

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of a Working Case Regarding)
Electric Vehicle Charging Facilities) Case No. EW-2016-0123

**RESPONSE OF KANSAS CITY POWER & LIGHT COMPANY AND
KCP&L GREATER MISSOURI OPERATIONS COMPANY**

Kansas City Power & Light Company (“KCP&L”) and KCP&L Greater Missouri Operations Company (“GMO”) submit this response to the Staff of the Missouri Public Service Commission (“Staff”) regarding the Staff’s August 5, 2016 *Staff Report A Working Case Regarding Electric Vehicle Charging Facilities* KCP&L/GMO states as follows:

I. GENERAL DISCUSSION

KCP&L/GMO would first like to thank Staff for organizing the Electric Vehicle Workshop in an effort to encourage collaboration between stakeholders and interested parties. The discussion was beneficial and provided additional insight into the direction that Missouri is headed regarding electric vehicle charging stations (“EVCS”) and the tariff mechanisms that need to be in place to ensure service can be provided.

KCP&L/GMO agrees with Staff’s conclusion that the Missouri Public Service Commission (“Commission”) has jurisdiction over the EVCS and networks owned by electric utilities or third-party vendors when available to the public and a fee is charged. KCP&L/GMO would also be in agreement with Staff’s outcome that prudently incurred costs are appropriate to be included in rate base for the duration of the useful life of the EVCS. KCP&L/GMO stresses the understanding that this process of electric vehicle charging station implementation is in a transitional status in nature and that while there are aspects that warrant continued study, at the very least, an EVCS Tariff will need to be implemented in order to ensure electric vehicle

(“EV”) drivers are billed appropriately for EVCS usage once the KCP&L/GMO’s agreements with selected hosts begin to expire.

II. SPECIFIC ITEMS

The follow comments are offered by KCP&L/GMO in regards to specific comments presented by Staff in the Report:

- a. “It is Staff’s view that EV charging stations should be treated in a manner similar to pay telephones...Third Party operators had to obtain a certificate for each pay telephone they operated...”(Staff’s Analysis of Missouri Law, Page 12)*

It should be noted that in jurisdictions like Connecticut and California, operators of publicly available EV charging stations are required to register with the Department of Energy Alternative Fuels Data Center and must include the locations, fees and operating characteristics of each station they operate.

- b. “Staff is concerned that absent mandatory TOU rates for EV owners, the EV owners may go home and plug in immediately, exacerbating the evening load of the utility...Therefore, it is anticipated by Staff that there could be an increase on peak demand since there is no incentive to charge off-peak.”(Reducing Electricity Rates, Page 18)*

The Clean Charge Network as currently deployed by KCP&L/GMO is a pilot project where EV charging stations have been deployed at a variety of host sites, including multi-dwelling unit locations, to understand the difference in charging patterns by type of host site. The knowledge gained will be used in the development of future products and services, including a potential residential TOU rate for EV drivers. KCP&L/GMO shares Staff’s concerns that EV charging may exacerbate system loading issues but from a different perspective. KCP&L’s system peak usually occurs between 4:00 and 5:00 PM which is a heavy commute time in KCP&L/GMO service territories. It is anticipated that a relatively low coincidence of home charging will occur during the overall system peak. However, once electric vehicles are plugged

in following the evening's heavy commute period, some localized distribution components could see loading issues.

- c. "The latest technology being developed is on-the-go mobile wireless charging of EVs. This new technology may soon make stationary, chord connected charging stations a thing of the past and cause the assets, potentially paid for by ratepayers, to become 'stranded assets' that would no longer be needed." (Emerging EV Charging Technology, Page 21)*

KCP&L/GMO do not dispute that there is research and studies are ongoing that could provide additional avenues for EV drivers to charge their vehicles. However, it is far too easy to gloss over any potential costs associated with installing an inductive charging network and KCP&L/GMO expect that such costs could be substantial. Additionally, work on new technology should not limit the needs of customers today who rely on corded EV charging stations.

- d. "IOUs in Missouri have not proposed any supply-side or demand response technologies specific to EV charging stations. In Staff's opinion, Missouri utilities should enhance the "learning experience" of the pilot programs by researching these technologies." (Emerging EV Charging Technology, Page 21)*

The KCP&L/GMO presentation presented by Ed Hedges on behalf of KCP&L/GMO covered the differences between non-networked and 'networked' charging stations which included a networked benefit of the system being able to 'provide charge level control and active load reduction.' (See Slide 7, KCP&L—Are all EV Charging Stations Created Equal?). Additionally, Mr. Hedges discussed 'Managing EV Charging for Grid Benefits' which included points on both demand response and TOU rates to control or influence charging behavior. (See Slide 8). As implemented, KCP&L/GMO Clean Charge Network has the capability to implement load reduction/ curtailment events. As part of the SmartGrid Demonstration Project, KCP&L demonstrated demand response events using the EV charging stations and the ChargePoint system. The KCP&L/GMO have yet to make this capability a formal part of their demand

response programs. The KCP&L/GMO will analyze the CCN charging data to determine charging profiles by Host site to develop appropriate strategy, design and implementation of CCN Load Reduction Event. At a minimum, we expect that CCN Load Reduction Events would be initiated in conjunction with other system wide demand response or Load Curtailment program events requested by Power System Operations.

e. Corrections to comments on KCPL/GMO EV Network Usage Analysis-Starting on Page 26

KCP&L/GMO found a number of necessary corrections regarding Staff's comments about the Clean Charge Network. First, it should be noted that there are only two plugs on each CCN charging station, not four as indicated in the report. On Level 2 stations this allows two electric vehicles to simultaneously charge. On Level 3 charging stations (DC Fast Charge) the two plugs accommodate different industry standard connectors, but only one electric vehicle may charge at a time.

KCP&L/GMO would like to provide additional clarity regarding Staff's inclusion of usage statistics at specific locations. It should be pointed out that through the Clean Charge Network pilot, KCP&L/GMO will gather site use information that will be utilized to better locate charging stations throughout the GMO and KCP&L Missouri service territories. This information will include data such as the time the charging stations have been available at each location, the number of unique users, energy consumption and more. These statistics are especially important when comparing sites against one another. For instance, in Staff's report, the lack of supporting information would lead a reader to believe that the 7th Heaven was an example of poor site locations due to low usage statistics. What is not taken into consideration is that the data used for the 7th Heaven location did not include that the location had only been in service since June 9th, allowing for only a partial month of data in Staff's June 2016 station usage

information. Furthermore, the 7th Heaven location is located in an underserved location where KCP&L anticipates slower electric vehicle adoption. This shows how important it is to understand all aspects of a location when either siting or evaluating installed charging stations.

f. “There were 677 available charging ports throughout Missouri as of May 31, 2016.” (ChargePoint, Page 29)

KCP&L/GMO would like to point out that 570 of the 677 available ports were associated with stations deployed by KCP&L/GMO throughout both the KCP&L-Missouri and GMO jurisdictions. Of the remaining 107 ChargePoint public charging ports, only 21 were located within either of GMO or KCP&L’s Missouri service territory.

g. “IOUs consider mandatory TOU for all public charging stations and EV Owner.” (Staff’s Conclusions and Recommendations, Page 30)

KCP&L/GMO believes further study and discussion is necessary prior to a TOU trial. KCP&L/GMO’s early analysis of the public charging indicates that most charging is occurring during non-peak hours. While KCP&L/GMO is not prepared to implement TOU rates, it is believed that TOU rates would be most effective regarding home charging to encourage off-peak charging, reducing the load strain on localized residential systems. Correspondingly, the implementation of a demand response program may be a more effective at present time in managing ‘system peak’ coincidence from public charging.

h. “To learn from the pilot projects Staff recommends the IOUs gather data and report annually to the Commission and interested stakeholders on the impact of the EVs on grid reliability...” (Staff’s Conclusions and Recommendations, Page 30)

KCP&L/GMO has gone on the record as stating that one of the objectives of the Clean Charge Network pilot is to understand the charging patterns at public charging stations and how charging stations should be deployed at various host sites. It would more difficult to include to include at-home EV charging since KCP&L/GMO does not monitor what is being utilized on the

customer's side of the meter. KCP&L/GMO would only be able to provide an estimate based on other studies and any insight gained from charging stations located at multi-unit dwelling locations.

- i. "The IOUs explore various emerging technologies and their impact on areas of demand-response, supply-side resourcing and second battery life programs." (Staff's Conclusions and Recommendations, Page 30)*

KCP&L/GMO currently monitor emerging technologies through internal staff, the Electric Power Research Institute and outside consultants that assist in the potential demand-side management study. Additionally, KCP&L/GMO's IRP process includes the requirement to address any 'special contemporary issues' identified by the Commission.

The Clean Charge Network will offer benefits to all customers in both the KCP&L and GMO territories and potentially can provide increased system efficiencies as electric vehicle adoption continues to grow. It should be understood that this process is transitional in nature and that information gathered will allow for stakeholders to make future decisions and investments that serve to benefit all parties.

WHEREFORE, KCP&L/GMO respectfully submits their response.

Respectfully submitted,

/s/ Robert J. Hack

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Dated: October 5, 2016

CERTIFICATE OF SERVICE

I do hereby certify that a true and correct copy of the foregoing document has been electronically mailed this 5th day of October, 2016 to all counsel of record in this proceeding.

/s/ Robert J. Hack

Robert J. Hack