.100(3)(A) for the 2014 and 2015 compliance year to allow the adjustments found during the Company's self-initiated internal review to be netted within them *Ameren Customer Solar <10 kW – 2015 Reconciliation* asset for the 2013 and 2014 vintages.

3. Staff is concerned the netting may create difficulty transferring the active S-RECs in the event a new tracking system is selected. As the Commission is aware, the current contract with the NAR tracking system expires in December 2016.
 - o Ameren has agreed to address the negative adjustments for the 2015 vintage by transferring those S-RECs to the NAR administrator for forced retirement and will address positive adjustments by the creation of S-RECs associated with the appropriate resources. This process ensures that the active S-RECs are linked with the associated renewable resource and that the double-counted S-RECs are not reflected in the tracking system.

Table 1**Ameren's Customer Generator Assets registered in NAR:**

NAR ID	Asset	Fuel/Project Type	Commenced Operation Date	Nameplate Capacity
GEN337	Ameren Customer Solar <10KW - 2011 - Ameren Customer Solar <10KW - 2011	Solar Photovoltaics	1/1/2011	0.801
AGG329	Ameren Customer Solar 10KW+ (2)	Solar Photovoltaics	12/8/2011	0.8185
GEN2204	Ameren Customer Solar <10KW - 2015 Reconciliation	Solar Photovoltaics	1/1/2012	2.114
GEN374	Ameren Customer Solar <10KW - 2012 - Ameren Customer Solar <10KW - 2012	Solar Photovoltaics	1/1/2012	1.263
AGG330	Ameren Customer Solar 10KW+ (3)	Solar Photovoltaics	5/26/2012	0.9424
AGG352	Ameren Customer Solar 10KW+ (4)	Solar Photovoltaics	10/16/2012	0.9301
GEN510	Ameren Customer Solar - Non-metered – 2013	Solar Photovoltaics	1/1/2013	7.008
AGG370	Ameren Customer Solar 10KW+ (5)	Solar Photovoltaics	1/28/2013	0.9626
AGG395	Ameren Customer Solar 10KW+ (6)	Solar Photovoltaics	4/26/2013	0.4916
GEN1119	Ameren Customer Solar Non-metered - 2014 - Ameren Customer Solar Non- metered - 2014	Solar Photovoltaics	1/1/2014	29.531
GEN2317	Ameren Customer Solar Non-metered - 2015 - Ameren Customer Solar Non- metered - 2015	Solar Photovoltaics	1/1/2015	2.233

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of Union Electric Company,)
d/b/a Ameren Missouri's 2015 RES Compliance)
Report and 2016-2018 Compliance Plan)

File No. EO-2016-0286

AFFIDAVIT

State of Missouri)
) ss.
County of Cole)

COMES NOW Claire M. Eubanks and on her oath declares that she is of sound mind and lawful age; that she contributed to the attached *Staff Report*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

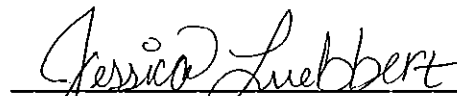


Claire M. Eubanks, P.E

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 21st day of June, 2016.

JESSICA LUEBBERT
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: February 19, 2019
Commission Number: 15633434



NOTARY PUBLIC