BEFORE THE ARIZONA CORPORATION COMMISSION

GARY PIERCE
Chairman

BOB STUMP
Commissioner

SANDRA D. KENNEDY
Commissioner

PAUL NEWMAN
Commissioner

BRENDA BURNS
Commissioner

Arizona Corporation Commission

DOCKETED

SEP 15 2011

DOCKETED BY ne

IN THE MATTER OF ARIZONA PUBLIC SERVICE COMPANY'S APPLICATION FOR APPROVAL OF PROPOSED ELECTRIC VEHICLE READINESS DEMONSTRATION PROJECT

DOCKET NO. E-01345A-10-0123

DECISION NO. 72582

ORDER

BY THE COMMISSION:

FINDINGS OF FACT

Background

1. Arizona Public Service Company ("APS" or "Company") is certificated to provide electric service as a public service corporation in the State of Arizona.

2. Pursuant to Commission Decision No. 71104, dated June 5, 2009, APS was required to conduct a Vehicle to Grid ("V2G") feasibility and cost benefit study ("V2G Study"). Subsequent to completion of the V2G Study, APS was required to propose a V2G program for Commission consideration, no later than April 2, 2010. The V2G Study was docketed on April 1, 2010, along with an overview of the proposed Electric Vehicle ("EV") Readiness Demonstration Program. On October 1, 2010, APS filed its application for the proposed Electric Vehicle Readiness Demonstration Project.

3. Staff believes that APS is in compliance with Decision No. 71104 in regards to the V2G issue. However, the proposed Project is not a V2G program. According to the V2G Study,
none of the V2G concepts reviewed by the study are presently commercially viable. The results of
the V2G Study are discussed later in this document. Staff agrees that the EV battery and
infrastructure technologies are too immature for a meaningful V2G program to be designed and
implemented at this time. Therefore, Staff believes that APS has complied with Decision No.
71104.

4. On June 29, 2011, Staff filed a Staff Report and Proposed Order in response to the
Company’s proposal, and on July 7, 2011, Staff filed a revised Proposed Order in this matter. The
Residential Utility Consumer Office (“RUCO”) filed comments in response to Staff’s
recommendations on July 8, 2011. On July 19, 2011, the Company filed a Request for Extension
of Time because Staff, RUCO and the Company had differing views on the role the Company
should have regarding electric vehicle (“EV”) recharging, and monitoring the potential impact of
EVs on the utility distribution system. The Request for Extension of Time allowed the Company
time to develop an alternative proposal, entitled “Revised EV-Ready Study” (“Study”), which was
filed on August 8, 2011. This revised application is the subject of this Memorandum.

Revised EV-Ready Study

Program Overview

5. APS proposes the Study as a three-year study project. At the end of the three-year
period (i.e. December 31, 2014), APS would assess the effectiveness and success of the Study and
would recommend available options to the Commission, which may include continuation or
modification of the Study.

6. The Study would consist of two main components: (1) a residential time-of-use
(“TOU”) rate that incents customer charging of EVs during off-peak hours; and (2) a public TOU
electric vehicle charging offering where any EV owner may charge their EV on a point-of-sale
basis. APS has designed the Study so that customers who enjoy the benefits of the Study will
largely support its costs. Those electric vehicle drivers who choose to participate in the public
point-of-sale rate schedule would pay a substantial percentage of the costs associated with the
Study.

...
Residential TOU Rate

7. APS proposes that Experimental Rate Schedule ET-EV (Electric TOU – Electric Vehicles) ("Rate ET-EV") would be available to residential customers with a qualifying electric vehicle. These customers would be required to verify continuing ownership of an EV on an annual basis throughout the three-year Study period through an APS-managed certification process.

8. Rate ET-EV is a time-of-use rate schedule that provides residential customers with a "Super Off-Peak" time period designed to encourage off-peak EV charging. However, this rate schedule is a "whole house" rate schedule, meaning that all of the customer's electricity usage would be served under this rate schedule, not just the electricity used to charge the EV. The "Super Off-Peak" pricing period would be from 11 p.m. to 5 a.m., Monday through Friday (excluding qualifying holidays). The Off-Peak period would be from 5 a.m. to 12 noon and 7 p.m. to 11 p.m., Monday through Friday and all day weekends and holidays; and the On-Peak period would be from 12 noon to 7 p.m., Monday through Friday. These time periods would be the same year round. Separate summer and winter rates are included in the rate schedule. The charges on the rate schedule consist of a Basic Service Charge of $0.556 per day and energy charges as shown in Table 1.

9. The energy charges of the proposed Rate ET-EV are as follows:

<table>
<thead>
<tr>
<th>Table I</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experimental Rate Schedule ET-EV (Electric TOU - Electric Vehicle)</strong></td>
</tr>
<tr>
<td>May - October Billing Cycles</td>
</tr>
<tr>
<td>(Summer)</td>
</tr>
<tr>
<td>$0.24777 per kWh during On-Peak hours, plus</td>
</tr>
<tr>
<td>$0.06458 per kWh during Off-Peak hours, plus</td>
</tr>
<tr>
<td>$0.04194 per kWh during Super Off-Peak hours</td>
</tr>
</tbody>
</table>

1 Neighborhood Electric Vehicles as defined by A.R.S. §28-101(36) do not qualify for this rate schedule.

2 These rates would also be subject to all applicable Adjustment Schedules, taxes and service fees.
APS-Owned Public EV Charging Stations

10. APS proposes a public charging program that would provide EV drivers the ability to charge EVs in convenient and accessible locations outside the home, and to enable longer-distance travel throughout the state.

11. The APS public EV charging program would be available to all EV drivers (not just APS customers) on a point-of-sale basis under proposed Experimental Rate Schedule EV-PS (Electric Vehicle – Point of Sale) (“Rate EV-PS”). Under this rate schedule, the EV driver would render payment for the transaction amount at the point and time of purchase via a credit card, a pre-paid card, or other method acceptable to APS.

12. The proposed EV-PS rate schedule includes an “Infrastructure Charge” in addition to a time-of-use energy rate. The Infrastructure Charge has been designed to recover the fixed and variable costs associated with the purchase, installation, and on-going operations and maintenance of charging stations in a variable manner, based on a 10-year book life of the charging stations. The Infrastructure Charge is proposed at $0.18249 per kWh. This rate schedule is designed to be “self-funding”, meaning that the revenue generated from the Infrastructure Charge will be utilized to fund the installation of the public charging infrastructure. In the event the Study is not continued beyond the initial three years, the remaining cost of the charging stations would be recovered through the normal ratemaking process.

13. The energy charges on the proposed Rate EV-PS rate are as follows:

<table>
<thead>
<tr>
<th>Table II</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experimental Rate Schedule EV-PS (Electric Vehicle – Point of Sale)</strong></td>
</tr>
<tr>
<td><strong>May - October Billing Cycles (Summer)</strong></td>
</tr>
<tr>
<td>$0.14133 per kWh during On-Peak hours, plus $0.05413 per kWh during Off-Peak hours</td>
</tr>
</tbody>
</table>

14. The number and location of public charging stations to be deployed by APS is based on estimates of EV sales within APS’ service territory and would be adjusted based on

---

3 These rates will also be subject to all applicable Adjustment Schedules, taxes and service fees.
actual EV purchases during the Study period. APS’ proposed public EV charging program would complement the Department of Energy’s *EV Project*,\(^4\) which is focused solely on roll-out and testing of charging stations within the Phoenix and Tucson metropolitan areas and along the I-10 corridor between those cities, but not in the balance of APS’ service territory.

Public Education and Outreach

15. APS is in the process of developing several communication tools in order to reach and inform customers regarding the benefits of electric vehicles and the availability of Company programs to support the adoption of EVs. First, APS has launched a website (aps.com/cars) that is intended to be a “one-stop shop” for customers to learn the basics of EV ownership.

16. APS has also partnered with leading automobile manufacturers, other utilities, and battery and charging station manufacturers to establish a website to educate consumers, policymakers, and key industry sectors on the benefits of EVs. This collaborative site, GoElectricDrive.com, contains comprehensive information about owning and operating an EV, including available federal and state incentives and other EV benefits.

17. The Company is also investigating additional consumer outreach channels to broaden the awareness of the proposed Rate ET-EV and the availability of public charging stations within APS’ service territory. In addition, detailed information will be made available to EV dealerships to educate the sales force regarding the availability of the proposed EV rates.

Reporting

18. At the end of each Study year, APS proposes to provide a detailed report to Commission Staff which would include a Study status report, a current analysis of the EV market, an analysis of data gathered, and the Company’s recommendations for moving forward with the Study. Staff has recommended that these reports be filed with the Commission in this docket.

---

\(^4\) The DOE’s *EV Project* is a federal project to deploy EVs and EV charging infrastructure in 18 major cities and metropolitan areas across the United States. By 2012, the EV Project will deploy approximately 14,000 Level 2 charging stations and 300-400 Level 3, DC Fast Charging Stations. The ultimate goal of the EV Project is to take the lessons learned from the deployment of the first 8,300 EVs, and the charging infrastructure supporting them, to enable the streamlined deployment of the next 5,000,000 EVs.
Study Expenses

19. APS anticipates the cost of the three-year Study to be approximately $1.5 million. Of this amount, approximately $1 million is related to the capital expenditures for procuring and deploying vehicle chargers. These expenses would begin at the time the Commission approves the Study and would be staggered over the initial Study period based on the level of market activity.

| Table III | Estimated EV-Ready Study Expenses by Year
<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Administration</th>
<th>Public Education and Outreach</th>
<th>Total Forecast Annual Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>2013</td>
<td>2014</td>
<td></td>
</tr>
<tr>
<td>Infrastructure</td>
<td>$670,000</td>
<td>$120,000</td>
<td>$55,000</td>
</tr>
<tr>
<td>Administration</td>
<td>$30,000</td>
<td>$120,000</td>
<td>$55,000</td>
</tr>
<tr>
<td>Public Education and Outreach</td>
<td>$180,000</td>
<td>$120,000</td>
<td>$55,000</td>
</tr>
<tr>
<td>Estimated Cumulative EV Population in APS Territory</td>
<td>538</td>
<td>694</td>
<td>957</td>
</tr>
<tr>
<td>APS Level 2 Public Chargers</td>
<td>27</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>APS Level 3 Public DC Fast Chargers</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Annual Number of Public APS Chargers</td>
<td>30</td>
<td>9</td>
<td>14</td>
</tr>
</tbody>
</table>

Analysis

V2G Study Findings

20. Under terms of Decision No. 71104, APS was required to prepare a report on the feasibility and cost benefits of a V2G program. Accordingly, APS contracted with Navigant Consulting, Inc. ("Navigant") to prepare a study. APS asked Navigant to assess the potential for the emergence of a plug-in hybrid electric vehicle ("PHEV")/EV fleet and how it might affect utilities in general and APS in particular. Navigant also examined the potential for using PHEV/EV as energy storage devices to redeliver energy in V2G or Vehicle-to-Building ("V2B") applications. APS filed the "PHEV/EV and V2G Impacts and Valuation Study", dated March 10, 2010 ("V2G Study") in this docket on April 1, 2010.

APS may spend more or less than the forecasted $1.5 million based upon EV market indicators.

Infrastructure expense during the first year includes software and system upgrades for the remainder of the Study. Infrastructure equipment costs are preliminary and are subject to formal quotes from vendors.

"PHEV/EV" is an acronym that stands for Plug-in Hybrid Electric Vehicle / Electric Vehicle. The V2G Study makes a distinction between PHEVs that contain an internal combustion engine in addition to a battery driven electric motor, and EVs which contain only a battery and electric motor. Both PHEVs and EVs have the capability to recharge their...
21. The V2G Study concludes that the market penetration of PHEV/EVs is likely to be gradual, especially within the next 15 years. PHEV/EVs are likely to comprise about 2 percent of motor vehicle sales in the APS service territory by 2018. After 2025, however, sales are expected to increase substantially, and by 2035, PHEV/EV could account for about 17 percent of sales. This equates to sales of about 29,000 EVs and 12,000 PHEVs in 2035 for a total PHEV/EV population of about 174,000.

22. The V2G Study states that the case for V2G services, defined as utility customers selling energy stored in vehicle batteries back to the grid, is less optimistic than for PHEV/EV market penetration. V2G is currently at the research and pilot stage, and none of the V2G concepts reviewed by the study are presently commercially viable. V2G services are not forecast to be economic for the utility until vehicle batteries achieve a much higher level of battery cycle life and affordability.

23. The V2G Study concludes: “Overall, PHEV/EV will have relatively minor impacts on the APS system in the next 10 years with the exception of the local distribution system. Impacts in the next 20 to 30 years, although growing, will also be relatively minor. V2G/V2B services will play only a minor role within the next 20 to 30 years in providing energy services within the APS service territory.”

**EV Market Development**

24. Several programs at the national level are working in concert to stimulate the rapid adoption of EVs and their attendant infrastructure. The Department of Energy’s *EV Project*, in partnership with General Motors and Nissan, and through their implementation contractor, ECOtality, will deploy approximately 14,000 chargers in 18 major cities and metropolitan areas located in six states and the District of Columbia. Both Chevrolet Volt and Nissan LEAF drivers who qualify to participate in the *EV Project* will receive a residential charger at no cost. In addition, most, if not all, of the installation cost will be paid for by the *EV Project*. The Phoenix and Tucson metropolitan areas are designated deployment communities in the *EV Project*. The batteries from the grid. Unless otherwise noted, the term “EV” as used in this document refers collectively to both PHEVs and EVs.
ultimate goal of the *EV Project* is to take the lessons learned from the deployment of the first 8,300 EVs, and the charging infrastructure supporting them, to enable the streamlined deployment of the next 5,000,000 EVs.

25. *ChargePoint America* is another national program designed to quickly roll out EV charging infrastructure. The program is sponsored by Coulomb Technologies to provide electric vehicle charging infrastructure to nine selected regions in the United States. The program is made possible by the American Recovery and Reinvestment Act through the Transportation Electrification Initiative administered by the Department of Energy. The objective is to accelerate the development and production of electric vehicles to substantially reduce petroleum consumption, reduce greenhouse gas production, and create jobs. To build the electric vehicle-charging infrastructure, Coulomb Technologies will provide a total of nearly 5,000 fully networked Level II charging stations at no cost in the participating regions. There are two types of networked charging stations being offered through the program: home and public/commercial. Installation of these charging stations in most cases will be paid by the station owner (host) or the individual.

26. Also working at the national level, *The Electrification Coalition* is a nonpartisan, not-for-profit group of business leaders committed to promoting policies and actions that facilitate the deployment of electric vehicles on a mass scale. The Coalition seeks to achieve its goals through a combination of public policy research and the education of policymakers, opinion leaders, and the public. The Coalition has published several comprehensive “roadmap” guides to electrification of company fleets and private passenger fleets. The Coalition’s most recent publication is an analysis of the economic impact of implementing their “Electrification Roadmap”. The Coalition’s analysis predicts numerous societal benefits including job creation, increased federal revenues, increased household income, and decreased oil imports.

27. The primary driver of the expected near term adoption of EVs is federal tax credits and other tax credits and incentives that help offset the price differential between an EV and a comparable conventional vehicle. Presently, the minimum federal credit amount for typical passenger vehicles is $2,500, and the credit may be up to $7,500, based on each vehicle’s traction...
battery capacity and the gross vehicle weight rating. The credit will begin to be phased out for each manufacturer in the second quarter following the calendar quarter in which a minimum of 200,000 qualified plug-in electric drive vehicles have been sold by that manufacturer for use in the United States. The state of Arizona offers a tax credit of up to $75 for EV charging equipment and a reduced vehicle license tax for alternative fuel vehicles. As previously discussed, incentives are also available through the federal EV Project for EV charging equipment.

28. Since tax credits and incentives are the main driver of early EV adoption, and because the continuation of credits and incentives is political and uncertain, it is hard to forecast the specific number of electric vehicles that will exist within APS' service territory at any particular point in the future. APS has taken the approach of using multiple forecast scenarios to provide a range of EV adoption figures. These scenarios are labeled “Curve A”, “Curve B”, and “Curve C” on the following table. Curve A is based on the Navigant V2G Study filed in this docket. Curve B is based on a Credit Suisse report on EVs prepared in 2009, modified with Arizona vehicle sales percentages from the National Auto Dealers Association (“NADA”). Curve C is based on a Deloitte report on EVs prepared in 2010, again modified with the NADA sales percentages for Arizona.

Table IV
Cumulative PHEV/EV Population Within APS Service Territory

<table>
<thead>
<tr>
<th></th>
<th>Curve A</th>
<th>Curve B</th>
<th>Curve C</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>406</td>
<td>449</td>
<td>533</td>
</tr>
<tr>
<td>2012</td>
<td>560</td>
<td>538</td>
<td>629</td>
</tr>
<tr>
<td>2013</td>
<td>837</td>
<td>694</td>
<td>867</td>
</tr>
<tr>
<td>2014</td>
<td>1,262</td>
<td>957</td>
<td>1,344</td>
</tr>
<tr>
<td>2015</td>
<td>2,015</td>
<td>1,340</td>
<td>2,060</td>
</tr>
<tr>
<td>2016</td>
<td>3,051</td>
<td>2,106</td>
<td>3,253</td>
</tr>
<tr>
<td>2017</td>
<td>4,993</td>
<td>3,682</td>
<td>5,161</td>
</tr>
<tr>
<td>2018</td>
<td>8,048</td>
<td>6,093</td>
<td>8,263</td>
</tr>
<tr>
<td>2019</td>
<td>8,852</td>
<td>8,717</td>
<td>13,034</td>
</tr>
<tr>
<td>2020</td>
<td>9,329</td>
<td>12,037</td>
<td>21,049</td>
</tr>
<tr>
<td>2021</td>
<td>9,922</td>
<td>15,414</td>
<td>31,069</td>
</tr>
</tbody>
</table>

29. Based on this range of potential electric vehicles within its service territory, APS has calculated the potential additional energy and demand requirements resulting from the
adoption of EVs. The design standard for Level 2 charging stations is 6.6 kW. APS has assumed that PHEVs will typically require 12 kWh per day for battery charging, and EVs will require 18.9 kWh per day. To determine the peak load added by electric vehicles, APS has assumed that all charging can occur simultaneously. The calculated ranges of peak loads added by the adoption of electric vehicles within the APS service territory is presented in the following Table V. APS has not included any DC Fast Charging in these scenarios; however, these types of chargers draw between 40-60 kW with a design standard up to 200 kW.

### Table V

**Electric Vehicle Peak Load Forecast**

<table>
<thead>
<tr>
<th></th>
<th>Curve A</th>
<th></th>
<th>Curve B</th>
<th></th>
<th>Curve C</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MWh</td>
<td>MW</td>
<td>MWh</td>
<td>MW</td>
<td>MWh</td>
<td>MW</td>
</tr>
<tr>
<td>2011</td>
<td>1,895</td>
<td>3</td>
<td>2,164</td>
<td>3</td>
<td>2,561</td>
<td>4</td>
</tr>
<tr>
<td>2012</td>
<td>2,438</td>
<td>4</td>
<td>2,525</td>
<td>4</td>
<td>2,910</td>
<td>4</td>
</tr>
<tr>
<td>2013</td>
<td>3,395</td>
<td>6</td>
<td>3,173</td>
<td>5</td>
<td>3,783</td>
<td>6</td>
</tr>
<tr>
<td>2014</td>
<td>4,874</td>
<td>8</td>
<td>4,289</td>
<td>6</td>
<td>5,557</td>
<td>9</td>
</tr>
<tr>
<td>2015</td>
<td>7,453</td>
<td>13</td>
<td>5,934</td>
<td>9</td>
<td>8,219</td>
<td>14</td>
</tr>
<tr>
<td>2016</td>
<td>11,121</td>
<td>20</td>
<td>9,222</td>
<td>14</td>
<td>12,723</td>
<td>21</td>
</tr>
<tr>
<td>2017</td>
<td>18,140</td>
<td>33</td>
<td>16,104</td>
<td>24</td>
<td>20,080</td>
<td>34</td>
</tr>
<tr>
<td>2018</td>
<td>29,213</td>
<td>53</td>
<td>26,700</td>
<td>40</td>
<td>32,103</td>
<td>55</td>
</tr>
<tr>
<td>2019</td>
<td>32,218</td>
<td>58</td>
<td>38,335</td>
<td>58</td>
<td>50,984</td>
<td>86</td>
</tr>
<tr>
<td>2020</td>
<td>34,164</td>
<td>62</td>
<td>53,208</td>
<td>79</td>
<td>84,303</td>
<td>139</td>
</tr>
<tr>
<td>2021</td>
<td>36,541</td>
<td>65</td>
<td>68,353</td>
<td>102</td>
<td>125,631</td>
<td>205</td>
</tr>
</tbody>
</table>

30. APS has used Curve B as the basis for its public EV charging station infrastructure installation plan.

### Time-Of-Use Rates

31. Table V demonstrates that the projected adoption of electric vehicles within the APS service territory will lead to modest increases in energy and demand requirements. While this increase represents an opportunity for increased revenue, APS will be challenged to find ways to integrate the new demand into its existing distribution system while minimizing negative system impacts. APS is largely relying on its proposed time-of-use ("TOU") rate (i.e. ET-EV) to incent home vehicle charging during off-peak hours to minimize distribution system impacts.

32. Experimental Rate Schedule ET-EV is a "whole house" TOU rate that provides residential customers with a "Super Off-Peak" time period designed to encourage off-peak EV charging. The "Super Off-Peak" pricing period will be from 11 p.m. to 5 a.m. Monday through
Friday, a time period during which APS residential customers traditionally use the least amount of energy, and APS; marginal generation sources are least expensive.

33. The term “whole house” refers to the fact that electric energy consumption for the customer’s entire house is measured through a single meter. Therefore, all electric usage within the house is subject to the time/price signals contained in the TOU rate. This approach can be contrasted with a TOU rate established for a separately metered service that feeds only the in-home EV charging station.

34. Several utility companies across the country have instituted TOU rates for separately metered EV charging stations. For example, The Detroit Edison Company (“DEC”) has an Experimental Electric Vehicle Tariff that is available to the first 2,550 customers seeking a separately metered vehicle charging station. Under this tariff, DEC will provide and install the required separately metered circuit and the charging station up to a cost of $2,500. Customers are provided with two rate options: a TOU rate with off-peak hours between 11:00 p.m. and 9:00 a.m., or a monthly flat fee of $40 per vehicle.

35. Southern California Edison Company, Pacific Gas & Electric Company, and San Diego Gas & Electric Company all offer separately metered TOU rates for EV charging. These separately metered rates are offered in addition to “whole house” TOU rates for EV charging.

36. APS has accepted Staff’s recommendation to look into the feasibility of offering a separately metered, non-tiered, TOU rate for EV charging as an additional customer rate option to the “whole house” TOU rate proposed in this application. APS has committed to conducting this feasibility study and would report its findings in the Company’s first annual report of Study findings.

37. Staff believes that the proposed electric vehicle-only ET-EV time-of-use rate schedule could be an effective method of shifting electric consumption to non-peak periods through the use of time / pricing signals. APS would implement an EV certification process similar to low-income certification. Staff has recommended approval of proposed Experimental Rate Schedule ET-EV.
38. Staff has considered the proposed rate schedule in terms of fair value implications. In Decision No. 71448, APS' fair value rate base was determined by the Commission to be $7,665,727,000. Although Staff considered this information when evaluating APS' proposed Rate ET-EV. The proposed rate schedule would have no significant impact on the Company's revenue or rate of return. Staff has determined that the revenue generated by the proposed rate schedule would be de minimus when considered in the context of the Company's overall revenue requirement and rate of return.

39. Study Expenses and Funding

Staff believes that the role of EV market stimulation is being adequately addressed by federally funded incentive programs. Staff further believes that the introduction of EVs into APS' service territory represents a load and revenue growth opportunity for APS. Indeed, APS will sell electricity to all EV charging systems within its service territory, regardless of charger infrastructure ownership. However, APS' role in providing charging infrastructure is presently unclear, in light of the federally funded efforts.

40. Staff further believes that a three-year study with an estimated cost of $1.5 million is unnecessary at this early stage of EV market development. Therefore, Staff has recommended that APS be directed to monitor the adoption of electric vehicles within its service territory and provide annual reports to the Commission detailing the status of EV adoption, beginning with the first annual report due on May 1, 2012. Subsequent annual reports are to be filed until such time as the Commission orders otherwise.

41. Although the proposed public point-of-sale rate EV-PS has been designed to self-fund the installation and maintenance of public charging infrastructure, the "Administration" and "Public Education and Outreach" line items of the Study's estimated costs would be paid through APS' general Operations & Maintenance budget, meaning these costs will ultimately be born by all ratepayers. Rather than spending relatively large sums of money in an effort to provide charging services to the relatively small number of EVs anticipated in the foreseeable future, Staff believes that it may be more prudent to direct APS to work cooperatively with the federally-funded EV infrastructure contractors for the first year of the proposed Study. Should APS identify a
specific gap in charging infrastructure deployment, or other deficiency in the federally-funded EV infrastructure efforts, APS could request approval of a public point-of-sale rate in APS; first annual report of Study findings to the Commission.

Waiver of Rules

42. APS has requested a waiver of the billing requirements contained in A.A.C. R14-2-210 to accommodate point-of-sale EV charging transactions as contemplated in Experimental Rate Schedule EV-PS. Under the Company's proposed Experimental Rate Schedule EV-PS, Electric Vehicle Point-of-Sale customers would render instantaneous payment for energy utilized to charge an EV at a public charging station owned by APS. Payment for point-of-sale service would generally be accomplished through the use of either a personal credit card or a specifically targeted pre-paid card. No bills would be rendered to customers for this service, as the customer would be paying for electricity at the time service is rendered.

43. A.A.C. R14-2-210 sets forth billing transaction requirements for electric utilities and their customers. As no bills would be rendered under point-of-sale service, APS believes this entire section would not be applicable to service provided under Schedule EV-PS.

44. Staff believes that point-of-sale recharging of EV batteries via APS-owned charging stations may not be necessary for the wide-spread adoption of EVs. Therefore, Staff has recommended that the Commission not approve Experimental Rate Schedule EV-PS and not grant a waiver of the billing requirements contained in A.A.C. R14-2-210 for this specific tariff, until such time as APS can demonstrate a need for company-owned charging stations.

Summary of Recommendations

45. Staff has recommended that APS be directed to file annual reports, beginning in May 2012, detailing the development of the EV market within APS' service territory.

46. Staff has further recommended approval of Experimental Rate Schedule ET-EV.

47. Staff has further recommended that APS be directed to conduct a feasibility study of offering a separately metered, non-tiered, TOU rate for EV charging with a report of the findings of this study to be included in APS' first annual report to the Commission.
48. Staff has further recommended that APS be directed to work cooperatively with the federally-funded EV infrastructure contractors for the first year of the proposed Study. Should APS identify a specific gap in charging infrastructure deployment, or other deficiency in the federally-funded EV infrastructure efforts, APS could request approval of a public point-of-sale rate in APS; first annual report of Study findings to the Commission.

49. Staff has further recommended that Experimental Rate Schedule EV-PS not be approved.

50. Staff has further recommended that APS file its annual status reports with the Commission in this docket.

51. In addition, Staff has recommended that APS file Experimental Rate Schedule ET-EV in compliance with the Decision in this case within 15 days of the effective date of the Decision.

CONCLUSIONS OF LAW

1. Arizona Public Service Company is an Arizona public service corporation within the meaning of Article XV, Section 2, of the Arizona Constitution.

2. The Commission has jurisdiction over Arizona Public Service Company and over the subject matter of the application.

3. The Commission, having reviewed the application and Staff’s Memorandum dated August 23, 2011, concludes that it is in the public interest to approve the EV-Ready Study as discussed herein.

ORDER

IT IS THEREFORE ORDERED that Arizona Public Service Company shall file annual reports, beginning in May 2012, detailing the development of the EV market within Arizona Public Service Company’s service territory.

IT IS FURTHER ORDERED that Arizona Public Service Company file its annual status reports with the Commission in this docket, each May, until further order of the Commission.

IT IS FURTHER ORDERED that Experimental Rate Schedule ET-EV is hereby approved.
IT IS FURTHER ORDERED that Arizona Public Service Company shall conduct a feasibility study of offering a separately metered, non-tiered, TOU rate for EV charging with a report of the findings of this study to be included in the Company’s first annual report to the Commission.

IT IS FURTHER ORDERED that Arizona Public Service Company shall work cooperatively with the federally-funded EV infrastructure contractors for the first year of the proposed Study. Should APS identify a specific gap in charging infrastructure deployment, or other deficiency in the federally-funded EV infrastructure efforts, APS may request approval of a public point-of-sale rate in APS’ first annual report of Study findings to the Commission.

IT IS FURTHER ORDERED that Experimental Rate Schedule EV-PS is not approved.
IT IS FURTHER ORDERED that Arizona Public Service Company file Experimental Rate Schedule ET-EV in compliance with the Decision in this case within 15 days of the effective date of the Decision.

IT IS FURTHER ORDERED that this Decision become effective immediately.

BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION

CHAIRMAN

EXCUSED
COMMISSIONER

COMMISSIONER

COMMISSIONER

IN WITNESS WHEREOF, I, ERNEST G. JOHNSON, Executive Director of the Arizona Corporation Commission, have hereunto, set my hand and caused the official seal of this Commission to be affixed at the Capitol, in the City of Phoenix, this 15th day of September, 2011.

ERNEST G. JOHNSON
EXECUTIVE DIRECTOR

DISSENT:

DISSENT:

SMO:RBL:lhmm\CH
SERVICE LIST FOR: Arizona Public Service Company
DOCKET NO. E-01345A-10-0123

Ms. Alana Chavez-Langdon
ECOthality
80 East Rio Salado Parkway, Suite 710
Tempe, Arizona 85281

Ms. Linda J. Arnold
Ms. Deborah R. Scott
Pinnacle West Capital Corporation
400 North Fifth Street
Post Office Box 53999, MS 8695
Phoenix, Arizona 85072

Mr. Daniel Pozefsky
RUCO
1110 West Washington Street, Suite 220
Phoenix, Arizona 85007

Mr. Steven M. Olea
Director, Utilities Division
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

Ms. Janice M. Alward
Chief Counsel, Legal Division
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

Decision No. 72582