

Exhibit No.:
Issue(s): Variable Fuel Expense
Witness: Shawn E. Lange, PE
Sponsoring Party: MoPSC Staff
Type of Exhibit: True-up Direct Testimony
Case No.: ER-2021-0240
Date Testimony Prepared: November 5, 2021

MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

ENGINEERING ANALYSIS DEPARTMENT

TRUE-UP DIRECT TESTIMONY

OF

SHAWN E. LANGE, PE

UNION ELECTRIC COMPANY

d/b/a Ameren Missouri

CASE NO. ER-2021-0240

Jefferson City, Missouri
November 2021

1 A. In direct Staff modeled High Prairie based on the 5 m/s cut in speed
2 generation shape¹. ** [REDACTED]

3 [REDACTED]
4 [REDACTED] **. Staff witness Claire M. Eubanks
5 states:

6 Ameren Missouri is purchasing and installing the deterrent system for 15 of
7 the turbines at High Prairie to study its effectiveness during the 2022 bat season
8 (April 1, 2022 – October 31, 2022). Ameren Missouri is also preparing a request
9 for proposal for an active curtailment system for use during the 2022 bat season.
10 Finally, model-based curtailment requires time to study weather and bat activity.
11 Ameren Missouri does not expect to implement this approach until the 2023 bat
12 season.³

13 Ameren witness Ajay Aurora stated “We likely will not know the efficacy of these
14 systems until sometime in 2022”⁴. Therefore Staff is adjusting the generation shape to
15 account for the reduction in nighttime generation during the period of April 1 through
16 October 31.

17 Q. What changes were made to the modeling associated with Atchison wind
18 farm?

19 A. At direct Staff did not have sufficient information to deem the plant in-
20 service but reasonably expected additional information from Ameren Missouri to be

¹ Generation shape in this context is the modeled hourly generation of a developing wind site. This shape is typically developed using specialized software that takes into account historical wind speeds expected for the wind farm site, site layout, turbine placement, hub height, turbine capacity as well as other pertinent information.

² Ameren Response to Staff DR 714.1

³ Claire M. Eubanks Rebuttal Pg. 5 lines 12-17.

⁴ Ajay Aurora Rebuttal Pg. 16 lines 2-3.

1 forthcoming; therefore, Staff recommended the wind farms be included in the development
2 of revenue requirement. In my rebuttal testimony, I recommended the Commission find
3 294.4 MW of wind capacity at Atchison met the in-service criteria. Additionally, Staff
4 Witness J Luebbert recommended that High Prairie met the in-service Criteria. I have
5 adjusted the capacity of Atchison from the modeled 299 MW in direct to 294.4 MW in
6 True-up Direct and made no changes to the capacity of High Prairie.

7 Q. What is the value of the variable fuel and purchase power expense?

8 A. The Staff calculates the variable fuel and purchased power expense
9 for Ameren Missouri for known and measureable changes through September 30, 2021,
10 to be \$356,857,756.

11 Q. What is the true up value of the physical bilateral margins, financial
12 swaps, and real time deviation?

13 A. The adjustments for physical bilateral margins, financial swaps, and
14 real time deviation are ** [REDACTED] **

15 Q. What is your recommendation?

16 A. I recommend that the Commission adopt the updated variable fuel
17 and purchase power expense that Staff modeled as well as the updated value of physical
18 bilateral margins, financial swaps, and real time deviation.

19 Q. Does this conclude your True-up direct testimony?

20 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-2021-0240

AFFIDAVIT OF SHAWN E. LANGE, PE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

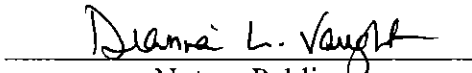
COMES NOW SHAWN E. LANGE, PE, and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *True-Up Direct Testimony of Shawn E. Lange, PE*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.


SHAWN E. LANGE, 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 3rd day of November, 2021.


Notary Public

DIANNA L. VAUGHT Notary Public - Notary Seal State of Missouri Commissioned for Cole County My Commission Expires: July 18, 2023 Commission Number: 15207377
