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**Arizona Corporation Commission Staff Policy Statement for Electric Vehicles, Electric Vehicle Infrastructure, and the Electrification of the Transportation Sector in Arizona**

## I. Introduction

This document reflects the Arizona Corporation Commission's ("Commission") approach to policy pertaining to regulated entities in the State of Arizona and Electric Vehicles, Electric Vehicle Infrastructure, and the Electrification of the Transportation Sector in Arizona.

Electric Vehicles ("EVs") are defined as transportation vehicles that use electricity for propulsion. EV Infrastructure is defined as, but not limited to, charging infrastructure and supporting software. This includes Level 1 120-Volt ("V") Alternating Current ("AC") charging, Level 2 240V AC charging, Level 3 Direct Current ("DC") charging, wireless charging, as well as emerging related technologies. The Electrification of the Transportation Sector is defined as the gradual transition from internal combustion engine vehicles to EVs in both public and private transportation. For this document, Public Service Corporations are limited to those that provide electric services.

One purpose for the Commission developing a policy on Electric Vehicles, Electric Vehicle Infrastructure, and the Electrification of the Transportation Sector is to address the role of regulated entities. Comments filed by stakeholders support a policy statement rather than a rule that would clearly identify the role of regulated entities in Electric Vehicles, Electric Vehicle Infrastructure, and the Electrification of the Transportation Sector. Staff believes issuing a policy statement at this time is appropriate because the EV market is still evolving and it is premature to adopt rules. A policy statement allows the Commission to provide guidelines to regulated entities when deploying EV charging infrastructure and supporting software. To that point, the focus of this policy will be on:

- The role of the regulated entity in charging infrastructure versus private companies;
- Ensuring recovery of such investments is appropriate, just, and reasonable;
- The scope and size of involvement; and
- Encouraging growth in the EV sector in Arizona.

This Policy Statement is intended to provide general guidelines to utilities regulated by the Commission on Electric Vehicles, Electric Vehicle Infrastructure, and the Electrification of the Transportation Sector in Arizona. The Commission intends to follow-up and provide more detail on various areas addressed in the Policy Statement either through additional meetings, workshops, and/or rulemaking proceedings.

## II. Background

On August 2, 2018, Commissioner Dunn requested a docket be opened titled Commissioner Dunn's Inquiry into Electric Vehicles, Electric Vehicle Infrastructure, and the Electrification of the Transportation Sector in Arizona. This docket (Docket No. E-00000J-18-

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0266) was closed on October 18, 2018 so the issue could be addressed in the rulemaking docket (RU-00000A-18-0284) instead. Subsequently, on November 7, 2018, the Commission directed the Commission's Utilities Division Staff ("Staff") to develop this policy statement on Electric Vehicles, Electric Vehicle Infrastructure, and the Electrification of the Transportation Sector in Arizona.

*A. Stakeholder Meetings*

A Stakeholders' Meeting was held at the Commission on November 20, 2018. Those in attendance included regulated entities, State agencies including the Residential Utility Consumer Office, private companies, advocacy groups, and individuals. Some of the topics discussed included charging infrastructure, education, awareness, outreach, and pilot programs. Throughout the discussion among stakeholders these focus points were reinforced as top priorities. Regulated entities and non-regulated entities both stressed the need for greater development of charger infrastructure as a precursor to growth of EVs.

Another issue that was addressed was whether someone who installs charging infrastructure would be considered a Public Service Corporation. Staff does not believe it is necessary to address this issue now; however, it will need to be examined in the future.

Stakeholders believe the Commission is well positioned to promote EV infrastructure by encouraging regulated entities to design rates that promote charging during off-peak hours. By encouraging regulated utilities to participate in outreach, education, development of rate plans, data collection, and related pilot programs, the Commission can promote EV infrastructure deployment without a high cost to the ratepayer. Stakeholders urged the Commission to adopt a policy that will allow the market to evolve and not pick winners and losers.

Participants who spoke at the November 20, 2018 stakeholder meeting included:

- Salt River Project
- Southwest Energy Efficiency Project
- Tesla
- Greenlots
- Tucson Electric Vehicle Association

Additional Participants: Navigant Consulting, Arizona Department of Environmental Quality, Tucson Electric Power, Arizona Public Service, Valley Metro, Western Resource Advocates, Arizona Center for Law in the Public Interest, Western States Petroleum Association, International Brotherhood of Electrical Workers, Arizona PIRG Education Fund, Residential Utility Consumer Office and Southwestern Power.

A second Stakeholders' Meeting was held at the Commission on December 11, 2018. The focus of the meeting was to discuss the draft policy statement completed by Staff on December 7,

2018 and Commissioner Burns questions. Stakeholders were encouraged to submit comments on the draft policy statement before and after the December 11, 2018 meeting. Participants at the meeting included: Tucson Electric Power, Arizona Public Service, Western Resource Advocates, Arizona Center for Law in the Public Interest, Western States Petroleum Association, Residential Utility Consumer Office, Southwestern Energy Efficiency Project, Tucson Electric Vehicle Association, Grand Canyon State Electric Cooperative Association, Southwestern Power Group, Plug in America, Greenlots, Rose Law Group, Phoenix Electric Auto Association, ChargePoint, Salt River Project, Alliance for Transportation Electrification, and Tesla.

*B. Written Comments*

Stakeholders were also invited to file written comments. Filings were made by the following interested parties:

- Advanced Energy Economy
- Greenlots
- Southwest Energy Efficiency Project
- Pearl Street
- Salt River Project
- Tucson Electric Power
- ChargePoint
- Western Resource Advocates
- Plug in America

*C. Current State of Electric Vehicles in Arizona*

The EV industry is growing rapidly in Arizona just like other regions of the country. Some of the benefits of owning an EV include tax credits, High Occupancy Vehicle lane access during heavy traffic, and reduced vehicle licensing fees. There are hundreds of public EV charging stations around the state and thousands of EV vehicles on the road with both areas showing huge growth year-over-year. Furthermore, Lucid Motors has announced plans to build a $1 billion EV manufacturing plant in Casa Grande. Staff believes that by adopting this policy it will send a signal to EV manufacturers to locate in Arizona and spur economic development.

According to a study commissioned by Salt River Project, as of March 2018, 813,000 EVs have been sold in the United States. March was the highest selling month to date with a total of 26,373 EVs sold. According to the study there are 45 different models of EVs available for purchase on the market. The market initially consisted of primarily smaller city cars, but projections show by 2022 30 percent of the models will be SUVs/crossovers.

The same study found the following key findings with respect to EV market and customer characteristics:

- EVs use approximately 2,700-3,300 kWh per year.
- Utility TOU rates are very effective in shifting peak loads.
- While DC Fast charging comprised less than 3 percent of total energy used in the study, DC Fast charging was the cause of most of the peaks in the total project load.
- Approximately 81 percent of charging occurred at home, while only ~3 percent of charging occurred in public charging locations.
- The majority of charging occurred at Level 2 (74.0 percent), followed by Level 1 (23.4 percent), and DC Fast charging (2.5 percent).

*Excerpted from Electric Power Research Institute technical report at vii*

*D. Benefits of Electric Vehicles, Electric Vehicle Infrastructure, and the Electrification of the Transportation Sector in Arizona*

Commission Staff recognizes that Electric Vehicles, Electric Vehicle Infrastructure, and the Electrification of the Transportation Sector in Arizona comes with many benefits. These benefits may include:

- Rate designs that reduce peak load and take advantage of times with low priced electricity;
- Increased grid reliability;
- Future possibilities of vehicle to grid integrations;
- Lower costs to consumers;
- Supports growth in battery technology which will lead to more economically feasible energy storage;
- Increased EV usage;
- Reduced emissions;
- Environmental benefits; and
- Lower health care costs.

*E. Challenges of Electric Vehicles, Electric Vehicle Infrastructure, and the Electrification of the Transportation Sector*

Several challenges were identified:

- Whether companies deploying EV charging stations are Public Service Corporations;
- The appropriate rate designs specific to EV charging stations; and
- The role of private vs. regulated entities.

There may be other challenges that have not yet been identified.

## III. The Role of the Commission Over Providers of Electric Charging Stations

The Commission has constitutional authority over Public Service Corporations in Arizona. Art. XV, § 2 defines a Public Service Corporation in part as "All corporations other than municipal engaged in furnishing gas, oil, or electricity for light, fuel or power". Several cases address who is and who is not a Public Service Corporation and subject to the Commission's jurisdiction. See Southwest Transmission Cooperative v. Ariz. Corp. Comm'n. 213 Ariz. 427 (App. 2006). The question would be whether providers of electric charging stations are engaged in furnishing electricity for "fuel or power" to the public. An argument can be made that these stations are encompassed within the provisions of Art. XV, § 2.

Art. XV, § 3 of the Arizona Constitution gives the Commission broad authority over Public Service Corporations, including sole and exclusive authority to set rates for Public Service Corporations.

Staff does not believe that it is necessary to precisely define the Commission's role with respect to the provision of electric vehicle charging stations to customers at this juncture. However, at some point the Commission will need to address this issue.

Staff believes the Commission can have its most impactful effect through its regulation of existing Public Service Corporations providing electricity in the state. The Commission's exclusive ratemaking authority allows it to influence and set appropriate pricing for EV charging stations. The rate design adopted and approved by the Commission will have important impacts on grid reliability, the cost of electricity to customers, and the reduction of peak load periods. The Commission's review and approval of various rate designs can also allow utilities to benefit from negatively priced electricity coming from neighboring markets.

The Commission can also incent deployment of electric vehicle charging stations through various ratemaking incentives. As an example, the Washington Utilities and Transportation Commission has used various rate making incentives.

Finally, the proliferation of electric vehicles and charging stations will also likely increase certain infrastructure needs and/or expenses of the regulated utilities. This will need to be factored into the Commission's Integrated Resource Planning ("IRP") process.

## IV. The Role of Public Service Corporations

Public Service Corporations can play a critical and necessary role in the EV market. For instance, deployment of EV charging stations may be appropriate, and their inclusion in rate base to ensure build-out in rural and low-income areas; multi-dwelling units and interstate corridors or highways.

Second, Commission regulated utilities don't currently have specialized tariffs applicable only to EV charging stations. Such tariffs should be designed to achieve grid benefits, reliability, and lower costs to customers.

Third, Public Service Corporations can also, through pilot programs, obtain valuable information on the deployment of charging stations, customer charging patterns, and the need for rate design incentive programs. Pilot programs designed to obtain information relative to deployment of charging stations should be encouraged. A good example of the type of information that can be obtained is the Electric Power Research Institute's 2018 technical report commissioned by Salt River Project entitled Electric Vehicle Driving, Charging, and Load Shape Analysis.

Finally, increased electric vehicles and charging stations will likely impact other infrastructure needs of the regulated electric utilities which may need to be examined further.

## V. Commissioners Questions

On November 29, 2018, Commissioner Burns docketed a list of questions regarding the development of EV policy. Those questions are listed below and were discussed at the December 11, 2018 meeting.

1. Should our initial policy require that Commission regulated electric utilities (including Cooperatives) install, own, and be responsible for all EV infrastructure in Arizona?

2. If a requirement is adopted, will the requirement also need to include a policy for rate design dealing with EV charging stations?

3. If a requirement is adopted, how will the utilities recover their costs – new adjusters, in rate cases only, special tariffs that recover full costs from EV charging only, etc.?

4. Should the Commission's initial policy not require anything at all, but instead simply allow Commission regulated utilities to install, own, and/or operate EV infrastructure up to a certain dollar limit of investment, where the utilities would then be allowed to seek recovery of any other investment that is made between rate cases (i.e., need to show that investment was prudent and is used and useful, no special treatment for EV infrastructure, no accounting orders, etc.)?

5. If No. 4 above is chosen, how would that dollar limit be set?

6. If No. 4 above is chosen, how would private industry (enterprises/businesses not regulated by the Commission) be allowed to install, own, and/or operate EV infrastructure without becoming Public Service Corporations that are regulated by the Commission?

7. If No. 4 above is adopted, will the Commission need to include a policy for rate design dealing with EV charging stations?

8. On any rate design policy dealing with EVs, should those rates be designed such that the full costs of any EV infrastructure are recovered from those rates only so that no other customers or customer classes are affected by the investment in EV infrastructure?

9. Should the policy voted on at the December 17th Open Meeting be a final policy that prohibits all Commission regulated utilities from installing, owning, and/or operating any EV infrastructure in Arizona? If this prohibition is adopted, how will EV infrastructure be installed and operated in Arizona?

10. And perhaps the ultimate question/issue – should the Commission develop/set an EV policy at all or should we just let private industry deal with the issue?

## VI. Commission Policy Statement Regarding Electric Vehicles, Electric Vehicle Infrastructure, and the Electrification of the Transportation Sector in Arizona

### Policy Statements

Given the significant benefits identified on page 4, the Commission is adopting this policy to encourage regulated utilities to invest in infrastructure and develop programs that support Electric Vehicle charging and widespread transportation electrification.

1. Public Service Corporations can play an integral role in promoting Electric Vehicles, Electric Vehicle Infrastructure, and the Electrification of the Transportation Sector in Arizona, and their participation should be encouraged as set forth herein.

2. Public Service Corporations are encouraged by the Commission to develop educational and outreach programs (subject to Commission oversight) as they relate to Electric Vehicles, Electric Vehicle Infrastructure, and the Electrification of the Transportation Sector and may request cost recovery for Electric Vehicle programs including education and outreach programs.

3. Public Service Corporations and stakeholders will develop best practices for Commission consideration that include consumer protections.

4. Public Service Corporations should maximize electric grid benefits through appropriate rate designs applicable to EV charging. To accomplish this, regulated utilities should propose optional rate design tariffs to encourage customers to charge vehicles during off-peak hours, creating overall system benefits.

5. Public Service Corporations could deploy EV charging stations in identified areas of inadequate coverage, such as but not limited to, rural and low-income areas, multi-dwelling units, interstate corridors or highways, and other areas. If the Public Service Corporation deploys EV charging stations, the prudent costs of this infrastructure may be included in rate base.

6. Public Service Corporations should be encouraged to adopt pilot programs to obtain valuable information on the deployment of EV infrastructure and charging stations, customer charging patterns, and the need for rate designs and incentive programs. Participating utilities are expected to file quarterly updates on such programs with the Commission in this docket.

7. The proliferation of EVs will have an impact on certain infrastructure needs and expenses of Public Service Corporations. This information should be included in their Integrated Resource Plans in the future.

8. Public Service Corporations should work with non-regulated entities to determine the location of charging and DC fast charging infrastructure where joint investment and ownership may be appropriate.

9. The Commission will work with the Governor's Office, the legislature, and the Maricopa Association of Governments and other State agencies such as Arizona Department of Transportation, Arizona Department of Environmental Quality, and

Chambers of Commerce to promote Electric Vehicles, Electric Vehicle Infrastructure, and the Electrification of the Transportation Sector in Arizona.

10. Commission Staff will continue discussions with stakeholders on the issue of Electric Vehicles, Electric Vehicle Infrastructure, and the Electrification of the Transportation Sector through future stakeholder meetings and will report to the Commission on a quarterly basis with recommendations for the Commissions further consideration.

11. Commission Staff will work with stakeholders to develop details on implementation on a company by company basis to present for Commission consideration at future open meetings.

**ORDER**

To provide guidance for electric utilities regulated by the Commission, this Policy Statement addresses Electric Vehicles, Electric Vehicle Infrastructure, and the Electrification of the Transportation Sector in Arizona.

Tom Forese
Chairman

Bob Burns
Commissioner

Andy Tobin
Commissioner

Boyd Dunn
Commissioner

**DISSENT**

Justin Olson
Commissioner