

**CBAC Subcommittee:
On the Implementation of Electric Vehicle Charges on Capitol Grounds**

Convened at 2:00 P.M. on August 27, 2013

Subcommittee Members:

Representative Randy Fischer, Chair
Marilyn Eddins, Chief Clerk of the House
Rick Lee, Capitol Complex
Cindi Markwell, Secretary of the Senate

Subcommittee Guests:

Jim Burness, National Car Charging
Tom Hunt, Colorado Energy Office

Discussion on EV Chargers

Representative Fischer discussed the history of electric vehicle (EV) legislation in Colorado and the proposal to add an EV charging station to the Capitol grounds.

Mr. Lee discussed the current EV chargers on the Capitol grounds, and the current use of each: two chargers at 1525 Sherman Street used by the state fleet, and one charger at state patrol, used by the Governor.

Mr. Burness discussed the different types of chargers and their potential use at the Capitol:

- type 1, a slow charge, most commonly used for residential properties;
- type 2, a medium charge, most commonly used for public and commercial properties; and
- direct current (DC) fast charge, most commonly used for quick charges at commercial properties.

The current charges around the Capitol are Level 2, which cost around \$6,000 for each individual station. DC chargers are not currently used in Colorado and are expensive for implementation.

Mr. Lee discussed the need to supply additional power to the Capitol building's electrical system in order to supply the EV charging stations, which require a minimum of 40 amps.

The subcommittee discussed the use and possible fee charge of a EV charging station. Mr. Burness spoke on setting rates through private companies and leasing a station for \$680 a month for two years. The committee decided that these were not a viable option due to the limited use of the station.

The subcommittee discussed possible locations and potential issues for placement of an EV charger station around the Capitol:

- the Circle: would raise costs due to the distance from the power source, and has designated spaces;

- parking garage fifth floor: difficult in winter, too far for legislatures, and has designated spaces;
- state fleet: currently has two stations not used, and may add EV in near future; and
- state patrol: currently has one station occupied by the Governor.

The subcommittee discussed the value of placing an EV charging station in the Circle for legislative use and for promotional purposes. The subcommittee concluded that two stations should be added initially with the potential for more at a later date.

Mr. Burness suggested that a station be located either on the south or west side of the building, due to weather conditions found on the north and east sides.

Mechanics of placing station in the Circle

Trenching is the process of laying the electrical system under ground from the building out to the station. The average cost of trenching is \$60 a foot. Trenching is the costliest part of a station installation. *Mr. Burness* discussed the possibility of installing a larger pipe that will allow additional wiring to be added for future stations. Having a station too far from the initial source can create a voltage drop, so a study would need to be done to determine how far a station could be from the building.

Electrical. The station requires 40 amps per station. *Mr. Lee* discussed the importance of studying the subbasement electrical system to decide where enough amps are available, due to a limited supply, to install a transformer to feed the stations.

Funding Options for Implementation

Mr. Hunt said that state grants from the Colorado Energy Office (CEO) would not be a good fit for this project due to the level of government identified in the grant qualifications. However, he stated that CEO would like to be involved in helping to get donations and possible sponsorship.

The subcommittee discussed the use of corporate sponsors as possible sources of funding for a station. In addition, the committee discussed that the initial costs for implementation would be high, due to trenching, and estimated around \$20,000 for two stations to be added to the Circle.

Mr. Burness explained the federal funding grants for EV charging stations and stated that the federal funds have now expired.

The subcommittee decided to wait until an electrician from the Department of Personnel and Administration could determine a location with sufficient power in the sub-basement.

The subcommittee will meet on **September 27, 2013, at 12:00 P.M.** to determine final recommendations.