



0000162355

RECEIVED

BEFORE THE ARIZONA CORPORATION COMMISSION JUN 16 12:43

COMMISSIONERS

AZ CORP COMMISSION  
DOCKET CONTROL

- 3 SUSAN BITTER SMITH, Chairman
- 4 BOB STUMP
- 4 BOB BURNS
- 4 DOUG LITTLE
- 5 TOM FORESE

ORIGINAL

6 IN THE MATTER OF THE APPLICATION OF THE  
 7 ARIZONA ELECTRIC POWER COOPERATIVE,  
 7 INC. FOR A HEARING TO DETERMINE THE  
 8 FAIR VALUE OF ITS PROPERTY FOR  
 8 RATEMAKING PURPOSES, TO FIX A JUST AND  
 9 REASONABLE RETURN THEREON AND TO  
 9 APPROVE RATES DESIGNED TO DEVELOP  
 10 SUCH RETURN

Docket No. E-01773A-12-0305

**AEPCO'S NOTICE OF FILING  
DIRECT TESTIMONY RE ECAR**

GALLAGHER & KENNEDY, P.A.  
2575 E. CAMELBACK ROAD  
PHOENIX, ARIZONA 85016-9225  
(602) 530-8000

11 Pursuant to the Procedural Order dated May 7, 2015 in this docket, attached are the direct  
12 testimonies of Peter Scott and Joe King on behalf of Arizona Electric Power Cooperative, Inc.

14 RESPECTFULLY SUBMITTED this 19th day of June, 2015.

GALLAGHER & KENNEDY, P.A.

By

  
 \_\_\_\_\_  
 Jennifer A. Cranston  
 2575 East Camelback Road  
 Phoenix, Arizona 85016-9225  
 Attorneys for Arizona Electric Cooperative, Inc.

20 **Original and 13 copies** filed this  
21 19th day of June, 2015, with:

22 Docket Control  
 22 Arizona Corporation Commission  
 23 1200 West Washington Street  
 23 Phoenix, Arizona 85007

Arizona Corporation Commission  
DOCKETED

JUN 19 2015

DOCKETED BY 

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

1 **Copies** of the foregoing delivered  
this 19th day of June, 2015, to:

2 Teena Jibilian  
3 Administrative Law Judge  
Arizona Corporation Commission  
4 Hearing Division  
1200 West Washington Street  
5 Phoenix, Arizona 85007

6 Bridget Humphrey  
Legal Division  
7 Arizona Corporation Commission  
1200 West Washington Street  
8 Phoenix, Arizona 85007

9 Terri Ford  
Utilities Division  
10 Arizona Corporation Commission  
1200 West Washington Street  
11 Phoenix, Arizona 85007

12 Barbara Keene  
Utilities Division  
13 Arizona Corporation Commission  
1200 West Washington Street  
14 Phoenix, Arizona 85007

15 Candrea Allen  
Utilities Division  
16 Arizona Corporation Commission  
1200 West Washington Street  
17 Phoenix, Arizona 85007

18 **Copies** of the foregoing mailed and/or e-mailed  
this 19th day of June, 2015, to:

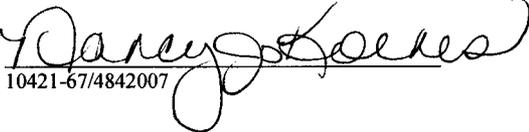
19 Michael W. Patten  
20 Snell & Wilmer  
One Arizona Center  
21 400 East Van Buren, Suite 1900  
Phoenix, Arizona 85004-2202  
22 Attorneys for Trico Electric Cooperative, Inc.

23

24

1 Russell E. Jones  
Waterfall, Economidis, Caldwell,  
2 Hanshaw & Villamana P.C.  
5210 East Williams Circle, Suite 800  
3 Tucson, Arizona 85711  
Attorneys for Trico Electric Cooperative, Inc.  
4  
Vincent Nitido  
5 Karen Cathers  
Trico Electric Cooperative, Inc.  
6 8600 West Tangerine Road  
P.O. Box 930  
7 Marana, Arizona 85653  
8 Jeffrey W. Crockett  
Crockett Law Group PLLC  
9 1702 East Highland Avenue, Suite 204  
Phoenix, Arizona 85016  
10 Attorneys for Sulphur Springs Valley  
Electric Cooperative, Inc.  
11  
Kirby Chapman  
12 Surphur Springs Valley Electric  
Cooperative, Inc.  
13 311 East Wilcox Drive  
Sierra Vista, Arizona 85635  
14  
Michael A. Curtis  
15 William P. Sullivan  
Curtis, Goodwin, Sullivan,  
16 Udall & Schwab, P.L.C.  
501 East Thomas Road  
17 Phoenix, Arizona 85012-3205  
Attorneys for Mohave Electric Cooperative, Inc.  
18  
Tyler Carlson  
19 Mohave Electric Cooperative, Inc.  
P.O. Box 1045  
20 Bullhead City, Arizona 86430  
21  
22  
23  
24

1 Peggy Gillman  
Mohave Electric Cooperative, Inc.  
2 P.O. Box 1045  
Bullhead City, Arizona 86430  
3

4   
10421-67/4842007  
5

6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

GALLAGHER & KENNEDY, P.A.  
2575 E. CAMELBACK ROAD  
PHOENIX, ARIZONA 85016-9225  
(602) 530-8000

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

**BEFORE THE ARIZONA CORPORATION COMMISSION**

COMMISSIONERS

- SUSAN BITTER SMITH, Chairman
- BOB STUMP
- BOB BURNS
- DOUG LITTLE
- TOM FORESE

IN THE MATTER OF THE APPLICATION OF THE  
ARIZONA ELECTRIC POWER COOPERATIVE,  
INC. FOR A HEARING TO DETERMINE THE  
FAIR VALUE OF ITS PROPERTY FOR  
RATEMAKING PURPOSES, TO FIX A JUST AND  
REASONABLE RETURN THEREON AND TO  
APPROVE RATES DESIGNED TO DEVELOP  
SUCH RETURN

Docket No. E-01773A-12-0305

**Direct Testimony of Peter Scott**  
  
**on Behalf of**  
  
**Arizona Electric Power Cooperative, Inc.**  
  
**ECAR Application**

**June 19, 2015**

TABLE OF CONTENTS

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

Page

INTRODUCTION .....1  
EVENTS LEADING TO AEPSCO'S ECAR APPLICATION .....2  
DISPUTED AND UNDISPUTED ISSUES .....5  
CHEMICAL COST ELIGIBILITY .....6  
CONCLUSION .....9

1 INTRODUCTION

2 **Q. Mr. Scott, are you the same Peter Scott who sponsored direct testimony for Arizona**  
3 **Electric Power Cooperative, Inc. (“AEPCO” or the “Cooperative” ) in the general**  
4 **rate case portion of this matter in July 2012?**

5 A. Yes, I am.

6  
7 **Q. What is your present employment and connection to AEPCO?**

8 A. I am the Chief Financial Officer for Sierra Southwest Cooperative Services, Inc. (“Sierra  
9 Southwest”) and, as such, I supervise that cooperative’s financial activities. In addition,  
10 pursuant to their contractual agreements with Sierra Southwest, I am responsible for the  
11 financial activities of AEPCO and Southwest Transmission Cooperative, Inc. As Chief  
12 Financial Officer, I serve in the Division Managers Group and report directly to the Chief  
13 Executive Officer. My specific responsibilities for AEPCO include establishing fiscal  
14 policy, developing procedures and implementing appropriate financial controls. I am  
15 also responsible for financial planning, rate design development and implementation,  
16 corporate treasury functions, cash and working capital management and inventory  
17 control.

18  
19 **Q. What is the purpose of your present testimony?**

20 A. I will provide the Commission with background information concerning AEPCO’s  
21 request for an Environmental Compliance Adjustment Rider (“ECAR”) as well as explain  
22 some of the unique characteristics of the Cooperative supporting our request that  
23 chemical costs be eligible for potential recovery through the ECAR. The testimony of

1 Joe King, Senior Financial Analyst, provides more specific details regarding the ECAR  
2 and the chemical costs at issue.  
3

4 **EVENTS LEADING TO AEPCO'S ECAR APPLICATION**

5 **Q. Please provide an overview of AEPCO's initial rate case filing.**

6 A. On July 5, 2012, we initiated this rate case seeking an overall 2.92% decrease in AEPCO's  
7 revenue requirements, based on a debt service coverage ratio ("DSC") of 1.32 (the same  
8 DSC that was approved by the Commission in the Cooperative's last rate case). Our request  
9 for a rate decrease was based on a number of factors, but the primary driver was that we had  
10 successfully implemented a number of cost-cutting and efficiency measures and wanted to  
11 pass along those savings to our members. We analyzed the Cooperative's financial status,  
12 including its working capital needs to support future operations, and determined that a rate  
13 decrease based on the 1.32 DSC was appropriate. We reviewed this information with our  
14 members and filed the rate application after receiving unanimous approval from the AEPCO  
15 Board of Directors.  
16

17 **Q. Did any complications arise during the rate case that impacted AEPCO's request for a  
18 decrease?**

19 A. Yes, the Environmental Protection Agency ("EPA") issued a ruling requiring the use of  
20 Best Available Retrofit Technology ("BART") at AEPCO's Apache Station in order to  
21 control emissions that cause or contribute to regional haze. In November 2012, the EPA's  
22 federal implementation plan was finalized and required AEPCO to install expensive  
23 Selective Catalytic Reduction ("SCR") technology on both Apache Station coal units. We  
24

1 initially estimated that the capital requirement for compliance with this requirement would  
2 be in the range of \$200 million. In response to this development, the Commission's  
3 Utilities Division Staff ("Staff") questioned whether the rate decrease should be  
4 approved.

5  
6 **Q. How did AEPCO respond to the EPA's rule?**

7 A. In February 2013, AEPCO submitted an alternative – "Better than BART" – plan that  
8 would achieve the goal of reducing regional haze through a less dramatic and costly  
9 process. Rather than install SCR on both coal units, AEPCO proposed to convert Steam  
10 Turbine Unit 2 to natural gas-fired operation and install Selective Non-Catalytic Reduction  
11 technology on Steam Turbine Unit 3. The estimated capital cost associated with  
12 AEPCO's alternative proposal was approximately \$30 million. I am happy to report that  
13 AEPCO's plan received final EPA approval in February 2015.

14  
15 **Q. What about Staff's concerns?**

16 A. In our Rebuttal Testimony, we proposed the ECAR as a means of addressing Staff's  
17 concerns about costs associated with future environmental compliance while achieving our  
18 initial goal of providing rate relief to our members. At the rate case hearing, several  
19 witnesses from AEPCO's distribution cooperative members testified that the combination of  
20 the proposed rate decrease and ECAR was in the best interest of their members – the retail  
21 ratepayers. These witnesses acknowledged that, due to pending and future environmental  
22 requirements imposed on AEPCO, the rate relief would likely be temporary. However, they  
23

1 explained that the temporary relief would come at a time when any decrease in rates would  
2 make a substantial difference to individuals and businesses still struggling to recover from  
3 the Great Recession. Another factor discussed by witnesses in support of the ECAR was the  
4 then-current uncertainty regarding the financial impact that the environmental compliance  
5 requirements would have on the Cooperative. They concluded that the ECAR was a better  
6 mechanism for recovering compliance costs because any adjustment to the rates would be  
7 based on more detailed cost information as it became available in the future.

8  
9 **Q. Did the Commission agree with the position of AEPCO and its distribution**  
10 **cooperative members?**

11 A. Yes. In October 2013, the Commission issued Decision No. 74173 in which it approved  
12 revised rates for AEPCO based on a 1.32 DSC, resulting in an approximate \$4.3 million  
13 decrease to the Cooperative's annual revenue requirement. AEPCO's revised rates have  
14 been in effect since November 2013, providing the much-needed rate relief to its members  
15 and their retail customers. In its Decision, the Commission also agreed with the ECAR in  
16 concept and, therefore, left the record open so that AEPCO and Staff could collaborate over  
17 the details of the mechanism. The Decision authorized AEPCO to file an application for  
18 approval of the ECAR by April 30, 2014.

1 **DISPUTED AND UNDISPUTED ISSUES**

2 **Q. After the Commission's October 2013 Decision, did AEPCO collaborate with Staff**  
3 **regarding the ECAR?**

4 A. Yes. Over the next six months, AEPCO and Staff discussed the ECAR and reached  
5 agreement on almost all of the terms of the Tariff and Plan of Administration. The  
6 parties agreed on several procedural aspects of the mechanism. Specifically, in response  
7 to Staff's comments, we included a provision requiring affirmative Commission approval  
8 of the Cooperative's initial Environmental Compliance Strategy ("ECS"), which is the  
9 document that will identify the specific costs to be recovered through the ECAR in  
10 connection with a particular environmental requirement. The parties also agreed on a  
11 number of specific categories of costs, identified by Rural Utilities Service ("RUS")  
12 account number, which would be eligible for inclusion in the ECS.

13  
14 **Q. You said "almost" all terms. Was there an issue upon which AEPCO and Staff did**  
15 **not agree?**

16 A. There was. In addition to capital expenses, AEPCO's ECAR proposal identifies a limited  
17 category of chemical expenses (RUS Account 502-Steam Expenses incurred solely due to  
18 environmental regulations, but excluding any indirect expenses such as overhead) as  
19 eligible for inclusion in the ECS and potential recovery through the ECAR. Staff agrees  
20 that capital expenses should be included, but opposes the eligibility of chemical expenses.  
21 Accordingly, when we filed our application for approval of the ECAR in April 2014, we  
22 brought this disagreement to the Commission's attention and requested that the limited  
23 category of chemical costs be included as eligible expenses despite Staff's opposition.

1 **Q. Do you know why Staff opposes the inclusion of chemical costs?**

2 A. It is my understanding, based on the report that Staff filed in October 2014, that Staff's  
3 position is policy-based. I believe that Staff is concerned about maintaining consistency  
4 with the categories of costs included in other utilities' environmental surcharge  
5 mechanisms, which apparently do not include RUS Account 502-Steam Expenses.  
6

7 **Q. Are there any other disputed issues regarding the ECAR between AEPCO and**  
8 **Staff?**

9 A. Not to my knowledge. In fact, earlier this year, the Administrative Law Judge questioned  
10 whether the chemical costs at issue are truly necessary for compliance with certain  
11 environmental regulations currently faced by AEPCO and whether the prices of those  
12 chemicals are variable and potentially volatile. In response to her questions, we worked  
13 with Staff to prepare a Stipulated Statement of Facts, which confirms that there are no  
14 factual disputes regarding either of these issues. A copy of the Stipulated Statement of  
15 Facts is attached as Exhibit PS-3.  
16

17 **CHEMICAL COST ELIGIBILITY**

18 **Q. Mr. Scott, please explain why AEPCO believes chemical costs should be eligible for**  
19 **inclusion in an ECS and ultimately recoverable through the ECAR.**

20 A. There are several reasons, some of which are also addressed in Mr. King's testimony. First,  
21 there's no question that AEPCO will need to purchase certain chemicals in order to comply  
22 with the environmental regulations we currently face. However, the costs of these  
23 chemicals may change over time, such that, if we are limited to recovering them through

1 future base rates without any adjustor, then AEPCO will either over- or under-recover from  
2 its members. Another reason to include chemical costs in the ECAR is transparency to  
3 our members. Specifically, using the ECAR to track compliance costs provides greater  
4 transparency by isolating expenses (including chemical costs) that AEPCO incurs solely  
5 as a result of environmental regulation. With this information, our members are better  
6 equipped to explain any compliance-related rate changes to their members (the retail  
7 ratepayers).

8  
9 **Q. Are there any other reasons why you disagree with Staff's policy position on this**  
10 **issue?**

11 A. Yes, two actually. First, it is my understanding that the other environmental surcharge  
12 mechanisms that Staff is relying upon differ from the ECAR in at least one significant  
13 respect. If a cost listed in one of those mechanisms is incurred by the utility, it is  
14 automatically recovered from the ratepayer without any further Commission review. By  
15 contrast, ECAR eligibility does not mean that the cost will automatically be recovered  
16 through the ECAR. Instead, any particular chemical cost must first receive approval  
17 from a majority of AEPCO's Board and unanimous approval from our members before it  
18 can be included in the ECS. If included in the ECS, any cost must then receive  
19 affirmative approval from the Commission before it can actually be recovered through  
20 the ECAR.

1 **Q. And the second reason?**

2 A. The second reason is that I think excluding these costs from the ECAR overlooks the fact  
3 that AEPCO is a not-for-profit cooperative.  
4

5 **Q. Please explain why AEPCO's status as a cooperative is relevant to the issue of**  
6 **chemical cost eligibility.**

7 A. It's my understanding that the other utilities with environmental surcharge mechanisms  
8 are investor-owned utilities ("IOU"). Under the IOU model, conflicts of interest  
9 sometimes arise between the utility owners (shareholders) and ratepayers because the  
10 shareholders are interested in the company's profits while the ratepayers want to keep  
11 rates as low as possible. In balancing these competing interests, the Commission  
12 sometimes adopts policies that encourage utilities to seek operational efficiencies in order  
13 to keep rates low but still produce a profit for the shareholders. Other times, the  
14 Commission determines that certain costs should be taken out of the shareholders' profits  
15 rather than borne by the ratepayers.  
16

17 This conflict of interest does not exist between a cooperative and its members because,  
18 under the cooperative model, the ratepayers and the utility owners are the same. That  
19 means that any "profit" made by the utility benefits the members by virtue of the  
20 patronage capital system. Patronage capital is the company's revenues in excess of its  
21 expenses. Similar to shareholder distributions under the IOU model, patronage capital is  
22 returned to the cooperative members periodically. However, unlike IOUs, any expenses  
23

1 incurred by a cooperative that are not included in rates (base or as adjusted) are still  
2 passed on to the member/ratepayers through the reduction of patronage capital.  
3 Therefore, excluding costs in the cooperative context does not have the same effect as it  
4 does in IOU cases.

5  
6 Finally, because cooperatives – including AEPCO – are governed by member-elected  
7 boards, the member/ratepayers are in a unique position to ensure that the company  
8 operates efficiently and incurs only those costs that benefit the company and its members.  
9 We believe this extra layer of ratepayer protection is another important distinction  
10 between AEPCO and IOUs and supports AEPCO's ECAR as proposed.

11  
12 **CONCLUSION**

13 **Q. Do you have any concluding remarks?**

14 A. I do. First, we appreciate both Staff's support of the ECAR as a mechanism to recover  
15 capital costs and Staff's willingness to work with us on narrowing the disputed issues.  
16 For the reasons addressed herein and as described by Mr. King, AEPCO maintains that  
17 the narrow category of chemical costs identified in its Plan of Administration should be  
18 deemed eligible for potential recovery through the ECAR. Accordingly, we ask that the  
19 Commission enter its Order approving the ECAR Tariff and Plan of Administration,  
20 which are attached as Exhibits JK-1 and JK-2 to Mr. King's testimony.

21  
22 **Q. Does this conclude your direct testimony concerning the ECAR?**

23 A. Yes, it does.

**EXHIBIT PS-3**

Docket No. E-01773A-12-0305  
Arizona Electric Power Cooperative, Inc.  
Environmental Compliance Adjustment Rider  
Stipulated Statement of Facts

1. On April 30, 2014, Arizona Electric Power Cooperative, Inc. ("AEPCO" or the "Cooperative") filed its application for approval of an Environmental Compliance Adjustment Rider ("ECAR").
2. The purpose of the ECAR is to establish a monthly surcharge to provide AEPCO with a revenue mechanism to meet future environmental compliance obligations mandated by federal, state and/or local laws or regulations. Examples of such obligations currently faced by AEPCO include:
  - a. modifications to AEPCO's generating facilities at its Apache Station and the need to use urea in the Selective Non-Catalytic Reduction ("SNCR") process, which have been approved by the Environmental Protection Agency ("EPA") as a means for AEPCO to meet the EPA's regional haze requirements as of December 2017; and
  - b. the Cooperative's need to purchase and use activated carbon in order to comply with the EPA's Mercury and Air Toxics Standards ("MATS") as of April 2016.
3. As proposed, the ECAR rate will initially be set at zero. Thereafter, in response to a particular environmental regulation, AEPCO will analyze its financial status, including its current rate levels and any expenses that qualify for recovery/refund through its Purchased Power and Fuel Adjustment Clause ("PPFAC"), to determine whether the Cooperative requires additional revenue to comply with the given regulation or whether its margins are sufficient. If AEPCO determines that its margins are sufficient, the ECAR rate would remain at zero.
4. If the results of AEPCO's financial analysis indicate that additional revenues are needed for environmental compliance, the Cooperative will prepare and file with Docket Control its initial Environmental Compliance Strategy ("ECS"), which, at a minimum, will include a scope of work, anticipated timelines and cost estimates. Prior to filing an initial ECS, AEPCO must obtain authorization from its Board of Directors as well as unanimous consent from its Class A Distribution Cooperative Members ("AEPCO's Members"). The compliance costs identified for recovery in the initial ECS cannot be recovered through the ECAR without affirmative approval by the Arizona Corporation Commission. If approved, the ECAR rate will be charged to AEPCO's Members, who, in turn, may pass those charges through to their retail members via their respective purchased power clauses.
5. AEPCO's ECAR Plan of Administration ("POA") identifies (by RUS account number) the categories of costs that would be eligible for recovery through the ECAR. AEPCO's proposal includes capital costs necessary to achieve compliance with environmental regulation. AEPCO is also requesting inclusion of certain chemical costs as eligible for recovery through the ECAR. Specifically, the POA identifies as eligible for recovery

- RUS Account 502 Steam Expenses “limited to chemical expenses incurred solely due to Environmental Regulation(s) but not including any indirect expenses such as overhead.”
6. The Commission’s Utilities Division Staff (“Staff”) supports approval of the ECAR and use of the mechanism for recovery of necessary capital expenses, as specified by the RUS accounts included in the proposed POA. However, Staff opposes AEPCO’s proposal to the extent that it includes chemical costs as eligible for recovery through the ECAR (RUS Account 502-Steam Expenses).
  7. The RUS Account 502 chemical costs identified in AEPCO’s POA will be necessary for compliance with both the EPA’s regional haze and MATS regulations. Specifically, AEPCO’s compliance plan for the EPA’s regional haze regulation requires the use of urea. Likewise, AEPCO will need to purchase and utilize activated carbon in order to comply with MATS.
  8. The price of both urea and activated carbon are subject to market forces, making them variable and potentially volatile. Historically, the price of urea has been highly volatile, as shown on Exhibit 1 to AEPCO’s Response to Staff Report re ECAR Plan of Administration and Tariff, dated November 13, 2014 (“AEPCO’s Response”). Also, Exhibit 2 to AEPCO’s Response indicates that the demand for activated carbon is anticipated to increase significantly in the future, which will result in upward pressure on prices.
  9. Another chemical that AEPCO has and will continue to purchase and use in connection with its mercury-related environmental compliance obligations (imposed by the State of Arizona) is calcium bromide. The cost of calcium bromide is included in RUS Account 501 because the chemical is applied before the fuel enters the hopper. Because this chemical is recorded as an RUS Account 501 expense (as opposed to a 502 expense), it qualifies for inclusion in AEPCO’s PPFAC.
  10. AEPCO’s current estimates for the combined RUS Account 502 chemical costs required to comply with the EPA’s regional haze and MATS regulations over the next three years range from a low of \$2.2 million to a high of \$6.2 million annually: \$2.2 million to \$4.5 million in 2016; \$3.1 million to \$6.2 million in 2017; and \$2.2 million to \$5 million in 2018. AEPCO’s current estimated revenue requirements associated with the Cooperative’s capital investment for compliance with the EPA’s regional haze and MATS regulations over the next three years are as follows: \$0.41 million in 2016; \$1.90 million in 2017; and \$3.40 million in 2018.
  11. AEPCO asserts that the impact of these costs on the retail customer is difficult to determine because AEPCO’s Members have different retail rate levels and structures. Based on its preliminary analysis and communications with and input from the Members, AEPCO estimates the average monthly residential bill impact (based on Member 2013 Form 7 data) related to the chemical compliance costs could range as follows: \$0.61 to \$2.10 in 2016; \$0.84 to \$2.91 in 2017; and \$0.59 to \$2.34 in 2018. Using the same methodology, AEPCO estimates the average monthly residential bill impact related to capital costs could range as follows: \$0.11 to \$0.19 in 2016; \$0.53 to \$0.90 in 2017; and \$0.94 to \$1.61 in 2018. According to AEPCO, these increases are not cumulative and would only be implemented through the ECAR if AEPCO includes the chemical and

## Exhibit PS-3

capital cost components in its ECS and if that ECS receives approval from AEPCO's Board, its Members and the Commission. AEPCO further asserts that, otherwise, the ECAR associated with any particular ECS may continue at the initially set level of zero. Staff neither agrees nor disagrees with the foregoing assertions or bill impact estimates provided by AEPCO; Staff has no evidence to the contrary and, therefore, is not disputing the Cooperative's assertions or estimates.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

**BEFORE THE ARIZONA CORPORATION COMMISSION**

COMMISSIONERS

SUSAN BITTER SMITH, Chairman  
BOB STUMP  
BOB BURNS  
DOUG LITTLE  
TOM FORESE

IN THE MATTER OF THE APPLICATION OF THE  
ARIZONA ELECTRIC POWER COOPERATIVE,  
INC. FOR A HEARING TO DETERMINE THE  
FAIR VALUE OF ITS PROPERTY FOR  
RATEMAKING PURPOSES, TO FIX A JUST AND  
REASONABLE RETURN THEREON AND TO  
APPROVE RATES DESIGNED TO DEVELOP  
SUCH RETURN

Docket No. E-01773A-12-0305

GALLAGHER & KENNEDY, P.A.  
2575 E. CAMELBACK ROAD  
PHOENIX, ARIZONA 85016-9225  
(602) 530-8000

**Direct Testimony of Joe King**  
  
**on Behalf of**  
  
**Arizona Electric Power Cooperative, Inc.**  
  
**ECAR Application**

**June 19, 2015**

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

## TABLE OF CONTENTS

**Page**

INTRODUCTION .....1  
ECAR OVERVIEW .....2  
AEP CO'S UPCOMING COMPLIANCE OBLIGATIONS & STRATEGY .....7  
CHEMICAL COST ELIGIBILITY .....9

1 **INTRODUCTION**

2 **Q. Please state your name and business address?**

3 A. My name is Joe King. My business address is 1000 South Highway 80, Benson, Arizona,  
4 85602.

5  
6 **Q. By whom are you employed and in what capacity?**

7 A. I am employed by Sierra Southwest Cooperative Services, Inc. ("Sierra Southwest") as a  
8 Senior Financial Analyst. As such, I am responsible for a number of internal and external  
9 rate-related matters for Arizona Electric Power Cooperative, Inc. ("AEPCO" or the  
10 "Cooperative") and Southwest Transmission Cooperative, Inc. ("SWTC"). Among other  
11 tasks, I oversee AEPCO's Purchased Power and Fuel Adjustment Clause ("PPFAC") as  
12 we well as the preparation of rate cases for both AEPCO and SWTC.

13  
14 **Q. Please briefly describe your educational background and work-related experience.**

15 A. I hold an Associate of Arts Degree from Arizona Western College with emphasis in  
16 General Studies/Science, a BSBA degree from the University of Arizona with emphasis  
17 in Accounting, and a MA degree from the University of Arizona with emphasis in  
18 Economics. I have been employed by Sierra Southwest for approximately seven years.  
19 Before that, I held positions with the University of Arizona Division of Economic  
20 Business Research, the Public Utility Commission of Texas and Tucson Electric Power  
21 Company ("TEP"). During my tenure with TEP, I served as Manager of Pricing and  
22 Competitive Analysis as well as Manager of Energy Settlements and Customer  
23

1 Accounting. I have previously testified before both the Public Utility Commission of  
2 Texas and the Arizona Corporation Commission.

3  
4 **Q. Mr. King, what is the purpose of your testimony?**

5 A. I am testifying in support of AEPCO's proposed Environmental Compliance Adjustment  
6 Rider ("ECAR"). I will provide the Commission with an overview of the ECAR,  
7 including the various procedural steps that AEPCO will undertake before it can recover  
8 any costs through the mechanism. I will also explain the slight revisions that we are  
9 proposing to the ECAR Tariff and Plan of Administration in order to make the  
10 mechanism more consistent with the principles of cost causation and improve the manner  
11 in which chemical costs can be tracked and assessed. Finally, my testimony describes the  
12 environmental regulations that AEPCO is currently facing as well as the costs, both  
13 capital and chemical, that we anticipate incurring in connection with our compliance  
14 obligations and demonstrates why the Commission should approve chemical costs as  
15 eligible for potential recovery through the ECAR.

16  
17 **ECAR OVERVIEW**

18 **Q. Mr. King, what is the ECAR?**

19 A. The ECAR is a funding mechanism tailored to assist AEPCO in meeting future  
20 environmental compliance obligations mandated by federal, state and/or local laws or  
21 regulations. As Peter Scott explains in his testimony, we originally proposed the ECAR in  
22 this rate case to address concerns raised by the Commission's Utilities Division Staff  
23 ("Staff") regarding the potential impact of a ruling from the Environmental Protection

1 Agency ("EPA") concerning regional haze. However, the ECAR is not limited to that one  
2 regulation. Instead, in keeping with the current regulatory atmosphere, we proposed the  
3 ECAR to be available, if necessary, to respond to a variety of environmental compliance  
4 obligations.

5  
6 **Q. Can you explain how the ECAR works?**

7 **A.** Yes. Once approved by the Commission, the initial rate of the ECAR will be set at zero.  
8 Thereafter, in response to a particular environmental regulation, AEPCO will analyze its  
9 financial status, including its current rate levels and any expenses that qualify for  
10 recovery/refund through its PPFAC, to determine whether the Cooperative requires  
11 additional revenue to comply with the given regulation. If AEPCO determines that its  
12 margins are sufficient to cover the compliance costs, then it would not seek to raise the  
13 ECAR rate above zero.

14  
15 However, if the results of AEPCO's financial analysis indicate that additional revenues are  
16 needed for environmental compliance, the Cooperative will prepare its initial Environmental  
17 Compliance Strategy ("ECS"). The ECS will, at a minimum, describe the scope of work,  
18 anticipated timeline and cost estimates. In preparing the ECS, AEPCO intends to limit the  
19 costs to be recovered through the ECAR to only those necessary to meet the shortfall in the  
20 Cooperative's margins. If the ECS is approved by AEPCO's Board of Directors and  
21 receives unanimous approval from its Class A Distribution Cooperative Members  
22 ("Members"), the Cooperative will then file the ECS with the Commission along with a  
23

1 revised tariff showing the additional charges to be assessed to each of the Members on their  
2 monthly invoices. If approved by the Commission, the ECAR tariff would remain in effect  
3 until the project, as specified in the ECS, has been completed or terminated. AEPCO's  
4 Members may pass along the ECAR charges to their retail members via their respective  
5 purchased power clauses.  
6

7 **Q. What kinds of costs does AEPCO envision funding through the ECAR?**

8 A. The ECAR identifies specific costs, by Rural Utilities Service ("RUS") account number,  
9 that may be included in the ECS. The costs fall into two general categories: capital costs  
10 (carrying costs and/or contributions in aid of construction) and operations' expenses.  
11 However, the costs may not be duplicative of any expense already recovered in base rates  
12 or through any other adjustor mechanism. Also, AEPCO is not permitted to use the  
13 ECAR to recover environmental fines or penalties.  
14

15 **Q. How will the funds collected through the ECAR be accounted for and administered?**

16 A. AEPCO will deposit the funds collected through the ECAR in a separate interest-bearing  
17 investment account; interest earned will be retained in the account. AEPCO may only  
18 draw monies from the account to pay for costs identified in the Commission-approved  
19 ECS. The funds collected will be separately identified and recorded as a regulatory  
20 liability and use of the funds will reduce the regulatory liability on a dollar-for-dollar  
21 basis. To the extent that AEPCO collects funds to pay for the Cooperative's capital  
22 additions (as opposed to capital carrying costs), those funds will be recorded as  
23

1 contributions in aid of construction. We will track the funds collected from each of  
2 AEPCO's Members such that, upon completion or termination of the ECS plan, all  
3 remaining funds in the account (including interest) can be refunded within ninety days.  
4

5 **Q. If the Commission approves AEPCO's initial ECS for a particular environmental**  
6 **compliance obligation, can the ECS and amount charged through the tariff be**  
7 **modified to address changes in circumstances, including price fluctuations?**

8 A. Yes. The ECAR Plan of Administration describes a modification process. If authorized  
9 by its Members and Board, the Cooperative may file a revised ECS and ECAR tariff with  
10 the Commission, which can adjust the ECAR charges up or down depending on the  
11 nature of the change in compliance strategy and/or actual costs. The revised ECS and  
12 tariff will be subject to a sixty-day Staff review period and become effective at the end of  
13 that period unless the Commission suspends the revised tariff, in which case the revised  
14 tariff would become effective upon Commission approval.  
15

16 **Q. What happens after AEPCO finishes an environmental compliance project?**

17 A. As indicated above, we will return all amounts owed to the Members during the ninety-  
18 day refund period. Also, we will file a revised ECAR tariff, resetting the rate to zero.  
19 The ECAR rate will remain at zero until the Cooperative deems it necessary to utilize the  
20 ECAR tariff again in response to a federal, state or local environmental requirement, in  
21 which case we will prepare and file another initial ECS and tariff for Commission  
22 approval.  
23

1 **Q. Will the ECAR tariff reset to zero if AEPCO files a rate case before an ECS plan is**  
2 **completed or terminated?**

3 A. Yes. Although we anticipate that the ECAR will help AEPCO reduce the frequency of its  
4 rate filings, the ECAR tariff will be reset in a rate case (just like other adjustor  
5 mechanisms). After new base rates go into effect, AEPCO may use the ECAR to track  
6 and return or recover any over- or under-collected environmental compliance costs,  
7 similar to the Cooperative's PPFAC.

8  
9 **Q. Does the ECAR include any compliance reporting requirements?**

10 A. It does. The Plan of Administration calls for semi-annual compliance reports while an  
11 ECS is in place. The reports will include ECAR account balances, the amount collected  
12 from AEPCO's Members (individually and collectively) and the amount of interest  
13 earned for the period. The reports will also provide total withdrawal information as well  
14 as the dates and amounts of each withdrawal and a description of each cost paid during  
15 the report period.

16  
17 **Q. How will AEPCO determine the amount to be charged to each Member through the**  
18 **ECAR?**

19 A. Our initial draft of the ECAR proposed a monthly fixed charge, which would be  
20 calculated based on the costs identified in the Commission-approved ECS and allocated  
21 to each Member based on the Member's Allocated Capacity Percentage. The monthly  
22  
23

1 charge to the individual All-Requirements Members would be based on the Member's  
2 monthly Demand Ratio Share, which is calculated on a 12-month rolling average basis.

3  
4 This methodology makes sense for the capital compliance costs because these costs are  
5 one-time expenditures that are easier to estimate in advance and are less likely to change  
6 during the project. However, the operations' costs associated with compliance are on-  
7 going expenses that may fluctuate. For example, we anticipate that the price of the  
8 chemicals at issues will likely change over time. Further, the quantity of chemicals  
9 needed for compliance has a direct correlation to the amount of energy produced and  
10 consumed. Therefore, we believe the operations' costs should be collected through a  
11 variable rate instead of a fixed charge. To this end, we revised the ECAR to include two  
12 types of charges: (1) a fixed monthly charge to recover capital costs and (2) an energy  
13 charge (\$/kWh) to recover environmental compliance operations' costs (including  
14 chemical expenses). The revised ECAR Tariff and Plan of Administration are attached as  
15 Exhibits JK-1 and JK-2, respectively.

16  
17 **AEPCO'S UPCOMING COMPLIANCE OBLIGATIONS & STRATEGY**

18 **Q. Mr. King, please describe the environmental compliance obligations currently faced**  
19 **by AEPCO.**

20 **A.** There are two federal requirements with upcoming deadlines that may require funding  
21 through the ECAR. One is the EPA's regional haze requirement that was discussed  
22 earlier in this rate case. As described by Mr. Scott, under AEPCO's Better than BART  
23 plan, we will convert Steam Turbine Unit 2 ("ST2") to natural gas-fired operation and

1 install Selective Non-Catalytic Reduction (“SNCR”) technology on Steam Turbine Unit 3  
2 (“ST3”). The deadline for this portion of the project is December 2017. Once the SNCR  
3 is installed, ST3 will continue to operate on coal, but AEPCO will need to use a chemical  
4 (urea) to further reduce the unit’s emissions in order to comply with the regional haze  
5 requirements.

6  
7 **Q. And the second federal requirement?**

8 A. The second compliance obligation we face is the EPA’s Mercury & Air Toxics Standards  
9 (“MATS”). Beginning in April 2016, AEPCO must use another chemical – activated  
10 carbon – in the operation of both ST2 and ST3. We will use activated carbon in both  
11 units until ST2 is converted to natural gas in 2017; thereafter, activated carbon (in  
12 addition to the urea discussed above) will only be used in the operation of ST3.

13  
14 **Q. Has AEPCO developed an ECS for either of these regulations?**

15 A. We have not prepared the actual ECS yet, but we do have some of the information that  
16 will be in the ECS. The scopes of work and project timelines are described above. The  
17 capital costs associated with these two projects are estimated to total \$32 million. Based  
18 on this figure, we have estimated the annual revenue requirement (*i.e.*, the capital  
19 carrying costs without a margin component) associated with AEPCO’s capital investment  
20 as follows: \$0.41 million in 2016; \$1.90 million in 2017; and \$3.40 million in 2018. We  
21 also developed estimates for the chemical costs, but as discussed below, these expenses  
22 are variable and subject to market fluctuation. Based on currently available information,  
23

1 we estimate the annual chemical costs associated with regional haze and MATS  
2 compliance as follows: \$2.2 million to \$4.5 million in 2016; \$3.1 million to \$6.2 million  
3 in 2017; and \$2.2 million to \$5 million in 2018. Both sets of estimates (for the annual  
4 capital carrying costs and chemical costs) are non-cumulative.  
5

6 **Q. Has AEPCO prepared any estimates of the potential rate impacts on the Members’**  
7 **customers based on the cost estimates outlined above?**

8 A. Yes. We estimated the potential rate impacts that the ECAR may have on our Members’  
9 residential customers based on average usage and current rate levels. These estimates  
10 were provided to Staff and the Members earlier this year. They will also be provided to  
11 the Members’ customers as required by the May 7, 2015 Procedural Order.  
12

#### 13 CHEMICAL COST ELIGIBILITY

14 **Q. Mr. King, please explain why AEPCO believes chemical costs should be eligible for**  
15 **inclusion in an ECS and ultimately recoverable through the ECAR.**

16 A. There are several reasons. First and foremost, AEPCO cannot comply with the EPA’s  
17 regional haze ruling or the MATS requirement without using these chemicals – they are an  
18 integral part of AEPCO’s compliance responsibility. While we appreciate Staff’s support  
19 for the ECAR to recover capital expenditures, excluding chemical costs will significantly  
20 limit the usefulness of the mechanism and our ability to respond to future regulations  
21 effectively and efficiently.  
22  
23

1 **Q. Couldn't AEPCO just file a rate case and include the chemical costs in its base rates**  
2 **rather than collect them through the ECAR?**

3 A. We could, but there are a couple problems with that option. First, we currently have  
4 limited information concerning the anticipated cost of both urea and activated carbon,  
5 which makes it difficult to develop pro forma adjustments. More importantly, including  
6 chemical costs in base rates would not address the issue of price fluctuation. Because the  
7 chemicals at issue are not recoverable through our current PPFAC, any change in price  
8 will result in over- or under-recovery from our Members.

9  
10 **Q. Please explain why AEPCO believes that the costs for these chemicals will fluctuate.**

11 A. Historically, the price of urea (the chemical needed for the operation of ST3 after the  
12 SNCR retrofit) has been highly volatile. Attached as Exhibit JK-3 is a chart comparing  
13 historic urea prices with natural gas prices. The reason I offer this comparison is because  
14 the dramatic price fluctuations of natural gas have supported the use of fuel adjustor  
15 clauses for years; we believe the same rationale should apply to the chemicals at issue.  
16 Furthermore, while we don't have access to historical price information for activated  
17 carbon, industry experts are predicting that environmental regulation will significantly  
18 increase demand for this chemical, which will likely put upward pressure on prices in the  
19 future. Attached as Exhibit JK-4 is a summary of the predictions regarding activated  
20 carbon.

21

22

23

24

1 **Q. Why can't AEPCO use its PPFAC to address the variations in these chemical costs?**

2 A. In its current form (and as the name implies), the PPFAC addresses fluctuations in  
3 purchased power and fuel costs. There are some chemicals used in environmental  
4 compliance (like calcium bromide) that are recovered through the PPFAC, but that is  
5 because they are recorded as a fuel expense in RUS Account 501. The chemicals that  
6 AEPCO will use to comply with the EPA's regional haze and MATS requirements are  
7 recorded in RUS Account 502 as a steam expense and, as a result, do not qualify for  
8 inclusion in the PPFAC.

9  
10 **Q. What is the difference between Account 501 and 502 chemicals?**

11 A. According to the RUS Uniform System of Accounts – Electric, chemicals applied before  
12 the fuel enters the hopper are included in the Account 501 definition of fuel. Chemicals  
13 used after that point are recorded in Account 502.

14  
15 **Q. Do you think this distinction should result in Account 502 chemicals being excluded  
16 from the ECAR?**

17 A. No. The fact that the cost of calcium bromide is recoverable through the PPFAC  
18 demonstrates that some chemical costs are appropriate for inclusion in an adjustor  
19 mechanism. The question then becomes, which adjustor is most appropriate for the cost  
20 at issue. While we know of one utility, TEP, that has been authorized to recover an  
21 Account 502 chemical expense through its fuel adjustor, we believe the ECAR would be  
22 a better recovery mechanism because it is narrowly designed to address environmental  
23

1 compliance costs. In other words, including chemical costs associated with  
2 environmental compliance in the ECAR is consistent with the same cost causation  
3 principles that form the basis of AEPCO's current rate design. Furthermore and as a  
4 practical matter, to include Account 502 environmental compliance chemical expenses in  
5 the PPFAC or another adjustor mechanism other than the ECAR, AEPCO would have to  
6 file another rate case. We do not think filing a new rate case is necessary or appropriate  
7 under the circumstances.

8  
9 **Q. Mr. King, has AEPCO analyzed the financial impact that exclusion of chemical**  
10 **costs from the ECAR could have on the Cooperative?**

11 A. We have done some preliminary analysis, but the impact is hard to predict given the  
12 uncertainty over the price of the chemicals. Also, the quantity of urea and activated  
13 carbon needed for compliance will vary based on the amount and type of coal used.  
14 Based on certain baseline assumptions regarding market prices, coal blend and unit  
15 operation, it is quite possible that AEPCO would need to file an expedited rate case in  
16 early 2016 if chemical costs are excluded from the ECAR. However, we do not believe  
17 filing a rate case under those circumstances would be in the best interest of the  
18 Cooperative or its Members and therefore request that the Commission approve the  
19 ECAR as proposed by AEPCO.

20  
21 **Q. Does this conclude your direct testimony?**

22 A. Yes, it does.  
23

**EXHIBIT JK-1**

ARIZONA ELECTRIC POWER COOPERATIVE, INC.

ENVIRONMENTAL COMPLIANCE ADJUSTMENT RIDER (ECAR)

TARIFF

Effective Date: \_\_\_\_\_ 1, 2015

PURPOSE

The purpose of the Environmental Compliance Adjustment Rider ("ECAR") is to provide a revenue recovery mechanism that will create a fund to be used for the purpose of meeting environmental compliance obligations mandated by federal, state, or local laws or regulations. The ECAR is the tariff collection mechanism for the overall Environmental Compliance Strategy ("ECS") developed by Arizona Electric Power Cooperative, Inc. ("AEP" or "Company") and its Members.

APPLICABILITY

Applicable to all Class A Member Distribution Cooperatives of AEP.

TERMS AND CONDITIONS

1. The initial rates of the tariff shall be set at zero. AEP will calculate the capital costs (including carrying costs and/or contributions in aid of construction) and operations' costs (including chemical costs) to be collected from each Class A Member Distribution Cooperative through the ECAR as follows:
  - a. Capital Costs – AEP will allocate the capital costs to each Class A Member Distribution Cooperative as a monthly fixed charge based on the Allocated Capacity Percentage ("ACP") of each Member. The monthly dollar amount to be collected from each individual Collective All-Requirements Member ("CARM") will be based upon each CARM's monthly Demand Ratio Share. The Demand Ratio Share is calculated each month as the percentage of each CARMs' 12-month rolling average demand to the total of the CARMs' 12-month rolling average demand. For contributions in aid of construction, AEP will also determine the term of collection for the costs.
  - b. Operations' Costs – The operating costs associated with environmental compliance will be assessed to each Member on a per kWh basis.
2. Once the monthly fixed and variable charges and the term of collection, if any, have been established, AEP will file the ECS plan and a revised tariff with the Arizona Corporation Commission ("ACC" or "Commission"), for Commission approval.\* Once the revised tariff is effective, each Member will be assessed a monthly charge on its bill

## Exhibit JK-1

for environmental compliance capital costs and a variable charge for environmental compliance operating costs in addition to other rates and charges approved by the Commission. Exhibit A sets forth the monthly Member charges and anticipated term of collection, if any.

3. The level of funding and ECAR rates may be adjusted (up or down) depending on the actual environmental compliance funding needs of the Company as outlined in the ECS plan. Any changes to the ECS and ECAR tariff after the initial ECS plan is approved will be subject to a sixty (60) day ACC Staff review period.\* The revised tariff shall become effective at the end of the sixty (60) day period unless the Commission elects to suspend the revised tariff, in which case it shall become effective upon Commission approval.

Details of the operation of the ECAR and ACC compliance requirements are as set forth in the Company's Plan of Administration.

\*In order for the ECAR to be revised, AEPCO must obtain Board approval and the unanimous consent of its Class A Member Distribution Cooperatives, prior to being submitted to the Commission.

EXHIBIT A

The Monthly Charges shall be as follows for each of the Company's Class A Member Distribution Cooperatives:

\_\_\_\_\_ 1, 2015\*

Environmental Compliance Capital Costs

Collective All-Requirements Members:

Anza Electric Cooperative, Inc.	\$0.00/mo.
Duncan Valley Electric Cooperative, Inc.	\$0.00/mo.
Graham County Electric Cooperative, Inc.	\$0.00/mo.

Partial Requirements Members:

Mohave Electric Power Cooperative, Inc.	\$0.00/mo.
Sulphur Springs Valley Electric Power Cooperative, Inc.	\$0.00/mo.
Trico Electric Cooperative, Inc.	\$0.00/mo.

Environmental Compliance Operations' Costs

All Members:	\$0.00000/kWh
--------------	---------------

\*The stated Monthly Rates apply to service provided on and after this date.

**EXHIBIT JK-2**

**Arizona Electric Power Cooperative, Inc.**

**Environmental Compliance Adjustment Rider**

**Plan of Administration**

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39

**ECAR – Plan of Administration**

**General Description:**

The purpose of the Environmental Compliance Adjustment Rider (“ECAR”) Surcharge is to establish a fund to be used for the purpose of meeting, in whole or in part, the cost of environmental compliance obligations imposed on or applicable to the Arizona Electric Power Cooperative, Inc. (“AEPSCO”) that are mandated by federal, state or local laws or regulations or judicial or regulatory agency interpretations of such laws or regulations (“Environmental Regulations”). The ECAR provides for the recovery of capital addition costs, operations’ costs and any other costs specified in the Environmental Compliance Strategy, as approved by the Commission. The ECAR is not intended to recover any costs already recovered in base rates approved in Decision No. 74173 or any subsequent rate case decision or recovered through any other Commission-approved adjustor mechanism.

**Key Definitions:**

1. ECAR Surcharge – A rate rider approved by the Arizona Corporation Commission (“ACC” or “Commission”) in Decision No. XXXXXX which authorizes AEPSCO to: recover or mitigate Environmental Regulations operations’ costs; or fund, in whole or in part, capital additions required by Environmental Regulations.
2. Environmental Compliance Strategy (“ECS”) – A formal plan developed by AEPSCO to meet Environmental Regulations. The ECS shall include, at a minimum, a scope of work, anticipated timelines and cost estimates.
3. Qualified Environmental Compliance Projects – Projects, as specified in the ECS plan, implemented in order to comply with standards mandated by Environmental Regulations. These standards include, but are not limited to, restrictions of carbon dioxide (CO<sub>2</sub>), nitrogen oxide (NO<sub>x</sub>), sulfur oxide (SO<sub>x</sub>), ozone, particulate matter (PM), volatile organic compounds (VOC), mercury (Hg), and other toxins, coal ash and other requirements.
4. Qualified ECS Costs – The costs associated with Qualified Environmental Compliance Projects as identified in the ECS plan and approved by the Commission as appropriate for recovery through the ECAR Surcharge pursuant to ACC review of the ECS plan. The Qualified ECS Costs must be classified in one or more of the Rural Utilities Service (“RUS”) accounts, or any other successor RUS account, listed below under Qualified RUS Accounts. Any costs already recovered in base rates approved in Decision No. 74173 or any subsequent rate case decision or recovered through any

1 other Commission-approved adjustor mechanism are not Qualified ECS Costs  
2 and are not recoverable through the ECAR. Environmental fines or penalties  
3 do not qualify for cost recovery through the ECAR Surcharge nor do costs  
4 that have been included as part of AEPCO's authorized cost of service for  
5 recovery through established rate tariffs.

6 **Calculation of ECAR:**

7 Based on costs detailed in the ECS, AEPCO will calculate the capital costs (including  
8 carrying costs and/or contributions in aid of construction) and operations' costs  
9 (including chemical costs) to be collected from each Class A Member Distribution  
10 Cooperative through the ECAR. AEPCO will allocate the capital costs to each Class A  
11 Member Distribution Cooperative as a monthly fixed charge based on the Allocated  
12 Capacity Percentage ("ACP") of each Member. The fixed charge to be collected from  
13 each individual Collective All-Requirements Member ("CARM") will be based upon  
14 each CARM's monthly Demand Ratio Share. The Demand Ratio Share is calculated  
15 each month as the percentage of each CARMs' 12-month rolling average demand to the  
16 total of the CARMs' 12-month rolling average demand. The operating costs associated  
17 with environmental compliance will be assessed to each Member on a per kWh basis.  
18 AEPCO will also determine the term of collection for any contributions in aid of  
19 construction.

20 **Qualified RUS Accounts:**

21 The costs classified in the following RUS accounts are eligible to be recovered through  
22 the ECAR. This list may be expanded to include other accounts approved by the  
23 Commission in the future.

24 ***Steam Production Plant***

- 25 • 310 Land and Land Rights
- 26 • 311 Structures and Improvements
- 27 • 312 Boiler Plant Equipment
- 28 • 313 Engines and Engine Driven Generators
- 29 • 314 Turbogenerator Units
- 30 • 315 Accessory Electric Equipment
- 31 • 316 Miscellaneous Power Plant Equipment

32 ***Other Production Plant***

- 33 • 340 Land and Land Rights
- 34 • 341 Structures and Improvements
- 35 • 342 Fuel Holders, Producers, and Accessories

- 1       • 343   Prime Movers
- 2       • 344   Generators
- 3       • 345   Accessory Electric Equipment
- 4       • 346   Miscellaneous Power Plant Equipment

5       ***Steam Power Generation Operations***

- 6       • 502   Steam Expenses (limited to chemical expenses incurred solely due to
- 7       Environmental Regulation(s) but not including any indirect expenses such as
- 8       overhead)

9

10      **Accounting:**

11      Funds collected from the ECAR Surcharge will be separately identified by AEPCO and

12      recorded as a regulatory liability. Accounting for these funds shall be done on a

13      contributing Member Distribution Cooperative basis. Use of these funds to meet

14      Qualified ECS Costs will reduce that regulatory liability on a dollar-for-dollar basis.

15      Funds used for qualified environmental capital additions (as opposed to capital carrying

16      costs) will be recorded as contributions in aid of construction.

17      **Investment Administration:**

18      AEPCO will deposit all funds collected through the ECAR Surcharge in a separate

19      interest bearing investment account ("ECAR Surcharge Account") and may only draw

20      monies from the account to fund Qualified ECS Costs. Interest earned on the investment

21      of these funds shall be retained in the account. Upon completion or termination of the

22      ECS plan, all remaining funds in the ECAR Surcharge Account, including interest

23      earned, will be refunded to Members within ninety (90) days, returning the rates to zero,

24      using the same method established for the collection of the ECAR (see Calculation of

25      ECAR above).

26      **Compliance Reports:**

27      On September 1 for the previous January through June period and March 1 for the prior

28      year July to December period of each year, AEPCO will file semi-annual reports

29      concerning the ECAR Surcharge with the Commission, with a copy to its Members,

30      containing the following information for the reporting period:

- 31           1. The beginning balance of the ECAR Surcharge Account.
- 32           2. The amount collected from each Class A Member through the ECAR Surcharge,
- 33           including the total amount collected.
- 34           3. The total amount of interest earned by the ECAR Surcharge Account.
- 35           4. The total withdrawals for Qualified ECS Costs.
- 36           5. The ending balance of the ECAR Surcharge Account.

1 AEPCO will also file the following supporting information with the semi-annual report:

- 2 1. A listing of the dates and amounts of withdrawals.
- 3 2. A description of each Qualified ECS Cost paid during the period and the
- 4 accounting for each cost.

5 Each report will be certified by AEPCO's Chief Executive Officer or Chief Financial  
6 Officer that all information provided in the filing is true and accurate to the best of his or  
7 her information and belief. However, no report shall be required for reporting periods  
8 during which there is no account activity and both the beginning and ending balances of  
9 the ECAR Surcharge Account are zero (\$0.00).

10 **ECS and ECAR Surcharge Modifications:**

11 Pursuant to Decision No. XXXXX, the initial ECAR rates shall be set at \$0.00.  
12 Thereafter, in response to an Environmental Regulation, AEPCO shall file its initial ECS  
13 plan and a revised ECAR tariff with Docket Control for Commission approval.

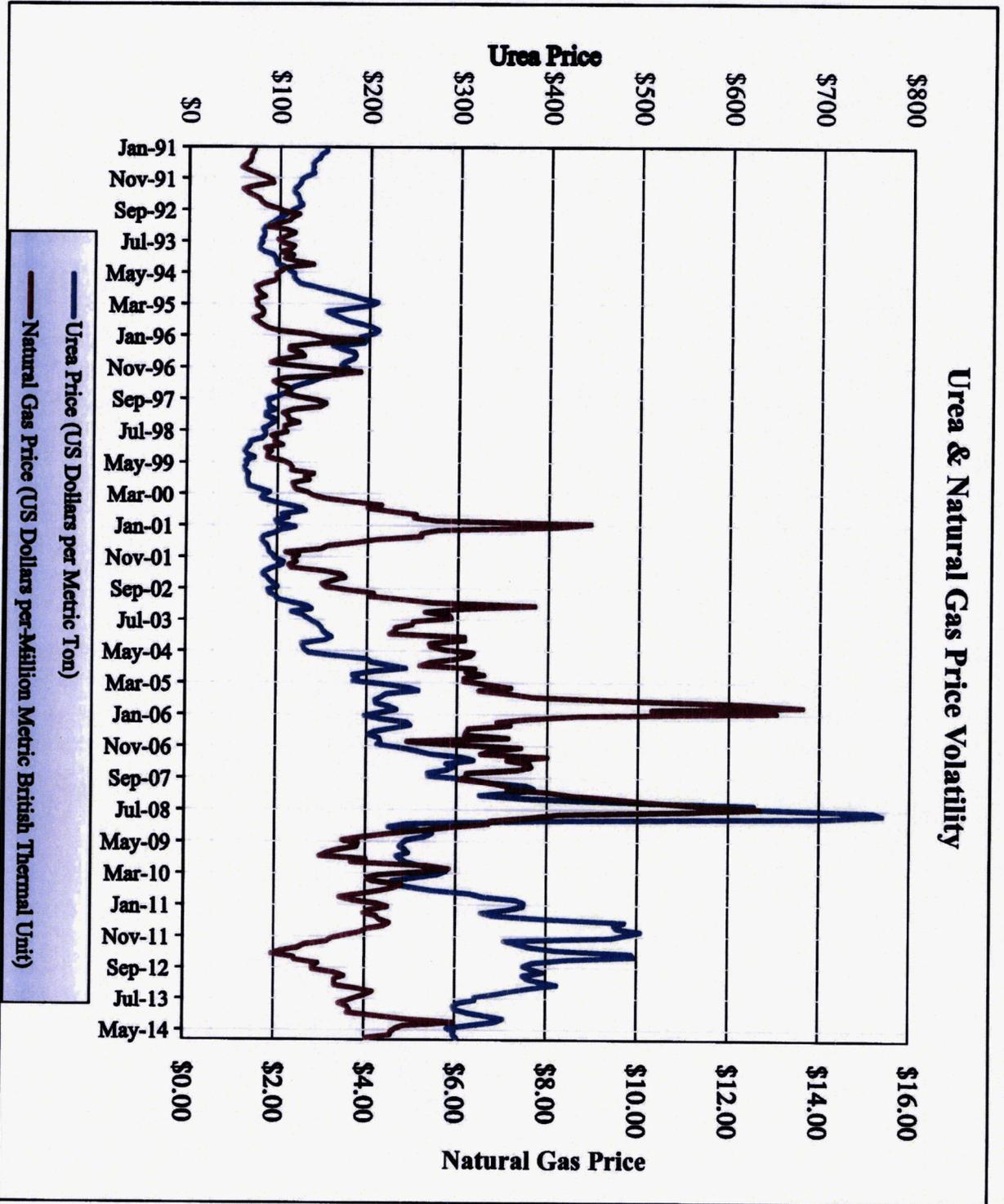
14 The level of funding and ECAR rates may be adjusted (up or down) depending on the  
15 actual environmental compliance funding needs of the Company as outlined in the ECS  
16 plan. Any changes to the ECS and ECAR tariff after the initial ECS plan is approved will  
17 be subject to a sixty (60) day ACC Staff review period. The revised tariff shall become  
18 effective at the end of the sixty (60) day period unless the Commission elects to suspend  
19 the revised tariff, in which case it shall become effective upon Commission approval.

20 Upon completion or termination of the ECS plan, all remaining funds in the ECAR  
21 Surcharge Account not needed to meet the Company's objective(s) for the ECS plan,  
22 including interest earned, will be refunded to Members within ninety (90) days, returning  
23 the rates to zero, using the same method established for the collection of the ECAR.  
24 AEPCO will file a revised tariff returning the rates to zero. The rates shall remain at zero  
25 until AEPCO deems it necessary to utilize the ECAR tariff again in response to an  
26 Environmental Regulation, in which case it will prepare and file an initial ECS plan and  
27 initial revised tariff for Commission approval.

28 **AEPCO Board Approval and Member Consent:**

29 Prior to filing an initial ECS plan and revised ECAR tariff or seeking a subsequent  
30 modification to either the ECS or ECAR, AEPCO will obtain authorization from its  
31 Board. AEPCO shall also notify its Member Distribution Cooperatives sixty (60) days  
32 in advance of a proposed filing with the Commission in order to confirm the unanimous  
33 consent of its Members. Absent receipt of timely written objections, Member consent  
34 shall be deemed obtained and AEPCO may proceed with the filing.

**EXHIBIT JK-3**



**EXHIBIT JK-4**

## ACTIVATED CARBON SUMMARY

1. US demand for activated carbon, including virgin and reactivated products sold by activated carbon suppliers, is expected to grow 11.2 percent per year to almost 1.3 billion pounds in 2017, with market value reaching almost \$1.8 billion. Implementation of the US Environmental Protection Agency's Mercury and Air Toxics Standards (MATS) will drive most of the growth, as utilities and industrial manufacturers upgrade their coal-fired power plants to comply with the regulations.<sup>1</sup>
2. Global market for activated carbon was valued at USD 1,913.2 million in 2012 and is expected to reach USD 4,180.5 million by 2019, growing at a CAGR of 11.9% from 2013 to 2019. Air purification is expected to be the fastest growing market and is expected to grow at a CAGR of 13.9% from 2013 to 2019.<sup>2</sup>
3. North American demand for powdered activated carbon in mercury control applications, which grew at a dramatic 101% per year between 2007 and 2012, compared with an average overall growth rate for all applications of 13% per year. In October 2013, a new UN Treaty on mercury control will be signed that holds even greater potential for activated carbon consumption.<sup>3</sup>
4. Global market for Activated Carbon is projected to reach 1.87 million metric tons by 2018, driven by stringent environmental regulations, especially in the United States." The United States is forecast to emerge as the fastest growing market with a projected CAGR of 13.2% over the analysis period.<sup>4</sup>
5. The global market for activated carbon was estimated to be 1,254 kilo tons in 2012 and is expected to grow at a CAGR of 11.7% from 2014 to 2020.<sup>5</sup>

---

<sup>1</sup> Source: "Activated Carbon to 2017", Freedonia Group, May 2013.

<sup>2</sup> Source: "Activated Carbon Market – Global Industry Analysis, Size, Share, Growth, Trends and Forecast, 2013 – 2019", Transparency Market Research, August 2013.

<sup>3</sup> Source: "Activated Carbon: Global Industry Markets & Outlook", Roskill Information Services Limited, March 2013.

<sup>4</sup> Source: "Activated Carbon: A Global Strategic Business Report", Global Industry Analysts, Inc.

<sup>5</sup> Source: "Activated Carbon Market Analysis and Segment Forecasts to 2020", Grand View Research, February 2014.