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	)	**File No. ET-2018-0132**
for Approval of Efficient Electrification Program	)	

STAFF POSITION STATEMENTS

COMES NOW the Staff of the Missouri Public Service Commission ("Staff"), by and through the undersigned counsel, and for its *Statements of Positions* states:

1. Should the Commission approve, reject, or modify Ameren Missouri's Charge Ahead – Electric Vehicles Program?

   For the reasons discussed below, Staff recommends the Commission reject the program and tariff as proposed, and order modification of the Workplace, Multifamily, and Public Area subprograms to minimize free ridership and maximize public policy benefits.[1]

   a. Has Ameren Missouri provided sufficient evidence that there is a need for the program?

      No, Ameren Missouri has not provided sufficient evidence that there is a need for the program, or that ratepayer subsidization is essential to spur electric vehicle (EV) adoption rates.[2] *As discussed in more detail to answer 1.b below, Ameren Missouri has made no clear connection between this program and its estimate of an additional 7,500 electric vehicles in the Ameren Missouri service territory for parties to begin to determine what level of adoption is naturally occurring and what would be attributable to the $11 million*

[1] Kliethermes Surrebuttal, page 3.
[2] Lange Rebuttal, page 5 and Murray Rebuttal, pages 7-8.

ratepayer subsidy.[3] *Secondly, due to the Electrify America and the Volkswagen Mitigation Trust programs plans to install EV charging stations to create a minimum practical network, Ameren Missouri has not shown that there is additional need for their ratepayer funded program*[4]*. Finally, the subsidies proposed by Ameren Missouri exceed those cost categories that Staff understands to be subject to a typical "Make Ready" level of subsidization.*[5] *In other words, Ameren Missouri is proposing to include costs such as awnings, battery storage, and other non-essential items beyond what is typically included in a line extension as part of the "Make Ready" model, without evidence of the necessity or resulting benefits to all customers.*[6]

b. Has Ameren Missouri provided sufficient evidence that the program is cost effective?

No. Ameren Missouri has not provided reliable evidence that either (A) the program will produce net benefits to nonparticipating ratepayers, or that (B) the public policy benefits Ameren Missouri claims the program will produce an offset the net program rate impact.[7] *Ameren Missouri is requesting $11 million of ratepayer dollars with absolute and unfettered discretion as to how many chargers will be installed, how much of the budget will be expended on administrative costs or on the Company's proposed efforts to* "work to promote greater awareness about the benefits of EVs to consumers"[8] *what*

[3] Lange Rebuttal, page 5.
[4] Murray Rebuttal, pages 7-10.
[5] Murray Rebuttal, pages 10 - 11.
[6] Kliethermes Surrebuttal, page 3.
[7] Lange Rebuttal, page 2.
[8] Justis Direct, page 38.

kind of chargers will be installed, and whether those chargers will be dedicated solely to one condo or apartment tenant in an assigned parking space or installed for the benefit of Missourians at public parks or commercial centers in a manner to more broadly facilitate EV adoption.[9]

At the root of Ameren Missouri's proposal is an assumption its ratepayers will pay lower rates if Ameren Missouri can cause people to charge EVs in Ameren Missouri's service territory at a level and in a manner that the additional kWh sold will bring in more revenue than the cost of the energy, infrastructure, subsidies, and program costs increase revenue requirement.[10] *Staff does not dispute that Ameren Missouri ratepayers will pay lower rates if this program causes people to purchase and charge EVs in Ameren Missouri's service territory at a level and in a manner that the additional kWh sold bring in more revenue than the cost of the energy, infrastructure, subsidies, and program costs increase revenue requirement. However, Ameren Missouri has provided no evidence the programs as proposed will "cause" EV adoption, as opposed to subsidization of those who would move to EVs anyway.*[11] *Further, the assumptions Ameren Missouri relies upon to assert that the additional kWh sold will bring in more revenue than the cost of the energy, infrastructure, subsidies, and program costs increase revenue requirement are internally inconsistent and not supported by competent and*

[9] Lange Rebuttal, page 12.
[10] Wills Direct, page 4.
[11] Lange Rebuttal, page 5.

substantial evidence.[12] *Finally, these programs are not tailored to further public policy goals that may constitute a reasonable basis to counter shortfalls in cost effectiveness.*

Ameren Missouri's testimony is that causing new cars to charge in Ameren Missouri's service territory will result in annual net utility revenues of approximately $259 per vehicle.[13] *(In his surrebuttal, Mr. Wills revises this figure to a range of $207 to $221.*[14]*) Ameren Missouri applies a carrying cost factor to the net margin to calculate a level of investment of $1,459 per vehicle as the cap on average spend that would still result in benefits for all ratepayers.*[15] *(In his surrebuttal, Mr. Wills revises this figure to a range of $1,237 to $1,319.)*[16] *At various points throughout testimony, Ameren Missouri alternates between using the $11 million dollar program as the reason for 7,500 new EVs projected in Ameren Missouri's service territory, (In his surrebuttal, Mr. Wills modifies this figure to 8,890 EVs, on the low end of his revised calculation*[17]*) and using the 7,500 new projected EVs as the reason foran $11 million dollar budget.*[18] *While Staff does appreciate the "chicken and egg" nature of this sort of estimating process, Ameren Missouri's testimony on this point is not particularly illuminative of whether the projection drove the budget, or the budget drove the projection.*

[12] Lange Rebuttal, pages 8-10.
[13] Wills Direct testimony, page 27.
[14] Wills Surrebuttal page 38.
[15] Wills Direct testimony, page 27.
[16] Wills Surrebuttal pages 38 – 39.
[17] Wills Surrebuttal, pages 38 – 39.
[18] Wills Direct testimony, pages 30-33.

Regardless of the flaws used to justify the $11 million dollar budget, the most glaring shortcoming of theAmeren Missouri analysis is the failure to connect the tariffed programs to the budget in any way.[19] *The failure to connect the tariffed programs to the budget leads Staff unable to conduct an appropriate cost benefit analysis or determine if free ridership is minimized while public policy benefits are maximized, leaving Staff with no choice but to recommend rejection of the programs as tariffed, and push towards a stakeholder collaborative to design a tariff.*[20]

Mr. Wills testifies at page 13 of his surrebuttal testimony that "the bulk of actual EV charging that customers would undertake would likely occur at the home of EV owners. The point of building the charging network is to provide a new type of infrastructure needed to serve a new type of load – a load that is not stationary and where customers cannot exclusively count on their home electric service to meet all of their needs. By helping to build this distributed network of charging stations, we help the customer overcome a barrier to adopting EVs." However, only one subprogram included in Ameren Missouri's requested program design (Public Charging) helps to build a distributed network of charging stations, and even then, improvements to its governing tariff are necessary.[21] *As designed, not only do the Workplace and Multifamily programs fail to help build out a distributed network of charging stations (in addition to not being publicly available, as designed there is a*

[19] Lange Rebuttal, page 5.
[20] Kliethermes Surrebuttal page 5.
[21] Lange Rebuttal, pages 11 – 12.

high likelihood that the port would be monopolized by one assigned end user, further misaligning the assumptions Ameren Missouri made regarding EV adoption and the utilization rate and the resulting tariff created to realize those assumptions[22]), the budgets for these programs exceed Mr. Wills' estimate of the net revenues these programs may generate, increasing the level of cost-effectiveness required to justify the Charge-Ahead program as a whole.[23] Also, as designed, these programs are rife with opportunities for free ridership and fail to include provisions to maximize public policy related benefits.[24]

Mr. Wills testifies that "the net margin from each EV will support investment levels of approximately $1,237 to $1,319."[25] Mr. Justis testifies that the program will likely enable just over 1,000 ports, with an average spend per port of $10,000.[26] The range of ports per subprogram could vary, as there are no limits in the tariff sheets for program cost, or the overall breakdown within certain subprograms between Level 2 and HVDC chargers, which are subsidized at different levels.[27]

Ports per Subprogram from Justis Direct page 36	Workplace Charging	Multifamily Charging	Public Areas Charging	Corridor Charging	Total
Budget:	$ 1,100,000	$ 4,400,000	$ 1,100,000	$ 4,400,000	$ 11,000,000
Ports:	136	800	136	12	1,084
$ per Port:	$ 8,088	$ 5,500	$ 8,088	$ 366,667	$ 10,148

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[22] Lange Rebuttal, page 9.
[23] Lange Rebuttal pages 10-11.
[24] Kliethermes Surrebuttal, page 5.
[25] Wills Surrebuttal, pages 38 -39.
[26] Justis Direct, page 36.
[27] See proposed tariff sheets 165 et seq.

Dividing Mr. Wills' numbers of $1,237 to $1,319[28] *(as the benefit per EV) by Mr. Justis's budget of $8,088 per port (as the cost) for the Workplace subprogram*[29] *results in a cost to benefit ratio of 1:0.153 to 1: 0163. Meaning, each port would have to enable between 6 and 7 EVs per port in order for the subprogram to be cost effective. Ameren Missouri's tariff, as proposed, includes no provisions to encourage plug sharing,*[30] *and Mr. Wills has testified repeatedly that one port in the Workplace program will enable only one EV.*[31] *Mr. Wills did not discuss the reduction to margin that would be experienced with Level 2 charging speeds above 6.6 kW, which are allowed under the proposed tariff.*[32]*The increase in charging speed from the 6.6kW analyzed by Mr. Wills to the 19.8kW allowed under the tariff erodes the margin calculation Mr. Wills relies on to justify EV subsidization.*[33] *Mr. Wills did not discuss the reduction to margin that would be experienced with HVDC charging speeds in excess of 50 kW, up to and including 500 kW,*[34] *which are allowed under the proposed tariff.* [35] *These fast chargers could cause infrastructure costs in the tens of thousands to hundreds of thousands of dollars.*[36] *Ameren Missouri has*

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[28] Wills Surrebuttal, pages 38 -39.
[29] Justis Direct, page 36. Proposed tariff sheets 165.5, 165.6.
[30] Wills Surrebuttal, page 31.
[31] See Wills Direct, page 47 "*Workplace chargers would be likely to be dedicated to a single car parked in that spot throughout the work day, so we assume each charger will serve the load equivalent of one additional car.*" and Wills Surrebuttal, page 31, "*Customers tend to purchase a new technology – like an EV – when that technology can make their life better – when the adoption is easy and adds convenience to their life. If drivers are going to be required to move their cars around at lunch to share a charger, they probably will either not buy the car, or will simply fail to take the action that would otherwise ensure Ms. Lange's idea of 'reasonable utilization' of the workplace charging is met.*"
[32] Wills Direct, page 26, Proposed tariff sheets 165.5, 165.6.
[33] Lange Surrebuttal, pages 2 – 4.
[34] Ellis Rebuttal, page 5.
[35] Wills Direct, page 26, Proposed tariff sheets 165.5, 165.6.
[36] Lange Surrebuttal, pages 5-7.

presented no evidence of public policy benefits that would be produced by this subprogram to offset its lack of cost effectiveness.

Similarly, regarding the Multifamily subprogram, dividing Mr. Wills' numbers of $1,237 to $1,319 (as the benefit per EV) by Mr. Justis's budget of $5,500 per port (as the cost) for the Multifamily subprogram[37] *results in a cost to benefit ratio of 1:0.225 to 1: 0.24. Meaning, each of the 800 ports Mr. Justis testifies the Multifamily subprogram could subsidize*[38] *(depending on level of budget expended on advertising and administrative costs) would have to enable between 4 and 5 EVs per port in order for the subprogram to be cost effective.*[39] *Again, Mr. Wills did not discuss the reduction to margin that would be experienced with Level 2 charging speeds above 6.6 kW, which are allowed under the proposed tariff,*[40]*and which would result in significant erosion of the margin Mr. Wills relies on to justify EV subsidization.*[41]*While a robust tariff design to promote plug sharing could enable multiple new EVs per port, Ameren Missouri's proposed tariff contains no such features, nor does it contain features to promote positive public policy outcomes such as those identified by the Division of Energy*.[42], [43]

[37] Justis Direct, page 36. Proposed tariff sheets 165.3, 165.4.
[38] Justis Direct, page 36.
[39] See Wills Direct, page 47, stating, "The majority of the level 2 charger incentives in the Company's proposal are for multi-family residential settings. The Company would expect a charger at such a premises to be dedicated to a specific resident and serve one vehicle at a time, but that over time multiple tenants may utilize the same parking spot with the former tenant carrying that vehicle on to another location. As such we estimate that 3 EVs may be enabled over time by a single multi-family charger. Those future multi-family EV additions result in additional incremental revenue being attributed to the program beyond the program term."
[40] Wills Direct, page 26, Proposed tariff sheets 165.5, 165.6.
[41] Lange Surrebuttal, pages 2 – 4.
[42] Kelly Rebuttal, page 10.

c. If the program is approved, what is the appropriate cost recovery mechanism?

If approved, in Ameren Missouri's next rate case, the appropriate amount of expense would be included in rates for Ameren Missouri to collect going forward, much like any other traditional expense item.[44] *Ameren Missouri has not adequately supported its request for deferral accounting for program costs, in that it has not demonstrated that for how these expenses are extraordinary (e.g., unique, non-reoccurring, and unusual), which is the Commission's threshold criterion for authorizing deferrals.*[45] *However, should the Commission authorize the deferral, no ratemaking determinations should be made in this case, as it is against Commission practice.*[46] *Furthermore, due to the passage of a plant in service accounting provision in Senate Bill 564, Staff has reasonable doubts regarding the use of two year rate case interval assumptions in Ameren Missouri's supporting analysis, due to the passage of a plant in service accounting provision in Senate Bill 564, highlighting the inherently speculative nature of Ameren Missouri's assumptions and serving as a caution against making binding ratemaking determinations based upon those assumptions.*[47]

d. If the program is approved, what conditions, if any, should be imposed by the Commission?

Staff does not recommend approval of the programs, instead Staff recommends the Commission order Ameren Missouri to enter into a

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[43] See proposed tariff sheets 165 et seq.
[44] Oligschlaeger Rebuttal, page 5.
[45] Oligschlaeger Rebuttal, page 4.
[46] Missouri Gas Energy v. Pub. Serv. Comm'n, State of Mo., 978 S.W.2d 434, 436 (Mo. Ct. App. 1998).
[47] Oligschlaeger Rebuttal, page 7.

stakeholder process to develop and file a "Make Ready" tariff to facilitate installation of customer-owned electric vehicle charging stations. Under such a tariff, Ameren Missouri would not require line extension charges from a customer seeking a line extension for separately metered electric vehicle charging that meets public policy considerations that are developed with stakeholder input and included in the tariff.[48] *The subsidies under this approach would be limited to the line extension costs otherwise payable by the entity seeking to install the charger.*[49]

2. Should the Commission approve, reject or modify Ameren Missouri's Charge Ahead – Business Solutions Program?

The Commission should reject Ameren Missouri's Charge Ahead-Business Solutions Program, as additional ratepayer funded incentives are not necessary, as evidenced by adoption rates of over 50% for certain proposed incentivized product end uses and Staff finds that this program is in direct competition with energy sources provided by other Commission regulated utilities.[50]

a. Has Ameren Missouri provided sufficient evidence that there is a need for the program?

Ameren Missouri has not provided sufficient evidence that there is a need for the program. In fact, the evidence on the record shows there is no need for this program, as electric forklifts comprise 54% of the market, truck refrigeration unit (TRU) dealers reported sales of up to 20% of electric

[48] Kliethermes Surrebuttal page 3.
[49] Kliethermes Surrebuttal page 3.
[50] Murray Rebuttal, pages 5-6.

stand-by TRUs, and the VW Mitigation Trust is providing incentives for electrification.[51]

b. Has Ameren Missouri provided evidence that the program is cost effective?

Ameren Missouri has not provided evidence that the program as proposed is cost effective because Ameren Missouri's cost effectiveness tests are based on assumptions of the number of pieces of electric equipment that will be installed under the various incentive product types; however, the tariff does not cap the amount of program budget to be spent on any one product type. [52] *Not only is the program not needed, as described in Staff's response to 2(a). Additionally, nearly half (44%) of the program's budget is devoted to program implementation, leaving only $3.8 million to be spent on the actual incentives that purportedly provide the benefits to all customers.*[53]

c. If the program is approved, what is the appropriate cost recovery mechanism?

Please see Staff's response to 1(c) above.

d. If the program is approved, what conditions, if any, should be imposed by the Commission?

Staff does not recommend approval of Business Solutions, so does not take a position on what conditions should be imposed at this time. Staff reserves the right to present a position in briefing based on the evidence produced during the hearing.

[51] Murray Rebuttal, pages 3-6.
[52] Murray Rebuttal, page 5
[53] Murray Rebuttal, page 5.

3. Should the Commission grant the variances requested by Ameren Missouri?

Staff understands Ameren Missouri's variance request to be driven by the Charge Ahead-Business Solutions program. Staff recommends the Commission deny Ameren Missouri's request for variances, as good cause has not been shown to waive the entirety of the Commission's promotional practices rule.[54]

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was served by electronic mail, or First Class United States Postal Mail, postage prepaid, on this 27th day of November, 2018, to all counsel of record.

/s/ Nicole Mers

[54] Murray Rebuttal, page 3.