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MISSOURI PUBLIC SERVICE COMMISSION

COMMISSION STAFF

INDUSTRY ANALYSIS DIVISION

TARIFF/RATE DESIGN DEPARTMENT

SURREBUTTAL TESTIMONY

OF

SARAH L.K. LANGE

**THE EMPIRE DISTRICT ELECTRIC COMPANY,
d/b/a Liberty**

CASE NO. ER-2021-0312

*Jefferson City, Missouri
January 2022*

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1 **SURREBUTTAL TESTIMONY**

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5 **d/b/a Liberty**

6 **CASE NO. ER-2021-0312**

7 Q. Please state your name and business address.

8 A. My name is Sarah L.K. Lange. My business address is P.O. Box 360,
9 Jefferson City, MO 65102.

10 Q. Are you the same Sarah L.K. Lange that contributed to Staff's Class Cost of
11 Service (CCOS) and Rate Design Report filed on November 17, 2021, and filed Rebuttal
12 testimony in this case?

13 A. Yes.

14 Q. What is the purpose of your surrebuttal testimony in this proceeding?

15 A. The purpose of my surrebuttal testimony is to respond to testimonies of
16 The Empire District Electric Company, d/b/a Liberty ("Empire" or "Company") and the
17 Midwest Energy Consumers Group (MECG) concerning rate structure, rate design, and
18 reasonable rate modernization strategies.

19 **DESIGNING JUST AND REASONABLE RATES**

20 Q. At page 19 of his rebuttal testimony, Empire witness Gregory W. Tillman asks
21 "Does Staff's proposed structure for the residential and small general Time of Use (TOU) rates
22 incorporate a price differential designed to elicit a meaningful response?" Is the eliciting of a
23 meaningful response the primary consideration in designing rates for an electric utility?

1 A. No. The intent of rate design is to establish rates that are just and reasonable.
2 Staff's rate design recommendations in this case use a time variable - as opposed to the existing
3 flat block and declining block designs currently in place at Empire – to price out the service
4 which Empire is authorized to offer. Given two options, rates that (1) recover a little more
5 revenue per kWh during the times of day when usage, expenses, and system requirements are
6 generally higher and a little less revenue per kWh during the times of day when usage, expenses,
7 and system requirements are generally lower are more reasonable than rates that (2) recover the
8 same amount per kWh all day long, or rates that charge less for kWh used later in the month
9 than kWh used earlier in the month, the first option results in rates that more equitably recover
10 revenues from customers.¹

11 Q. Mr. Tillman suggests at page 21 that allowing three LP customers to opt-in to a
12 highly-differentiated ToU rate design will be instructive for further rate modernization.
13 What information would you expect to be elicited by offering of the Empire-designed,
14 limited-availability, highly-differentiated ToU rate?

15 A. I expect this offering to identify a maximum of three LP customers whose loads
16 currently align with the designed time periods such that the customers will receive a bill
17 reduction, or possibly a maximum of three LP customers whose loads can be slightly modified
18 to align with the designed time periods such that the customers will receive a bill reduction.
19 This information can be achieved through a review of current loads, or possibly a brief customer
20 survey executed by existing LP account representatives.

¹ Empire witness Lyons devotes significant portions of his testimony to a similar discussion that focuses on rates designed to induce changes in customer behaviors, and that ignores the regulatory structure in Missouri that complicates the introduction of highly-differentiated time-variant rates, as described in the Staff Report at pages 4-6.

1 Q. Mr. Tillman references the Ameren ToU deployment, and references
2 publications by Dr. Faruqui, who was retained as a witness for Ameren Missouri in the current
3 Ameren rate case and the prior rate case in which the ToU default rate was promulgated. Has
4 Dr. Faruqui offered an opinion on Staff's approach of implementing a low-differential,
5 long-period ToU design as a reasonable rate design and as a path of customer education toward
6 more sophisticated rate designs?

7 A. Yes. Dr. Faruqui endorsed the concept behind the Staff's proposal in that case
8 (similar to Staff's proposal in this case) during the March 4, 2020, on-the-record presentation
9 of the Stipulation, stating,

10 . . . what I picked up was the sentiment I think at least it was the Staff
11 testimony that let's do it gradually – and I think Steve Wills mentioned this
12 as well. **Let's first bring in the notion that there is time of use and let's**
13 **very mildly differentiate a default rate, then as the years go by let's**
14 **begin to ramp it up.** And I guess they were calling it “training wheel” I've
15 heard it called gradualism. So if that is the intent to gradually ramp it up and
16 make it a robust differentiation, on peak off peak maybe two to one, and have
17 a shorter peak period **then I suspect this is probably the best way to do it.**²

² As transcribed from the hearing audio, beginning at approximately one hour and forty two minutes,

What can be said positively about this very mild default rate is that it makes all the customers that Ameren Missouri has aware of something called ‘time of use’ because most of them probably today don't think of electricity as having a time of use character. So it will increase awareness and consciousness that there is time variation. Now it admittedly, it is very mild in the differentiation it is really very mild. And so you could well say why have it in the first place why bother people with such a mild differentiation as I said on the positive side well now they are aware of the fact that there is time of use. And I think philosophically, if I was following the discussions earlier when the case was being filed and conversations were taking place, I was not in those conversations, but what I picked up was the sentiment I think at least it was the Staff testimony that let's do it gradually – and I think Steve Wills mentioned this as well. Let's first bring in the notion that there is time of use and let's very mildly differentiate a default rate, then as the years go by let's begin to ramp it up. And I guess they were calling it “training wheel” I've heard it called gradualism. So if that is the intent to gradually ramp it up and make it a robust differentiation, on peak off peak maybe two to one, and have a shorter peak period then I suspect this is probably the best way to do it. But if the idea is to stay with this and just market it indefinitely, there's a part of me that says you might be better off just keeping it as a flat rate and encouraging people to the other time of use rates that are the genuine real time of use rates. So you know I find myself somewhat in an ambivalent here. Not having been part of the negotiations and what the pros and cons were but reading the Staff testimony I got the sense that they were supportive of default time of use rates they just wanted to start with a relatively flat differential with the expectation that it will ramp up over time. Again I am putting

1 Q. At page 4 of his rebuttal testimony, Timothy S. Lyons, discussing
2 implementation of default ToU rates, states the need for “preparing research and analysis on
3 effective approaches to customer education and communication.” Are there utilities operating
4 in and around Empire’s service territory that have already implemented mandatory time-variant
5 rate structures with whom Empire may collaborate or review extant educational materials?

6 A. Yes. SacOsage Cooperative and Barry County Cooperative, currently have
7 time-differentiated demand charges for residential and small general service-type customers,
8 with the on-peak window for SacOsage defined as 6-9AM daily and from 4-7PM daily, and
9 with the on-peak window for Barry County defined as Monday – Friday, 7-8am and 2-6pm.
10 Based on brief phone calls with other cooperatives in the area, at least one will be implementing
11 similar time-differentiated demand charges soon.

12 **EMPIRE’S REQUESTED MODIFICATION TO MANDATORY ToU RATES**

13 Q. What are the four modifications to Staff’s recommended default ToU
14 deployment Mr. Tillman requests at page 24 of his rebuttal testimony, and what are
15 Staff’s responses?

16 A. Mr. Tillman opines that

17 [t]he Commission should make four changes:

18 1. The on-peak period should be adjusted to match the Company’s proposed
19 TOU rate on-peak period to ensure a consistent message to customers about
20 periods of high costs.

21 2. The initial rate differential should be designed based on costs, yet should
22 maintain Staff’s goal of minimizing the impact to customers.

words perhaps into somebody else’s mouth, but that would be one scenario in which I would find myself supporting this concept. Again I am not a party to the settlement or part of the conversations and in my discussions with Steve Wills and others at Ameren have certainly indicated that this is a starting point but the real benefit is the awareness for all of the population and perhaps to direct them to the other rates the Smart Savers and the Ultimate Savers being kind of like the real time of use rates....

1 3. The rate should not be available nor designated as the default rate until one
2 year after approval to ensure the Company has sufficient time to educate its
3 customers regarding the pending transition.

4 4. The rate should be identified as a transitory rate in which the price
5 differential is periodically increased, and block sizes are periodically
6 decreased, to ensure the rate is transitioned over time into an effective
7 time-varying rate structure.

8 Staff is not opposed to refinement of the time period selected, however, the time periods
9 in the Company's proposed ToU rates are too short for development with reliable determinants
10 in this case. In its direct case for Residential ToU default options 1-3, Staff selected a single
11 year-round time period for customer understandability. Staff is not opposed to reasonable
12 modifications of this proposal by the Commission to an afternoon-evening peak for the spring,
13 summer, and fall months, and a dual peak for the winter months to be implemented in
14 compliance tariffs. If this approach is adopted, the "winter" and "summer" seasons require
15 refinement and the fall and spring months should have the same on-peak period as the summer
16 months, not the winter months.

17 The second recommendation and third recommendation should be taken together.³
18 Staff's selection of the level of differential is targeted to the level of increase ordered in this
19 case. The customer impact of raising the rate value for all kWh at the conclusion of this case,
20 then reverting portions of that value a year down the road would result in needless confusion.

21 The fourth recommendation is entirely contemplated by Staff's direct testimony in this
22 case and several other cases and workshops. While the Commission in this case cannot order
23 the rate designs to take effect in a future case, Staff has identified its intent to recommend

³ At pages 22 and 23, Empire witness Tillman discusses the deployment of the Ameren ToU default rate. However, he does not mention the mid-deployment status of Ameren's AMI deployment or the timing of stay-at-home orders related to the COVID pandemic and subsequent relief requested by Ameren related to those orders. Ameren's AMI meter deployment is not expected to be complete for several more years, whereas Empire's AMI deployment has already been completed.

1 movement towards cost-based modern rates, an example of which was provided as Residential
2 default option 4.

3 **MODERNIZATION OF LARGE CUSTOMER RATE STRUCTURES**

4 Q. What is the position of MECG in this case regarding Staff's recommended
5 restructuring of the Large Power rate schedule from a two-block hours' use structure to a
6 multi-part ToU structure, with retention of the facilities charge and with modification of the
7 demand charge to a coincident peak demand charge. ?

8 A. MECG's witness testifies at length that the existing Hours Use rate structure
9 should be maintained.

10 Q. What was the position of MECG in the current Ameren rate case concerning
11 Ameren Missouri's hours use rate structure for comparably-sized customers?

12 A. MECG's position is summarized in its Initial Brief in ER-2021-0240, at page 36,
13 . . . [g]iven the complexity of the rate design and that most customers lack
14 the sophistication to: (1) calculate their rates; (2) respond to price signals;
15 and (3) take steps to reduce their electric bills, MECG suggests that the
16 Commission order Ameren to begin to simplify its LGS / SP rates.
17 Specifically, MECG recommends that the Commission 'require Ameren to
18 redesign LGS and SP as three part rates with unbundled demand charges and
19 time varying energy charges and for all LGS and SP customers to be
20 transitioned to those rates by 2025, which is my understanding of when the
21 Company anticipates AMI will be fully deployed.'

22 While MECG did not provide a detailed rate example in the Ameren Missouri case, the rate
23 structure described by MECG in that case appears to mirror the structure recommended by
24 Staff for Empire.

25 Q. Does this conclude your surrebuttal testimony?

26 A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of the Request of The Empire)
District Electric Company d/b/a Liberty for) Case No. ER-2021-0312
Authority to File Tariffs Increasing Rates)
for Electric Service Provided to Customers)
in its Missouri Service Area)

AFFIDAVIT OF SARAH L.K. LANGE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW SARAH L.K. LANGE and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing Surrebuttal Testimony of Sarah L.K. Lange; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

Sarah L.K. Lange
SARAH L.K. LANGE

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 19th day of January, 2022.

Dianna L. Vaught
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