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Policy Considerations Martin Hyman Missouri Department of Economic Development – Division of Energy Surrebuttal Testimony ET-2016-0246 FILED<sup>2</sup>

## MISSOURI PUBLIC SERVICE COMMISSION

Missouri Public Service Commission

FEB 3 2017

## UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

#### CASE NO. ET-2016-0246

#### SURREBUTTAL TESTIMONY

#### OF

#### MARTIN R. HYMAN

#### ON

#### **BEHALF OF**

## MISSOURI DEPARTMENT OF ECONOMIC DEVELOPMENT

#### **DIVISION OF ENERGY**

Jefferson City, Missouri December 19, 2016

DED Exhibit No. 251 Later 31-17 Reporter XF File NO. FT-2016-0246

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

In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Approval of a Tariff Setting a Rate for Electric Vehicle Charging Stations

Case No. ET-2016-0246

#### AFFIDAVIT OF MARTIN HYMAN

STATE OF MISSOURI	)	
	)	SS
COUNTY OF COLE	)	

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

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

Martin R. Hyman

Subscribed and sworn to before me this 19<sup>th</sup> day of December, 2016.

LAUAIR ANN AANOLD Notary Public - Notary Seal State of Missouri Commissioned for Callaway County My Commission Expires: April 26, 2020 Commission Number: 16808714

Tarme Un Que

Notary Public

My commission expires: 4/24/20

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**INTRODUCTION** 

I.

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- 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 720, PO Box 1766, Jefferson City, Missouri 65102. 4 5 Q. Please describe your educational background and employment experience. In 2011, I graduated from the School of Public and Environmental Affairs at Indiana 6 A. 7 University in Bloomington with a Master of Public Affairs and a Master of Science in 8 Environmental Science. There, I worked as a graduate assistant, primarily investigating 9 issues surrounding energy-related funding under the American Recovery and 10 Reinvestment Act of 2009. I also worked as a teaching assistant in graduate school and 11 interned at the White House Council on Environmental Quality in the summer of 2011. I 12 began employment with DE in September of 2014. Prior to that, I worked as a contractor for the U.S. Environmental Protection Agency to coordinate intra-agency modeling 13 discussions. 14
- Q. Have you previously filed testimony in this case before the Missouri Public Service
   Commission ("PSC" or "Commission") on behalf of DE or any other party?

17 A. Yes.

- II. PURPOSE AND SUMMARY OF TESTIMONY 1 2 Q. What is the purpose of your Surrebuttal Testimony in this proceeding? 3 My testimony addresses certain arguments made by Commission Staff ("Staff") witness A. Mr. Byron M. Murray<sup>1</sup> and Office of the Public Counsel ("OPC") witness Dr. Geoff 4 Marke.<sup>2</sup> I respond to arguments regarding the rate base treatment of Union Electric 5 Company d/b/a Ameren Missouri's ("Ameren Missouri" or "Company") proposed 6 7 electric vehicle ("EV") charging stations ("EVCS"), as well as rate design issues. I also 8 address Dr. Marke's allegations regarding market competition for EV charging services, 9 public road funding, and environmental impacts. Lastly, I respond to Dr. Marke's 10 inclusion in testimony of the Kansas Corporation Commission's recent Order regarding Kansas City Power & Light Company's ("KCP&L") Clean Charge Network.<sup>3</sup> 11 12 III. **RATE BASE TREATMENT AND RATE DESIGN RATE BASE TREATMENT** 13 A. Both Staff<sup>4</sup> and OPC<sup>5</sup> oppose the inclusion of Ameren Missouri's proposed EVCSs 14 **Q**. in rate base. Does DE agree? 15
- A. No. Failure to include the EVCSs in rate base could diminish the Company's incentive to
   pursue EVCSs. Their inclusion in rate base also does not mean that inequitable

<sup>&</sup>lt;sup>1</sup> Missouri Public Service Commission Case No. ET-2016-0246, In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Approval of a Tariff Setting a Rate for Electric Vehicle Charging Stations, Rebuttal Testimony of Byron M. Murray on Behalf of Missouri Public Service Commission, Operational Analysis Department, Tarff/Rate Design Unit, November 29, 2016.

<sup>&</sup>lt;sup>2</sup> Missouri Public Service Commission Case No. ET-2016-0246, In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Approval of a Tariff Setting a Rate for Electric Vehicle Charging Stations, Rebuttal Testimony of Geoff Marke Submitted on Behalf of the Office of the Public Counsel, November 29, 2016. <sup>3</sup> Ibid, Schedule GM-2. Original citation: State Corporation Commission of the State of Kansas Docket No. 16-KCPE-160-MIS, In the Matter of Kansas City Power & Light's Application to Deploy and Operate its Proposed Clean Charge Network, Order Denying KCP&L's Application for Approval of Its Clean Charge Network Project and Electric Vehicle Charging Station Tariff, September 13, 2016.

<sup>&</sup>lt;sup>4</sup> Murray Rebuttal, page 3, lines 7-10.

<sup>&</sup>lt;sup>5</sup> Marke Rebuttal, page 5, lines 2-6.

1	l	"subsidization" of EVCSs would occur, or that competition in the EV charging market
2		would be stifled.
3	Q.	Does including the proposed project in rate base mean that all Ameren Missouri
4		customers will have to pay for the proposed EVCSs?
5	А.	No, not over the lifetime of the project. Ameren Missouri's Direct Testimony indicates
6		that under its initial proposal, while some initial payment for EVCS costs by non-EV
7		driving customers may be necessary, the EVCSs would make a net contribution to fixed
8		plant investment beginning in their fifth year of operation, with a cumulative contribution
9		of \$1.9 million in the fifteenth year of operation. This net contribution would result in
10		lower rates for all residential customers. <sup>6</sup>
11	Q.	Does the fact that non-EV driving customers would initially pay part of the EVCSs'
	Q.	Does the fact that non-EV driving customers would initially pay part of the EVCSs' costs indicate a subsidy?
	Q. A.	
12		costs indicate a subsidy?
12 13		<pre>costs indicate a subsidy? No. A "subsidy" only occurs when one type of service is charged for at less than its fully</pre>
12 13 14		costs indicate a subsidy? No. A "subsidy" only occurs when one type of service is charged for at less than its fully allocated incremental cost while another type of service is charged for at more than its
12 13 14 15		costs indicate a subsidy? No. A "subsidy" only occurs when one type of service is charged for at less than its fully allocated incremental cost while another type of service is charged for at more than its fully allocated incremental cost as a consequence. When evaluating alleged subsidization,
12 13 14 15 16		costs indicate a subsidy? No. A "subsidy" only occurs when one type of service is charged for at less than its fully allocated incremental cost while another type of service is charged for at more than its fully allocated incremental cost as a consequence. When evaluating alleged subsidization, the central issue is whether or not customers of a given class ultimately contribute to
12 13 14 15 16 17		costs indicate a subsidy? No. A "subsidy" only occurs when one type of service is charged for at less than its fully allocated incremental cost while another type of service is charged for at more than its fully allocated incremental cost as a consequence. When evaluating alleged subsidization, the central issue is whether or not customers of a given class ultimately contribute to fixed cost recovery by paying above their incremental costs of service. In such an
12 13 14 15 16 17 18		costs indicate a subsidy? No. A "subsidy" only occurs when one type of service is charged for at less than its fully allocated incremental cost while another type of service is charged for at more than its fully allocated incremental cost as a consequence. When evaluating alleged subsidization, the central issue is whether or not customers of a given class ultimately contribute to fixed cost recovery by paying above their incremental costs of service. In such an evaluation for a new service offering, it is common practice to evaluate cost recovery

<sup>&</sup>lt;sup>6</sup> Missouri Public Service Commission Case No. ET-2016-0246, In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Approval of a Tariff Setting a Rate for Electric Vehicle Charging Stations, Direct Testimony of Mark J. Nealon on Behalf of Union Electric Company d/b/a Ameren Missouri, August 15, 2016, pages 25-26, lines 13-20 and 1-9.

1		million contribution over the life of the investment in the EVCS infrastructure. <sup>7</sup>
2		Consequently, although non-EVCS residential customers would pay 11.3 cents annually
3		for four years as a result of these EVCSs, residential customers would ultimately gain a
4		net present value of \$3.63 over 15 years from the "downward pressure" placed upon rates
5		from EV drivers. <sup>8</sup> Furthermore, in the short run, Level 2-AC charging will be paid for by
6		EV drivers at a rate of \$0.20/kWh, <sup>9</sup> which is above the Company's residential summer
7		energy charge of \$0.1208/kWh. <sup>10</sup>
8	Q.	Is including the EVCSs in the Company's rate base inequitable?
9	А.	So long as non-EV driving ratepayers benefit in the long run through fixed cost
10		contributions by EV drivers, inclusion of the EVCSs in rate base is not inequitable. Such
11		a contribution benefits all customers, regardless of income, rate class, or EV ownership.
12	Q.	Why might the exclusion of the EVCSs from the Company's rate base discourage
13		the Company from implementing its EVCS proposal?
14	А.	Although investor-owned utilities serve the public, they are publicly traded; shareholders
15		who invest in these firms do so with some expectation of earning a return on their
16		investments. Traditionally, a franchise to serve the public and Commission authorization
17		to earn a specific return on equity has been offered to utilities in exchange for
18		government regulation over prices and a commitment to serve all customers under
19		reasonable terms and conditions. Including EVCSs in rate base subjects them to
	7 Ibid -	and 26 lines 1.2

<sup>&</sup>lt;sup>7</sup> *Ibid*, page 26, lines 1-3.

<sup>&</sup>lt;sup>8</sup> Ibid, page 25, lines 13-20, and page 26, lines 8-9.

<sup>&</sup>lt;sup>9</sup> Missouri Public Service Commission Case No. ET-2016-0246, In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Approval of a Tariff Setting a Rate for Electric Vehicle Charging Stations, Union Electric Company d/b/a Ameren Missouri, Schedule of Rates for Electricity, Electric Vehicle Charging Pilot Program, October 7, 2016, Sheet No. 166.

<sup>&</sup>lt;sup>10</sup> Missouri Public Service Commission Tariff No. YE-2015-0325, Union Electric Company d/b/a Ameren Missouri, Schedule of Rates for Electricity, Service Classification No. 1(M) – Residential Service Rate, May 30, 2015, Sheet No. 54.

1		Commission regulation, but also offers the Company an opportunity to earn a reasonable
2		return on its investments devoted to the public interest. Exclusion of the EVCSs from rate
3		base would remove this opportunity, discouraging the Company from investing in
4		infrastructure that serves the public interest through rate reductions and cleaner air.
5	Q.	Does the inclusion of EVCSs in the Company's rate base reduce competition or
6		preclude a third party from installing EVCSs?
7	A.	No. I have been advised by counsel that third-party entities, subject to applicable laws
8		and regulations, would not be prohibited from providing EV charging services.
9		Theoretically, such providers could even provide lower-cost charging than that offered by
10		Ameren Missouri once EV adoption increases and/or because of more flexible corporate
11		structures (as compared to an investor-owned utility).
12	В.	RATE DESIGN
13	Q.	What is Mr. Murray's recommendation with respect to the design of Ameren
14		Missouri's proposed EVCS tariffs?
15	Α.	Mr. Murray recommends that the tariffs for both Level 2-AC and DC fast charging use
16		either time-based charges (i.e., charges per time period of use) or "per kW [sic]"
17		charges. <sup>11</sup>
18	Q.	Has the Company worked with stakeholders to revise its EVCS tariffs?
19	А.	Yes. The Company's initial tariff filing used time-based rates for both types of
20		charging. <sup>12</sup> However, as noted by Sierra Club witness Mr. Douglas B. Jester, time-based

 <sup>&</sup>lt;sup>11</sup> Murray Direct, page 5, lines 4-8.
 <sup>12</sup> Missouri Public Service Commission Case No. ET-2016-0246, In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Approval of a Tariff Setting a Rate for Electric Vehicle Charging Stations, Schedule of Rates for Electricity, Electric Vehicle Charging Pilot Program, August 15, 2016, Sheet No. 166.

1		rates would not be fair to customers with EVs that charge at slower speeds. <sup>13</sup> Ameren
2		Missouri filed its revised tariff, which includes a per-kWh charge for Level 2-AC
3		charging, to address the concerns of the Sierra Club and the Natural Resources Defense
4	ļ	Council. <sup>14</sup>
5	Q.	What is DE's recommendation with regard to rate design in this case?
6	A.	DE does not support moving Level 2-AC charging back to a time-based rate due to the
7		concern with unfair treatment of consumers using different charging speeds.
8	Q.	Dr. Marke notes that Ameren Missouri has not proposed an at-home off-peak EV
9		charging rate. <sup>15</sup> Would DE support this type of rate?
10	А.	In the context of a general rate case, DE supports demand-response rates (such as an off-
11		peak rate) applicable to all end uses. Demand response rates should be broadly applicable
12		to all uses and should not discriminate for or against particular end uses. However, more
13		generally applicable residential rate designs are not the subject of this case, which focuses
14		on rates for Ameren Missouri's proposed EVCSs.
15	IV.	MARKET COMPETITION
16	Q.	Dr. Marke has alleged that a competitive market for EV charging already exists for
17		vehicle refueling. <sup>16</sup> Does DE agree?
18	А.	No, not in the context of EVs. Although Dr. Marke presented a map of EVCSs found on

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No, not in the context of EVs. Although Dr. Marke presented a map of EVCSs found on

the PlugShare website, his map does not support his assertion that there is a competitive

<sup>&</sup>lt;sup>13</sup> Missouri Public Service Commission Case No. ET-2016-0246, *In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Approval of a Tariff Setting a Rate for Electric Vehicle Charging Stations*, Rebuttal Testimony of Mr. Douglas B. Jester on Behalf of Sierra Club, November 29, 2016, page 6, lines 11-14. <sup>14</sup> Missouri Public Service Commission Case No. ET-2016-0246, *In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Approval of a Tariff Setting a Rate for Electric Vehicle Charging Stations*, Response of the Missouri Division of Energy to Ameren Missouri's Revised Tariff, October 13, 2016, page 2. <sup>15</sup> Marke Rebuttal, page 32, lines 11-12.

<sup>&</sup>lt;sup>16</sup> *Ibid*, page 6, lines 7-9.

1	I.	market in the area. Between the St. Louis metropolitan area and Columbia his map shows
2		only one charging location, and – according to this map – that location does not seem to
3	_	have DC fast charging. <sup>17</sup> Given the lack of DC fast charging (and the existence of only
4		one charging location between the St. Louis metropolitan area and Columbia), the EV
5		charging market cannot be considered competitive in that area.
6	Q.	Why is it important that there is no DC fast charging between the St. Louis
7		metropolitan area and Columbia?
8	Α.	DC fast charging enables EVs to charge more quickly than Level 2-AC charging. With
9		Level 2-AC charging, a customer could receive only 20 to 30 miles of driving range per
10		hour, <sup>18</sup> while DC fast chargers can recharge the equivalent of over 100 miles of driving
11		range in the same amount of time. <sup>19</sup> As with different types of gasoline, it is important
12		that EV drivers have the capability to use the type of charging compatible with their
13		vehicle capabilities and driving needs. Unless a customer is willing to spend a significant
14		amount of time in one location during a long-distance trip, a Level 2-AC charger will not
15		support long-distance EV travel, <sup>20</sup> thus reducing the EV market with respect to drivers
16		who travel long distances. A competitive market does not exist if consumer demands are
17		not fully served.

 <sup>&</sup>lt;sup>17</sup> *Ibid*, page 8, lines 1-6. See also: PlugShare, 2016, "EV Charging Station Map – Find a place to charge your car!," <u>https://www.plugshare.com/#</u>.
 <sup>18</sup> Jester Rebuttal, page 22, lines 17-20.
 <sup>19</sup> *Ibid*, page 23, lines 4-6.
 <sup>20</sup> *Ibid*, lines 7-8.

1	V.	PUBLIC ROADS
2	Q.	Dr. Marke expresses concern that EV drivers would not contribute to road
3		maintenance since they would not pay gasoline taxes, <sup>21</sup> and states that road
4		maintenance funding relies mostly on, "inefficient cars and/or more miles
5		traveled" <sup>22</sup> Are his statements relevant to this case?
6	A.	No. Dr. Marke's concern pertains to tax revenue collected for the Missouri Department of
7		Transportation by the Missouri Department of Revenue, not to rates set by the
8		Commission for regulated utilities.
9	Q.	Notwithstanding the relevance of Dr. Marke's concern, do EV drivers pay for road
9 10	Q.	Notwithstanding the relevance of Dr. Marke's concern, do EV drivers pay for road maintenance in Missouri?
	Q. A.	
10		maintenance in Missouri?
10 11		maintenance in Missouri? Yes. Missouri drivers of EV passenger vehicles are required to purchase a \$75 decal
10 11 12		maintenance in Missouri? Yes. Missouri drivers of EV passenger vehicles are required to purchase a \$75 decal every year. <sup>23</sup> Given Missouri's \$0.17 per gallon gasoline tax <sup>24</sup> and a 2014 new passenger
10 11 12 13		maintenance in Missouri? Yes. Missouri drivers of EV passenger vehicles are required to purchase a \$75 decal every year. <sup>23</sup> Given Missouri's \$0.17 per gallon gasoline tax <sup>24</sup> and a 2014 new passenger vehicle average fuel economy of 36.4 miles per gallon, <sup>25</sup> this decal pays for the annual
10 11 12 13 14		maintenance in Missouri? Yes. Missouri drivers of EV passenger vehicles are required to purchase a \$75 decal every year. <sup>23</sup> Given Missouri's \$0.17 per gallon gasoline tax <sup>24</sup> and a 2014 new passenger vehicle average fuel economy of 36.4 miles per gallon, <sup>25</sup> this decal pays for the annual equivalent of approximately 16,059 miles of gasoline taxes, well above the average

<sup>&</sup>lt;sup>21</sup> Marke Rebuttal, page 28, lines 16-17, and page 31, lines 10-13.
<sup>22</sup> *Ibid*, page 30, lines 16-18.
<sup>23</sup> Missouri Department of Revenue. Undated. "Special Fuel Decals." <u>http://dor.mo.gov/motory/decals.php</u>.

<sup>&</sup>lt;sup>24</sup> Missouri Department of Revenue. Undated. "Motor Fuel Tax." <u>http://dor.mo.gov/business/fuel/</u>.

<sup>&</sup>lt;sup>25</sup> U.S. Department of Transportation, Bureau of Transportation Statistics. 2016. "Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles." National Transportation Statistics. http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national transportation statistics/html/table 04 2 3.html.

<sup>&</sup>lt;sup>26</sup> U.S Department of Transportation, Federal Highway Administration. 2016. "Average Annual Miles per Driver by Age Group." https://www.fhwa.dot.gov/ohim/onh00/bar8.htm.

1	Q.	Should Dr. Marke's concern be addressed?
2	A.	Yes, in the appropriate forum. Funding the maintenance of Missouri's roads is a matter
3	-	for consideration by the General Assembly; the Commission is charged with regulating
4		the generation, distribution, and sale of electricity, not with maintaining highway
5		infrastructure.
6	VI.	ENVIRONMENTAL IMPACTS
7	Q.	Dr. Marke disputes the environmental benefits of driving EVCSs. <sup>27</sup> Does DE agree
8		with his assessment?
9	A.	No. Dr. Marke's arguments rely, in part, <sup>28</sup> on the same U.S. Department of Energy data <sup>29</sup>
10		used in a source cited in my Rebuttal Testimony. <sup>30</sup> The data clearly show that an EV
11		powered by the average Missouri electric portfolio produces fewer annual emissions of
12		greenhouse gases than a conventional automobile. Even if driving EVs in states with
13		fewer fossil fuel-fired power plants would produce lower emissions than driving in
14		Missouri, the fact remains that EVs powered by Missouri's fossil fuel-intensive average
15		portfolio would emit fewer greenhouse gases than conventional automobiles. This
16		improvement will increase with the deployment of greater amounts of renewable energy,
17		a transition which seems economically certain. <sup>31</sup>

<sup>27</sup> Marke Rebuttal, pages 15-20, lines 11-16, 1-8, 1-12, 1-14, 1-3, and 1-6.

<sup>28</sup> *Ibid*, page 19, lines 1-2 and page 20, lines 4-5.

http://www.afdc.energy.gov/vehicles/electric\_emissions.php.

<sup>&</sup>lt;sup>29</sup> U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy, Alternative Fuels Data Center. 2016. "Emissions from Hybrid and Plug-In Electric Vehicles."

<sup>&</sup>lt;sup>30</sup> Missouri Public Service Commission Case No. ET-2016-0246, *In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Approval of a Tariff Setting a Rate for Electric Vehicle Charging Stations*, Rebuttal Testimony of Martin R. Hyman on Behalf of Missouri Department of Economic development – Division of Energy, November 29, 2016, page 6, footnote 10.

<sup>&</sup>lt;sup>31</sup> Ryan, Joe, Martin, Chris, and Polson, Jim. 2016. "Economics to Keep Wind and Solar Energy Thriving With Trump." *Bloomberg*. November 23. <u>https://www.bloomberg.com/news/articles/2016-11-23/economics-will-keep-wind-and-solar-energy-thriving-under-trump</u>.

1	Q.	Dr. Marke states that the average fuel mix of an electric utility's portfolio is less
2		indicative of EV-related emissions than emissions based on plant dispatch order. <sup>32</sup> Is
3		he correct?
4	А.	To an extent. As he notes, estimating plant dispatch order is not an easy task; <sup>33</sup> at the
5		same time, it should neither be assumed that an EV will charge based only on renewable
6	÷	energy or that it will only be charged based on coal or peaking natural gas facilities.
7		Using an average electricity mix is a reasonable compromise for factoring in variations in
8		electric generation sources.
9	Q.	Should emissions reduction efforts focus on lowest-cost solutions, such as
10		compliance with current emissions standards? <sup>34</sup>
11	A.	To some extent, but these first-best options should not constitute the entirety of public
12		policy to reduce emissions given the reductions which EVs could provide and other
13		benefits previously stated. Exclusive reliance upon one solution increases the risk of
14		policy failure. The state should work to diversify the mix of transportation fuels
15		available, which involves supporting EVs and other alternatives. Such diversification is
16		consistent with the third goal of the Missouri Comprehensive State Energy Plan. <sup>35</sup>
17	Q.	Would Missouri be a "first-mover" (as alleged by Dr. Marke) <sup>36</sup> with respect to
18		policies on EV adoption?
19	Α.	Not at all. Around the country, other state-level policies support EV adoption. <sup>37</sup> For
20		example, Oklahoma's Office of Management and Enterprise Services is authorized to

<sup>32</sup> Marke Rebuttal, pages 17-18, lines 10-12 and 1-6.
 <sup>33</sup> *Ibid*, page 18, lines 5-6.
 <sup>34</sup> *Ibid*, page 23, lines 8-10.
 <sup>35</sup> Missouri Department of Economic Development – Division of Energy. 2015. "Missouri Comprehensive State Energy Plan." <u>https://energy.mo.gov/energy/docs/MCSEP.pdf</u>. Page 227.
 <sup>36</sup> Marke Rebuttal, page 30, lines 11-15.

1		offer public access to its alternative fueling infrastructure where publicly accessible
2		infrastructure is not readily available; electricity is counted as an alternative fuel. <sup>38</sup> The
3	-	Washington State Utilities and Transportation Commission is permitted to allow an
4		incentive rate of return on capital expenditures for ratepayer-benefitting EV supply
5		equipment located where EVs are most likely to be parked for over two hours; the
6		expenditures are limited to 0.25 percent in increased ratepayer costs, and the investments
7		must be regulated. <sup>39</sup>
8	Q.	Are there existing state policies in Missouri which support alternative fuel vehicles?
9	A.	Yes. Through tax years beginning prior to January of 2018, Missouri's Alternative Fuel
10		Infrastructure Tax Credit provides a credit of up to the lesser of \$20,000 or 20 percent of
11		total costs directly related to purchases and installations of recharging equipment by
12		businesses, subject to appropriations. <sup>40</sup> The tax credit received appropriations in 2015 and
13		2016. Additionally, Section 414.400, RSMo. requires state agencies to use alternative
14		fuels (such as electricity) in an amount equivalent to thirty percent of their motor fuel
15		consumption.

<sup>37</sup> See, for example, the search results for state laws and incentives pertaining to EVs at: U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy, Alternative Fuels Data Center, 2016, "Search Federal and State Laws and Incentives," <u>http://www.afdc.energy.gov/laws/search</u>. <sup>38</sup> Oklahoma Statute Sections 74-78.G and H and 74-130.2.1.

<sup>40</sup> Missouri Department of Economic Development – Division of Energy. 2015. "Missouri Alternative Fuel Infrastructure Tax Credit." https://energy.mo.gov/docs/default-source/energy\_division/EE-15-034.pdf.

<sup>&</sup>lt;sup>39</sup> RCW 80.28.360.

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, 1	VII.	KANSAS CORPORATION COMMISSION ORDER
2	Q.	What reason does Dr. Marke give for attaching the KCC Order regarding
3		KCP&L's Clean Charge Network to his testimony?
4	А.	Dr. Marke introduces the order only by stating that, "Similar conclusions [as reached by
5		Dr. Marke] were reached by the Kansas Corporation Commission recently in its
6		Order <sup>341</sup>
7	Q.	Was the case before the KCC the same as Ameren Missouri's case before this
8		Commission?
9	А.	No. Ameren Missouri proposes to install and operate five EVCSs along the I-70 corridor
10		between St. Louis and Boonville and an EVCS in Jefferson City <sup>42</sup> at a total cost of
11		\$570,000, with \$40,000 annually for operations, maintenance, and network access and
12		\$10,000 annually for the first three years for education and marketing. <sup>43</sup> By contrast,
13		KCP&L sought authorization for the installation of 315 charging stations <sup>44</sup> in Johnson
14		County, Kansas <sup>45</sup> (and an associated tariff) for \$5.6 million in jurisdictional capital costs,
15		depreciation expense, and \$250,000 annually for operations and maintenance. <sup>46</sup> Whereas
16		Ameren Missouri's proposal is for a few stations along a long-distance travel corridor for
17		\$1.2 million, KCP&L's proposal involved a more concentrated distribution of a larger
18		number of stations for close to \$9.35 million (assuming 15 years of Clean Charge
19		Network operation). The proposals are dissimilar both in scale and geographic scope, so

 <sup>&</sup>lt;sup>41</sup> Marke Rebuttal, page 34, lines 4-6.
 <sup>42</sup> Missouri Public Service Commission Case No. ET-2016-0246, In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Approval of a Tariff Setting a Rate for Electric Vehicle Charging Stations, Application for Approval of Tariff Authorizing a Pilot Program for Electric Vehicle Charging Stations, August 15, <sup>43</sup> Nealon Direct, page 15, lines 7-17.
<sup>44</sup> KCC Order, page 2.
<sup>45</sup> *Ibid*, page 14.
<sup>46</sup> *Ibid*, page 2.

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1		it is difficult to see the comparison between the KCC Order and Ameren Missouri's
2		proposal.
3	Q.	What was the outcome of the KCC Order?
4	A.	The KCC denied KCP&L's application.47 Following this denial, KCP&L suspended
5		installation of the 85 remaining planned EVCSs. <sup>48</sup> The Kansas situation provides an
6		example of the discouraging effect an adverse Commission decision could have on future
7		utility EVCS investments.
8	VIII.	CONCLUSIONS
9	Q.	Please summarize your conclusions and the positions of DE.
10	A.	DE supports Ameren Missouri's revised EVCS tariff proposal, which would provide
11		economic and environmental benefits to Ameren Missouri customers and the broader
12		public. Other parties to this case have not presented compelling evidence for excluding
13		the EVCSs from Ameren Missouri's rate base or modifying the proposed rates to be
14		based on time spent charging, nor have they presented evidence of a competitive market
15		for EV charging or a lack of environmental benefits. Dr. Marke's inclusion of the KCC's
16		Order regarding KCP&L's Clean Charge Network is also unpersuasive; although the
17		order is not applicable to the specifics of this case, it raises the possibility that an adverse
18		Commission decision could deter Ameren Missouri from implementing its EVCS project.
19		DE recommends Commission approval of the Company's revised tariffs.
20	Q.	Does this conclude your Surrebuttal Testimony in this case?
21	Α.	Yes.

 <sup>&</sup>lt;sup>47</sup> *Ibid*, page 18.
 <sup>48</sup> Uhlenhuth, Karen. 2016. "State regulators cool to Kansas City utility's electric vehicle plans." *Midwest Energy News*. October 27. <u>http://midwestenergynews.com/2016/10/27/state-regulators-cool-to-kansas-city-utilitys-electric-vehicle-plans/</u>.