

Exhibit No.: _____
Issue: Competition, Private Sector
Charging Market
Witness: Anne Smart
Sponsoring Party: ChargePoint, Inc.
Case No.: Case No. ET-2016-0246

CHARGE POINT, INC.

Case No. ET-2016-0246

REBUTTAL TESTIMONY

OF

ANNE SMART

Campbell, California
November 2016

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4 CASE NO. ET-2016-0246

5 **Q. Please state your full name and business address.**

6 A. My name is Anne Smart. My business address is 254 E Hacienda Avenue,
7 Campbell, California 95008.

8 **Q. By whom are you employed and what is your position?**

9 A. I am employed by ChargePoint, Inc. (“ChargePoint”) as Director of Government
10 Relations and Regulatory Affairs.

11 **Q. Please describe your educational background and employment experience.**

12 A. My educational background includes a Bachelor of Arts in Public Administration
13 and a Bachelor of Philosophy in Environmental Studies from Miami University in
14 Oxford, Ohio, and a Master of Energy and Environmental Policy from the
15 University of Delaware in Newark, Delaware. I have been an employee of
16 ChargePoint for 2.5 years in the role of Director of Government Relations and
17 Regulatory Affairs. In this role, I lead state and local legislative and regulatory
18 strategy in the West including in Missouri. Prior to ChargePoint, I was the
19 Executive Director of The Alliance for Solar Choice (TASC), a rooftop solar
20 advocacy organization founded by SolarCity and Sunrun. I have also been the
21 Director of Energy for the Silicon Valley Leadership Group, a trade association of
22 more than 350 Silicon Valley employers, leading federal and California
23 legislative and regulatory policy on energy issues related to smart grid

1 development, data center efficiency, energy efficiency, solar, storage, and electric
2 vehicles.

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

4 A. In general, I will be responding to portions of the direct testimony submitted by
5 Union Electric Company (“Company”) and direct filings made by Staff and other
6 parties regarding competition and the private sector EV charging market, the
7 design of the proposed EV charging pilot, and Commission jurisdiction over
8 regulating EV charging stations.

9 **DESCRIPTION OF CHARGEPOINT**

10 **Q. What is ChargePoint’s business model?**

11 A. The ChargePoint business model is to engineer, manufacture, and sell the
12 equipment and network services necessary for EV charging station owners to
13 effectively provide charging services to drivers who visit their properties. In
14 almost all cases, ChargePoint does not own the hardware. The site host, as the
15 owner and operator of the charging station, is free to set the price to EV drivers
16 who use the charging station or they may offer free charging. ChargePoint does
17 not set the pricing to drivers at any station. ChargePoint sells the site host a
18 subscription service to manage its charging infrastructure using cloud-based
19 software tools. ChargePoint also provides services to drivers, free of charge,
20 which allow them to easily find and access the EV infrastructure provided by
21 station owners through a mobile app, in-vehicle navigation and our website.

22 **Q. What are the products and services that ChargePoint offers?**

1 A. ChargePoint sells Level 2 (L2) and DC fast charging (DCFC) products and
2 services. For station owners, ChargePoint provides subscriptions to our cloud-
3 based platform which allows the owner to manage EV charging operations,
4 including online management tools for data analysis, payment processing, load
5 management, and access control. Stations are connected to the ChargePoint
6 network over a secure, cellular data network allowing station owners to manage
7 all their charging operations from a single dashboard. ChargePoint also offers a
8 comprehensive set of support services for both EV drivers and station hosts,
9 including: 24/7/365 hotline for drivers, the industry's first Parts and On-Site
10 Labor warranty, site qualification, installation and validation services. For drivers,
11 ChargePoint provides a single mobile and web application for all aspects of their
12 public, workplace, and home EV charging. ChargePoint drivers have access to
13 real time information, payment and support services through the information
14 available on the screen of the charging station, in their mobile app, via email and
15 text notifications, or on the ChargePoint website.

16 **Q. Did ChargePoint respond to Ameren's EV charging pilot RFP?**

17 A. Yes, ChargePoint responded to the RFP.

18 **Q. Does ChargePoint sell charging stations to utilities?**

19 A. Yes, ChargePoint has many utility customers including all three investor-owned
20 utilities in Missouri. ChargePoint has sold stations to utilities for their own
21 workplace charging needs and has partnered with Kansas City Power and Light as
22 the charging station provider for the Clean Charge Network. Many other utilities
23 around the country are also customers of ChargePoint or partners through rebate

1 programs and other pilots to incentivize utility customers to purchase their own
2 EV charging stations.

3 **Q. How many drivers use ChargePoint's stations?**

4 A. ChargePoint has 240,000 EV drivers registered on the ChargePoint network
5 including more than 1,410 registered users in Missouri.

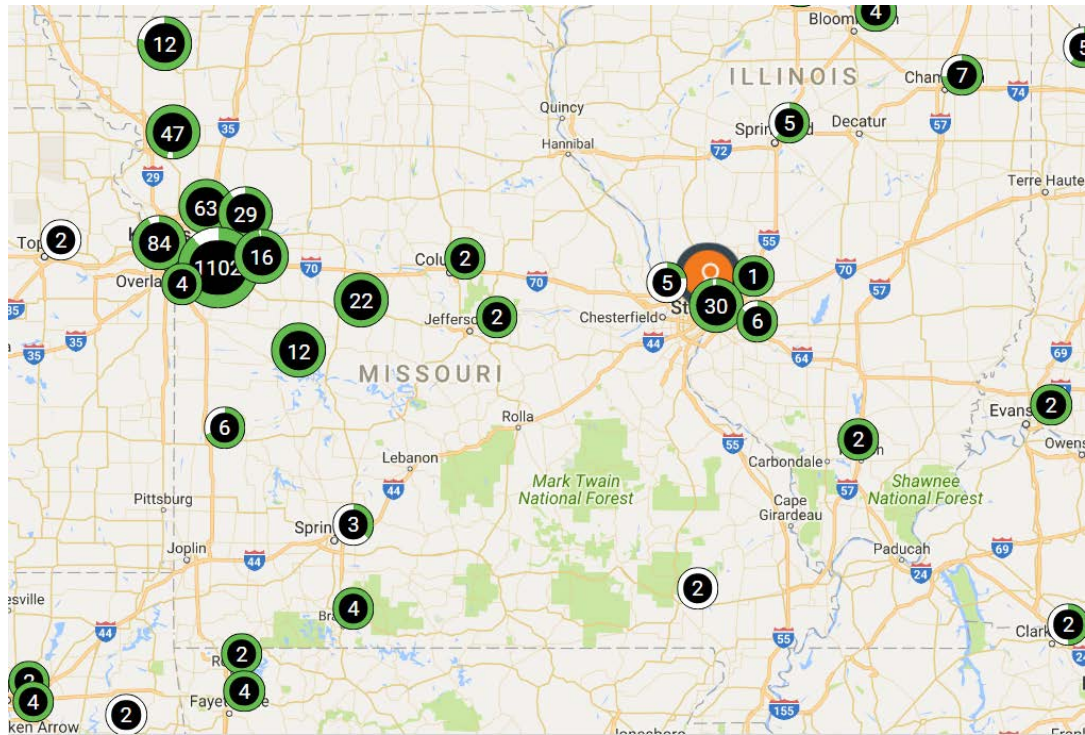
6 **Q. How do drivers pay for charging at a ChargePoint station?**

7 A. Payment options available to drivers include through a ChargePoint Account or
8 by using a credit card by calling a 24/7 customer support phone number clearly
9 displayed on the charging station. ChargePoint has a ChargePoint Account
10 Agreement with ChargePoint drivers that allows them to have one or more radio
11 frequency identification (RFID) card(s) known as "ChargePoint Cards" that will
12 permit access to those charging stations on ChargePoint's Network that the driver
13 is authorized to use. Drivers have access to all public charging stations and may
14 have access to private stations depending on access controls set by the charging
15 station owner. ChargePoint collects payments on behalf of owners of charging
16 stations for the fees charged to users for access to the charging stations.
17 ChargePoint does not charge drivers any subscription fees. If the charging station
18 does not charge a fee, which is the case for the majority of charging stations in
19 Missouri, the driver may call the 24/7 customer support number to unlock the
20 station for use if they do not have a ChargePoint account. No fee will be collected
21 by the Host or by ChargePoint for use of a free station.

22 **Q. Who are ChargePoint's customers?**

1 public ChargePoint ports across Missouri. The numbers in the circles indicate the
2 number of ports in that area and the colors indicate whether or not the station was
3 in use by a driver when the map was saved. (White on the circle indicates that a
4 station in that area is in use.)

5 **Figure 1. ChargePoint Public Charging Ports in Missouri**



17 **Q. Has the market failed to provide needed charging infrastructure to support**
18 **future EV adoption?**

19 A. No, there are 1,025 public charging ports in Missouri supporting 3,092 registered
20 EV drivers.² The “attach rate” for Missouri, which is a term used to describe the
21 ratio of EV drivers to EV charging ports, is about 3:1 or three drivers per port.
22 The National Renewable Energy Laboratory (NREL) has indicated a target attach

² Alternative Fuel Data Center, 2016. Navigant, 2016.

1 rate of 4:1.³ Ameren witness Mark Nealon states in his direct testimony that the
2 “dormancy of free market activity to seize” the opportunity to install charging
3 stations in Ameren’s service territory justifies the utility to pursue this EV
4 charging pilot.⁴ Mr. Nealon also states that “both the private sector and regulated
5 utilities may be too late in adequately addressing the long-distance charging
6 infrastructure gap” to support consumers expected to purchase EVs in 2017.
7 While there is clearly a need for more charging stations in Ameren’s service
8 territory to support more EV adoption, including more DC fast chargers, there
9 clearly is not a failure of the private market to “seize” existing opportunities to
10 sell charging stations in this state. While ChargePoint does not wish to claim that
11 the EV charging market is in any way saturated in Missouri or that our work there
12 is done, because that is far from the case, it is false to claim that the private sector
13 market has failed to support future EV drivers.

14 **Q. Are there DC fast chargers in Ameren’s service territory?**

15 A. Yes. According to the AFDC, there are currently 75 DC fast chargers in Missouri.
16 ChargePoint has customers that own and operate their own fast chargers in the
17 area that Ameren proposes to operate its pilot including St Charles Nissan,
18 Bommarito Nissan, and Lou Fusz Motor Company.

19 **Q. Is there a need for the number of charging stations proposed by Ameren?**

20 A. Yes, there is a need for more charging stations in Ameren’s territory, including
21 DC fast chargers. The prevalence of charging stations does help to encourage EV

³ California Statewide Plug-In Electric Vehicle Infrastructure Assessment” Final Project Report, Prepared by the National Renewable Energy Laboratory for the California Energy Commission, Alternative and Renewable Fuel and Vehicle Technology Program, CEC-600-2014-003, May 2014, *available at* <http://www.energy.ca.gov/2014publications/CEC-600-2014-003/CEC-600-2014-003.pdf>.

⁴ Nealon, page 14.

1 adoption by providing assurance to potential EV buyers that they will have a
2 place to fuel, even if the majority of their fueling occurs at home.

3 **Q. What does ChargePoint support in Ameren's pilot proposal?**

4 A. Overall, ChargePoint agrees with the intent of Ameren's pilot to encourage EV
5 adoption by supporting the installation of EV charging stations. There are real
6 societal benefits and grid benefits associated with EV adoption as outlined in Mr.
7 Nealon's testimony and echoed in comments filed by Sierra Club and Natural
8 Resource Defense Council. ChargePoint is also not opposed to Ameren seeking to
9 socialize some of the costs of this pilot to ratepayers, including non-EV drivers,
10 though we encourage Ameren to seek to leverage private capital wherever
11 possible to reduce any possible cost shifting associated with EV charging
12 investments.

13 **Q. What does ChargePoint oppose in Ameren's pilot proposal?**

14 A. ChargePoint is concerned that the design of Ameren's pilot, including selecting a
15 single vendor for the charging stations, and seeking to regulate pricing to drivers,
16 could negatively impact the competitive EV charging market in Ameren's service
17 territory.

18 **Q. Could any changes be made to Ameren's proposed pilot design to support
19 competition?**

20 A. Yes, in order to support a competitive EV charging market, ChargePoint
21 recommends 1) qualifying multiple RFP respondents to provide charging station
22 equipment and network services in this pilot; 2) customer (site host) choice in

1 equipment and services; 3) site host skin in the game; 4) site host control over
2 pricing to drivers; and 5) consideration for alternative business models.

3 *Multiple Market Participants*

4 Ameren should consider qualifying multiple RFP respondents to provide charging
5 station equipment and services in its pilot. Selecting a single vendor will allow
6 Ameren to pick a market winner and offer that vendor's product free of charge to
7 site hosts, potentially making it impossible for other vendors to continue to
8 compete in this service territory until the pilot is complete.

9 *Customer Choice*

10 After selecting multiple vendors that qualify for Ameren's requirements, the
11 utility should allow site hosts in the pilot to choose from that list of qualified
12 vendors the charging station that the site wants installed on its property. Even if
13 the utility ultimately owns the charging station, this element of customer choice
14 encourages competition amongst charging station vendors, increases site host
15 awareness of products and services, and allows for real market feedback as to
16 what site hosts want for their customers, which are the drivers who visit those
17 sites and patrons of those sites.

18 *Skin in the Game*

19 The site host should also have "skin in the game" by providing some payment for
20 hosting the charging station on their property. Mr. Nealon states in his testimony
21 that Ameren did not consider having site hosts pay any portion of the costs of the
22 charging station.⁵ ChargePoint is not opposed to utility ownership but in order to

⁵ Mark Nealon testimony, page 36.

1 reduce overall cost to ratepayers and encourage competition, there are alternative
2 business models which the Commission may wish to consider including requiring
3 site hosts to provide a payment to the utility to cover a portion of the cost of the
4 station and/or maintenance and services. Requiring site hosts to have a significant
5 stake in the charging station will help to ensure that the site host has a vested
6 interest in the asset, in customer satisfaction for drivers, and in the pilot program
7 in general.

8 *Site Host Control on Pricing*

9 ChargePoint is not opposed per say to the pricing proposed by Ameren in its tariff
10 revision filed on October 7. However in order to support competition, the site
11 host, rather than the utility, should control pricing to drivers who are using the
12 charging service located on their own property. Those drivers are customers of the
13 site and have a relationship with the site host. When site hosts have control of the
14 EV charging pricing, they can align pricing to reflect site-specific considerations
15 and the nature and needs of drivers who use the EV charger. Site hosts that
16 operate multiple sites (some within utility programs, some with their own
17 investment) also have the ability to have consistent charging policies across
18 multiple service territories. For example, global property management companies
19 and retailers with hundreds of sites around the country can achieve customer-
20 centric scalability. Forcing the site host to permanently forfeit the right to have
21 any input into pricing (as well as forfeiting control of the parking space the
22 charger is attached to) will likely have a negative impact on site host interest in
23 the program and on drivers.

1 *Other Models*

2 Other alternative pilot designs that do not include utility ownership could also be
3 considered including that Ameren provides rebates for charging stations to be
4 owned and operated by the site host, rather than the utility, or that Ameren is
5 limited to owning the “make ready” infrastructure (lines, wires, conduit, metering,
6 and paneling) up to but not including the charging station itself. There is
7 precedent for this design in California currently being tested by Southern
8 California Edison with an L2 pilot and in a proposed decision before the
9 Commission on a pilot for Pacific Gas and Electric.⁶ Additionally, Ameren could
10 consider other ways to promote charging station deployment such as developing
11 fast charging-specific electricity rates for operators of DCFC that reduce demand
12 charges and operating costs.

13 **Q. Does Ameren need to own and operate all charging stations in its pilot in**
14 **order to own and collect EV charging data?**

15 A. No, the data that Ameren seeks to collect could be acquired through agreements
16 with site hosts and network operators and does not in any way require the utility
17 to own the charging stations. On page 10 of Mr. Nealon’s testimony, he indicates
18 that Ameren is conducting this pilot to “test” several things, including: “(1) the
19 ease with which the charging islands can be located; (2) the availability,
20 performance and reliability of the charging station hardware; (3) the smoothness

⁶ California Public Utilities Commission Decision on Southern California Edison Company’s Application for Charge Ready and Market Education Programs:
<http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M157/K682/157682806.PDF>.
Proposed Decision Directing Pacific Gas and Electric Company to Establish an Electric Vehicle Infrastructure Education Program (A.15-02-009):
<http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M169/K668/169668696.PDF>.

1 of the various payment methods; (4) the quality of the technical/phone support
2 available; (5) the reasonableness of the pricing; and (6) the local attractions
3 available for occupying the driver and passengers during the charging period.”⁷
4 However, in order to “test” anything, there needs to be comparisons made.
5 Selecting a single vendor and single network for this pilot does not give Ameren
6 anything to compare. Instead, to improve the pilot, Ameren should consider using
7 multiple vendors for its pilot and require all network operators to allow Ameren to
8 share access to the charging station data.

9 **COMMISSION JURISDICTION**

10 **Q. Does the Commission have jurisdiction to rule on Ameren’s tariff filing?**

11 A. Yes, the Commission clearly has jurisdiction over any investment made by the
12 utility that it regulates. The issue of Commission jurisdiction over EV charging
13 stations should be irrelevant to the question of whether utilities, which are in fact
14 regulated by the Commission, can make investments like this pilot being proposed
15 by Ameren.

16 **Q. Should the Commission use this case to determine whether or not non-**
17 **utilities can own and operate charging stations in Missouri?**

18 A. ChargePoint contends that non-utilities can own and operate charging stations in
19 Missouri and encourages the Commission not to make any statewide policy
20 decisions in the context of Ameren’s tariff filing. ChargePoint supports the ability
21 of Ameren to invest in charging stations, as a regulated utility, and does not
22 believe that this ability precludes non-utilities from continuing to operate their

⁷ Nealon, page 10.

1 own public charging stations in the state. The Commission should open a separate
2 proceeding to discuss statewide policy issues, including whether or not non-
3 utilities can charge a per kilowatt-hour fee for charging services, to ensure that all
4 relevant stakeholders have an opportunity to participate in the case. Ameren's
5 tariff filing did not originally include these issues, as was noted by Kansas City
6 Power and Light in its late motion for intervention.

7 **Q. Does this conclude your Rebuttal Testimony?**

8 A. Yes, it does.