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	))))	**File No. ET-2016-0246**

INITIAL BRIEF OF SIERRA CLUB & NRDC

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I. Introduction

Sierra Club and the Natural Resources Defense Council (NRDC) support Ameren Missouri's application for approval of a tariff authorizing a pilot program for electric vehicle (EV) charging stations, including, in principle, above-the-line cost recovery, as an important step in expanding the market for EVs, a technology which is in the public interest and will benefit all Ameren customers.

How will utility engagement affect the EV service providers' market?

When or if a robust competitive market for EV charging will emerge is a question that involves too many imponderables to answer at this time.[1] Despite the protestations of OPC and ChargePoint, the evidence does not support the conclusion that there is *now* a robust, private market for EV charging in the state, especially along the corridors Ameren seeks to electrify or for the type (DC fast chargers) that are the core focus of the pilot.[2]

The most convincing evidence of this is Exhibit 303, ChargePoint's response to a DED data request, which lists the 19 publicly accessible ChargePoint charging stations along the I-70 and Highway 54 corridors covered by Ameren's pilot. Twelve of the 19 provide free charging, which is not proof of a market at all, let alone a competitive one. Just three are DC fast charging stations, and only one of those is outside of the St Louis area. Six of the 19, including the three fast chargers, are at auto dealerships. Most of the others are evidently for employees or occasional visitors (Missouri Botanical Garden, Busch Stadium, Washington and Webster Universities, the Missouri National Guard,

[1] Exh. 4, Sheehy surrebuttal, p. 5, line 13–p. 6, l. 5.

[2] Exh. 1, Nealon direct, p. 13, lines 2-14. .

Barnes-Jewish Hospital, Mastercard, Moonrise Hotel, etc.). Fifteen of the 19 are in St Louis City or County and two more in St Charles County. OPC witness Marke's testimony of all known stations shows the same geographic concentration[3], which illustrates the lack of regional DC fast charging connectivity that Ameren aims to correct.[4]

The evidence supports the existence of a market coordination problem (more colloquially a chicken-or-the-egg problem) in which the lack of charging limits EV adoption while the lack of EVs acts as a disincentive to building charging infrastructure.[5] This market coordination problem is acute for DC fast charging, which has high upfront costs.[6] In this situation revenue from charging sessions alone cannot recover the costs of the infrastructure at reasonable prices.[7] A utility has a different, gentler way of recovering its costs, one that spreads them over a much larger customer base. This is justified if it is in the public interest.

Only KCP&L and Staff contend that non-utility, third-party entrants should be excluded from the market. Indeed, the vision shared by nearly all parties is for utilities to take action that *advances* the market for EVs and non-utility EV service providers. To support that vision, the Commission should act in this case to remedy the lack of regulatory certainty regarding the jurisdictional status of *non-utility* and *utility* EV

[3] Exh. 200, Marke rebuttal, p.8; figure 1; Exh. 501, Jester surrebuttal, pp. 4–5.

[4] Exh. 1, Nealon direct, p. 12, lines 1-13.

[5] Exh. 500, Jester rebuttal, p. 19.

[6] Exh. 500 Jester rebuttal, p. 25, lines 15-19.

[7] Exh. 500, Jester rebuttal, p. 30, lines 1–6.

charging stations and the provision of electricity.[8] At the same time, it is important to see that any utility EV charging deployment will be reliant on, and can be structured to be of benefit to, the EV service provider market.[9] Ameren's small EV Pilot would rely on a competitive service provider for equipment and network services, and in this case selected its provider through a competitive solicitation. This competitive program element furthers the market.[10] There is room for a public utility to advance the market, and this pilot offers a way to study the emergence of the market and for the Commission to take care that competition may develop.

II. Jurisdiction

a. Applicable Law

The Commission's jurisdiction lives in several provisions of Missouri law.

Jurisdiction extends first to "the manufacture, sale or distribution of … electricity for light, heat and power, within the state, and to persons or corporations owning, leasing, operating or controlling the same…."[11]

Under the same section, jurisdiction is also extended to "to all public utility corporations…."[12] A "public utility" is defined to include "every … electrical corporation."[13] An "electrical corporation," in turn, includes persons or corporations

[8] Exh. 500, Jester rebuttal, p. 31, line 19 – p. 32, l. 7; Exhibit 550, Garcia surrebuttal, p. 21, lines 15-21.

[9] Exh. 500, Jester rebuttal, p. 29, line 19 – p. 31, l. 2.

[10] Exh. 500, Jester rebuttal, p. 31, lines 16-18.

[11] Mo. Rev. Stat. § 386.250(1).

[12] *Id.* at subsection 5.

[13] Mo. Rev. Stat. § 386.020.1(43).

"owning, operating, controlling, or managing *any* electric plant."[14]

Finally, although a "public use" requirement is not expressly stated in the definitions above, the Missouri Supreme Court long ago found that "it is apparent that the words 'for public use' are to be understood and to be read therein."[15] In short, "facilities must be devoted to a public use before they are subject to public regulation."[16]

b. Ameren's EV Pilot Would Be a Regulated Utility Service.

To determine jurisdiction over Ameren's EV Pilot, the Commission must consider two questions. First, whether the proposed EV charging stations would be made available for "public use;" and second, whether the proposed EV charging stations are to be clearly owned and operated by a regulated, "public utility," and are thus a regulated utility service. As to both questions, the answer must be "yes."

To the first question, Ameren has expressly stated that "[e]ach of the proposed charging sites, or 'charging islands' would be available for use by the general public to charge electric vehicles."[17] It is plain, therefore, that the stations will be available for public use.

Second, Ameren Missouri manufactures, sells and distributes electricity[18], and, as

[14] *Id.* at subsection 15 (emphasis added).

[15] *State ex rel. M.O. Danciger & Co. v. Public Service Commission,* 275 Mo. 483, 205 S.W. 36, 38 (1918) (citing *ICE CO State v. Spokane & I. E. R. Co.*, 89 Wash. 599, 154 P. 1110 (1916)).

[16] *See, e.g.*, *Hurricane Deck Holding Co. v. Public Service Commission of State*, 289 S.W.3d 260, 264 (Mo. Ct. App. 2009) (citing *State ex rel. M.O. Danciger & Co. v. Public Service Commission,* 275 Mo. 483, 205 S.W. 36, 38 (1918)).

[17] Ameren Missouri, Application for Approval of a Tariff Authorizing a Pilot for Electric Vehicle Charging Stations at 3 (filed August 15, 2016).

[18] Mo. Rev. Stat. § 386.250(1).

an entity with control over "*any* electric plant," Ameren is an electrical corporation[19], and a public utility.[20] If built, the EV Pilot charging islands would clearly be owned and operated by a regulated entity.[21] Moreover, they would cap an infrastructure chain that spans generation, transmission and distribution—all owned/operated by Ameren. EV drivers would be the end-users. This would remain true regardless of whether EV charging stations were found to generally constitute "electric plant."

This interpretation tracks the judgment of other utility regulators, whose jurisdictional rulings have routinely demonstrated that the nature of the owner/operator is paramount. In several states, regulators have held that *non-utility* owners of EVCS are excepted from regulation on the grounds that EVCS do not constitute "electric plant," while holding that EVCS owned or operated by *otherwise-regulated utilities* are squarely within their jurisdiction.

The New York Public Service Commission (New York PSC), for example, disclaimed jurisdiction over *non-utility* owners and operators of charging stations[22] because the stations did not "fall within the definition of 'electric plant,'"—a term that has an identical definition in New York[23] and Missouri[24]—but nonetheless found that

[19] Mo. Rev. Stat. § 386.020(15).

[20] Mo. Rev. Stat. § 386.020(43).

[21] *See* Ameren Missouri, *Application for Approval of a Tariff Authorizing a Pilot for Electric Vehicle Charging Stations* at 1 (filed August 15, 2016); Tr. Vol. 2, pp. 141-42.

[22] *Declaratory Ruling on Jurisdiction Over Publicly Available Electric Vehicle Charging Stations* at 4, Case 13-E-0199, In the Matter of Electric Vehicle Policies (filed November 22, 2013), New York Public Service Commission.

[23] NY Public Service Law §2(12) ("The term 'electric plant,' when used in this chapter, includes all real estate, fixtures and personal property operated, owned, used or to be used for or in connection with or to facilitate the generation, transmission, distribution, sale or furnishing of electricity for light, heat or

"we do have jurisdiction over the owner or operator of a Charging Station, where that owner or operator *otherwise falls within the PSL §2 (13) definition of 'electric corporation.*'"[25]

The Massachusetts Department of Public Utilities (MA DPU) reached a similar conclusion, finding that *non-utility* owners and operators of EVCS were not subject to DPU jurisdiction, but that entities otherwise subject to the MA DPU's jurisdiction "may recover costs associated with ownership and operation of electric vehicle supply equipment…."[26]

In an analogous decision regarding *non-utility* owner/operators of EVCS, the California Public Utilities Commission put it bluntly: "To the extent an investor-owned utility provides electric vehicle charging services, provision of such services will not affect the utility's status as a public utility."[27] In California[28] and Washington[29],

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power; and any conduits, ducts or other devices, materials, apparatus or property for containing, holding or carrying conductors used or to be used for the transmission of electricity for light, heat or power.").

[24] Mo. Rev. Stat. § 386.020(14) ("'Electric plant' includes all real estate, fixtures and personal property operated, controlled, owned, used or to be used for in connection with or to facilitate the generation, transmission, distribution, sale or furnishing of electricity for light, heat or power; and any conduits, ducts, or other devices, materials, apparatus or property for containing, holding or carrying conductors used or to be used for the transmission of electricity for light, heat or power.").

[25] *Declaratory Ruling on Jurisdiction Over Publicly Available Electric Vehicle Charging Stations* at 4, Case 13- E-0199, In the Matter of Electric Vehicle Policies (filed November 22, 2013), New York Public Service Commission (emphasis added).

[26] *Order on Department Jurisdiction Over Electric Vehicles, The Role of Distribution Companies in Electric Vehicle Charging and Other Matters* at 16, DPU 13-182-A, Investigation by the Department of Public Utilities upon its own Motion into Electric Vehicles and Electric Vehicle Charging (filed August 4, 2014), Massachusetts Department of Public Utilities.

[27] *Decision in Phase 1 On Whether a Corporation or Person That Sells Electric Vehicle Charging Services To the Public Is a Public Utility* at 21, D.10-07-044, Order Instituting Rulemaking on the Commission's own motion to consider alternative-fueled vehicle tariffs, infrastructure and policies to support California's greenhouse gas emissions reduction goals (filed July 29, 2010), California Public Utilities Commission).

regulators have approved cost recovery for utility owned EVCS, as well as tariffs for end-use electricity pricing at those stations.

In sum, the provision of EV charging services should not affect Ameren's status as a public utility, and the Commission should exercise its traditional scope of jurisdiction over the provision of electricity as between public utilities and their end-users.

c. Non-Utility Owners and Operators of EVCS Do Not Qualify as Public Utilities.

This statement would appear tantamount to saying that the same EVCS is electric plant in one case but not in the other. This conundrum has bedeviled this case as it did the prior working docket.[30] But the absurdity of saying that a stand-alone EVCS is a regulated public utility is obvious to all. If a gasoline service station were to install a single electric charging port, would it instantly be transformed into a public utility? Would it have the power of eminent domain?[31]

When owned by a utility, an EVCS is part and parcel of plant in service, and the end user is the EV driver. An EVCS owned or operated by a non-utility is behind the meter from the utility's viewpoint, and the EVCS is itself the end user. The non-utility EVCS is useless without a source of electricity. If the owner built its own power source it would have a serious claim on being a public utility, but not until then.

The definition of "electric plant" is very broad because it must encompass every

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[28] Exhibit 4, Sheehy surrebuttal, p. 6, line 12 – p. , l. 5; Exhibit 500, Jester surrebuttal, p. 6, line 9-13.

[29] Exhibit 4, Sheehy surrebuttal, p. 7, line 14-18; Exhibit 500, Jester surrebuttal, p. 6, line 6-8.

[30] *A Working Case Regarding Electric Vehicle charging Facilities* (File No. EW-2016-0123).

[31] Tr., Vol. 2, pp. 407, 420.

part of a vertically integrated utility's system that may be subject to regulation. It would not occur to common sense that "electric plant" included an EV charging island by itself, which is more like an end-use appliance or a power tool. "A statute should not be construed in a way to make it unreasonable, when it can be given a reasonable construction."[32] "A basic rule of construction is that the true intention of the legislature must be followed and if necessary the strict letter of the act must yield to its obvious intendment."[33]

"[I]n determining whether a corporation is or is not a public utility, the important thing is…what it actually does."[34] Faced with this issue, the MA DPU decided, "the EVSE [electric vehicle supply equipment] owner or operator is selling EV charging services, i.e., the use of specialized equipment — EVSE — for the purpose of charging an EV battery. EVSE allows the customer to do only one thing, charge an EV battery."[35] The MA DPU found this result to be true "regardless of the business model … use[d] to charge customers for charging services, even if the charge is by per-kilowatt hour basis or other volumetric energy basis."[36]

The New York PSC agreed: "The primary purpose of the transaction between Charging Station owners/operators and members of the public is the purchase of this

[32] *St Louis Public Service Co. v. PSC,* 326 Mo. 1169, 34 S.W.2d 486, 489 (1930).

[33] *Hickman v. City Council of Kirksville,* 690 S.W.2d 799, 801 (Mo.App. W.D. 1985).

[34] *M. O. Danciger & Co. v. PSC,* 275 Mo. 483, 205 S.W. 36, 39 (1918).

[35] *Order on Department Jurisdiction Over Electric Vehicles, The Role of Distribution Companies in Electric Vehicle Charging and Other Matters* at 4, DPU 13-182-A, Investigation by the Department of Public Utilities upon its own Motion into Electric Vehicles and Electric Vehicle Charging (filed August 4, 2014), Massachusetts Department of Public Utilities.

[36] *Id*.

service and the use of this specialized equipment. While the customer is using electricity, this is incidental to the transaction." For this service, the NY PSC concluded, charging stations are not electric plant.[37]

In the terms of Missouri's definition of electric plant, a third-party EVCS is not selling electricity "for light, heat or power." It is selling battery charging, availing itself of the utility that is selling generic power. The EVCS is not a public utility just because its equipment conducts electricity, and a public utility is no less one because it adds a charging station onto its distribution system.

d. EV Charging Is Not Forbidden Resale of Electricity.

Tariffs may forbid resale of electricity. This prohibition is aimed at the practice of submetering, not at EV charging.[38] The MA DPU Order discussed above also considered resale to be a submetering issue, determining that the resale prohibition is not applicable to EV charging because it is provision of a service rather than a sale or resale of electricity.[39]

A tariff must have Commission approval before it can have the status of a law.[40] In the Wall Street Towers submetering case discussed in the testimony of KCP&L witness Rush[41], the Commission found that it has the authority to grant a variance from the resale

[37] *Declaratory Ruling on Jurisdiction Over Publicly Available Electric Vehicle Charging Stations* at 4, Case 13- E-0199, In the Matter of Electric Vehicle Policies (filed November 22, 2013), New York Public Service Commission (emphasis added).

[38] (Witness Rush, T. II, 355–6); Ameren tariffs, Schedule 6, Sheet 137 (T. II, 362–3).

[39] MA Order 7-8.

[40] *A.C. Jacobs & Co. v. Union Electric,* 17 S.W.3d 579, 581 (Mo.App. W.D. 2000).

[41] Tr., Vol. 2, 357, 359–60.

clause of a tariff when it is in the public interest.[42]

Ameren's tariff restriction is not an insuperable obstacle to competitive EV charging services. Indeed, Ameren witness Bryne stated at hearing that the company would gladly exclude EV charging from its "sale for resale" prohibition.[43]

III. Public Policy Supports Utility EV Charging as a Regulated Service.

Ameren's small pilot will not by itself transform the market, but it is in the public interest if electric vehicles themselves are in the public interest. There is ample evidence that they are.

Ratepayer benefits. EV load can increase utility sales without incurring significant infrastructure costs, thereby spreading fixed costs across greater sales.[44] In addition, the flexible and manageable load provided by EVs can smooth out fluctuations from variable renewable generation.[45] By increasing usage of standing assets, smoothing and shifting loads, and improving reliability, EV-charging can lower the marginal cost of electricity for all ratepayers—whether or not they own an EV.[46] In a rough calculation, witness Jester estimates that fully electrified travel in Missouri could reduce average rates by 8 percent.[47]

Economic and energy security benefits. The oil-based transportation system

[42] *In re Wall Street Towers, Inc.,* EE-2006-0123 (Order of Oct. 19, 2005).

[43] Tr., Vol. 2, p. 233.

[44] Exh. 500, Jester rebuttal, pp. 13 line 15 – p. 14, l. 20.

[45] Id.

[46] Exh. 500, Jester rebuttal, p. 14, lines 3-5; Exh. 550, Garcia surrebuttal, p. 13, lines 11-14.

[47] Exh. 500, Jester rebuttal at 15, ll.6–9.

makes us vulnerable to supply disruptions from overseas and price volatility.[48] Charging an EV with "eGallons" costs half as much as filling a gasoline tank.[49]

Environmental benefits. Even with Missouri's coal-heavy generation mix, in 2014 EVs emitted 27% less CO2 than gasoline vehicles.[50] According to a U.S. Department of Energy calculator, it is 28% less.[51] This will improve with more renewable energy, and EVs help integrate renewables into the grid by adding regulation services and operating reserves.[52] Home charging can absorb nighttime wind generation peaks.[53] Even with increased electricity generation, EVs have the added health benefit of completely removing the ground-level tailpipe air pollution that plagues our cities.[54]

IV. The Rate Design is Just and Reasonable.

Ameren's initial tariff set rates of $0.30 for each 15 minutes for Level 2 AC chargers and $2.50 for each 15 minutes for DC fast chargers. Ameren considered the views of NRDC and Sierra Club in deciding to file an amended tariff for $0.20/kWh for AC and $0.17/minute for DCFC.[55]

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[48] Exh. 500, Jester rebuttal, p. 11, ll. 2–14, p. 12, ll.10–18; Exh. 550, Garcia surrebuttal, pp. 18, l. 24–19, l. 9).

[49] (Exh. 550, Garcia surrebuttal, p. 20, ll. 1–9.

[50] Exh. 550, Garcia surrebuttal, p. 16, ll. 6–8.

[51] Exh. 500, Jester rebuttal, p. 9, fn. 19.

[52] Exh. 500, Jester rebuttal, p. 18, ll. 7–10.

[53] Exh. 550, Garcia surrebuttal, p. 18, ll. 12–13.

[54] Exh. 500, Jester rebuttal, pp. 7, l. 16–8, l.13.

[55] See Ameren Missouri, *Response to Recommendations Filed by Staff, Sierra Club, and the Natural Resources Defense Council, ET-2016-0246 (filed October 4, 2016).*

While it may seem logical and simpler to charge both types at either a per-kWh or a time-based charge, as Staff suggests, the fact is that the power level for AC charging is not determined by the charging station. Instead, the rate of charge is determined by the capacity of the on-board charger in the vehicle, which varies by model. A time-based charge risks significant disadvantage to drivers with lower capacity on-board chargers.[56] To illustrate the problem, take two cars with fairly common power ratings: Car 1 is rated for 3.3 kW while Car 2 can charge at up to 6.6 kW.[57] Assuming all else is equal, Car 1 would take twice as long to charge as Car 2. In the end, although both drivers would have consumed an equal amount of electricity, the driver of Car 1 would pay twice as much as Car 2 with a time-based charge.

Charging by the kWh is therefore more fair to AC drivers, while the DCFC per-minute charge discourages those drivers from staying past the time it takes to recharge, after which the island should be open to the next customer.

V. Conclusion

WHEREFORE, Sierra Club and NRDC respectfully request that the Public Service Commission exercise jurisdiction over Ameren's proposed EV Pilot and approve the tariff as amended.

[56] Exh. 500, Jester rebuttal, p. 6, line 9-18.

[57] Exh. 500, Jester rebuttal, p. 22, line 12-20.

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct PDF version of the foregoing was filed on EFIS and sent by email on this 17th day of February, 2017, to all counsel of record:

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