

**CITY OF PHOENIX  
ELECTRIC VEHICLE AD HOC COMMITTEE:  
CITY FLEET AND CHARGING INFRASTRUCTURE SUBCOMMITTEE**



**Summary Minutes from Tuesday, Nov. 16, 2021**

Virtual Meeting – Via WebEx

**Ad Hoc Committee Members (Present)**

Councilwoman Ansari  
Delbert Hawk  
Kathy Knoop  
Caryn Potter

**Committee Members (Absent)**

Katherine Stainken

**City Staff Present**

David Benton, City Attorney  
John Chan, Convention Center  
Sarah Demory, Aviation  
Joe Giudice, Public Works  
Sandra Hoffman, Planning & Dev  
Willa Kaough, Mayor's Office  
Rebecca McCarthy, Aviation  
Karen Peters, City Manager's Office  
William Robinson, Convention Center  
Larry Smallwood, City Manager's Office  
Roberto Valentin, Transit

Karen Apple, Sustainability  
Kimberly Brown, Aviation  
Albert Crespo, Transit  
Craig Doyle, Aviation  
Mark Hartman, Sustainability  
Aaron Kane, District 7 Office  
Karl Kaseoru, ITS  
Gabriel Nevarez, Aviation  
Lawrence Polk, Parks  
Jesús Sapien, Transit  
April Truncellito, Convention Center  
Felissa Washington Smith, Public Works

**1. Call to Order/Roll Call**

Councilwoman Ansari called the meeting to order at 5:20 p.m.

Councilwoman Ansari reported that this is the third meeting for this subcommittee.

**2. Approval of Minutes – Oct. 19, 2021 City Fleet and Charging Infrastructure Subcommittee Meeting**

Councilwoman Ansari requested a motion to adopt the minutes. Committee Member Hawk called for a first motion and Committee Member Knoop called for a second. Unanimous pass, motion carried.

**3. News and Announcements**

Councilwoman Ansari introduced Karen Apple, EV Program Manager, to discuss recent news in the EV world.

Ms. Apple reported President Biden signed the infrastructure bill on Nov. 15, 2021, which includes the \$7.5B for zero and low emission buses and ferries, and \$7.5B for a network of plugin electric vehicle chargers. The U.S. Department of Energy, Office

of Electricity has expanded its Energy Zones Mapping Tool to support electric vehicle service equipment (EVSE) planning, with an emphasis on equity. B2U Storage Solutions has turned about 160 used Leaf battery packs into an energy-storage array that supports a 1MW solar farm in Lancaster, California. Toyota just revealed its first all battery electric vehicle (BEV), the 2022 Toyota bZ4X electric vehicle, which has a range of 310 miles. Ford demonstrated applications for its first electric crate motor called the “Eluminator” by retrofitting a 1978 F-100 pickup with an all-electric powertrain; the motor can be purchased separately along with a battery to convert gas-powered drivetrains to electric. National Automobile Dealers Association (NADA) has recently formed a partnership with Chargeway to deploy EV info beacons to the nearly 16,500 franchised new vehicle dealerships.

Moving into announcements, Ms. Apple shared that the original sharepoint page created is no longer accessible as it has been moved to a public website. The public now has access to materials and meeting minutes, which are located at: [www.phoenix.gov/sustainability/electric-vehicles/ad-hoc-committee](http://www.phoenix.gov/sustainability/electric-vehicles/ad-hoc-committee).

Committee Member Knoop repeated an announcement from a prior meeting. General Motors (GM) will be providing L2 charging stations to community partners. Goal is 40,000 public L2 charging stations across north America and Canada over the next couple years. She stated that this might be an opportunity for the city if there are existing partnerships.

#### **4. Comparable Cities - City Employee Parking Programs Overview**

Councilwoman Ansari introduced Ms. Apple to highlight the findings of comparable cities benchmarking. Ms. Apple presented the nine cities reviewed and common themes identified from the employee parking program research.

Councilwoman Ansari opened the floor for questions.

Committee Member Knoop commented that these common themes are helpful, she also mentioned it would be interesting to know whether these cities are doing L1 or L2 charging for employee charging.

Committee Member Potter followed up by mentioning that there may be a special use case to support L1 charging and lighting fixtures for employee parking.

#### **5. Overview of City EV Parking Program and Employee Charger Locations**

Councilwoman Ansari introduced Mark Hartman, Chief Sustainability Officer to introduce the current employee EV parking program. Mr. Hartman mentioned current partnerships with SRP and APS (Take Charge Program) and their involvement as utility providers in these efforts. He then transitioned to introduce John Chan, Director of Phoenix’s Convention Center.

Mr. Chan started his presentation by providing an overview of the Convention Center’s responsibility in managing all downtown public and employee parking (nine

parking garages total). As of right now, there are 54 EV charging stations that they manage (28 L1, 26 L2), this does not include charging for city fleet vehicles. He then transitioned to discuss the city's alternative fuel parking program and how this program follows ADOT Alternative Fuel Vehicle standards. Alternative fuel in this program is considered solar, hydrogen, battery electric (excluding PEHV), and natural gas (CNG or LPG). By participating in this program, the city provides a \$10/month discount, preferred parking locations, and no-cost charging. There are currently 81 qualified alternative fuel vehicles registered in the employee program, 67 of which are BEVs; BEV usage increased from 15 to 67 since 2018. Not all employee's with BEVs are working the same shifts, which alleviates the burden on EV charging stations. There is opportunity for charging infrastructure growth when comparing available stations (28 L1, 9 L2) to those participating in the program.

Mr. Chan then transitioned to discuss policy considerations. He suggested that the city increase the number of charging stations from 32 to 75; continue to provide employee charging at no-cost; develop EV charging etiquette policies; clearly denote EV parking spaces with signs and graphics; increase promotion of EV charging stations; and lastly, add additional L2 public charging stations as demand warrants.

Committee Member Knoop asked whether there is a cost for public to use L2 charging stations.

Mr. Chan responded that yes, public L2 charging is managed through a 3<sup>rd</sup> party company.

Committee Member Potter asked how many employees are currently utilizing the alternative fuel program relative to how many employees use these garages. Does the city have an intensity ratio?

Mr. Chan referenced a slide provided earlier in his presentation, specific to the total participants in the program.

Committee Member Potter followed up to clarify her initial question. She wanted to know how many employees in total use these garages and the potential growth of employee charging.

Mr. Chan diverted the question to William Robinson, Parking Manager, for the city's employee parking programs. Mr. Robinson suggested for this calculation it would be best to use the total amount of employees under payroll deduction, which is 2,000, with the understanding that there were cancelations (400-500) over the past year and a half. He stated that pre-pandemic numbers would be closer to 2,400 on payroll deduction parking for city garages.

Committee Member Potter stated that this information was helpful. Committee Member Potter also suggested that when garages are not being utilized by

employees to see if there is potential opportunity to leverage these garages for public use.

Mr. Chan mentioned there are limitations due to how the employee garage was financed, as it limits private activity. He stated this would require additional research to evaluate how much of this activity is allowed.

Committee Member Potter suggested that this may warrant a revolving loan fund to support other infrastructure or maintenance in other garages. She also suggested that any additional signage installed by the city should follow the universal standard established at a federal level.

## **6. Overview of EV Fleet Charging Equipment and Business Models**

Councilwoman Ansari introduced Mr. Hartman who introduced featured guests that will provide an overview of EV fleet charging equipment and business models.

Mr. Hartman introduced Gary Root with EVGo.

Mr. Root first provided some background on EVGo. The company is best known for owning and operating the largest fast charging network with over 15,000 fast chargers and over 1,000 L2 chargers with an industry leading 98% uptime. EVGo were the first to create dedicated EV charging hubs, first to partner with rideshare/TNC companies at scale, and first to emphasize dynamic power sharing. They have two different ownership models to consider, customer owned (upfront cost) and charging-as-a-service (no upfront cost).

Mr. Hartman thanked Mr. Root, and then introduced Jui Dai with Blink.

Mr. Dai mentioned that Blink has over 17,000 nationwide chargers on their network and their L2 EV charging stations can provide up-to 80 amps of continuous output. He stated that Blink provides a complete fleet management solution software that is all inclusive; including features that track performance, location, charge status, and assist with route planning.

Mr. Hartman thanked Mr. Dai, and then introduced Carlos San Miguel with ChargePoint, Inc.

Mr. Miguel provided an overview of ChargePoint and then discussed some challenges that can arise when adopting an electric vehicle fleet. These challenges include developing use cases, understanding charging and infrastructure needs, integrating with existing fleet management systems, future proofing the EV investment, and ensuring high vehicle utilization and availability. He stated that ChargePoint provided a configurable policy to manage charging behavior and has power management features (power ceiling and load shift).

Mr. Hartman opened the floor for questions.

Committee Member Knoop asked about the design and engineering aspect of a project, and whether these companies work with firms to develop the station specifications.

All three companies EVGo, Blink, and ChargePoint stated that they each provided these services.

Councilwoman Ansari asked what cities are leading the way with EV city fleets and where does Phoenix fall in this assessment. Are there any barriers to consider?

Mr. Root said that there has been an uptick in EV usage in California, which runs parallel with general EV adoption trends, which is largely due to funding options. Mr. Root also stated that there are also trends in New York, largely due to low utility rates, which decreases the total cost of ownership.

Mr. Dai mentioned that the cities of Portland and New York have experienced an uptick in EV usage and development of EV infrastructure. He stated that grid management and cost control is a challenge to consider.

Mr. Miguel stated that the city of New York is leading the way, in addition to Columbus, Long Beach, Albuquerque, and California in general. He stated that the largest hurdle is the lack of infrastructure and the initial high level of investment needed (60-90% of total cost).

Mr. Hartman asked whether the city should plan for obsolete infrastructure and whether this is based on a 7-year cycle. He also wanted to know what is realistic specific to lifecycle.

Mr. Miguel suggested a 5-year amortization rate, 7-year life cycle. He stated that the charging standard for L3 may change, L2 may not change.

Mr. Dai suggested 7-10 years depending on usage and the adoption rate; from a city and citizens perspective.

Mr. Root suggested 7 years.

Committee Member Potter asked what policy driven programs out there help city's maximize electrification software, investments, public stations, etc.

Mr. Miguel suggested building codes for new buildings. He stated that by making electrification a standard can have a ripple effect.

Mr. Root suggested zoning and permitting. He stated that permitting can delay the process, depending on the time to receive the permit. He also stated that locations must allow for this type of primary use.

Mr. Dai suggested that there is much confusion about what is required and needed, clear messaging is needed. He also stated that secondly, using LA as an example, rolling EVs out to the public must be transparent so that people know where stations are located to drive adoption and interest.

Councilwoman Ansari thanked all presenters and turned attention to Mr. Hartman to introduce the next presenter, Bernie Kotlier with EVITP.

## **7. Overview of EV Infrastructure Training Program**

Mr. Kotlier provided an overview of the Electric Vehicle Infrastructure Training Program (EVITP) which is a non-profit, volunteer based, brand neutral, national EV industry collaborative that was launched at the University of Michigan in 2012. EVITP addresses the technical requirements, safety imperatives, and performance integrity of industry partners and stakeholders. EVITP 4.0 Curriculum was updated in 2020 to provide comprehensive residential, commercial, industrial charging infrastructure training. The four slides within the curriculum are: Electric Vehicles; Electric Vehicle Supply Equipment / EVSE (“Charging Stations”); 2017 National Electric Code (NEC); and Load Calculations, Based on National Electrical Code (NEC). Mr. Kotlier stated that to be eligible for this course, electricians must be licensed or certified or they must have completed at least 8,000 hours of documented on-the-job training; requirement depends on the state or local jurisdiction. He stated that the main reason this program is in place is to create safe conditions in the EV industry. For more information: <https://evitp.org/>.

## **8. Overview of Draft Deliverables Template**

Mr. Hartman started to discuss subcommittee’s deliverables. He stated that the plan is for the city to provide a draft to the committee for review.

Committee Member Knoop requested assistance from city staff in drafting the deliverables document.

## **9. Public Comment**

Councilwoman Ansari asked for public comment. No public comment.

## **10. Future Agenda Items**

Councilwoman Ansari asked the committee whether there were additional items to add to future agendas. No suggestions were made.

## **11. Adjournment**

Councilwoman Ansari adjourned the meeting at 6:58 p.m.

Next meeting is December 21, 2021 from 5:00-7:00 p.m. MST