

Exhibit No.:  
Issue(s): Rate Design  
Witness: Ahmad Faruqui  
Type of Exhibit: Rebuttal Testimony  
Sponsoring Party: Union Electric Company  
File No.: ER-2021-0240  
Date Testimony Prepared: October 15, 2021

**MISSOURI PUBLIC SERVICE COMMISSION**

**FILE NO. ER-2021-0240**

**REBUTTAL TESTIMONY**

**OF**

**AHMAD FARUQUI, Ph.D.**

**ON**

**BEHALF OF**

**UNION ELECTRIC COMPANY**

**D/B/A AMEREN MISSOURI**

**St. Louis, Missouri**

**October, 2021**

**REBUTTAL TESTIMONY**

**OF**

**AHMAD FARUQUI**

**FILE NO. ER-2021-0240**

**I. INTRODUCTION**

1

2 **Q. Please state your name for the record.**

3 A. Ahmad Faruqui. I am a Principal at The Brattle Group, which is located at  
4 201 Mission Street, Suite 2800, San Francisco, CA 94105.

5 **Q. Are you the same Ahmad Faruqui who filed direct testimony in the case**  
6 **on behalf of Ameren Missouri?**

7 A. Yes.

8 **Q. What issues are you addressing in this rebuttal testimony?**

9 A. I am addressing two issues in the Staff's Class Cost of Service Report. The  
10 first issue is the differential between peak and off-peak rates in the default time-of-use  
11 (TOU) rate, and the second issue is the name of the new TOU rates that Ameren Missouri  
12 has rolled out.

13 **II. Reasons for Not Changing the Differential**

14 **Q. Staff recommends that Ameren Missouri increase the differential**  
15 **between peak and off-peak prices for the default time-of-use (TOU) rate by one penny**  
16 **per kWh during the summer months and to half a penny per kWh during the non-**  
17 **summer months. Do you agree with this recommendation?**

18 A. No, I do not agree with it.

1           **Q.     Staff says this modest differential will have no impact on customer bills**  
2 **but that it will begin to impart the notion to customers that energy used during the**  
3 **daytime hours is more expensive than the energy used during the nighttime hours. Do**  
4 **you agree with this rationale for enhancing the differentials between peak and off-**  
5 **peak prices in the default rate?**

6           A.     No, I do not agree with it.

7           **Q.     Staff says that this will be a continuation of Ameren Missouri’s default**  
8 **TOU rollout strategy. Do you agree with it?**

9           A.     No, I do not agree with it.

10          **Q.     What are your reasons for disagreeing with Staff’s recommendations,**  
11 **the rationale for Staff’s recommendations, and Staff’s assertion that this will be a**  
12 **continuation of Ameren Missouri’s default TOU rollout strategy?**

13          A.     The proposed enhancement of the rate differential between peak and off-  
14 peak periods is so small that it provides no additional financial incentive whatsoever to  
15 customers to move their usage from peak periods to off-peak periods beyond the existing  
16 default rate differential. The Staff itself says the change in the default rate that Staff is  
17 proposing will have virtually no impact on customer bills. If it will have virtually no impact  
18 on customer bills, then why would it attract customer attention, let alone impart an  
19 enhanced signal relative to the existing default rate differential to them that peak prices are  
20 higher than off-peak prices? In my opinion, based on decades of working with TOU rates  
21 around the U.S. and Canada, and based on my reading of the vast literature on TOU rates  
22 in Europe, Asia, Australia, New Zealand, Latin America, and Africa, the proposed

1 modification to the differential is so tiny that it will be ignored by the vast majority of  
2 customers.

3 **Q. Why would this be a problem?**

4 A. Because those customers who do notice it are likely to get confused as to  
5 what is going on, since they recently received communications to learn about the default  
6 rate with the current differential, and the impact that it is likely to have on their bills based  
7 on their usage patterns. The change Staff proposes, which would so abruptly follow  
8 communication about the rate's prospective impact on the customer with its present  
9 parameters, may lead to customer dissatisfaction, disenchantment, and frustration. In turn,  
10 this will undermine the Company's long-term initiative to take advantage of TOU rate  
11 structures for customers' benefit, including by helping customers lower their bills and by  
12 creating grid benefits for all customers by moving usage from peak to non-peak periods.  
13 As I stated in my direct testimony, any changes in the default TOU rate should wait until  
14 Ameren Missouri has completed the rollout of advanced metering infrastructure, which I  
15 understand is a few years away.

16 **III. Reasons to Not Change the Names of Ameren Missouri's TOU Rates**

17 **Q. Staff has characterized the names Ameren Missouri has given to its**  
18 **TOU rate options as not being descriptive but promotional. Staff further says these**  
19 **names do not convey the risks such rates carry for customers and suggest that the**  
20 **names be changed. Do you agree with Staff's characterization of the names?**

21 A. No, I do not. As I understand it, Ameren Missouri has designed its TOU  
22 rates to give residential customers choice between multiple rate options, convenience in  
23 comparing rate options and selecting one of them, and the ability to reduce the amount of

1 money they spend on electricity. The names of the advanced TOU rates try to highlight  
2 the level of savings a customer may achieve by consuming more when it costs less to  
3 deliver electricity and to consume less when it is more expensive to deliver electricity. The  
4 notion of saving money on their electric bills is key to getting customers to undertake the  
5 required behavior modifications. Ameren Missouri is undertaking a marketing, education,  
6 and outreach campaign to help its customers (a) understand how the rates work and (b)  
7 show them ways for reducing their electricity bills by reducing peak usage and/or or  
8 shifting to off-peak usage. Ameren Missouri also has installed a simple and easy to use bill  
9 comparison tool on its website to help customers analyze whether their bill would go up or  
10 go down when they shift over to the new rate, which is explained further in the rebuttal  
11 testimony of Company witness Steve Wills.

12 **Q. Is it appropriate to focus on the savings potential of TOU rate options**  
13 **while naming the TOU rates?**

14 A. Yes. In my opinion, the overarching goal of almost all TOU rate programs  
15 is to encourage customers to save money by taking actions that are also beneficial to the  
16 electric grid. In my direct testimony, I specifically discussed the savings that customers  
17 could expect to achieve on the different TOU rates offered by the Company. I based my  
18 analysis on the Arcturus database that I built along with colleagues from The Brattle Group,  
19 which synthesizes information from studies that have been carried-out over several years  
20 of 400 TOU treatments in multiple pilot programs and full-scale deployments in the United  
21 States and around the globe. The overarching conclusion that one arrives at by reviewing  
22 the Arcturus database is that customers on TOU rates can and do respond to the price  
23 signals in those rates, and the response is generally proportional to the peak/off-peak rate

1 differential reflected in the rate. Ameren Missouri's rate differentials in its TOU rates are  
2 sufficiently strong to motivate customers to sign up for those rates and to save money by  
3 reducing peak usage and shifting it to off-peak periods. Customers on these rates are likely  
4 to save money, and simultaneously reduce the strain on the electric grid during peak times.

5 **Q. How does Ameren Missouri's deployment of TOU rates compare with**  
6 **that of other utilities in the US?**

7 A. It compares very well. Ameren Missouri has done as much as any utility  
8 can do to intrigue customers with the concept of time-variation in rates, to draw them to its  
9 website, and to educate them on how best to reduce their bills on the new rates. This  
10 approach is much better than that of many other utilities. Many of those other utilities do  
11 not even present half of the information on their website that Ameren Missouri has  
12 provided on its website. Furthermore, they use dull and dreary names for their TOU rates,  
13 such as E1, EV2A, TOU DR-1 and TOU-D Prime. Such names come across as  
14 hieroglyphics to customers. In the interest of simplicity, some utilities simply call them  
15 TOU rates, a concept very few customers understand. Even if they do understand them,  
16 they think that if they pick a TOU rates, they will have to shut down their consumption  
17 during peak periods and live a harsh life. Other utilities spell out their TOU rates and call  
18 them the Time-of-Day Pricing plans. Such names do not attract customers to TOU rates  
19 since they do not even remotely suggest a savings opportunity to customers. Thus, very  
20 few customers adopt TOU rates in most jurisdictions. Unless the TOU rates have attractive  
21 names, few people will adopt them. If few people adopt them, the very purpose of  
22 deploying TOU rates will be defeated. I assume that Staff's recommendation to utilize more  
23 "informative" names would similarly result in bland, dreary, or otherwise unappealing

1 names for Ameren Missouri's rate plan offerings. In my opinion, such a naming strategy  
2 would inhibit customer adoption of TOU rates and result in fewer customers participating  
3 in the modern rate options that the Company has made available to customers, creating less  
4 beneficial load shifting as well.

5           In this regard, it is worth considering the success that other utilities have  
6 had in recruiting customers to TOU rates. Arizona Public Service ("APS") has the largest  
7 percentage of customers (above 60%) on TOU rates of any large electric utility of which I  
8 am aware. APS's rates have attractive names such as Saver Choice and Saver Choice Plus.<sup>1</sup>  
9 By way of contrast, the Salt River Project ("SRP"), which operates in a territory that is  
10 immediately adjacent to large portions of the APS territory, uses more bland names for its  
11 TOU rates. It has roughly half of the adoption rate of APS. While there are several reasons  
12 why the adoption rates might differ between these two utilities, the nomenclature of the  
13 TOU rates has to be among the top factors driving the lower penetration of such rates at  
14 SRP and the higher penetration at APS. The simple conclusion that I reach by observing  
15 this circumstance, and others in the industry that I am familiar with, is that attracting  
16 customers to participate in TOU rate plans means appealing to those customers in ways  
17 that appeal to things they value, such as saving money on their electric bill.

18           **Q. Does this conclude your rebuttal testimony?**

19           A. Yes, it does.

---

<sup>1</sup> <https://www.aps.com/en/Residential/Service-Plans/Compare-Service-Plans/>.

**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-2021-0240  
Its Revenues for Electric Service.         )

**AFFIDAVIT OF AHMAD FARUQUI, PhD.**

**STATE OF CALIFORNIA    )**  
**CITY OF                    ) ss**  
**SAN FRANCISCO         )**

Ahmad Faruqui, PhD., being first duly sworn on his oath, states:

My name is Ahmad Faruqui, PhD, and on his oath declare that he is of sound mind and lawful age; that he has prepared the foregoing *Rebuttal Testimony*; and further, under the penalty of perjury, that the same is true and correct to the best of my knowledge and belief.

*/s/ Ahmad Faruqui, Phd.*  
Ahmad Faruqui, PhD.

Sworn to me this 12th day October, 2021.