



City of Columbia, Missouri

Meeting Minutes

Water and Light Advisory Board

Tuesday, December 12, 2023
1:00 PM

EV Training

701 E Broadway
Conference Room
1A/1B

I. CALL TO ORDER

Mr. Coffin called the meeting to order at 1:03 p.m.

Staff: Sarah Talbert, Assistant Utility Director; Dave Sorrell, Utilities Director; Todd McVicker, Energy Services Supervisor; Matt Nestor, Communication Specialist; Erin Keys, Acting Assistant Director-Electric; Ron Wyble, Power Production Superintendent; Aubrey Turner, Public Information Specialist; Madison Jones-Smith, Administrative Technician I; David Storvick, Engineering Manager; Eric Hempel, Sustainability Manager; Ben Edes, Energy Services Supervisor; Earl Kraus, Assistant City Counselor; John Blakemore, Engineering Specialist; Kyla Morgan, Sr. Rate Analyst; Steve Mahinga, Engineering Specialist; Greg Baehr, Engineer

Council Members: Don Waterman, Betsy Peters, Nick Foster

Consultant: Peter Kelly-Detwiler

Present: 5 - Thomas Jensen, David Switzer, Gregg Coffin, Philip Fracica and Amanda Jacobs

II. INTRODUCTIONS

None

III. APPROVAL OF AGENDA

Mr. Gregg Coffin made a motion to approve the agenda as submitted with a second by Mr. Phillip Fracica. Motion passed unanimously.

IV. AGENDA ITEMS

a) The Rise of Electric Vehicles (EVs)

Mr. Kelly-Detwiler introduced his presentation on "Electrification of Transportation and the Implications for the City of Columbia, Missouri." He spoke about his book called "The Energy Switch" and discussed the ways Electric Vehicles (EVs) are becoming a bigger part of society. He discussed a graph detailing the breakdown of Greenhouse Gas Emissions by Economic Sector which showed that transportation made up 28% of Greenhouse Gas Emissions. Mr. Coffin asked a great question about the breakdown of transportation and which vehicles were the biggest contributors. Mr. Kelly-Detwiler stated that buses, cars, and trucks are the biggest factor in that 28%. He discussed the different companies who have already switched to EVs which included bigger fleets such as delivery trucks, USPS who committed to 66,000 EVs by 2028, FedEx, and even Municipalities are joining in with some of their buses. He also discussed the problem of charging and transformers being able to handle the load. He spoke about ways municipalities are combating this by introducing Inductive Charging by placing a wireless charging area into the pavement of city roads.

b) Implications of EVs for Utility Planning

Mr. Kelly-Detwiler discussed the implication of EVs for Utility Planning and how it would affect Utilities. He went over multiple graphs to show the difficulty of forecasting the increase in EV stock. He discussed the peak charging times and what that would mean for the transformers in the area. Most of those numbers would be affected by the type of vehicle that was charging. He went over the estimates of energy impact due to EVs. There was discussion about when the community would not want the charging of the vehicles to be done due to how overloaded the transformers would be at certain periods of the day. Due to those timeframes, if not monitored, the costs of replacing those transformers and grids would be enormous so the question would be could the city's transformers be able to withstand the power of the chargers.

c) Harnessing the Potential of EVs to Create a More Efficient Grid

Mr. Kelly-Detwiler moved into discussing the ways in which harnessing the potential of EVs could create a more efficient grid going forward. He discussed the differences between certain types of batteries and how we could use the left over power from said batteries to add more power to the grid to help with some of the load. He stated that most fleets would start in the school bus industry and move along from there so that the full potential could be reached. The biggest takeaways, according to Kelly-Detwiler, were to make sure to engage early, collaborate closely with policymakers and regulators to help them stay ahead and implement frameworks that enable scale, and to build customer confidence from the outset and focus on delivering ease and simplicity.

d) Effective Program Design

Mr. Kelly-Detwiler discussed the ways in which the City of Columbia should build their program. In order to get started, there would need to be research done to determine the stress points in and around the city. In a graph, he showed that during the winter months in which it would take more heat to heat up the car, an EV needed more electricity to travel the same distance as a trip in the summer would. He also stated that rapid fleet adoption could be the City's greatest exposure to these vehicles. He also stated that addressing the load would start with managed charging. Addressing the load would start with managed charging. The design process of the program starts with looking into a customer's charging behavior, considering what the program should be and look like, identifying regulatory considerations that may help with the managed charging, creating an incentive design that would meet the objectives, but also stay within budget, determining the program size according to the budget and identify potential program participants, and choosing a marketing and recruitment strategy.

e) Other Critical Concerns

Mr. Kelly-Detwiler then discussed other critical concerns dealing with the potential for hackers as well as the struggle of the end of battery life. He stated a big way to create a culture of sustainability is to recycle the batteries. There are three ways in which he discussed how to do this: pyrometallurgy, hydrometallurgy, and direct recycling.

V. GENERAL COMMENTS BY PUBLIC, MEMBERS AND STAFF

Mr. Misenbach made a statement about wondering whether our grids and transformers could handle the load of a ton of EV chargers and wondered whether the city should potentially collaborate with Ameren on the project in order to insure the best outcomes, which was noted.

VI. ADJOURNMENT

The meeting adjourned around 4:00 p.m. on a motion by Mr. Tom Jensen with a second by Ms. Amanda Jacobs. Motion passed unanimously.

To submit questions or comments to the Water & Light Advisory Board, please email wlabpublic@como.gov.

All media inquiries should be submitted to Matt Nestor at Matthew.Nestor@como.gov.

Members of the public may attend any open meeting. For requests for accommodations related to disability, please call 573-874-CITY (573-874-2489) or email CITY@CoMo.gov. In order to assist staff in making the appropriate arrangements for your accommodation, please make your request as far in advance of the posted meeting date as possible.

USB DRIVES PROHIBITED: Due to cybersecurity concerns, flash drives and other media devices are no longer permitted for delivering files or presentation materials. A speaker who desires to display a presentation must upload the presentation, in advance, to the city network using an upload portal. To upload your files and learn more, visit CoMo.gov/upload. (Effective Jan. 1, 2023)