ATTACHMENT 1
Ameren Missouri's *Additional Comments*

On March 22, 2019, Missouri Public Service Commission Staff ("Staff") submitted its *Request for Additional Comments* ("*Request*"), asking interested stakeholders in File No. EW-2019-0229 to provide additional information on a variety of topics. Below are responses from Union Electric Company d/b/a Ameren Missouri ("Ameren Missouri" or "Company") to the topics raised in Paragraph 2 of Staff's *Request*.

a. Additional Thoughts stemming from common themes of the workshop discussions:

i. Pilot Programs

Ameren Missouri sees pilot programs as an excellent opportunity to study potential program offerings. A pilot program should be flexible enough to allow for modification as the initial pilot is studied and program impacts become more apparent. If stakeholders are interested in implementing pilot programs to research electric vehicle ("EV") charging stations to gather information for broader offerings, the Company will not object to such a construct.

ii. Data Gathering

Ameren Missouri agrees that the implementation of EV charging alternatives can provide good data for analysis. While the specific type of EV charging construct will impact what type of information can realistically and practically be gathered, Ameren Missouri supports gathering data to inform additional EV charging programs and policies.

iii. Customer Education

Ameren Missouri considers customer education a vital part of successful promotion of EV adoption, and believes that electric utilities – because of their inherent audience – are in a unique position to provide education to potential EV owners and charging station providers and hosts.

iv. Cost/Benefit Analysis

Ameren Missouri simply cautions that any cost/benefit analysis must consider the holistic approach to EV adoption rather than focusing on a single component of that infrastructure. For example, a single workplace, around town, or multifamily charging station may not meet a traditional cost/benefit analysis in isolation. Instead, that charging station should be considered as part of the larger holistic EV charging ecosystem – the infrastructure necessary to assure a potential EV purchaser that a sufficient charging network exists to facilitate their purchase. If the provision of incentives spurs increased local EV adoption as anticipated, the

benefits of investing in those incentives would more than pay for the costs necessary to build out that charging ecosystem.

v. Adoption Rates/Needs of Customers at Present

As acknowledged even in the *Comments on the Missouri Volkswagen Settlement Environmental Mitigation Trust Funds* document (p. 3) submitted on behalf of multiple parties to the Missouri Department of Natural Resources on December 6, 2017:

> Any comprehensive strategy to reduce transportation sector NOx and co-pollutant emissions should consider the electrification of the light-duty vehicle fleet as a key mitigation strategy. The development of a robust, strategic charging station network is critical to achieving that goal. However, a dearth of this supporting infrastructure currently presents a barrier to a broader, more diverse [plug-in electric vehicle] market. [Emphasis added.]

The current need for additional EV charging infrastructure is already here. While adoption may be ongoing, it could be accomplished at a greater rate with sufficient infrastructure.

vi. Cost Recovery/Rate Design/Incentives

Cost Recovery. Ameren Missouri's primary stance on cost recovery is that it should not be unduly defined or restricted at this point. We already have two potential EV infrastructure constructs that are either present or will be implemented soon in the state – utility-owned and customer-owned with incentives. These are distinctly different constructs and may well require different cost recovery examinations.

Rate Design. Ameren Missouri acknowledges that certain rate designs associated with EV charging may provide system benefits and is examining how it can be used to encourage increased EV charging and adoption. However, making EV charging its own rate class does not acknowledge the benefits such increased adoption provides to all customers. As a result, the Company cannot see how instituting EV charging as a separate rate class could further the goal of increased adoption, and fears, in fact, such a construct could discourage adoption because the resulting rate would likely be cost prohibitive for potential charging station owners.

Incentives. Ameren Missouri supports the use of incentives in encouraging EV charging station ecosystem development in order to foster increased EV adoption.

vii. Flexibility and Choice

Ameren Missouri believes that flexibility and choice are integral components to EV charging station ecosystem development, particularly in the early stages of development. Incentives provided to customers that can cover any aspects of the installation, but with limits in total amount, maximize the customer choice and flexibility and allows the market to innovate and be economically efficient.

b. Any comments on the questions Staff proffered at the March 21 workshop:

i. What is the "Make Ready Model" - what should be included in the "Make Ready"?

"Make Ready" can have a myriad of definitions, from the provision free line extensions to ease the burden of line extension costs, to offering incentives so that a host site can install a station at little or no charge, to the provision of all necessary infrastructure, up to and including conduits, wires, and concrete supports ready for a charging station mount. "Make Ready" is a term typically used in relation to a utility program intended to increase EV adoption through development of EV charging stations by reducing the charging infrastructure barrier to EV adoption. The focus on the terminology is not as important as focusing on how to stimulate the market to cost-efficiently develop the infrastructure.

1. **Line Extension for EV Charging Station**
   This is clearly one option as part of the "Make Ready" construct. However, as Ameren Missouri noted in the Charge Ahead case, many developers who provided responses to the Request for Information noted that a line extension by itself was insufficient to appropriately spur EV charging station installations.

2. **Option to waive line extension charges for separately metered EV charging stations that meet specific public policy considerations.**
   This is also a potential option as part of a "Make Ready" construct. However, as previously noted, the waiver of line extensions in isolation is likely insufficient to spur appropriate charging station ecosystem development.

3. **What public policy considerations must be met for an EV charging station to receive the incentive?**
   The primary public policy consideration should be, does the installation of this charging station provide another encouraging option for a potential EV owner to make the purchase. Of course, distribution impacts should also be a component of this decision. But the primary focus should always be whether or not this installation represents an appropriate part of a holistic charging ecosystem that reduces barriers to EV adoption.

ii. Ownership Models

1. Third Party

Ameren Missouri supports utilizing incentives to encourage third-party ownership, as evidenced in its position here and in the Charge Ahead case. Even when Ameren Missouri proposed an ownership model for corridor charging in File No. ET-2016-0246, the ultimate plan was to prime the pump for third-party competitive development.

2. IOU

a. IOU Ownership With/Without Subsidies

IOU ownership is a successful ownership model, particularly when you consider the increased EV adoption rates in the Kansas City area spurred by Kansas City Power & Light Company's Clean Charging Network investment.

iii. Potential Policies for EV Charging Infrastructure Implementation That Provides the Most Benefit to the Grid

1. What policies will promote deployment of EV charging stations?

Any policy, as Ameren Missouri has advocated for strongly herein, must involve the development of a holistic EV charging network. The Commission should favor policies that offer flexibility to customers and that leverage market forces to get cost-efficient installations, and avoid policies that force unnecessary constraints on incentives. To maximize awareness building and fully relieve range anxiety, customers need to know that they have a variety of charging options and feel secure in an EV purchase. If a customer knows that, in addition to setting up charging at her residence, she can charge on a highway corridor, at work, and while running errands around town, then any lingering fears related to charging availability are fully assuaged.

2. What type of technology/charging equipment needs to be utilized?

a. Energy Star Certified EV Charging Station Requirements

i. Network Communications for EV Charging Stations

ii. Commercial – Level 2 and DC Fast Charging

iii. Residential – Level 2 Charging Stations

The Commission should maintain a wide variety of EV charging technology and charging equipment options because of the varying needs at different locations. There are many considerations for a customer to assess when determining what type of charging to install. A business workplace, residence, highway corridor, and around town host will each

have a somewhat different perspective and need. Maximizing flexibility and choice are key elements to drive charging infrastructure development.

3. **What is the interoperability of the EV charging station?**
   Ameren Missouri supports the industry goals related to high levels of interoperability to maximize ease of use for EV driving customers. It is important the use of charging stations is relatively simple and that such infrastructure does not pose additional barriers to EV adoption.

4. **Energy Storage with EV charging stations for mitigation of demand charges.**
   Ameren Missouri supports the utilization of energy storage in conjunction with EV charging stations as appropriate.

5. **What are the anticipated system impacts of EV charging on-peak on the grid?**
   System impacts will vary by utility and location. As demonstrated in the Charge Ahead proceeding data requests, Ameren Missouri anticipates no negative system impacts of on-peak EV charging. The Company plans to review any Charge Ahead EV Program incentive applications to determine if there would be any system impacts upstream of the local transformer and disallow incentives for such applications.

6. **What are the potential impacts on the local distribution system?**
   a. **Distribution System Upgrade Requirements**
      i. **Smart Meter Requirements**

   System impacts will vary by utility and location. With regard to system impacts generally, please see the previous answer. The Company will take the system impacts into consideration when pre-approving Charge Ahead EV Program incentive applications. With regard to smart meters, the Company does not yet have widespread adoption of this technology.

7. **Ratemaking Policies – What will facilitate the most benefit for the grid?**
   a. **Time of Use Rates Specific to EV Charging**

   Ameren Missouri acknowledges that certain rate designs associated with EV charging may provide system benefits and is examining how it can be used to encourage increased EV charging and adoption. However, making EV charging its own rate class does not acknowledge the benefits such increased adoption provides to all customers. As a result, the Company cannot see how instituting EV charging as a separate rate class could further the goal of increased adoption and fears, in fact, such a construct could actually discourage increased adoption because the

resulting rate would likely be cost prohibitive for potential charging station owners.

c. The need for a rulemaking to address electric vehicle charging and the infrastructure to support it. Stakeholders may also submit exemplar rules from other jurisdictions.

Ameren Missouri does not believe a rulemaking is necessary at this stage to govern EV charging infrastructure development. Especially if utilities are still examining a variety of pilot constructs to explore and determine what is effective, instituting rules could be too limiting. Particularly at this stage, and likely at all stages of infrastructure development, the Commission should maintain its current tools and flexibility so that it can entertain a variety of constructs.