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Pilot Rider, Renewable Energy Program Rider  
Witness: Kimberly H. Winslow  
Type of Exhibit: Direct Testimony  
Sponsoring Party: Kansas City Power & Light Company  
Case No.: ER-2018-0145  
Date Testimony Prepared: January 30, 2018

**MISSOURI PUBLIC SERVICE COMMISSION**

**CASE NO.: ER-2018-0145**

**DIRECT TESTIMONY**

**OF**

**KIMBERLY H. WINSLOW**

**ON BEHALF OF**

**KANSAS CITY POWER & LIGHT COMPANY**

**Kansas City, Missouri  
January 2018**

KCP&L Exhibit No. 174  
Date 9-25-18 Reporter JH  
File No. ER-2018-0145-0146

**DIRECT TESTIMONY**  
**OF**  
**KIMBERLY H. WINSLOW**

**Case No. ER-2018-0145**

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

2     A.    My name is Kimberly H. Winslow. My business address is 1200 Main Street, Kansas  
3            City, Missouri 64105.

4     **Q.    On whose behalf are you testifying?**

5     A.    I am testifying on behalf of Kansas City Power & Light Company (“KCP&L” or the  
6            “Company”).

7     **Q.    Please state your educational background and describe your professional training  
8            and experience.**

9     A.    I graduated from Missouri University of Science and Technology with a Bachelor of  
10           Science degree in Mechanical Engineering in 1990. In 1994, I graduated from  
11           Rockhurst University with a Master of Business Administration degree. I began my  
12           career at Black & Veatch in 1990 as an equipment engineer in its Gas, Oil and  
13           Chemicals Division. Within a year, I transferred to Black & Veatch’s Management  
14           Consulting Division. As a project manager and consultant, I worked on various  
15           projects for electric, gas, water and wastewater municipal and investor owned utilities,  
16           ranging in scope from long-term electric and natural gas demand and energy forecasts,  
17           cost of service and rate design studies, depreciation studies, valuation studies, and  
18           preparation of financial feasibility assessments and Consulting Engineer’s Reports for  
19           revenue bond sales.

1                   In December 2007, I began my employment with KCP&L as a Senior Energy  
2                   Consultant working with KCP&L's large industrial customers. In 2009, I assumed the  
3                   position of Manager of Energy Efficiency. In 2011, I transferred to our Generation  
4                   Division as a Senior Quantitative Analyst. In September 2013, I assumed the position  
5                   of Director of Energy Solutions within the Marketing and Public Affairs Division. I  
6                   am a Professional Engineer in the state of Missouri.

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

8                   A. I am employed by Kansas City Power & Light Company ("KCP&L" or "Company")  
9                   as Director of Energy Solutions.

10                  **Q. What are your responsibilities?**

11                  A. I lead and direct the following teams: Customer Solutions, Regulated Products and  
12                  Services, Economic Development, Business Center and Market Intelligence. My  
13                  responsibilities include initiating and bringing to market new regulated products, as  
14                  well as improvements and innovations to existing affordability, energy efficiency and  
15                  demand response products. I am also responsible for overseeing our small scale  
16                  renewable programs and offerings, as well as our Clean Charge Network.

17                         Additionally, I oversee our key accounts team who work with our largest  
18                         customers (also referred to as Tier 1 customers). I also oversee our Business Center  
19                         who interact with our Tier 2 business customers (minimum \$50,000 annual revenue),  
20                         and our Economic Development team who focuses on attraction of new business  
21                         customers and retention and expansion of existing business customers.

22                  **Q. What is the purpose of your testimony?**

23                  A: I will be covering several topics as it relates to my responsibilities at KCP&L. I will  
24                  address (1) the Company's proposed Solar Subscription Pilot Rider and Renewable

1 Energy Program tariffs and explain why the Company believes the time is right to  
2 propose these programs; and (2) the Company’s proposed time of use (“TOU”) pilots  
3 and why the Company is asking for recovery of the associated lost margin and program  
4 costs of the TOU rates through the Missouri Energy Efficiency Investment Act  
5 (“MEEIA”).

6 **Solar Subscription Pilot Rider**

7 **Q: Please generally describe utility-owned shared solar programs.**

8 A: Utility-owned shared solar are programs designed to provide customers direct access  
9 to solar generation without having to own, install and maintain their own solar  
10 generation. The utility builds the solar facility, maintains it and virtually “transports”  
11 the energy to customers who voluntarily enroll in the program. Program designs vary;  
12 however, depending on the program and jurisdiction, customers generally buy a solar  
13 panel directly, subscribe to its generation output, and/or subscribe to panel capacity.  
14 Customers may not physically receive the energy generated from the solar, but do  
15 receive the solar output as a credit to their bill. KCP&L’s solar program (“Solar  
16 Subscription Pilot Rider”) is proposed in this filing and is defined in the Solar  
17 Subscription Pilot Rider (“SSPR”) tariff. Company witness Brad Lutz also addresses  
18 aspects of the SSPR tariff.

19 **Q: Why is the Company proposing the SSPR at this time?**

20 A: Offering SSPR provides choice to customers and will benefit those customers who  
21 want renewable generation but are unable to either afford their own solar generation  
22 installation or whose particular circumstance does not allow for solar installation.

23 In anticipation of offering the SSPR, the Company surveyed its Customer  
24 Advisory Panel (“CAP”) to further understand how customers perceived rooftop solar,

1 hindrances to rooftop solar adoption, and renewable preferences. The results indicate  
2 that 54 percent of customers (642 of 1,189 surveyed) are interested in rooftop solar but  
3 had not installed their own panels due to cost<sup>1</sup>. In addition, 25 percent of customers  
4 could not install due to either renting their home or zoning or subdivision restrictions.

5 While the survey responses are representative across the Company's three  
6 jurisdictions (KCP&L-Missouri, KCP&L-Kansas, and KCP&L-Greater Missouri  
7 Operations Company ("GMO")), in the KCP&L-MO jurisdiction, data indicates that  
8 35 percent<sup>2</sup> of customers rent their homes, which is a greater number than the survey  
9 results. Because renting typically precludes a customer from installing rooftop solar,  
10 by offering the SSPR the Company can help to fill in the gap for those customers who  
11 want renewable generation but are unable to physically install their own panels.  
12 Furthermore, over half the customers surveyed said the option to purchase renewable  
13 energy was important to them.<sup>3</sup>

14 Many utilities nationwide have begun to evaluate and offer programs that allow  
15 customers access to solar generation as a way to offset a part or all of their energy  
16 needs. Based on our customer survey and national trends, the Company believes it is  
17 appropriate to provide customers with a utility-owned shared solar option.

18 **Q: What other investor-owned utilities are currently offering utility-owned shared**  
19 **solar programs within Kansas or Missouri?**

20 **A:** Westar Energy ("Westar") in Kansas and Ameren Missouri ("Ameren") offer similar  
21 solar programs in their respective states. Westar's program allows customers to

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<sup>1</sup> October 4, 2017 Customer Advisory Panel Solar Survey.

<sup>2</sup> Appliance saturation survey conducted as part of the KCP&L 2016 DSM Potential Study, filed in EO-2017-0229, June 1, 2017.

<sup>3</sup> October 4, 2017 Customer Advisory Panel Solar Survey.

1 subscribe to blocks of capacity (kW) and receive an energy credit on their monthly bill  
2 based on the actual energy (kWh) output of that capacity. Energy usage and demand  
3 exceeding the output of the subscribed solar capacity is priced at the customer's current  
4 tariffed rates. The price of the solar is fixed and the term of the agreement is 5 to 20  
5 years. Westar constructed a 1.2 MW solar system.

6 Ameren's program is structured differently than Westar's program. It allows  
7 customers to subscribe to solar blocks of 100 kWh that will directly offset the  
8 equivalent energy that the customer uses. Similarly, energy usage exceeding the  
9 amount of the subscribed solar energy is priced at the customer's current tariffed rates.  
10 The price of the solar may vary as additional solar generation is added to Ameren's  
11 program such that the customer pays a levelized cost of the new and existing solar  
12 generation. The term of Ameren's program is three years. Ameren installed a 1.0  
13 MW solar system to supply their shared solar program subscribers.

14 **Q: What other utility shared solar programs did the Company review in its**  
15 **development of its proposed program?**

16 **A:** The Company reviewed several; however Sacramento Municipal Utility District  
17 ("SMUD"), Minnesota Power ("MN Power") and Oklahoma Gas & Electric ("OGE")  
18 offered programs that were of particular interest to the Company because of their  
19 individual program design, customer adoption, and ease of customer participation.

20 SMUD's SolarShares Program<sup>4</sup> allows the customer to subscribe to a minimum  
21 0.5 kW of capacity up to the solar generating capacity and based on the actual energy  
22 output of that capacity, the customer can offset up to half their monthly usage. SMUD

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<sup>4</sup> See <https://www.smud.org/en/Going-Green/SolarShares>

1 does not own the facility as a utility asset but contracts through a third party that owns  
2 and maintains the system and delivers the energy to SMUD under a 20-year Power  
3 Purchase Agreement (“PPA”). The rate is locked in for as long as customers wish to  
4 participate within the program with the idea that the current premium price will actually  
5 lead to cost savings if utility rates increase.

6 MN Power’s Community Solar Program<sup>5</sup> contains 1.040 MW of solar  
7 generating capacity split between two locations in Duluth, Minnesota. Customers may  
8 subscribe to the program under three different options. The first is a per kWh charge  
9 for energy generated by the subscribed capacity. The second option is a flat monthly  
10 fee per kW of subscribed capacity. And the third option is a one-time upfront payment  
11 per kW that is for the duration of the 25-year program. Differing from SMUD’s design,  
12 MN Power customers can subscribe to capacity sufficient to cover 100 percent of their  
13 monthly energy needs.

14 OGE’s Solar Power Program<sup>6</sup> is a capacity-based subscription program that  
15 allows a customer to offset between 10 percent and 50 percent of their monthly energy  
16 needs with solar energy. Customers pay a fixed dollar-per-kWh rate for each kWh  
17 generated by the panels associated with their subscription. In order to participate,  
18 customers must also be on OGE’s time-of-use tariff. Due to the success of the program,  
19 OGE is expanding beyond its initial 2.5 MW solar investment and adding 10 MW more  
20 of solar capacity for the more than 3,000 customers who currently are on their program  
21 wait list.

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<sup>5</sup> <https://www.mnpower.com/Environment/CommunitySolar>

<sup>6</sup> <https://www.oge.com/wps/portal/oge/save-energy/Solar-Powe>

1           The Company reviewed each of these programs in conjunction with Ameren's  
2           and Westar's programs to develop a program that was easy for the customer to  
3           participate and understand, in addition to keeping the utility whole as to recovery of  
4           the costs of the solar generating unit and properly assigning the output of the solar  
5           generating unit.

6           **Q: Does the Company intend to own and operate the solar generating facilities**  
7           **required for this program or enter a PPA, similar to SMUD?**

8           A: The Company plans to construct, own, operate and maintain solar generating facilities  
9           of no less than 5 MW-AC, or approximately 6.5 MW-DC, of new generating capacity  
10          for this program. A larger system, such as 5 MW, should provide a more levelized price  
11          versus a 1-2 MW system for customers. Early estimates of the construction cost are  
12          \$1,350 to \$1,925 per kW. The Company will evaluate both company-owned and  
13          external partner property sites to choose the best suited location(s). As contained  
14          within the tariff language, the Company will enroll customers and place them on a  
15          waiting list and will not begin construction until 75 percent of the solar capacity is  
16          committed (or 3.75 MW). This will reduce the risk of the Company incurring costs  
17          should the program not generate sufficient interest and subscriptions from customers.  
18          If this were to occur, the Company may propose to terminate the program.

19          **Q: Has the Company evaluated possible solar sites for construction?**

20          A: The Company has begun evaluating sites that will minimize costs of the project. These  
21          evaluations consider a site's access to existing energy infrastructure, ability to expand  
22          and usage fees, amongst other considerations. The Company is working with both  
23          internal and external stakeholders to begin preliminary analyses to identify potential  
24          sites. Stakeholders include the Company's Generation and Transmission/ Distribution



1 Planning teams, as well as external partners like the City of Kansas City, Missouri and  
2 the Environmental Protection Agency.

3 **Q: Is the Company requesting a Certificate of Convenience and Necessity (“CCN”)**  
4 **at this time to the proposed construction?**

5 A: No. The Company believes it is premature to make the request. Once sufficient interest  
6 has been identified and the Company has identified a site, the Company will make the  
7 CCN request before the Commission.

8 **Q: What are the benefits that both subscribers and non-participating customers may**  
9 **realize as a result of this program?**

10 A: The main benefit to all of the Company’s customers is the continued diversification of  
11 generation sources that compose the Company’s generating fleet. With each solar  
12 installation, load will be shifted away from traditional fossil fuel generation. SSPR will  
13 provide a new option for customers to consider based on their preferences. The  
14 Program will also provide the Company and opportunity to learn more about providing  
15 renewables to customers.

16 **Q: Please describe these learning opportunities.**

17 A: Foremost, we hope to learn how customers view renewables and examine their  
18 willingness to directly obtain renewable energy. This interaction will help provide  
19 understanding of how to best communicate with prospective participants and to get  
20 feedback concerning what drives their satisfaction. The Company also expects to build  
21 on lessons learned from construction and operation of the Greenwood solar facility.

1 Renewable Energy Rider

2 **Q: Why is the Company proposing the Renewable Energy Program Rider?**

3 A: KCP&L sees an opportunity to address corporate customers' increasing demand for  
4 renewables. KCP&L's Renewable Energy Rider is proposed in this filing and is further  
5 defined in the Renewable Energy Rider ("RER") tariff. Company witness Lutz also  
6 addresses aspects of the RER tariff.

7 The Renewable Energy Program provides a way for KCP&L to contract on  
8 behalf of its customers to provide renewably-sourced electricity at a long-term price  
9 that reflects the cost of generation and delivery, similar to if the customer were  
10 purchasing the PPA directly from the developer. The program is designed such that it  
11 contains the costs of the RER to those participating customers without imposing costs  
12 on other customers. The RER is designed to meet larger business customer's energy  
13 needs and renewable commitments while the SSPR is expected to be utilized by  
14 residential and smaller businesses. We recognize that across the industry, the trend has  
15 been for larger customers to ask the utility to provide 100 percent of their energy needs  
16 via renewables. This tariff provides KCP&L the opportunity to fulfill this need as well  
17 as attract new load and retain existing load.

18 Customers within our jurisdictions have publically announced goals to achieve  
19 some level of renewable energy. Specifically, the RE100<sup>7</sup> "is a collaborative, global  
20 initiative uniting more than 100 influential businesses committed to 100 percent  
21 renewable electricity, working to massively increase demand for- and delivery of-  
22 renewable energy." Examples of companies that are committed to RE100 and have

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<sup>7</sup> [www.there100.com](http://www.there100.com)

1 locations within the our territories include IKEA Group, SwissRe, Schneider Electric,  
2 Unilever and Wal-Mart. Additionally, primary data from surveys that we have fielded  
3 with our largest customers indicate that customers have renewable energy goals in  
4 place, which include purchasing a percentage of clean energy or installing solar. Other  
5 businesses have signed on to the Renewable Energy Buyers' Principles, which includes  
6 72 companies engaged as of January 2018<sup>8</sup>.

7 The Company has met with representatives of the Clean Energy Business  
8 Council<sup>9</sup> ("CEBC"). The CEBC was formed in 2016 to "expand opportunities for  
9 business access to wind, solar, geothermal and waste-heat recovery systems and energy  
10 efficiency in Kansas and the Greater Kansas City Metro". In multiple meetings and  
11 interactions, the CEBC expressed their interest in Utility Purchasing Options, Third-  
12 Party Purchasing Options, and Onsite/Direct Deployment Options.

13 Additionally, the City of Kansas City, Missouri recently passed Resolution No.  
14 17058610 ("Renewable Energy Now Resolution") in 2017 to advance the City's  
15 environmental goals related to the Paris Climate Agreement. Among a number of  
16 renewable initiatives, the resolution directs that the City will evaluate the feasibility of  
17 procuring 100 percent of the electricity for municipal operations from renewables  
18 within three years, and also challenges all universities, public and private schools,  
19 hotels, and hospitals in the City to do the same. KCP&L has met with the City on  
20 several occasions to discuss our Renewable Energy Program and how it could be  
21 utilized to satisfy the resolution requirement. In addition, the Renewable Energy Now

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<sup>8</sup> <http://buyersprinciples.org/about-us/>

<sup>9</sup> <http://www.cleanenergyforbusiness.com/>

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<http://cityclerk.kcmo.org/LiveWeb/Documents/Document.aspx?q=DfoUSXu7pUSJTU5A5Zt%2FoWqkjtNDkyUIaNI6mdOfwqYjGvJHb50FjMIZ0GCwrJvx>

1 Resolution also requests an evaluation of the feasibility of developing five 1-MW  
2 shared solar facilities for municipal employees and employees of universities, schools,  
3 and hospitals. My earlier discussion of the Company’s proposed SSPR is directly  
4 correlated with this initiative.

5 **Q: What other investor-owned utilities are currently offering corporate renewable**  
6 **programs within Kansas or Missouri?**

7 A: Westar and Ameren Missouri have proposed tariffs before their respective  
8 Commissions for corporate renewable procurement. Nationwide, utilities are  
9 responding to the need voiced by customers. According to World Resources Institutes,  
10 nearly 560 MW of generation capacity related to “green tariffs” were approved in 2017  
11 with another 465 MW currently under negotiation. This is in contrast to 300 MW  
12 developed in 2015 and 220 MW in 2016.<sup>11</sup>

13 **Q: What other corporate renewable programs did the Company review in its**  
14 **development of its proposed program?**

15 A: The Company reviewed multiple programs that had been proposed or had been  
16 approved. Of note, we looked at the programs submitted by Ameren Missouri<sup>12</sup> and  
17 Westar<sup>13</sup> that are under consideration for approval in their respective jurisdictions. Our  
18 evaluation also looked into programs outside of our jurisdictions including programs  
19 operated by NV Energy<sup>14</sup>, Puget Sound Energy<sup>15</sup> and Duke Energy (North Carolina)<sup>16</sup>.  
20 The various program structures applied by these utilities within their respective

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<sup>11</sup> <http://www.wri.org/resources/charts-graphs/grid-transformation-green-tariff-deals>

<sup>12</sup> See Missouri Public Service Commission Case No. ET-2018-0063

<sup>13</sup> See Kansas Corporation Commission Docket No. 18-WSEE-190-TAR

<sup>14</sup> <https://www.nvenergy.com/cleanenergy/green-energy-choice>

<sup>15</sup> <https://pse.com/savingsandenergycenter/GreenPower/Pages/default.aspx>

<sup>16</sup> <https://www.duke-energy.com/home/products/renewable-energy/nc-greenpower>

1 jurisdictions allowed the Company to consider multiple program structures before  
2 ultimately settling on one that we believe is best suited for our customers.

3 **Q. What did you do to understand what was best for your customers?**

4 A. In addition to the direct interactions listed previously, the Company consulted multiple  
5 sources concerning best practice for corporate renewable procurement solutions. For  
6 example, the Company reviewed materials from the Advanced Energy Economy  
7 Institute, Lawrence Berkeley National Laboratory, PricewaterhouseCoopers, National  
8 Renewable Energy Laboratory, World Resources Institute, Baker & McKenzie, World  
9 Wildlife Fund and the Edison Electric Institute. Of particular note was the Corporate  
10 Renewable Energy Buyers' Principles<sup>17</sup> which defined six principles to expand and  
11 streamline the opportunities for renewable energy procurement.

#### 12 Time of Use Rates

13 **Q. Please describe the pilot residential tariffs that KCP&L is requesting approval?**

14 A. KCP&L is proposing to implement three Pilot Residential Demand Side Management  
15 ("DSM") rates, they are:

- 16 • Residential Time of Use (Schedule RTOU) - A two part rate comprised of a  
17 customer charge and a three period TOU per kWh energy charge
- 18 • Residential Demand Service (Schedule RD) - A three-part rate comprised of a  
19 customer charge, per kW demand charge, and a flat per kWh energy charge
- 20 • Residential Demand Service plus Time of Use (Schedule RDTOU) - A three-part  
21 rate comprised of a customer charge, a per kW demand charge, and a three-period  
22 TOU per kWh energy charge.

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<sup>17</sup> <http://buyersprinciples.org/>

1                   Because they are pilot tariffs, participation in each tariff will initially be limited  
2                   to 1,000 customers meeting the eligibility requirements specified in the tariffs.  
3                   Company witnesses Tim Rush and Marisol Miller also provide testimony on the Pilot  
4                   Residential DSM tariffs.

5                   **Q. You have referred to these rates as Pilot Residential DSM rates. Please explain.**

6                   A. Per Missouri regulation 4 CSR 240-20.020 (12), “demand-side rate means a rate  
7                   structure for retail electric service designed to reduce the net consumption or modify  
8                   the time of consumption of a customer rate class”. The 2017 KCP&L DSM Potential  
9                   Study<sup>18</sup>, performed for the 2018 Integrated Resource Plan, evaluated several residential  
10                  and commercial rate designs for their Demand Response (“DR”) potential. This study  
11                  identified several rate designs as candidates as viable Demand-Side Resources (defined  
12                  in Missouri regulation 4 CSR 240-20.020 (13)<sup>19</sup>). Based on the DSM Potential Study,  
13                  KCP&L designed the proposed rates for the pilot tariffs and have included them as  
14                  candidate resources in our 2018 IRP process.

15                  **Q. What process did KCP&L use to design these DSM rates?**

16                  A. KCP&L contracted with Burns & McDonnell (“BMcD”) to perform a Residential Rate  
17                  Design Strategy Study<sup>20</sup> to prepare a general long term plan for implementing  
18                  residential rate designs. As part of this study, KCP&L and BMcD used the conceptual  
19                  rate constructs evaluated in the potential study to inform the development of the

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<sup>18</sup> KCP&L 2016 DSM Potential Study, filed in EO-2017-0229, June 1, 2017.

<sup>19</sup> Missouri regulation 4 CSR 240-20.020 (13) Demand-side resource is a demand-side program or a demand-side rate conducted by the utility to modify the net consumption of electricity on the retail customer’s side of the meter. A load-building program or rate is not a demand-side resource.

<sup>20</sup> Residential Rate Design Strategy Study, Burns & McDonnell Engineering Company, 2017

1 proposed rate designs that are revenue neutral with the current residential rate  
2 structures. Company witness Miller further describes the design of the DSM rates.

3 **Q. Does KCP&L plan to propose these DSM rate as MEEIA programs?**

4 A. Yes. As described in Mr. Rush's testimony, KCP&L proposes that the rates be  
5 approved in this case; however the rates will not become effective until approval of  
6 MEEIA Cycle 3. MEEIA Cycle 2 ends March 31, 2019 and it is anticipated that  
7 MEEIA Cycle 3 would go into effect in April, 2019. At that time, we expect to further  
8 define how to launch the program and provide a program budget to support active  
9 customer promotion and education as well as a budget for the evaluation, measurement  
10 and verification.

11 **Q. As a DSM rate program, what costs does KCP&L anticipate seeking recovery as  
12 MEEIA program?**

13 A, The recoverable program cost are in three areas, program costs, lost revenue  
14 (throughput disincentive) and earnings opportunity.

15 **Q. Do you have an estimate of the lost revenue potential associated with the DSM  
16 rate programs?**

17 A. The BMcD study provided some estimates of the lost revenue potential but these were  
18 conducted on previous class cost of service data and current rates. Using DSM rates  
19 designed to be revenue with no customer load modifications, the BMcD study  
20 estimated that with a 10 percent shift in on- to off-peak usage the average lost revenue  
21 per participant could range from a low of \$0.50 per month, but could be as high as  
22 \$5.60 per month. The BMcD study estimated that if 28 percent of customers switched  
23 to the rate providing them the lowest annual bill, the total residential class revenue loss  
24 could be about 1.5 percent. Actual lost revenues may vary significantly from these

1 estimates based on the rates approved in this rate case and the level to which customers  
2 change their usage patterns.

3 **Q. What is the benefit of initially offering the DSM rates as pilots?**

4 A. Limiting the participation for each pilot rate to 1,000 customers will enable the  
5 company to fully assess what is required to recruit customers as well as evaluate the  
6 impact of the rates. If approved as DSM programs under MEEIA, the participation  
7 limits also provide a control to the level of revenue loss recoverable as part of the  
8 demand side investment mechanism charges. The EM&V conducted as a DSM  
9 program will provide data on which to determine future program expansion.

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

11 A. Yes, it does.



