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MISSOURI PUBLIC SERVICE COMMISSION

KANSAS CITY POWER & LIGHT COMPANY

KCP&L GREATER MISSOURI OPERATIONS COMPANY

CASE NOS. ER-2018-0145 and ER-2018-0146

SURREBUTTAL TESTIMONY

OF

MARTIN R. HYMAN

ON

BEHALF OF

MISSOURI DEPARTMENT OF ECONOMIC DEVELOPMENT

DIVISION OF ENERGY

Jefferson City, Missouri

September 4, 2018

Mo. Div. Energy Exhibit No. 453
Date 10/31/18 Operator JMB
File No. ER-2018-0145
ER-2018-0146

Exhibit # 453

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

In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service))
 Case No. ER-2018-0145

In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service))
 Case No. ER-2018-0146

AFFIDAVIT OF MARTIN R. HYMAN

STATE OF MISSOURI)
) ss
 COUNTY OF COLE)

Martin R. Hyman, of lawful age, being duly sworn on his oath, deposes and states:

1. My name is Martin R. Hyman. I work in the City of Jefferson, Missouri, and I am employed by the Missouri Department of Economic Development as a Planner III, Division of Energy.
2. Attached hereto and made a part hereof for all purposes is my Surrebuttal Testimony on behalf of the Missouri Department of Economic Development – Division of Energy.
3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge.

 Martin R. Hyman

Subscribed and sworn to before me this 4th day of September, 2018.

My commission expires:

 Notary Public

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1 **I. INTRODUCTION**

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

3 A. My name is Martin R. Hyman. My business address is 301 West High Street, Suite
4 720, PO Box 1766, Jefferson City, Missouri 65102.

5 **Q. Have you previously filed testimony before the Missouri Public Service
6 Commission ("Commission") on behalf of the Missouri Department of
7 Economic Development – Division of Energy ("DE") in this case?**

8 A. Yes. I filed Direct Rate Design Testimony on July 6, 2018 regarding residential rate
9 design, Rebuttal Revenue Requirement Testimony on July 27, 2018 regarding
10 generating unit retirements, and Rebuttal Rate Design Testimony on August 7,
11 2018 regarding residential rate design, the Companies' proposed Restoration
12 Charges, electric vehicle ("EV") charging station ("EVCS") rates, renewable energy
13 tariff programs, and distributed energy resource ("DER") data.

14 **II. PURPOSE AND SUMMARY OF TESTIMONY**

15 **Q. What is the purpose of your Surrebuttal Testimony in this proceeding?**

16 A. The purpose of my testimony is to respond to Kansas City Power & Light Company
17 ("KCP&L") and KCP&L Greater Missouri Operations Company ("GMO")
18 (collectively, "Companies"), the Commission Staff ("Staff"), the Office of the Public
19 Counsel ("OPC"), Renew Missouri Advocates d/b/a Renew Missouri ("Renew
20 Missouri"), Dogwood Energy LLC, and the Advanced Energy Management
21 Alliance regarding generating unit retirements, rate design, EVCSs, and renewable
22 energy tariff programs. Additionally, I address the recent Western District Court of
23 Appeals ("Western District") ruling on the Commission's authority over EVCSs.

1 In determining residential customer charges, DE recommends that the
2 Commission consider the allocation of some advanced metering infrastructure
3 ("AMI") meter costs based on non-customer-related measures. DE supports
4 continuation and expansion of real-time pricing ("RTP") options for larger
5 customers, as well as enabling "aggregators" of different customer loads to
6 participate in utility demand response programs, either under a Missouri Energy
7 Efficiency Investment Act program or through other types of utility tariff programs.
8 In light of the Western District's ruling on EVCSs, DE recommends that the
9 Commission consider opportunities to support equitable EVCS deployment
10 through multiple ownership models, with goals of improving Missouri's energy
11 security and independence, ensuring equitable access to EVCSs, promoting jobs
12 and economic development, and reducing emissions. Finally, DE recommends
13 basing the solar-related prices for the Companies' Solar Subscription Pilot Riders
14 on actual solar costs and including credits for excess generation from subscribed
15 resources. The recommendations articulated in my previous rounds of testimony
16 in these cases remain unchanged.

1 **III. RATE DESIGN**

2 **A. RESIDENTIAL NON-TIME-OF-USE RATE DESIGN**

3 **Q. KCP&L and GMO witness Ms. Marisol E. Miller rejects DE's recommendation**
4 **to continue movement towards flatter rates in the winter and inclining block**
5 **rates in the summer for residential general use¹ customers.² Are there**
6 **deficiencies with her analysis of this issue?**

7 **A.** Yes. I would start by noting that she mischaracterizes my testimony in two
8 important ways. First, she describes my proposal as being to, "... flatten and/or
9 incline the energy rates across the board"³ This is inaccurate— my proposal
10 was to continue a gradual transition away from declining block rates in the winter
11 for residential general use customers and to continue gradual movement towards
12 inclining block rates in the summer for residential general use customers (and
13 implementing such rates for GMO general use residential customers), with
14 consideration of bill impact analyses.⁴ Second, Ms. Miller states that I, "... appear
15 to acknowledge that [time-of-use] rates provide a better price signal than [inclining

¹ I use the phrase "general use" to refer to the non-space heating rates that serve most residential customers.

² Missouri Public Service Commission Case Nos. ER-2018-0145 and ER-2018-0146, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service* and *In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Rebuttal Testimony of Marisol E. Miller on Behalf of Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company (Rate Design), August 7, 2018, page 16, lines 1-4.

³ *Ibid*, page 17, lines 4-5.

⁴ Missouri Public Service Commission Case Nos. ER-2018-0145 and ER-2018-0146, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service* and *In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Direct Testimony of Martin R. Hyman on Behalf of Missouri Department of Economic Development – Division of Energy, July 6, 2018, pages 11-12, lines 3-9 and 1-4.

1 block rates]”⁵ Again, this is inaccurate – while I agree that time-of-use (“TOU”)
2 rates can help manage peak demand, inclining block rates serve to promote
3 efficiency at all hours, particularly in the absence of TOU rates.⁶

4 Similarly, Ms. Miller selectively quotes the Commission’s Report and Order in ER-
5 2016-0285 regarding TOU rates;⁷ she neglects to include other pertinent passages
6 from the Report and Order:

7 A declining block rate sends poorer efficiency signals to customers, since
8 the effective price signal is that higher amounts of usage cost less.

9 Flat rates provide slightly better price signals, but the best efficiency-
10 inducing price signals, sponsored by DE, are provided by inclining block
11 rates (“IBR”) (which charge more per amount of energy used after a certain
12 threshold or thresholds of usage).

13 Inclining block rates signal to customers that higher use incurs higher costs,
14 encouraging greater energy efficiency.

15 Inclining block rates can not only be used to recover short-run “fixed” costs,
16 but signal to customers that higher usage spurs greater investment in future
17 plant; this signal will reduce future rate increases and provide benefits to all
18 customers.

19 ...

⁵ ER-2018-0145 and ER-2018-0146, Miller Rebuttal, page 18, lines 8-10.

⁶ ER-2018-0145 and ER-2018-0146, Hyman Direct, page 9, lines 1-12.

⁷ ER-2018-0145 and ER-2018-0146, Miller Rebuttal, page 16, lines 6-18, citing Missouri Public Service Commission Case No. ER-2016-0285, *In the Matter of Kansas City Power & Light Company’s Request for Authority to Implement a General Rate Increase for Electric Service*, Report and Order, May 3, 2017, pages 55-56.

1 An inclining block structure would also effectuate the public policy of the
2 state as enacted in the Missouri Energy Efficiency Investment Act. The IBR
3 would do so by incenting energy efficiency and demand response due to
4 the second block of energy being more expensive than the first block during
5 the summer.

6 Such energy savings and peak demand reduction reduces costs to the
7 utility, and, ultimately, also to its customers. (Citations omitted.)⁸

8 Moreover, as Renew Missouri witness Ms. Jamie W. Scripps notes, the decision
9 to implement TOU and inclining block rates is not an “either-or” proposition – the
10 two can be combined.⁹ Even if there has to be a “choice” between TOU and
11 inclining block rates, inclining block rates can incent demand-side savings by
12 customers until TOU rates are implemented on a broader scale.

13 **Q. Are there other concerns with Ms. Miller’s discussion?**

14 **A.** Yes. She provides a limited analysis of the effects of inclining block rates on
15 KCP&L customers using recent higher temperatures and the effects on KCP&L’s
16 revenues within specific blocks of customer usage, as well as effects on customers
17 with 1,000 kWh of usage that she characterizes as the average in June of 2018.¹⁰
18 This analysis contradicts her argument for looking beyond “average” impacts.¹¹ It
19 is important to look at bill impacts beyond those that would be experienced by

⁸ ER-2016-0285, Report and Order, pages 53-54 and 55.

⁹ Missouri Public Service Commission Case Nos. ER-2018-0145 and ER-2018-0146, *In the Matter of Kansas City Power & Light Company’s Request for Authority to Implement a General Rate Increase for Electric Service and In the Matter of KCP&L Greater Missouri Operations Company’s Request for Authority to Implement a General Rate Increase for Electric Service*, Direct Testimony of Jamie W. Scripps on Behalf of Renew Missouri Advocates d/b/a Renew Missouri, July 6, 2018, page 17, lines 4-10.

¹⁰ ER-2018-0145 and ER-2018-0146, Miller Rebuttal (Rate Design), pages 17-18, lines 17-23 and 1-7.

¹¹ *Ibid*, page 9, lines 1-18.

1 "average" customers in order to have a better understanding of how inclining block
2 rates would affect all customers.

3 **Q. Does Staff witness Robin Kliethermes's response to your rate design**
4 **proposals raise similar concerns as Ms. Miller's testimony?**

5 A. Yes. Ms. Kliethermes states, "Staff cautions that an inclining block rate with a steep
6 incline in summer or winter may have unexpected negative impacts on either
7 customers or the utility due to an abnormal weather event."¹² I would agree with
8 this caution, and I note that I neither proposed a "steep incline" nor an inclining
9 block rate in the winter. Ms. Kliethermes also suggests potential concerns with my
10 proposal by providing average usage data and degree days from two different
11 years. However, she neglects to quantify potential bill impacts in her testimony
12 based on this data.¹³ It is also unclear why she includes space heating customers
13 in her analysis,¹⁴ since I only recommended rate design changes for residential
14 general use customers in these cases.

15 **Q. Is it possible that higher than normal usage would create higher bill impacts**
16 **under TOU rates as well as inclining block rates?**

17 A. Yes, if usage occurred during a tariffed "peak" period. When evaluating bill impacts
18 from alternative rate designs, the concern should be with how much higher bills
19 are for various types of customers, whether those increases are reasonably linked

¹² Missouri Public Service Commission Case Nos. ER-2018-0145 and ER-2018-0146, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service and In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Rebuttal Testimony of Robin Kliethermes on Behalf of Commission Staff Division (Rate Design), August 7, 2018, page 12, lines 3-5.

¹³ *Ibid*, pages 12-13, lines 8-15 and 1-4.

¹⁴ *Ibid*, page 13, lines 3-4.

1 to cost causation and policy goals, and whether various types of customers (e.g.,
2 low-income, elderly, apartment dwellers, suburban homeowners) can modify their
3 usage and reduce their bills – as opposed to a concern only with higher bills due
4 to higher use in a general sense.

5 **Q. Is Staff's opposition to inclining block rates consistent with its other recent**
6 **rate case filings?**

7 A. Not entirely. Both in the recent Spire Missouri rate cases¹⁵ and Liberty Utilities
8 (Midstates Natural Gas) d/b/a Liberty Utilities' latest rate case,¹⁶ Staff proposed
9 alternative summer inclining block rates in its Direct filings. While DE believes that
10 it is unlikely that summer inclining block rates will have much impact on natural gas
11 usage, it is worth noting that the Commission ultimately approved summer inclining
12 block rates in the Spire Missouri natural gas rate cases¹⁷ and approved a
13 stipulation and agreement implementing such rates in Liberty Utilities' rate case.¹⁸
14 It makes even more sense to consider inclining block rates in the summer for an

¹⁵ Missouri Public Service Commission Case Nos. GR-2017-0215 and GR-2017-0216, *In the Matter of Laclede Gas Company's Request to Increase its Revenues for Gas Service and In the Matter of Laclede Gas Company d/b/a Missouri Gas Energy's Request to Increase its Revenues for Gas Service*, Staff Report – Class Cost of Service, September 22, 2017, pages 22-25, lines 9-10, 1-6, 1-6, and 1-13.

¹⁶ Missouri Public Service Commission Case No. GR-2018-0013, *In the Matter of Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities' Tariff Revisions Designed to Implement a General Rate Increase for Natural Gas Service in the Missouri Service Areas of the Company*, Staff Report – Class Cost of Service, March 16, 2018, pages 26-27, lines 18-23 and 1-20.

¹⁷ Missouri Public Service Commission Case Nos. GR-2017-0215 and GR-2017-0216, *In the Matter of Laclede Gas Company's Request to Increase its Revenues for Gas Service and In the Matter of Laclede Gas Company d/b/a Missouri Gas Energy's Request to Increase its Revenues for Gas Service*, Report and Order, February 21, 2018, page 90.

¹⁸ Missouri Public Service Commission Case No. GR-2018-0013, *In the Matter of Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities' Tariff Revisions Designed to Implement a General Rate Increase for Natural Gas Service in the Missouri Service Areas of the Company*, Order Approving Stipulation and Agreement, June 6, 2018, page 2.

1 electric utility because of the potential for increased efficiency in satisfying air
2 conditioning loads, which may reduce peaks in usage.

3 **Q. Ms. Kliethermes notes that many residential customers had usage above**
4 **600 kWh in July and August of 2015.¹⁹ Is DE opposed to modifying inclining**
5 **block rate structures to account for this fact?**

6 A. DE would not oppose modifying the blocking and rate differentials of inclining
7 block rates to account for higher summer usage, so long as such mitigation
8 results in gradual changes to rate blocks and rate differentials.

9 **Q. What does OPC state regarding inclining block rates?**

10 A. OPC notes that in KCP&L's prior rate case, "...OPC supported a 'modest'
11 gradual movement to inclining block rates in the summer and flatter rate[s] in the
12 winter."²⁰ Since DE's proposal is a modest gradual movement that should be
13 accompanied by education, DE is hopeful that OPC supports continued progress
14 toward this rate design in the absence of widespread TOU rate deployment.

¹⁹ ER-2018-0145 and ER-2018-0146, Kliethermes Rebuttal (Rate Design), page 14, lines 3-5.

²⁰ Missouri Public Service Commission Case Nos. ER-2018-0145 and ER-2018-0146, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service and In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Rebuttal Testimony of Geoff Marke Submitted on Behalf of the Office of the Public Counsel (Rate Design), August 7, 2018, page 19, lines 14-16.

1 **Q. Ms. Miller argues against holding customer charges constant by citing your**
2 **testimony on cost causation, stating that, “Artificially limiting the customer**
3 **charge as suggested is contrary to cost based rate making.”²¹ Do you agree?**

4 **A.** No. Determining cost causation is a blend of numeric analysis and judgements
5 about how to allocate costs fairly. Additionally, as the Commission has noted in
6 previous cases, there are also other factors to consider in rate design, including
7 gradualism and customer understanding.²²

8 **Q. Have you suggested in these rate cases that the customer charge should be**
9 **“artificially limited?”**

10 **A.** No. My recommendation is certainly to maintain current residential customer
11 charge levels, but that recommendation is based on relevant considerations in
12 addition to cost causation – i.e., efficiency, affordability, and gradualism – and is
13 not in disregard of cost causation.²³

²¹ ER-2018-0145 and ER-2018-0146, Miller Rebuttal (Rate Design), page 18, lines 16-22.

²² ER-2016-0285, Report and Order, page 49.

²³ ER-2018-0145 and ER-2018-0146, Hyman Direct, page 9, lines 19-23.

1 **Q. Renew Missouri²⁴ and OPC²⁵ both state that the costs of AMI meters should**
2 **not solely be allocated based on customer counts. Do you agree?**

3 A. Yes. As these parties state, some of the costs associated with AMI meters relate
4 to functions that go beyond customer-related costs – i.e., the incremental costs
5 associated with serving additional customers, such as the costs of meters
6 designed solely for the purpose of capturing usage. Since AMI meters enable a
7 number of new demand- and energy-related service options, such as demand
8 response programs, new efficiency programs, and TOU rates, AMI cost allocation
9 should reasonably reflect customer-, demand-, and energy-related cost
10 components. DE recommends that the Commission consider the allocation of
11 some AMI meter costs based on non-customer-related measures.

²⁴ Missouri Public Service Commission Case Nos. ER-2018-0145 and ER-2018-0146, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service and In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Rebuttal Testimony of Jamie W. Scripps on Behalf of Renew Missouri Advocates d/b/a Renew Missouri, August 7, 2018, pages 2-8, lines 9-17, 1-16, 1-20, 1-20, 1-20, 1-19, and 1-2.

²⁵ Missouri Public Service Commission Case Nos. ER-2018-0145 and ER-2018-0146, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service and In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Rebuttal Testimony of Karl Richard Pavlovic Submitted on Behalf of the Office of the Public Counsel, August 7, 2018, pages 4-7, lines 3-18, 1-12, 1-22, and 1-4.

1 **B. RESIDENTIAL TIME-OF-USE RATES**

2 **Q. Do parties in this case support Staff's proposal for mandatory Residential**
3 **TOU rates?**

4 **A. No. Staff's proposal is also opposed by OPC,²⁶ Renew Missouri,²⁷ and the**
5 **Companies.²⁸**

6 **Q. Staff witness Ms. Sarah L.K. Lange states her belief that Staff's rate design**
7 **recommendation meets your considerations for designing rates.²⁹ Do you**
8 **agree?**

9 **A. No. Moving customers from non-time-differentiated to poorly designed TOU rates**
10 **without a meaningful and intentionally designed educational plan³⁰ or any**
11 **significant forewarning is not aligned with the concept of gradualism; coupled with**
12 **Staff's recommended customer charge increase,³¹ Staff's proposal is also not**
13 **affordable for low-use, low-income customers³² and would represent a step away**

²⁶ ER-2018-0145 and ER-2018-0146, Marke Rebuttal (Rate Design), page 18, line 9.

²⁷ ER-2018-0145 and ER-2018-0146, Scripps Rebuttal, page 8, lines 7-9.

²⁸ Missouri Public Service Commission Case Nos. ER-2018-0145 and ER-2018-0146, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service and In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Rebuttal Testimony of Kimberly H. Winslow on Behalf of Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company (Rate Design), August 7, 2018, page 5, lines 16-18.

²⁹ Missouri Public Service Commission Case Nos. ER-2018-0145 and ER-2018-0146, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service and In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Rebuttal Testimony of Sarah L.K. Lange on Behalf of Commission Staff Division, August 7, 2018, page 27, lines 4-16.

³⁰ See Staff response to Data Request DED-DE No. 211, page 2.

³¹ Missouri Public Service Commission Case Nos. ER-2018-0145 and ER-2018-0146, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service and In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Staff Report – Class Cost of Service ("Staff CCOS Report"), July 6, 2018, page 42, lines 13-20.

³² See ER-2018-0145 and ER-2018-0146, Marke Rebuttal (Rate Design), pages 20-22, lines 11-14, 1-2, and 1-4.

1 from encouraging energy efficiency because of the lowered reliance on volumetric
2 rates for revenue recovery. Staff's proposed rate design, which has a 14-hour
3 "peak" period,³³ could also harm those with low price elasticity of demand during
4 the day, such as home-bound seniors.³⁴

5 **Q. Would Staff's proposed TOU rates encourage customers to change their**
6 **usage?**

7 A. Not necessarily. Ms. Lange recommends setting KCP&L's summer TOU rates and
8 both Companies' winter TOU rates such that the difference between on- and off-
9 peak charges is no greater than \$0.05.³⁵ If this results in a relatively small price
10 differential, then customers would have a weak price signal for purposes of
11 encouraging demand shifts. However, it is not clear that customers would be fully
12 aware of time-based price signals given Staff's lack of incorporation of a
13 meaningful customer education plan. Moreover, Staff's recommended 14-hour
14 peak period leaves little room for customers to shift usage to off-peak periods
15 without inconveniencing customers or additional investments by customers in
16 automated or "smart" devices and appliances.

³³ ER-2018-0145 and ER-2018-0146, Staff CCOS Report, page 34, lines 16-17.

³⁴ See: Colgan, John T., Delattre, Andre, Fanshaw, Bret, Gilliam, Rick, Hawiger, Marcel, Howat, John, Jester, Douglas, LeBel, Mark, and Zuckerman, Ellen, 2017, "Guidance for Utilities Commissions on Time of Use Rates: A Shared Perspective from Consumer and Clean Energy Advocates," *Electricity Rate Design Review Paper No. 2*, <https://uspirg.org/sites/pirg/files/reports/TOU-Paper-7.17.17.pdf>, page 10.

³⁵ ER-2018-0145 and ER-2018-0146, Lange Rebuttal, page 30, lines 14-22.

1 **Q. How do these concerns align with your recommended approach of**
2 **gradualism?**

3 A. It is entirely possible to construct TOU rates that maintain gradualism while
4 allowing customers to shift usage based on price signals. To do so, one need only
5 shorten the on-peak period and increase the on- and off-peak rate differentials in
6 a way that reflects cost causation and typical system conditions. A limited peak
7 period with a strong price signal can mitigate bill impacts while still encouraging
8 shifts in usage. Of course, gradualism can be more easily achieved by starting with
9 opt-in TOU rates.

10 **Q. Has Staff moderated its position on mandatory residential TOU rates since**
11 **its Direct Testimony?**

12 A. Somewhat. Staff now provides two alternative scenarios to “phase in” such rates,
13 including 1) the use of “shadow billing”³⁶ that would compare alternative rate
14 designs for customers and 2) either a delay in winter TOU rates or the
15 implementation of a “hold harmless” rate design during the first winter in which the
16 rates would be in effect.³⁷ Shadow billing by itself does not provide adequate
17 customer education: customers need to be made aware of rate design changes in
18 advance through thoughtful, planned and targeted customer outreach (e.g.,
19 mailings, outbound phone calls, other utility communication channels through

³⁶ In this instance, shadow billing would provide customers with a comparison of their bills under typical, non-TOU rates versus their bills under TOU rates. Shadow billing can support customer education by indicating how TOU rates may be beneficial for them if they can change their consumption patterns. Migden-Ostrander, Janine. 2017. “Utility ‘Shadow Billing’ Can Shed Light on Rate Options.” The Regulatory Assistance Project. <https://www.raponline.org/blog/utility-shadow-billing-can-shed-light-on-rate-options/>.

³⁷ ER-2018-0145 and ER-2018-0146, Lange Rebuttal, pages 27-30, lines 19-21, 1-13, 1-14, and 1-5.

1 community action agencies, website education) and detailed bill information.
2 Customer service representatives need to understand new rate designs, efficiency
3 and demand response options should be made known, and – particularly in the
4 case of TOU rates – granular usage data should be easily accessible.

5 DE strongly recommends that tools such as a phase-in of rates, shadow billing,
6 “hold harmless” billing, and opt-out provisions be implemented along with TOU
7 rates. However, DE’s primary recommendation remains to have broadly available,
8 opt-in TOU pilots, the results of which can be carefully studied to inform wider
9 deployment of TOU rates.

10 **Q. Are Staff’s moderated proposals supported by any bill impact analyses**
11 **included in Rebuttal Testimony?**

12 **A.** No. There are calculations included in Staff’s workpapers, but these involve
13 comparisons for a non-random subset of customers. In fact, when I requested
14 sufficient bill impact analyses from Staff, DE received the following objection:

15 Staff objects to this portion of the data request as unduly burdensome in
16 that it requires Staff to conduct an analysis and create information not
17 immediately available to Staff in the form described and sought. Staff has
18 not represented that it has performed an analysis based on a random
19 sample of customers, and cannot reliably perform the statistical analysis
20 requested in the data request without use of KCPL’s load research software
21 to weight, stratify, and reweight the customer hourly information. Based on

1 previous conversations with KCPL, KCPL's software cannot provide the
2 weighting of the load research sample customers for each hour. ...³⁸

3 Staff has provided insufficient data for purposes of analyzing the impacts of its
4 new proposals, which only serves to emphasize KCP&L and GMO witness Ms.
5 Kimberly H. Winslow's concern about the impacts of Staff's TOU proposal on
6 vulnerable customers, i.e., low-income customers and those customers with
7 electricity-dependent medical needs.³⁹ While low-income customers might be
8 expected to have relatively lower on-peak usage, it is also possible that such
9 customers have less ability to adapt to TOU rates.⁴⁰ Without sufficient analyses of
10 bill impacts for these or other customer segments, the Commission does not have
11 sufficient and necessary information to make an adequately informed decision
12 about Staff's proposed mandatory TOU rates.

13 **Q. Do Staff's residential rate design proposals contemplate consolidating**
14 **general use and space heating rates?**

15 **A.** Yes, generally.⁴¹ This is a particularly problematic proposal, since space heating
16 rates are – by definition – not the same as general use rates, and bill impacts would
17 differ because of variations in pricing and customer usage profiles between the two
18 rates. Like any other rate design change, transitions in space heating rates should

³⁸ Staff objection to Data Request DED-DE No. 218(3) a-c.

³⁹ ER-2018-0145 and ER-2018-0146, Winslow Rebuttal, page 6, lines 4-6.

⁴⁰ Colgan et al., 2017, page 27.

⁴¹ ER-2018-0145 and ER-2018-0146, Staff CCOS Report, page 3, lines 20-25 and footnote 4; ER-2018-0145 and ER-2018-0146, Lange Rebuttal, pages 27-30, lines 19-21, 1-13, 1-14, and 1-5.

1 be gradual in order to avoid bill impacts that might jeopardize customer health and
2 safety.

3 **Q. In your Rebuttal Rate Design Testimony, you stated that the amount of**
4 **participation allowed in the Companies' proposed TOU pilot programs**
5 **should be expanded.⁴² Have any other parties expressed similar positions?**

6 **A.** Yes; Renew Missouri recommends higher participation caps.⁴³ DE recommends
7 that the Commission consider whether there should be any participation caps,
8 particularly given the Companies' support for EVs and the possibility of additional
9 movement towards default inclining block rates.

10 **Q. Dr. Marke testifies that the primary value of AMI, Customer Information**
11 **System ("CIS"), and Customer Care and Billing system investments lies in**
12 **dynamic rates.⁴⁴ Does DE agree?**

13 **A.** DE agrees that the ability to offer time-differentiated rates is a key value of these
14 investments. There are also benefits from customers having access to real-time
15 data on their usage and customers' ability to share such usage information as they
16 determine appropriate, if such data are made available; real-time usage data can

⁴² Missouri Public Service Commission Case Nos. ER-2018-0145 and ER-2018-0146, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service and In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Rebuttal Rate Design Testimony of Martin R. Hyman on Behalf of Missouri Department of Economic Development – Division of Energy, August 7, 2018, page 8, lines 14-16.

⁴³ ER-2018-0145 and ER-2018-0146, Scripps Rebuttal, pages 8-9, lines 14-19 and 1-6.

⁴⁴ Missouri Public Service Commission Case Nos. ER-2018-0145 and ER-2018-0146, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service and In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Rebuttal Testimony of Geoff Marke Submitted on Behalf of the Office of the Public Counsel (Revenue Requirement), July 27, 2018, page 18, lines 17-18.

1 allow for more timely responses by customers to rates than a bill provided at the
2 end of the month. Such potential added functionality of AMI distinguishes it from
3 traditional meters that existed solely to measure usage for generating customer
4 bills. Fully utilized AMI can help customers determine how best to use energy more
5 efficiently and potentially lower their energy bills, providing them with more
6 resources to use in other ways that may benefit the customers and Missouri
7 economic development generally.

8 **Q. Do you share some of Dr. Marke's concern with the Companies' deployment**
9 **of AMI and CIS investments?⁴⁵**

10 **A.** Yes, broadly. It is troubling that the Companies' deployments of their AMI and CIS
11 investments have resulted in systems for which only hourly interval data will be
12 available to residential customers later in the year, and that there could be yet
13 more costs associated with enabling the use of interval data for new rates
14 dependent on this data. Consider the following portions of the response provided
15 by the Companies to Data Request DED-DE No. 11:

16 3a: AMI meters are configured to provide 15-minute interval data as noted
17 in A2a; this data is stored in the One CIS Meter Data Management (MDM)
18 system where it can be retrieved as needed by One CIS Customer Care &
19 Billing (CCB) for billing or customer presentment in the web portal. Where
20 rates required the interval data, they were configured. However, currently
21 the vast majority of KCP&L's and GMO's rates do not rely on interval data

⁴⁵ *Ibid*, lines 14-16.

1 for billing. As such, **except to support existing rates, the programming**
2 **necessary to convert the interval data into billing determinants that**
3 **could be passed to One CIS has not been done. It simply was not**
4 **necessary at the time of implementation, and would have resulted in**
5 **additional cost to the project to do so. This is not to say that it cannot**
6 **be done, but programming, testing, and bill print definition take time**
7 **and resources.**

8 3b: Rate definition and rate setup must be completed in the One CIS
9 solution to enable use of the AMI interval data for billing. **If new**
10 **requirements are identified for customer presentment beyond the**
11 **current web portal presentment, they would be assessed and**
12 **configurations and costs determined at that time. (Emphases added.)⁴⁶**

13 It is also concerning that GMO has stated it would have to determine if its new CIS
14 system could "... automatically bill a [real-time pricing] customer."⁴⁷ It is unclear
15 why the Companies would consider deploying AMI and CIS solutions that do not
16 automatically accommodate modern dynamic pricing. It is equally troubling that the
17 Companies intend not to deploy TOU rates until the fourth quarter of 2019,⁴⁸
18 denying customers the ability to use what should be one of AMI's main benefits.

19 The Companies' investments in a CIS initiative – and their investments in AMI

⁴⁶ Companies' response to Data Request DED-DE No. 11.

⁴⁷ Missouri Public Service Commission Case No. ER-2018-0146, *In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Rebuttal Testimony and Schedules of Greg R. Meyer on Behalf of Dogwood Energy LLC, August 7, 2018, page 8, lines 20-21.

⁴⁸ ER-2018-0145 and ER-2018-0146, Winslow Rebuttal, Schedule KHW-1.

1 meters – should be scrutinized to ensure that customers receive incremental
2 benefits above those from investments in traditional metering. Grid modernization
3 should be clearly tied to customer benefits.

4 **C. OTHER ISSUES**

5 **Q. Staff opposes the Companies' currently proposed Restoration Charges,⁴⁹ as**
6 **does OPC.⁵⁰ Does DE agree?**

7 A. Yes. However, I would note that Staff is apparently open to the possibility of revised
8 Restoration Charge proposals that include specificity about when such charges
9 would apply, as well as recommending that the Companies estimate the revenues
10 such tariffs would generate and have customer service representatives able to
11 describe the applicability of the charges if they are approved.⁵¹ As discussed in my
12 Rebuttal Rate Design Testimony, DE does not support the proposed Restoration
13 Charges for a number of reasons, including the lack of supporting evidence or
14 basis in cost causation and the potential effects of the charges on certain customer
15 segments.⁵² Determining how and when to apply the Restoration Charges would
16 not resolve the problem that the Companies would be allowed to collect for
17 revenues lost from customers who were not on their system. As Ms. Bernsen
18 notes, both KCP&L and GMO already have reconnection charges (although

⁴⁹ Missouri Public Service Commission Case Nos. ER-2018-0145 and ER-2018-0146, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service and In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Rebuttal Testimony of Deborah Ann Bernsen on Behalf of Commission Staff Division, August 7, 2018, page 5, lines 5-7.

⁵⁰ ER-2018-0145 and ER-2018-0146, Marke Rebuttal (Rate Design), page 23, lines 16-18.

⁵¹ ER-2018-0145 and ER-2018-0146, Bernsen Rebuttal, page 5, lines 7-18.

⁵² ER-2018-0145 and ER-2018-0146, Hyman Rebuttal (Rate Design), pages 17-19, lines 1-18, 1-21, and 1-2.

1 GMO's charge evidently does not cover voluntary disconnections),⁵³ so there is no
2 basis for adding a new set of charges to recover lost revenues.

3 **Q. Dogwood Energy LLC witness Mr. Greg R. Meyer references your testimony**
4 **on TOU rates and customer education in his discussion of real-time pricing**
5 **("RTP").⁵⁴ Do you have any responsive comments?**

6 **A.** Yes. First, I would re-emphasize that changes to rate designs should be gradual,
7 and that while DE would expect most residential customers to eventually be served
8 on TOU rates as a standard practice, that transition must occur over a reasonable
9 period of time to avoid rate shock and allow for appropriate customer education.⁵⁵
10 Dynamic pricing (which includes RTP) is a logical future framework for larger
11 commercial and industrial customers, who may have the ability to respond more
12 quickly to system conditions. Dynamic pricing can enable substantial savings to
13 participants and customers overall by avoiding usage during times of high energy
14 costs based on real-time data (as opposed to the set time periods involved in TOU
15 pricing). DE supports continuation and expansion of RTP options for larger
16 customers, and DE also strongly agrees with Mr. Meyer that the RTP tariff should
17 potentially be marketed.⁵⁶ The Companies should be ordered to rigorously
18 promote and educate customers on any TOU tariff options that arise from this
19 case, along with RTP tariffs.

⁵³ ER-2018-0145 and ER-2018-0146, Bernsen Rebuttal, page 2, lines 4-8 and 16-21.

⁵⁴ ER-2018-0146, Meyer Rebuttal, page 6, lines 3-7 and 11-16.

⁵⁵ ER-2018-0145 and ER-2018-0146, Hyman Direct, page 15, lines 7-15.

⁵⁶ ER-2018-0146, Meyer Rebuttal, page 11, lines 19-21.

1 Q. Do you agree with Staff's proposal to "simplify" the RTP rates into TOU
2 rates?⁵⁷

3 A. No. There is no reason to move backwards from a dynamic tariff that can more
4 closely reflect actual system costs to a static tariff that does not change directly
5 with system costs. However, DE would support making TOU rates available to
6 smaller commercial and industrial customers on an opt-in basis in order to provide
7 time-differentiated pricing options to these customers.

⁵⁷ ER-2018-0145 and ER-2018-0146, Lange Rebuttal, page 13, lines 15-17.

1 **Q. The Companies,⁵⁸ Renew Missouri,⁵⁹ Staff,⁶⁰ and the Advanced Energy**
2 **Management Alliance⁶¹ have filed testimony regarding demand response**
3 **rates. What is DE's position on this issue?**

4 **A.** DE supports enabling "aggregators" of different customer loads to participate in
5 utility demand response programs, either under a Missouri Energy Efficiency
6 Investment Act program or through other types of utility tariffs.

⁵⁸ Missouri Public Service Commission Case No. ER-2018-0145, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Supplemental Direct Testimony of Kimberly H. Winslow on Behalf of Kansas City Power & Light Company, June 19, 2018.

Missouri Public Service Commission Case No. ER-2018-0146, *In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Supplemental Direct Testimony of Kimberly H. Winslow on Behalf of KCP&L Greater Missouri Operations Company, June 19, 2018.

Missouri Public Service Commission Case No. ER-2018-0145, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Supplemental Direct Testimony of Burton L. Crawford on Behalf of Kansas City Power & Light Company, June 19, 2018.

Missouri Public Service Commission Case No. ER-2018-0146, *In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Supplemental Direct Testimony of Burton L. Crawford on Behalf of KCP&L Greater Missouri Operations Company, June 19, 2018.

⁵⁹ Missouri Public Service Commission Case Nos. ER-2018-0145 and ER-2018-0146, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service and In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Rebuttal Testimony of James Owen on Behalf of Renew Missouri Advocates d/b/a Renew Missouri, July 27, 2018.

⁶⁰ Missouri Public Service Commission Case Nos. ER-2018-0145 and ER-2018-0146, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service and In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Rebuttal Testimony of Brad J. Fortson on Behalf of Commission Staff Division, August 7, 2018, pages 5-6, lines 18-21 and 1-13.

⁶¹ Missouri Public Service Commission Case Nos. ER-2018-0145 and ER-2018-0146, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service and In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Rebuttal Testimony of Nicholas J. Papanastassiou on Behalf of Advanced Energy Management Alliance, August 7, 2018.

1 **IV. ELECTRIC VEHICLE CHARGING STATIONS**

2 **Q. Are you familiar with the Western District's ruling in WD 80911?**

3 A. Yes. The Western District reversed the Commission's determination in Case No.
4 ER-2016-0285 that EVCSs are not "electric plant" and remanded the decision to
5 the Commission.⁶²

6 **Q. Did the Western District also comment on the Commission's ability to make**
7 **policy determinations as to EVCSs?**

8 A. Yes. The Western District stated:

9 Our conclusion that KCP&L's electric vehicle charging stations constitute
10 "electric plant" within the meaning of § 386.020(14) does not leave the
11 Commission without remedy; to the contrary, it provides a basis for the
12 Commission to exercise its full range of regulatory authorities with respect
13 to those stations.⁶³

14 **Q. What was Staff's response to this ruling?**

15 A. At the time of Staff's response, the ruling was not yet final. However, Staff provided
16 a number of recommendations in the event that the ruling stood unchallenged:

- 17 • To allocate all costs of the Companies' EVCS infrastructure to a separate
18 rate class;
- 19 • To implement TOU rates for the Companies' EVCSs; and,

⁶² *In the Matter of Kansas City Power and Light Co v. Missouri P.S.C., et al, WD 80911, 2018 WL 3730901, pages 19-20 (Mo. App. August 7, 2018).*

⁶³ *Ibid*, page 19.

- 1 • That the Companies should evaluate advanced applications of EVs on the
2 utility system.⁶⁴

3 **Q. Has the Western District issued its mandate in WD 80911?**

4 A. Yes. The mandate was issued on August 29, 2018.⁶⁵

5 **Q. Do you agree with Staff's recommendations?**

6 A. I agree that the Companies should examine EVCSs in the context of distribution
7 system planning and demand response programs applicable to EVCSs, and that
8 they should monitor vehicle-to-grid applications; all of these recommendations are
9 consistent with improved distribution system planning that incorporates DERs
10 while encouraging efficient system utilization. While I also agree that the rates
11 charged on the Clean Charge Network should be cost-based, doing so should not
12 result in disparate treatment of EVCSs compared to other utility plant. Joint and
13 common costs should be fairly allocated, and the rates charged should reflect the
14 full useful lives of the EVCSs rather than an arbitrarily determined period of time.
15 I hesitate to support TOU rates for EVCSs at this time. Once there is high EV
16 market penetration (and the potential for significantly increased on-peak demand)
17 it would be reasonable to revisit the potential benefits of such rates in the EVCS
18 context. At the current market penetration of EVs, TOU rates may be less
19 applicable for the Clean Charge Network. As of the second quarter of 2017, there

⁶⁴ Missouri Public Service Commission Case Nos. ER-2018-0145 and ER-2018-0146, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service* and *In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Rebuttal Testimony of Byron M. Murray on Behalf of Commission Staff Division, August 7, 2018, pages 3-4, lines 8-22 and 1-6.

⁶⁵ *In the Matter of Kansas City Power and Light Co v. Missouri P.S.C., et al, WD 80911, 2018 WL 3730901*, (Mo. App. August 7, 2018).

1 are still only 2,400 registered EVs (including plug-in hybrid EVs) in all of the
2 Companies' service territories (including Kansas).⁶⁶

3 **Q. The Companies express concern at Staff's proposal to "throttle" EVCS**
4 **demand.⁶⁷ Do you share this concern?**

5 A. Yes, in general. I agree that EV charging should not be treated differently than
6 other end uses with regards to forced load reductions. However, EV charging could
7 pose challenges to the distribution system without proper planning. The solution is
8 not to throttle the rate of charging at EVCSs, but to have robust distribution system
9 planning that accounts for EVCSs and other DERs, as well as to gradually
10 introduce time-differentiated rate designs and incorporate EVCSs into demand
11 response programs.

12 **Q. What are the public policy reasons for supporting EVs?**

13 A. There are many public policy reasons for supporting EVs. As utilities begin to
14 transition their generation portfolios toward cleaner, in-state resources, using EVs
15 will accomplish several public policy goals. First, Missouri has low fossil fuel

⁶⁶ Missouri Public Service Commission Case No. ER-2018-0145, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Direct Testimony of Charles A. Caisley on Behalf of Kansas City Power & Light Company, January 30, 2018, page 11, lines 13-16.

Missouri Public Service Commission Case No. ER-2018-0146, *In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Direct Testimony of Charles A. Caisley on Behalf of KCP&L Greater Missouri Operations Company, January 30, 2018, page 11, lines 4-7.

⁶⁷ Missouri Public Service Commission Case Nos. ER-2018-0145 and ER-2018-0146, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service* and *In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Rebuttal Testimony of Tim M. Rush on Behalf of Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company (Rate Design), August 7, 2018, page 7, lines 18-20.

1 production,⁶⁸ so the use of in-state renewables to charge EVs will reduce out-of-
2 state imports. This will result in more dollars remaining in local economies,
3 supporting economic growth and job creation. Economic growth and job creation
4 could also result from the retention and attraction of forward-thinking businesses
5 that are interested in EVs, as well as through providing an expanded EV market
6 for Missouri's automotive sector.

7 In addition, the use of EVs results in lower emissions than driving conventional
8 automobiles. This is true even in a state such as Missouri, which has a high share
9 of coal-fired power in its generation portfolio. According to the U.S. Department of
10 Energy's Alternative Fuels Data Center ("AFDC"), an all-electric vehicle charged
11 in Missouri would create 8,328 lbs of carbon dioxide equivalent ("CO₂e") emissions
12 each year, which is lower than the 11,435 lbs CO₂e emissions expected from a
13 gasoline-powered vehicle. By comparison, an EV charged on the national average
14 mix of electricity sources would emit 4,455 CO₂e. These differences are no doubt
15 because the AFDC shows that 82.44 percent of Missouri's electricity comes from
16 coal, as opposed to 30.19 percent nationally.⁶⁹

17 **Q. Do those emissions figures mean Missouri should wait to support EVs until**
18 **it has a cleaner electricity portfolio?**

19 **A.** No. In fact, timely charging of EVs can support greater renewable energy
20 penetration. By encouraging drivers to charge during otherwise "off-peak" periods

⁶⁸ U.S. Energy Information Administration. 2018. "Missouri – State Energy Profile Analysis." *State Energy Data System*. <https://www.eia.gov/state/analysis.php?sid=MO>.

⁶⁹ U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy. 2018. "Emissions from Hybrid and Plug-In Electric Vehicles." *Alternative Fuels Data Center*. https://www.afdc.energy.gov/vehicles/electric_emissions.php.

1 when wind power is more likely to enter a utility's portfolio, EVs can support a
2 cleaner generation profile and improve overall system utilization. It is also
3 reasonable to assume that Missouri's electric portfolio may continue to move
4 towards in-state renewables, as shown by Union Electric Company d/b/a Ameren
5 Missouri's ("Ameren Missouri") application for a wind farm in northeastern
6 Missouri.⁷⁰

7 **Q. Should the Commission allow recovery of all EVCS-related costs in the**
8 **Companies' rate bases?**

9 A. It depends on the circumstances. DE recognizes that competition should play a
10 role in the deployment of EVCSs; however, this recognition is tempered by the fact
11 that EVCSs are not widely deployed in all areas. In particular, there is good reason
12 to support EVCS deployment in areas that might otherwise be underserved, e.g.,
13 rural communities, low-income areas, multifamily housing, and highway corridors.
14 Even if customers in these areas do not purchase EVs in the immediate future,
15 there is a need for EVCSs in such locations in order to enable future EV ownership
16 by these customers (i.e., as prices for EVs decline and used EVs become
17 available) and to support travel through these areas by other EV drivers.
18 Widespread access to EVCSs will be important as the automotive market
19 transforms towards EVs. Utility ownership of EVCSs is also reasonable in order to
20 promote economies of scale. DE recommends that the Commission evaluate utility

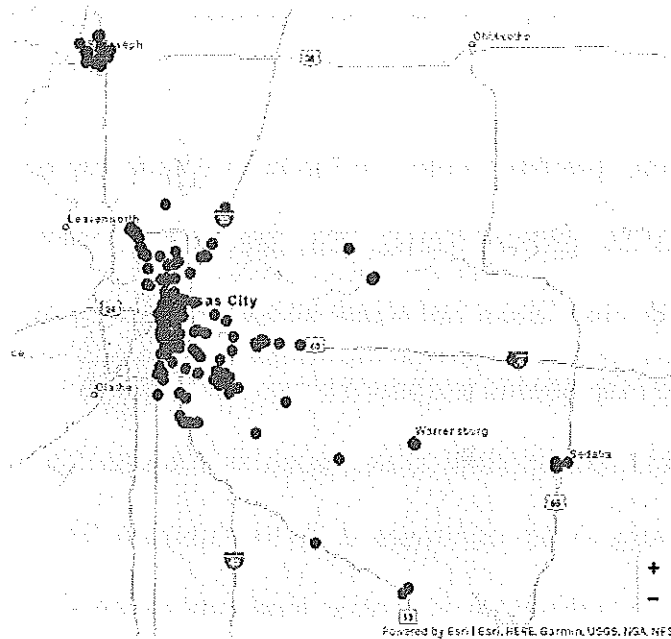
⁷⁰ See Missouri Public Service Commission Case No. EA-2018-0202.

1 cost recovery for EVCSs on a case-by-case basis, i.e., based on policy
2 considerations in particular contexts and prudence.

3 **Q. What is your evidence that EVCSs are not yet widely available?**

4 A. Consider the map provided below in Figure 1 of publicly available Level 2, non-
5 Tesla EVCSs in the greater Kansas City area, which I obtained from the AFDC.
6 Even though the map does not show all EVCSs, it is a useful illustration of my
7 point. While the map seems to show a large number of EVCSs, these EVCSs are also
8 clustered around metropolitan areas, such as Kansas City, St. Joseph, Sedalia,
9 and Warrensburg. This contrasts with the ubiquity of conventional gasoline
10 refueling. A wide availability of fueling locations reduces “range anxiety,” or the
11 concern that a driver could run out of fuel.

1 **Figure 1. Publicly available Level 2, non-Tesla EVCSs in the Kansas City area.⁷¹**



2 **Q. Why not let the penetration of EVs drive the deployment of EVCSs?**

3 A. As stated above, the deployment of EVCSs has been uneven to date, leaving
4 some areas underserved or unserved. An investor-owned electric utility, through
5 its obligation to provide “safe and adequate” service, has an important role to play
6 in supporting equitable EVCS deployment.

7 **Q. Would your recommendations mean that an EVCS owned by some entity
8 besides the Companies (or other entities currently regulated by the
9 Commission) must be regulated by the Commission in the same way as the
10 Companies’ EVCSs?**

11 A. No. First, I would note the following passage from the Western District’s decision:

⁷¹ U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy. 2018. “Alternative Fueling Station Locator.” *Alternative Fuels Data Center*. https://www.afdc.energy.gov/stations/#/analyze?region=US-MO&fuel=ELEC&ev_levels=2&show_map=true&ev_connectors=J1772.

1 The Commission argued that, if it found that KCP&L's electric vehicle
2 charging stations constituted "electric plant," it would be required to regulate
3 other "similar" battery-charging services, such as "smart phone charging
4 stations or kiosks, RV parks that allow vehicles to connect to the park's
5 electricity supply, or airports that connect plans to a hangar's electricity
6 supply while parked." Once again, we find the Commission's reasoning
7 unpersuasive. **At least with respect to recreational vehicle parks and
8 airports, the provision of electricity to a customer is plainly ancillary
9 to other services offered by the business proprietor – namely, the rental
10 of a space in which to park or store a vehicle, along with other amenities. In
11 addition, because the electricity is supplied solely to persons who
12 otherwise rent the business' parking or storage space, the electricity
13 is not being offered for "public use" because it is not "indiscriminately
14 and reasonably made available to the general public"; it therefore
15 would not trigger Commission jurisdiction. ... (Emphases added.)⁷²**

16 In other words, the fact that someone owns a charging station does not make them
17 a public utility unless they offer charging indiscriminately to the general public as
18 a non-ancillary service – i.e., the entity would have to solely be in the business of
19 selling electricity to any and all persons.

⁷² *In the Matter of Kansas City Power and Light Co v. Missouri P.S.C., et al*, WD 80911, 2018 WL 3730901, page 17 (Mo. App. August 7, 2018).

1 **Q. Did the Commission already have a working docket on EVCSs?**

2 A. Yes. However, that docket occurred prior to the Commission ruling that the
3 Western District has now overturned. Since this issue has been determined
4 differently by the Western District, DE recommends that stakeholders reconsider
5 the public policies to apply to EVCSs.

6 **Q. Are there any other considerations you would offer as to EVCS cost
7 recovery?**

8 A. Yes. Going forward, the Commission should consider the impact of the
9 Volkswagen settlement on EVCS deployment. This is relevant in two respects: 1)
10 the "Electrify America" initiative, which will deploy EV infrastructure across the
11 country,⁷³ and 2) the Missouri Department of Natural Resources' currently filed
12 compliance plan, which allows for EVCS investments.⁷⁴ These two initiatives could
13 result in EVCS investments in utility service territories that would affect utilities'
14 EVCSs investments. This is not to say that these considerations obviate all utility
15 investments in EVCSs; however, all factors should be considered with regards to
16 future utility investments in EVCSs to determine complementary opportunities for
17 EVCS deployment.

18 Additionally, I would note that utility ownership of EVCSs does not preclude a
19 "make ready" model. Both can – and should – be used to ensure equitable EVCS
20 deployment.

⁷³ Electrify America, LLC. 2018. "Welcome to Electrify America – Commitment."
<https://www.electrifyamerica.com/our-plan>.

⁷⁴ Missouri Department of Natural Resources. 2018. *Missouri's Beneficiary Mitigation Plan*.
<https://dnr.mo.gov/env/apcp/vw/documents/mo-beneficiary-mitigation-plan.pdf>. Page 1.

1 **V. RENEWABLE ENERGY TARIFF PROGRAMS**

2 **Q. What is OPC's chief recommendation regarding the Companies' proposed**
3 **Solar Subscription Pilot Riders and Renewable Energy Programs?**

4 A. Dr. Marke recommends that these proposals be withdrawn and considered in
5 separate dockets. He cites complicating issues in the current rate cases, such as
6 potential changes to residential rate design.⁷⁵

7 **Q. Does DE agree that these programs should be considered later, rather than**
8 **in these rate cases?**

9 A. DE appreciates that there are many different concerns that must be addressed in
10 these rate cases, both separate from and in conjunction with designing renewable
11 energy tariff programs. Nonetheless, it is not unusual for a rate case to involve
12 many interdependent policy considerations. Consequently, DE does not view the
13 complexity of the current cases as a reason to delay the evaluation and
14 implementation of programs to help businesses, communities, and individuals
15 meet their renewable energy needs.

16 **Q. Do you agree with Staff that the rates for subscribing to the Renewable**
17 **Energy Programs should be tariffed?⁷⁶**

18 A. Yes. It is crucial that prospective participants know what value they may gain from
19 subscribing, although flexibility in arranging special contracts would remain
20 beneficial in certain instances. Recommendation 4.2 in the Missouri

⁷⁵ ER-2018-0145 and ER-2018-0146, Marke Rebuttal (Revenue Requirement), pages 4-5, lines 20-22 and 1-10, and page 11, lines 11-16.

⁷⁶ ER-2018-0145 and ER-2018-0146, Lange Rebuttal, page 3, lines 16-19.

1 Comprehensive State Energy Plan centers on improving the “transparency and
2 availability” of green power purchasing.⁷⁷

3 **Q. Staff recommends that the Companies have separate facilities for each
4 Company’s Solar Subscription Pilot Rider.⁷⁸ Does DE support this
5 suggestion?**

6 **A.** No. This could lead to unnecessarily higher costs for participants due to the loss
7 of economies of scale. The Renewable Energy Programs and Solar Subscription
8 Pilot Riders should also not have arbitrarily determined limits on system sizes or
9 the number of systems (as Staff proposes for the Solar Subscription Pilot Riders),⁷⁹
10 but should accommodate consumer demands at the lowest reasonable costs.

11 **Q. Staff also suggests that GMO’s Greenwood solar facility could be part of a
12 subscriber solar program.⁸⁰ Is this the best approach?**

13 **A.** No. As Staff witness Ms. Claire M. Eubanks notes, “Non-residential customers with
14 renewable goals tend to prefer programs which are additive rather using existing
15 facilities.”⁸¹ This is clearly the case, as evidenced by the Corporate Renewable
16 Energy Buyers Principles. One of these principles is that the signatories, “...would

⁷⁷ Missouri Department of Economic Development – Division of Energy. 2015. “Missouri Comprehensive State Energy Plan.” <https://energy.mo.gov/sites/energy/files/MCSEP.pdf>. Page 227.

⁷⁸ Missouri Public Service Commission Case Nos. ER-2018-0145 and ER-2018-0146, *In the Matter of Kansas City Power & Light Company’s Request for Authority to Implement a General Rate Increase for Electric Service* and *In the Matter of KCP&L Greater Missouri Operations Company’s Request for Authority to Implement a General Rate Increase for Electric Service*, Rebuttal Testimony of Claire M. Eubanks, PE on Behalf of Commission Staff Division, August 7, 2018, page 5, lines 6-10.

⁷⁹ *Ibid*, lines 6-8.

⁸⁰ *Ibid*, page 7, lines 11-16.

⁸¹ *Ibid*, lines 13-14.

1 like [their] efforts to result in new renewable power generation.”⁸² Ms. Eubanks’s
2 concern with the programs’ “economic value”⁸³ would only be worsened if
3 customers learned they were not actually paying for new solar generation. I would
4 also note that the Commission’s order approving a Certificate of Convenience and
5 Necessity for the Greenwood project was not predicated on using the facility for a
6 community solar program.⁸⁴

7 **Q. Does DE agree with Staff’s proposal to include bill credits for excess**
8 **generation in the Solar Subscription Pilot Riders?**⁸⁵

9 A. Yes. This proposal would more closely align the programs with “true” net metering
10 of solar systems and improve the programs’ potential value to customers.

11 **Q. What does Staff recommend as to the Companies’ proposals to create**
12 **flexible Renewable Energy Program-style arrangements for economic**
13 **development purposes?**

14 A. Staff recommends striking the applicable tariffed language and replacing it with the
15 following: “Nothing in this tariff is intended to limit the ability of the Company to
16 enter into unregulated third party transactions for purchases of energy or
17 transmission.”⁸⁶

⁸² World Resources Institute and World Wildlife Fund. Undated. “The Principles.” *Corporate Renewable Energy Buyers’ Principles*. <https://buyersprinciples.org/principles/>.

⁸³ ER-2018-0145 and ER-2018-0146, Eubanks Rebuttal, page 8, lines 7-9.

⁸⁴ Missouri Public Service Commission Case No. EA-2015-0256, *In the Matter of the Application of KCP&L Greater Missouri Operations Company for Permission and Approval of a Certificate of Public Convenience and Necessity Authorizing it to Construct, Install, Own, Operate, Maintain and Otherwise Control and Manage Solar Generation Facilities in Western Missouri*, Report and Order, March 2, 2016.

⁸⁵ ER-2018-0145 and ER-2018-0146, Lange Rebuttal, Schedule SLKL-r3, page 3.

⁸⁶ *Ibid*, Schedule SLKL-r1, page 5 and Schedule SLKL-r2, page 5.

1 **Q. Is this revision problematic?**

2 A. Yes. It suggests that the state of Missouri can only support large economic
3 development projects with particular renewable energy needs through
4 unregulated, potentially complicated arrangements. The Companies should have
5 the flexibility to offer special contract arrangements that incorporate renewable
6 energy needs, with these contracts subject to Commission review; such contracts
7 should support state economic development goals and benefit customers through
8 improved system utilization.

9 **Q. Renew Missouri witness Mr. Philip Fracica recommends basing the price of**
10 **the Solar Subscription Pilot Rider on the outcome of a Request for Proposal**
11 **process.⁸⁷ Does DE agree?**

12 A. Yes. The prices for subscribing to solar energy should be based on actual costs,
13 not the Companies' predictions. This is particularly true if, as Mr. Fracica suggests,
14 the prices proposed by the Companies are potentially too high.⁸⁸

15 **Q. In addition, Renew Missouri suggests potentially copying Ameren Missouri's**
16 **subscriber solar program with regards to an up-front payment, possibly as**
17 **an optional charge.⁸⁹ Would DE support this proposal?**

18 A. In general, DE recommends against basing the Companies' proposals too closely
19 on Ameren Missouri's pilot program. The Ameren Missouri program – which has

⁸⁷ Missouri Public Service Commission Case Nos. ER-2018-0145 and ER-2018-0146, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service and In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*, Rebuttal Testimony of Philip Fracica on Behalf of Renew Missouri Advocates d/b/a Renew Missouri, July 27, 2018, page 2, lines 10-12.

⁸⁸ *Ibid*, page 11, lines 17-21.

⁸⁹ *Ibid*, pages 6-7, lines 14-23 and 1-10.

1 yet to launch – is problematic from an accessibility standpoint because of the
2 “participation fee” that it includes.⁹⁰ Requiring such a fee runs counter to one of the
3 primary purposes of subscriber solar programs, which is to enable solar access to
4 customers that may otherwise go unserved (or be underserved) by solar offerings
5 due to upfront capital constraints.

6 **VI. CONCLUSIONS**

7 **Q. Please summarize your conclusions, positions, and the recommendations**
8 **of DE.**

9 A. DE recommends that in determining residential customer charges, the
10 Commission consider the allocation of some AMI meter costs based on non-
11 customer-related measures. DE supports continuation and expansion of RTP
12 options for larger customers. DE also supports enabling “aggregators” of different
13 customer loads to participate in utility demand response programs, either under a
14 Missouri Energy Efficiency Investment Act program or through other types of utility
15 tariff programs.

16 In light of the Western District’s ruling on EVCSs, DE recommends that the
17 Commission consider opportunities to support equitable EVCS deployment
18 through multiple ownership models, with goals of improving Missouri’s energy
19 security and independence, ensuring equitable access to EVCSs, promoting jobs
20 and economic development, and reducing emissions. Finally, DE recommends

⁹⁰ Missouri Public Service Commission Case No. EA-2016-0207, *In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Permission and Approval and a Certificate of Public Convenience and Necessity Authorizing it to Offer a Pilot Subscriber Solar Program and File Associated Tariff*, Second Amended Non-Unanimous Stipulation and Agreement, August 20, 2018, Sheet No. 158.1.

1 basing the solar-related prices for the Companies' Solar Subscription Pilot Riders
2 on actual solar costs and including credits for excess generation from subscribed
3 resources. The recommendations articulated in my previous rounds of testimony
4 in these cases remain unchanged.

5 **Q. Does this conclude your Surrebuttal Testimony?**

6 **A. Yes.**