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Rate Design
Marke/Rebuttal
Public Counsel
ER-2019-0374

REBUTTAL TESTIMONY
OF
GEOFF MARKE

Submitted on Behalf of the Office of the Public Counsel

EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2019-0374

March 9, 2020

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF THE MISSOURI**

In the Matter of The Empire District)
Electric Company's Request for Authority)
to File Tariffs Increasing Rates for Electric) Case No. ER-2019-0374
Service Provided to Customers in its)
Missouri Service Area)

AFFIDAVIT OF GEOFF MARKE

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Geoff Marke, of lawful age and being first duly sworn, deposes and states:

1. My name is Geoff Marke. I am a Regulatory Economist for the Office of the Public Counsel.
2. Attached hereto and made a part hereof for all purposes is my rebuttal testimony.
3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.



Geoff Marke
Chief Economist

Subscribed and sworn to me this 9th day of March 2020.



TIFFANY HILDEBRAND
My Commission Expires
August 8, 2023
Cole County
Commission #15637121

My commission expires August 8, 2023.



Tiffany Hildebrand
Notary Public

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THE EMPIRE DISTRICT ELECTRIC COMPANY
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1 **I. INTRODUCTION**

2 **Q. What are your name, title and business address?**

3 A. Geoff Marke, PhD, Chief Economist, Office of the Public Counsel (“OPC” or “Public
4 Counsel”), P.O. Box 2230, Jefferson City, Missouri 65102.

5 **Q. Are you the same Geoff Marke that filed direct and rebuttal revenue requirement
6 testimony?**

7 A. Yes.

8 **Q. What is the purpose of your rebuttal rate design testimony?**

9 A. I respond to the direct testimony of other parties’ witnesses as indicated regarding the following
10 topics:

- 11 • Class Cost of Service
 - 12 ○ The Empire District Electric Company and/or Liberty Utilities Company
 - 13 (“Empire,” “Liberty,” “Empire-Liberty”) witness Timothy S. Lyons; and
 - 14 ○ Missouri Public Service Commission Staff (“Staff”) witness Robin
 - 15 Kliethermes;
 - 16 ○ Midwest Energy Consumers Group (“MECG”) witness Kavita Maini
- 17 • Residential Customer Charge
 - 18 ○ Empire witness Timothy S. Lyons; and
 - 19 ○ Staff witness Sarah L.K. Lange;
- 20 • Low-Income Pilot Program
 - 21 ○ Empire witness Nathaniel W. Hackney

22 My silence regarding any issue should not be construed as an endorsement of, agreement with,
23 or consent to any other party’s filed position.

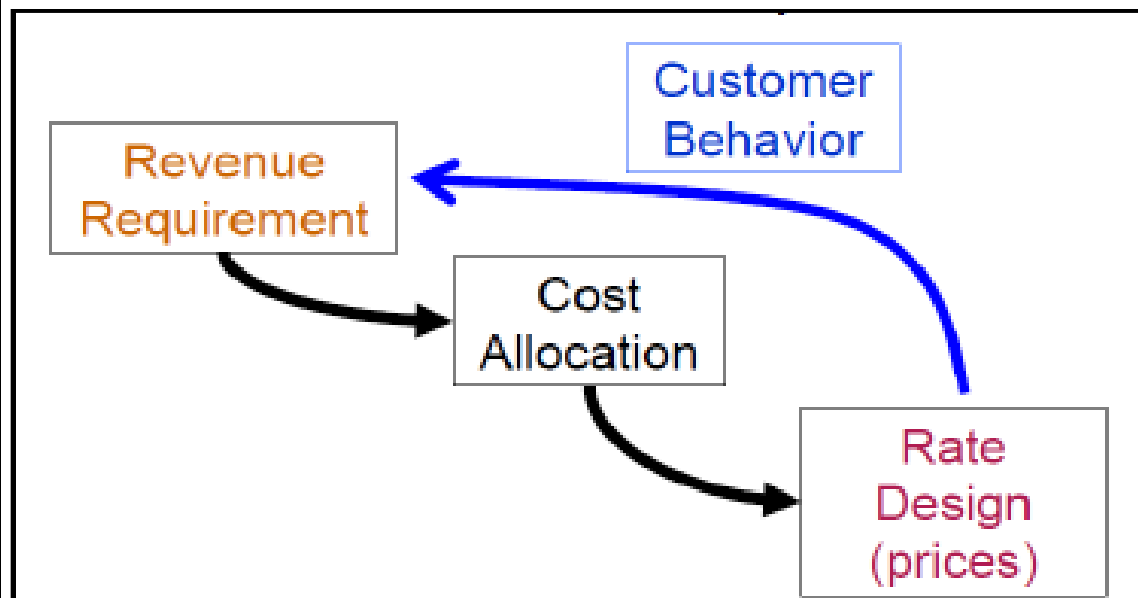
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II. CLASS COST OF SERVICE

Q. What is a Class Cost of Service (“CCOS”) study?

A. It is an analysis that allocates a utility’s allowed costs to provide service among its various customer classes. The total cost allocated to a given class represents the costs that class would pay to produce an equal rate of return to other classes. There is no one definitive accepted method. Instead, there are different methods (e.g., Average and Peak, Average and Excess, Base-Intermediate-Peak, Capacity-Assigned, etc.) and cost allocation factors that produce different outcomes. If step one in a rate case is determining the revenue requirement, then step two is allocating that revenue requirement among customer classes. Step three then focuses on designing the rates for each class to appropriately recover the revenue requirement allocated to it. How rates are designed influences future revenue requirements, thus providing a feedback loop on the entire process. Figure 2 provides a simplified, illustrative feedback loop of the rate case process.

Figure 2: The Rate Case Feedback Loop



Q. By how much is Empire’s rate request increase designed to increase its annual revenues?

A. Empire filed a \$26.5 million, or 4.93% increase.

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1 **Q. Aside from the increase, is Empire seeking any changes in class revenue neutral shifts,**
2 **i.e., how much of Empire’s revenue requirement the rates for each class are designed to**
3 **collect?**

4 A. Yes. The 4.93% increase is not uniform across classes. Figure 2 provides a breakdown of
5 Empire’s estimated bill impact across customer classes and the average annual increase if
6 its request is fully ordered.

7 **Figure 2: Empire’s Requested Average Annual Increase and % Bill Impact**¹

Customer Class	Average Annual Customer Impact	
	Bill Change \$	Bill Change %
RG-Residential	\$96.24	5.8%
CB-Commercial	\$125.82	5.2%
Small Heating	\$164.22	5.0%
GP-General Power	\$1,476.02	3.1%
SC-P Praxair Transmission	\$212,414.31	5.1%
TEB-Total Electric Building	\$1,172.45	3.0%
PFM-Feed Mill / Grain Elev	\$115.67	1.6%
LP-Large Power	\$81,320.65	5.2%
MS-Miscellaneous	\$282.94	5.8%
SPL-Municipal Street Lighting	\$29,358.47	9.4%
PL-Private Lighting	\$553.88	3.4%
LS-Special Lighting	\$72.13	6.9%

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9
¹ ER-2019-0374 Direct Testimony of Timothy S. Lyons, p. 38, 4.

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1 **Q. What is Staff's revenue requirement result for Empire in its Cost of Service report?**

2 A. That Empire is overearning by about \$22 million.²

3 **Q. What revenue requirement did Staff assume for Empire for purposes of Staff's Class**
4 **Cost of Service Report?**

5 A. In its study Staff assumes a \$36.5 million overall revenue requirement reduction with
6 various % rate reductions across classes as well.³ Staff did not estimate changes through
7 January 31, 2020, for purposes of its class cost of service analysis.

8 **Q. What does MCEG recommend?**

9 A. MCEG appears to recommend either a 4.2% or 8.4% revenue neutral allocation increase to
10 the residential class depending on the magnitude of the overall revenue requirement change
11 the Commission ultimately orders in this case. MCEG takes this position, in part, by arguing
12 that Empire's industrial rates are no longer competitive by providing a snapshot of select
13 utilities (omitting states located on each coast and the state of Nebraska) from an Edison
14 Electric Institute utility bill compilation with Empire (Missouri) industrial customers ranked
15 the 12th highest.

16 **Q. Do you have any concerns with MCEG's representations?**

17 A. I do not doubt that Empire's Industrial customers are paying a lot relative to their peers in
18 other states. But Empire's industrial customers are not unique with this distinction. In direct
19 testimony I utilized SNL utility billing data to show that Empire's residential customers are
20 experiencing some of the most pronounced bills in the country, including the fourth largest
21 annual average bill in 2018.⁴

22 However, before I can opine on the appropriateness of MCEG's conclusions I need to see
23 the data. MCEG did not provide any work papers to support its representations of bill

² ER-2019-0374 Staff Report, Cost of Service p. 1. 11-13.

³ ER-2019-0374 Staff Report, Class Cost of Service p. 1. 10-14.

⁴ Since that filing I have become aware that Empire has estimated large amounts of its residential bills throughout 2018 to present. It is unclear how much Empire's inability to accurately and consistently provide monthly bills to its customers has had on the impact (if any) of the reported data.

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1 impacts relative to other states. As such, I intend to engage in further discovery with MECG
2 and update my position in my surrebuttal testimony.

3 **Q. What is your recommendation regarding changes in the relative responsibilities of**
4 **customer classes to Empire for its revenue requirement, i.e., how much of Empire's**
5 **revenue requirement their rates should be designed to collect?**

6 A. As it stands, I do not believe a rate increase is warranted. I also have serious concerns with
7 the validity and reliability of Empire's billing data in light of the large amounts of estimated
8 bills in the test year, including through the Commission-ordered update and true-up
9 periods—September 30, 2019, and January 31, 2020, respectively. As such, I am tentatively
10 aligned with Staff's initial recommendations, but I reserve the right to amend my
11 recommendation as more information is presented.

12 **III. RESIDENTIAL CUSTOMER CHARGE**

13 **Q. Generally, what is a customer charge?**

14 A. A fixed charge to customers each billing period, typically viewed as intended to cover
15 metering, meter reading and billing costs that do not vary with size or usage. Also known
16 as a basic service charge or standing charge.

17 **Q. What are the various parties' positions on Empire's customer charge for its residential**
18 **customers?**

19 A. Empire recommends a 46% increase in its residential customer charge, which would raise it
20 from \$13.00 to \$19.00. Staff recommends the \$13.00 residential customer charge remain as is.

21 **Q. In your opinion what kinds of costs should be recovered in a customer charge?**

22 A. To state the obvious, customer-related costs should be recovered through the customer
23 charge. These should be costs sensitive to connecting a customer irrespective of the
24 customer's load (e.g., meter, billing). That is, customer-related costs exist even when kW
25 demand and kWh are zero.

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1 When having one or more customers on the system raises the utility's cost regardless of how
2 much the customer uses (billing is an example), then a fixed charge to reflect that additional
3 fixed cost the customer imposes on the system makes perfect economic sense. Utilities can
4 justify a customer charge to recover these basic costs because they are directly related to the
5 number of customers receiving an essential monopoly service. The idea that each household
6 has to cover its customer-specific fixed cost also has obvious appeal on grounds of equity. This
7 is contrasted with system-wide "fixed" costs, such as maintaining the distribution network,
8 which do not change if one customer were to drop off the system.

9 **Q. How does increasing and decreasing a residential customer charge impact the**
10 **customers?**

11 A. An increase to the customer charge positively impacts above-average use customers and
12 negatively impacts below-average use customers. On the other hand, a decrease to the
13 customer charge positively impacts below-average use customers and negatively impacts
14 above-average use customers.

15 Stated differently, "in general," a lower customer charge tends to favor, low-income
16 customers, renters, and customers who have invested in energy efficiency and solar (or plan
17 on investing in those items).⁵ In contrast, a higher customer charge favors affluent customers
18 and electric space-heating customers. It also provides greater revenue certainty for the
19 utility.

20 **Q. Is OPC concerned with the frequency of requests to increase residential customer**
21 **charges?**

22 A. Yes. OPC strongly believes the customer charge should not be a conduit to address the
23 Company's perceived external threats and certainly not at the expense of those who can least
24 afford to lose further control over their financial lives. However, beyond low and fixed-income
25 ratepayers, the next obvious subset of ratepayers who are unfairly penalized by an increased

⁵ I say in general, as there will be affluent customers who have below average use and low-income customers with above-average usage.

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1 customer charge are those who have invested time and money in being efficient, conservative
2 and environmentally responsible.

3 This is because increased customer charges offset the financial savings of any previous
4 efficiency actions and erode the incentive to improve appliances or better insulate their home
5 moving forward. Ratepayers who are considering making investments in energy efficiency
6 measures will have longer payback periods over which to recoup their investments. Increasing
7 the customer charge distorts these pricing estimates and would cancel out the energy saved by
8 Empire's energy efficiency programs to date. This same logic applies to distributive generation
9 (rooftop solar).

10 If a ratepayer considers making a large-scale capital investment they should be cognizant of
11 the risk involved with that purchase. In some ways, this is no different than any other long-
12 lived investment. For example, if you pay extra for an electric car, you run the risk that gas
13 prices fall after you buy the car and your investment will not pay off. What's different about
14 distributed generation or energy efficiency is much of the risk is subject to Commission orders.
15 With most financial risks, there's a chance the underlying prices will go up or down 5% but a
16 much smaller chance that they'll change by over 50%. However, this is exactly the sort of risk
17 ratepayers who have elected to become more efficient are faced with whenever a rate case
18 docket is opened.

19 If the residential customer charge is raised, ratepayers who have made investments in energy
20 efficiency or distributed generation will have longer payback periods over which to recoup
21 their investments if any of those fixed monthly customer charges were accepted. Despite the
22 increased customer charge tactic largely being abandoned by utilities throughout the country,⁶
23 ratepayers who made good-faith investments are still exposed to future regulatory rate design
24 departures or rulemaking decisions that could have an adverse impact on their past decisions
25 to proactively take control of their bills.

⁶ Trabish, H.K. (2015) Beyond fixed charges: 'Disruptive Challenges' author charts new utility path. *Utilitydive*.
<http://www.utilitydive.com/news/beyond-fixed-charges-disruptive-challenges-author-charts-new-utility-pat/408971/>

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1 An increased residential customer charge will also negatively impact Empire's ability to
2 increase profits through a MEEIA and/or a Community Solar investment. Empire has made
3 representations of both as potential investments for Commission consideration in this filing.

4 **Q. What about Mr. Lyons argument that electric cooperatives in Missouri have higher**
5 **customer charges?**

6 A. Empire is not an electric cooperative. This Commission does not regulate the rates, including
7 customer charges, of electric cooperatives.

8 **Q. What is your recommendation regarding Empire's residential customer charge?**

9 A. Historically, distribution costs have been recovered through the energy charge in light of
10 economic and public welfare characteristics. More recently, an emphasis on public policy goals
11 focusing on energy efficiency and environmental stewardship have reinforced those decisions.
12 I see very little reason to deviate from that rationale. This is especially true in light of Empire's
13 pending MEEIA application.

14 I recommend that the Commission keep Empire's residential customer charge at \$13.00.

15 **IV. LOW INCOME PILOT PROGRAM**

16 **Q. What is Empire's Low Income Pilot Program ("LIPP")?**

17 A. Certain, self-identified, LIHEAP eligible residential customers can receive a 100% discount
18 on their monthly customer charge.⁷ The customers merely need to stay in good standing (i.e.,
19 pay their bills on-time), be registered with a designated Community Action Agency ("CAA"),
20 be on an Average Payment Plan (budget billing), and not default on payments more than two
21 months.

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⁷ Customers needed to be identified by the Ozarks Area Community Action Corporation ("OACAC") or the
Economic Security Corporation ("ESC") other Empire-relevant Community Action Agencies were not eligible.

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1 **Q. How did this program come to be?**

2 A. Essentially, the Commission directed parties to agree to a low-income discount pilot rate during
3 Empire's last rate case.⁸

4 **Q. Is it legal to have a low-income rate class?**

5 A. I am not an attorney, but a review of the on-the-record transcripts from Empire's last rate case
6 appear to suggest that one could argue a low-income rate unto itself would be discriminatory
7 and, therefore, illegal.

8 **Q. So how did the LIPP get applied to a subset of residential customers?**

9 A. Again, the transcript suggests that if a "pilot" status was applied to the rate, and if no parties
10 were to object, then the legality of the order would not be questioned and the discount could
11 go into effect. This is, in effect what happened. The Commission's order stated:

12 The Commission will authorize Empire to implement an experimental residential low-
13 income pilot program that provides a 100 percent discount on the customer charge for
14 eligible low-income customers, based on LIHEAP eligibility. The goal of the
15 temporary pilot program shall be to evaluate the impact a discount in the customer
16 charge for low-income residential customers has on the disconnection and bad debt
17 rates for Empire both during and after participation in the program. The results of the
18 experimental program shall be reviewed in Empire's next general rate case.⁹

19 **Q. What are the results of Empire's temporary LIPP to date?**

20 A. According to Mr. Hackney, 1,218 customers have participated since February 2017. 594 (or
21 47.9%) customers are currently still receiving the discount. 647 (or 52.1%) customers have
22 dropped off.

23 Of the 1,218 individual customers that participated, 277 withdrew as customers all together
24 and were given final bills. Of those 277 who were given a final bill, 154, or 56% of the
25 customers left an unpaid bill that resulted in total write-offs of \$111,165 or \$722 per customer.

⁸ See Case No:ER-2016-0023, Transcripts: Volume 5, 6, and 7.

⁹ ER-2016-0023 Order Approving Stipulation and Agreement p. 4-5.

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1 Empire's results did not include a control group for comparison.

2 **Q. What is Empire and Staff's position with regard to Empire's temporary LIPP moving**
3 **forward?**

4 A. Empire has taken the position in its Low-Income Pilot Program ("LIPP") "Summary of
5 Results" that "by any measure, Liberty-Empire considers the LIPP to have been successfully
6 implemented, as it was directed to do in [Case No.] ER-2016-0023."¹⁰ Both Empire and Staff
7 recommend to continue the program as is, remove the spending cap of \$250,000, and include
8 a tracker for future cost recovery.

9 **Q. What is OPC's recommendation for this temporary LIPP as you presented it in your**
10 **revenue requirement rebuttal testimony filed in this case?**

11 A. In last week's testimony, I recommend the following:

- 12 • The request for the tracker be rejected;
- 13 • The existing tariff be frozen so no new customers may enroll;
- 14 • The Company cease offering the program at the conclusion of its December 2020 bill;
- 15 and
- 16 • Costs historically reserved for Empire's DSM EM&V be allocated instead towards a
17 third-party low-income assistance study to be submitted in Empire's next rate case.

18 The third-party study shall include (at a minimum):

- 19 • A literature review of bill assistance best practices across utilities;
- 20 • Alternative proposals that focus on specific targeted bill assistance segments (former
21 homeless population, elderly, renters, etc...); and
- 22 • Avenues to leverage existing funding mechanisms to maximize program impact
23 moving forward.

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¹⁰ ER-2019-0374 Direct Testimony of Nathaniel W. Hackney, Schedule NWH-2 p. 6, section 6: Conclusion

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1 **Q. Why is OPC recommending that the temporary LIPP be “frozen” for now?**

2 A. Empire’s temporary LIPP was thrown together quickly and has produced inconclusive results.
3 If the program continues “as is” I am confident that there will be even fewer customers enrolled
4 by the next rate case.

5 My recommendations provide an avenue to consider alternative options, program redesign,
6 and consider further explicit Commission directives before the next filed rate case.

7 **Q. Do you have any further testimony at this time?**

8 A. No.

9