

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

American Electric Power Service Corporation) Docket No. ER09-____-000
On behalf of:)
Appalachian Power Company)
Columbus Southern Power Company)
Indiana Michigan Power Company)
Kentucky Power Company)
Kingsport Power Company)
Ohio Power Company)
Wheeling Power Company)
Collectively, the "AEP East Companies")

PREPARED DIRECT TESTIMONY OF
DENNIS W. BETHEL
ON BEHALF OF THE AEP EAST COMPANIES

June 5, 2009

INDEX OF EXHIBITS

**Exhibit AEP-200: Prepared Direct Testimony of Dennis W. Bethel,
On Behalf of the AEP East Companies**

TABLE OF CONTENTS

I.	Introduction.....	3
II.	Purpose of Testimony.....	5
III.	Discussion of the Proposed Agreement Changes.....	6
IV.	Comparison of Alternative Allocation Method Impacts.....	22
V.	Conclusions and Recommendations.....	29

Exhibit AEP-201: Existing AEP Transmission Agreement, in Clean Format;

Exhibit AEP-202: Revised AEP Transmission Agreement, in Black-lined Format;

**Exhibit AEP-203: AEP East Companies' Transmission Cost of Service and Comparison
of Retail Transmission Rates Present and Proposed;**

Exhibit AEP-204: Comparison of Variation in Using MLR, 1CP, and 12 CP

Exhibit AEP-205: Summary of Agreement Modification Impacts for 2008 and 2009

Exhibit AEP-206: Summary of Revenue, Demand, Energy and Other Allocation Ratios

Exhibit AEP-207: Settlements under the Present Transmission Agreement

Exhibit AEP-208: Cost Impact Comparison of Present and Revised Allocations – 1 CP

Exhibit AEP-209: Cost Impact Comparison of Present and Revised Allocations - MLR

Exhibit AEP-210: Cost Impact Comparison of Present and Revised Allocations – 12 CP

Work Papers for Exhibits AEP-206 and AEP-207

I. INTRODUCTION

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

Q. BY WHOM ARE YOU EMPLOYED, AND IN WHAT CAPACITY?

A. My name is Dennis W. Bethel. I am employed by American Electric Power Service Corporation (“AEPSC” or “AEP”), as Managing Director – Regulated Tariffs. My business address is 1 Riverside Plaza, Columbus, Ohio 43215.

Q. PLEASE REVIEW YOUR TRAINING AND EXPERIENCE IN ELECTRIC UTILITY SERVICE MATTERS RELEVANT TO THIS PROCEEDING?

A. In 1973, I earned a Bachelor of Science Degree in Electrical Engineering from the University of Evansville (Indiana). I began my career with AEP, at Indiana Michigan Power Company (I&M), that same year, as a commercial and industrial customer service engineer. In 1977 I transferred to I&M’s rate department. In 1980 I transferred to AEPSC, where I have held positions in Rate Research and Design, System Transactions, Transmission Operations, and Regulated Tariffs. At I&M I worked directly with customers on new and expanded service, was responsible for retail and wholesale contract development and administration, cost of service studies, rate design, fuel clause adjustments and other regulatory analyses. In the AEPSC Rate Research and Design Division, from 1980 to 1988, I performed and supervised cost of service and rate design studies and testified in a number of retail rate cases on those topics for several of the AEP East Companies. In 1988 I transferred to the Systems Transactions Department where I was responsible for power, interconnection and transmission-related agreements and tariffs. In 1991 was promoted to Manager – Interconnection Agreements. During this time I helped to develop and support AEP’s

1 first Open Access Transmission Tariff (“OATT”) filed in Docket No. ER93-540-000.
2 In 1997 I moved to the Transmission Operations Department as Manager –
3 Transmission Contracts and Regulatory Support, a position that was functionally
4 separated from the merchant operations function. In June 2000, the merger of AEP
5 and Central and Southwest Corporation was approved, and I was named Director –
6 Transmission and Interconnection Services in the AEPSC Regulatory Services
7 Department. In that position I was responsible for the development and
8 implementation of transmission, interconnection and related agreements, tariffs and
9 policies on behalf of the AEP companies in the three regions where we provide
10 service, SPP, PJM and ERCOT. I assumed my present position in July 2005. As
11 Managing Director- Regulated Tariffs, I direct a staff that is responsible for cost of
12 service studies, rate design, agreements and tariffs for retail and regulated wholesale
13 services through out the eleven-state AEP service area. I frequently represent AEP in
14 Regional Transmission Organization (“RTO”) forums, particularly relating to the
15 transmission tariffs, rate design, and related committee matters in the Southwest
16 Power Pool (“SPP”) and PJM.

17 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE ANY UTILITY**
18 **REGULATORY COMMISSIONS?**

19 A. Yes. I have previously submitted testimony or affidavits on transmission and related
20 services before the Federal Energy Regulatory Commission (“Commission”) in
21 Dockets ER93-540, ER98-2786, EL02-111, et al, EL01-73, EL05-74, EL05-121,
22 EL07-101, and ER05-751, the AEP East Companies last rate case for transmission
23 service under the PJM OATT (“PJM Tariff” or “Tariff”). In presently open Dockets

1 No. ER07-1069 and ER08-1329, I sponsor formula rates and protocols for inclusion
2 in, respectively, the SPP OATT, on behalf of Public Service Company of Oklahoma
3 and Southwestern Electric Power Company, and in the PJM OATT, on behalf of the
4 AEP East Companies. I have also provided expert testimony on various electric cost-
5 of-service and rate design issues before the utility regulatory commissions of
6 Michigan, Kentucky, Ohio, Oklahoma, Tennessee, Virginia, and West Virginia. I am
7 registered as a Professional Engineer in the States of Indiana and Ohio.

8 **II. PURPOSE OF TESTIMONY**

9 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

10 A. My testimony discusses and supports the proposed changes to the Transmission
11 Agreement, the rationale behind the cost and revenue allocation methods specified in
12 the revised Transmission Agreement, and the changes in cost and revenue allocations
13 that each of the AEP East Companies will experience after the changes take effect. I
14 will also address the characteristics and cost impacts of two cost allocation methods
15 that were also considered by the AEP East Companies.

16 **Q. ARE YOU SPONSORING ANY EXHIBITS?**

17 Yes. In addition to this Testimony, I am sponsoring the following Exhibits:

18 **Exhibit AEP-201: Existing AEP Transmission Agreement, in Clean Format;**

19 **Exhibit AEP-202: Revised AEP Transmission Agreement, in Black-lined Format;**

20 **Exhibit AEP-203: AEP East Companies' Transmission Cost of Service and Comparison of Retail**
21 **Transmission Rates Present and Proposed;**

22 **Exhibit AEP-204: Comparison of Variation in Using MLR, 1CP, and 12 CP.**

23 **Exhibit AEP-205: Summary of Agreement Modification Impacts for 2008 and 2009;**

24 **Exhibit AEP-206: Summary of Revenue, Demand, Energy and Other Allocation Ratios;**

- 1 **Exhibit AEP-207: Settlements under the Present Transmission Agreement;**
- 2 **Exhibit AEP-208: Cost Impact Comparison of Present and Revised Allocations – 1 CP;**
- 3 **Exhibit AEP-209: Cost Impact Comparison of Present and Revised Allocations – MLR; and**
- 4 **Exhibit AEP-210: Cost Impact Comparison of Present and Revised Allocations – 12 CP**

5

6 **III. DISCUSSION OF THE PROPOSED AGREEMENT CHANGES**

7

8 **Q. PLEASE BRIEFLY DESCRIBE THE SCOPE OF THE PROPOSED**
9 **CHANGES TO THE TRANSMISSION AGREEMENT.**

10 A. Since its inception, the Transmission Agreement has had one purpose, to effect a
11 sharing of the participating AEP East Companies' ("Members") costs of owning and
12 operating Bulk Transmission facilities. The Members originally intended Bulk
13 Transmission facilities to include extra high voltage ("EHV") transmission lines and
14 station facilities operating at 345 kV and higher voltages, but in its final order in
15 Docket No. ER84-348, the Commission directed the Members, in 1989, to include
16 transmission lines operating at 138 kV and higher and all facilities, without regard to
17 voltage, at transmission stations that contain at least some EHV facilities.

18 Since that time, some very significant changes have occurred in the provision
19 and regulation of transmission and transmission-related services, affecting the electric
20 industry generally, and the AEP East Companies in particular. The two most
21 significant changes are the advent of open access transmission service, pursuant to
22 Orders 888, 889, and their successors, and the AEP East Companies' relinquishment
23 of functional control of their transmission facilities to the PJM RTO. The scope of
24 the changes to the Transmission Agreement proposed by the AEP East Companies is

1 consistent with the significance of the changes in the provision and regulation of
2 transmission service in the twenty years since the Commission's Order approving it.
3 The proposed changes recognize that, pursuant to the PJM Open Access Transmission
4 Tariff ("OATT", or "PJM OATT"), the AEP East Companies, and other Load
5 Serving Entities ("LSEs") in the AEP Zone of PJM, now share the cost of the AEP
6 East Companies' transmission facilities of all voltages, including those operated at
7 voltages below 138 kV. Further, while the Transmission Agreement included only
8 the five largest AEP East Companies, all seven of them own and operate transmission
9 facilities that are used to provide transmission service under the OATT. The
10 proposed Transmission Agreement changes also recognize that, as a result of open
11 access and RTO participation, the AEP East Companies now are obligated to provide
12 certain transmission-related ("ancillary") services, and to purchase such services and
13 additional RTO supplied services. Accordingly, the proposed Transmission
14 Agreement changes address the allocation of OATT-based transmission related costs
15 and revenues among all seven of the AEP East Companies.

16 **Q. PLEASE SUMMARIZE THE CHANGES TO THE TRANSMISSION**
17 **AGREEMENT.**

18 A. As can be seen by examination of Exhibits AEP-201 and AEP-202, the significant
19 changes, by Agreement section are as follows:

- 20 • The Preamble, is amended to include Kingsport Power Company and Wheeling
21 Power Company as Members, and recognize the Members' participation in the
22 PJM RTO;

- 1 • Article 1, Description of Transmission System, is amended to recognize all
2 transmission facilities of the Members, and delete the provisions defining and
3 providing for periodic updates to investments of the Members in Bulk
4 Transmission Facilities;
- 5 • Article 4, Agent’s Responsibilities, amends the Agent’s Responsibilities to
6 recognize the changed nature of Settlements under the revised agreement;
- 7 • Article 5, Description of Factors Associated With Settlements, is deleted;
- 8 • Article 6, Settlements, is rewritten consistent with RTO participation, and
9 renumbered as Article 5;
- 10 • Article 7, Taxes, amends the provisions for recovery of settlement related taxes to
11 recognize the OATT as the recovery mechanism, and is renumbered as Article 6;
- 12 • Article 8, Billing and Payments, is replaced with provisions describing the
13 Allocation Principles for transmission related costs and revenues and is
14 renumbered and renamed the section as Article 7, Allocation Principles;
- 15 • Article 9, Modification, is amended to include the Agent, that is, the AEP Service
16 Corporation, among those that may call for a reconsideration of the terms and
17 conditions of the Agreement, and is renumbered as Article 8
- 18 • Article 10, Effective Date and Term of This Agreement, is modified consistent
19 with the Commission’s Order approving the Agreement in Docket No. ER84-348,
20 and is renumbered as Article 9;
- 21 • Article 11, Termination of Special Facilities Agreement, is deleted as no longer
22 relevant;
- 23 • Article 12, Regulatory Authorities, is renumbered as Article 10;

- 1 • Article 13, Assignment, is renumbered as Article 11;
- 2 • The signature page is amended to add Kingsport and Wheeling Power
- 3 Companies' signature lines; and
- 4 • Appendix I is added. It is a new attachment, in the form of a table summarizing
- 5 the costs and revenues to be allocated under the Transmission Agreement, the
- 6 allocation methods to be used, and describing the expense and revenue accounts
- 7 where the Members will record the costs and revenues so allocated.

8 **Q. OF THE CHANGES YOU HAVE SUMMARIZED, WHICH IS THE MOST**

9 **SIGNIFICANT?**

10 **A.** The most significant change is the replacement of the present bulk transmission

11 investment cost sharing method, specified in Articles 5 and 6, with the comprehensive

12 transmission cost and revenue allocations, contained in new Article 5 and Appendix I.

13 **Q. DO THE PROPOSED CHANGES AFFECT THE WHOLESALE**

14 **TRANSMISSION RATES CHARGED TO ANY CUSTOMER?**

15 **A.** No. I think it is important to point out that the proposed changes do not affect the

16 rates for transmission or related services that the AEP East Companies as a group or

17 any other LSE currently is charged by PJM under its OATT. The rates for

18 transmission and related services in the AEP Zone of PJM already reflect the rolled-in

19 costs of all transmission facilities operated by the seven AEP East Companies. What

20 will change, as a result of the new settlement process embodied in the revised

21 Transmission Agreement, is the share of transmission related costs and revenues that

22 will be allocated to each of the AEP East Companies. This means that, while the

1 AEP Companies' net costs for retail service will be changed, no wholesale
2 transmission customers will be affected.

3 **Q. YOU MENTIONED THAT THE NEW APPENDIX I TO THE**
4 **TRANSMISSION AGREEMENT SUMMARIZES THE PROPOSED**
5 **ALLOCATION OF TRANSMISSION RELATED COSTS AND REVENUES**
6 **AMONG THE AEP EAST COMPANIES. PLEASE EXPLAIN WHETHER**
7 **ALL OF THOSE COSTS AND REVENUES ARE SHARED TODAY, AND IF**
8 **SO HOW.**

9 A. The AEP East Companies do share all of the transmission related costs and revenues
10 that come to them by way of the PJM LSE and PJM Transmission Owner settlements
11 today. Except for two minor items, the charges billed to the AEP East Companies by
12 PJM for transmission service and the revenues paid to them for use of the AEP
13 transmission system are allocated among the AEP East Companies by the Member
14 Load Ratio ("MLR"), the same allocation method used in the present Transmission
15 Agreement.

16 **Q. WHAT TYPE OF ALLOCATION METHOD IS THE MLR?**

17 A. The MLR is a peak demand allocation method that has been used by the AEP East
18 Companies since 1951 to share costs related to generation capacity under the AEP
19 Interconnection Agreement "Generation Pool". The MLR is calculated monthly
20 based on the non-coincident peak demands of each of the five largest AEP East
21 Companies during the previous twelve months. The MLR load includes each
22 Members' retail and firm sales for resale load. The load of Kingsport Power
23 Company ("KgPCo") is included in the MLR of Appalachian Power Company

1 (“APCo”), while the load of Wheeling Power Company (“WPCo”) is included in the
2 load of Ohio Power Company (“OPCo”). The highest peak demand of each Member
3 during the last twelve months are summed, and then each Member’s MLR is
4 calculated as its peak demand in the previous twelve months divided by the sum of
5 the five Members’ non-coincident peaks. Unlike a single coincident peak or 1 CP,
6 demand allocation basis such as the PJM Network Service Peak Load (“NSPL”)
7 billing unit, the MLR recognizes the seasonal diversity among the AEP East
8 Companies’ loads by incorporating each company’s peak demand during the past
9 twelve months, whether it occurs in the winter or summer.

10 **Q. WHAT IS THE NET EFFECT OF THE PRESENT METHODS OF**
11 **ALLOCATING TRANSMISSION RELATED COSTS AND REVENUES**
12 **AMONG THE AEP EAST COMPANIES?**

13 A. The net effect of the allocations used presently by the AEP East Companies is to
14 cause the charges PJM makes to the AEP East Companies for transmission and
15 related services provided by the AEP East Companies to be offset by the revenues
16 they receive from PJM for those same services. As a result, the Companies’ net costs
17 for transmission and related services are made up of (1) each Company’s cost to own
18 and operate the transmission facilities that each has constructed, (2) their receipts or
19 payments under the Transmission Agreement, (3) the revenues from non-affiliates
20 they receive, and (4) the charges related to services provided by other transmission
21 owners. I will refer to these net transmission costs as “Residual Costs” in discussing
22 the costs that each AEP East Company presently incurs on behalf of their retail
23 customers.

1 **Q. PLEASE IDENTIFY EACH OF THE COMPONENTS OF TRANSMISSION**
 2 **COST AND REVENUE THAT WILL BE AFFECTED BY THE PROPOSED**
 3 **MODIFICATION OF THE TA?**

4 A. The following table summarizes the transmission related costs and revenues
 5 experienced by the AEP Companies:

Item	Table 1: Items of Both Expense and Revenue	Billed By	Revenue To:
1	AEP Transmission Agreement Payments and Receipts	AEP	Surplus Cos.
2	Network Integration Transmission Service (NITS)	PJM	AEP Cos.
3	Scheduling, System Control and Dispatch Service (Sch. 1A)	PJM	AEP Cos.
4	RTO Start-Up Cost Recovery Charges (SCRC)	PJM	AEP Cos.
5	PJM Expansion Cost Recovery Charges (ECRC, Sch. 13)	PJM	AEP Cos. 48%
6	PJM Transmission Enhancement Charges (Sch. 12)	PJM	Various
	Additional Revenue and Credit Expense Items		
7	PJM Point-to-Point Transmission Service Credits	PJM	AEP Cos.
8	Grandfathered Transmission Service (Pre-PJM Contracts)	AEP	AEP Cos.
Underlying Cost of Service for AEP Provided Services			
a	Owning and operating the AEP transmission system	Note: Each of the AEP Companies accounts for their own plant, capital and expense for these services.	
b	Performing AEP System Control and Dispatch Operations		
c	Amortization of Deferred RTO Start-up Expenses		
d	Amortization of Deferred PJM Expansion Cost Funding		

6

7 **Q. WHAT TRANSMISSION RELATED COSTS ARE THE AEP EAST**
 8 **COMPANIES PERMITTED TO RECOVER THROUGH THEIR RETAIL**
 9 **RATES?**

10 A. There is no consistent basis for determining the cost of transmission service among
 11 the retail jurisdictions served by the AEP Companies. In Ohio, Columbus Southern
 12 Power Company (“CSP”) and OPCo are permitted to charge, through a Transmission
 13 Cost Recovery Rider (“TCRR”), the share of the PJM OATT costs billed to the AEP
 14 Companies that they incur on behalf of retail customers. Ohio adopted this method as
 15 a step toward the introduction of retail supply competition. As in some other states
 16 that have unbundled retail tariffs, the OATT rate is used as the transmission charge so

1 that retail customers experience the same costs for transmission and related services
2 whether they buy their power from the local utility or another competitive supplier.

3 The Tennessee Public Service Commission has also recently approved a
4 transmission cost adjustment that permits KgPCo to recover its share of the charges
5 billed to the AEP East Companies by PJM, which charges are allocated to KgPCo
6 pursuant to a Power Purchase Agreement (PPA) with APCo.

7 The other AEP Companies' retail rates presently in effect in Kentucky,
8 Michigan, Virginia and West Virginia reflect the Residual Costs of transmission and
9 related services where the companies' jurisdictional costs of owning and operating
10 the transmission system are adjusted by the net cost or credit resulting from
11 jurisdictional allocation of transmission service charges and revenues from third
12 parties and AEP affiliates. Although AEP's retail rates in Virginia presently reflect
13 Residual Costs (separated into OATT and retail cost components), Virginia regulation
14 now permits the recovery of OATT-based costs, as in Ohio.

15 The Indiana Utilities Regulatory Commission recently approved an RTO Cost
16 Tracker that will periodically adjust retail rates for changes in a number of PJM
17 charges and credits, including some of the items listed above; however, I&M's
18 Indiana base rates still reflect the company's Residual Cost to own and operate its
19 transmission facilities, net of affiliate and third party revenues.

20

21

22

23

1 **Q. WITH THE PRESENT MIX OF RETAIL RATE MAKING METHODS, ARE**
2 **THE AEP EAST COMPANIES ABLE TO RECOVER ALL THEIR**
3 **TRANSMISSION RELATED COSTS?**

4 A. No. Presently, the AEP East Companies are experiencing a significant transmission
5 cost recovery short-fall. The sum of the transmission and related revenues that the
6 AEP East Companies are able to include in retail rates, together with the revenues
7 they receive from non-affiliates is less than their cost of service for transmission and
8 related services.

9 **Q. WILL THE COST RECOVERY SHORT-FALL PROBLEM BE**
10 **AMELIORATED BY THE APPROVAL OF THE TRANSMISSION**
11 **AGREEMENT CHANGES PROPOSED IN THIS PROCEEDING?**

12 A. The proposed changes will create the conditions necessary to ameliorate the problem,
13 but retail rate changes will still be required. The cost recovery issue is primarily a
14 result of the way transmission related costs and revenues are allocated among the
15 AEP Companies. If the cost and revenue allocation changes proposed in this case are
16 approved, the Residual Cost of transmission service determined by states that may
17 continue to set retail rates that way, will come more closely into line with the RTO-
18 based costs allowed in Ohio, Tennessee and Virginia.

19 **Q. CAN YOU QUANTIFY THE MAGNITUDE OF THE COST RECOVERY**
20 **PROBLEM, AND ILLUSTRATE THE RETAIL RATE IMPACTS THAT**
21 **WOULD RESULT IF THE PROPOSED SOLUTION IS APPROVED AND**
22 **THE RETAIL RATES OF EACH AEP COMPANY ARE ADJUSTED TO**
23 **REFLECT THE REALLOCATED COSTS AND REVENUES?**

1 A. Yes. Exhibit AEP-203 illustrates (i) the Residual Costs that each AEP Company
2 experiences today to provide transmission service on behalf of retail customers (line
3 8), calculated as the approximate total cost of service experienced by the AEP
4 Companies for transmission and related services that they provide (line 6), plus the
5 net charge or credit they experience from the present allocation of costs and revenues
6 among them (line 7); (ii) the approximate cost each Company is able to include in
7 retail rates (line 11); and (iii) the Residual Costs they would each experience with the
8 transmission cost and revenue allocations proposed in this proceeding (line 13).

9 Comparing the totals of lines 8 and 11, it can be seen that the cost recovery
10 short-fall problem is approximately \$58 million per year. It can also be seen that this
11 problem is not merely the result of Ohio and Tennessee charging retail customers
12 based on the PJM OATT. The problem instead results from the Bulk Transmission
13 settlement method in the present Transmission Agreement, and the allocation of other
14 transmission related costs and revenues using the same method, e.g., MLR. The
15 proposed Transmission Agreement changes will fix the problem by allocating
16 transmission costs among the Companies based on their use of each service, and
17 sharing revenues based on each Company's cost to provide the service. With the
18 present settlements and allocations, the Companies are being charged for services on
19 a load share basis, but they are not receiving revenues in proportion to the costs of the
20 services they provide.

21

22

1 **Q. PLEASE EXPLAIN THE SIGNIFICANCE OF THE \$/kW-Month VALUES**
2 **SHOWN IN EXHIBIT AEP-203.**

3 A. Those values are important in demonstrating the reasonableness of the proposed
4 changes. The first set of values on line 10 shows each AEP East Company's Residual
5 Cost of transmission per kilo-Watt (kW) of monthly peak demand, based on present
6 settlements and allocations. The variation in the per kW costs that the Companies
7 need to recover from retail customers, is presently more than 200%. As shown, the
8 costs vary from a low of \$1.59/kW-month for I&M to a high of \$3.27/kW-month for
9 KgPCo. The values on line 12 represent the average cost per kW of demand that the
10 Companies are permitted to recover from retail customers. Those values show the
11 same wide variation, although the CSP and OPCo values are lower than the actual
12 residual cost to the Ohio Companies. Comparing lines 10 and 12, one sees that even
13 with the Ohio cost recovery limited to the PJM OATT costs, as presently allocated
14 using the MLR method, the transmission costs charged to Ohio retail customers is
15 higher than for APCo and I&M customers. Finally, line 14 shows that the proposed
16 cost and revenue allocations will equalize the per-kW transmission and related costs
17 among the AEP Companies.

18 **Q. WHAT LOGIC SHOULD DRIVE THE CHOICE OF COST AND REVENUE**
19 **SHARING METHODS IN A POOLING ARRANGEMENT AMONG SISTER**
20 **COMPANIES SUCH AS THE AEP EAST COMPANIES?**

21 A. Costs should be allocated proportionate to the amount of service that each Member
22 uses, typically measured by relative contributions to total peak demand; however,
23 there are various methods that can be used to measure relative contributions to peak

1 demand. The choice among reasonable alternative cost allocation methods should
2 consider factors such as administrative efficiency and stability of the relative cost
3 shares the allocation methods will produce.

4 Revenues for transmission and related services should be allocated
5 proportionate to the costs that each Member incurs in making its facilities and
6 services available to its affiliates, and in this case the RTO, such that when all sources
7 of transmission revenues are taken into account, e.g., wholesale and retail, each
8 Member will receive revenues equal to its cost of service.

9 **Q. WHAT BILLING BASIS DOES PJM USE TO CHARGE LOAD SERVING**
10 **ENTITIES FOR TRANSMISSION AND RELATED SERVICES?**

11 A. PJM uses the prior year single peak or 1CP demand method to charge LSEs for
12 network transmission service (“NTS”), expansion cost recovery charge (“ECRC”)
13 and RTO start up cost recovery charge (“SCRC”), and to allocate revenue credits for
14 point-to-point transmission service among NITS customers. PJM charges
15 Transmission Owner Scheduling, System Control and Dispatch Service based on
16 delivered energy.

17 **Q. WHAT COSTS ARE BEING COLLECTED THROUGH THE ECRC AND**
18 **SCRC RATES?**

19 A. The ECRC rates are billed by PJM to recover the costs that PJM originally charged to
20 the AEP East Companies, Commonwealth Edison Company and the Dayton Power
21 and Light Company to fund the expansion of the RTO’s operations in order to
22 accommodate the addition of new zones in 2004 and 2005. ECRC rates are charged
23 to loads in all zones of PJM, except the Dominion Virginia Power Zone. Dominion

1 also funded a share of the PJM expansion costs, but elected not to participate in the
2 region-wide recovery of the costs. The SCRC rate is a charge that recovers the AEP
3 East Companies' direct costs for RTO development and start-up. That charge is only
4 billed to the AEP East Companies and other NITS customers in the AEP Zone. The
5 ECRC and SCRC rates collect the underlying PJM expansion and AEP RTO start-up
6 costs and carrying costs over the periods that the costs are being amortized, ten years
7 and fifteen years, respectively.

8 **Q. WHAT METHOD DO THE AEP EAST COMPANIES PROPOSE TO USE TO**
9 **SHARE COSTS THAT PJM BILLS BASED ON THE PRIOR YEAR 1CP**
10 **DEMANDS?**

11 A. The AEP East Companies propose to use the twelve month average coincident peak
12 or 12CP method to allocate the costs billed to them as a group by PJM using the 1CP
13 method.

14 **Q. PLEASE EXPLAIN WHY AEP IS PROPOSING THE 12CP METHOD.**

15 A. The 12 CP method will result in more stable cost sharing among the AEP Companies
16 than other alternatives. Rate stability is an important consideration for customers,
17 state regulators and for AEP. Exhibit AEP-204 shows the relative stability of several
18 alternative demand allocation methods, on an actual basis from 2005 through 2008,
19 and as projected for 2009. The exhibit shows (1) the present MLRs, (2) the MLRs
20 with KgPCo and WPCo separated from APCo and OPCo, the seven-Member MLRs,
21 (3) the annual 1CP load ratios, and (4) the 12CP load ratios for each of the AEP East
22 Companies. The exhibit calculates the year to year percentage changes, the
23 maximum annual deviation, and the range of deviations. Over the five years, the 1CP

1 would cause four companies to have single year cost allocation shifts of 20% to more
2 than 33%. Cost variations under the seven-Member MLR method would be relatively
3 low, topping out at 13%. Cost allocation variances under the 12CP method would be
4 the smallest. Similar differences appear when the high to low annual allocation
5 percentage ranges are compared. APCo's 1CP share would range from a high of
6 34.18% to a low of 26.84%, a 7.34% spread, while the largest spread for 12CP is only
7 2.85% for I&M. Again the seven-Member MLR comes in second, with a 3.5%
8 spread for APCo.

9 **Q. WHY DOES THE 1CP METHOD CAUSE INSTABILITY IN THE SHARING**
10 **OF TRANSMISSION COSTS AMONG THE AEP EAST COMPANIES?**

11 A. The 1CP transmission billing demand is inherently less stable than the 12CP method
12 because it measures each customer's load in only one hour of the year. When applied
13 to individual customers, the 1CP method can result in cost allocations reflecting
14 anywhere from zero to 100% of a customer's annual peak load. When applied to
15 utilities like the AEP East Companies that serve the diversified load of many
16 customers, the 1CP can still produce significant variability in cost allocations when
17 the annual peak occurs in the summer than when it occurs in the winter. That is
18 exactly what happened this year in the AEP Zone of PJM. The 1CP in 2007, which
19 was used for billing purposes in 2008, was a summer peak. The 1CP for 2008, that is
20 the network integration transmission service (NITS) billing demand in the AEP Zone
21 during 2009, was a winter demand peak. Three of the AEP East Companies, APCo,
22 KPCo and KgPCo, typically have their annual peak in the winter, while the others
23 typically peak in the summer. Thus, in a year like 2009, when a change from summer

1 peak allocations to winter peak allocations occurs, costs will be shifted from the
2 summer peaking companies to the winter peaking companies. Of course the reverse
3 will occur when the peak again occurs in the summer.

4 **Q. CAN YOU ILLUSTRATE HOW THE NET TRANSMISSION COSTS OF**
5 **EACH OF THE AEP EAST COMPANIES WOULD CHANGE UNDER THE**
6 **12CP AND ALTERNATIVE ALLOCATION METHODS?**

7 A. Yes. Figure 1 shows in bar graph form, from left to right, (1) the total transmission
8 service revenue requirement of the AEP East Companies, (2) the approximate
9 amounts they are currently able to reflect in retail rates, the costs they would
10 experience if the Transmission Agreement changes as proposed are approved, but
11 assuming (3) that the 1CP method is used to share transmission service costs, (4) that
12 the modified 7-Member MLR method is used, and (5) if the 12CP method, as
13 proposed is used.

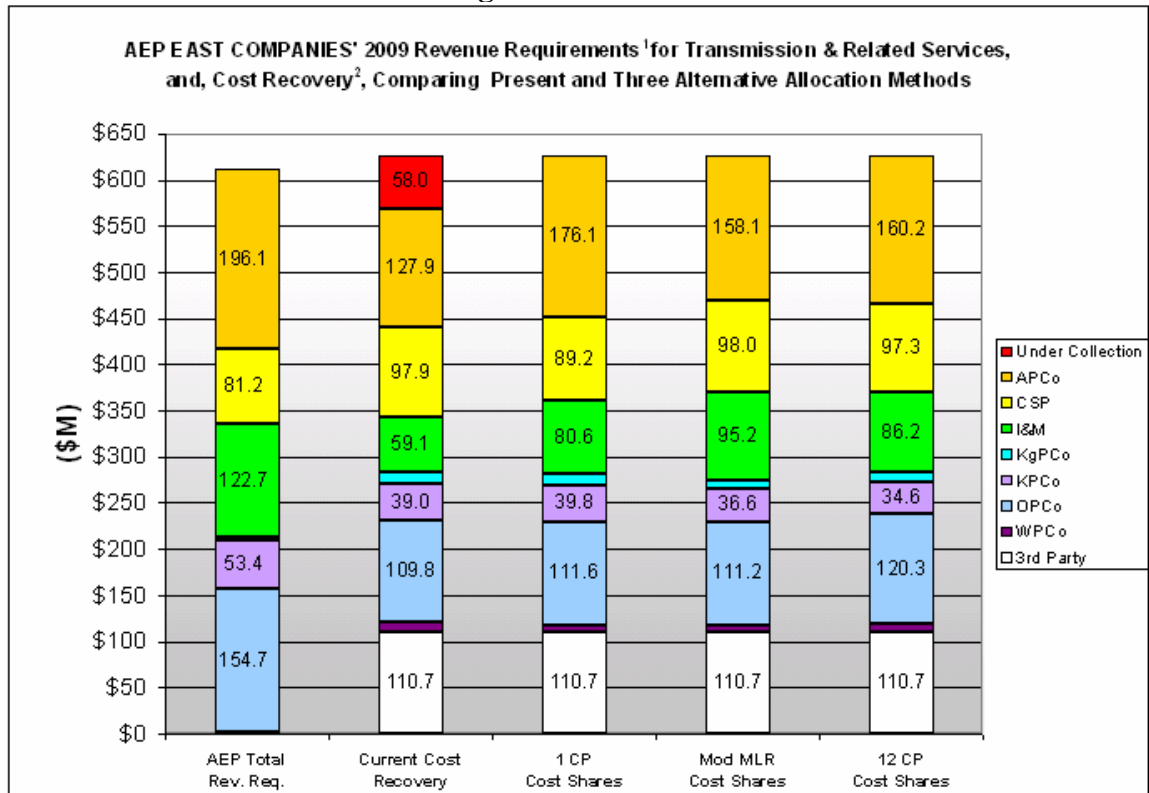
14 **Q. PLEASE DESCRIBE FIGURE 1.**

15 A. Last year, in Docket No. ER08-1329, the AEP East Companies filed a transmission
16 formula rate, which was accepted, effective as of March 1, 2009, subject to refund
17 after settlement and potential hearing processes. The first bar graph in Figure 1
18 shows that the transmission and related services revenue requirements of the various
19 AEP East Companies total \$612.5 million based on the proposed formula rate. Based
20 on the billing demands effective during 2009, non-affiliates, or third parties, would
21 pay approximately \$110.7 million of the AEP Companies' cost of transmission and
22 related services.

23
24

1
2

Figure 1



1. Revenue Requirement Includes: AEP Transmission, Schedule 1A, PJM Expansion Costs Amortization, and RTO Startup Cost Amortization.
2. Cost Recovery totals exceed AEP Revenue Requirement due to PJM RTEP project socialization charges.

3
4
5
6
7
8
9
10
11
12
13
14

The AEP East Companies would be responsible for the remainder. The second bar graph shows the present situation with regard to retail cost recovery, and the under-recovery problem. The other bar graphs show the relative costs that each of the AEP East Companies would experience if transmission service costs are allocated by the 1CP method, the seven member MLR method or the 12CP method, and illustrate the concept that the under-recovery issue will be resolved if the changes proposed in the Transmission Agreement are approved.

1 **IV. COMPARISON OF ALTERNATIVE ALLOCATION METHODS**

2
3 **Q. HAVE YOU PREPARED A MORE DETAILED ANALYSIS OF THE**
4 **IMPACTS THE COST AND REVENUE ALLOCATION CHANGES WILL**
5 **HAVE ON THE AEP EAST COMPANIES?**

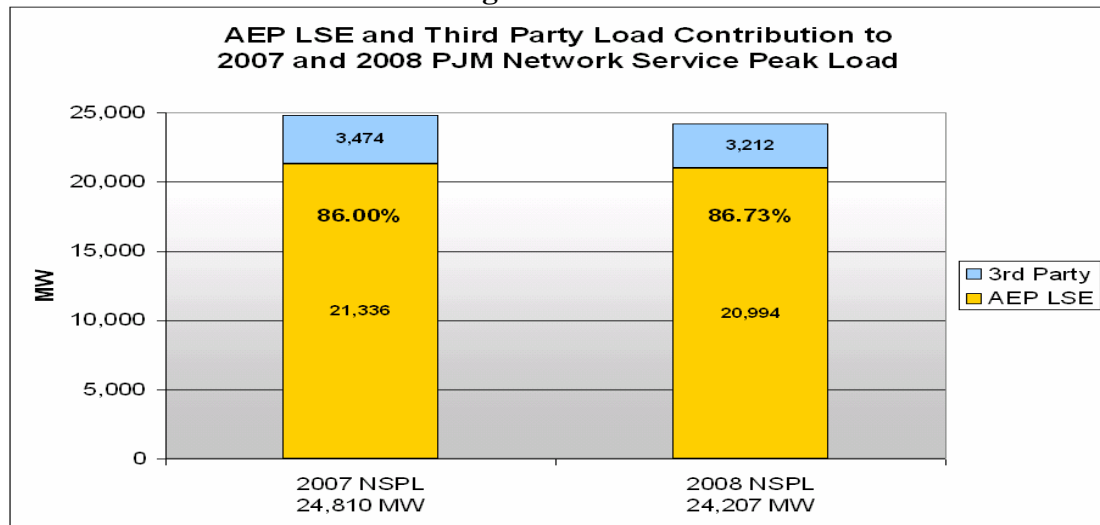
6 A. Yes. Exhibit AEP-205 summarizes three cost impact analyses contained in Exhibits
7 AEP- 208, AEP-209 and AEP-210 that show, respectively, the revenues that each
8 AEP East Company would share as a Transmission Owner and the expenses each
9 would incur as an LSE under the Transmission Agreement as it stands today, and as
10 modified in this proceeding if transmission costs are shared by the AEP East
11 Companies, as LSEs, based on the 1CP Method (Exhibit AEP-208), by the MLR
12 method adjusted to allocate costs to all seven of the AEP East Companies based on
13 their peak retail loads (Exhibit AEP-209), and based on the 12CP method (Exhibit
14 AEP-210). The AEP East Companies are proposing in this proceeding to adopt the
15 12CP method for transmission and related service cost allocations, other than the PJM
16 Schedule 1A charges that are based on energy deliveries.

17 As can be seen by summary Exhibit AEP-205, in total, the AEP Companies
18 presently receive more revenue from PJM as Transmission Owners than they pay as
19 LSEs, and based on the rates and billing demands effective during 2008, those net
20 receipts were about \$104 million. In 2009, even recognizing the annualized effect of
21 the higher rates that started March 1, the net receipts will be lower, at about \$96.5
22 million. There are two primary reasons the for the reduction in net receipts, (1) the
23 AEP East Companies' share of the AEP transmission costs increased, because the
24 AEP Companies' share of the 2008 winter peak demand is larger than their share of

1 the 2007 summer peak demand, as shown in the following graph (Figure 2), and (2)
2 the AEP Companies are being charged 15% of the cost of new PJM transmission
3 projects that are being socialized under PJM OATT Schedule 12, Transmission
4 Enhancements.

5

Figure 2



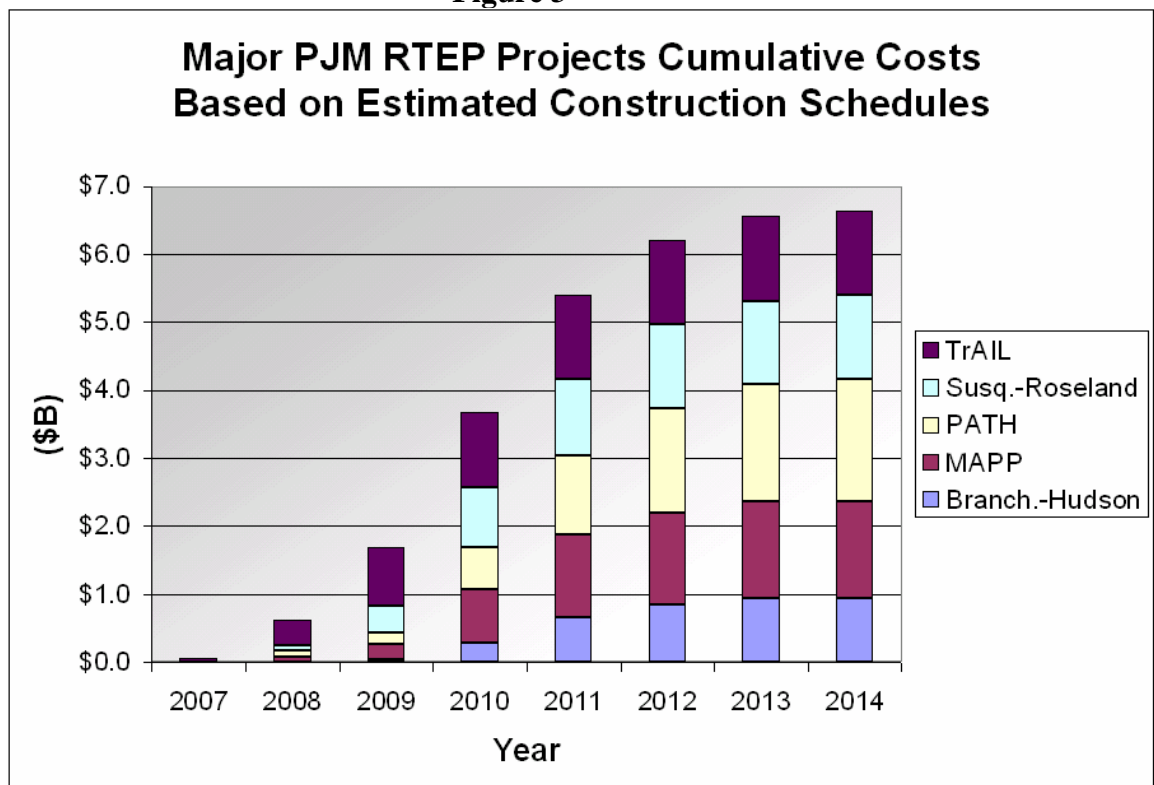
6
7

8 In 2008 PJM began charging the AEP Companies for socialized RTEP
9 projects. So far those charges have not been significant, compared to the cost of the
10 AEP East Companies' facilities; however, those charges are increasing quite rapidly.
11 The 2009 cost impact analyses, summarized in Exhibit AEP-205, include about \$14
12 million for Schedule 12 charges. The \$14 million estimate is based on Schedule 12
13 charges experienced so far in 2009, but several major projects will receive increases
14 in their revenue requirements during 2009, based on inclusion of CWIP in the rate
15 base. AEP does not know with any certainty how much the Schedule 12 charges will
16 actually be during 2009, but estimates of the charges show that they could be as much
17 three times the amount reflected in the analyses.

1 **Q. HAVE YOU PERFORMED AN ANALYSIS TO PROJECT THE SCHEDULE**
2 **12 CHARGES EXTENDING BEYOND 2009?**

3 A. Yes. Figure 3 shows the trajectory of PJM capital spending on major PJM Regional
4 Transmission Expansion Plan (“RTEP”) projects, for which socialized cost recovery
5 has been approved. Figure 3 illustrates an explosive growth pattern for such projects.
6

Figure 3

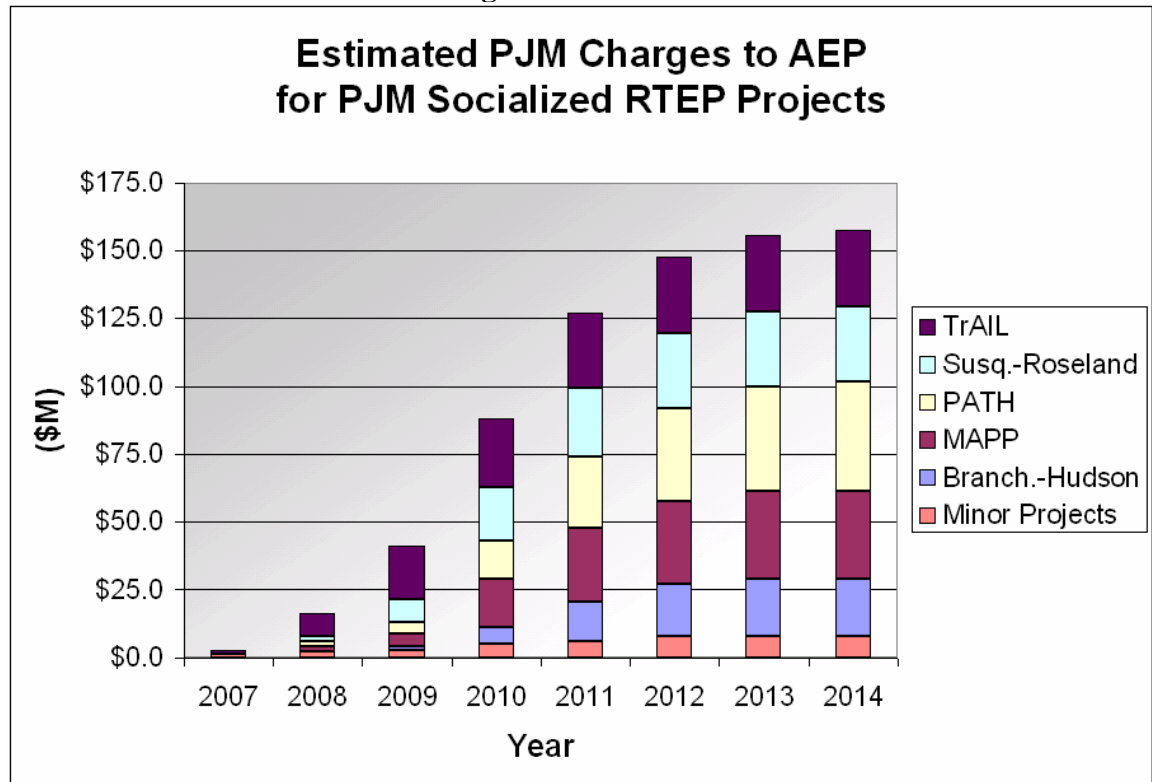


7
8
9 **Q. WHAT IS THE BASIS OF THE PROJECTED SPENDING, AND HOW MUCH**
10 **MIGHT THE AEP COMPANIES ULTIMATELY BE CHARGED FOR**
11 **THOSE PROJECTS?**

12 A. The spending projections in Figure 3 are based on the estimated cost and in-service
13 dates of the RTEP projects, as published by PJM. The estimated start-to-end
14 spending projection for the various projects has been developed using estimated

1 spending schedules that assume most of the costs will be incurred in the middle and
 2 last years of the construction schedules. Figure 4 shows that the AEP Companies
 3 might expect to see Schedule 12 charges increase to about \$160 million per year over
 4 the next six years, assuming a 15% annual carrying charge rate, and current recovery
 5 of construction work in-progress costs for the largest projects. Actual carrying costs
 6 may be less than 15% during construction, but the figure is likely to yield a
 7 conservative estimate of annual costs once the projects are in service.

8 **Figure 4**



9
10

11 **Q. PLEASE CONTINUE WITH YOUR DISCUSSION OF Exhibit AEP-205.**

12 A. Exhibit AEP-205 distills a lot of information derived in Exhibits AEP-208, AEP-209
 13 and AEP-210. The exhibit is understood most easily by tracking through the numbers
 14 from top to bottom three columns at a time. Note that the line descriptions apply to

1 all columns, and are arranged in three blocks. The block header “Present Allocation”
2 refers to the present application of the five-company MLR to all costs and revenues,
3 except for the two minor exceptions noted earlier, the ECRC and the SCRC related
4 expenses and revenues which are shared by transmission pole-mile ratios. The Block
5 header “Proposed Allocation” refers to allocations under a modified Transmission
6 Agreement where revenues are allocated based on each AEP East Companies’
7 revenue requirement for each service, and costs are allocated proportionate to relevant
8 measures of load.

9 The first three columns of numbers under the Header “Summary of Impact,
10 1CP Cost Allocation, (Exhibit AEP-207)” shows the Present Allocations for each
11 AEP East Company during 2008 and 2009 and the differences in the top block of
12 rows, then the Proposed Allocation for 2008 and 2009 and the differences in the
13 middle block of rows. Bear in mind that on this exhibit the values represent the net of
14 revenues received by and expenses charged to the Members in RTO settlements. The
15 bottom block of rows shows the changes that would result in 2008 and 2009 from
16 replacing the present Transmission Agreement and allocation methods, with the
17 proposed load-based allocation of costs and revenue requirement-based allocations of
18 revenues. The first block of columns show that if the 1CP method were to be used for
19 transmission service cost allocations, the Net Transmission Cost for APCo would
20 increase by \$46.5 million from 2008 to 2009 because of the change from a summer
21 peak to a winter peak. The one year change for CSP is \$28 million. Two other
22 companies would change by more than \$10 million from 2008 to 2009 using the 1CP
23 method.

1 Moving across to the next block of columns, and tracking down through the
2 rows, one can see that if the seven-Member MLR method is used, instead of the 1CP
3 method, the largest year to year change is reduced by about 2/3 to \$18.1 million. The
4 last block of columns shows the results for the 12CP method. The 2008 to 2009 cost
5 changes are slightly larger for the 12CP method than for the 7-Member MLR, but
6 over a longer period of time, as illustrated by Exhibit AEP-204, the 12CP will be the
7 most stable of the methods.

8 **Q. PLEASE DESCRIBE EXHIBITS AEP-206 THROUGH AEP-210?**

9 A. Exhibits AEP-206 and AEP-207 summarize the allocation factors and other data
10 underlying the analyses in Exhibits AEP-208 through AEP-210. Page 1 of Exhibit
11 AEP-206 shows the revenue requirements of each AEP East Company for
12 transmission and PJM Schedule 1A service pursuant both to the rates effective before
13 and after March 1, 2009. Also shown there are the revenue requirements for RTO
14 Start-up and PJM Expansion costs. Page 2 of Exhibit AEP-206 summarizes the AEP
15 East Companies' demand allocation percentages for 2008 and 2009 under the three
16 methods discussed earlier. Page 3 of Exhibit AEP-206 summarizes the energy
17 allocation factors for 2008 and 2009 used to allocate the PJM Schedule 1A service
18 charges. Page 4 of Exhibit AEP-206 summarizes Other Operating revenue and
19 transmission costs that are presently directly assigned. Page 5 of Exhibit AEP-206
20 summarizes transmission charges to KgPCo and WPCo in 2008 and 2009 under their
21 PPAs with APCo and OPCo, respectively.

22
23

1 **Q. WHAT INFORMATION DOES EXHIBIT AEP-207 PROVIDE?**

2 A. Exhibit AEP-207 summarizes the going-level monthly settlements under the
3 Transmission Agreement as it presently operates. In 2008 the total payments by
4 Deficit Members was \$68.4 million, with \$54.9 million paid by CSP and \$13.5
5 million paid by OPCo. The Surplus Members, APCo, I&M and KPCo, received
6 \$28.7 million, \$37.7 million and \$1.9 million, respectively. Exhibit AEP-205 shows
7 that the Transmission Agreement settlements for 2008 and 2009, based on the
8 investments as of January 2009, would increase slightly to about \$71.5 million.

9 **Q. HOW ARE EXHIBITS AEP-208 THROUGH AEP-210 STRUCTURED?**

10 A. Each of the Exhibits AEP-208, AEP-209 and AEP-210 consist of 5 pages. The first
11 page summarizes the information developed on pages 2 through 5. Page 1 looks
12 similar to Exhibit AEP-205, but displays different information. Page 1 of Exhibits
13 AEP-208 through AEP-210 each have three blocks of rows and three blocks of
14 columns. The blocks of rows tabulate Present Allocations, Proposed Allocations and
15 the differences as in Exhibit AEP-205, but the first block of columns shows revenues
16 (“T-Related”), costs (“LSE Related”), and the net cost or receipt for each AEP East
17 Company for 2008. The middle block of columns shows revenues (“T-Related”),
18 costs (“LSE Related”), and the net cost or receipt for each AEP East Company for
19 2009. Then the third block of columns shows the change from 2008 to 2009 in the
20 revenues and costs, and in the net cost or receipt for each AEP East Company. The
21 “Present Allocation” values are the same in all three exhibits, as are the revenue
22 allocations in the “Proposed Allocation” sections. What is different about Exhibits
23 AEP-208, AEP-209 and AEP-210 is the “Proposed Allocation” for transmission

1 service costs and the ECRC and SCRC amounts. In Exhibit AEP-208, the
2 transmission costs are allocated using the 1CP method, in Exhibit AEP-209 the
3 seven-Member MLR method is used to allocate transmission costs, and in Exhibit
4 AEP-210, the 12CP method is employed.

5 Page 2 of each of the three Exhibits shows present, proposed and differences
6 in the allocation of 2008 revenues (T-Related). Page 3 shows present, proposed and
7 differences in the allocation of 2008 costs (LSE-Related). Pages 4 and 5 of each
8 Exhibit AEP-208 through AEP-210 shows the same allocations and differences as
9 pages 2 and 3, but for the 2009 revenues and costs.

10 V. CONCLUSIONS AND RECOMMENDATIONS

11 Q. PLEASE SUMMARIZE YOUR TESTIMONY AND RECOMMENDATIONS.

12 A. The AEP Companies initiated the AEP Transmission Agreement in 1984 with the
13 goal of levelizing the cost of bulk transmission investments that they each had made
14 and planned to make. Over time, events and new goals have over-taken the
15 Companies and the agreement, resulting in wide differences in per kW costs for
16 transmission service among the AEP East Companies, and a significant cost recovery
17 short-fall. The AEP East Companies have studied the issues, considered the relative
18 affects of several alternative courses of action, and have agreed, pursuant to the terms
19 of the Transmission Agreement, that the agreement should be modified, as has been
20 proposed in this proceeding. My study of the issues and impacts, presented in the for-
21 going testimony, and attached exhibits, lead me to conclude that the proposed
22 changes are consistent with the principles of cost allocation, and the Commission's
23 policies, will improve equity in the sharing of costs among the AEP East Companies

1 and stability in the costs of their customers. For these and other reasons that Mr.
2 Baker and I have discussed, I recommend that the changes to the Transmission
3 Agreement, reflected in Exhibit AEP-202, be accepted and made effective upon their
4 approval by Order of the Commission.

5 **Q. DO YOU HAVE ANYTHING FURTHER TO ADD?**

6 A. At this time I do not.