MEMORANDUM

TO: Missouri Public Service Commission
Official Case File, Case No. EO-2018-0287
Renewable Energy Standard Compliance Plan 2018 – 2020 for
Union Electric Company, d/b/a Ameren Missouri

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

/s/ Daniel I. Beck, PE / 5/21/18	/s/ Steven Dottheim / 5/21/18
Engineering Analysis / Date	Staff Counsel's Office / Date

SUBJECT: Staff Report on Ameren Missouri's Renewable Energy Standard
Compliance Plan 2018-2020

DATE: May 21, 2018

CONCLUSION

The Staff has reviewed Union Electric Company, d/b/a Ameren Missouri's ("Ameren Missouri" or "Company") *Renewable Energy Standard Compliance Plan 2018-2020* ("*Plan*"). Based on Staff's review, the Company has met the minimum requirements for the *Plan*.

Staff recommends the Company work with Staff prior to filing its 2019-2021 plan to ensure the detailed analysis required by 4 CSR 240-20.100(8)(B)1.E. is provided for the 2019-2021 plan and reflects the addition of planned wind projects.

Regarding the Company's retail rate impact ("RRI") calculation,** ____________________

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____ [1] ____ **

Therefore, Staff does not recommend a revised calculation for 2018.

[1] 4 CSR 240-20.100(5)(G).

OVERVIEW

On April 15, 2018, the Company filed its *Plan* for calendar years 2018 through 2020, in accordance with Rule 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 annual RES compliance plan with the commission. The plan shall be filed no later than April 15 of each year." Subparagraphs 4 CSR 240-20.100(8)(B)1. A. through G. provide the minimum requirements for the plan. Subsection 4 CSR 240-20.100(8)(D) requires that Staff examine the plan and file a report within forty-five (45) days of the filing.

DISCUSSION

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

A. "A specific description of the electric utility's planned action to comply with the RES;"

The current planning period includes an increase in RES requirements, to 10%, beginning in 2018. Ameren Missouri generally described its planned actions to comply with the RES for the 2018-2020 timeframe. Ameren Missouri is finalizing several wind projects, totaling at least 700 MW and anticipated to be operational by the end of 2020. Additionally, the Company expects to make REC purchases in the 2019-2020 timeframe. The Company considered the cost of REC purchases in its RRI calculation.[2]

The Company explains in the *Plan* that it will continue to utilize renewable energy certificates ("RECs") from the Keokuk Hydroelectric Generating Station ("Keokuk"), the Maryland Heights Renewable Energy Center ("MHREC") which utilizes landfill gas, and a purchased power agreement ("PPA") from the Pioneer Prairie II Wind Farm ("Pioneer Prairie II").

For solar compliance, the Company will utilize solar renewable energy credits ("S-RECs") from net-metered customers, the solar generation facility installed at the Company headquarters, and its utility-scale solar facility O'Fallon Renewable Energy Center ("OREC"). The MHREC, the net-metered systems, and Company-owned solar generation will qualify for the Missouri in-state one and twenty-five hundredths (1.25) credit.[3]

Please note the two solar pilot programs which were subjects of recent CCN cases (EA-2016-0207 and EA-2016-0208) were not included in the *Plan*.

B. "A list of executed contracts to purchase RECs (whether or not bundled with energy), including type of renewable energy resource, expected amount of energy to be delivered, and contract duration and terms;"

The Company discusses its executed contracts on page 10 and Table 1 on page 18 of the *Plan* includes a list of executed contracts, the type of renewable energy, the expected energy to be delivered and contract duration and terms. The Company provided the following information regarding its executed contracts:

[2] Staff previously raised a concern in EO-2017-0268 related to incorporating all RES compliance costs in the RRI calculation. The Commission ordered Ameren Missouri to file its RRI as a part of its 2017 IRP filing. The Company provided the RRI calculation as a part of its 2017 IRP filing.
[3] 393.1030.1., RSMo; Rule 4 CSR 240-20.100(3)(G).

	Type	**Expected Energy Delivered**	**Contract duration and terms**[4]
Pioneer Prairie[5]	Wind	** _____ **	15 years
Customer Standard Offer Contracts	Solar	** _____ **	10 years

Please note there is a typographical error on page 10 of the *Plan*; the Company executed 628 SOCs prior to passage of HB 142.[6]

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C. "The projected total retail electric sales for each year;"

The Company provided values for its projected retail electric sales. The values appear to be reasonable estimates. ** ________________________________
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D. "Any differences, as a result of RES compliance, from the utility's preferred resource plan as described in the most recent electric utility resource plan filed

[4] The Company has previously provided the executed contracts for Pioneer Prairie in response to Staff Data Requests.
[5] Contract began in 2009.
[6] Response to Staff Data Request No. 0009 in EO-2015-0267.

with the commission in accordance with 4 CSR 240-22, Electric Utility Resource Planning;"

The Company submitted its most recent triennial compliance filing on September 25, 2017. The *Plan* is similar to the September 25, 2017 preferred resource plan in regard to renewable resource additions as a result of RES compliance. However, as explained on page 8 of the *Plan*, Ameren Missouri made corrections to the load reflected in the RES model[7] which resulted in an additional 39 MWs of Missouri wind required to fully meet the non-solar RES requirements and an additional 1 MW of solar.

E. "A detailed analysis providing information necessary to verify that the RES compliance plan is the least cost, prudent methodology to achieve compliance with the RES;"

The Company discussed items of cost related to RES compliance for the planning period on page 9 of its *Plan*. The Company did not address the cost of its planned addition of wind resources as the projects are expected to be operational by the end of 2020 for use outside the three year planning period. Staff recommends the Company work with Staff prior to filing its 2019-2021 *Plan* to ensure the required detailed analysis provided for the 2019-2021 *Plan* reflects the addition of the wind projects.

Staff reserves the right to comment on whether the *Plan* is the least cost, prudent method to comply with the RES when rate recovery is requested.

F. "A calculation of the RES retail rate impact limit calculated in accordance with section (5) of this rule. The calculation should be accompanied by workpapers including all the relevant inputs used to calculate the retail rate impact limits for

[7] Additionally, Ameren Missouri modified the capacity value rating of wind resources and reflected changes in tax laws.

the planning interval which is included in the RES compliance plan. The electric utility may designate all or part of those calculations as highly confidential, proprietary, or public as appropriate under the commission's rules;"

The Company provided a description of the RRI calculation on pages 10-11 of the *Plan* and provided the associated work paper in response to Staff Data Request No. 0009. The work paper models the unconstrained renewable additions and constrained renewable additions to remain under the 1% RRI limitation. **

[8]

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A number of revisions to model inputs and assumptions were made since the Company's 2017-2019 RES Compliance Plan based on the most recent resource planning. The 2017-2019 RRI calculation resulted in a Plan that was constrained by the 1% RRI limitation. The calculations provided with the *2018-2020 RES Compliance Plan* result in a *Plan* which fully meets the RES requirements, with the purchase of RECs in some years, and does not exceed the 1% RRI limitation.

[8] 4 CSR 240-20.100(5)(G).

G. "Verification that the utility has met the requirements for not causing undue adverse air, water, or land use impacts pursuant to subsection 393.1030.4. RSMo, and the regulations of the division."

The Company states that the generating facilities utilized to meet the RES requirements have been certified by the Missouri Department of Natural Resources.[9] The existing renewable resources Ameren Missouri intends to utilize over the planning period have been certified by the Division of Energy.

[9] Rule 10 CSR 140-8.010(4) – now the Missouri Department of Economic Development – Division of Energy.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter Union Electric d/b/a Ameren Missouri's Filing of the Renewable Energy Standard Compliance Plan for 2018-2020	)))	Case No. EO-2018-0287

AFFIDAVIT OF CLAIRE M. EUBANKS, PE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW CLAIRE M. EUBANKS, PE and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing Staff Report (*RES Compliance Plan 2018 - 2020*) in Memorandum form; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

Claire M Eubanks
CLAIRE M. EUBANKS, PE

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 May 2018.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

D Suzie Mankin
Notary Public