

Exhibit No.:
Issue(s):
Witness: Nicholas Bowden, Ph.D.
Type of Exhibit: True-Up Rebuttal
Testimony
Sponsoring Party: Union Electric Company
File No.: ER-2022-0337
Date Testimony Prepared: March 24, 2023

MISSOURI PUBLIC SERVICE COMMISSION

FILE NO. ER-2022-0337

TRUE-UP REBUTTAL TESTIMONY

OF

NICHOLAS BOWDEN, Ph.D.

ON

BEHALF OF

UNION ELECTRIC COMPANY

d/b/a Ameren Missouri

**St. Louis, Missouri
March, 2023**

TABLE OF CONTENTS

I.	PURPOSE OF TESTIMONY	1
II.	MEEIA ADJUSTMENT	1
III.	SOLAR ADJUSTMENT	2
IV.	WEATHER NORMALIZATION	2
V.	GROWTH ADJUSTMENT.....	3
IV.	NON-RESIDENTIAL SWITCHING ADJUSTMENT.....	5

TRUE-UP REBUTTAL TESTIMONY

OF

NICHOLAS BOWDEN, Ph.D.

FILE NO. ER-2022-0337

1 **Q. Please state your name and business address.**

2 A. Nicholas Bowden, Union Electric Company d/b/a Ameren Missouri ("Ameren
3 Missouri" or "Company"), One Ameren Plaza, 1901 Chouteau Avenue, St. Louis, Missouri 63103.

4 **Q. Are you the same Nicholas Bowden that filed direct, rebuttal and**
5 **surrebuttal/true-up testimony in this proceeding?**

6 A. Yes, I am.

7 **I. PURPOSE OF TESTIMONY**

8 **Q. What is the purpose of your true-up rebuttal testimony in this proceeding?**

9 A. The purpose of my true-up rebuttal testimony is to respond to Staff's true-up billing
10 units and normalized revenues. Specifically, billing unit and normalized revenue issues exist related
11 to the following adjustments:

12 1. MEEIA Adjustment

13 2. Solar Adjustment

14 3. Weather Normalization

15 4. Growth Adjustment

16 5. Non-residential Switching Adjustment

17 **II. MEEIA ADJUSTMENT**

18 **Q. Did you review Staff's MEEIA Adjustment in its true-up filing?**

19 A. Yes.

1 **V. GROWTH ADJUSTMENT**

2 **Q. Did Staff perform a Growth Adjustment in its billing unit and normalized**
3 **revenue analysis in its true-up filing?**

4 A. Yes.

5 **Q. Did you review Staff's Growth Adjustment?**

6 A. Yes.

7 **Q. What was the result of that review?**

8 A. There is one notable result of the review. The Company and Staff used different
9 assumptions to allocate residential Evening/Morning Savers kWh associated with the growth
10 adjustment to block 1 and block 2 usage, and that difference in assumptions has a notably different
11 impact on the Staff's and Company's growth adjustments for the residential class.

12 **Q. Is there a specific reason why different growth-related assumptions about**
13 **Evening/Morning Savers billing units are impactful in this case?**

14 A. Yes. There was a significant number of customers switching from Anytime Users
15 to Evening/Morning Savers in the test year and true-up period. The customers switching were not
16 random, but rather followed the geographic roll-out of AMI meters. If the characteristics of
17 customers who were switching changed over the test year and true-up period, and the assumption
18 about the characteristics in each month of the test year don't reflect the characteristics of customers
19 at the true-up date, then the assumption will distort the outcome.

20 **Q. What are the different assumptions made by the Company and Staff?**

21 A. The Company assumed that Evening/Morning Savers customers after the
22 adjustment look more like Anytime Users customers did in the test year than they look like
23 Evening/Morning Savers customers did in the test year. Staff assumed the opposite, that

1 Evening/Morning Savers customers after the adjustment look more like Evening/Morning Savers
2 customers did in the test year than they look like Anytime Users customers did in the test year.

3 **Q. Which one of the assumptions is better?**

4 A. The Company's assumption is better for one simple reason. More customers were
5 switched to Evening/Morning Savers from Anytime Users in the adjustment, than there were
6 customers in evening morning Evening/Morning Savers during the test year. Said another way,
7 there are more customers who are Evening/Morning customers after the adjustment who were
8 Anytime Users in the test year than there are customers who are evening morning customers after
9 the adjustment who were actually Evening/Morning Savers customers during the test year. In this
10 context, customer means customer-months, so if there are 1 million customers, then there are 12
11 million customer-months per year. There were 2,325,792 Evening/Morning Savers customer-
12 months in the test year and 2,964,248 customers-months which were switched from Anytime Users
13 to evening morning Evening/ Morning Savers in the adjustment.

14 **Q. Does an alternative assumption exist that gives weight to both Staff's**
15 **assumption and the Company's assumption?**

16 A. Yes. An alternative assumption exists which mathematically weights both Staff's
17 and the Company's assumptions. The alternative is to use a weighted average of the Staff's and the
18 Company's assumption. The alternative also does not require a choice of weights, but allows the
19 data to dictate them. The alternative is to use the combined Anytime User and Evening/Morning
20 Savers average block 1 and block 2 split. This combined average is implicitly and literally a
21 weighted average of the assumptions used by Staff and the Company. In fact, both the Company
22 and Staff use a similar combined Anytime User and Evening/Morning Saver average of the total
23 kWh to determine the total kWh that will switch with each customer. The use of a similar

1 assumption for the determination of block 1 and block 2 kWh that result from the switch is
2 logically consistent with that choice both the Company and Staff made related to the total kWh
3 switched.

4 **Q. Have you quantified the impact of implementing this average customer**
5 **assumption to Evening/Morning Savers block 1 and block 2 kWh?**

6 A. Yes. The Staff's residential class growth adjustment resulted in a \$6 million
7 increase in revenue, while the Company's growth adjustment resulted in a \$2 million increase in
8 revenue. The weighted average assumption results in a \$3.5 million increase in revenue.

9 **IV. NON-RESIDENTIAL SWITCHING ADJUSTMENT**

10 **Q. Did you review Staff's non-residential switching adjustment?**

11 A. Yes.

12 **Q. Could you describe the purpose of Staff's non-residential customer switching**
13 **adjustment?**

14 A. Yes. Both Staff and the Company model non-residential customers who switch to
15 or from the SPS and LPS classes on a customer-specific basis. That means that we identify specific
16 customers from those classes who switch to another class or leave or enter the service territory,
17 and make adjustments for those customers' specific kWh and kW characteristics.

18 **Q. What is the result of your review of Staff's switching adjustment?**

19 A. Staff switching adjustments are unreasonable, because Staff makes two decisions
20 that are unreasonable when performing its switching adjustment.

21 First, Staff assumes all customer kWh coming to or leaving from the SPS class are block 1
22 kWh. The SPS has a declining block tariff with three blocks, and it is clear that not all kWh coming
23 or leaving the class are block 1. For instance, in June of 2022, Staff removes 6.6 million kWh and

1 12,772 kW out of the SPS class. Per the SPS tariff, the first 150 kWh times kW of demand are
2 block 1. That means the maximum number of block kWh, approximately 1.9 million kWh, can be
3 block 1 kWh. Furthermore, per the SPS tariff, the next 200 kWh time kW demand are block 2
4 kWh. Therefore, the next approximately 2.5 million kWh are block 2 kWh. Therefore, 2.2 million
5 kWh are block 3 kWh.¹ Nonetheless, Staff assumes that all kWh are block 1 kWh, while it is clear
6 that some of the kWh are block 1, some are block 2 and some are block 3 kWh.

7 Second, Staff adds kWh and kW to the SPS class for an LPS customer who has shut down
8 operations. The customer's plan to shut down was known at the time of the Company's direct filing
9 and that information was provided to Staff via data request responses.² This customer's usage
10 measured approximately 200,000 kWh and 400 kW of demand in May and June of 2022 of the
11 test year as the customer began shutting down operations. Staff added nearly 3,000,000 kWh and
12 5,000 kW per month to the SPS class for the months of July 2021 through March 2022 of the test
13 year attributable to the customer though. This known and measurable change should be reflected
14 in normalized billing units.

15 **Q. Does this conclude your true-up rebuttal testimony?**

16 A. Yes, it does.

¹ Calculated: 6.6 million kWh – 1.9 million kWh - 2.5 million kWh = 2.2 million kWh.

² MPSC 0146 and MPSC 0148.

**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) Case No. ER-2022-0337
Its Revenues for Electric Service.)

AFFIDAVIT OF NICHOLAS BOWDEN, Ph.D.

STATE OF MISSOURI)
)**ss**
CITY OF ST. LOUIS)

Nicholas Bowden, being first duly sworn states:

My name is Nicholas Bowden, and on my oath declare that I am of sound mind and lawful age; that I have prepared the foregoing *True-Up Rebuttal Testimony*; and further, under the penalty of perjury, that the same is true and correct to the best of my knowledge and belief.

 \ Nicholas Bowden
Nicholas Bowden

Sworn to me this 24th day of March, 2023.