

Exhibit No.:
Issue(s): Cape Girardeau Solar
In-Service
Witness: Amanda Coffey
Sponsoring Party: MoPSC Staff
Type of Exhibit: True-Up Direct/Surrebuttal
Testimony
Case No.: ER-2022-0337
Date Testimony Prepared: March 13, 2023

MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

ENGINEERING ANALYSIS DEPARTMENT

TRUE-UP DIRECT/SURREBUTTAL TESTIMONY

OF

AMANDA COFFER

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

CASE NO. ER-2022-0337

*Jefferson City, Missouri
March 2023*

True-Up Direct/Surrebuttal Testimony of
Amanda Coffey

1 Data Request Nos. 0259.2 and 0259.3, and that I would finish my evaluation after receipt of
2 these responses and provide a recommendation concerning satisfaction of the in-service criteria
3 in true-up direct testimony.

4 Q. Have you since received these responses and finished your evaluation?

5 A. Yes. Responses were received to Staff Data Request No. 0259.2 on
6 January 5, 2023, with a supplement received on February 17, 2023, and the response for
7 Staff Data Request No. 0259.3 was received on February 3, 2023. I was able to review these
8 responses and finish my evaluation of the in-service criteria for Cape Girardeau Renewable
9 Energy Center. My review of the solar in-service criteria is attached as Schedule AC-s1.

10 Q. Company witness Ajay Arora stated in his testimony that all of the in-service
11 criteria were met on or before December 31, 2022. Do you agree?

12 A. Yes.

13 Q. What is your recommendation regarding the in-service criteria for the
14 Cape Girardeau Renewable Energy Center?

15 A. The solar in-service criteria has been met for the Cape Girardeau Renewable
16 Energy Center. The Cape Girardeau Renewable Energy Center is fully operational and used
17 for service and can be included in rates as of December 31, 2022.

18 Q. Does this conclude your true-up direct/surrebuttal testimony?

19 A. Yes it does.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company)
d/b/a Ameren Missouri's Tariffs to Adjust)
Its Revenues for Electric Service) Case No. ER-2022-0337

AFFIDAVIT OF AMANDA COFFER

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW AMANDA COFFER and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *True-Up Direct/Surrebuttal Testimony of Amanda Coffe*r; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.




AMANDA COFFER

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 9th day of March 2023.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
Commission Number: 12412070



Notary Public

Staff has utilized the following in-service criteria to evaluate solar facilities prior to inclusion in a utility's rate base:

1. All major construction work is complete.

Construction of the Cape Girardeau solar facility was completed and the facility was initially operational on July 20, 2022. After submitting the as-built drawings for final drafting, the contractor informed Ameren that the AC cables from the inverters to the main switchboard were derated and new, larger cables needed to be installed. The cables were ordered and the 8 inverters affected by this issue were de-energized for safety reasons. The cables have since been installed. Ameren has provided a letter from its contractor indicating that the facility was substantially completed as of November 2, 2022.¹

Criterion 1 has been met.

2. All preoperational tests have been successfully completed.

Ameren provided the following documents in response to this requirement:

- Ameren Show Me Center – 395W.pdf
- Ameren Show Me Center 400W.pdf
- Array #1 Installation Inspection Report.pdf
- Array #2 Installation Inspection Report.pdf
- Array #3 Installation Inspection Report.pdf
- Array #4 Installation Inspection Report.pdf
- Array #5 Installation Inspection Report.pdf
- Array #6 Installation Inspection Report.pdf
- Array #7 Installation Inspection Report.pdf
- Array #8 Installation Inspection Report.pdf
- Cable Megger Test Results.pdf
- DC Local Control Distribution Panel Checklist.pdf
- Low Voltage Disconnect Switch Checklist.pdf
- Medium Voltage Dry Type Transformer Checklist.pdf
- North Array DC Voltages.pdf
- South Array DC Voltages.pdf
- PV Megger Testing.pdf

Criterion 2 has been met.

3. Facility successfully meets contract operational guarantees that are necessary for satisfactory completion of all other items in this list.

The Company provided the capacity test procedures, capacity test data², and its executed contracts for Cape Girardeau Renewable Energy Center³. Staff reviewed these documents and the only operational guarantee related to other items on the list is the satisfactory

¹ Data Request 259.1.

² Company response to Data Request 259, AUE-SPEC-000026-Rev 1_conformed final_Section 16999 Inspection and Testing.pdf, and CGREC_Capacity Verification Datasheet_2022-07-25_rev1.xlsx.

³ ER-2021-0240, Data Request 432.

completion of the Capacity Test. Additionally, the Company provided a more recent Capacity Test in response to Staff Data Request 259.3.

Criterion 3 has been met.

4. Upon observation of the facility for 72 consecutive hours, the facility will have demonstrated that when sunlight was shining on it, during that period, it produced power in a standard operating mode.

The Company provided the capacity test procedures and data⁴ from a capacity test that was completed over a four day period, July 21, 2022 through July 24, 2022. However, the capacity test was conducted prior to the installation of new cables. The Company provided a more recent capacity test in response to Staff Data Request 259.3. The data demonstrates that power was produced when sunlight was shining.

Criterion 4 has been met.

5. Facility shall meet at least 95% of the guaranteed capacity (in MW AC) based on the Capacity Test Procedures provided in DR 259. The Capacity Test shall determine the facility's Corrected Capacity at the Design Point Conditions.

The Company provided the capacity test procedures and data⁵ from a capacity test that was completed over a four day period.

In reviewing the capacity test procedures and capacity test data, Staff noticed a discrepancy between the Capacity Test Calculations in section 4.1.2.1 of the Inspection and Testing Procedures and the calculations in the Capacity Verification Datasheet. Staff has sent a DR requesting clarification. The Company responded with its explanation. Further, Staff had a call with the Company for clarification. The Company will resubmit the corrected calculations.

Criterion 5 has been met.

6. Sufficient transmission/distribution interconnection facilities shall exist for the total plant design net electrical capacity at the time the facility is declared fully operational and used for service.

Ameren provided a Generation Interconnection Study⁶ that was performed to determine impacts on the Ameren Missouri Electric System resulting from the connection and operation of the Cape Girardeau Renewable Energy Center.

Criterion 6 has been met.

⁴ Company response to Data Request 259.3

⁵ Company response to Data Request 259, AUE-SPEC-000026-Rev 1_conformed final_Section 16999 Inspection and Testing.pdf, and CGREC_Capacity Verification Datasheet_2022-07-25_rev1.xlsx.

⁶ Company response to Data Request 259, DG93 - Show Me Solar Generation Connection Study Report - Rev 0.pdf.

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 is declared fully operational and used for service.

Ameren provided a Generation Interconnection Study⁷ that was performed to determine impacts on the Ameren Missouri Electric System resulting from the connection and operation of the Cape Girardeau Renewable Energy Center.

Criterion 7 has been met.

⁷ Company response to Data Request 259, DG93 - Show Me Solar Generation Connection Study Report - Rev 0.pdf