

MEMORANDUM

TO: Missouri Public Service Commission Official Case File
File No. EA-2024-0212
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

FROM: Matthew W. Lucas, Sr. Project Manager, Engineering Analysis Department
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Industry Analysis Division
Seoung Joun Won, PhD, Manager, Financial Analysis Department
Financial and Business Analysis Division

SUBJECT: Recommendation to Conditionally Approve Application

DATE: July 30, 2024

/s/ *Matthew W. Lucas* 07-30-2024
Sr. Project Manager/ Date

SUMMARY

Staff has reviewed the May 24, 2024, Application of Union Electric Company (“Ameren Missouri”) concerning a proposed community solar generator in Montgomery County, Missouri (“Application”) and the supporting direct testimony of Gregory Lovett and Scott Wibbenmeyer. As discussed below, Staff recommends the Commission order the issuance of a Certificate of Convenience and Necessity (“CCN”) to Ameren Missouri for this project.

BACKGROUND

On May 24, 2024, Ameren Missouri submitted the Application for a Missouri Public Service Commission (“Commission”) CCN authorizing it to construct a photovoltaic solar generation plant in Montgomery County, Missouri (“Project” or “New Florence Solar Facility”), per Section 393.170.1, RSMo. The stated purpose for this project is to expand Ameren Missouri’s Community Solar Program (“CSP”) to meet exhibited customer demand. Ameren Missouri further requests the CCN to be effective on or before November 1, 2024.

The filing requirements for CCN applications for the authority to construct an asset are contained in Commission rule 20 CSR 4240-20.045(6). Ameren Missouri outlines the specific

requirements in Section IV part B of its Application. Staff has reviewed the Application and supporting testimony and it contains the filing requirements.¹

The proposed project is an approximately 7 MW photovoltaic solar generation plant sited in New Florence, Missouri. The site consists of roughly 33 acres of agricultural land currently owned by Ameren Missouri, and is adjacent to their existing Montgomery County Community Solar Center (“MCCSC”). Because of its proximity to the MCCSC the Project can leverage the existing interconnection point to Ameren Missouri’s 34.5 kV distribution system. It is expected that the Project will produce 15,000 MWh annually and cost approximately ** [REDACTED] **. ²

The CSP Pilot was first proposed in case EA-2016-0207 and adopted with the approval of a settlement³ between Ameren Missouri, Renew Missouri, Commission Staff, and the Office of the Public Counsel (“OPC”). The first resource dedicated to the CSP Pilot was the Lambert Airport Renewable Energy Center (“LAREC”), a 1,302 block PV system located near Lambert Airport in St. Louis. LAREC was fully subscribed within two months and an application to expand the program was filed a year after the CSP Pilot’s launch. In May 2020 the Commission approved a unanimous stipulation in case ET-2020-0022 that allowed the expansion of the CSP Pilot.

The second CCN Ameren Missouri received for its CSP Pilot was in case EA-2020-0371. This CCN resulted in the MCCSC, a ground-mounted single-axis tracking system of 6.16 MW located at New Florence, Missouri in Montgomery County. Ameren Missouri applied for this CCN in October 2020 and it was granted by the Commission in March 2021. The MCCSC went into service on March 22, 2022.

In case ER-2021-0240 Ameren Missouri requested to create a permanent CSP with several changes based on their experience with the CSP Pilot. The principal modification was to switch from selling customers fixed 100 kWh blocks of solar energy each month to a percentage of usage model. The permanent CSP was approved by the Commission as part of the Unanimous

¹ 20 CSR 4240-20.045(6)(E) and 20 CSR 4240-20.045(6)(K) are not applicable in this case.

² Page 3, lines 16-17, Scott J. Wibbenmeyer’s Direct Testimony.

³ EA-2016-0207. *Unanimous Stipulation and Agreement*. Item 132.

Stipulation and Settlement in ER-2021-0240, and the Project will be the first project for use by the CSP.

DISCUSSION

Community Solar Program

The CSP Pilot allows customers who subscribe to offset their monthly usage with 100 kWh blocks of solar energy. Under the CSP Pilot Residential and Small General Service (“SGS”) customers are permitted to offset up to 50% of their average annual usage, with each 100 kWh block assessed separate Solar Generation and Facilities charges. After the customer’s usage has been reduced according to their subscription level, the remaining usage is assessed at the standard rates according to Ameren Missouri’s tariff. In the event that a customer’s monthly usage is less than its solar subscription, any excess solar energy is forfeited to Ameren Missouri with no reimbursement.

The permanent CSP is very different from the CSP Pilot. As stated earlier, the main change from the pilot is that customers will now subscribe to assign a specified percentage of their monthly usage as solar energy, rather than applying blocks of 100 kWh to reduce their monthly usage. For example, if a customer chooses to replace 50% of their usage with solar under the CSP, then 50% of their usage will be assessed the standard rates according to the tariff, and the other 50% will be provided by the CSP and assessed a Solar Generation rate and a Facilities rate per kWh. Accordingly, under the CSP the amount each customer pays for their subscription will vary monthly, where it was fixed under the CSP Pilot.

The CSP now allows for subscribers to offset up to 100% of their monthly usage. This was not possible under the pilot since each customer is obligated to take their fixed 100 kWh allotment regardless of their actual monthly usage. The seasonal nature of customer load profiles makes it highly likely that customers would have much less usage than their subscription during some months, and much more usage than their subscription in other months. Under the CSP subscribers can no longer use less than their subscription provides, enabling subscribers to offset more of their usage without the risk of paying for excess solar energy.

Difficulties in properly accounting for the energy under the CSP is one area that concerns Staff. Due to the percentage of usage method employed by the CSP, the cumulative demand from the customers can vary widely from month-to-month as each subscriber's usage varies. In winter months, the CSP demand could be significantly higher than the Project's production. When considered annually this may not be a problem since there will be months when the Project produces more than the CSP demand as well, there remain scenarios where demand is consistently higher than the production of the Project that could lead to subscribers paying for solar energy that does not exist.

Another concern that Staff has is in the continuation of the CSP Pilot. While Ameren Missouri witness Gregory Lovett⁴ mentions a request to "transition" from the CSP Pilot to the CSP, there does not appear to be any urgency for this to happen. In discussions with Ameren Missouri, it was stated that the transition will only occur as customer choose to move from the CSP Pilot to the CSP on their own. Unless the customer wants to increase their subscription past 50% of their usage, there is no reason for the subscriber to switch to the CSP. Allowing the CSP Pilot to continue past the activation of the CSP will lead to customer confusion and could result in inequity between the two sets of subscribers.

The intended structure of the CSP is such that only its subscribers or Ameren Missouri's shareholders pay the costs associated with the CSP, but this structure only partially protects Ameren Missouri's unsubscribed ratepayers. If the Project drops to below 50 % of program resources, according to the tariff the costs of the Project could be borne by the unsubscribed ratepayers.⁵ That scenario could be exacerbated if the CSP rates are not designed to fully recover the entire revenue requirement of this facility from CSP participants, in each year of the program term. In such an event, Staff would have serious concerns about the prudence of the Project. To address that concern, Staff recommends that Ameren Missouri design rates that ensure those whom receive the benefits, CSP subscribers and Ameren Missouri shareholders, bear the risk throughout the CSP lifetime. As described before, the Solar Generation Rate

⁴ EA-2024-0212. Direct Testimony of Gregory W. Lovett, page 3.

⁵ Paragraph 13. Tariff Schedule 89.3.

should be designed in a manner that will recover the entire revenue requirement of the facility, in each year of the CSP term, from participants.

The CSP Rider states that, "...any unsubscribed portion of Program Resources will not be included in the revenue requirement used to establish base rates if subscriptions cover at least 50 percent of Program Resources." Staff believes this should be clarified for the situation where the subscription level is greater than 50% but less than fully subscribed. It is important that the subscribed customers only pay for their subscription, rather than part of the unsubscribed portion as well. Staff recommends that the Commission order Ameren Missouri to clarify their tariff language to include a condition stating that if the Project is subscribed to at least the 50% level but less than 100%, the cost to the customer shall be the same as if the Project was fully subscribed, leaving Ameren Missouri's shareholders to pay for any deficit.

Staff Witnesses: Matthew W. Lucas & Francisco Del Pozo

Tartan Factors

When considering a request for a CCN, the Commission applies criteria originally developed in a CCN case filed by the Tartan Energy Company⁶ and referred to now as the "Tartan criteria." The Tartan criteria contemplate 1) the need for service; 2) the utility's qualifications; 3) the utility's financial ability; 4) the economic feasibility of the proposal; and, 5) promotion of the public interest. These factors are an over-arching general framework to organize discussion of the evidence in review of the various types of CCN applications that come before the Commission. Each CCN case must be evaluated in light of the regulatory context and operating circumstances of a project. The Commission's inquiry does not end at a surface level Tartan analysis.

Is the service needed?

While the capacity and energy produced by the Project is not intended to meet Ameren Missouri's resource adequacy requirements, it does serve the demand for solar resources exhibited by Ameren Missouri's customers. The ongoing CSP Pilot is fully subscribed, and

⁶ 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).

Ameren Missouri states in its application⁷ that its current waitlist for the CSP has demand totalling 85% of the anticipated capacity of the Project. The waitlist demand exceeds the minimum of 70% that is required in the Tariff for construction on the project to proceed.

However, in the event that the New Florence Solar Facility subscription demand drops to below 50%, the unsubscribed ratepayers could be expected to pay for the Project. In that case, the Project is too small improve Ameren Missouri's resource adequacy position, and so, would be not be a prudent use of ratepayer funds. Provided that the subscriber demand is sufficient to keep costs to within the CSP, Staff concludes that the Project is needed to satisfy the demand.

Staff Witness: Matthew W. Lucas

Is the applicant qualified to provide the service?

Ameren Missouri currently operates and manages the MCCSC along with the O'Fallon Renewable Energy Center ("OREC") and other smaller sites. Additionally, the Commission recently granted Ameren Missouri CCNs for a number of larger solar resources (Huck Finn⁸, Boomtown⁹, Cass County, Split Rail, Vandalia, and Bowling Green¹⁰) though construction is not yet complete. The Project is not significantly larger than OREC and MCCSC with the latter being an expansion on the CSP Pilot. Given Ameren Missouri's experience with similar projects and its long-standing history of providing electric service, Staff has no concerns with Ameren Missouri's qualifications.

Staff Witness: Max Young

Does the applicant have the financial ability to provide the service?

Yes. Ameren Missouri believes it has the ability to finance the Project because the cost estimates associated with this Project are relatively small in scale when compared to some other construction projects that Ameren Missouri has successfully completed during the past few years. Ameren Missouri expects to finance the Project through the use of existing funds

⁷ EA-2024-0212. [Application EA-2024-0212 HC.pdf](#). Page 4 paragraph 9.

⁸ EA-2022-0244.

⁹ EA-2022-0245.

¹⁰ In EA-2023-0286 the Commission granted Ameren Missouri CCNs for Cass County, Split Rail, Vandalia, and Bowling Green.

and indebtedness while maintaining strong financial metrics.¹¹ Ameren Missouri intends to finance the project initially with short-term debt prior to financing it on a long-term basis with other capital expenditures with a mix of debt and equity roughly in proportion to its current capital structure.¹²

With consideration of Ameren Missouri's financial capacity, the Applicant has the financial ability to provide the service. Ameren Missouri plans to spend \$9 billion through 2025 on grid modernization, transmission system build-out, and renewable generation capacity.¹³ Standard & Poor's ("S&P") expects an average of \$1.7 billion in capital spending per year through 2024. Ameren Missouri is a wholly owned subsidiary of Ameren Corporation ("Ameren Corp."). Ameren Missouri currently has access of up to \$1 billion of committed credit via its \$1.4 billion Missouri credit facility that it shares with its parent, Ameren Corp.¹⁴ Over the next five years, S&P expects Ameren Corp.'s elevated capital spending to reflect roughly \$19.7 billion in capital spending through 2024 across its electric transmission and electric and gas distribution businesses.¹⁵ Overall, S&P expects Ameren Missouri's capital spending will account for about 60% of its parent, Ameren Corp.'s, 2024-2028 capital spending plan.¹⁶ S&P and Moody's rated both Ameren Missouri and Ameren Corp. as investment grade. S&P rated both Ameren Missouri and Ameren Corp. as "BBB+", while Moody's rated them as "Baa1".¹⁷ In addition Staff found no material change in Ameren Missouri's financial risk profile due to the Project upon investigating the financial impact of the Project.¹⁸ Considering the proposed cost and financial impact of the Project, it is reasonable to conclude that Ameren Missouri has the financial ability to construct, operate, and maintain the Project.

Staff Witness: Seoung Joun Won, PhD

¹¹ Page 8, lines 3-7, Scott J. Wibbenmeyer's Direct Testimony.

¹² Staff Data Request No. 0007.

¹³ RatingsDirect, Union Electric Company, S&P Global Ratings. March 23, 2023.

¹⁴ Staff Data Request No. 0007.

¹⁵ Ameren Corporation, RatingsDirect, S&P Global Ratings. March 23, 2023.

¹⁶ Ameren Corporation, RatingsDirect, S&P Global Ratings. March 20, 2024.

¹⁷ S&P Capital IQ Pro.

¹⁸ Staff Data Request Nos. 0002 and 0003.

Is the applicant's proposal economically feasible?

The CSP is a voluntary subscription program, currently regulated by the existing tariff schedule.¹⁹ The CSP is intended to fully recover the revenue requirement from its subscribers or Ameren Missouri's shareholders. Since this facility is intended to serve participants in the CSP the proposal is economically feasible but contingent on demonstrating a subscription level that exceeds 70%²⁰ based upon a rate that is expected to fully recover the revenue requirement of the facility from subscribers in each year of the program term.

Staff is unaware of the expected pricing offered by Ameren Missouri to the customers that have been included on the waitlist and recognizes that pricing of the program may be a significant factor in determining the ultimate subscription level of the program. The CSP defines the resource term to be 25 years from the date the resource is placed in service, and participants have flexibility to cancel the subscription under CSP Rider.²¹ If the CSP subscribers drops to below 50%, the remaining costs of the CSP could affect ratepayers that are not CSP participants²². In such an event, Staff would have serious concerns about the economic feasibility of the Project, and would recommend the rejection of the proposed CCN.

To avoid such a scenario, Staff recommends that the Commission condition approval of this CCN such that Ameren Missouri:

1. Develops conservative "not-to-exceed" rates that are expected to recover the entire revenue requirement associated from the facility, from participants, in each year of the program term;
2. Provides the conservative "not-to-exceed rate" to the waitlist customers, and any prospective customers, requesting feedback on the impact of the status of their expected subscription status;

¹⁹ Paragraph 4. Tariff Schedule 89.2.

²⁰ Upon grant of a CCN, construction of a new Resource shall not begin until at least 70 percent of the Resource's solar energy is subscribed. Paragraph 2.a. Tariff Schedule 89.1.

²¹ Enrollees will be obligated to participate in the Program and pay the charges thereunder for a term of two years after the Resource's in-service date. Paragraph 2.c. Tariff Schedule 89.2.

²² Paragraph 13. Tariff Schedule 89.3.

3. Provides the Commission, and Staff, documentation of the calculation of the conservative “not-to-exceed” rate and the subsequent total waitlist subscription level based upon customer feedback on subscription status; and
4. Demonstrates that the expected subscription level exceeds the 70%, equivalent to 4.9 MW of the expected generation capacity of the solar resource.

Such disclosure will help customers make an informed decision about their participation in the CSP, and provide a more transparent view of the expected CSP subscription level prior to approval of the resource.

Staff Witness: Francisco Del Pozo

Does the service promote the public interest?

Yes. The public interest assessment involves a reconsideration of the other Tartan Criteria. Staff considers the evaluation of the separate Tartan criteria and whether, on balance, the project promotes the public interest. Additionally, Staff reviews the project and whether there are any considerations not covered by the other Tartan Criteria that should be considered in the public interest assessment.

The motivations of the subscribers are primarily to have access to renewable energy and to reduce the use of Ameren Missouri’s thermal units. Ameren Missouri’s existing thermal units will continue to be available for dispatch after the Project is completed; with the only change being that they may be dispatched slightly less frequently. This is sufficient to satisfy the interests of many of the subscribers.

For the non-subscribers, they are not responsible for the costs of the Project unless the subscription rate is under 50%, in which case the Project would no longer be viable. Despite this, the non-subscribers do potentially benefit. By exposing less of its load to the MISO marketplace, Ameren Missouri could see some small savings in purchased power that would affect all its customers, non-subscribers included. Since both subscribers and non-subscribers can potentially benefit from the Project, Staff concludes that the Project does serve the public interest.

Staff Witness: Matthew W. Lucas

In-Service Criteria

In-service criteria are a set of operational tests or operational requirements used to determine whether a unit is “fully operational and used for service”. The phrase comes from Section 393.135, RSMo. 2000, a statute that was adopted by Initiative, Proposition No. 1, on November 2, 1976. Section 393.135, RSMo. 2000, provides as follows:

Any charge made or demanded by an electrical corporation for service, or in connection therewith, which is based on the costs of construction in progress upon any existing or new facility of the electrical corporation, or any other cost associated with owning, operating, maintaining, or financing any property before it is fully operational and used for service, is unjust and unreasonable, and is prohibited.

Staff considers a unit to be “fully operational and used for service” once all major construction has been completed and the facility is placed into service in the manner that it was intended and operating as intended. Staff determines whether a new or acquired unit is “fully operational and used for service” by evaluating the unit based on specific criteria. The criteria may be different depending on the type of unit that is being evaluated.

Ameren has provided the following proposed list of in-service criteria in response to Data Request No. 0021:

1. Solar Block Circuit major construction work is complete.
2. Solar Block Circuit preoperational tests have been successfully completed.
3. Facility or Solar Block Circuit successfully meets contract operational guarantees that are necessary for satisfactory completion of all other items in this list.
4. Upon observation of the facility or Solar Block Circuit for 72 consecutive hours, the facility or Solar Block Circuit will have demonstrated that when sunlight was shining on it during that period it produced power in a standard operating mode.
5. Facility or Solar Block Circuit shall meet at least 95% of the guaranteed capacity (in MW AC) based on the Capacity Test in Attachment 1.²³ The Capacity Test shall determine the facility's Corrected Capacity at the Design Point Conditions.

²³ Ameren did not provide an Attachment 1 with their response, however, the Capacity Test procedure is provided in Schedule F, Section 6, in its Application.

6. Sufficient transmission/distribution interconnection facilities shall exist for the total plant design or Solar Block Circuit net electrical capacity at the time the facility or Solar Block Circuit is declared fully operational and used for service.
7. Sufficient transmission/distribution facilities shall exist for the total plant design net electrical capacity into the utility service territory at the time the facility or Solar Block Circuit is declared fully operational and used for service.

The in-service criteria provided by Ameren is comparable to the criteria used for other solar facilities, such as Ameren Missouri's Cape Girardeau and O'Fallon Renewable Energy Centers.

Staff recommends the Commission condition the granting of the CCN on the in-service criteria listed above being used for future determination of whether the facility, once constructed, is fully operational and used for service.

Staff Witness: Amanda Coffey

CONCLUSION

Based on the application and supporting documentation and Staff recommends that the Commission award the requested CCN, contingent on Ameren Missouri meeting the following conditions:

1. Ameren Missouri agrees to include tariff language such that in the event that the Project is subscribed to at least the 50% level but less than 100%, the cost to the customer shall be the same as if the Project was fully subscribed, leaving Ameren Missouri's shareholders to pay for any deficit;
2. Develops conservative "not-to-exceed" rates that are expected to recover the entire revenue requirement associated from the facility, from participants, in each year of the program term;
3. Provides the conservative "not-to-exceed rate" to the waitlist customers, and any prospective customers, requesting feedback on the impact of the status of their expected subscription status;

4. Provides the Commission, and Staff, documentation of the calculation of the conservative “not-to-exceed” rate and the subsequent total waitlist subscription level based upon customer feedback on subscription status;
5. Demonstrates that the expected subscription level exceeds the 70%, equivalent to 4.9 MW of the expected generation capacity of the solar resource;
6. Ameren Missouri agree to use the in-service criteria contained in this memo to determine whether the facility, once constructed, is fully operational and used for service; and
7. Ameren Missouri agree that any costs associated to the CSP be well recorded and isolated from the non-subscribers in future rate cases.

While Staff has some other concerns regarding how the energy accounting will work under the CSP and the continuation of the CSP Pilot, those issues are more relevant to a subsequent rate case and should not affect the outcome of this case.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

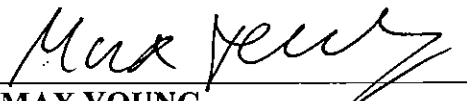
In the Matter of the Application of Union Electric)
Company d/b/a Ameren Missouri for Permission) File No. EA-2024-0212
and Approval and a Certificate of Public)
Convenience and Necessity)

AFFIDAVIT OF MAX YOUNG

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW MAX YOUNG, and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff Recommendation, in Memorandum form*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

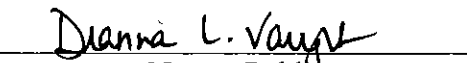


MAX YOUNG

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 29th day of July 2024.

DIANNA L. VAUGHT
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: July 18, 2027
Commission Number: 15207377



Notary Public

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)
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Convenience and Necessity)
File No. EA-2024-0212

AFFIDAVIT OF SEOUNG JOUN WON, PhD

STATE OF MISSOURI)
)
COUNTY OF COLE) ss.

COMES NOW SEOUNG JOUN WON, PhD, and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff Recommendation, in Memorandum form*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

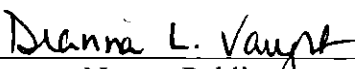


SEOUNG JOUN WON, PhD

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 25th day of July 2024.

DIANNA L. VAUGHT
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: July 18, 2027
Commission Number: 15207377



Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

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AFFIDAVIT OF FRANCISCO DEL POZO

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW FRANCISCO DEL POZO, and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff Recommendation, in Memorandum form*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

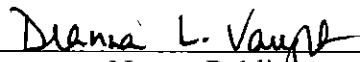


FRANCISCO DEL POZO

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 25th day of July 2024.

DIANNA L. VAUGHT Notary Public - Notary Seal State of Missouri Commissioned for Cole County My Commission Expires: July 18, 2027 Commission Number: 15207377



Notary Public