

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Application of Ohio Power Company and Columbus Southern Power Company for Authority to Merge and Related Approvals))))	Case No. 10-2376-EL-UNC
In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to §4928.143, Ohio Rev. Code, in the Form of an Electric Security Plan.))))))	Case No. 11-346-EL-SSO Case No. 11-348-EL-SSO
In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Approval of Certain Accounting Authority))))	Case No. 11-349-EL-AAM Case No. 11-350-EL-AAM
In the Matter of the Application of Columbus Southern Power Company to Amend its Emergency Curtailment Service Riders))))	Case No. 10-343-EL-ATA
In the Matter of the Application of Ohio Power Company to Amend its Emergency Curtailment Service Riders))))	Case No. 10-344-EL-ATA
In the Matter of the Commission Review of the Capacity Charges of Ohio Power Company and Columbus Southern Power Company.))))	Case No. 10-2929-EL-UNC
In the Matter of the Application of Columbus Southern Power Company for Approval of a Mechanism to Recover Deferred Fuel Costs Ordered Under Ohio Revised Code 4928.144)))))	Case No. 11-4920-EL-RDR

DIRECT TESTIMONY OF

ROY J. SHANKER

ON BEHALF OF

FIRSTENERGY SOLUTIONS CORP.

1 **I. INTRODUCTION, PURPOSE AND SUMMARY OF CONCLUSIONS**

2 **Q. WHAT IS YOUR NAME, BUSINESS ADDRESS, AND POSITION?**

3 A. My name is Roy J. Shanker. My business address is P.O. Box 60450, Potomac,
4 Maryland 20859. I am currently self-employed as an independent consultant.

5 **Q. WHAT ARE YOUR EDUCATIONAL AND PROFESSIONAL**
6 **QUALIFICATIONS?**

7 A. I have extensive experience spanning 38 years in the electric utility industry and
8 have been an active participant in the development of formal organized wholesale energy
9 markets since 1995. I have participated actively in the stakeholder process in all of these
10 markets, including in PJM Interconnection LLC (“PJM”). Much of this work has focused
11 on capacity markets. I have testified numerous times before the Federal Energy
12 Regulatory Commission (“FERC”) and state commissions about PJM’s Reliability
13 Pricing Model (“RPM”), related elements of the Reliability Assurance Agreement
14 (“RAA”), and the PJM tariff that governs capacity obligations. I have also participated in
15 technical sessions and in settlement discussions about these issues. I have a bachelor’s
16 degree from Swarthmore College and a master’s degree and doctorate from Carnegie-
17 Mellon University. A summary of my experience is attached as Exhibit RJS-1 to this
18 testimony.

19 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY RELATED TO AEP**
20 **OHIO’S RATES?**

21 A. Yes. I have submitted testimony before FERC addressing AEP Ohio’s filing for
22 cost-based capacity compensation in Docket Number ER11-2183-000. I also submitted
23 testimony before the PUCO related to the Ohio Power Company and Columbus Southern

1 Power Company (collectively, “AEP Ohio”) recent ESP filings in Cases Nos. 11-346-EL-
2 SSO; 11-348-EL-SSO;11-349-EL-AAM and 1-350-EL-AAM.

3 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING?**

4 A. I am testifying on behalf of FirstEnergy Solutions Corp. (“FirstEnergy
5 Solutions”).

6 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

7 A. The purpose of my testimony is to address the areas of the Stipulation related to
8 the establishment of a capacity transfer price for CRES providers and the associated
9 issues related to AEP Ohio’s entry in the RPM market.

10 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

11 A. In section II of my testimony I provide background information regarding the
12 PJM Tariff and PJM’s Reliability Assurance Agreement (“RAA”). This section also
13 discusses the recent litigation at FERC and the PUCO, including the recent PUCO
14 decision holding that Ohio’s state compensation mechanism shall be the RPM price,
15 rather than the cost-based price proposed by AEP Ohio. This section also discusses the
16 capacity pricing proposed by AEP Ohio in the Stipulation.

17 In section III of my testimony I address AEP Ohio’s argument that use of RPM
18 priced capacity constitutes a subsidy to CRES providers. I conclude that the use of RPM
19 priced capacity is not a subsidy to CRES providers. I also conclude that the use of cost-
20 based capacity as proposed by AEP Ohio is a subsidy to AEP Ohio because it forces
21 potential competitive suppliers to pay above market rates and discriminates against
22 shopping customers.

1 In section IV, I discuss the impacts of using any rate other than the RPM market-
2 based rate as the capacity transfer price. I discuss the market efficiency of this proposal,
3 and conclude that the only efficient transfer price of capacity is the market price.

4 In section V, I explain that RPM capacity transfer pricing should be maintained as
5 under current law. The PUCO has already set RPM capacity transfer pricing as Ohio's
6 state compensation mechanism, and this is also the price that has been used since AEP
7 Ohio joined PJM. I also address AEP Ohio's incorrect assertion that the proposed
8 Stipulation reflects a concession of \$856 million over the course of the ESP. I conclude
9 there is no point in moving from the correct capacity transfer price to the wrong price
10 during the majority of the term of the Stipulation, only then to return to the correct
11 pricing for the last year of the ESP.

12 In section VI, I address potential issues associated with AEP Ohio's transition to
13 RPM. These include potential issues associated with the termination of the pool
14 agreement, the possible transfer of generating assets, and the FRR elections of the other
15 AEP entities as impacted by AEP Ohio's participation in RPM.

16 In section VII, I address my overall recommendation to the Commission with
17 respect to the Stipulation. I recommend that starting with the beginning of this Proposed
18 ESP on January 1, 2012, the Commission retain the state compensation mechanism
19 already in place (and proposed to be maintained under the Stipulation as Ohio's state
20 compensation mechanism for a portion of the load until 2015 and for all load starting in
21 2015). Implementing this recommendation also entails eliminating the shopping caps
22 contained in the Stipulation and allowing unconstrained shopping at RPM pricing.

1 **Q. PLEASE BRIEFLY SUMMARIZE YOUR OVERALL CONCLUSIONS.**

2 A. First, commencing in the planning year 2015-16 the Stipulation provides that: (a)
3 AEP Ohio’s capacity should be entered into the RPM process; (b) that capacity should be
4 priced at the market rate; and (c) a competitive bid process will be instituted to meet AEP
5 Ohio’s SSO obligation. Assuming resolution of certain issues associated with entry into
6 RPM auctions, I would recommend that the Commission accept these aspects of the
7 proposed Stipulation.

8 Second, during the period from January 1, 2012 through May 31, 2015, the
9 Stipulation does not require that AEP Ohio take any of these steps. Instead, the
10 Stipulation creates a system which allows a portion of capacity to be sold at market rates,
11 and the remainder of the capacity to be sold at \$255/MW-day, a rate which will reduce or
12 eliminate shopping choice. For the very reasons that the steps referenced above are the
13 right long-run solutions, they are also simply “right” and should be implemented
14 immediately for transfer pricing for retail access without any limits. There is no valid
15 reason why the transfer pricing quantity of capacity at the PJM RTO price should be
16 limited to specified percentages of retail load during the transition period. Similarly,
17 there is no reason why pricing for load above these percentages should be at a premium
18 to market prices. All this accomplishes is an out-of-market transfer of value from
19 competitive suppliers and their load to AEP Ohio, or more likely just suppresses
20 competition. While I recognize settlements are a compromise process, the Commission
21 should be cognizant that sometimes there is a right answer and corresponding good
22 reasons to implement the correct pricing solution. Considerations of simply setting a
23 level playing field for all participants to ensure no unfair advantages going forward

1 regarding retail competition further supports maintaining the status quo with respect to
2 capacity pricing for CRES providers – with the status quo being that capacity pricing is
3 set at the RPM level for providers in AEP’s service territory.

4 Third, there is need for much greater detail with respect to the proposed
5 implementation of the switch of AEP Ohio into RPM, particularly with the remainder of
6 AEP apparently remaining as an FRR entity. The Commission and PJM as a whole need
7 to be assured that appropriate procedures are followed in terms of the capacity that would
8 be offered into PJM’s RPM, the capacity that would likely continue to be transferred
9 between AEP Ohio and the remainder of AEP, and the potential interactions of such
10 transfers with the overall market auction structure. I would recommend that much more
11 detail be provided regarding how AEP Ohio intends, if at all, to transact capacity with the
12 remainder of AEP that stays within the FRR construct.

13 **II. BACKGROUND OF CAPACITY ISSUES RELATED TO CRES PROVIDERS**
14 **AND RETAIL ACCESS**

15 **A. BACKGROUND INFORMATION REGARDING CAPACITY PRICING**

16 **Q. WHAT ARE THE CAPACITY CHARGES THAT AEP OHIO REFERS TO IN**
17 **THIS CASE?**

18 A. Under the RAA, AEP Ohio is obligated to procure its share of a regional capacity
19 requirement within PJM. Under the Stipulation, AEP Ohio has opted to meet its capacity
20 obligation through the RAA’s FRR alternative through 5/31/15 and then join RPM for the
21 planning year 6/1/15 to 5/31/16. In this proceeding, AEP Ohio uses these capacity
22 charges for two purposes. First, AEP Ohio uses this charge as a component in its
23 calculation of the “Competitive Benchmark Price” expected to result from a MRO,

1 compared to which the proposed ESP must be more favorable in the aggregate.¹ Second,
2 AEP Ohio also seeks to assess these capacity charges against CRES providers in AEP
3 Ohio's service territories.² This is further discussed in the testimony of FirstEnergy
4 Solutions witnesses Michael Schnitzer and Dr. Jonathan Lesser.

5 **Q. HOW DOES THE FRR ALTERNATIVE WORK?**

6 A. The FRR election allows eligible Load Serving Entities ("LSE") (such as AEP
7 Ohio) the option to submit a FRR capacity plan and meet a fixed capacity requirement as
8 an alternative to participating in the RPM capacity auction. See PJM Reliability
9 Assurance Agreement, Schedule 8.1, Sec. D ("FRR Capacity Plans"). AEP Ohio has
10 voluntarily made the FRR election since the inception of RPM and has continued this
11 election through the 2014/15 Delivery Year period. The Base Residual Auction ("BRA")
12 in which capacity is obtained by PJM and LSEs for the portion of AEP Ohio's ESP for
13 which AEP Ohio will remain under FRR has already occurred, and similarly LSEs in
14 AEP Ohio no longer have any opportunity for self-supply. By making the FRR election,
15 AEP Ohio avoids paying auction rates for capacity. Any eligible LSE may elect this
16 option, so long as they comply with the FRR requirements, including both the
17 identification of adequate reliability resources and notice.

18 **Q. DOES THE FRR ALTERNATIVE ACCOMMODATE RETAIL SWITCHING?**

19 A. Yes. The PJM RAA has provisions for FRR suppliers to charge for capacity to
20 load that departs from service by the FRR entity (in this case AEP Ohio) to another LSE
21 (such as a CRES provider). In accordance with the PJM RAA, these capacity charges

¹ See Direct Testimony of AEP Ohio witness Thomas, filed September 13, 2011, at 9-10.

² See Direct Testimony of AEP Ohio witness Munczinski, filed September 13, 2011, at 3-14.

1 have been established by the PUCO at a level equal to the current respective delivery
2 year (i.e., June 1, 2011-May 31, 2012) clearing price for the Regional Transmission
3 Organization (“RTO”) as established in PJM’s RPM. See Case No. 10-2929-EL-UNC
4 (December 8, 2010 Order ¶ 4).

5 The RAA also allows any eligible LSE within an FRR designated area that has
6 retail access to establish its own FRR plan.³ However, such an election can only occur
7 after the existing FRR plan for the region (e.g. AEP Ohio’s FRR plan) ends. This means
8 that once AEP Ohio has submitted an FRR plan, which must include all load within its
9 zone, independent FRR plans cannot be implemented by LSEs (such as CRES providers)
10 to meet the requirements of load they may obtain until the expiration of the existing FRR
11 plan. Effectively, LSEs such as FES and other suppliers are “locked in” through 5/31/15
12 – the portion of the ESP term during which AEP Ohio’s FRR is in place. Thus, the
13 earliest period an LSE could elect to self supply is for the planning year 6/1/15 to
14 5/31/16, but that will not be necessary at that point as AEP Ohio will participate in RPM
15 for that period in accordance with the Stipulation.

16 **Q. HOW ARE CAPACITY RATES NORMALLY SET IN PJM UNDER THE RPM?**

17 A. Capacity rates in PJM normally would be set via the RPM auction process that
18 constitutes PJM’s capacity market.⁴ The RPM auction process acquires all the necessary

³ See RAA Schedule 8.D.9.

⁴ In detail, LSE charges for capacity are made up of a weighted average of capacity clearing prices in the BRA, and three incremental auctions. These are clearing auctions, and each sets a corresponding capacity price for the locational delivery areas (“LDAs”) within PJM. Load prices would further be modified by adjustments between forecast quantities and actual load allocation shares and peak load responsibility. Generators are paid the price they clear at in any specific auction in which they are sold. For the sake of simplicity and clarity, the RTO price discussed in this testimony reflects BRA prices and not the final charge to load for any specific delivery year.

1 capacity needed for the LSEs participating in RPM. Eligible resources can be generation,
2 demand response, energy efficiency or qualified transmission enhancements. LSEs can
3 also offer their own eligible self-supply into the auction. LSEs are then assigned a cost
4 responsibility for their share of the procured capacity in all of the PJM auctions for any
5 given delivery year. LSEs may hedge their cost exposure in the auctions by obtaining or
6 arranging for capacity under bilateral agreements.

7 **Q. HOW DO CAPACITY SUPPLIERS PARTICIPATE IN THE AUCTIONS?**

8 A. Suppliers are subject to a must-offer obligation in the RPM markets. The
9 independent market monitor (“IMM”) has determined that the capacity markets are
10 structurally concentrated, meaning that each supplier theoretically has sufficient market
11 power to affect price. As a result, all supply offers are subject to price caps.

12 **Q. HOW ARE THE PRICE CAPS FOR SUPPLIER OFFERS SET?**

13 A. Offers must be based on a resource’s short run marginal costs, or “avoidable”
14 costs. Specifically, suppliers’ caps are established at the avoided cost rate (the “ACR”),
15 as specified in section 6.8 of Attachment DD of the PJM tariff. I discuss this further
16 below. Suppliers cannot make offers at their full embedded costs.⁵

17 **Q. WHAT IS THE LOGIC UNDERLYING THE ESTABLISHMENT OF OFFER**
18 **CAPS AT THE ACR VALUES?**

19 A. The intent of offer caps in general, for buyers or sellers, is to replicate the offer
20 and bid behavior that would be expected in a competitive environment. In the absence of
21 market power, individual suppliers would be expected to offer supplies at their short-term

⁵ Under certain circumstances floor rates may apply to the offers for new competitive supply.

1 “to go” costs. This would represent the costs that could be avoided by either retiring or
2 “mothballing” an existing unit for a year. The ACR values used in the PJM auction
3 process reflect an attempt to administratively set the determination of such “to go” costs,
4 allowing not only for typical marginal short-term costs, but also allowing for the types of
5 incremental investment that would be expected with maintaining large, capital intensive
6 projects.

7 **Q. DOES RPM OR THE RAA PROVIDE FOR AEP OHIO TO RECOVER ITS FULL**
8 **EMBEDDED COSTS OF CAPACITY?**

9 A. No. RPM does not guarantee full recovery of all costs related to capacity for any
10 supplier of capacity, and neither does the FRR alternative. Nothing in the RAA provides
11 for AEP Ohio or any supplier participating under the FRR alternative to recover its full
12 embedded costs. The RAA does address default pricing options in FRR regions for LSEs
13 operating under retail access programs to receive some capacity payments from migrating
14 load. These alternatives may be related in some fashion to costs or reflect other
15 compensation established by a state regulatory authority. In the absence of a specific
16 state designation, this capacity payment for migrating load defaults to the PJM RPM
17 auction results for the unconstrained RTO area. However, the RAA and tariff do not
18 specifically authorize full embedded cost-based payments. This is discussed further
19 below.

20 **Q. HOW DOES THE FRR ALTERNATIVE ACCOUNT FOR CAPACITY COSTS**
21 **ASSOCIATED WITH RETAIL CHOICE?**

22 A. Under the FRR alternative, a CRES provider such as FES can get its capacity
23 from AEP Ohio to serve retail customers. Under the current structure in Ohio, because

1 AEP Ohio has elected the FRR option for all load in its region, the Ohio CRES provider
2 sells energy to retail customers at a negotiated rate that includes the PUCO-approved
3 AEP Ohio capacity charge for the departing load. Effectively, the CRES provider is
4 buying the capacity from AEP Ohio at the PUCO-approved rate and providing it to the
5 departing load it now serves. Alternatively, in the long-term, CRES providers also have
6 the option to supply their own capacity by making their own FRR election if they want to
7 avoid AEP Ohio’s capacity charge. This latter choice, however, in accordance with PJM
8 requirements must be made three years in advance – before the applicable Base Residual
9 Auction for a specific delivery year. After that point, if no election is made, the CRES
10 provider effectively is locked-in to obtaining capacity from AEP Ohio for the delivery
11 year. However, since the current AEP Ohio elections do not expire until after the
12 2014/15 Delivery Year period, CRES providers do not have the opportunity to self supply
13 during the portion of the ESP period when AEP Ohio will be under FRR provisions.

14 **Q. DOES THE RAA DISCUSS COMPENSATION TO AEP OHIO IF A CUSTOMER**
15 **SWITCHES FROM AEP OHIO TO A CRES PROVIDER?**

16 A. Yes, under Schedule 8.1, Section D.8, the RAA provides:

17 “In the case of load reflected in the FRR Capacity Plan that switches to an
18 alternative retail LSE, where the state regulatory jurisdiction requires
19 switching customers or the LSE to compensate the FRR Entity for its FRR
20 capacity obligations, such state compensation mechanism will prevail. In
21 the absence of a state compensation mechanism, the applicable alternative
22 retail LSE shall compensate the FRR Entity at [rest-of-pool or “RTO”
23 RPM clearing prices], provided that the FRR Entity may, at any time,

1 make a filing with FERC under Sections 205 of the Federal Power Act
2 proposing to change the basis for compensation to a method based on the
3 FRR Entity's costs or such other basis shown to be just and reasonable.”

4 Thus the default compensation is the RTO capacity clearing price, which itself is
5 based on mitigated avoided cost or “to go” offers. There is no mention in the RAA of
6 full embedded costs. The alternatives to this default rate are to be based on some cost-
7 related basis or other just and reasonable compensation. As I discuss, I believe the most
8 appropriate mechanism is the RPM pricing, but if any cost-basis were to be considered it
9 would have to be linked to marginal or “to go” cost concepts and clearing prices similar
10 to the RPM default provision and not be based on full embedded cost recovery.

11 **B. FERC/PUCO LITIGATION REGARDING CAPACITY CHARGES**

12 **Q. WHAT CAPACITY CHARGE HAS HISTORICALLY BEEN USED BY AEP**
13 **OHIO?**

14 A. AEP Ohio historically has been compensated at RPM market-based prices.⁶ As
15 of September 27, 2011 (and effective through May 31, 2012), AEP Ohio charged CRES
16 providers approximately \$110/MW-day,⁷ which is the PJM RPM RTO clearing price for
17 the 2011/2012 delivery year.

⁶ Direct Testimony of AEP Ohio witness Munczinski filed September 13, 2011 at 7:7.

⁷ The PJM RTO clearing price is subsequently adjusted and is then multiplied by a scaling factor and pool requirement and loss factor to determine the total price paid by CRES providers. See Case No. 10-2929, AEP February 7, 2011 Reply Comments at Attachment 2, page 72 of 156; AEP November 24, 2010 FERC Filing in Case No. ER11-2183-000, Attachment B, page 59 of 63.

1 **Q. HAS AN APPLICATION TO ESTABLISH CAPACITY CHARGES TO**
2 **MIGRATING RETAIL LOAD IN AEP OHIO UNDER SCHEDULE 8.1, SECTION**
3 **D.8 BEEN LITIGATED RECENTLY AT FERC?**

4 A. Yes. On November 24, 2010, in FERC Case No. ER11-2183-000, AEP Ohio
5 filed new “capacity compensation formulae.” AEP Ohio proposed that the same cost-
6 based capacity charges they use in this proceeding would be charged to CRES providers
7 for load that migrated from AEP Ohio to the CRES provider. AEP Ohio argued that the
8 RPM RTO clearing prices that it was charging (and had been charging since the inception
9 of CRES alternatives) to LSEs for capacity did not permit AEP Ohio to fully recover its
10 costs. AEP Ohio therefore proposed to change the basis of compensation for its FRR
11 capacity obligations to cost-based recovery. AEP Ohio omitted any explanation of the
12 PUCO retail paradigm in its FERC filing. AEP Ohio also omitted any discussion of
13 whether capacity charges under the RAA were intended to provide full compensation (by
14 themselves) for all embedded costs.

15 **Q. WHAT ARE THE RTO CLEARING PRICES FOR THE TERM OF THE ESP?**

16 A. AEP Ohio’s proposed new ESP covers portions of 5 planning years, and the RTO
17 prices vary from planning year to planning year. PJM’s RPM auctions for the ESP period
18 have cleared at \$110.04/MW-day (for 2011-2012), \$16.46/MW-day (for 2012-2013),
19 \$27.73/MW-day (for 2013-2014), and \$125.99/MW-day (for 2014-2015). The auction
20 for the planning period 2015-2016 will be held in 2012. These results are indicative of
21 the current large surplus of capacity in the RTO region, lower demand, and increased
22 participation by demand response. Together they represent the best estimate currently
23 available for the market value of such capacity for the designated periods.

1 **Q. WHAT WAS AEP OHIO'S PROPOSED CAPACITY CHARGE FOR OPCO AND**
2 **CSP IN ITS FILING IN FERC CASE NO. ER11-2183-000?**

3 A. The rate proposed by CSP was \$310.04/MW-day.⁸ The rate proposed by OPCo
4 was \$401.01/MW-day.⁹ AEP Ohio's combined rate was \$388/MW-day using 2009
5 numbers.¹⁰

6 In its filing in the ESP PUCO proceeding, AEP Ohio used the combined value of
7 \$347.97/MW-day (combined CSP-OPCo) and sought to apply this same price for the
8 entire term of the ESP.¹¹ In the capacity proceeding (Case No. Case No. 10-2929-EL-
9 UNC), AEP Ohio sought to apply a combined cost-based capacity charge of
10 \$355.72/MW-day.¹²

11 **Q. DID FERC APPROVE AEP OHIO'S PROPOSED CAPACITY COST**
12 **INCREASE?**

13 A. No. In its Order dated January 20, 2011, FERC held that the PUCO had adopted,
14 as provided for by the RAA, the use of the RPM auction price as the state compensation
15 mechanism for capacity compensation related to load migrating to CRES providers.
16 Accordingly, FERC rejected AEP Ohio's proposal.¹³ In so ruling, FERC relied upon the
17 PUCO's order dated December 8, 2010, in Case No. 10-2929-EL-UNC.

⁸ AEP November 24, 2010 FERC Filing in Case No. ER11-2183-000, Attachment B, page 59 of 63.

⁹ AEP November 24, 2010 FERC Filing in Case No. ER11-2183-000, Attachment B, page 59 of 63.

¹⁰ AEP November 24, 2010 FERC Filing in Case No. ER11-2183-000, Attachment A, page 11 of 63.

¹¹ See Case No. 11-346 et al., Testimony of AEP Ohio witness Laura J. Thomas, Exhibit LJT-1; Columbus Southern Power Company's and Ohio Power Company's Response to Industrial Energy Users-Ohio Discovery Request, Case No. 11-346-EL-SSO and 11-348-EL-SSO, Second Set, INT-092, Attachment 1; Columbus Southern Power Company's and Ohio Power Company's Response to OCC RPD-036, Attachment 1.

¹² See Testimony of AEP Ohio witness Kelly D. Pearce at 20:10, filed August 31, 2011.

¹³ See American Electric Power Serv. Corp., 134 FERC ¶ 61,039 (2011).

1 **Q. YOU MENTIONED A PUCO ENTRY DATED DECEMBER 8, 2010. WHAT**
2 **WAS THE PUCO’S DECISION IN THAT ENTRY?**

3 A. The December 8, 2010 PUCO Entry formally adopted “the current capacity
4 charges established by the three-year capacity auction conducted by PJM, Inc.” as the
5 state capacity compensation mechanism “during the pendency of this review.” Thus,
6 while I can’t offer a legal opinion, as the PUCO’s review is ongoing, and as the FERC
7 has confirmed the applicability of the RAA, AEP Ohio has no choice under the terms of
8 the RAA but to use the applicable RPM capacity charges for the RTO.

9 **Q. HAS AEP OHIO CHALLENGED THE FERC AND PUCO DECISIONS?**

10 A. Yes, AEP Ohio has filed applications for rehearing in both cases. Also, AEP
11 Ohio has filed a Complaint pursuant to Section 206 of the Federal Power Act to amend
12 Schedule 8.1, Section D.8, of the RAA, to permit it to file for new wholesale capacity
13 charges.

14 **C. CAPACITY PRICES PROPOSED BY AEP OHIO**

15 **Q. WHAT CAPACITY CHARGE HAS HISTORICALLY BEEN USED BY AEP**
16 **OHIO?**

17 A. AEP Ohio historically has been compensated at RPM RTO market based prices,¹⁴
18 and pursuant to the PUCO’s Entry in Case No. 10-2929-EL-UNC such RPM RTO
19 pricing is currently Ohio’s state compensation mechanism as provided for under the PJM
20 RAA.

¹⁴ Direct Testimony of AEP Ohio witness Munczinski filed September 13, 2011 at 7:7.

1 **Q. DID OTHER PARTIES OPPOSE THE AEP OHIO CAPACITY PROPOSAL?**

2 A. Yes. Various intervenors opposed this request, arguing that the appropriate
3 capacity rate is the market rate for capacity. The PUCO's Staff also opposed this request,
4 finding that AEP Ohio's proposal was "not reasonable."¹⁵ Staff concluded that market-
5 based capacity charges, RPM charges, should be used instead.¹⁶ In accordance with this
6 widespread opposition, AEP Ohio's proposed cost-based charge is inappropriate, and
7 RPM market-based pricing should be used instead for both MRO and CRES pricing, as
8 has been previously approved by the FERC and the Commission.

9 **Q. DOES THE STIPULATION ADDRESS CAPACITY PRICING?**

10 A. Yes. In the Stipulation filed on September 7, 2011, the Signatory Parties
11 recommended that the Commission set the capacity charge in Case No. 10-2929-EL-
12 UNC to be the PJM RPM-based rate, except that an arbitrary interim rate of \$255/MW-
13 day would be charged to CRES providers for all shopping above certain thresholds.¹⁷
14 The arbitrary interim rate is well above market, and in fact is above AEP Ohio's actual
15 non-stranded costs as explained by FES witness Lesser. Such market-based pricing
16 would also apply universally after June, 2015. The fact that AEP Ohio admits that the
17 \$255/MW-day charge is not cost-based, and is simply an arbitrary result of a black box
18 settlement, does nothing to change my recommendation that RPM market-based pricing
19 should be used for both the actual price charged to CRES providers and also used for

¹⁵ Direct Testimony of Staff witness Hisham M. Choueiki, filed August 4, 2011 at 4.

¹⁶ Direct Testimony of Staff witness Hisham M. Choueiki, filed August 4, 2011 at 7-8.

¹⁷ See Stipulation pg. 20, ¶2(b)(1).

1 purposes of evaluating the MRO when comparing the Revised ESP to the expected
2 results of an MRO.

3 **III. USING RPM PRICING DOES NOT CREATE A SUBSIDY TO CRES**
4 **PROVIDERS.**

5 **Q. WOULD AEP OHIO BE PROVIDING AN ANTI-COMPETITIVE SUBSIDY TO**
6 **CRES PROVIDERS IF AEP OHIO PROVIDES CAPACITY TO CRES**
7 **PROVIDERS UNDER THE TERMS SPECIFIED BY FERC AND THE PUCO?**

8 A. No. As discussed above, FERC and the PUCO have already determined that the
9 appropriate capacity charges to CRES providers are the applicable RPM charges for the
10 RTO. However, even leaving these determinations aside, the use of PJM RPM capacity
11 charges is not anti-competitive for three reasons. First, AEP Ohio currently charges
12 CRES providers RPM pricing, and is seeking to change the current system now as part of
13 this Stipulation,¹⁸ when CRES providers no longer have the ability to make their own
14 FRR election during the portion of the ESP period that AEP Ohio is under FRR. If
15 anything, under these locked-in conditions, it is the pricing as proposed by AEP Ohio that
16 is anti-competitive as it forces potential competitive suppliers to pay above-market rates
17 and discriminates against shopping customers for a period of time when CRES providers
18 have no choice to self-supply because the time for making that election has already
19 passed. Second, if the objective is to “show” a market-based rate to customers, which is
20 the underlying intent of retail competition in Ohio, these RPM capacity prices are the best
21 indicators of market price for the associated service. Third, AEP Ohio would not be
22 subsidizing CRES providers by providing capacity below AEP Ohio’s purported “costs”
23 because, among other reasons, AEP Ohio’s cost calculations are inaccurate. As FES

¹⁸ See Stipulation ¶ IV.2(b)(1).

1 witness Lesser explains in detail, AEP Ohio's "cost" calculation is inflated, includes
2 improper costs, and fails to account for necessary offsets for sales of energy. But the
3 heart of the matter is a presumption by AEP Ohio that it is entitled to full embedded costs
4 absent any offsets, and that any payment less than this constitutes a subsidy to the CRES
5 provider. There is no reason for such a presumption as a matter of law or economics. In
6 terms of economic efficiency this is also wrong. The right price for transfers is the
7 market price. It is the only result that avoids subsidies as the payments are equal to the
8 opportunity costs that AEP Ohio has for a market disposition (not an assumed regulatory
9 disposition) of the capacity. If AEP Ohio were free to sell this capacity, the best
10 approximation of what it would receive is the RPM RTO rate.

11 **Q. WOULD YOU EXPAND ON WHY AEP OHIO'S BEHAVIOR WOULD BE**
12 **CONSIDERED ANTI-COMPETITIVE?**

13 A. Yes. Setting aside whether there are any specific legal issues relating to AEP
14 Ohio's status as a regulated utility, the behavior in this situation is a classic example of
15 the exercise or attempt to exercise market power by a monopolist. Market power is
16 typically defined as the ability to unilaterally impact prices, as contrasted to normal
17 market competitive conditions where no individual party has this ability, and prices are
18 set by the atomistic independent behavior of supply and demand. The exercise of market
19 power, which then constitutes the anti-competitive behavior, is when the ability is used to
20 actually "move" prices.

21 The market of interest here is not the traditional retail supply of power by a
22 vertically integrated monopoly subject to state regulation, but the competitive supply of
23 retail electric service by CRES providers. It is within this context, where my

1 understanding is that there is an explicit legislative mandate to promote competition¹⁹,
2 that AEP Ohio may be attempting to exercise market power with respect to the supply of
3 mandatory capacity resources. AEP Ohio’s conduct amounts to a classic “bait and
4 switch” which has resulted from having a monopoly over the capacity resources
5 necessary to support retail competition in their service territory by other potential
6 suppliers. The “bait” has been the historic use of the market-based RPM RTO value for
7 capacity as the transfer price for capacity supplied for CRES providers. This removed
8 any need or motivation for CRES providers to obtain their own capacity. The “switch” is
9 the unilateral attempt to change that pricing from market-based to embedded costs under
10 circumstances where CRES suppliers now have no opportunity to seek alternative
11 capacity supplies other than from AEP Ohio. In this context AEP Ohio has a monopoly
12 and potentially absolute market power over the supply of capacity for at least a three-year
13 horizon. Granting its pricing request would be the equivalent of allowing the exercise of
14 market power and frustrating retail competition.

15 **IV. THE ONLY APPROPRIATE CAPACITY TRANSFER PRICE IS THE RPM**
16 **PRICE.**

17 **Q. WHAT DO YOU FEEL IS THE MOST APPROPRIATE CAPACITY TRANSFER**
18 **PRICING FORMULA?**

19 A. There are two relevant perspectives here, long and short run. In the long run, I
20 believe the appropriate capacity transfer price is the RPM RTO auction price. The RPM
21 auction price to value capacity transferred from the FRR entity (AEP Ohio) to CRES
22 providers is the “right price” in terms of economic efficiency. It is the closest
23 approximation to the market value of capacity that is available. We maximize efficiency

¹⁹ See O.R.C. § 4928.02.

1 by pricing or transferring commodities at their market price, so that there is a rational
2 trade-off between the value captured by utilizing a good versus selling it in the market.

3 Leaving aside the economic efficiency issue, if the Stipulation is not approved
4 and if the transfer price is set at a cost-based rate higher than market price, starting in
5 three years CRES providers would have an incentive to divert capacity into AEP Ohio's
6 FRR region in order to obtain the higher capacity payments.²⁰ Because of the specific
7 RPM market rules regarding FRR plans, pricing at something other than the market rate
8 would create significant distortions by effectively encouraging and justifying behavior
9 that would otherwise be seen as the equivalent of economic withholding. In that
10 situation, the wrong price incentives would likely raise prices for all consumers in the rest
11 of PJM, while also potentially forcing AEP Ohio into purchasing above-market supplies
12 from CRES providers who shifted more supply into the FRR plan than the final retail
13 loads that they were able to attract.

14 Similarly, there are inefficient results if the transfer price for capacity is set too
15 low. Efficient supplies will flee the market to be used in potentially lower valued
16 applications, and CRES providers would be encouraged to "lean" on AEP Ohio for
17 capacity, rather than appropriately be indifferent between a market-based price transfer
18 and providing their own supplies.

²⁰ AEP Ohio admitted that if cost-based capacity rates are used, CRES providers could elect to supply their own capacity into AEP Ohio's FRR plan so long as the election was made three years prior to the delivery year. Direct Testimony of Kelly Pearce 23:14-16, Case No. 10-2929, filed August 31, 2011. If the CRES provider overestimated the load it will serve, AEP Ohio would become short of capacity and be forced to compensate the CRES provider for the CRES provider's capacity at the higher cost-based rate. See id. at 25:7-11, 26-27 (discussing this issue and making several recommendations to mitigate the market-distorting impact of using a cost-based capacity rate). As recognized by AEP Ohio, use of a cost-based capacity rate would distort the market and create improper incentives for CRES providers. Of course, these market distorting effects are eliminated by simply using the RPM price as the state compensation mechanism for capacity.

1 **Q. IS USING THE RPM RTO PRICE ALSO THE “RIGHT” PRICE IN THE SHORT**
2 **RUN?**

3 A. Yes. While the proposed Stipulation settles the long-run pricing inefficiency by
4 eventually adopting market-based pricing, in the short-run, the Stipulation still provides
5 for above-market payments to AEP Ohio from competitive suppliers. To the extent that
6 competitive suppliers can divert resources from other applications, this again would
7 create an allocative inefficiency by creating an incentive to remove resources from where
8 they are valued more in order to displace mispriced lower valued AEP Ohio resources.
9 But even if such resources cannot be displaced, the use of a higher than market price has
10 other undesirable impacts. In the interim until the 2015-16 delivery year, the use of
11 higher than market prices results in any shopping customer above the “caps” paying more
12 than they should for capacity. This both discourages and slows the development of new
13 competitive suppliers, and also supplies a competitive advantage now, and going forward,
14 for AEP Ohio in its ability to compete for retail customers.

15 **Q. WHAT CONCLUSION DO YOU DRAW FROM THESE ADVERSE IMPACTS?**

16 A. Recognizing the basic truth about efficiency and the “right price” lead to my
17 recommendation that the transfer price be maintained at the current level set by the
18 Commission – the RPM RTO auction value. Because supply is currently locked down,
19 and the “right” prices will apply after June, 2015, these incentives have been eliminated
20 for the long run, with the remaining impact between now and May, 2015 simply being
21 the unjustified subsidy between CRES providers and their customers to AEP Ohio. It
22 seems irrational to move from the status quo, which has the right pricing, to an interim

1 alternative that creates these subsidies and inefficiencies, particularly when at the end of
2 three years it is agreed to go back to the correct pricing.

3 **Q. WHY DID YOU LINK CAPACITY PRICING TO YOUR RECOMMENDATION**
4 **THAT AEP OHIO PARTICIPATE IN RPM?**

5 A. The simplest solution to the capacity pricing issue is for all load to pay a market-
6 based price. If some load is priced at market and some load is priced at the much higher
7 cost-based value proposed by the Stipulation, then the Stipulation discriminates among
8 customers, eliminates competition, and leads to inappropriate incentives in the
9 marketplace. As proposed, to the extent that CRES providers obtain load above the
10 proposed caps they will be paying AEP Ohio above-market prices. This is a continuing
11 advantage for AEP Ohio in terms of insulating AEP Ohio from current market pressures,
12 and allowing AEP Ohio to cross-subsidize participation in other markets (e.g., retail
13 supply in the rest of PJM). Eliminating this inappropriate advantage is exactly the right
14 thing to do if the Commission seeks a level playing field, diversity, and depth of
15 competitive suppliers for retail services, as it must to fulfill its own mission statement to
16 “facilitate[e] an environment that provides competitive choices.”²¹

17 Pricing capacity at market rates complements my understanding of one of the
18 fundamental objectives of the relevant Ohio legislation in terms of promoting retail
19 competition. Everyone should have a common incentive to make resources available at
20 the “right” price, and transfer/purchase/sell at competitive levels. Under RPM, PJM is
21 implementing a procurement system to supply the lowest cost spot requirements of all
22 load from the “best” set of capacity resources that can reliably meet adequacy

²¹ <http://www.puco.ohio.gov/puco/index.cfm/about-the-commission/mission-and-commitments/>

1 requirements. The FRR option under the RAA does not change this analysis in any way,
2 as CRES providers have access to this capacity at the market price.

3 Another advantage that shouldn't be abandoned until June 2015 is that pricing for
4 SSO default service similarly becomes equally transparent when a competitively priced
5 supply portfolio is used to meet this demand. Price transparency complements the ability
6 to institute full competitive supply not only for shoppers, but default service as well.
7 Maintaining price transparency and encouraging retail competition can all be done in
8 conjunction with any type of hedging or risk management function that CRES providers
9 want to implement or the Commission puts in place for competitive or default suppliers.

10 **Q. DID THE PROPOSED STIPULATION RECOGNIZE THESE BENEFITS?**

11 A. De facto it did. Two fundamental elements of the Stipulation rest on converting
12 the AEP Ohio supply and load to the RPM capacity construct and in turn pricing capacity
13 to CRES providers at the RPM auction price. While settlement processes are often
14 characterized as "black box" with respect to many elements, it is important to understand
15 when specific elements are the right thing to do. Too often my experience has been that
16 compromise is used as a justification for poor market design, and inefficient and
17 inequitable results. That certainly would be the case here if the transition pricing for
18 capacity for the period 1/1/12 to 5/31/15 went into place.

19 **Q. IF THE COMMISSION RETAINS THE CAPACITY PRICING LIMITATIONS**
20 **AS PROPOSED IN THE STIPULATION, IS THERE ANY WAY AEP OHIO CAN**
21 **MITIGATE THE ANTI-COMPETITIVE IMPACT OF THIS LIMITATION?**

22 A. Yes. AEP Ohio can mitigate a great deal of the anti-competitive impact of the
23 capacity pricing limitations simply by allowing CRES providers to effectively self-supply

1 their own capacity instead of being forced to purchase it from AEP Ohio during the
2 period prior to the 2015-16 RPM auction. PJM rules allow AEP Ohio to substitute
3 capacity from other sources into its FRR plan. If AEP Ohio would make such an election
4 on behalf of CRES providers for capacity amounts sufficient to meet the CRES
5 providers' requirements, then competitive shopping will become possible because CRES
6 providers will not be forced to pay the above-market rates for capacity contained in the
7 Stipulation, AEP Ohio's capacity will be freed up for sale elsewhere (presumably at
8 market prices), and the anti-competitive impact of the capacity pricing limitation will be
9 mitigated.

10 **V. RPM CAPACITY TRANSFER PRICING SHOULD BE MAINTAINED AS**
11 **CURRENTLY IMPLEMENTED BY THE COMMISSION.**

12 **Q. PLEASE EXPLAIN YOUR RECOMMENDATIONS REGARDING THE**
13 **RETENTION OF THE COMMISSION'S CURRENT CAPACITY TRANSFER**
14 **PRICING SET AT THE PJM RTO AUCTION LEVELS?**

15 A. The state's current policy, which has been in place historically and which was
16 reaffirmed by the Commission on December 8, 2010, results in the correct prices. There
17 is no point in moving to the wrong prices for a significant portion of the term of the
18 Stipulation just to return back to the correct pricing for the final year of the Stipulation.
19 The only objective served by this is one of compromise to transfer funds to AEP Ohio
20 and provide AEP Ohio with a competitive advantage with respect to other firms that
21 would be forced to pay above-market prices for capacity should their market share
22 exceed the agreed upon retail caps. The charge to CRES providers of \$255/MW-day for
23 all shopping above certain thresholds will result in shopping being limited to those
24 thresholds, thus not making market-based capacity available to all customers until 6/1/15.

1 **Q. HASN'T AEP OHIO INDICATED THAT THE PROPOSED STIPULATION**
2 **REFLECTS A CONCESSION OF \$856 MILLION OVER THE COURSE OF THE**
3 **ESP WITH RESPECT TO CAPACITY PAYMENTS BY CRES SUPPLIERS IF**
4 **SALES GO TO THE TARGETED CAPS?**

5 A. Yes. But I think the issue here is one of perspective. Mr. Hamrock, citing Mr.
6 Allen's conclusions, states "Mr. Allen has estimated that the benefit of discounting the
7 price of capacity to be provided to CRES providers during the ESP in order to encourage
8 shopping has a present value of \$856 million."²² But that assumes that the full
9 embedded costs for capacity, with no adjustments at all from the proposed average of
10 \$355.72/MW day, would have been in place rather than the status quo RPM RTO auction
11 value. It really isn't much of a concession to say you are reducing prices by almost \$1
12 billion dollars if you have never been granted authority to impose the improper charge
13 that you were seeking. I prefer to look at it from another perspective, that is, how much
14 would AEP Ohio have been charging customers above market for all their capacity
15 versus what would have been the cost to AEP customers had the "right" RPM
16 competitive prices been in effect. In that light, the \$255/MW-day is a very big cost, and
17 not a benefit at all.

18 **Q. WHY IS THIS THE APPROPRIATE PERSPECTIVE?**

19 A, This is the right way to look at the question for several reasons. First, and most
20 obviously, AEP has no ability to charge its claimed full "embedded cost" rate for
21 shopping customers at this time. The RAA agreement and the current PUCO policy, as
22 well as the actual order of the PUCO, result in the lower PJM RPM rates. This is also
23 consistent with the level of charges AEP has been charging since it joined PJM. Second,

²² Direct Testimony of Joseph Hamrock 20:17, Case No. 11-346, filed September 13, 2011.

1 it is highly debatable that the \$355/MW-day value is even close to an accurate
2 compensatory level. In testimony by FES witnesses Lesser and Schnitzer, far lower
3 “cost” levels for AEP Ohio capacity are established. So we are basically left with an
4 asserted benefit that says “if I were successful I could have gotten a result to overcharge
5 you by several billion dollars, so, customers benefit by settling for only an additional
6 billion of excess recovery”.

7 **Q. IS IT POSSIBLE TO ESTIMATE HOW MUCH AEP OHIO WOULD HAVE**
8 **CHARGED ITS CUSTOMERS FOR CAPACITY IN EXCESS OF MARKET**
9 **RATES?**

10 A. Yes. Mr. Munczinski provides an estimate of the “cost” to AEP Ohio over the
11 ESP period if 100% shopping penetration occurred, which is the amount of overcharge
12 above market between AEP Ohio’s desired reimbursement and the RPM competitive
13 market rate. “At 100% shopping, the financial impacts to AEP Ohio if RPM-based
14 pricing were to remain would exceed \$485M for 2011, \$771M for 2012, and \$971M for
15 2013.”²³ So by its own testimony, for the ESP period **AEP Ohio was seeking \$2.227**
16 **billion dollars (the sum of these three values) above market-based rate recovery.** In
17 this context, one sees the \$856 million that might not be collected from retail competitors
18 in a much different light.

19 **Q. ARE THERE OTHER INDICATIONS OF THE LEVEL OF EXCESS CHARGES**
20 **THAT AEP OHIO COLLECTIVELY WOULD CAPTURE BY OBTAINING ITS**
21 **FULL CLAIMED COST-OF-SERVICE RATES VERSUS MARKET-BASED**
22 **PAYMENTS?**

23 A. Yes. AEP Ohio witness Horton in Case No. 10-2929-EL-UNC gave a very
24 distorted and incorrect picture of claimed additional charges that AEP Ohio would have

²³ Direct Testimony of AEP Ohio witness Munczinski, filed September 13, 2011, at 7:19-20.

1 paid had it operated under the RPM paradigm instead of FRR. From his calculations one
2 can estimate both how much he misrepresents these so-called additional costs, and also,
3 determine what the actual **reduced** total charges would have been to AEP Ohio
4 customers had RPM pricing been in effect.

5 In his evaluation of the benefits of the FRR option over RPM, Mr. Horton claims
6 that RPM would have resulted in AEP Ohio having to carry 19.2% in reserves for the
7 2007/08 auction instead of the 15% target.²⁴ This additional capacity was added due to
8 the descending nature of the RPM demand curve. He claimed that by being in FRR AEP
9 Ohio customers “saved” having to purchase an additional 4.2% “that wasn’t necessary to
10 meet the Company’s internal load obligations.”²⁵

11 Mr. Horton estimated the value of these “savings” in reference to AEP Ohio’s
12 total company peak load in PJM of approximately 22,000 MW. He claimed a resulting
13 savings of 4.2% of 22,000 MW (rounded to 925 MW) at the final billing rate of RPM
14 capacity price of \$46.73 would be \$15.7 million (925 x \$46.73 x 365).²⁶ He views this as
15 a benefit of not participating in RPM.

16 **Q. IS THIS A PROPER ESTIMATE OF SAVINGS THAT AEP OHIO ACHIEVED**
17 **BY NOT BEING IN RPM AND UNDER FRR?**

18 A. No. Mr. Horton and other AEP Ohio witnesses make two fundamental errors:
19 first, assuming that AEP Ohio is entitled to full embedded costs; and second, failing to
20 recognize that total payments under RPM decrease as quantity procured increases.

²⁴ Direct Testimony of AEP Ohio witness Horton, filed August 31, 2011, at 5-6.

²⁵ Direct Testimony of AEP Ohio witness Horton, filed August 31, 2011, at 5-6.

²⁶ Direct Testimony of AEP Ohio witness Horton, filed August 31, 2011, at 7:6.

1 The right perspective of cost impacts to AEP Ohio customers is to calculate what
2 22,000 MW of peak capacity plus 15% reserves would cost under the rates AEP Ohio
3 would like to charge (e.g., say approximately the \$350/MW-day that AEP Ohio claims as
4 its true cost of capacity) versus what 22,000 MW of capacity plus 19.2% reserves would
5 cost if purchased under RPM (\$46.73 per MW-day). Using AEP Ohio’s \$350/MW-day
6 price, even with its lower reserve margin, creates a huge one-year increase in costs to
7 AEP Ohio customers of \$2.785 billion dollars in above-market payments for a lower
8 level of system reliability (15% versus 19.2% reserves).²⁷

9 Mr. Horton even helps us calculate the impact of AEP Ohio system embedded
10 cost-based charges to customers versus RPM costs for the first eight RPM auctions that
11 have been concluded. He notes that for these eight auctions the difference in increased
12 reserve margins over AEP requirements was 3.5% and the average RPM clearing price
13 was \$90, so he mistakenly concludes that staying out of RPM “saved” AEP Ohio
14 customers \$25 million per year.²⁸ However, if we again do the correct calculation, we
15 see that by not participating in RPM, and if AEP Ohio had been allowed to recover the
16 \$350 per MW-day for that period, AEP Ohio apparently would have recovered a
17 **staggering \$19 billion in above-market capacity charges from its customers for the**
18 **eight year period.**²⁹

19 While it is true that over a business cycle the scale of the differences might be
20 lower, given today’s uncertain regulatory environment, starting off with a nearly \$20

²⁷ The calculation is $(22,000 \times 1.15 \times \$350 \times 365) - (22,000 \times 1.192 \times \$46.73 \times 365) \sim \$2.785$ billion. In reality AEP Ohio captures some of the additional reliability of RPM having committed over the minimum 15% installed reserve target by leaning on the resources of the entire PJM.

²⁸ Direct Testimony of AEP Ohio witness Horton, filed August 31, 2011, at 7:24.

²⁹ $(22,000 \times 1.155 \times \$350 \times 365) - (22,000 \times 1.19 \times \$90 \times 365)$ times 8 years \sim \$19 billion.

1 billion “lead” in over-collections versus market prices would not have been a bad cushion
2 – all a cost to customers. Further, it is likely that relatively depressed prices will continue
3 in the near future for the RTO pricing.

4 I have continually been amazed that AEP Ohio in any forum suggests that the
5 addition of “extra” reserves procured under RPM increases costs. It is a mathematical
6 impossibility given the function/design of the RPM demand curve. It simply cannot
7 happen. Total costs to customers must go down as dedicated reserves and total reliability
8 go up as this is a structural definition of the RPM model. Total costs to customers must
9 go down because as the curve is defined, for any given increase in total supply, prices
10 decline for all supply by a greater percentage. Under the definition of the Variable
11 Resource Requirement (“VRR”) curve in Attachment DD of the PJM Tariff, the slope of
12 the curve for the portion between Installed Reserve Margin (“IRM”) plus 1% and IRM
13 plus 5% results in a 20% decrease in the payment for all supply for every 1% increase in
14 procured supply. With the Tariff-specified slopes for the VRR curve, the only impact
15 that higher reserve margins and total supply can have is to decrease total payments by
16 load.

17 **Q. WHAT CONCLUSIONS DO YOU DRAW FROM THIS WITH RESPECT TO**
18 **THE SPECIFIC TERMS OF THE STIPULATION?**

19 A. I think it is obvious. The right end-state has been identified, and depending on
20 perspective AEP Ohio in total could be seeking recovery of approximately \$2.227 billion
21 in above-market capacity payments during the proposed ESP period. AEP Ohio now
22 suggests that by putting \$856 million at risk to lower customer costs, they have made a
23 great concession. The Commission should maintain the current transfer pricing policy,

1 remove the proposed caps on retail access migration, and continue with market auctions
2 for all resources beginning with the 2015/16 auction next year.

3 **VI. THERE ARE SIGNIFICANT UNANSWERED QUESTIONS REGARDING**
4 **THE TRANSITION TO RPM**

5 **Q PLEASE DISCUSS YOUR THIRD CONCLUSION REGARDING THE DETAILS**
6 **OF AEP OHIO SHIFTING TO RPM.**

7 A. As I have stated, I believe that the Stipulation has the correct end-state with
8 respect to establishing the pricing for capacity for all customers and the associated
9 transfer pricing for CRES providers. My concern is with respect to the mechanics of
10 getting from the status quo to that new structure with full RPM participation. The most
11 serious of these concerns relates to how AEP Ohio will continue to do business with the
12 rest of AEP and the details of exactly how AEP Ohio plans to participate in RPM.

13 My understanding is that AEP Ohio is net long against its own capacity
14 requirements, and the remainder of AEP is short. Presumably some provisions may come
15 out of any dissolution of the pool agreement that would address the sale of capacity from
16 AEP Ohio to the remaining AEP FRR entities. This could be done in a variety of
17 manners. Remembering that PJM's requirements for FRR entities are unit specific, one
18 alternative would be for AEP Ohio to simply sell unit specific capacity entitlements to the
19 FRR entities. But as far as I can determine, the Stipulation says nothing about the price,
20 term, specific units or quantity of such sales. Depending on how these and other terms
21 are settled, there may be either a positive or adverse impact on AEP Ohio, the new non-
22 regulated generation entity, AEP Ohio's distribution customers, other AEP FRR entities,
23 and other PJM members as a whole. For example, it would be problematic (to either
24 Ohio or other state regulators) if AEP Ohio sold or transferred assets at very high prices

1 to the remaining AEP FRR entities. Also, the selection of the specific generation sold or
2 transferred to others versus what is retained by AEP Ohio could impact overall market
3 prices if the remaining AEP Ohio capacity offered into the auction were marginal. Under
4 those circumstances, the AEP Ohio units would then be directly modifying the auction
5 clearing prices.

6 The simplest solution, which seems to be implied by the Stipulation, would be for
7 all AEP Ohio generation assets to be offered into the RPM RTO auction, and all AEP
8 Ohio retail load to be served under either CRES or default service based on RPM RTO
9 auction results. But this would leave open the issue of how the remainder of AEP intends
10 to satisfy its FRR requirements going forward. The Commission needs an explanation of
11 how AEP Ohio intends to participate in the RPM RTO auction. The Commission also
12 needs to know if asset sales/transfers are contemplated, so that these transfers can be
13 evaluated without delaying the move to full separation of generation and participation of
14 all of AEP Ohio in the RPM process.

15 **Q. HAS AEP OHIO BEEN ABLE TO OFFER ANY DETAILS REGARDING THESE**
16 **ISSUES?**

17 A. No. In FES's 19th set of discovery responses propounded on AEP Ohio, a
18 number of specific questions regarding these issues were posed. No substantive
19 information was provided.³⁰ Indeed, some of the responses suggested that some portion
20 of the AEP Ohio capacity may not participate in RPM, but this was not further
21 explained.³¹ AEP Ohio's inability to answer these simple questions indicates to me

³⁰ See AEP Ohio responses to FES Int. 19-001 through FES 19-020. The foregoing discovery responses are attached hereto as Exhibit RJS-2.

³¹ See AEP Ohio responses to FES Int. 19-001, 19-002, 19-004, 19-010, and 19-013.

1 either none of these issues were considered, which is difficult to believe, or that AEP
2 Ohio is refusing to provide information in its possession necessary to evaluate the
3 Stipulation.

4 **VII. RECOMMENDATIONS REGARDING STIPULATION**

5 **Q. DO YOU HAVE ANY OPINION ON THE LIMITED AMOUNT OF RPM**
6 **PRICED CAPACITY AVAILABLE UNDER THE STIPULATION?**

7 A. Yes. The Stipulation only permits a limited amount of RPM priced capacity to be
8 made available to CRES providers for each year until the 2015/2016 planning year.³² As
9 discussed earlier, I believe that the only appropriate price for capacity is the RPM price.
10 There is no justification for providing only a limited amount of RPM priced capacity
11 during this period, and this would constitute an unjustified departure from historic
12 practice and prior decisions of FERC and the PUCO. Providing only a limited amount of
13 RPM priced capacity would also constitute a direct reduction or elimination of shopping
14 in AEP Ohio's territory. As there is no reason to limit the amount of RPM priced
15 capacity available to CRES providers, I would recommend that the Commission retain
16 the RPM price as the state compensation mechanism (as proposed by the Stipulation) but
17 eliminate the caps on the amount of RPM priced capacity which is available to CRES
18 providers until the 2015/2016 planning year. Eliminating RPM priced capacity limits
19 would allow competition to continue in the state, maximize economic efficiency, and
20 permit customers to shop for the lowest prices available.

³² Stipulation ¶ IV.2(b)(1).

1 **Q. WHY DO YOU BELIEVE THAT REMOVING THE CAPS CONTAINED IN THE**
2 **STIPULATION IS NEEDED TO ALLOW CUSTOMERS TO SHOP FOR LOWER**
3 **PRICES?**

4 A. AEP Ohio has already informed CRES providers that, as of September 7, 2011
5 (the date of the Stipulation), the amount of RPM based capacity allocated for commercial
6 and industrial customers was already fully subscribed for 2012.³³ This means no further
7 shopping in these classes in AEP Ohio's territory will take place until 2013 at the earliest.

8 Moreover, AEP Ohio has been unable to even identify the communities which
9 have passed ordinances authorizing the government to act as aggregators or the
10 government aggregation ballot measures that are scheduled for the November 2011
11 ballot.³⁴ As the Stipulation fails to credit any of these aggregation efforts that were
12 already underway as of the date the Stipulation was signed, it is likely that the entire
13 amount of RPM priced capacity was already completely gone when AEP Ohio signed the
14 Stipulation.³⁵ These immediate examples show the severe restrictions on shopping
15 contained in the Stipulation, and provide additional evidence that caps contained in the
16 Stipulation should be removed.

17 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

18 A. Yes. However I reserve the right to supplement my testimony as new information
19 subsequently becomes available or in response to positions taken by other parties.

³³ <https://www.aepohio.com/service/choice/cres/Default.aspx>. Attached hereto as Exhibit RJS-3.

³⁴ See AEP Ohio response to IEU Int 3-019 through 3-022, attached hereto as Exhibit RJS-4.

³⁵ See Stipulation, Appendix C.

**QUALIFICATIONS
AND
EXPERIENCE OF
DR. ROY J. SHANKER**

EDUCATION:

Swarthmore College, Swarthmore, PA
A.B., Physics, 1970

Carnegie-Mellon University, Pittsburgh, PA
Graduate School of Industrial Administration
MSIA Industrial Administration, 1972
Ph.D., Industrial Administration, 1975

Doctoral research in the development of new non-parametric multivariate techniques for data analysis, with applications in business, marketing and finance.

EXPERIENCE:

1981 - Present Independent Consultant
P.O. Box 60450
Potomac MD 20854

Providing management and economic consulting services in natural resource-related industries, primarily electric and natural gas utilities.

1979-81 Hagler, Bailly & Company
2301 M Street, N.W.
Washington, D.C.

Principal and a founding partner of the firm; director of electric utility practice area. The firm conducted economic, financial, and technical management consulting analyses in the natural resource area.

1976-79 Resource Planning Associates, Inc.
1901 L Street, N.W.

Washington, D.C.

Principal of the firm; management consultant on resource problems, director of the Washington, D.C. utility practice. Direct supervisor of approximately 20 people.

1973-76 Institute for Defense Analysis
Professional Staff
400 Army-Navy Drive
Arlington, VA

Member of 25 person doctoral level research staff conducting economic and operations research analyses of military and resource problems.

RELEVANT EXPERIENCE:

2011

Federal Energy Regulatory Commission Dockets No. ER11-2875, EL11-20, Staff Technical Conference addressing self supply and the Fixed Resource Requirement elements of PJM's capacity market design.

New Jersey Board of Public Utilities, Docket Number EO11050309 on behalf of PSEG Companies. Affidavit addressing the implications of markets and market design elements, and regulatory actions on the relative risk and trade-offs between capital versus energy intensive generation investments.

Federal Energy Regulatory Commission Docket No. ER11-2875. Affidavit and supplemental statement on behalf of PJM Power Providers addressing flaws in the PJM tariff's Minimum Offer Price Rule regarding new capacity entry and recommendations for tariff revisions.

Federal Energy Regulatory Commission Docket No. EL11-20. Affidavit on behalf of PJM Power Providers addressing flaws in the PJM tariff's Minimum Offer Price Rule regarding new capacity entry.

Federal Energy Regulatory Commission Docket Nos. ER04-449. Affidavit and supplemental statement on behalf of New York Suppliers addressing the appropriate criteria for the establishment of a new capacity zone in the NYISO markets.

2010

New Jersey State Assembly and Senate. Statements on behalf of the Competitive Supplier Coalition addressing market power and reliability impacts of proposed legislation, Assembly Bill 3442 and Senate Bill 2381

Federal Energy Regulatory Commission. Docket ER11-2183. Affidavit on behalf of First Energy Services Company addressing default capacity charges for Fixed Resource Requirement participants in the PJM Reliability Pricing Model capacity market design.

Federal Energy Regulatory Commission. Docket ER11-2059 Affidavit on behalf of First Energy Services Company addressing deficiencies and computational problems in the proposed “exit charges” for transmission owners leaving the MISO RTO related to long term transmission rights.

Federal Energy Regulatory Commission Docket RM10-17. Invited panelist addressing metrics for cost effectiveness of demand response and associated cost allocations and implications for monopsony power.

Federal Energy Regulatory Commission Consolidated Dockets ER10-787-000, EL10-50-000, and EL10-57-000. Two affidavits on behalf of the New England Power Generators Association regarding ISO-NE modified proposals for alternative price rule mitigation and zonal definitions/functions of locational capacity markets.

Federal Energy Regulatory Commission Docket No. ER10-2220-000. Affidavit on behalf of the Independent Energy Producers of New York. Addressing rest of state mitigation thresholds and procedures for adjusting thresholds for frequently mitigated units and reliability must run units.

Federal Energy Regulatory Commission Docket PA10-1. Affidavit on behalf of Entergy Services related to development of security constrained unit commitment software and its performance.

Federal Energy Regulatory Commission Docket No. ER09-1063-004. Testimony on behalf of the PJM Power Providers Group (P3) regarding the proposed shortage pricing mechanism to be implemented in the PJM energy market. Reply comments related to a similar proposal by the independent market monitor.

PJM RTO. Statement regarding the impact of the exercise of buyer market power in the PJM RPM/Capacity market. Panel discussant on the issue at the associated Long Term Capacity Market Issues Symposium.

Federal Energy Regulatory Commission Docket No. ER10-787-000.
Affidavit on behalf of New England Power Generators Association
addressing proper design of the alternative price rules (APR) for the ISO-
NE Forward Capacity Auctions. Second affidavit offered in reply.
Supplemental affidavit also submitted

Federal Energy Regulatory Commission Docket No. RM10-17-000.
Affidavit on behalf of New England Power Generators Association
addressing proper pricing for demand response compensation in organized
wholesale regional transmission organizations.

Federal Energy Regulatory Commission Docket No. RM10-17-000,
Affidavit on my on behalf regarding inconsistent representations made
between filings in this docket and contemporaneous materials presented in
the PJM stakeholder process.

2009

Federal Energy Regulatory Commission Docket No. ER09-1682. Two
affidavits on behalf of an un-named party regarding confidential treatment
of market data coupled with specific market participant bidding, and
associated issues.

American Arbitration Association, Case No. 75-198-Y-00042-09 JMLE,
on behalf of Rathdrum Power LLC. Report on the operation of specific
pricing provision of a tolling power purchase agreement.

Federal Energy Regulatory Commission. Docket No. IN06-3-003.
Analyses on behalf of Energy Transfer Partners L.P. regarding trading
activity in physical and financial natural gas markets.

Federal Energy Regulatory Commission. Docket No. ER08-1281-000.
Analyses on behalf of Fortis Energy Trading related to the impacts
of loop flow on trading activities and pricing.

American Arbitration Association. Report on behalf of PEPCO Energy
Services regarding several trading transactions related to the purchase and
sale of Installed Capacity under the PJM Reliability Pricing Model.

Federal Energy Regulatory Commission Docket No. EL-0-47. Analyses
on behalf of HQ Energy services (U.S.) regarding pricing and sale of
energy associated with capacity imports into ISO-NE.

Federal Energy Regulatory Commission Docket No. ER04-449 019,
Affidavit on behalf of HQ Energy Services (U.S.) regarding the

implementation of the consensus deliverability plan for the NYISO, and associated reliability impacts of imports.

Federal Energy Regulatory Commission Docket ER09-412-000, ER05-1410-010, EL05-148-010. Affidavit and Reply Affidavit on behalf of PSEG Companies addressing proposed changes to the PJM Reliability Pricing Model and rebuttal related to other parties' filings.

2008

Pennsylvania Public Service Commission. *En Banc* Public Hearing on "Current and Future Wholesale Electricity Markets", comments regarding the design of PJM wholesale market pricing and state restructuring.

Maine Public Utility Commission. Docket No. 2008-156. Testimony on behalf of a consortium of energy producers and suppliers addressing the potential withdrawal of Maine from ISO New England and associated market and supplier response.

Federal Energy Regulatory Commission. Docket No. EL08-67-000. Affidavit on behalf of Duke Energy Ohio and Reliant Energy regarding criticisms of the PJM reliability pricing model (RPM) transitional auctions.

Federal Energy Regulatory Commission. Docket AD08-4, on behalf of the PJM Power Providers. Statement and participation in technical session regarding the design and operation of capacity markets, the status of the PJM RPM market and comments regarding additional market design proposals.

Federal Energy Regulatory Commission. Docket ER06-456-006, Testimony on behalf of East Coast Power and Long Island Power Authority regarding appropriate cost allocation procedures for merchant transmission facilities within PJM.

2007

FERC Docket No. EL07-39-000. Testimony on behalf of Mirant Companies and Entergy Nuclear Power Marketing regarding the operation of the NYISO In-City Capacity market and the associated rules and proposed rule modifications.

FERC Dockets: RM07-19-000 and AD07-7-000, filing on behalf of the PJM Power Providers addressing conservation and scarcity pricing issues identified in the Commission's ANOPR on Competition.

FERC Docket No. EL07-67-000. Testimony and reply comments on behalf of Hydro Quebec U.S. regarding the operation of the NYISO TCC market and appropriate bidding and competitive practices in the TCC and Energy markets.

FERC Docket Nos. EL06-45-003. Testimony on behalf of El Paso Electric regarding the appropriate interpretation of a bilateral transmission and exchange agreement.

2006

United States Bankruptcy Court for the Southern District of New York. Case No. 01-16034 (AJG). Report on Behalf of EPMI regarding the properties and operation of a power purchase agreement.

FERC Docket No. EL05-148-000. Testimony regarding the proposed Reliability Pricing Model settlement submitted for the PJM RTO.

FERC Docket No. ER06-1474-000, FERC. Testimony on behalf of the PSEG Companies regarding the PJM proposed new policy for including "market efficiency" transmission upgrades in the regional transmission expansion plan.

FERC Docket No. EL05-148-000, FERC. Participation in Commission technical sessions regarding the PJM proposed Reliability Pricing Model.

FERC Docket No. EL05-148-000, FERC. Comments filed on behalf of six PJM market participants concerning the proposed rules for participation in the PJM Reliability Pricing Model Installed Capacity market, and related rules for opting out of the RPM market.

FERC Docket No. ER06-407-000. Testimony on behalf of GSG, regarding interconnection issues for new wind generation facilities within PJM.

2005

FERC Docket No. EL05-121-000, Testimony on behalf of several PJM Transmission Owners (Responsible Pricing Alliance) regarding alternative regional rate designs for transmission service and associated market design issues.

FERC Technical Conference of June 16, 2005. (Docket Nos. PL05-7-000, EL03-236-000, ER04-539-000). Invited participant. Statement regarding

the operation of the PJM Capacity market and the proposed new Reliability Pricing Model Market design.

American Arbitration Association Nos. 16-198-00206-03 16-198-002070. On behalf of PG&E Energy Trading. Analyses related to the operation and interpretation of power purchase and sale/tolling agreements and electrical interconnection requirements.

Arbitration on behalf of Black Hills Power, Inc. Expert testimony related to a power purchase and sale and energy exchange agreement, as well as FERC criteria related to the applicable code and standards of conduct.

2004

Federal Energy Regulatory Commission. Docket No. Docket No. EL03-236-003 Testimony on behalf of Mirant companies relating to PJM proposal for compensation of frequently mitigated generation facilities.

Federal Energy Regulatory Commission. Docket No. ER03-563-030. Testimony on behalf of Calpine Energy Services regarding the development of a locational Installed Capacity market and associated generator service obligations for ISO-NE. Supplemental testimony filed 2005.

Federal Energy Regulatory Commission. Docket No. EL04-135-000. Testimony on behalf on the Unified Plan Supporters regarding implications of using a flow based rate design to allocate embedded costs.

Federal Energy Regulatory Commission. Docket No. ER04-1229-000. Testimony on behalf of EME Companies regarding the allocation and recovery of administrative charges in the NYISO markets.

Federal Energy Regulatory Commission. Dockets No. EL01-19-000, No. EL01-19-001, No. EL02-16-000, EL02-16-000. Testimony on behalf of PSE&G Energy Resources and Trade regarding pricing in the New York Independent System Operator energy markets.

Federal Energy Regulatory Commission. Invited panelist regarding performance based regulation (PBR) and wholesale market design. Comments related to the potential role of PBR in transmission expansion, and its interaction with market mechanisms for new transmission.

Federal Energy Regulatory Commission. Docket No. ER04-539-000 Testimony on behalf of EME Companies regarding proposed market mitigation in the energy and capacity markets of the Northern Illinois Control Area.

Federal Energy Regulatory Commission. Standardization of Generator Interconnection Agreements and Procedures Docket No. RM02-1-001, Order 2003-A, Affidavit on Behalf of PSEG Companies regarding the modifications on rehearing to interconnection crediting procedures.

Federal Energy Regulatory Commission. Dockets ER03-236-000,ER04-364-000,ER04-367-000,ER04-375-000. Testimony on behalf of the EME Companies regarding proposed market mitigation measures in the Northern Illinois Control Area of PJM.

Federal Energy Regulatory Commission. Dockets PL04-2-000, EL03-236-000. Invited panelist, testimony related to local market power and the appropriate levels of compensation for reliability must run resources.

2003

American Arbitration Association. 16 Y 198 00204 03. Report on behalf of Trigen-Cineregy Solutions regarding an energy services agreement related to a cogeneration facility.

Federal Energy Regulatory Commission. Docket No. EL03-236-000. Testimony on behalf of EME Companies regarding the PJM proposed tariff changes addressing mitigation of local market power and the implementation of a related auction process.

Federal Energy Regulatory Commission. Docket No. PA03-12-000. Testimony on behalf of Pepco Holdings Incorporated regarding transmission congestion and related issues in market design in general, and specifically addressing congestion on the Delmarva Peninsula.

Federal Energy Regulatory Commission. Docket Nos. ER03-262-007, Affidavit on behalf of EME Companies regarding the cost benefit analysis of the operation of an expanded PJM including Commonwealth Edison.

Supreme Court of the State of New York, Index No. 601505/01. Report on behalf of Trigen-Syracuse Energy Corporation regarding energy trading and sales agreements and the operation of the New York Independent System Operator.

Federal Energy Regulatory Commission. Docket No. ER03-262-000. Affidavit on behalf of the EME Companies regarding the issues associated with the integration of the Commonwealth Edison Company into PJM.

Federal Energy Regulatory Commission. Docket No. ER03-690-000. Affidavit on behalf of Hydro Quebec US regarding New York ISO market rules at external generator proxy buses when such buses are deemed non-competitive.

Federal Energy Regulatory Commission. Docket RT01-2-006,007. Affidavit on behalf of the PSEG Companies regarding the PJM Regional Transmission Expansion Planning Protocol, and proper incentives and structure for merchant transmission expansion.

Federal Energy Regulatory Commission. Docket No. ER03-406-000. Affidavit on behalf of seven PJM Stakeholders addressing the appropriateness of the proposed new Auction Revenue Rights/Financial Transmission Rights process to be implemented by the PJM ISO.

Federal Energy Regulatory Commission. Docket No. ER01-2998-002. Testimony on behalf of Pacific Gas and Electric Company related to the cause and allocation of transmission congestion charges.

Federal Energy Regulatory Commission. Docket No. RM01-12-000. On behalf of six different companies including both independent generators, integrated utilities and distribution companies comments on the proposed resource adequacy requirements of the Standard Market Design.

United States Bankruptcy Court, Northern District of California, San Francisco Division, Case No. 01-30923 DM. On behalf of Pacific Gas and Electric Dr. Shanker presented testimony addressing issues related to transmission congestion, and the proposed FERC SMD and California MD02 market design proposals.

2002

Arbitration. Testimony on behalf of AES Ironwood regarding the operation of a tolling agreement and its interaction with PJM market rules.

Federal Energy Regulatory Commission. Docket No. RM01-12-000. Dr. Shanker was asked by the three Northeast ISO's to present a summary of his resource adequacy proposal developed in the Joint Capacity Adequacy Group. This was part of the Standard Market Design NOPR process.

Federal Energy Regulatory Commission. Docket No. ER02-456-000. Testimony on behalf of Electric Gen LLC addressing comparability of a contract among affiliates with respect to non-price terms and conditions.

Circuit Court for Baltimore City. Case 24-C-01-000234. Testimony on behalf of Baltimore Refuse Energy Systems Company regarding the appropriate implementation and pricing of a power purchase agreement and related Installed Capacity credits.

Federal Energy Regulatory Commission. Docket No. RM01-12-000. Comments on the characteristics of capacity adequacy markets and

alternative market design systems for implementing capacity adequacy markets.

2001

Federal Energy Regulatory Commission. Docket ER02-456-000. Testimony on behalf of Electric Gen LLC regarding the terms and conditions of a power sales agreement between PG&E and Electric Generating Company LLC.

Delaware Public Service Commission. Docket 01-194. On behalf of Conectiv et al. Testimony relating to the proper calculation of Locational Marginal Prices in the PJM market design, and the function of Fixed Transmission Rights.

Federal Energy Regulatory Commission. Docket No. IN01-7-000 On behalf of Exelon Corporation . Testimony relating to the function of Fixed Transmission Rights, and associated business strategies in the PJM market system.

Federal Energy Regulatory Commission. Docket No. RM01-12-000. Comments on the basic elements of RTO market design and the required market elements.

Federal Energy Regulatory Commission. Docket No. RT01-99-000. On behalf of the One RTO Coalition. Affidavit on the computational feasibility of large scale regional transmission organizations and related issues in the PJM and NYISO market design.

Arbitration. On behalf of Hydro Quebec. Testimony related to the eligibility of power sales to qualify as Installed Capacity within the New York Independent system operator.

Virginia State Corporation Commission. Case No. PUE000584. On behalf of the Virginia Independent Power Producers. Testimony related to the proposed restructuring of Dominion Power and its impact on private power contracts.

United States District Court, Northern District of Ohio, Eastern Division, Case: 1:00CV1729. On behalf of Federal Energy Sales, Inc. Testimony related to damages in disputed electric energy trading transactions.

Federal Energy Regulatory Commission. Docket Number ER01-2076-000. Testimony on behalf of Aquila Energy Marketing Corp and Edison Mission Marketing and Trading, Inc. relating to the implementation of an Automated Mitigation Procedure by the New York ISO.

2000

New York Independent System Operator Board. Statement on behalf of Hydro Quebec, U.S. regarding the implications and impacts of the imposition of a price cap on an operating market system.

Federal Energy Regulatory Administration. Docket No. EL00-24-000. Testimony on behalf of Dayton Power and Light Company regarding the proper characterization and computation of regulation and imbalance charges.

American Arbitration Association File 71-198-00309-99. Report on behalf of Orange and Rockland Utilities, Inc. regarding the estimation of damages associated with the termination of a power marketing agreement.

Circuit Court, 15th Judicial Circuit, Palm Beach County, Florida. On behalf of Okeelanta and Osceola Power Limited Partnerships et. al. Analyses related to commercial operation provisions of a power purchase agreement.

1999

Federal Energy Regulatory Commission. Docket No. ER00-1-000. Testimony on behalf of TransEnergie U.S. related to market power associated with merchant transmission facilities. Also related analyses regarding market based tariff design for merchant transmission facilities.

Federal Energy Regulatory Commission. Docket RM99-2-000. Analyses on behalf of Edison Mission Energy relating to the Regional Transmission Organization Notice of Proposed Rulemaking.

Federal Energy Regulatory Commission. Docket No. ER99-3508-000. On behalf of PG&E Energy Trading, analyses associated with the proposed implementation and cutover plan for the New York Independent System Operator.

Federal Energy Regulatory Commission. Docket No. EL99-46-000. Comments on behalf of the Electric Power Supply Association relating to the Capacity Benefit Margin.

New York Public Service Commission, Case 97-F-1563. Testimony on behalf of Athens Generating Company describing the impacts on pricing and transmission of a new generation facility within the New York Power Pool under the new proposed ISO tariff.

JAMS Arbitration Case No. 1220019318 On behalf of Fellows Generation Company. Testimony related to the development of the independent

power and qualifying facility industry and related industry practices with respect to transactions between cogeneration facilities and thermal hosts.

Court of Common Pleas, Philadelphia County, Pennsylvania. Analyses on behalf of Chase Manhattan Bank and Grays Ferry Cogeneration Partnership related to power purchase agreements and electric utility restructuring.

1998

Virginia State Corporation Commission. Case No. PUE 980463. Testimony on behalf of Appomattax Cogeneration related to the proper implementation of avoided cost methodology.

Virginia State Corporation Commission. Case No. PUE980462 Testimony on behalf of Virginia Independent Power Producers related to an application for a certificate for new generation facilities.

Federal Energy Regulatory Commission. Analyses related to a number of dockets reflecting amendments to the PJM ISO tariff and Reliability Assurance Agreement.

U.S. District Court, Western Oklahoma. CIV96-1595-L. Testimony related to anti-competitive elements of utility rate design and promotional actions.

Federal Energy Regulatory Commission Dockets No. EL94-45-001 and QF88-84-006. Analyses related to historic measurement of spot prices for as available energy.

Circuit Court, Fourth Judicial Circuit, Duval County, Florida. Analyses related to the proper implementation of a power purchase agreement and associated calculations of capacity payments. (Testimony 1999)

1997

United States District Court for the Eastern District of Virginia, CA No. 3:97CV 231. Analyses of the business and market behavior of Virginia Power with respect to the implementation of wholesale electric power purchase agreements.

United States District Court, Southern District of Florida, Case No. 96-594-CIV, Analyses related to anti-competitive practices by an electric utility and related contract matters regarding the appropriate calculation of energy payments.

Virginia State Corporation Commission. Case No. PUE960296. Testimony related to the restructuring proposal of Virginia Power and associated stranded cost issues.

Federal Energy Regulatory Commission. Dockets No. ER97-1523-000 and OA97-470-000, Analyses related to the restructuring of the New York Power Pool and the implementation of locational marginal cost pricing.

Federal Energy Regulatory Commission Dockets No. OA97-261-000 and ER97-1082-000 Analyses and testimony related to the restructuring of the PJM Power Pool and the implementation of locational marginal cost pricing.

Missouri Public Service Commission. Case No. ET-97-113. Testimony related to the proper definition and rate design for standby, supplemental and maintenance service for Qualifying facilities.

American Arbitration Association. Case 79 Y 199 00070 95. Testimony and analyses related to the proper conditions necessary for the curtailment of Qualifying Facilities and the associated calculations of negative avoided costs.

Virginia State Corporation Commission. Case Number PUE960117 Testimony related to proper implementation of the differential revenue requirements methodology for the calculation of avoided costs.

New York Public Service Commission. Case 96-E-0897, Analyses related to the restructuring of Consolidated Edison Company of New York and New York Power Pool proposed Independent System Operator and related transmission tariffs.

1996

Florida Public Service Commission. Docket No. 950110-EI. Testimony related to the correct calculation of avoided costs using the Value of Deferral methodology and its implementation.

Federal Energy Regulatory Commission Dockets No. EL94-45-001 and QF88-84-006. Testimony and Analyses related to the estimation of historic market rates for electricity in the Virginia Power service territory.

Circuit Court of the City of Richmond Case No. LA-2266-4. Analyses related to the incurrence of actual and estimated damages associated with the outages of an electric generation facility.

New Hampshire Public Utility Commission, Docket No. DR96-149. Analyses related to the requirements of light loading for the curtailment of Qualifying Facilities, and the compliance of a utility with such requirements.

State of New York Supreme Court, Index No. 94-1125. Testimony related to system planning criteria and their relationship to contract performance specifications for a purchased power facility.

United States District Court for the Western District of Pennsylvania, Civil Action No. 95-0658. Analyses related to anti-competitive actions of an electric utility with respect to a power purchase agreement.

United States District Court for the Northern District of Alabama, Southern Division. Civil Action Number CV-96-PT 0097-S. Affidavit on behalf of TVA and LG&E Power regarding displacement in wholesale power transactions.

1995

American Arbitration Association. Arbitration No. 14 198 012795 H/K. Report concerning the correct measurement of savings resulting from a commercial building cogeneration system and associated contract compensation issues.

Circuit Court City of Richmond. Law No. LX-2859-1. Analyses related to IPP contract structure and interpretation regarding plant compensation under different operating conditions.

Federal Energy Regulatory Commission. Case EL95-28-000. Affidavit concerning the provisions of the FERC regulations related to the Public Utility Regulatory Policies Act of 1978, and relationship of estimated avoided cost to traditional rate based recovery of utility investment.

New York Public Service Commission, Case 95-E-0172, Testimony on the correct design of standby, maintenance and supplemental service rates for qualifying facilities.

Florida Public Service Commission, Docket No. 941101-EQ. Testimony related to the proper analyses and procedures related to the curtailment of purchases from Qualifying Facilities under Florida and FERC regulations.

Federal Energy Regulatory Commission, Dockets ER95-267-000 and EL95-25-000. Testimony related to the proper evaluation of generation expansion alternatives.

1994

American Arbitration Association, Case Number 11 Y198 00352 94
Analyses related to contract provisions for milestones and commercial operation date and associated termination and damages related to the construction of a NUG facility.

United States District Court, Middle District Florida, Case No. 94-303 Civ-Orl-18. Analyses related to contract pricing interpretation other contract matters in a power purchase agreement between a qualifying facility and Florida Power Corporation.

Florida Public Service Commission Docket 94037-EQ. Analyses related to a contract dispute between Orlando Power Generation and Florida Power Corporation.

Florida Public Service Commission Docket 941101-EQ. Testimony and analyses of the proper procedures for the determination and measurement for the need to curtail purchases from qualifying facilities.

New York Public Service Commission Case 93-E-0272, Testimony regarding PURPA policy considerations and the status of services provided to the generation and consuming elements of a qualifying facility.

Circuit Court for the City of Richmond. Case Number LW 730-4. Analyses of the historic avoided costs of Virginia Power, related procedures and fixed fuel transportation rate design.

New York Public Service Commission, Case 93-E-0958 Analyses of Stand-by, Supplementary and Maintenance Rates of Niagara Mohawk Power Corporation for Qualifying Facilities .

New York Public Service Commission, Case 94-E-0098. Analyses of cost of service and rate design of Niagara Mohawk Power Corporation.

American Arbitration Association, Case 55-198-0198-93, Arbitrator in contract dispute regarding the commercial operation date of a qualifying small power generation facility.

1993

U.S. District Court, Southern District of New York Case 92 Civ 5755. Analyses of contract provisions and associated commercial terms and conditions of power purchase agreements between an independent power producer and Orange and Rockland Utilities.

State Corporation Commission, Virginia. Case No. PUE920041.
Testimony related to the appropriate evaluation of historic avoided costs in Virginia and the inclusion of gross receipt taxes.

Federal Energy Regulatory Commission. Docket ER93-323-000.
Evaluations and analyses related to the financial and regulatory status of a cogeneration facility.

Federal Energy Regulatory Commission. Docket EL93-45-000; Docket QF83-248-002. Analyses related to the qualifying status of cogeneration facility.

Circuit Court of the Eleventh Judicial Circuit, Dade County, Florida. Case No. 92-08605-CA-06. Analyses related to compliance with electric and thermal energy purchase agreements. Damage analyses and testimony.

Board of Regulatory Commissioners, State of New Jersey. Docket EM 91010067. Testimony regarding the revised GPU/Duquesne 500 MW power sales agreement and associated transmission line.

State of North Carolina Utilities Commission. Docket No. E-100 Sub 67. Testimony in the consideration of rate making standards pursuant to Section 712 of the Energy Policy Act of 1992.

State of New York Public Service Commission. Cases 88-E-081 and 92-E-0814. Testimony regarding appropriate procedures for the determination of the need for curtailment of qualifying facilities and associated proper production cost modeling and measurement.

Pennsylvania Public Utility Commission. Docket No. A-110300f051. Testimony regarding the prudence of the revised GPU/Duquesne 500 MW power sales agreement and associated transmission line.

1992

Pennsylvania Public Service Commission. Dockets No. P-870235,C-913318,P-910515,C-913764. Testimony regarding the calculation of avoided costs for GPU/Penelec.

Public Service Commission of Maryland. Case No. 8413,8346. Testimony on the appropriate avoided costs for Pepco, and appropriate procedures for contract negotiation.

1991

Board of Regulatory Commissioners, State of New Jersey. Docket EM-91010067. Testimony regarding the planned purchase of 500 MW by GPU from Duquesne Light Company.

Public Service Commission of Wisconsin. Docket 05-EP-6. State Advance Plan. Testimony on the calculation of avoided costs and the structuring of payments to qualifying facilities.

State Corporation Commission, Virginia. Case No. PUE910033. Testimony on class rate of return and rate design for delivery point service. Northern Virginia Electric Cooperative.

State Corporation Commission, Virginia. Case No. PUE910048. Testimony on proper data and modeling procedures to be used in the evaluation of the annual Virginia Power fuel factor.

State Corporation Commission, Virginia. Case No. PUE910035. Evaluation of the differential revenue requirements method for the calculation of avoided costs.

Public Service Commission of Maryland. Case Number 8241 Phase II. Testimony related to the proper determination of avoided costs for Baltimore Gas and Electric.

Public Service Commission of Maryland. Case Number 8315. Evaluation of the system expansion planning methodology and the associated impacts on marginal costs and rate design, PEPCO.

1990

Public Utility Commission, State of California, Application 90-12-064. Analyses related to the contractual obligations between San Diego Gas and Electric and a proposed QF.

Montana Public Service Commission. Docket 90.1.1 Testimony and analyses related to natural gas transportation, services and rates.

State Corporation Commission, Virginia. Case No. PUE890075. Testimony on the calculation of full avoided costs via the differential revenue requirements methodology.

District of Columbia Public Service Commission. Formal Case 834 Phase II. Analyses and development of demand side management programs and least cost planning for Washington Gas Light.

State Corporation Commission, Virginia. Case No. PUE890076. Analyses related to administratively set avoided costs. Determination of optimal expansion plans for Virginia Power.

State Corporation Commission, Virginia. Case No. PUE900052. Analyses supporting arbitration of a power purchase agreement with Virginia Power. Determination of expansion plan and avoided costs.

Public Service Commission of Maryland. Case Number 8251. Analyses of system expansion planning models and marginal cost rate design for PEPCO.

State Corporation Commission, Virginia. Case No. PUE900054. Evaluation of fuel factor application and short term avoided costs.

Federal Energy Regulatory Commission. Northeast Utilities Service Company Docket Nos. EC90-10-000, ER90-143-000, ER90-144-000, ER90-145-000 and EI90-9-000. Analyses of the implications of Northeast Utilities and Public Service Company of New Hampshire merger on electric supply and pricing.

Public Service Commission of Maryland. Re: Southern Maryland Electric Cooperative Inc. Contract with Advanced Power Systems, Inc. and PEPCO.

Puerto Rico Electric Power Authority, Office of the Governor of Puerto Rico. Independent evaluation for PREPA of avoided costs and the evaluation of competing QF's.

State Corporation Commission, Virginia. Case No. PUE890041. Testimony on the proper determination of avoided costs with respect to Old Dominion Electric Cooperative.

1989

Oklahoma Corporation Commission. Case Number PUD-000586. Analyses related to system planning and calculation of avoided costs for Public Service of Oklahoma.

Virginia State Corporation Commission. Case Number PUE890007. Testimony relating to the proper determination of avoided costs to the certification evaluation of new generation facilities.

Federal Energy Regulatory Commission. Docket RP85-50. Analyses of the gas transportation rates, terms and conditions filed by Florida Gas Transmission.

Circuit Court of the Fifth Judicial Circuit, Dade County, Florida. Case No. 88-48187. Analyses related to compliance with electric and thermal energy purchase agreements.

Florida Public Service Commission. Docket 880004-EU. Analysis of state wide expansion planning procedures and associated avoided unit.

1988

Virginia State Corporation Commission. Case No. PUE870081. Testimony on the implementation of the differential revenue requirements avoided cost methodology recommended by the SCC Task Force.

Virginia State Corporation Commission. Case No. PUE880014. Testimony on the design and level of standby, maintenance and supplemental power rates for qualifying facilities.

Virginia State Corporation Commission. Case No. PUE99038. Testimony on the natural gas transportation rate design and service provisions.

Montana Public Service Commission. Docket 87.8.38. Testimony on Natural Gas Transmission Rate Design and Service Provisions.

Oklahoma Corporation Commission. Cause Pud No. 00345. Testimony on estimation and level of avoided cost payments for qualifying facilities.

Florida Public Service Commission. Docket No. 8700197-EI. Testimony on the methodology for establishing non-firm load service levels.

Arizona Corporation Commission. Docket No. U-1551-86-300. Analysis of cost-of-service studies and related terms and conditions for material gas transportation rates.

1987

Virginia State Corporation Commission. Case No. PUE870028. Analysis of Virginia Power fuel factor application and relationship to avoided costs.

District of Columbia Public Service Commission. Formal Case No. 834 Phase II. Analysis of the theory and empirical basis for establishing cost effectiveness of natural gas conservation programs.

Virginia State Corporation Commission. Case No. PUE860058. Testimony on the relationship of small power producers and cogenerators to the need for power and new generation facilities.

Virginia State Corporation Commission. Case No.

PUE870025. Testimony addressing the proper design of rates for standby, maintenance and supplement power sales to cogenerators.

Florida Public Service Commission. Docket No. 860004 EU. Testimony in the 1986 annual planning hearing on proper system expansion planning procedures.

1986

Florida Public Service Commission. Docket No. 860001 EI-E. Testimony on the proper methodology for the estimation of avoided O&M costs.

Florida Public Service Commission. Docket No. 860786-EI. Testimony on the proper economic analysis for the evaluation of self-service wheeling.

U.S. Bankruptcy Court, District of Ohio. Testimony on capabilities to develop and operate wood-fired qualifying facility.

Public Utility Commission, New Hampshire Docket No. DR-86-41. Testimony on pricing and contract terms for power purchase agreement between utility and QFs. (Settlement Negotiations)

Florida Public Service Commission, Docket No. 850673-EU. Testimony on generic issues related to the design of standby rates for qualifying facilities.

Virginia State Corporation Commission. Case No. 860024. Generic hearing on natural gas transportation rate design and tariff terms and conditions.

Virginia State Corporation Commission. Commonwealth Gas Pipeline Corporation. Case No. 850052. Testimony on natural gas transportation rate design and tariff terms and conditions.

Bonneville Power Administration. Case No. VI86. Testimony on the proposed Variable Industrial Power Rate for Aluminum Smelters.

Virginia Power. Case No. PUE860011. Testimony on the proper ex post facto valuation of avoided power costs for qualifying facilities.

Florida Public Service Commission. Docket No. 850004 EU. Testimony on proper analytic procedures for developing a statewide generation expansion plan and associated avoided unit.

1985

Virginia Natural Gas. Docket No. 85-0036. Testimony and cost of service procedures and rate design for natural gas transportation service.

Arkansas Louisiana Gas. Louisiana Docket No. U-16534. Testimony on proper cost of service procedures and rate design for natural gas service.

Connecticut Light and Power. Docket No. 85-08-08.
Assist in the development of testimony for industrial natural gas transportation rates.

Oklahoma Gas and Electric. Cause 29727. Testimony and system operations and the development of avoided cost measurements as the basis for rates to qualifying facilities.

Florida Public Service Commission. Docket No. 840399EU. Testimony on self-service wheeling and business arrangements for qualifying facilities.

Virginia Electric and Power Company. General Rate application No. PUE840071. Testimony on proper rate design procedures and computations for development of supplemental, maintenance and standby service for cogenerators.

Virginia Electric and Power Company. Fuel Factor Proceeding No. PUE850001. Testimony on the proper use of the PROMOD model and associated procedures in setting avoided cost energy rates for cogenerators.

New York State Public Service Commission. Case No. 28962.
Development of the use of multi-area PROMOD models to estimate avoided energy costs for six private utilities in New York State.

Vermont Rate Hearings on Payments to Small Power Producers. Case No. 4933. Testimony on proper assumptions, procedures and analysis for the development of avoided cost rates.

1984

Northern Virginia Electric Cooperative. Case No. PUE840041. Testimony on class cost-of-service procedures, class rate of return and rate design.

BPA 1985 Wholesale Rate Proceedings. Analysis of Power 1985 Rate Directives. Testimony on theory and implementation of marginal cost rate design.

Virginia Electric Power Company. Application to Revise Rate Schedule 19 -- Power Purchases from Cogeneration and Small Power Production Qualifying Facilities. Case No. PUE830067. Testimony on proper PROMOD modeling procedures for power purchases and properties of PROMOD model.

Northern Virginia Electric Cooperative. Case No. PUE840041. Testimony on class cost-of-service procedures, class rate of return and rate design.

BPA 1985 Wholesale Rate Proceedings. Analysis of Power 1985 Rate Directives. Testimony on the theory and implementation of marginal cost rate design, financial performance of BPA; interactions between rate design, demand, system expansion and operation.

1983

Northern Virginia Electric Cooperative. Case No. PUE830040. Testimony on class cost-of-service procedures, class rate of return and rate design.

Vermont Rate Hearings to Small Power Producers. No.4804. Testimony on proper use and application of production costing analyses to the estimation of avoided costs.

BPA Wholesale Rate Proceedings. Testimony on the theory and implementation of marginal cost rate design; financial performance of BPA; interactions between rate design, demand, system expansion and operation.

Idaho Power Company, PUC-U-1006-185. Analysis of system planning/production costing model play of hydro regulation and associated energy costs.

1982

Generic Conservation Proceedings, New York State. Case No. 18223. Testimony on the economic criteria for the evaluation of conservation activities; impacts on utility financial performance and rate design.

PEPCO, Washington Gas Light. DCPSC-743. Financial evaluation of conservation activities; procedures for cost classification, allocation; rate design.

PEPCO, Maryland PSC Case Nos. 7597-I, 7597-II, and 7652. Testimony on class rates of return, cost classification and allocation, power pool operations and sales.

1981

Pacific Gas and Electric. California PSC Case No.
60153. Testimony on rate design; class cost-of-service and rate of return.

Previous testimony before the District of Columbia
Public Service Commission, Maryland PSC, New York Public Service
Commission, FERC; Economic Regulatory Administration

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

INTERROGATORIES

STIP-FES-INT-19-001. Identify the generation units which AEP Ohio intends to bid into the Base Residual Auction for delivery years 2015-2016.

RESPONSE

This is unknown at this time.

Prepared By: Kelly D. Pearce

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

INTERROGATORY

STIP-FES-INT-19-002

Identify any generation units which AEP Ohio may transfer to another entity (other than the generation company identified in paragraph 1(q) of the Stipulation) prior to April 1, 2012 and/or which may be included in the FRR plan of any AEP entities other than AEP Ohio.

RESPONSE

The Company objects to this request as being vague, overbroad. Without waiving the foregoing objection(s) or any general objection the Company may have, the Company states as follows. This is unknown at this time and may be addressed as part of the FERC proceeding relating to dissolution/amendment of the Pool.

Prepared By: Counsel/ Rich Munczinski

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

INTERROGATORY

STIP-FES-INT-19-003

As part of the legal separation identified in paragraph 1(q) of the Stipulation, does AEP Ohio intend to transfer (either completely or on a contract sales basis) any generation units to any other AEP entity other than the generation company identified in paragraph 1(q) of the Stipulation?

RESPONSE

The Company objects to this request as being vague, overbroad. Without waiving the foregoing objection(s) or any general objection the Company may have, the Company states as follows. This is unknown at this time and may be addressed as part of the FERC proceeding relating to dissolution/amendment of the Pool.

Prepared By: Counsel/ Rich Munczinski

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

INTERROGATORY

STIP-FES-INT-19-004. Will any AEP Ohio units be provided under bilateral sales to any other AEP entity to fulfill that entities' FRR requirement?

RESPONSE

The Company objects to this request as being vague, overbroad. Without waiving the foregoing objection(s) or any general objection the Company may have, the Company states as follows. This is unknown at this time and may be addressed as part of the FERC proceeding relating to dissolution/amendment of the Pool.

Prepared By: Counsel/ Rich Munczinski

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

INTERROGATORY

STIP-FES-INT-19-005.

Will other AEP entities that are PJM members continue to operate under an FRR plan for delivery years 2015-2016?

RESPONSE

Objection. Other AEP entities currently under an FRR plan are not parties to this proceeding this request seeks information that is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence.

Prepared By: Counsel

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

INTERROGATORY

STIP-FES-INT-19-006.

If the answer to the foregoing interrogatory is in the affirmative, what section of the PJM Reliability Assurance Agreement ("RAA") or other relevant FERC order permits AEP to make a partial FRR election?

RESPONSE

Not applicable. Refer the Company's response to INT 19-005.

Prepared By: Counsel

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

INTERROGATORY

STIP-FES-INT-19-007.

If the answer to Interrogatory 19-005 is in the affirmative, will any of AEP Ohio's generation assets be used in those FRR plans? If so, which assets?

RESPONSE

Not applicable. Refer the Company's response to INT 19-005.

Prepared By: Counsel

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

INTERROGATORY

STIP-FES-INT-19-008.

Is it AEP Ohio's or any other AEP entity's opinion that the Stipulation is in any way contingent on the determinations of PJM and/or the Independent Market Monitor with respect to the units identified in response to Interrogatory 19-007, and /or the avoided cost rates determined for any units that will be offered into the PJM RPM.

RESPONSE

Objection. Other AEP entities currently under an FRR plan are not parties to this proceeding this request seeks information that is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence. Objection to the extent that no units were identified in response to Interrogatory 19-007.

Prepared By: Counsel

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

INTERROGATORY

STIP-FES-INT-19-009.

Paragraph 1(q) of the Stipulation provides, among other things:

“Provided that the Commission has approved full legal separation as proposed through a final order (even if any appeals before the Supreme Court of Ohio have been filed), AEP Ohio will provide notice to PJM in March of 2012 (per Schedule 8.1 of the [PJM] Reliability Assurance Agreement) that it intends to participate in the Base Residual Auction for delivery years 2015-16.”

- (a) Describe the details of the AEP Ohio “participation” in the Base Residual Auction for delivery years 2015-16.
- (b) Identify any legal authority or policy that prohibits AEP Ohio from providing the notice described in the cited section to PJM on or before January 31, 2012.
- (c) Identify any factual basis that would prevent AEP Ohio from providing the notice described in the cited section to PJM on or before January 31, 2012.
- (d) What portion (e.g., 100%, some other amount) of the AEP Ohio load will be placed into the RPM auction as part of AEP Ohio’s “participation” in the Base Residual Auction for delivery years 2015-16?
- (e) Does AEP intend to place the rest of its PJM load – other than the AEP Ohio load described in the cited sentence of the Stipulation – into the PJM Base Residual Auction at the same time that the AEP Ohio load will be committed into the auction?
- (f) In addition to the notice described in the cited language from the Stipulation, identify and describe any legal limits or rules that bear on the question of whether and how AEP Ohio can “participate” in the May 2012 Base Residual Auction for delivery years 2015-16.

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

STIP-FES-INT-19-009. (CONTINUED)

RESPONSE

- (a) The details of the AEP Ohio participation are unknown at this time.
- (b) The Company is unaware of any legal basis for providing notice to PJM on or before January 31, 2012.
- (c) Bases that may prevent such notification include, but are not necessarily limited to, a PUCO Order disapproving the Stipulation.
- (d) 100% subject to the approval and terms and conditions of the Stipulation.
- (e) See STIP FES INT-19-004.
- (f) Objection, the request seeks a legal opinion and legal research on "legal limits" and "rules" that are not likely to lead to facts that are discoverable and sponsored by a witness.

Prepared By: Kelly D. Pearce / Counsel

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

INTERROGATORY

STIP-FES-INT-19-010.

The term "Capacity Resource" is defined in the RAA, the PJM Operating Agreement, and the PJM tariff. Given that AEP Ohio is placing its load into the 2012 Base Residual Auction for delivery years 2015-16, indicate whether AEP Ohio will bid its generating units into the same auction as Capacity Resources.

RESPONSE

Currently, it is anticipated that the generation-owning entity could bid at least some of its capacity into the Base Residual Auction.

Prepared By: Kelly D. Pearce

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

INTERROGATORY
STIP-FES-INT-19-011.

The term "Capacity Resource" is defined in the RAA, the PJM Operating Agreement, and the PJM tariff. Identify each Capacity Resource that is owned or controlled by AEP Ohio. For each such resource, identify the amount of capacity that is or will be available for offer into the May 2012 PJM RPM auction.

RESPONSE

Capacity Resources as defined in the RAA are a function of the Delivery Year specified. These resources are unknown at this time for the May 2012 PJM RPM auction

Prepared By: Kelly D. Pearce

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

INTERROGATORY
STIP-FES-INT-19-012

The term "Capacity Resource" is defined in the RAA, the PJM Operating Agreement, and the PJM tariff. Identify whether any AEP affiliates, other than AEP Ohio, has a claim to some or all of the capacity of the Capacity Resources that are identified in response to the foregoing question. For each such claim, identify the AEP affiliate that has the claim, and the amount in MW of each such claim. To the extent that non-AEP Ohio affiliates have claims to parts of generating plants or other Capacity Resources that are located in the AEP Ohio footprint, for each such resource: (a) identify the resource; (b) the nominal capacity value of the resource; and (c) the amount of capacity that the non-AEP Ohio affiliate claims or asserts rights for.

RESPONSE

Objection, no Capacity Resources are identified in response to the previous question. See the response to STIP-FES-10-INT-004.

Prepared By: Counsel

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

INTERROGATORY

STIP-FES-INT-19-013.

Identify the estimated MW value of AEP Ohio's load that will be placed into the 2012 Base Residual Auction.

RESPONSE

It is unknown at this time how many MWs of AEP Ohio's load might be placed into the 2012 Base Residual Auction. PJM has not provided a load forecast to be used for the 2015/16 auction. Plus market participants may choose the FRR alternative, and do not need to notify PJM about this selection until 2012.

Prepared By: Kelly Pearce

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

INTERROGATORY

STIP-FES-INT-19-014.

The term "Party" is defined in the RAA. Identify whether AEP Ohio is or will be a Party under the RAA for purposes of committing the AEP Ohio load into the 2012 Base Residual Auction.

RESPONSE

It is unknown at this time.

Prepared By: Kelly D. Pearce

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

INTERROGATORY

STIP-FES-INT-19-015.

The term "Party" is defined in the RAA. If AEP Ohio is not a Party under the RAA, describe the steps whereby AEP Ohio will become a Party.

RESPONSE

If AEP Ohio is not a Party under the RAA and if it is required to become such a Party, it will follow the applicable steps as required by PJM to become a Party.

Prepared By: Kelly D Pearce

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

INTERROGATORY

STIP-FES-INT-19-016.

The term "Zone" is defined in the RAA. Identify whether AEP Ohio is or will be a stand-alone Zone for purposes of participating in the 2012 Base Residual Auction.

RESPONSE

It is not known at this time.

Prepared By: Kelly D. Pearce

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

INTERROGATORY

STIP-FES-INT-19-017.

The term "Zone" is defined in the RAA. If AEP Ohio is a stand-alone Zone for purposes of participating in the 2012 Base Residual Auction, identify whether any of the AEP affiliates other than AEP Ohio are included as part of the same Zone that includes AEP Ohio.

RESPONSE

Refer to the Companies response to INT 19-016

Prepared By: Kelly D. Pearce

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

INTERROGATORY

STIP-FES-INT-19-018.

The term "Zone" is defined in the RAA. If AEP affiliates other than AEP Ohio are included as part of the same Zone as the AEP Ohio Zone for purposes of AEP Ohio's participation in the Base Residual Auction for the 2015-16 delivery year, describe the mechanics whereby AEP Ohio will "participate" in the Base Residual Auction for the 2015-16 delivery year as alleged in paragraph 1(q) of the Stipulation.

RESPONSE

Refer to the Companies response to INT 19-016.

Prepared By: Kelly D. Pearce

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

INTERROGATORY

STIP-FES-INT-19-019.

The term "Zone" is defined in the RAA. The term 'Self Supply' is defined in the RAA, and Section 7.3 of the RAA describes a process whereby a Load Serving Entity like AEP Ohio can Self Supply capacity for its load. If AEP affiliates other than AEP Ohio are included as part of the same Zone as the AEP Ohio Zone for purposes of AEP Ohio's participation in the Base Residual Auction for the 2015-16 delivery year, describe the mechanics of how the AEP affiliates that are not AEP Ohio will satisfy their capacity requirement for the same delivery year. Specifically, will their load stay as an FRR load, will they 'Self Supply,' or will their load be placed into the Base Residual Auction?

RESPONSE

Refer to the Companies response to INT 19-016.

Prepared By: Kelly D. Pearce

COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO FIRST ENERGY SOLUTIONS DATA REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
NINETEENTH SET

INTERROGATORY
STIP-FES-INT-19-020.

The term "Self Supply" is defined in the RAA, and Section 7.3 of the RAA describes a process whereby a Load Serving Entity can Self Supply its capacity requirement. Identify whether AEP Ohio plans to Self Supply its capacity requirements as part of AEP Ohio's participation in the Base Residual Auction for the 2015-16 delivery years. If AEP Ohio plans to Self Supply, describe whether AEP Ohio will self supply for all of the AEP Ohio load or for a part and, if Self Supply for only part of the AEP Ohio load, the estimated or projected amount of load for which AEP Ohio will Self Supply.

RESPONSE

It is currently anticipated that the electric distribution utility load will be included in the Base Residual Auction.

Prepared By: Kelly D. Pearce



Service Requests / Electric Choice / Competitive Retail Electric Service (CRES) Providers

Logged Out / Log In

CRES Providers

- Register With AEP Ohio
- Aggregation Registration
- Provider Handbook
- AEP Ohio Transmission
- PUCO Certification
- EDI Testing And Certification
- EDI Test Schedules
- Load Profiles
- Meter Reading Schedule And Codes
- Metering And Usage History
- Provider Support
- Proxy Day Selection
- Service Territory Maps
- AEP PJM FRR Capacity Calculation Filing (Docket No. ER11-2183-000)
- Tariffs And Tariff Codes

Welcome to AEP Ohio's web pages for companies interested in providing competitive services in AEP Ohio's service territory. Please remember that information contained here pertains only to Ohio customers served by AEP Ohio.

RPM-Priced Allotment Status Notifications as of September 7, 2011 – This notification is being issued on September 23, 2011

In recognition of the Stipulation and Recommendation filed in Case Nos. 10-2929-EL-UNC et al (Stipulation), AEP Ohio is providing the following information that may be informative to CRES providers and customers while the Public Utilities Commission of Ohio (Commission) reviews the Stipulation. Paragraph IV.2.b.3 and Appendix C of the Stipulation provide for a set-aside of RPM priced-capacity (e.g., 21% of AEP Ohio's retail load in 2012). Additionally, the Stipulation provides that the RPM-priced capacity shall initially be allocated on a pro rata basis among the residential, commercial and industrial classes and that if the allotment to any customer class as of September 7, 2011 exceeds 21%, then the allocation to the remaining classes shall be reduced on a pro rata basis such that the total allotment does not exceed 21%.

Values expressed in units of MWh	Pro Rata Allocation of RPM Set-aside	Initial RPM Set-aside	Allotments Awarded as of September 7, 2011*	Unallocated Allotments as of September 7, 2011
Residential	3,071,897	2,535,599	103,387	2,432,211
Commercial	3,033,579	4,227,965	4,227,965	-
Industrial	3,769,500	3,111,413	2,570,034	541,319
Total	9,874,976	9,874,976	6,901,446	2,973,530

* The Allotments Awarded as of September 7, 2011 included all customers classified per Appendix C of the Stipulation as Group 1, 2 and 4.

Please be aware that the above values may change as a result of final data validation.

Based upon preliminary current information compiled by AEP Ohio, it is likely that all of the available RPM priced-capacity allotments for 2012 have also been awarded for the industrial class. After that data is further validated, an additional notification will be issued.

RPM Set-Aside Allotment Rules Meeting, September 19th, 2011

In accordance with the Stipulation and Recommendation (filed on September 7, 2011), AEP Ohio hosted a meeting among Interested Parties, including the Signatory Parties, to discuss the RPM Set-Aside Allotment Rules. Attached is the presentation from this meeting for your reference:

- [RPM Set-Aside Presentation to Interested Parties \(PDF\), Columbus, Ohio, September 19, 2011](#)
- [Frequently Asked Questions Regarding RPM Set-Aside September 7th, 2011 Stipulation](#)

AEP Ohio welcomes your questions on Appendix C. Please email your questions to ohiochoiceoperation@aep.com

If you have any questions or need assistance regarding Ohio Choice, please contact:

Anita Adams

Doug Hinkle

AEP Ohio
Ohio Choice Operations
Phone: 614-883-6990
Email: ohiochoiceoperation@aep.com

AEP Ohio
Ohio Choice Operations
Phone: 614-883-6991
Email: ohiochoiceoperation@aep.com

More information for Competitive Retail Electric Service (CRES) Providers on AEP Ohio Customer Choice is available including:

[Registering with AEP Ohio.](#)

[The complete Provider handbook.](#)

[Information on certification with the Public Utilities Commission of Ohio.](#)

[Service territory maps.](#)

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**COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO
IEU-OHIO'S DISCOVERY REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
THIRD SET**

INTERROGATORIES

STIP-IEU-INT-3-019

Do You know which communities or units of local governments with constituents within the OPCo or CSP service territories or if any communities or units of local governments have passed ordinances that authorize the unit of government to act as an opt-out aggregator for the purpose of soliciting electric generation supply?

RESPONSE

No.

Prepared By: Joseph Hamrock

**COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO
IEU-OHIO'S DISCOVERY REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
THIRD SET**

INTERROGATORIES

STIP-IEU-INT-3-020

If the answer to Interrogatory No. 2-19 is affirmative, identify which communities or units of local government that You know have passed ordinances?

RESPONSE

N/A.

Prepared By: Joseph Hamrock

**COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO
IEU-OHIO'S DISCOVERY REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
THIRD SET**

INTERROGATORIES

STIP-IEU-INT-3-021

Do You know which communities or units of local governments with constituents within the OPCo or CSP service territories or if any communities or units of local governments have ordinances on the ballot in the upcoming November general election that would authorize the unit of government to act as an opt-out aggregator for the purpose of soliciting electric generation supply?

RESPONSE

No.

Prepared By: Joseph Hamrock

**COLUMBUS SOUTHERN POWER COMPANY'S
AND OHIO POWER COMPANY'S
RESPONSE TO
IEU-OHIO'S DISCOVERY REQUEST
IN PUCO CASE NOS. 11-346-EL-SSO AND 11-348-EL-SSO
THIRD SET**

INTERROGATORIES

STIP-IEU-INT-3-022

If the answer to Interrogatory No 2-21 is affirmative, identify which communities or units of local government that You know have ordinances on the ballot in the upcoming November general election?

RESPONSE

N/A

Prepared By: Joseph Hamrock

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

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in

Case No(s). 11-0346-EL-SSO, 11-0348-EL-SSO, 10-2376-EL-UNC, 11-0349-EL-AAM, 11-0350-EL-AAM

Summary: Testimony in Opposition to the Partial Stipulation of Roy J. Shanker electronically filed by Ms. Laura C. McBride on behalf of FirstEnergy Solutions Corp.