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Witness:	Jamie W. Scripps
Sponsoring Party:	Renew Missouri
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**MISSOURI PUBLIC SERVICE COMMISSION**

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

**REBUTTAL TESTIMONY**

**OF**

**JAMIE SCRIPPS**

**ON BEHALF OF**

**RENEW MISSOURI**

August 7, 2018

Renew MO Exhibit No. 401  
Date 9-25-18 Reporter TV  
File No. ER-2018-0145+0146



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1 **Introduction**

2 **Q. State your name, business name and address.**

3 A. My name is Jamie Scripps and I am a partner with 5 Lakes Energy LLC located at 115  
4 West Allegan, Suite 710, Lansing, Michigan 48933.

5 **Q. On whose behalf are you appearing in this case?**

6 A. I am appearing here as an expert witness on Renew Missouri Advocates.

7 **Q. Have you previously provided testimony in this proceeding?**

8 A. Yes, I provided written direct testimony on July 6, 2018 on the topics of residential rate  
9 design and standby service, testifying that:

- 10 1. The Commission should avoid increases to Kansas City Power & Light  
11 (“KCP&L”) and Kansas City Power & Light – Greater Missouri Operations  
12 (“GMO”) residential customer charges;
- 13 2. The Commission should continue to fully migrate KCP&L and GMO residential  
14 tariffs away from declining and toward inclining block rates;
- 15 3. The Commission should require KCP&L and GMO to expand their use of  
16 residential time-of-use pilots and exercise caution as to residential demand  
17 charges; and
- 18 4. The Commission should require that KCP&L and GMO continue to exempt solar  
19 generating facilities from application of the proposed standby service riders.

1 **Q. What is the purpose of your rebuttal testimony?**

2 A. The purpose of my rebuttal testimony is to respond to the company's inclusion of the full  
3 cost of AMI meters in its residential customer charge. I also respond to the Staff Report –  
4 Class Cost of Service and the direct testimony of staff witness Natelle Dietrich on  
5 residential customer charges and time of use ("TOU") rates, and to the direct testimony  
6 of Missouri Department of Economic Development – Division of Energy ("MDE")  
7 witness Martin Hyman on declining block rates, inclining block rates, and rate design for  
8 electric vehicles.

9 **Residential Customer Charge**

10 **Q. The company has stated that it includes the full cost of AMI meters in the customer**  
11 **component of its cost study.<sup>1</sup> Do you agree that the full cost of AMI meters should**  
12 **be reflected in the customer charge?**

13 A. No. As has been discussed in a recent proceeding in Minnesota,<sup>2</sup> and in recent rate design  
14 reports from the Regulatory Assistance Project (RAP)<sup>3</sup> and Rocky Mountain Institute,<sup>4</sup>  
15 some portion of the cost of AMI meters should be classified as demand-related or energy-  
16 related costs as opposed to customer-related costs. The Commission has previously ruled  
17 that customer charges should be limited to "those costs necessary to make electric service

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<sup>1</sup> In response to DR RM-001 stating "Please provide the portion of costs associated with AMI meter investment included in the residential customer charge. (i.e. 100% of the cost of AMI meters is included in the residential customer charge)," the company responded "100% of the balance of account 371 – Meters is classified as customer-related and included in the Study's customer charge calculation. Account 371 includes AMI and non-AMI meters."

<sup>2</sup> See Minnesota Public Utilities Commission, Docket No. E-015/GR-16-664, Order dated March 12, 2018, p. 113

<sup>3</sup> See Regulatory Assistance Project, Smart Rate Design for a Smart Future, July 2015, available at <http://www.raponline.org/wp-content/uploads/2016/05/rap-lazar-gonzalez-smart-rate-design-july2015.pdf>

<sup>4</sup> See Rocky Mountain Institute, A Review of Alternative Rate Designs, May 2016, p. 54, available at <https://rmi.org/insight/review-alternative-rate-designs>

1 available to the customer, regardless of the level of electric service utilized. Examples of  
2 such costs include monthly meter reading, billing, postage, customer accounting service  
3 expenses, a portion of costs associated with meter investment, and the service line.”<sup>5</sup>

4 While the Commission has recognized that a portion of costs associated with meter  
5 investment may be considered to be customer-related, it is unreasonable to classify the  
6 full cost of AMI meters as customer-related, particularly in light of the distribution-  
7 related benefits and cost-causation of the AMI investment.

8 **Q. Why is it appropriate to classify a portion of the cost of AMI meters as a demand-  
9 related or energy-related cost?**

10 A. While it may have once been appropriate to classify the full cost of utility investment in  
11 non-AMI or “dumb meters”<sup>6</sup> as customer-related, the widespread deployment of AMI  
12 meters<sup>7</sup> impacts the distribution system as a whole, delivering benefits well beyond the  
13 capabilities of non-AMI metering technologies. These advanced capabilities include: data  
14 acquisition, equipment control, and communication capability between the customer and  
15 the power grid.<sup>8</sup> AMI data can be used by system controllers to aid in reducing loads  
16 during times of system stress, and particularly in conjunction with TOU rates, can be

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<sup>5</sup> Missouri Public Service Commission, Report and Order, ER-2014-0370, p. 88

<sup>6</sup> The meters included in FERC account 370 “are generally classified on a customer basis. However, they may also be classified using a demand component to show that larger-usage customers require more expensive metering equipment.” Advanced meters with additional functionality are a more expensive investment and can be used to mitigate demand costs through price signals, which drives the cost causation argument. See NARUC Electric Utility Cost Allocation Manual (1992) at p. 96; “In some situations, a portion of AMI (and other smart-grid infrastructure) costs may be appropriately recovered through energy or demand charges.” Rocky Mountain Institute, A Review of Alternative Rate Designs, May 2016, p. 54, available at <https://rmi.org/insight/review-alternative-rate-designs/>

<sup>7</sup> In an email dated July 31, 2018, Brad Lutz, Senior Manager of Regulatory Affairs for KCP&L/GMO, stated that the company has deployed AMI to 96.25% of its customers, and GMO has deployed AMI to 58.04% of its customers – and that “the remaining meters are to be converted by 2020.”

<sup>8</sup> Regulatory Assistance Project, Smart Rate Design for a Smart Future, July 2015, p. 15, available at <http://www.raponline.org/wp-content/.../rap-lazar-gonzalez-smart-rate-design-july2015.pdf>

1 used to shift usage from on-peak to off-peak periods.<sup>9</sup> In justifying investment in AMI,  
2 utilities point to system-wide benefits well beyond the billing of customers, such as  
3 energy savings, peak load management, and reduced distribution system costs.<sup>10</sup> As early  
4 as 2011, when the company was first rolling out smart meters as part of its SmartGrid  
5 demonstration area, it touted the many benefits of smart meters in a press release titled  
6 “KCP&L COMPLETES SMART METER INSTALLATION: Successful completion of  
7 first phase of unique energy project.”<sup>11</sup> In the press release, Mike Deggendorf, then-  
8 KCP&L senior vice president for delivery is quoted as saying, “These new meters, which  
9 we began installing in the SmartGrid project area last October, gave customers access to  
10 enhanced information about their electricity usage. Customers can use this information to  
11 change their behaviors resulting in monthly energy savings.” Mr. Deggendorf goes on to  
12 state, “We look forward to helping both our residential and commercial customers realize  
13 the full potential and many benefits of this advanced technology.”<sup>12</sup> The AMI meters  
14 since deployed by KCP&L/GMO have a number of capabilities that go beyond customer  
15 billing. In response to DR RM-003, the KCP&L/GMO witness Thomas Howe stated:  
16 “Service functionality and enhancements that are garnered by the deployment of a AMI  
17 meter that isn’t provided with the traditional non-AMI meter are: ability of providing 15-  
18 minute LP interval data; ability of providing daily readings and daily usage; remote  
19 connect/disconnect for majority of all meters; temperature monitoring for hot socket for  
20 certain meter types; outage notification and restoration events; tamper and diversion

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<sup>9</sup> Ibid.

<sup>10</sup> Ibid.

<sup>11</sup> Press Release: *KCP&L Smart Meter Installation Complete*, April 29, 2011, available at <https://www.kcpl.com/about-kcpl/media-center/2011/april/smart-meter-installation-complete>

<sup>12</sup> Ibid.

1 notifications; on demand read function of both kWh and kW readings to allow quicker  
2 response to move in/outs.”<sup>13</sup> In light of the fact that the company’s AMI investment was  
3 justified in part based on demand-related and energy-related distribution benefits, and  
4 that the AMI meters deployed are already generating system-wide benefits, and have the  
5 capability of providing even more such benefits in the future, it is appropriate to classify  
6 a portion of the cost of AMI meters as a demand-related or energy-related distribution  
7 cost and remove this portion from the customer charge.

8 **Q. What portion of the cost of AMI investment should be removed from the customer**  
9 **component of the company’s cost study?**

10 A. In response to DRs RM-004 in ER-2018-0145 and ER-2018-0146, KCP&L/GMO  
11 witness Thomas Howe stated that the cost difference between a residential AMI meter  
12 and non-AMI meter is \$71.50.<sup>14</sup> This per meter cost difference is a reasonable estimate of  
13 the portion of the AMI investment that should be removed from the customer charge. I  
14 recommend that the company lift out from the customer component in its cost of service  
15 study \$71.50 per AMI meter deployed and reclassify this cost as demand-related or  
16 energy-related.

17 **Q. Are there any other models for classification of AMI costs that the Commission**  
18 **should consider?**

19 A. On March 12, 2018, the Minnesota Public Utilities Commission rejected a request by  
20 Minnesota Power to raise its residential customer charge to \$9.00.<sup>15</sup> In that proceeding,

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<sup>13</sup> KCP&L/GMO response to DR RM-003 dated July 26, 2018.

<sup>14</sup> KCP&L/GMO response to DRs RM-004, Docket No. ER-2018-0145 and ER-2018-0146, dated July 26, 2018

<sup>15</sup> Minnesota Public Utilities Commission, Docket No. E-015/GR-16-664, Order dated March 12, 2018, p. 113



1 Minnesota Power had classified 100% of its metering costs as being customer-related.  
2 The Minnesota Office of the Attorney General – Residential Utilities and Antitrust  
3 Division (“OAG”) argued that Minnesota Power’s “cost study should be modified to  
4 classify the cost of meters as equally demand-, energy-, and customer-related,”<sup>16</sup> given  
5 that “AMI technology enables two-way communication between customers and utilities,  
6 ultimately lowering a utility’s demand and energy costs, particularly through time-based  
7 customer rates, increased reliability, and improved load control.”<sup>17</sup> In that proceeding, the  
8 Administrative Law Judge “concluded that Minnesota Power did not meet its burden to  
9 show that its classification of AMI meter costs is just and reasonable. In reaching this  
10 conclusion, the ALJ stated that the cost of AMI meters is not exclusively customer-  
11 related and recommended that the Commission exclude from the calculation of each  
12 customer class the cost of meters.”<sup>18</sup> In its Order, the Commission rejected Minnesota  
13 Power’s request for an increase to its residential customer charge.<sup>19</sup>

14 **Q. If a portion of the cost of AMI investment is classified as a demand-related or**  
15 **energy-related distribution cost, what impact will this have on the customer charge?**

16 A. In response to DRs RM-002 in ER-2018-0145 and ER-2018-0146, KCP&L/GMO  
17 witness Randy Erickson, Regulatory Affairs, identified the components of the customer  
18 charge for KCP&L and GMO. According to Mr. Erickson, the total customer component  
19 for KCP&L is \$17.43 before the removal of solar rebates. The “customer meters”  
20 component contributes \$3.43 toward this total. For GMO, the total customer component

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<sup>16</sup> Ibid at p. 69

<sup>17</sup> Ibid.

<sup>18</sup> Ibid at p. 71

<sup>19</sup> Minnesota Public Utilities Commission, Docket No. E-015/GR-16-664, Order dated March 12, 2018, p. 113

1 is \$14.50. The “customer meters” component contributes \$4.69 toward this total. In both  
2 cases, this is a meaningful percentage, with the customer meter component representing  
3 19.68% of the customer component for KCP&L and 32.34% of the customer component  
4 for GMO. The significance of the customer meter component is clear, and classification  
5 of the distribution-related portion of AMI costs away from the customer charge would  
6 provide a non-trivial reduction in the overall customer charge.

7 **Q. In the Staff Report – Class Cost of Service, staff recommends movement to the**  
8 **staff’s CCOS calculated customer charges for KCP&L and GMO (KCP&L would**  
9 **increase from \$12.62 to \$12.82; GMO would increase from \$10.43 to \$12.38).<sup>20</sup> Do**  
10 **you agree with this recommendation?**

11 A. No, I do not agree with this recommendation. As discussed previously, the current cost  
12 studies inappropriately include the full cost of AMI meters in the customer component.  
13 Further, high customer charges have a negative impact on customers and are inconsistent  
14 with a variety of public policy objectives, including restricting a customer’s ability to  
15 lower her bills through reduced consumption and sending improper price signals. High  
16 customer charges also place an unreasonable and unjust burden on low-income customers  
17 and those residing in apartment buildings. Recently, Commissions in many other states  
18 have rejected utility proposals to increase fixed charges on customers,<sup>21</sup> including the  
19 Minnesota PUC rejection of Minnesota Power’s requested customer charge increase,

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<sup>20</sup> See Staff Report – Class Cost of Service, Docket No. ER-2018-0145 and ER-2018-0146, p. 42; see also Direct Testimony of staff witness Natelle Dietrich, ER-2018-0145 and ER-2018-1046, filed July 6, 2018, p. 2.

<sup>21</sup> See Synapse Energy Economics, Inc., Caught in a Fix: The Problem with Fixed Charges for Electricity, February 2016, p. 3-4, previously filed on July 6, 2018 as Schedule JWS-4 with Direct Testimony of Jamie Scripps.

1 discussed above.<sup>22</sup> In general, the Commission should avoid increases in customer  
2 charges.

3 **Time of use Rates**

4 **Q. Staff witness Natelle Dietrich summarizes the Staff's recommendation for the**  
5 **implementation of mandatory company-wide Time of Use ("TOU") rates for all**  
6 **residential customers with AMI meters.<sup>23</sup> Do you agree with this recommendation?**

7 A. While I support expanding and enhancing the TOU pilot programs proposed by KCP&L  
8 and GMO in this proceeding, I do not recommend mandatory company-wide TOU rates  
9 for all residential customers with AMI meters at this time. More information is needed  
10 regarding customer responsiveness to TOU rates and the effectiveness of customer  
11 education. Holding off on moving to mandatory company-wide TOU rates would also  
12 allow time for the company to make more progress in AMI meter deployment, which is  
13 scheduled to be completed by 2020.<sup>24</sup>

14 **Q. How do you recommend KCP&L and GMO expand the proposed TOU pilot**  
15 **programs?**

16 A. As stated in my direct testimony, I recommend enlarging the size of the pilot programs to  
17 accommodate a larger total number of customers broken out by three types of residential  
18 customer: non-EV residential; EV-residential and residential customers with solar  
19 generation. The new pilot program size could be 3,000 total, with 1,000 spots allocated to

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<sup>22</sup> Minnesota Public Utilities Commission, Docket No. E-015/GR-16-664, Order dated March 12, 2018, p. 113

<sup>23</sup> See Direct Testimony of staff witness Natelle Dietrich, ER-2018-0145 and ER-2018-1046, filed July 6, 2018, p. 3.

<sup>24</sup> In an email dated July 31, 2018, Brad Lutz, Senior Manager of Regulatory Affairs for KCP&L/GMO, stated that the company has deployed AMI to 96.25% of its customers, and GMO has deployed AMI to 58.04% of its customers – and that “the remaining meters are to be converted by 2020.”

1 each of these segments of the residential class. In this way, the company would reduce the  
2 risk of the time-of-use rate becoming a de facto end-use specific rate by allowing over-  
3 subscription by one of these segments (*e. g.*, customers with electric vehicles). Reasonably  
4 expanding the overall size of the pilot programs in this way would also represent an  
5 important step toward realizing the value proposition of the AMI meters that have already  
6 been deployed.

7 **Q. Ms. Dietrich anticipates working with KCP&L and GMO and other stakeholders to**  
8 **refine the TOU design during the rate case process, and to facilitate customer**  
9 **education on the fundamental changes to the residential rate structure prior to the**  
10 **effective dates of tariffs implementing the rates resulting from this case.<sup>25</sup> Do you**  
11 **support this course of action?**

12 A. Yes, I strongly support this course of action. I agree that engagement of stakeholders  
13 (including, importantly, stakeholders beyond those internal to the company) has the  
14 potential to improve on the proposed TOU rate designs, and that facilitation of customer  
15 education prior to the effective dates of implementation will be helpful in obtaining the  
16 benefits of the proposed TOU rates. As I explained in my direct testimony, I have  
17 concerns about the limited stakeholder process used in the KCP&L Greater Missouri  
18 Operations Time-of -Use Rate Study<sup>26</sup> submitted in this proceeding. Experience has  
19 shown that proposed changes to rates should include input from a variety of stakeholders

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<sup>25</sup> See Direct Testimony of staff witness Natelle Dietrich, ER-2018-0145 and ER-2018-1046, filed July 6, 2018, p. 4.

<sup>26</sup> KCP&L Greater Missouri Operations Company, Time of Use Rate Study, December 12, 2017, submitted as Schedule MEM-3 with the testimony of company witness M. Miller in ER-2018-0146.

1 so that regulators can take into consideration the impact of the changes on all market  
2 participants.<sup>27</sup>

3 **Q. In the Staff Report – Class Cost of Service, staff recommends that KCP&L and  
4 **GMO establish TOU rate schedules applicable to separately-metered EV charging  
5 equipment.<sup>28</sup> Do you agree with this recommendation?****

6 **A.** Yes, I agree with this recommendation. EVs present utilities with unique challenges and  
7 opportunities in rate design; a utility that has deployed AMI has many options for  
8 providing a rate for residential EV owners that is attractive to both the customer and the  
9 utility. The goal should be to provide these customers with ready access to a time-varying  
10 rate and to send these customers the proper price signals to move EV charging to off-  
11 peak times. Establishing TOU rate schedules applicable to separately-metered EV  
12 charging equipment could be a positive step in this direction and could help avoid the  
13 pitfall of customers charging during times of peak demand, resulting in higher electric  
14 system costs and outweighing the potential operational energy savings associated with  
15 electric vehicles.<sup>29</sup>

## 16 **Inclining Block Rates**

17 **Q. Missouri Department of Economic Development – Division of Energy (“MDE”)  
18 witness Martin Hyman recommends that the company continue the transition away**

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<sup>27</sup> See Advanced Energy Economy, Rate Design for a DER Future, January 2018, p. 2, available at <https://info.aee.net/hubfs/PDF/Rate-Design.pdf>

<sup>28</sup> Staff Report – Class Cost of Service, Docket No. ER-2018-0145 and ER-2018-0146, p. 52 ; see also Direct Testimony of staff witness Natelle Dietrich, ER-2018-0145 and ER-2018-1046, filed July 6, 2018, p. 4.

<sup>29</sup> See A. Allison and M. Whited, Synapse Energy Economics, A Plug for Effective EV Rates, March 2017, p. 1, available at <http://www.synapse-energy.com/sites/default/files/A-Plug-for-Effective-EV-Rates-S66-020.pdf>

1           **from the declining block rates employed for residential general use customers**  
2           **during the winter.<sup>30</sup> Do you agree with this recommendation?**

3    A.    Yes, I agree that the company should move away from employing declining block rates  
4           during the winter. In its Report and Order in ER-2016-0285, the Commission stated in its  
5           findings of fact that a “declining block rate sends poorer efficiency signals to customers,  
6           since the effective price signal is that higher amounts of usage cost less.”<sup>31</sup> A declining  
7           block rate also suffers from the same deficiencies as a high customer charge because it  
8           artificially inflates the price of consumption for the first 600 kWh of usage. In its Report  
9           and Order in ER-2016-0285, the Commission found that “The first 500-600 kilowatt  
10          hours (kWh) is considered the minimum amount needed for the residents of a typical  
11          home to survive. This is also known as the ‘lifeline block.’” Because customers rely on  
12          this first block for survival, an increase in the rate charged for this “lifeline block” is  
13          effectively an additional fixed customer charge. As discussed previously, there are  
14          numerous harmful impacts from increasing fixed customer charges (whether  
15          accomplished through ramping up the explicit customer charge and/or increasing the  
16          price attached to the first block of consumption in a declining block rate). This approach  
17          hits low-income customers hardest, and the effects of the proposed rate structure would  
18          be particularly disproportionate during the winter season.

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<sup>30</sup> See Direct Testimony on Residential Rate Design of MDE witness Martin Hyman, ER-2018-0145 and ER-2018-0146, filed July 6, 2018, p. 2.

<sup>31</sup> Missouri Public Service Commission, Case No. ER-2016-0285, Report and Order dated May 3, 2017, p. 53.

1 **Q. Mr. Hyman recommends that the company implement inclining block rates for**  
2 **GMO’s residential general use customers during the summer.<sup>32</sup> Do you agree with**  
3 **this recommendation?**

4 A. Yes, I agree that the company should implement inclining block rates for GMO’s  
5 residential general use customers during the summer. In its Report and Order in ER-  
6 2016-0285, the Commission stated in its findings of fact that “the best efficiency-  
7 inducing price signals are provided by inclining block rates (‘IBR’) which charge more  
8 per amount of energy used after a certain threshold or thresholds of usage” and “inclining  
9 block rates signal to customers that higher use incurs higher costs, encouraging greater  
10 energy efficiency.”<sup>33</sup> Overall, the company will be able to obtain the benefits of increased  
11 energy efficiency and proper price signals by implementing inclining block rates for  
12 GMO’s residential general use customers during the summer.

13  
14 **Q. Mr. Hyman recommends that electric vehicles (“EVs”) should be identified and**  
15 **targeted for education about TOU rates so as not to be disadvantaged by IBRs.<sup>34</sup>**  
16 **How do you respond to this recommendation?**

17 A. I agree that EV customers may benefit from targeted education around TOU rate  
18 offerings. The Commission has properly urged the use of inclining block rates as KCP&L  
19 and GMO ramp up to greater use of time-varying rates, and there are many benefits to the  
20 use of an inclining block rate, including the fact that these rates encourage energy

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<sup>32</sup> See Direct Testimony on Residential Rate Design of MDE witness Martin Hyman, ER-2018-0145 and ER-2018-0146, filed July 6, 2018, p. 2.

<sup>33</sup> Missouri Public Service Commission, Case No. ER-2016-0285, Report and Order dated May 3, 2017, p. 53.

<sup>34</sup> See Direct Testimony on Residential Rate Design of MDE witness Martin Hyman, ER-2018-0145 and ER-2018-0146, filed July 6, 2018, p. 16.

1 efficiency and align with cost causation. However, if an EV customer has difficulty  
2 accessing a time-varying rate and is limited to an inclining block rate (which could be  
3 costly when applied to EV charging), this could have a negative impact on the EV  
4 customer and could frustrate efforts to encourage EV adoption. As described by Mr.  
5 Hyman, the company might consider working through local dealerships to inform  
6 KCP&L and GMO customers of time-of-use-rates and identifying EV customers through  
7 the companies' call center and via information provided on the companies' website,  
8 through social media campaigns, in bill inserts, and in public notices through local  
9 newspapers.<sup>35</sup> These additional efforts to identify and provide education on TOU rates to  
10 EV customers could be helpful to the company in obtaining the benefits of both the TOU  
11 and inclining block rates while preventing customers with EVs from being unduly  
12 disadvantaged.

13 **Q. Does this conclude your testimony?**

14 **A. Yes.**

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<sup>35</sup> See Direct Testimony on Residential Rate Design of MDE witness Martin Hyman, ER-2018-0145 and ER-2018-0146, filed July 6, 2018, p. 16-17.