



**Request for Information
(RFI) For
Development of Missouri
Highway Corridor DC-Fast Charging**

August 9, 2017

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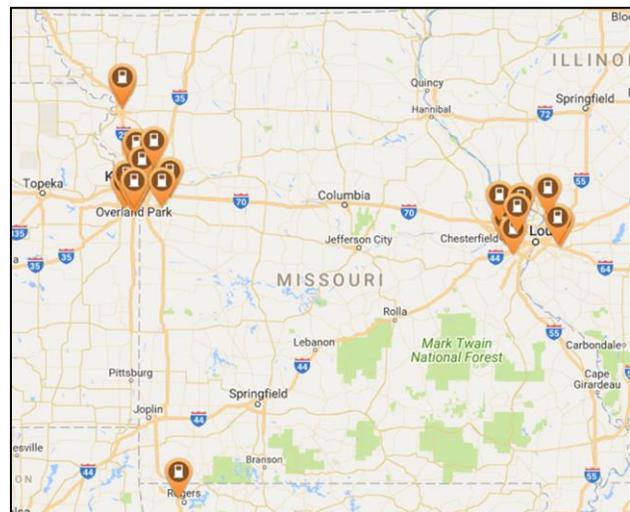
Section 1: Overview

1.1 Introduction, Background, and Purpose

Under its efforts to remove market barriers and promote electric vehicle (EV) adoption, Ameren Services Company ("Ameren"), as agent for Union Electric Company d/b/a Ameren Missouri, is seeking to identify and have dialogues with multiple private sector charging station developer/operator partnerships to determine how Ameren Missouri should stimulate the EV marketplace to establish a minimum practical network of privately managed public long-distance DC Fast Charging (DCFC) stations along Missouri's highways. Through this RFI solicitation, Ameren Missouri intends to engage private sector charging station developer/operator partnerships for the purpose of getting market intelligence that will inform utility development of tariffs and/or incentives related to EV line extensions, DC service, billing rates, and/or other development aspects needed to stimulate private marketplace investment that will establish a minimum practical network of DCFC along Missouri's highway corridors.

In 2016, Ameren Missouri filed a proposal to pilot DCFC islands along I-70 in Missouri. The proposal included end-to-end utility owned and operated equipment with sites to be selected and developed by Ameren Missouri. Earlier this year, the Missouri Public Service Commission (PSC) denied Ameren's tariff proposal on the grounds that the PSC did not have jurisdiction to approve the tariff filing, stating that EV charging equipment was not considered utility plant¹. This denial by the PSC causes Ameren Missouri to seek options to stimulate the marketplace rather than further pursue the end-to-end utility owned and operated model at this time.

There is currently a lack of sufficient DCFC equipment along highway corridors in Missouri, with just a few instances of charging stations established in urban areas that are coincidentally near highways. Ameren Missouri recognizes the importance of a minimum practical network of corridor DCFC along highways for accelerating growth in electric vehicle adoption, but realizes that the private market likely does not view a network of corridors in Missouri as a viable business at this time. Thus, a classic "chicken and egg" dilemma exists. Ameren Missouri seeks to identify the current types and levels of support required to trigger EV market players to invest in ownership and operation of a network of DCFC islands along Missouri highway corridors.



Ameren Missouri assumes that development of a minimum practical network of DCFC along Missouri's highways requires not just financial support but also planning to ensure sufficient

¹ RSMo 386.020(14): "Electric plant" includes all real estate, fixtures and personal property operated, controlled, 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 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;



number and appropriate placement of charging stations occurs rather than only having DCFC near higher population urban areas. For this reason, Section 1.3, **Minimum Practical Network Specifications**, provides some guidance in the area of planning.

Ameren Missouri intends to utilize the information from this RFI to determine its approach to facilitating development of DCFC stations along Missouri's highways. Depending on the responses and subsequent individual dialogues prompted by this RFI, Ameren Missouri will determine its next steps in stimulating the market.

1.2 Ameren Corporate Background

St. Louis-based Ameren Corporation powers the quality of life for 2.4 million electric customers and more than 900,000 natural gas customers in a 64,000-square-mile area through its Ameren Missouri and Ameren Illinois rate-regulated utility subsidiaries. Ameren Illinois provides electric distribution and transmission service, as well as natural gas distribution service, while Ameren Missouri provides vertically integrated electric service, with generating capacity of over 10,200 megawatts, and natural gas distribution service. Ameren Transmission Company of Illinois develops regional electric transmission projects. Through various projects and initiatives, Ameren is focused on the long-term sustainability of our business, which requires a culture of innovation. This mindset drives our efforts to deliver distinctive value to our customers. Through our vision of "Leading the Way to a Secure Energy Future," we are compelled to embrace our future with excitement and confidence, and to actively support emerging technologies such as electric vehicles and the customers who adopt them.

1.3 Minimum Practical Network Specifications

Ameren Missouri's vision for a minimum practical network for corridor DCFC in Missouri includes collaborating with other utilities to facilitate a public network that makes long-distance EV travel across Missouri not only possible, but practical, for EVs having a nominal range of 100 miles or greater. As a starting point for planning, Ameren Missouri offers the following basic specifications for the charging "islands" in the network:

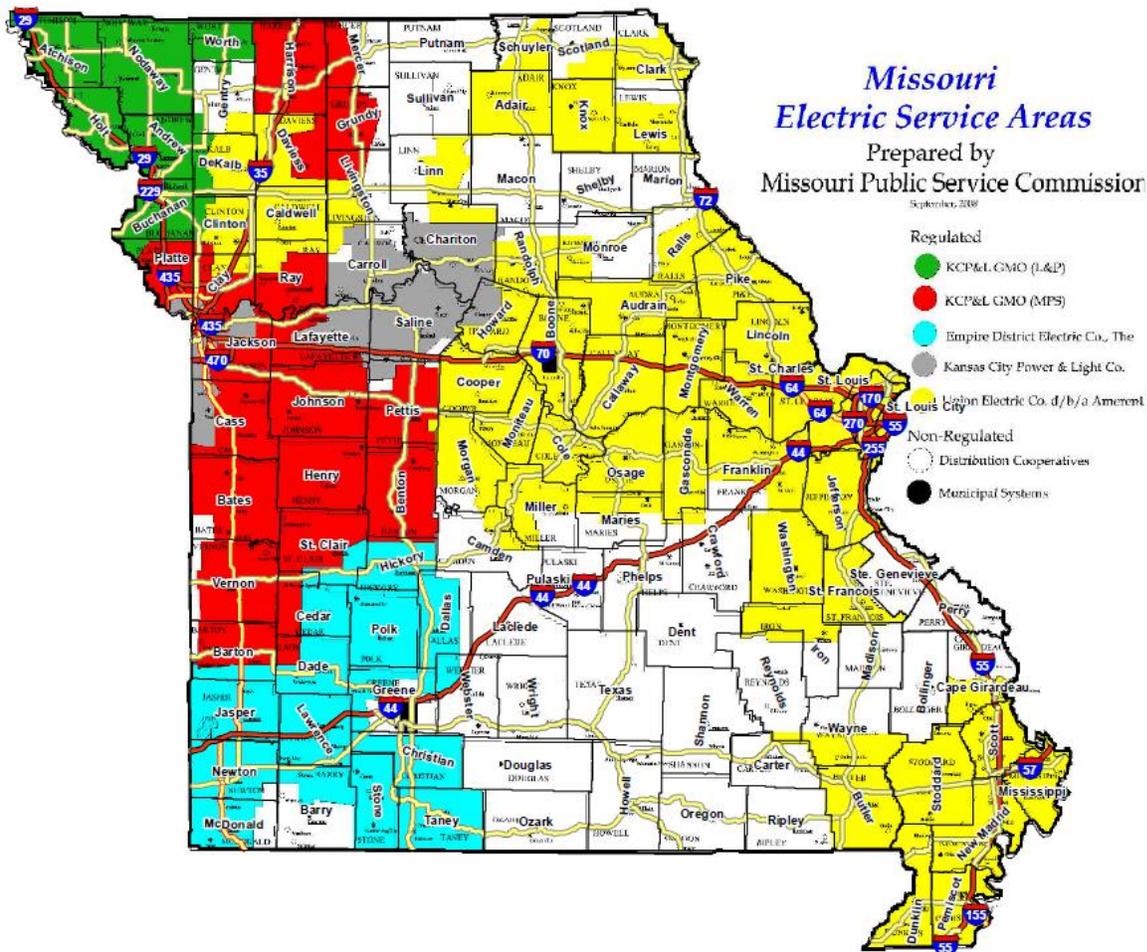
- Minimum of 2 DCFC having the following capability:
 - Minimum of 50kW DC output
 - Both CHAdeMO and CCS Combo connectors
- Minimum 2 L2 ports having ~7kW AC output
- Credit card capability
- Spacing of islands no less than 25 miles and no more than 50 miles apart
- Located in communities within approximately 3 miles of interstates or multilane state highways
- Located within walking distance of amenities
- High reliability/availability
- Developer sets pricing for charging
- Developer chooses specific sites

1.4 Volkswagen/Electrify America and ZEV/Mitigation Trust

This RFI is not related to any Electrify America efforts or Mitigation Trust planning for Missouri. However, it is possible that, through this RFI, Ameren Missouri learns about opportunities that may have relationship to these efforts and welcomes such opportunities. Further, the same vision for a minimum practical network of EV charging stations may be proposed to Missouri's designated beneficiary (not yet named) in collaboration with other Missouri utilities and EV advocates.

1.5 Missouri Utilities Map

Ameren Missouri provides electricity for a large portion, but less than half, of Missouri. There are several other utilities that provide service in Missouri, as shown in the map below. Note that Ameren Missouri is working with these other utilities as well as other EV advocates (MoDOT, Clean Cities, NRDC, Sierra Club, etc.) to plan for the statewide minimum practical network, **but would only be able to provide direct support for the Ameren Missouri territory, shown in yellow below.** The electric service territory map (without roadways) is available at the PSC website: <https://psc.mo.gov/Electric/>.





1.8 RFI Timeline

Table 1 below shows the schedule of activities for this RFI.

Table 1: RFI Schedule of Activities

Activity	Date
Issue RFI	08/09/2017
Deadline for Respondent Written Questions (submit via email to ABarrio@ameren.com)	08/23/2017
Ameren provides responses to written Questions	08/25/2017
RFI responses Due – 2:00 PM CDT (submit via email to pjustis2@ameren.com AND abarrio@ameren.com)	09/07/2017 2:00PM CDT
Direct Confidential Dialogues	Tentatively scheduled for week of 09/18/2017

1.9 Submission Instructions

Ameren anticipates that collaboration between EV-related companies will be necessary to properly respond to this RFI and encourages EVSE manufacturers, software/networking providers, site developers, auto manufacturers, communications, energy storage and relevant others to form charging station developer/operator “partnerships” that respond jointly. It is Ameren’s intention to have confidential dialogues with each responding partnership which provides a response demonstrating the interest, experience, and business acumen to help Ameren determine the types and levels of support required to enable a partnership to invest in ownership and operation of a network of DCFC islands along Missouri highway corridors.

Please provide written answers to the following questions:

1. Specify your partnership:
 - a. Primary contact person and contact information.
 - b. Names of partnership member companies and primary contact for each.
 - c. Role of each member company in corridor development.
 - d. Experience of each company relevant to corridor development.
 - e. How Ameren should handle any communications with your partners, considering confidentiality concerns.

2. Regarding a minimum practical network of corridor charging:
 - a. Is Ameren’s vision realistic and why or why not?
 - b. Where (geographically) should Ameren focus its efforts to provide



-
- corridor DCFC?
- c. What would your partnership need from Ameren (or other utilities) to develop corridor DCFC in Missouri as a viable private sector business and operate and maintain it long-term?
 - d. In follow-up to question 2.c. above, how should Ameren best encourage development such that the minimum practical network of corridor charging occurs (even in less populated areas), rather than simply clusters of DCFC outside major urban areas?
 - e. What corridor DCFC power levels should be assumed to future proof infrastructure investments made today?
3. Given that any support provided by the utility is ultimately provided on behalf of Ameren Missouri customers, how would you suggest Ameren ensure that any support provided to the private sector results in long-term availability of corridor DCFC stations to the public?
 4. There is discussion within the industry of utilities offering DC supply as a metered service to EV charging stations. Regarding DC supply to the charging islands:
 - a. Is this something that you recommend Ameren develop as a new service offering for EV charging applications?
 - b. If YES to 4.a:
 - i. How would a DC service offering help in stimulating the private sector to invest in corridor DCFC?
 - ii. When would you begin deploying charging stations using utility-supplied DC service?
 - iii. What are the specifications of the DC supply that you would need?
 - c. If NO to 4.a., why is DC service not something you recommend Ameren develop for EV charging applications?

All submissions to this RFI should be sent to Ameren via email to PJustis2@ameren.com AND ABarrio@ameren.com.

1.10 Ameren Contacts

The Ameren Contacts for this RFI are:

*Pat Justis (PRIMARY CONTACT)
Energy Efficiency and Renewables
Ameren Missouri
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St. Louis, MO 63166-6149*

*Phone: 314-554-2211
Email: abarrio@ameren.com*



Section 2: General Conditions and Terms

2.1 RFI Questions, Inquiries, and Clarifications

Any questions or other inquiries from your firm concerning this RFI should be submitted to the Ameren Primary Contact indicated in Section 1.10 above. If clarifications to this RFI become necessary as a result of questions from your firm or other firms, such clarifications will be issued by Ameren to all firms under consideration. Any contact or communications with regard to this RFI with other Ameren employees or its consultants is strictly prohibited unless approved by the Ameren Primary Contact indicated in Section 1.10 above. Failure to adhere to this policy may result in immediate disqualification for direct dialogues. However, conversations with respect to other current Ameren purchases or ongoing business activities may continue to proceed as required.

2.2 Response Format

There is no specific format required for responses to this RFI. Your responses should provide concise answers to the questions in Section 1.9 and demonstrate the interest, experience, and business acumen to help Ameren determine the types and levels of support required to enable a partnership to invest in ownership and operation of a network of DCFC islands along Missouri highway corridors.

2.3 Supplier Diversity

The communities and customers Ameren serves, as well as their employees, are diverse. Ameren's commitment to supplier diversity reflects a belief that efforts to assist diverse businesses will enhance opportunities for success, while providing Ameren with needed materials and services at competitive prices.

2.4 Sustainability

It is Ameren Missouri's goal to operate its business in a sustainable manner, i.e., to meet the needs of the present generation without compromising the ability of future generations to meet their own needs.

2.5 Disclaimers

Respondent is hereby advised that Ameren is not committed to any course of action as a result of its issuance of this RFI and/or its receipt of a response from any Respondent in response to it. Further, Ameren reserves the right to:

- Reject any response which does not conform to instructions and specifications which are issued herein;
- Not accept responses after the stated submission deadline;
- Reject any or all responses, if it so decides;
- Negotiate with one or more Respondents;
- Award a contract in connection with this RFI at any time;

Ameren will not reimburse any respondent for any response preparation costs or other work performed in connection with this RFI.

2.6 Disclosure and Confidentiality Terms

The information contained in this RFI (or accumulated through other written or verbal communication) is confidential. It is for response purposes only and is not to be disclosed or used for any other purpose. Information received in response to this RFI will be held in strict confidence and not disclosed to any party, other than as may be required by the Missouri Public Service Commission or other governmental regulators, without the express written consent of the Respondent.