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Witness: Martin R. Hyman
Sponsoring Party: Missouri Department of
Economic Development –
Division of Energy
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Case No.: EO-2018-0211

MISSOURI PUBLIC SERVICE COMMISSION

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

CASE NO. EO-2018-0211

SURREBUTTAL TESTIMONY

OF

MARTIN R. HYMAN

ON

BEHALF OF

MISSOURI DEPARTMENT OF ECONOMIC DEVELOPMENT

DIVISION OF ENERGY

Jefferson City, Missouri
September 17, 2018

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

In The Matter of Union Electric Company)
d/b/a Ameren Missouri's 3rd Filing to)
Implement Regulatory Changes in)
Furtherance of Energy Efficiency as)
Allowed by MEEIA)

File No. EO-2018-0211

AFFIDAVIT OF MARTIN R. HYMAN

STATE OF MISSOURI)
)
COUNTY OF COLE) **ss**

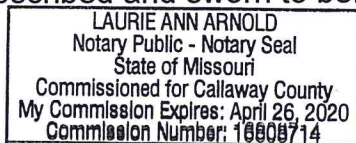
Martin R. Hyman, of lawful age, being duly sworn on his oath, deposes and states:


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 17th day of September, 2018.





Notary Public

My commission expires: 4/26/20

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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. By whom and in what capacity are you employed?**

6 A. I am employed by the Missouri Department of Economic Development – Division
7 of Energy (“DE”) as a Planner III.

8 **Q. Have you previously filed testimony before the Public Service Commission
9 (“Commission”) in this case?**

10 A. Yes. I filed Rebuttal Testimony regarding DE’s support for Union Electric Company
11 d/b/a Ameren Missouri’s (“Ameren Missouri” or “Company”) proposed third cycle
12 (“Cycle 3”) of demand-side management (“DSM”) programs under the Missouri
13 Energy Efficiency Investment Act (“MEEIA”), as well as cost-effectiveness testing,
14 on-bill programs, and adding new programs.

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

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

17 A. The purpose of my testimony is to respond to the testimony filed in this matter by
18 the Commission Staff (“Staff”), Office of the Public Counsel (“OPC”) witness Dr.
19 Geoff Marke, Consumers Council of Missouri (“CCM”) witness Ms. Cara Spencer,
20 National Housing Trust (“NHT”) witness Ms. Annika Brink, Tower Grove
21 Neighborhoods Community Development Corporation (“Tower Grove”) witness
22 Ms. Dana Gray, and Natural Resources Defense Council (“NRDC”) witness Mr.
23 Matthew Socks. I address DE’s concerns with some of the policy positions raised

1 by Staff and OPC, and I also indicate DE's support for certain recommendations
2 made by Staff, CCM, NHT, Tower Grove, and NRDC.

3 Even under the conservative avoided cost assumptions used by Staff, a substantial
4 portion of Ameren Missouri's portfolio passes the Total Resource Cost ("TRC") test
5 and was therefore inappropriately rejected by Staff. DE continues to support the
6 Company's Cycle 3 proposal in general, subject to the recommendations in my
7 Rebuttal Testimony. Additionally, DE supports data collection recommendations
8 made by Staff and CCM as discussed below, certain of Staff's proposals related
9 to low-income programs and links to the Company's website, as well as NHT and
10 NRDC's recommended budget modifications for the low-income multifamily
11 program and NHT and Tower Grove's employment recommendations. In the event
12 that the Commission rejects Ameren Missouri's Cycle 3 application, DE
13 recommends a continuance of Cycle 2 programs with the addition of those
14 proposed Cycle 3 programs that Staff agrees are cost-effective and Ameren
15 Missouri's proposed low-income and general education programs, with all such
16 programs continuing through the MEEIA Cycle 2 framework until the
17 implementation of Cycle 3.

1 **III. RESPONSE TO OPPOSING POLICY POSITIONS**

2 **Q. Do Staff and OPC support the Company's proposed Cycle 3?**

3 A. No. Staff and/or OPC cite issues such as the alleged lack of supply-side
4 investment deferrals,^{1, 2} the level of benefits to customers from the proposed
5 MEEIA programs,³ and load growth-related concerns stemming from Ameren
6 Missouri's pending case regarding electric vehicle ("EV") charging.^{4, 5}

7 **A. COST-EFFECTIVENESS**

8 **Q. What are the concerns expressed by Staff and OPC regarding an alleged lack**
9 **of supply-side investments?**

10 A. Staff⁶ and OPC⁷ note the Company's capacity position, with Staff stating that
11 Ameren Missouri does not need to build any new generating plant until 2034.⁸ Staff
12 further argues that avoided transmission and distribution costs cannot be
13 considered due to a number of factors, such as the uncertainty as to where on the
14 Company's system DSM savings would occur and the lack of load growth.⁹

¹ Missouri Public Service Commission Case No. EO-2018-0211, *In the Matter of Union Electric Company d/b/a Ameren Missouri's 3rd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as Allowed by MEEIA*, Staff Rebuttal Report, August 30, 2018, page 23, lines 2-10.

² Missouri Public Service Commission Case No. EO-2018-0211, *In the Matter of Union Electric Company d/b/a Ameren Missouri's 3rd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as Allowed by MEEIA*, Rebuttal Testimony of Geoff Marke Submitted on Behalf of the Office of the Public Counsel, August 30, 2018, page 8, lines 15-21.

³ EO-2018-0211, Staff Rebuttal Report, pages 38-42, lines 22-26, 1-24, 1-11, 1-28, and 1-6.

⁴ *Ibid*, page 34, lines 1-8.

⁵ EO-2018-0211, Marke Rebuttal, pages 17-18, lines 3-14 and 1-2.

⁶ EO-2018-0211, Staff Rebuttal Report, page 10, lines 1-5

⁷ EO-2018-0211, Marke Rebuttal, page 8, lines 15-21.

⁸ EO-2018-0211, Staff Rebuttal Report, page 10, lines 1-5.

⁹ *Ibid*, pages 27-34, lines 28-34, 1-28, 1-4, 1-26, 1-29, 1-11, and 1-17.

1 **Q. Is it relevant to the evaluation of DSM programs that a particular supply-side**
2 **investment may not be needed until 2034, and that such an investment could**
3 **only be delayed two years?**

4 A. No, not in isolation of other considerations. Cost-effectiveness should also be
5 evaluated in the context of participant benefits and societal non-energy benefits
6 (“NEBs”),¹⁰ with holistic consideration of distributional equity as further discussed
7 below. DSM programs can provide customers with choices and opportunities to
8 enable greater control over their bills and energy costs, which is an important policy
9 goal in its own right that is explicitly included at Section 393.1075.3(2), RSMo. As
10 Staff notes, “In general, customers appear to want energy efficiency programs,”¹¹
11 and energy efficiency programs may improve customer satisfaction.¹²

12 **Q. How do you respond to Staff’s apparent position that DSM programs only**
13 **have value when there is an imminent capacity need?**

14 A. This position is unreasonable and short-sighted. A “stop and start” approach to
15 MEEIA programs will not support the consistent levels of savings needed to avoid
16 or defer future supply-side investments, is impractical and costly from an
17 administrative standpoint, and disrupts relationships with trade allies (as occurred,
18 for example, with the gap between MEEIA Cycles 1 and 2). Continuous DSM
19 program savings also enable greater flexibility in utility planning, as indicated
20 below, and create greater DSM implementation market certainty.

¹⁰ DE also filed regarding NEBs in the current Special Contemporary Resource Planning Issues dockets (Case Nos. EO-2019-0063, EO-2019-0064, EO-2019-0065, and EO-2019-0066).

¹¹ EO-2018-0211, Staff Rebuttal Report, page 14, line 11.

¹² *Ibid*, page 16, lines 3-11.

1 **Q. Should the focus of MEEIA programs be on peak savings, as suggested by**
2 **OPC?¹³**

3 A. Peak savings should be one pursued outcome, but MEEIA programs should
4 encompass a variety of program offerings. The statutory goal of MEEIA is to
5 pursue all cost-effective demand-side savings (Section 393.1075.4, RSMo.), not
6 just those that reduce peaking capacity needs. To limit programs to those that
7 reduce peak savings would ignore the other times of the day and the year that
8 customers need energy and could benefit from energy efficiency; electric plant is
9 built for more than simply meeting peak. DE's concern regarding the focus on peak
10 savings also extends to Staff's recommendation that approval of the Cycle 3
11 proposal be contingent on having no earnings opportunity associated with
12 measured and verified energy savings;¹⁴ this type of earnings opportunity would
13 signal that only demand savings matter, contravening the policy goal of achieving
14 all cost-effective demand-side savings.

15 **Q. What did Ameren Missouri's most recent IRP filing conclude regarding DSM**
16 **programs?**

17 A. Ameren Missouri's IRP concluded with support for DSM savings at the Company's
18 version of "realistically achievable potential" ("RAP") in its preferred IRP plan.¹⁵ In
19 fact, two alternative resource plans including RAP-level DSM were coupled with

¹³ EO-2018-0211, Marke Rebuttal, page 23, lines 5-6.

¹⁴ EO-2018-0211, Staff Rebuttal Report, page 78, lines 19-21 and 25-26.

¹⁵ Missouri Public Service Commission Case No. EO-2018-0038, *In the Matter of Ameren Missouri's 2017 Utility Resource Filing Pursuant to 4 CSR 240 – Chapter 22, 2017 Integrated Resource Plan*, "10. Strategy Selection," September 25, 2017, page 9.

1 the retirement of Meramec in 2020,¹⁶ which would provide greater flexibility in the
2 event of market economics that disfavored that generating station. The alternative
3 resource plan with savings at the “maximum achievable potential” (“MAP”) level
4 had the lowest net present value of revenue requirement of any plan analyzed.¹⁷

5 **Q. Did Staff’s report on Ameren Missouri’s IRP filing allege any deficiency or**
6 **concern related to the fact that the Company’s preferred IRP plan included**
7 **RAP-level DSM?**

8 A. No.¹⁸

9 **Q. Is DE suggesting that the IRP process should be relied upon to determine**
10 **MEEIA programs through the lens of “least cost” planning?**

11 A. No. DE is only citing to the above filings in order to highlight why even conservative
12 assumptions about resource planning support MEEIA program implementation.
13 DE recommends evaluating utility resource options based not just on the lowest
14 cost outcome, but the “best cost” outcome reflecting which options provide the
15 greatest benefits in totality (e.g., improved customer choice and bill control,
16 societal benefits such as economic development, lower emissions, and improved
17 health) at the most reasonable cost.

¹⁶ Missouri Public Service Commission Case No. EO-2018-0038, *In the Matter of Ameren Missouri’s 2017 Utility Resource Filing Pursuant to 4 CSR 240 – Chapter 22, 2017 Integrated Resource Plan*, “9. Integrated Resource Plan and Risk Analysis,” September 25, 2017, page 10.

¹⁷ *Ibid*, page 21.

¹⁸ Missouri Public Service Commission Case No. EO-2018-0038, *In the Matter of Ameren Missouri’s 2017 Utility Resource Filing Pursuant to 4 CSR 240 – Chapter 22*, Staff Report – 2017 Electric Utility Resource Planning Compliance Filing of Union Electric Company d/b/a Ameren Missouri, February 28, 2018.

1 **Q. Does the IRP process appropriately consider or evaluate DSM?**

2 A. No. The policy of the state, as articulated in MEEIA, is not only to value supply-
3 and demand-side options on an equivalent basis (Section 393.1075.3, RSMo.), but
4 to pursue the, "... goal of achieving **all** cost-effective demand-side savings"
5 (Section 393.1075.4, RSMo; emphasis added). The current IRP process does not
6 accomplish this goal because it starts with a market potential study to determine
7 RAP and MAP, runs resource plans with potentially modified versions of the DSM
8 options through a comparison of net present value (rather than benefit-cost ratio
9 evaluation that accounts for all benefits), and then provides no guarantee that the
10 utility will even adopt RAP-level savings. The goal of all cost-effective savings can
11 only be pursued through robust programs that are not limited by a nested series of
12 semi-arbitrary constraints that artificially eliminate cost-effective measures aimed
13 at delivering customer savings and avoiding plant investments.

14 **Q. Does Staff express concern with including non-cost-effective measures in**
15 **non-low-income programs?**

16 A. Yes. Staff states:

17 ... incentivizing a measure, outside of a low income program, that is not
18 cost-effective is contradictory to "a goal of achieving all cost-effective
19 demand-side savings." The most prudently incurred costs are those costs
20 that maximize the benefits to customers through these programs. To the
21 extent that measures that are not cost-effective are included within
22 programs, Ameren Missouri is minimizing potential benefits of the overall
23 portfolio. Because the potential benefits from demand-side programs are

1 uncertain and difficult to quantify and the costs are certain and tangible,
2 each program should be designed to be as cost-effective as possible in
3 order to maximize the probability that actual benefits outweigh the actual
4 costs. (Citation omitted.)¹⁹

5 **Q. Does “all cost-effective” mean that every single measure in a MEEIA**
6 **portfolio must be cost-effective?**

7 A. No. The MEEIA statute indicates that the appropriate scope of evaluation is at the
8 program level when it provides conditions related to, “Recovery for [DSM]
9 **programs ...**” based on factors such as the Total Resource Cost (“TRC”) test
10 (Section 393.1075.4, RSMo.; emphasis added). A program implementer may need
11 the ability to “bundle” measures at varying levels of cost-effectiveness into viable
12 programs, especially in instances where customer acquisition is expensive and
13 measures are not “extremely” cost-effective. The statutory goal of MEEIA is to
14 achieve all cost-effective demand-side savings (Section 393.1075.4, RSMo.), not
15 just those that provide the “most” cost-effective savings. MEEIA also provides for
16 aligning utility incentives with helping customers use energy more efficiently
17 (Section 393.1075.3(2), RSMo.). While such efforts may not lead to the “most”
18 cost-effective savings, they will more closely align with achieving all cost-effective
19 savings and benefits to all customers per the MEEIA statute.

¹⁹ EO-2018-0211, Staff Rebuttal Report, pages 45-46, lines 20-26 and 1-2.

1 **Q. What does Staff present in its testimony with regards to the cost-**
2 **effectiveness of Ameren Missouri’s proposal?**

3 A. Based on extremely conservative avoided cost estimates – i.e., no avoided
4 transmission or distribution costs and no incorporation of avoided capacity costs
5 until after 2034 – Staff calculates that the residential portfolio has an overall TRC
6 test score of 0.96 and that most of the business portfolio is cost-effective (excluding
7 the Business Social Services program, which Staff does not consider to be a low-
8 income program).^{20, 21} The marginal TRC test score calculated by Staff for the
9 residential portfolio is evidently the result of the residential programs that Staff
10 asserts are not cost-effective. Despite the fact that Staff’s calculations show that a
11 substantial portion of Ameren Missouri’s portfolio passes the TRC test – and
12 results in net benefits to customers of \$145 million in 2044²² – Staff nonetheless
13 asserts that the portfolio does not provide benefits to all customers because, in
14 part, net costs would be higher until 2034.²³ As discussed further below, the
15 appropriate measure of providing benefits to all customers within a customer class
16 is the TRC test (with the inclusion of participant benefits), the Societal Cost Test
17 (“SCT”), and the Utility Cost Test (“UCT”), not the Ratepayer Impact Measure
18 (“RIM”) test. Rejecting Ameren Missouri’s entire proposal based on Staff’s
19 calculations would not comply with the statutory statements that the policy of the
20 state is to pursue, “... a goal of achieving all cost-effective demand-side savings,”

²⁰ *Ibid*, page 44, lines 1-3.

²¹ *Ibid*, page 55, lines 19-31.

²² *Ibid*, page 41, lines 5-7.

²³ *Ibid*, pages 38-42, lines 22-26, 1-24, 1-11, 1-28, and 1-6.

1 and that, “The commission shall consider the total resource cost test a preferred
2 cost-effectiveness test” (Section 393.1075.4, RSMo.). A plan with a number of
3 cost-effective programs that results in a net (not gross) benefit to customers is
4 absolutely and unambiguously beneficial to all customers in the long run.

5 **Q. Staff cites to a Regulatory Assistance Project website post to make a claim
6 regarding the relationship between renewable energy resources and energy
7 efficiency. Is Staff’s characterization of that citation accurate?**

8 A. No. Staff states that, “... in recent years demand-side resources have been losing
9 their clear standing as the lowest cost resource, and may soon be replaced by
10 renewable resources (wind and solar) as the lowest cost resources.”²⁴ However,
11 Staff appears to have taken the website material out of context. The source to
12 which Staff cites actually delivers a very different message than opposing energy
13 efficiency, citing a study, “... showing that efficiency operates in tandem with
14 renewables to achieve higher penetrations of clean energy, lowering system costs
15 and emissions over time;”²⁵ the study cited in the post notes that efficiency and
16 decentralized renewable generation could lower transmission investment needs.²⁶
17 The post cited by Staff also notes that, “...wasting valuable renewable resources
18 on inefficient end-use consumption makes little economic sense and slows the

²⁴ *Ibid*, page 38, lines 16-18.

²⁵ Colburn, Ken. 2018. “Efficiency 2.0: New Questions, Same Answer.” The Regulatory Assistance Project. <https://www.raponline.org/blog/energy-efficiency-2-0-new-questions-same-answer/?utm>.

²⁶ Berghout, Niels, van den Broek, Machteld, Worrell, Ernst, Gielen, Dolf, Saygin, Deger, and Wagner, Nicholas. 2017. *Synergies between renewable energy and energy efficiency*. International Renewable Energy Agency. <http://www.irena.org/publications/2017/Aug/Synergies-between-renewable-energy-and-energy-efficiency>. Page 22.

1 pace of decarbonization.”²⁷ Finally, it is worth highlighting that the post contradicts
2 Staff’s concerns about EV promotion in combination with DSM programs
3 (discussed further later in this testimony):

4 Efficiency 2.0 won’t be as simple as just using fewer kWh. [The Regulatory
5 Assistance Project]’s work on beneficial electrification has been weighing
6 how best to reconcile electrification and efficiency, and one of our guiding
7 principles is that electrification cannot be considered beneficial unless end
8 uses are as efficient as possible. As Steve Specker, former CEO of the
9 Electric Power Research Institute, wisely said, we must use less electricity
10 where we *can*, so we can use more electricity where we *should*. (Emphases
11 in original.)²⁸

12 **B. BENEFITS TO ALL CUSTOMERS IN A CUSTOMER CLASS**

13 **Q. What concern does Staff suggest regarding non-participant customer**
14 **benefits?**

15 A. Staff asserts that the Company’s proposal would not provide benefits to all
16 customers in the classes in which programs are offered. In part, this contention is
17 based on the initial costs paid by ratepayers that, in Staff’s view, only result in
18 relatively low, uncertain non-participant benefits starting in 2034.²⁹

²⁷ Colburn, 2018.

²⁸ *Ibid.*

²⁹ EO-2018-0211, Staff Rebuttal Report, pages 38-42, lines 22-26, 1-24, 1-11, 1-28, and 1-6.

1 **Q. Does Section 393.1075.4, RSMo. require that non-participants benefit from a**
2 **specific cost reduction due to MEEIA programs offered within their**
3 **respective class?**

4 A. No. Section 393.1075.4, RSMo. states that MEEIA programs must be,
5 “...beneficial to all customers in the customer class in which the programs are
6 proposed, regardless of whether the programs are utilized by all customers” – i.e.,
7 all customers should benefit, not just non-participants or participants in isolation.
8 Interpreting this provision of MEEIA to require short-term cost reductions to non-
9 participants effectively subjects MEEIA programs to the RIM test. The RIM test is
10 not an appropriate test for MEEIA programs because 1) the RIM test attempts to
11 address one limited aspect of equity (i.e., if rates increase or decrease), 2) does
12 not provide information about the level of rate or bill increases, 3) may not reduce
13 system costs, 4) is affected by the consideration of unavoidable sunk costs (i.e.,
14 lost revenues), and 5) does not result in an evaluation equivalent to that used for
15 other types of resources. Rather than considering the RIM test in isolation, DE
16 recommends evaluating equity based on a combination of rate impacts, bill
17 impacts, and participation rates.³⁰

18 In order to evaluate cost-effectiveness and net benefits to all customers, the
19 Commission should instead rely on the results of the TRC test (with the inclusion
20 of participant benefits), the UCT, and the SCT. The MEEIA statute indicates that

³⁰ Missouri Public Service Commission Case No. EO-2018-0211, *In the Matter of Union Electric Company d/b/a Ameren Missouri's 3rd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as Allowed by MEEIA*, Rebuttal Testimony of Martin R. Hyman on Behalf of Missouri Department of Economic Development – Division of Energy, August 30, 2018, pages 12-14, lines 18-23, 1-21, and 1-9.

1 the TRC test is a preferred test (Section 393.1075.4, RSMo.), but given the
2 historical failure to incorporate participant benefits in the TRC test in Missouri, DE
3 provided a number of recommendations in Rebuttal Testimony to improve how
4 MEEIA programs' cost-effectiveness are evaluated. These recommendations
5 consist of including participant benefits (e.g., natural gas and water utility bill
6 savings) in the TRC test, quantifying societal NEBs for use in the SCT, and using
7 SCT and UCT results to evaluate MEEIA programs unless participant benefits are
8 included in the TRC test.³¹

9 **Q. How do you respond to OPC's assertion that increased participation in**
10 **MEEIA programs could ultimately reduce the benefits from MEEIA**
11 **programs?**³²

12 A. I disagree. Reducing barriers to greater customer choice, convenience, control,
13 and affordability, as well as achieving important NEBs, should be encouraged and
14 supported. Increasing program participation, by definition, reduces the number of
15 non-participants and allows, encourages, and supports the ability for more
16 customers to manage their energy bills. This is entirely consistent with the
17 provision of Section 393.1075.3(2), RSMo. providing that the Commission shall,
18 "... Ensure that utility financial incentives are aligned with helping customers use
19 energy more efficiently and in a manner that sustains or enhances utility
20 customers' incentives to use energy more efficiently"

³¹ *Ibid*, page 15, lines 8-14 and page 16, lines 3-14.

³² EO-2018-0211, Marke Rebuttal, page 8, lines 1-9.

1 **C. ELECTRIC VEHICLES**

2 **Q. Why do Staff and OPC express concern about Ameren Missouri’s MEEIA**
3 **application in relation to its EV case?**

4 A. Both parties contend that the EV case represents “load building” that contravenes
5 the purpose of MEEIA.^{33, 34}

6 **Q. Please explain what the significance of the term “load building” is in**
7 **Missouri’s regulatory context.**

8 A. The Commission’s Chapter 14 rules prohibit certain promotional practices, with a
9 goal (in part) of avoiding destructive competition between the regulated electric
10 and natural gas utilities. These rules generally prohibit “load building,” i.e.,
11 encouraging customers to increase the amount of utility service consumed through
12 means other than the provision of information or customer service:

13 Load-building program means an organized promotional effort by a utility to
14 persuade energy-related decision makers to choose the form of energy
15 supplied by that utility instead of other forms of energy for the provision of
16 energy service or to persuade customers to increase their use of that utility’s
17 form of energy, either by substituting it for other forms of energy or by
18 increasing the level or variety of energy services used. This term is not
19 intended to include the provision of technical or engineering assistance,
20 information about filed rates and tariffs or other forms of routine customer
21 service. (4 CSR 240-14.010(6)(J).)

³³ EO-2018-0211, Staff Rebuttal Report, page 34, lines 1-8.

³⁴ EO-2018-0211, Marke Rebuttal, pages 17-18, lines 3-14 and 1-2.

1 **Q. Should encouraging EV adoption be a prohibited load building program?**

2 A. No, as is clear from the Regulatory Assistance Project post that Staff cites (see
3 above). The difference between encouraging the adoption of EVs and load building
4 programs is that customers would generally not be substituting one type of
5 regulated utility service for another when selecting EVs (e.g., using electricity in
6 place of natural gas), but would most likely be substituting electricity for the
7 consumption of petroleum-based liquid fuels. Consequently, supporting EVs would
8 not result in destructive competition between regulated entities, which is one of the
9 outcomes that the promotional practices rules are meant to avoid. There are also
10 a number of public policy rationales for supporting EV adoption, such as
11 encouraging off-peak charging to spread utility system cost recovery across more
12 units of usage (which would potentially lower customer rates), reducing emissions,
13 and improving energy security and Missouri's economic development and
14 prosperity through reductions in out-of-state fuel dependence.³⁵

15 **Q. Is there an inherent contradiction between simultaneously supporting EVs
16 and offering MEEIA programs?**

17 A. No. The premise of such a perceived contradiction would seem to be that the goal
18 of MEEIA is to reduce usage. However, that is not the full scope of potential MEEIA
19 programs; a MEEIA program need only, "...modify the net consumption of

³⁵ 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*, Surrebuttal Testimony of Martin R. Hyman on Behalf of Missouri Department of Economic Development – Division of Energy, September 4, 2018, pages 25-26, lines 12-15 and 1-16.

1 electricity on the retail customer’s side of the electric meter ...,” and can include
2 programs such as demand response that shape or shift peak demand rather than
3 causing outright usage reductions (Section 393.1075.2(3), RSMo.). While using
4 less energy is important from a customer bill impact and resource utilization
5 perspective, the timing of usage is also important. This is not to say that only peak
6 savings should be pursued, as discussed above; however, peak shifting is one of
7 several types of MEEIA programs that should be pursued. This is particularly true
8 in the case of EV adoption, since the greatest benefits (and smallest investments
9 in supply-side resources) from EV adoption result from charging in off-peak hours,
10 when the utility system is not used as much as during peak hours. If anything, EVs
11 and other uses with similar characteristics support the need for DSM programs that
12 encourage beneficial system utilization to increase savings for EV drivers and all
13 other ratepayers.

14 By the same logic used by Staff and OPC, there would also seem to be a conflict
15 between offering MEEIA programs and encouraging load retention, expansion, or
16 attraction via business development. However, the Commission has supported the
17 former through “economic development riders” – as has the legislature³⁶ – even
18 while approving DSM programs. As with promoting EVs, MEEIA programs are
19 complementary to economic development riders, since DSM programs can better
20 enable businesses to control their energy costs.

³⁶ See Section 393.1640, RSMo.

1 **D. CYCLE 3 LENGTH**

2 **Q. Do Staff, OPC, or CCM support a six-year program cycle?**

3 A. No. These parties cite issues such as uncertainty in the utility planning
4 environment and the need for stakeholder input.^{37, 38, 39}

5 **Q. Does DE support a six-year program cycle?**

6 A. Yes, so long as there is a flexible mid-cycle check-in process that continues the
7 portfolio (rather than terminating it), and so long as the Company seeks and
8 considers input from stakeholders regarding new or modified programs on an
9 annual basis. DE recognizes that MEEIA programs are offered in an uncertain
10 planning environment, but this is also true of any supply-side investment decision;
11 uncertainty should not lead to inaction. A six-year program cycle will create greater
12 market certainty and provide time for programs to mature so that customers
13 become aware of them and use them to manage their bills, and so that evaluation
14 results are based on sufficient data. Moreover, as evidenced by Schedule GM-2
15 to Dr. Marke's testimony, there are other utilities with program portfolios that are
16 longer than three years.

³⁷ EO-2018-0211, Staff Rebuttal Report, pages 35-38, lines 4-28, 1-5, 1-13, and 1-20.

³⁸ EO-2018-0211, Marke Rebuttal, pages 19-20, lines 7-25 and 1-8.

³⁹ Missouri Public Service Commission Case No. EO-2018-0211, *In the Matter of Union Electric Company d/b/a Ameren Missouri's 3rd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as Allowed by MEEIA*, Rebuttal Testimony of Cara Spencer on Behalf of Consumers Council of Missouri, August 30, 2018, pages 5-6, lines 14-26 and 1-16.

1 **E. GENERAL EDUCATION PROGRAMS**

2 **Q. Staff expresses opposition to the circuit rider portion of Ameren Missouri's**
3 **general education programs, citing current efforts in the City of St. Louis.⁴⁰**

4 **How do you respond?**

5 A. Based on recent research,⁴¹ compliance with residential building codes is still a
6 significant problem in Missouri. This problem results in buildings not being
7 designed and built to save energy, reducing consumer savings from the very
8 moment they buy or rent a home. Citing to the efforts in St. Louis to increase
9 building code stringency is an inadequate reason for opposition to a circuit rider
10 program when other localities may not be enforcing more stringent codes.

11 **Q. Staff indicates that it is unclear what is meant by "gamification."⁴² Can you**
12 **explain this concept?**

13 A. Yes. Gamification is essentially creating a "game" out of achieving demand-side
14 savings, encouraging customers to achieve greater energy savings through
15 behavioral changes.⁴³ DE supported this concept in the context of the MEEIA
16 Cycle 2 collaborative to find new savings opportunities;⁴⁴ Staff was a participant in
17 that collaborative.

⁴⁰ EO-2018-0211, Staff Rebuttal Report, pages 51-52, lines 6-27 and 1-2.

⁴¹ Missouri Department of Economic Development – Division of Energy. 2017. "Missouri Residential Building Energy Code Construction Practices Study." <https://energy.mo.gov/energy-codes/missouri-residential-building-codes-study>.

⁴² EO-2018-0211, Staff Rebuttal Report, page 52, lines 11-13.

⁴³ Grossberg, Frederick, Wolfson, Mariel, Mazur-Stommen, Susan, Farley, Kate, and Nadel, Steven. 2015. *Gamified Energy Efficiency Programs*. American Council for an Energy-Efficient Economy. <http://aceee.org/sites/default/files/publications/researchreports/b1501.pdf>.

⁴⁴ Missouri Public Service Commission Case No. EO-2015-0055, *In the Matter of Union Electric Company d/b/a Ameren Missouri's 2nd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as Allowed by MEEIA*, Missouri Division of Energy's Response to Ameren Missouri's Energy Efficiency Collaborative Report, November 14, 2016, page 2.

1 **Q. Staff states that a link to the Company’s energy efficiency website would be**
2 **as effective as the Home Energy Report, Small Business Energy Report, and**
3 **Employee Education Channel proposals.⁴⁵ Do you agree?**

4 A. No. This assertion presumes that customers will notice the link and go to the
5 website, and is not accompanied by any recommendations as to the educational
6 material that should be on the website. Staff’s comment also ignores the lack of
7 broadband availability in many rural areas and the fact that the state of Missouri is
8 pursuing greater broadband deployment. Moreover, the MEEIA statute does not
9 require general education programs to pass a cost-effectiveness test (Section
10 393.1075.4, RSMo.).

11 **IV. ALTERNATIVE PROPOSALS**

12 **Q. Do Staff and OPC provide alternative proposals to Ameren Missouri’s Cycle**
13 **3 filing?**

14 A. Yes. Staff recommends continuing MEEIA Cycle 2 programs for up to one year
15 while parties negotiate Cycle 3 or another option,⁴⁶ and OPC recommends a
16 “default” level of MEEIA programs.⁴⁷ OPC’s default portfolio includes low-income
17 programs,⁴⁸ but neither parties’ alternative portfolio explicitly includes general
18 education programs.

⁴⁵ EO-2018-0211, Staff Rebuttal Report, pages 48-49, lines 31 and 1-2, page 49, lines 9-12, page 52, lines 21-24, and page 53, lines 1-3.

⁴⁶ *Ibid*, page 2, lines 3-6.

⁴⁷ EO-2018-0211, Marke Rebuttal, pages 2-5, lines 17-27, 1-20, 1-12, and 1-12.

⁴⁸ *Ibid*, page 4, lines 3-5.

1 **Q. If the Commission does not accept the Company's Cycle 3 proposal, would**
2 **DE support some sort of continuation of Cycle 2 programs?**

3 A. Yes, although DE would note that a number of the programs in Ameren Missouri's
4 proposal are cost-effective even under Staff's conservative avoided cost
5 assumptions. In fact, if the Commission rejects the Company's application, DE
6 would recommend continuing Cycle 2 beyond the one year limit recommended by
7 Staff if needed to achieve a resolution regarding Cycle 3, with the inclusion within
8 the Cycle 2 framework of those proposed Cycle 3 programs that Staff found to be
9 cost-effective and Ameren Missouri's proposed general education and low-income
10 programs; this continuation should only end upon the implementation of Cycle 3.
11 It is important to maintain program continuity and avoid "gaps" between cycles.
12 Such gaps are disruptive to the energy efficiency marketplace, as was shown with
13 the spacing between Cycle 1 and Cycle 2. Additionally, a lack of program offerings
14 contributed to Missouri's drop in the American Council for an Energy-Efficient
15 Economy's 2017 scorecard,⁴⁹ a particularly troubling outcome given that, in the
16 prior year's scorecard, Missouri was one of the "most improved" states in the
17 nation.⁵⁰

⁴⁹ American Council for an Energy-Efficient Economy. 2017. "Missouri." *2017 Score Sheets*.
<http://aceee.org/sites/default/files/pdf/state-sheet/2017/missouri.pdf>.

⁵⁰ Berg, Weston, Nowak, Seth, Kelly, Meegan, Vaidyanathan, Shruti, Shoemaker, Mary, Chittum, Anna, DiMascio, Marianne, and Kallakuri, Chetana. 2016. *The 2016 State Energy Efficiency Scorecard*. American Council for an Energy-Efficient Economy.
<http://aceee.org/sites/default/files/publications/researchreports/u1606.pdf>. Page 12.

1 **Q. Why is it important for such a continued portfolio to include the general**
2 **education programs proposed by the Company?**

3 A. As Dr. Marke notes, one of the best policies for encouraging energy efficiency is
4 to have buildings constructed efficiently.⁵¹ While Missouri has no statewide
5 building codes, there are ways to encourage the adoption of leading energy
6 efficiency practices in building construction and operation. These include the
7 “circuit rider” concept supported by Ameren Missouri⁵² (which DE proposed during
8 Cycle 2)⁵³ and the Building Operator Certification program that the Company also
9 proposes to support.⁵⁴ Like low-income programs, general education programs are
10 not required to pass a cost-effectiveness test under the MEEIA statute (Section
11 393.1075.4, RSMo.); therefore, even if the Commission accepts the cost-
12 effectiveness concerns raised by Staff or OPC, it can still approve the Company’s
13 proposed general education programs, much as it can still approve low-income
14 programs.

15 **Q. Do you have concerns about OPC’s proposed “default” MEEIA level?**

16 A. Yes. While DE recognizes that OPC, as well as Staff, have attempted to address
17 the MEEIA cycle continuity issue, OPC’s solution is far too small⁵⁵ when compared
18 to a continuation of Cycle 2.⁵⁶ Moreover, OPC’s proposal is not based on either a

⁵¹ EO-2018-0211, Marke Rebuttal, page 8, lines 10-12.

⁵² Missouri Public Service Commission Case No. EO-2018-0211, *In the Matter of Union Electric Company d/b/a Ameren Missouri’s 3rd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as Allowed by MEEIA*, Appendix B – Program Templates, June 4, 2018, page 42.

⁵³ EO-2015-0055, Missouri Division of Energy’s Response to *Ameren Missouri’s Energy Efficiency Collaborative Report*, page 2.

⁵⁴ EO-2018-0211, MEEIA 3 Plan, Appendix B, page 68.

⁵⁵ EO-2018-0211, Marke Rebuttal, pages 2-3, lines 17-27 and 1-12.

⁵⁶ EO-2018-0211, Staff Rebuttal Report, page 7, lines 8-9.

1 current or a past evaluation of “all cost-effective demand-side savings,” but only
2 scales the budget for Empire’s current non-MEEIA programs to create budgets for
3 non-low-income programs based on Ameren Missouri’s higher customer count.⁵⁷
4 While this approach might make sense for utilities that do not evaluate the possible
5 scope of cost-effective programs, it is unsuited to the electric utility regulatory
6 environment. In the event that the Commission rejects Ameren Missouri’s Cycle 3
7 application, DE recommends a continuance of Cycle 2 programs with the addition
8 (within the Cycle 2 framework) of those proposed Cycle 3 programs found cost-
9 effective by Staff and Ameren Missouri’s proposed low-income and general
10 education programs, with all such programs continuing until the implementation of
11 Cycle 3.

12 **V. OTHER RECOMMENDATIONS PROVIDED IN PARTIES’ TESTIMONIES**

13 **Q. Do you agree with Staff’s testimony that the Company should collect**
14 **additional data on what motivates customers to participate in DSM**
15 **programs?**

16 **A.** Yes. Such information would help inform future program designs and improve
17 participation rates, spreading direct benefits from MEEIA programs to more
18 customers.⁵⁸

⁵⁷ EO-2018-0211, Marke Rebuttal, pages 3-4, lines 13-20 and 1-7.

⁵⁸ EO-2018-0211, Staff Rebuttal Report, pages 13-14, lines 24-30 and 1-8.

1 **Q. Do you support the four recommendations provided by Staff on page 56 of**
2 **its report regarding the Company’s low-income program portfolio?**

3 A. Yes. These recommendations consist of working with the low-income MEEIA
4 workgroup on program expansion, working with the Keeping Current Collaborative,
5 expanding the Business Social Service program, and collaborating with other
6 utilities.⁵⁹

7 **Q. Do you also agree with Staff’s recommendation that the website links in**
8 **Ameren Missouri’s tariffs should go directly to program-specific pages?**⁶⁰

9 A. Yes.

10 **Q. What is CCM’s recommendation regarding data collection?**

11 A. CCM recommends additional data collection by the Company in order to evaluate
12 the equity-related aspects of Ameren Missouri’s programs.⁶¹ DE supports such
13 data collection as a means to inform and improve future program design, with the
14 goal of increasing participation and savings for vulnerable populations.

15 **Q. What do NHT and NRDC propose regarding low-income program budgeting?**

16 A. NHT⁶² and NRDC⁶³ both recommend revising the low-income multifamily
17 program’s budget to “ramp up” over the course of Cycle 3 in order to achieve more
18 comprehensive energy savings. DE agrees with this approach.

⁵⁹ *Ibid*, page 56, lines 5-27.

⁶⁰ *Ibid*, page 61, lines 18-20

⁶¹ EO-2018-0211, Spencer Rebuttal, pages 2-5, lines 27-31, 1-35, 1-22, and 1-3.

⁶² Missouri Public Service Commission Case No. EO-2018-0211, *In the Matter of Union Electric Company d/b/a Ameren Missouri’s 3rd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as Allowed by MEEIA*, Rebuttal Testimony of Annika Brink on Behalf of National Housing Trust, August 30, 2018, pages 9-10, lines 19-23 and 1-8.

⁶³ Missouri Public Service Commission Case No. EO-2018-0211, *In the Matter of Union Electric Company d/b/a Ameren Missouri’s 3rd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency*

1 **Q. Tower Grove recommends making additional information available to**
2 **prospective participants on the Company's low-income multifamily**
3 **programs. Does DE agree?** ⁶⁴

4 A. Yes.

5 **Q. Do NHT and Tower Grove have any employment-related recommendations?**

6 A. Yes. Both NHT⁶⁵ and Tower Grove⁶⁶ recommend a focus on supporting MEEIA-
7 related jobs for low-income communities and minorities. DE supports this
8 recommendation and notes that energy efficiency jobs represent the majority of
9 employment in the clean energy sector in Missouri.⁶⁷ This fact underscores the
10 economic benefits created by MEEIA.

11 **VI. CONCLUSIONS**

12 **Q. Please summarize your conclusions and recommendations.**

13 A. Even under the conservative avoided cost assumptions used by Staff, a substantial
14 portion of Ameren Missouri's portfolio passes the Total Resource Cost ("TRC") test
15 and was therefore inappropriately rejected by Staff. DE continues to support the
16 Company's Cycle 3 proposal in general, subject to the recommendations in my
17 Rebuttal Testimony. Additionally, DE supports the aforementioned data collection
18 recommendations made by Staff and CCM, certain of Staff's proposals related to

as Allowed by MEEIA, Rebuttal Testimony of Matthew Socks on Behalf of Natural Resources Defense Council, August 30, 2018, pages 4-8, lines 47-125.

⁶⁴ Missouri Public Service Commission Case No. EO-2018-0211, *In the Matter of Union Electric Company d/b/a Ameren Missouri's 3rd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as Allowed by MEEIA*, Rebuttal Testimony of Dana Gray on Behalf of Tower Grove Neighborhoods Community Development Corporation, August 30, 2018, page 5, lines 14-19.

⁶⁵ EO-2018-0211, Brink Rebuttal, pages 10-11, lines 15-20 and 1-3.

⁶⁶ EO-2018-0211, Gray Rebuttal, page 6, lines 7-10.

⁶⁷ Clean Energy Trust. 2018. "Missouri Toplines." *Clean Jobs Midwest*.
<https://www.cleanjobsmidwest.com/state/missouri>.

1 low-income programs and links to the Company's website, as well as NHT and
2 NRDC's recommended budget modifications for the low-income multifamily
3 program and NHT and Tower Grove's employment recommendations. In the event
4 that the Commission rejects Ameren Missouri's Cycle 3 application, DE
5 recommends a continuance of Cycle 2 programs with the addition of those
6 proposed Cycle 3 programs that Staff agrees are cost-effective and Ameren
7 Missouri's proposed low-income and general education programs, with all such
8 programs continuing through the MEEIA Cycle 2 framework until the
9 implementation of Cycle 3.

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

11 A. Yes.