

BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

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| In the Matter of the Commission Review of |) | |
| Capacity Charges of Ohio Power Company |) | Case No. 10-2929-EL-UNC |
| and Columbus Southern Power Company |) | |

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| In the Matter of the Application of Columbus |) | |
| Southern Power Company and Ohio Power |) | |
| Company for Authority to Establish a Standard |) | Case No. 11-346-EL-SSO |
| Service Offer Pursuant to Section 4928.143, |) | Case No. 11-348-EL-SSO |
| Revised Code, in the Form of an Electric |) | |
| Security Plan |) | |

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| In the Matter of the Application of Columbus |) | |
| Southern Power Company and Ohio Power |) | Case No. 11-349-EL-AAM |
| Company for Approval of Certain Accounting |) | Case No. 11-350-EL-AAM |
| Authority |) | |

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| In the Matter of the Fuel Adjustment Clauses |) | Case No. 13-1892-EL-FAC |
| for Ohio Power Company |) | |

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| In the Matter of the Application of Ohio Power |) | |
| Company to Adopt a Final Implementation |) | Case No. 14-1186-EL-RDR |
| Plan for the Retail Stability Rider |) | |

DIRECT TESTIMONY OF
WILLIAM A. ALLEN
ON BEHALF OF
OHIO POWER COMPANY

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WILLIAM A. ALLEN

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BEFORE
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1 **PERSONAL DATA**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is William A. Allen, and my business address is 1 Riverside Plaza, Columbus,
4 Ohio 43215.

5 **Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?**

6 A. I am employed by the American Electric Power Service Corporation (“AEPSC”) as
7 Managing Director of Regulatory Case Management. AEPSC supplies engineering,
8 regulatory, financing, accounting, and planning and advisory services to the electric
9 operating companies of the American Electric Power Co. Inc. (“AEP”) system, one of
10 which is Ohio Power Company (“AEP Ohio” or the “Company”).

11 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL**
12 **BACKGROUND.**

13 A. I received a Bachelor of Science in Nuclear Engineering from the University of
14 Cincinnati in 1996 and a Master of Business Administration from the Ohio State
15 University in 2004.

16 I was employed by AEPSC beginning in 1992 as a Co-op Engineer in the Nuclear
17 Fuels, Safety, and Analysis Department and, upon completing my degree in 1996, was
18 hired on a permanent basis in the Nuclear Fuel Section of the same Department. In
19 January 1997, the Nuclear Fuel Section became a part of Indiana Michigan Power

1 Company ("I&M") due to a corporate restructuring. In 1999, I transferred to the
2 Business Planning Section of the I&M Nuclear Generation Group as a Financial Analyst.
3 In 2000, I transferred back to AEPSC into the Regulatory Pricing and Analysis Section as
4 a Regulatory Consultant. In 2003, I transferred into the Corporate Financial Forecasting
5 department as a Senior Financial Analyst. In 2007, I was promoted to the position of
6 Director of Operating Company Forecasts. In that role, I was primarily responsible for
7 the supervision of the financial forecasting and analysis of the AEP system's operating
8 companies, including AEP Ohio. In 2010, I transferred to the Regulatory Services
9 Department as Director of Regulatory Case Management. I was named to my current
10 position in January 2013.

11 **Q. WHAT ARE YOUR RESPONSIBILITIES AS MANAGING DIRECTOR OF**
12 **REGULATORY CASE MANAGEMENT?**

13 A. I am primarily responsible for the supervision, oversight, and preparation of major filings
14 with state utility commissions and the Federal Energy Regulatory Commission
15 ("FERC").

16 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN ANY REGULATORY**
17 **PROCEEDINGS?**

18 A. Yes. I have previously testified before the Public Utilities Commission of Ohio
19 ("Commission") on behalf of AEP Ohio. I have also submitted testimony or testified
20 before the Michigan Public Service Commission, the Indiana Utility Regulatory
21 Commission, the Kentucky Public Service Commission, the West Virginia Public Service
22 Commission, and the Virginia State Corporation Commission on behalf of various other
23 electric operating companies of the American Electric Power system.

1 **PURPOSE OF TESTIMONY**

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

3 A. The purpose of my testimony is to (1) describe the history of the proceedings leading up
4 to this filing; (2) demonstrate that, on remand from the Ohio Supreme Court's decision in
5 *In re Commission Review of Capacity Charges of Ohio Power*, 2016-Ohio-1607
6 ("Capacity Charge Appeal"), the appropriate energy credit to be applied to the
7 Company's cost-based capacity charge is \$47.46/MW-day, resulting in a net capacity
8 cost of \$288.83/MW-day (as opposed to the Commission-ordered \$188.88/MW-day); (3)
9 demonstrate that the Company's cost of providing capacity to competitive retail electric
10 service ("CRES") providers under the State Compensation Mechanism from August 8,
11 2012 to May 31, 2015 exceeded the revenues the Company collected from those CRES
12 providers by \$1.02 billion; (4) identify that the retail stability rider ("RSR") collection
13 through May 31, 2015 consisted of \$121 million that originally applied to the deferral
14 balance and a non-deferral portion of \$327 million; (5) provide a calculation showing
15 AEP Ohio's corrected capacity costs, subject to regulatory deferral, based upon a
16 corrected capacity charge of \$288.83/MW-day and application of the non-deferral portion
17 of the RSR consistent with the Court's direction as of the end of May 31, 2015, were
18 \$601 million; (6) provide a calculation of the updated RSR rates that will provide for
19 recovery of the balance of deferred capacity costs through May 2018; and (7) support the
20 position that recovery of capacity costs related to OVEC and Lawrenceburg from non-
21 shopping customers through the Fuel Adjustment Clause ("FAC") and Fixed Cost
22 Recovery ("FCR") Rider did not result in over-recovery of capacity costs.

1 **Q. ARE YOU SPONSORING ANY EXHIBITS AS A PART OF YOUR**
2 **TESTIMONY?**

3 A. Yes. I am sponsoring the following exhibits:

4 Exhibit WAA-REM1 – Market Price Comparison

5 Exhibit WAA-REM2 – Fuel Cost Comparison

6 Exhibit WAA-REM3 – Heat Rate Comparison

7 Exhibit WAA-REM4 – Summary of Capacity Regulatory Deferrals

8 Exhibit WAA-REM5 – Calculation of Retail Stability Rider

9 **HISTORY OF PROCEEDINGS**

10 **Q. PLEASE IDENTIFY THE CASES AND TOPICS THAT THE COMPANY IS**
11 **ADDRESSING IN THIS FILING.**

12 A. This filing is addressing several interrelated cases that span a number of years beginning
13 in late 2010. The first of these is Case No. 10-2929-EL-UNC (the “*Capacity Charge*”
14 proceeding), which addressed AEP Ohio’s capacity charges to CRES providers that were
15 using the Company’s capacity to serve shopping customers. The second of these is Case
16 Nos. 11-346-EL-SSO et al. (the “*ESP II*” proceeding), which addressed the Company’s
17 second Electric Security Plan (“ESP”) covering the period August 2012 through May
18 2015. The next is Case Nos. 14-1186-EL-RDR et al. (the “*RSR Implementation Plan*”
19 proceeding), which established a rider to collect the balance of deferred capacity costs
20 resulting from the *Capacity Charge* and *ESP II* proceedings. The final set of cases are
21 Case Nos. 11-5906-EL-FAC, 12-3133-EL-FAC, 13-572-EL-FAC, 13-1286-EL-FAC, and
22 13-1892-EL-FAC (the “*FAC Audit*” proceeding), which, along with the traditional audit
23 of fuel costs, reviewed the recovery of certain capacity-related costs. Each of these sets

1 of cases addressed various aspects of the recovery of the Company's capacity-related
2 costs, either from CRES providers, standard service offer ("SSO") customers, or all
3 customers.

4 **Q. PLEASE DISCUSS THE HISTORY OF THE *CAPACITY CHARGE* CASE.**

5 A. On November 1, 2010, AEP Ohio filed an application with FERC in FERC Docket No.
6 ER11-1995-000. On November 24, 2010, at the direction of FERC, AEP Ohio refiled its
7 application in FERC Docket No. ER11-2183-000. As a Fixed Resource Requirement
8 ("FRR") entity, AEP Ohio proposed to implement an existing clause within the PJM
9 Reliability Assurance Agreement ("RAA") to change the basis of compensation for use
10 of its capacity by CRES providers to an AEP Ohio cost-based method.

11 AEP Ohio had self-supplied its capacity as an FRR entity since the inception of
12 PJM's Reliability Assurance Agreement ("RAA") in June 2007, thus opting out of the
13 PJM RPM auction market for purposes of meeting its load obligations each year through
14 planning year 2014/2015. Since the RPM auction inception, AEP Ohio had been
15 compensated at the adjusted PJM RPM auction price for supplying capacity associated
16 with load lost to CRES providers who chose not to self-supply their own capacity. The
17 CRES providers who chose not to self-supply merely acted as middle-men on capacity
18 flowing from AEP Ohio. It is important to note that CRES providers had the ability to
19 self-supply capacity under AEP Ohio's FRR plan throughout this period but chose not to
20 commit capacity resources to serve customers and instead purchased capacity from AEP
21 Ohio.

1 In its November 2010 FERC application, AEP Ohio proposed cost-based formula
2 tariffs that were based on AEP Ohio's¹ 2009 FERC Form 1 filings. In response to AEP
3 Ohio's November 2010 application to the FERC, the Commission represented to FERC
4 that, as of December 8, 2010, it was "adopt[ing] as the state compensation mechanism for
5 [AEP Ohio] the current capacity charges established by the three-year capacity auction
6 conducted by PJM," which is the PJM RPM auction price. At the same time the
7 Commission initiated a proceeding, the *Capacity Charge* case, to determine what changes
8 to the current state compensation mechanism ("SCM") were appropriate and to determine
9 AEP Ohio's FRR capacity charges to CRES providers.

10 On August 31, 2011, AEP Ohio made an application in the *Capacity Charge* case
11 to remedy the situation where CRES providers were receiving a subsidy for their use of
12 the Company's capacity due to the use of RPM auction prices. That application included
13 a cost-based formula rate to determine the appropriate compensation for CRES use of the
14 Company's capacity. Based upon 2010 cost data, the Company supported a cost-based
15 capacity rate of \$355.72/MW-day. A settlement in the Capacity Case was approved by
16 the Commission on December 14, 2011, and subsequently rejected on February 23, 2012.

17 Testimony was then filed by various parties, including testimony on behalf of the
18 Commission Staff, and a lengthy evidentiary hearing was undertaken. On July 2, 2012,
19 the Commission issued an Opinion and Order ("*Capacity Charge* Opinion and Order")
20 finding that a cost-based capacity charge of \$188.88/MW-day was appropriate. The
21 capacity charge of \$188.88/MW-day was based upon a cost of capacity of \$342.95/MW-

¹ For simplicity, I use the term "AEP Ohio" here to refer to Ohio Power Company and Columbus Southern Power both before and after their merger.

1 day, an offset for ancillary service revenues of \$6.66/MW-day, Staff's proposed energy
2 credit of \$152.41/MW-day, and an adjustment to reflect AEP Ohio's full requirements
3 contract with Wheeling Power Company of \$5.00/MW-day.

Capacity Charge Adopted in *Capacity Charge* Opinion and Order (pp. 34-35)

| | (\$/MW-day) |
|---|---------------|
| Filed Cost of Capacity | 355.72 |
| Commission Cost of Service Adjustments | (12.77) |
| Ordered Cost of Capacity | 342.95 |
| Ancillary Service Revenues | (6.66) |
| Staff's Proposed Energy Credit | (152.41) |
| Wheeling Power Contract Offset | 5.00 |
| Ordered Capacity Charge with Energy Credit | 188.88 |

4 The *Capacity Charge* Opinion and Order also directed the Company to modify its
5 accounting procedures to defer the difference between the adjusted RPM rate and the
6 Company's incurred capacity costs, but only up to the Commission-approved Capacity
7 Charge of \$188.88/MW-day. The Opinion and Order also indicated that recovery of the
8 deferral would be addressed in the *ESP II* proceeding.

9 **Q. PLEASE DISCUSS THE HISTORY OF AEP OHIO'S ESP II.**

10 A. On January 7, 2011 AEP Ohio filed its second ESP. This ESP proposed the continuation
11 of several elements from the first ESP as well as new benefits for AEP Ohio's customers.
12 The case was consolidated with several other cases, including the *Capacity Charge*
13 proceeding, and parties filed a Stipulation and Recommendation on September 7, 2011.
14 The Stipulation was modified and approved by the Commission on December 14, 2011,
15 but was later rejected by the Commission on February 23, 2012.

16 On March 30, 2012, AEP Ohio filed an application to modify its ESP II
17 application for the period of June 1, 2012 through May 15, 2015. This modified

1 application included newly proposed components, including highly discounted capacity
2 charges and a newly proposed RSR. The proposed RSR was to encourage customer
3 shopping through discounted capacity prices while retaining reasonable rates for SSO
4 customers and to ensure that AEP Ohio was not financially harmed as it transitioned
5 towards a competitive auction for SSO supply. This case involved over forty-five
6 intervenors, several of them filing testimony, and several weeks of evidentiary hearings
7 with over seventy witnesses testifying.

8 On August 8, 2012, the Commission issued an Opinion and Order in the *ESP II*
9 case (“*ESP II* Opinion and Order”) approving, among other things, the RSR. The
10 Commission found that the RSR promotes stable retail electric service and ensures
11 customer certainty regarding retail electric service. The Commission set the RSR
12 recovery amounts through May of 2015 and ordered that \$1/MWh of the amount
13 collected be allocated toward AEP Ohio’s capacity deferral recovery, as ordered in the
14 *Capacity Charge* case. Any remaining balance of the capacity deferral that remained at
15 the conclusion of the modified ESP period was to be amortized and collected over a three
16 year period. Following the Commission’s directive to establish a means of recovering the
17 remaining *Capacity Charge* deferral following the completion of *ESP II*, AEP Ohio filed
18 Case No. 14-1186-EL-RDR (the “*RSR Implementation Plan*” case). On April 2, 2015,
19 the Commission, through its order in the *RSR Implementation Plan* proceeding,
20 confirmed that AEP Ohio should continue to assess the RSR at a rate of \$4.00/MWh until
21 the complete *Capacity Charge* deferral balance was recovered.

22 **Q. PLEASE DISCUSS THE HISTORY OF THE FAC AUDIT CASES AND**
23 **RELATED CASES.**

1 A. The *ESP II* Opinion and Order approved the continuation of the FAC, in which the
2 Company recovered prudently incurred fuel and fuel-related costs through May 31, 2015.
3 Included in these costs are demand charges from the Ohio Valley Electric Company
4 (“OVEC”) and the Lawrenceburg Generation Stations. These costs were originally
5 approved for recovery in the Commission’s March 18, 2009 Opinion and Order in the
6 Company’s first ESP.

7 In Case No. 12-3254-EL-UNC, which established a Competitive Bid Process
8 (“CBP”), AEP Ohio proposed to unbundle the FAC in order to blend its energy auction
9 clearing prices into the SSO rates. The first component, the Auction Phase-In Rider,
10 included recovery of energy and variable costs, including auction purchases and auction
11 costs. The second component, the FCR, included the remainder of the FAC, which
12 consists of non-energy fixed costs. Several parties in this case argued that the non-energy
13 fixed costs relating to OVEC and Lawrenceburg, specifically capacity-related charges
14 that are included in FERC Account 555, were part of the SCM approved in the *Capacity*
15 *Charge* case, and should not have been included in the FCR. AEP Ohio contended that
16 the FCR, as it was proposed, did not amount to double recovery any more than the
17 previous FACs that had been in place through the Company’s first two ESPs. The
18 Commission approved the Company’s proposed unbundling of the FAC into the two
19 components on November 13, 2013. The Commission stated that the CBP proceeding
20 was not the appropriate forum to address the allegations of double recovery of costs
21 related to OVEC and Lawrenceburg.

22 Instead, in the *FAC Audit* proceeding, an RFP was issued on April 16, 2014, and
23 an audit was awarded to Baker Tilly Virchow Krause. LLP (“Baker Tilly”) on May 21,

1 2014. Baker Tilly conducted a thorough review and audit of the Company's collection of
2 the OVEC and Lawrenceburg's capacity cost and issued its final report on October 6,
3 2014. The case has not yet been set for hearing. Company witness Pearce further
4 addresses the alleged double recovery.

5 **ENERGY CREDIT**

6 **Q. DID YOU PROVIDE TESTIMONY IN THE *CAPACITY CHARGE* CASE?**

7 A. Yes. I offered direct and rebuttal testimony in the *Capacity Charge* case.

8 **Q. HAVE YOU REVIEWED THE OHIO SUPREME COURT'S OPINION IN CASE**
9 **NOS. 2012-2098 AND 2013-0228?**

10 A. Yes. I have been advised by counsel that the Court remanded the determination of the
11 energy credit to the Commission to substantively address AEP's input arguments.
12 Specifically, the Court noted that AEP Ohio had raised numerous substantive objections
13 to the energy credit, including, among other things, that the model used by Energy
14 Ventures Analysis ("EVA") "(1) was not properly calibrated, which resulted in overstated
15 gross energy margins by more than 200 percent, (2) wrongly incorporated traditional off-
16 system-sales margins, (3) failed to properly reflect AEP's System Interconnection
17 Agreement ('pool agreement') for off-system sales, (4) overstated forecasted market
18 prices, (5) understated fuel costs for coal units, and (6) understated heat rates for
19 generation facilities." *In re Commission Review of Capacity Charges of Ohio Power*,
20 2016-Ohio-1607, ¶ 52 ("*Capacity Charge Appeal*"). The Court found that the
21 Commission had erred by "approv[ing] the staff's proposed energy credit without
22 specifically addressing any of AEP's challenges to the inputs used in EVA's

1 methodology.” *Id.* ¶ 53. Thus, the Court “reverse[d] this part of the order and direct[ed]
2 the commission on remand to substantively address AEP’s input arguments.” *Id.* ¶ 57.

3 Of the six items identified in the Court’s opinion, my testimony specifically
4 addresses the last three items – (4) overstated forecasted market prices, (5) understated
5 fuel costs for coal units, and (6) understated heat rates for generation facilities. The first
6 item – related to the model not being properly calibrated – is addressed by my proposed
7 corrections to items four through six. The second item – related to wrongly incorporated
8 traditional off-system-sales margins – results in “phantom” off-system sales (“OSS”)
9 margins from non-shopping customers being improperly included as a component of the
10 OSS margins used to calculate the energy credits. While correcting for this error would
11 reduce the energy credit below the level I have proposed, I have not calculated the impact
12 of correcting this error. The third item – related to the failure to properly reflect AEP’s
13 System Interconnection Agreement (“Pool Agreement”) for off-system sales – is not
14 being addressed in my testimony. The Pool Agreement was terminated at the end of
15 2013. Addressing the impact of the Pool Agreement for the first half of the period would
16 have further reduced the energy credit of \$47.46/MW-day that I am supporting.

17 **Q. CAN YOU DESCRIBE WHAT AN ENERGY CREDIT IS IN THE CONTEXT OF**
18 **A CAPACITY CHARGE?**

19 A. In the PJM “market,” a power plant obtains revenue from two primary sources – sales of
20 capacity and sales of energy. An energy credit is an approach to reduce the overall cost
21 of capacity to reflect potential margins that a power plant could obtain from sales of
22 energy. A cost-based capacity charge developed with an appropriate energy credit allows
23 a power plant to earn revenues from the sale of capacity and energy that are sufficient to

1 cover its full cost of providing capacity and energy. If the capacity charge is developed
2 with an energy credit that is overstated, the power plant will be unable to collect its full
3 cost of providing capacity.

4 Q. **DID YOU ADDRESS OVERSTATED FORECASTED MARKET PRICES,**
5 **UNDERSTATED FUEL COSTS FOR COAL UNITS, AND UNDERSTATED**
6 **HEAT RATES FOR GENERATION FACILITIES IN YOUR REBUTTAL**
7 **TESTIMONY IN THE *CAPACITY CHARGE* CASE?**

8 A. Yes. I addressed each of these items in my rebuttal testimony in the *Capacity Charge*
9 case. In that testimony I demonstrated that these three input errors resulted in an
10 overstatement in the Staff's proposed energy credit of \$99.95/MW-day. This overstated
11 energy credit resulted in understated costs for AEP Ohio to provide capacity to load
12 served by CRES providers of approximately \$470 million over the period August 2012
13 through May 2015.

| | (\$/MW-day) |
|---|----------------|
| Medine's Energy Credit | 152.41 |
| Correction to Address Wheeling Power Contract | (5.00) |
| Approved Energy Credit | 147.41 |
| | |
| Additional Input Errors | |
| Understated Fuel Costs for Coal Units | (70.10) |
| Understated Heat Rate for Gas Units | (1.87) |
| Overstated Market Prices | (50.42) |
| Cross Impact of Fuel and Market | 22.44 |
| Total Impact of Input Errors | (99.95) |
| | |
| Corrected Energy Credit | 47.46 |

14 Q. **WERE THESE THE ONLY ERRORS THAT YOU IDENTIFIED IN THE STAFF**
15 **CONSULTANT'S PROPOSED ENERGY CREDIT?**

1 A. No, but they are the ones that relate to the scope of this remand proceeding. In the
2 *Capacity Charge* case, the Staff employed an outside party, EVA, to evaluate the energy
3 credit and to present testimony on behalf of the Staff. EVA presented an analysis
4 attempting to calculate an energy credit to be used in developing a capacity charge to be
5 applied to load served by CRES providers who were using the Company's capacity.
6 EVA initially presented the testimony of Ryan Harter. My initial review of Mr. Harter's
7 analysis identified a number of significant errors. Further errors were brought out during
8 Mr. Harter's extensive cross examination at the hearing. Mr. Harter attempted to revise
9 his analysis to correct these errors and submitted an updated analysis in the hearing phase
10 of the proceeding. Upon further review, this updated analysis included "significant,
11 inadvertent errors in estimating the energy credits,"² and a third analysis was prepared by
12 EVA and presented by Emily S. Medine. As described in my rebuttal testimony and the
13 rebuttal testimony of Company witness Nelson, this final analysis continued to include
14 numerous and substantive errors – in terms of assumptions, methodology and inputs. The
15 errors in Mr. Harter's and Ms. Medine's testimony began with elements as fundamental
16 as a failure to identify the correct generating units to include in their analysis. My
17 rebuttal testimony related to the energy credit was primarily focused on errors in
18 assumptions and inputs. In the remainder of this testimony, I will focus on the input
19 errors that the Supreme Court required the Commission to address on remand.

20 **Q. PLEASE DESCRIBE THE INPUT ERRORS ASSOCIATED WITH**
21 **OVERSTATED FORECASTED MARKET PRICES.**

² Memorandum in Support of Staff's Expedited Motion for Extension of Procedural Schedule and to Accept Testimony, filed May 1, 2012 in Case No. 10-2929-EL-UNC..

1 A. Ms. Medine's energy credit calculation included an overstated forecast of market prices,
2 which in turn resulted in an overstated energy credit. When I compared the forecasted
3 market prices used in Ms. Medine's testimony to the then-current forward market prices
4 for the three-year period the rate would be in effect, I determined that the forecasted
5 market prices were overstated by \$4.31/MWh on average or 13%³.

6 **Q. HAVE YOU COMPARED ADDITIONAL FORWARD MARKET PRICES TO**
7 **THE FORECASTED MARKET PRICES PRESENTED BY MS. MEDINE?**

8 A. Yes, I have. In order to determine whether Ms. Medine's forecasted market prices
9 reasonably reflected prices that a generator could have expected to receive, I have
10 compared her prices to the forward prices that existed on the December 31 just prior to
11 the calendar year in question. Forward market prices represent the price at which willing
12 buyers and sellers have agreed to transact in the market. For 2012, I continue to use the
13 April 25, 2012 forwards for comparison purposes, since those were current as of the time
14 of filing my original rebuttal testimony. Review of the data shows that throughout the
15 forecast period, Ms. Medine's forecasted market prices were significantly higher than
16 forward market prices. In fact, her forecasted prices exceeded the updated forward
17 market prices in each of the thirty-six months included in her forecast. Ms. Medine's
18 forecasted market prices exceeded the updated forward market prices by an average of
19 \$5.24/MWh or 16.1% as reflected in Exhibit WAA-REM1.

³ Case No. 10-2929-EL-UNC Rebuttal Testimony of William A. Allen filed on May 11, 2012, Exhibit WAA-R4

1 **Q. HAVE YOU SIMILARLY COMPARED THE UPDATED FORWARD MARKET**
2 **PRICES THAT OCCURRED TO THE FORWARD MARKET PRICES THAT**
3 **YOU PRESENTED IN YOUR REBUTTAL TESTIMONY?**

4 A. Yes. In contrast to the significantly overstated market prices presented by Ms. Medine,
5 the forward market prices presented in my rebuttal testimony align very closely with the
6 updated forward market prices. The forward market prices presented in my rebuttal
7 testimony were only \$0.93/MWh or 2.8% higher than the updated forward market prices.
8 This confirms that the forward market prices presented in my rebuttal testimony were a
9 more appropriate input to use in the analysis of an energy credit than Ms. Medine's
10 forecasted market prices. I have provided this comparison as Exhibit WAA-REM1.

11 **Q. PLEASE DESCRIBE THE INPUT ERRORS ASSOCIATED WITH**
12 **UNDERSTATED FUEL COSTS FOR COAL UNITS.**

13 A. In reviewing the fuel costs data used in Mr. Harter and Ms. Medine's analysis, I observed
14 that the fuel cost data for certain AEP Ohio generation facilities was very low compared
15 to historical data, and use of fuel costs that were too low resulted in an overstated energy
16 credit. As an example, the forecasted fuel costs used in EVA's analysis for the two 1,300
17 MW Gavin units were between \$13/MWh and \$15/MWh, well below the level that I
18 would expect. On cross examination during the *Capacity Charge* case hearing, Ms.
19 Medine admitted that the projected costs for the Gavin units used in her analysis were
20 "certainly aggressive."⁴ To put these values in perspective, the actual fuel costs for the
21 Gavin units in 2011, the year just prior to the filing of Ms. Medine's analysis, were

⁴ Case No. 10-2929-EL-UNC Tr. Vol. X, at 2288- 2289 (May 9, 2012).

1 \$20.2/MWh.⁵ In reviewing the fuel costs for the other coal units listed in the final
2 workpapers of Staff witness Medine, I observed that the analysis included similar
3 understatements of fuel costs. I estimated that the impact of these understated fuel costs,
4 based on actual 2011 fuel costs, was an overstatement of the energy credit of
5 \$70.10/MWh.⁶

6 **Q. HAVE YOU COMPARED THE ACTUAL FUEL COSTS FOR THE COAL**
7 **PLANTS TO THE FUEL COSTS USED BY MS. MEDINE OR THOSE**
8 **PRESENTED IN YOUR REBUTTAL TESTIMONY?**

9 A. Yes. A comparison of actual fuel costs to those used by Ms. Medine shows that her
10 analysis used significantly understated fuel costs. Focusing first on the Gavin units, the
11 actual fuel costs for Gavin exceeded those used by Ms. Medine by over \$7/MWh in each
12 year from 2012 to 2015. Ms. Medine used fuel costs for the Gavin plant in the range of
13 \$13.1/MWh to \$14.7/MWh, when the actual fuel costs were in the range of \$22.4/MWh
14 to \$24.7/MWh. In my rebuttal testimony, I had suggested that a conservative approach to
15 future fuel costs for the coal plants was to use actual fuel costs for 2011.⁷ For the Gavin
16 plant, actual fuel costs for 2011 were \$20.2/MWh, which is much closer to the actual fuel
17 costs incurred in 2012 through 2015 – and, in fact, quite conservative. My review of
18 actual fuel costs for all of the coal plants shows similar results. I have provided a
19 comparison for each of the coal plants as Exhibit WAA-REM2. This exhibit confirms

⁵ Case No. 10-2929-EL-UNC, IEU Ex. 120.

⁶ Case No. 10-2929-EL-UNC, AEP Ohio Ex. 142, Rebuttal Testimony of William A. Allen (May 11, 2012), Exhibit WAA-R1.

⁷ Case No. 10-2929-EL-UNC, AEP Ohio Ex. 142, Rebuttal Testimony of William A. Allen (May 11, 2012), at 6:1-7.

1 that the historical fuel prices presented in my rebuttal testimony were a more appropriate
2 input to use in the analysis of an energy credit than Ms. Medine's fuel costs.

3 **Q. PLEASE DESCRIBE THE INPUT ERRORS ASSOCIATED WITH**
4 **UNDERSTATED HEAT RATES FOR GENERATION FACILITIES.**

5 A. Ms. Medine's energy credit calculation included understated heat rates for several
6 generating units, and use of heat rates that were too low resulted in understated fuel
7 consumption and costs and an overstated energy credit. The impact of understated heat
8 rates for any of the coal units was captured in the fuel cost discussion above. In my
9 rebuttal testimony, I showed that the understated heat rates for the gas plants that Ms.
10 Medine used in her analysis resulted in an energy credit that was overstated by
11 \$1.87/MW-day.⁸

12 **Q. HAVE YOU COMPARED THE ACTUAL HEAT RATES FOR THE GAS**
13 **PLANTS TO THE HEAT RATES USED BY MS. MEDINE OR THOSE**
14 **PRESENTED IN YOUR REBUTTAL TESTIMONY?**

15 A. Yes. The most egregious error in heat rates used in Ms. Medine's analysis was the use of
16 a 9,000 BTU/kWh heat rate for the Darby Generating Station. In my rebuttal testimony, I
17 pointed out that a more appropriate heat rate to use would have been the actual 2011
18 value of 12,429 BTU/kWh. In reviewing the actual heat rates for 2012 through 2015, I
19 confirmed that the heat rate for the Darby Generating Station was approximately 12,000
20 BTU/kWh. A comparison of Ms. Medine's modeled inputs to the actual heat rates of the
21 gas plants is provided as Exhibit WAA- REM3.

⁸ Case No. 10-2929-EL-UNC, AEP Ohio Ex. 142, Rebuttal Testimony of William A. Allen (May 11, 2012), Exhibit WAA-R3, at 4.

1 **Q. HAVE YOU CALCULATED THE CAPACITY CHARGE THAT WOULD HAVE**
2 **RESULTED FROM THE CORRECTIONS TO INPUTS AND ASSUMPTIONS IN**
3 **MS. MEDINE’S ENERGY AS IDENTIFIED IN YOUR REBUTTAL**
4 **TESTIMONY?**

5 A. Yes. The errors in inputs and assumptions resulted in Ms. Medine’s energy credit being
6 overstated by \$99.95/MW-day. Correcting for these errors results in an adjusted energy
7 credit of \$47.46/MW-day and a corrected capacity charge of \$288.83/MW-day.

| | (\$/MW-day) |
|----------------------------------|---------------|
| Cost of Capacity | 342.95 |
| Ancillary Service Revenues | (6.66) |
| Adjusted Energy Credit | (47.46) |
| Corrected Capacity Charge | 288.83 |

8 **BASE GENERATION RATES**

9 **Q. DID THE OVERSTATEMENT OF THE ENERGY CREDIT HAVE AN IMPACT**
10 **ON BASE GENERATION RATES FOR NON-SHOPPING CUSTOMERS?**

11 A. Yes. In its November 13, 2013, Opinion and Order in Case No 12-3254-EL-UNC, the
12 Commission ordered AEP Ohio to blend base generation rates with the cost-based
13 capacity rate determined in the *Capacity Charge* case in a proportion equal to the amount
14 of energy procured through auctions (e.g. 10%, 60%, 100%). The overstatement of the
15 energy credit by \$99.95/MW-day resulted in reduced revenue from non-shopping
16 customers of approximately \$78 million during the term of ESP II. This resulted in an
17 additional financial harm to AEP Ohio from the overstated energy credit. I am not
18 proposing that this \$78 million of reduced revenue be recovered from customers in this
19 filing, but the Commission should be aware that the substantial errors in Ms. Medine’s
20 energy credit calculation caused harm beyond the capacity deferral balance at issue here.

1 **DEFERRED CAPACITY COSTS**

2 **Q. PLEASE DESCRIBE HOW THE COMPANY HAS CALCULATED DEFERRED**
3 **CAPACITY COSTS (UP TO THE COMMISSION APPROVED CAPACITY**
4 **CHARGE OF \$188.88/MW-DAY) SINCE THE COMMISSION ISSUED ITS**
5 **AUGUST 8, 2012 OPINION AND ORDER IN THE *ESP II* PROCEEDING.**

6 A. To determine the level of deferred capacity costs, AEP Ohio has taken the incurred
7 capacity cost (up to the Commission-approved capacity charge of \$188.88/MW-day) for
8 capacity provided to CRES providers serving shopping customers and subtracted the
9 actual capacity revenue received from CRES providers based upon the PJM RPM rate for
10 the Rest of RTO. AEP Ohio then applied \$1/MWh of the RSR revenues during the term
11 of ESP II to reduce the level of the deferred balance. Carrying costs were applied to the
12 monthly balance of the deferral. Beginning in June 2015, 100% of the revenues
13 recovered through the RSR have been used to reduce the level of the deferred balance.

14 **Q. ABOVE YOU JUSTIFY A CORRECTED CAPACITY CHARGE OF \$288.83/MW-**
15 **DAY. HAVE YOU CALCULATED THE DIFFERENCE BETWEEN THE**
16 **INCURRED CAPACITY COSTS FOR CAPACITY PROVIDED TO CRES**
17 **PROVIDERS USING THE CORRECTED \$288.83/MW-DAY CAPACITY**
18 **CHARGE AND THE ACTUAL CAPACITY REVENUES RECEIVED FROM**
19 **CRES PROVIDERS FOR THE PERIOD AUGUST 8, 2012 THROUGH MAY 31,**
20 **2015?**

21 A. Yes. Using an energy credit of \$47.46/MW-day and a corrected net incurred capacity
22 cost of \$288.83/MW-day, AEP Ohio's actual incurred capacity costs for capacity
23 provided to CRES providers for that period was \$1.36 billion. The capacity revenues

1 received from CRES providers during that period was only \$358 million. This resulted in
2 an actual under-recovery of capacity costs of \$1.02 billion.

3 **Q. IN THE *ESP II APPEAL*, THE OHIO SUPREME COURT INSTRUCTED THAT**
4 **THE BALANCE OF THE CAPACITY COST DEFERRAL BE ADJUSTED TO**
5 **ELIMINATE THE NON-DEFERRED PORTION OF THE RSR REVENUE**
6 **COLLECTED DURING ESP II. HAVE YOU CALCULATED THE LEVEL OF**
7 **NON-DEFERRED RSR REVENUES THAT WERE COLLECTED FROM**
8 **CUSTOMERS OVER THE PERIOD SEPTEMBER 2012 THROUGH MAY 2015?**

9 A. Yes. Over the period September 2012 through May 2015, \$448 million in RSR revenues
10 were collected. This is inclusive of the \$1/MWh that the Commission directed to be
11 applied to reduce the balance of deferred capacity costs in its August 8, 2012 Opinion and
12 Order in the ESP II case. Of the \$448 million of total RSR revenues collected, \$121
13 million related to the \$1/MWh originally applied to the balance of the capacity cost
14 deferral. Thus, the non-deferred portion of the RSR revenue is \$327 million.

15 **Q. HAVE YOU DEVELOPED A CALCULATION OF THE CORRECTED**
16 **BALANCE OF DEFERRED CAPACITY COSTS TAKING INTO ACCOUNT**
17 **ALL OF THE ADJUSTMENTS YOU HAVE DISCUSSED ABOVE?**

18 A. Yes. I have prepared a calculation of the deferred capacity costs, including carrying costs
19 of \$51 million, through May 31, 2015 based upon an incurred capacity cost of
20 \$288.83/MW-day. This calculation also reflects the application of 100% of RSR
21 revenues being applied against the capacity cost deferral and monthly long-term debt
22 carrying costs beginning in August of 2012 consistent with the directive of the Ohio
23 Supreme Court. This calculation is provided as Exhibit WAA-REM4 and shows total

1 corrected deferred capacity costs of \$601 million as of May 31, 2015. The calculation
2 was performed by first updating the incurred capacity costs on a monthly basis to reflect
3 a capacity charge of \$288.83/MW-day and offsetting these costs with actual CRES
4 revenues received and the deferral portion of the RSR revenues. The next step was to
5 offset the balance of the deferred capacity costs by the non-deferred portion of the RSR
6 on a monthly basis. The final step was to calculate a carrying cost on the net balance
7 subject to regulatory deferral.

8 **Q. WHAT WOULD THE BALANCE OF DEFERRED CAPACITY COSTS HAVE**
9 **BEEN PRIOR TO RECOGNIZING THE CORRECTED CAPACITY CHARGE**
10 **AND APPLYING THE NON-DEFERRAL PORTION OF THE RSR AS AN**
11 **OFFSET TO THE BALANCE?**

12 A. The balance of deferred capacity costs as of May 31, 2015, would have been \$444
13 million versus the corrected balance of \$601 million described above.

14 **UPDATED RSR RATES**

15 **Q. HAVE YOU PREPARED A CALCULATION OF THE RATES THAT WOULD**
16 **PROVIDE FOR RECOVERY OF THE BALANCE OF DEFERRED CAPACITY**
17 **COSTS REFLECTING THE CORRECTED CAPACITY CHARGE OF**
18 **\$288.83/MW-DAY AND THE COURT'S DIRECTIVE WITH REGARD TO THE**
19 **NONDEFERRAL PORTION OF THE RSR?**

20 A. Yes. Based upon a projected capacity deferral balance of \$412 million as of September
21 30, 2016 and new rates effective October 1, 2016, the average RSR rate will be
22 \$5.77/MWh as compared to the current rate of \$4.00/MWh. I have provided a
23 breakdown of the RSR rates by class as Exhibit WAA-REM5.

1 **FAC AUDIT CASES**

2 **Q. HAVE YOU PARTICIPATED IN THE *FAC AUDIT* CASES AS THEY RELATE**
3 **TO THE RECOVERY OF COSTS ASSOCIATED WITH OVEC AND**
4 **LAWRENCEBURG?**

5 A. Yes, I have participated in the *FAC Audit* cases. I have reviewed and assisted in the
6 preparation of responses to audit requests as well as reviewed the final audit report
7 prepared by Baker Tilly.

8 **Q. THE BAKER TILLY AUDIT REPORT CONCLUDED THAT THERE WAS AN**
9 **OVER-COLLECTION OF OVEC AND LAWRENCEBURG FIXED COSTS**
10 **FROM NON-SHOPPING CUSTOMERS. DO YOU AGREE WITH THIS**
11 **CONCLUSION?**

12 A. No. The Baker Tilly audit report's conclusion that there was an over-collection of OVEC
13 and Lawrenceburg fixed costs from non-shopping customers fails to recognize a
14 fundamental fact – an over-collection of costs cannot occur until all actual costs are fully
15 collected. Company witness Pearce's testimony demonstrates that the Company's actual
16 costs exceeded the level of costs collected from non-shopping customers under the State
17 Compensation Mechanism, even when incorporating the updates to the deferred capacity
18 cost balance I discuss above. As part of its audit, Baker Tilly reviewed the Company's
19 calculation, presented in Witness Pearce's testimony, of its actual incurred capacity costs
20 and validated the accuracy of those calculations.⁹ Company witness Pearce demonstrates
21 that our actual cost of capacity has exceeded the amount eligible for recovery, either from
22 a CRES, through the RSR, or through the FAC by \$8 million. As such, there has been no

⁹ Baker Tilly Report at 10 (Section 3.1.2).

1 over recovery of capacity costs and the Commission should determine that that no refund
2 of the fixed costs for OVEC and Lawrenceburg are due to non-shopping customers.

3 **CONCLUSIONS**

4 **Q. DO YOU HAVE ANY RECOMMENDATIONS OR CONCLUSIONS?**

5 A. Yes, I am recommending that the Commission (1) determine that the appropriate energy
6 credit to be used in determining AEP Ohio's cost based capacity was \$47.46/MW-day;
7 (2) determine that the appropriate cost-based capacity charge to be used in the calculation
8 of AEP Ohio's deferred capacity costs is \$288.83/MW-day; (3) confirm, subject to final
9 audit, that the appropriate balance of deferred capacity costs as of May 31, 2015 is \$601
10 million; (4) approve the updated RSR rates to recover the corrected capacity deferral
11 balance as set forth in Exhibit WAA-REM5; and (5) determine that there was no over-
12 recovery of capacity costs associated with the OVEC and Lawrenceburg plants.

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

14 A. Yes.

Market Price Comparison

| | Time Period | EVA AEP Zone Projection (\$/MWh) | Allen AEP Gen Hub Projection (\$/MWh) | AEP Gen Hub Forwards (\$/MWh) | EVA Variance (\$/MWh) | Allen Variance (\$/MWh) |
|----------------------|-------------|--|---|-------------------------------------|--------------------------|----------------------------|
| | 2012_06 | \$33.32 | \$28.38 | \$28.38 | \$4.94 | \$0.00 |
| | 2012_07 | \$35.81 | \$31.74 | \$31.74 | \$4.07 | \$0.00 |
| | 2012_08 | \$35.72 | \$31.74 | \$31.74 | \$3.98 | \$0.00 |
| | 2012_09 | \$32.16 | \$27.16 | \$27.16 | \$5.00 | \$0.00 |
| | 2012_10 | \$30.95 | \$28.43 | \$28.43 | \$2.52 | \$0.00 |
| | 2012_11 | \$32.30 | \$28.43 | \$28.43 | \$3.87 | \$0.00 |
| | 2012_12 | \$32.11 | \$28.43 | \$28.43 | \$3.68 | \$0.00 |
| 2012 Average Price | | \$33.19 | \$29.19 | \$29.19 | \$4.00 | \$0.00 |
| | 2013_01 | \$40.55 | \$32.55 | \$38.40 | \$2.15 | (\$5.85) |
| | 2013_02 | \$40.83 | \$32.55 | \$32.68 | \$8.15 | (\$0.13) |
| | 2013_03 | \$37.89 | \$31.58 | \$31.51 | \$6.38 | \$0.07 |
| | 2013_04 | \$35.12 | \$31.58 | \$30.91 | \$4.21 | \$0.67 |
| | 2013_05 | \$35.78 | \$31.75 | \$30.83 | \$4.95 | \$0.92 |
| | 2013_06 | \$38.21 | \$33.51 | \$31.35 | \$6.86 | \$2.16 |
| | 2013_07 | \$41.00 | \$36.43 | \$36.28 | \$4.72 | \$0.15 |
| | 2013_08 | \$41.64 | \$36.43 | \$35.41 | \$6.23 | \$1.02 |
| | 2013_09 | \$37.55 | \$32.30 | \$30.70 | \$6.85 | \$1.60 |
| | 2013_10 | \$36.25 | \$31.78 | \$31.84 | \$4.41 | (\$0.06) |
| | 2013_11 | \$37.29 | \$31.78 | \$32.04 | \$5.25 | (\$0.26) |
| | 2013_12 | \$38.91 | \$31.78 | \$31.23 | \$7.68 | \$0.55 |
| 2013 Average Price | | \$38.42 | \$32.84 | \$32.76 | \$5.66 | \$0.08 |
| | 2014_01 | \$42.57 | \$35.28 | \$37.35 | \$5.22 | (\$2.07) |
| | 2014_02 | \$42.20 | \$35.28 | \$35.21 | \$6.99 | \$0.07 |
| | 2014_03 | \$37.89 | \$35.28 | \$34.45 | \$3.44 | \$0.83 |
| | 2014_04 | \$35.51 | \$35.28 | \$32.35 | \$3.16 | \$2.93 |
| | 2014_05 | \$36.87 | \$35.28 | \$30.91 | \$5.96 | \$4.37 |
| | 2014_06 | \$39.03 | \$35.28 | \$32.50 | \$6.53 | \$2.78 |
| | 2014_07 | \$42.23 | \$35.28 | \$38.87 | \$3.36 | (\$3.59) |
| | 2014_08 | \$42.22 | \$35.28 | \$35.75 | \$6.47 | (\$0.47) |
| | 2014_09 | \$38.26 | \$35.28 | \$30.69 | \$7.57 | \$4.59 |
| | 2014_10 | \$37.24 | \$35.28 | \$30.13 | \$7.11 | \$5.15 |
| | 2014_11 | \$37.97 | \$35.28 | \$31.33 | \$6.64 | \$3.95 |
| | 2014_12 | \$40.57 | \$35.28 | \$32.82 | \$7.75 | \$2.46 |
| 2014 Average Price | | \$39.38 | \$35.28 | \$33.53 | \$5.85 | \$1.75 |
| | 2015_01 | \$43.25 | \$37.37 | \$40.12 | \$3.13 | (\$2.75) |
| | 2015_02 | \$43.89 | \$37.37 | \$38.19 | \$5.70 | (\$0.82) |
| | 2015_03 | \$38.35 | \$37.37 | \$33.81 | \$4.54 | \$3.56 |
| | 2015_04 | \$35.75 | \$37.37 | \$32.23 | \$3.52 | \$5.14 |
| | 2015_05 | \$36.58 | \$37.37 | \$30.83 | \$5.75 | \$6.54 |
| 2015 Average Price | | \$39.56 | \$37.37 | \$35.03 | \$4.53 | \$2.34 |
| Total Period Average | | \$37.88 | \$33.57 | \$32.64 | \$5.24 | \$0.93 |

Fuel Cost Comparison (\$/MWh)

| | 2011 | 2012 | | | 2013 | | | 2014 | | | 2015 | | |
|--------------------|--------|-------|--------|----------|-------|--------|----------|-------|--------|----------|-------|--------|----------|
| Plant | Actual | EVA | Actual | Variance | EVA | Actual | Variance | EVA | Actual | Variance | EVA | Actual | Variance |
| Cardinal 1 | 20.18 | 14.03 | 19.75 | (5.72) | 15.01 | 20.26 | (5.25) | 15.99 | 17.90 | (1.91) | 16.37 | 23.86 | (7.49) |
| Conesville 3, 5, 6 | 28.24 | 26.22 | 33.72 | (7.50) | 27.04 | 27.07 | (0.03) | 27.95 | 27.45 | 0.50 | 28.22 | 28.94 | (0.72) |
| Conesville 4 | 39.58 | 23.92 | 50.03 | (26.11) | 24.57 | 47.42 | (22.85) | 25.59 | 42.74 | (17.15) | 25.95 | 31.01 | (5.06) |
| Gavin | 20.16 | 13.14 | 23.37 | (10.23) | 13.52 | 24.75 | (11.23) | 14.33 | 24.29 | (9.96) | 14.68 | 22.43 | (7.75) |
| Kammer | 35.59 | 26.62 | 38.41 | (11.79) | 26.59 | 39.33 | (12.74) | 28.38 | 36.28 | (7.90) | 29.39 | 33.76 | (4.37) |
| Muskingum River | 26.69 | 24.41 | 34.02 | (9.61) | 29.79 | 37.97 | (8.18) | N/A | 33.10 | N/A | 30.36 | 31.69 | (1.33) |
| Stuart | 29.11 | 23.70 | 30.78 | (7.08) | 23.59 | 25.51 | (1.92) | 24.54 | 25.98 | (1.44) | 25.38 | 26.76 | (1.38) |
| Zimmer | 26.88 | 15.95 | 31.98 | (16.03) | 16.52 | 23.13 | (6.61) | 17.06 | 26.06 | (9.00) | 17.26 | 23.78 | (6.52) |

Heat Rate Comparison

| | Heat Rate (BTU/kWh) | | | | | |
|-----------------|---------------------|--------|--------|--------|--------|--------|
| | EVA Input | Actual | | | | |
| | All Years | 2011 | 2012 | 2013 | 2014 | 2015 |
| Waterford CC | 7,000 | 7,308 | 7,196 | 6,954 | 7,218 | 7,064 |
| Darby CT | 9,000 | 12,429 | 12,105 | 11,959 | 11,965 | 12,172 |
| Lawrenceburg CC | 7,000 | 7,190 | 7,074 | 7,245 | 7,236 | 7,045 |

Summary of Capacity Regulatory Deferrals

| | Incurring Capacity Costs @ \$288.83/MW-day | CRES Capacity Payments | Deferral Portion of RSR Revenues | Non-Deferral Portion of RSR Revenues | Carrying Costs | Cummulative Deferred Capacity Costs |
|--------------|--|---------------------------|--|--|----------------------|---|
| Aug-12 | \$ 19,191,518 | \$ (1,333,795) | \$ - | \$ - | \$ - | \$ 17,857,723 |
| Sep-12 | \$ 26,061,486 | \$ (1,811,252) | \$ (3,619,686) | \$ (9,231,650) | \$ 82,155 | \$ 29,338,778 |
| Oct-12 | \$ 29,436,242 | \$ (2,045,794) | \$ (3,457,783) | \$ (8,228,644) | \$ 134,957 | \$ 45,177,756 |
| Nov-12 | \$ 31,166,698 | \$ (2,166,060) | \$ (2,852,025) | \$ (7,343,490) | \$ 207,816 | \$ 64,190,696 |
| Dec-12 | \$ 33,532,470 | \$ (2,330,479) | \$ (4,218,795) | \$ (10,450,222) | \$ 295,249 | \$ 81,018,918 |
| Jan-13 | \$ 34,847,302 | \$ (2,421,868) | \$ (4,292,225) | \$ (11,084,436) | \$ 372,573 | \$ 98,440,264 |
| Feb-13 | \$ 32,247,329 | \$ (2,241,542) | \$ (3,911,387) | \$ (10,100,854) | \$ 452,583 | \$ 114,886,394 |
| Mar-13 | \$ 36,574,280 | \$ (2,542,304) | \$ (3,857,071) | \$ (9,844,342) | \$ 546,613 | \$ 135,763,570 |
| Apr-13 | \$ 35,983,894 | \$ (2,500,850) | \$ (3,770,419) | \$ (9,399,509) | \$ 597,970 | \$ 156,674,656 |
| May-13 | \$ 37,805,392 | \$ (2,627,443) | \$ (3,160,832) | \$ (7,728,358) | \$ 690,861 | \$ 181,654,276 |
| Jun-13 | \$ 39,078,988 | \$ (4,583,014) | \$ (3,694,944) | \$ (9,041,392) | \$ 799,439 | \$ 204,213,353 |
| Jul-13 | \$ 40,997,218 | \$ (4,807,974) | \$ (4,162,806) | \$ (10,408,356) | \$ 889,163 | \$ 226,720,598 |
| Aug-13 | \$ 41,548,926 | \$ (4,872,678) | \$ (3,662,506) | \$ (9,245,178) | \$ 877,082 | \$ 251,366,244 |
| Sep-13 | \$ 40,720,256 | \$ (4,775,494) | \$ (3,677,643) | \$ (9,248,487) | \$ 963,164 | \$ 275,348,039 |
| Oct-13 | \$ 42,408,120 | \$ (4,973,440) | \$ (3,528,691) | \$ (8,508,174) | \$ 1,041,396 | \$ 301,787,250 |
| Nov-13 | \$ 41,457,177 | \$ (4,861,918) | \$ (3,133,452) | \$ (7,802,883) | \$ 1,143,279 | \$ 328,589,454 |
| Dec-13 | \$ 43,110,061 | \$ (5,055,760) | \$ (3,839,289) | \$ (9,895,056) | \$ 1,260,329 | \$ 354,169,740 |
| Jan-14 | \$ 43,423,936 | \$ (5,092,570) | \$ (4,187,006) | \$ (11,072,915) | \$ 1,683,397 | \$ 378,924,581 |
| Feb-14 | \$ 39,434,558 | \$ (4,624,714) | \$ (4,065,798) | \$ (10,812,252) | \$ 1,843,999 | \$ 400,700,374 |
| Mar-14 | \$ 43,920,010 | \$ (5,150,748) | \$ (3,696,426) | \$ (9,672,549) | \$ 1,819,998 | \$ 427,920,659 |
| Apr-14 | \$ 42,873,172 | \$ (5,027,979) | \$ (3,356,982) | \$ (8,452,350) | \$ 2,030,689 | \$ 455,987,208 |
| May-14 | \$ 44,483,363 | \$ (5,216,816) | \$ (3,316,372) | \$ (8,031,131) | \$ 2,163,500 | \$ 486,069,751 |
| Jun-14 | \$ 42,799,054 | \$ (22,166,758) | \$ (3,481,447) | \$ (10,237,584) | \$ 2,307,157 | \$ 495,290,173 |
| Jul-14 | \$ 44,461,137 | \$ (23,027,594) | \$ (3,778,824) | \$ (11,473,885) | \$ 2,410,570 | \$ 503,881,578 |
| Aug-14 | \$ 44,624,400 | \$ (23,112,152) | \$ (3,620,249) | \$ (10,856,365) | \$ 2,447,928 | \$ 513,365,138 |
| Sep-14 | \$ 43,210,676 | \$ (22,379,947) | \$ (3,745,480) | \$ (11,270,495) | \$ 2,516,438 | \$ 521,696,329 |
| Oct-14 | \$ 44,739,264 | \$ (23,171,644) | \$ (3,362,852) | \$ (9,751,809) | \$ 2,557,217 | \$ 532,706,506 |
| Nov-14 | \$ 43,378,734 | \$ (22,466,989) | \$ (3,002,799) | \$ (9,000,683) | \$ 2,611,934 | \$ 544,226,703 |
| Dec-14 | \$ 45,913,962 | \$ (23,780,051) | \$ (3,945,829) | \$ (12,080,355) | \$ 2,665,710 | \$ 553,000,140 |
| Jan-15 | \$ 45,797,161 | \$ (23,719,556) | \$ (4,204,809) | \$ (13,136,153) | \$ 2,700,677 | \$ 560,437,460 |
| Feb-15 | \$ 41,475,410 | \$ (21,481,207) | \$ (3,929,530) | \$ (12,298,229) | \$ 2,735,157 | \$ 566,939,059 |
| Mar-15 | \$ 46,320,146 | \$ (23,900,424) | \$ (3,874,061) | \$ (12,077,003) | \$ 2,764,265 | \$ 576,171,984 |
| Apr-15 | \$ 45,295,195 | \$ (23,459,575) | \$ (3,310,524) | \$ (9,920,570) | \$ 2,810,581 | \$ 587,587,091 |
| May-15 | \$ 46,657,070 | \$ (24,164,926) | \$ (3,138,754) | \$ (9,234,802) | \$ 2,926,516 | \$ 600,632,195 |
| Total | \$ 1,354,974,603 | \$ (357,895,315) | \$ (120,857,295) | \$ (326,940,161) | \$ 51,350,362 | \$ 600,632,195 |

Calculation of Retail Stability Rider

| <u>Line No.</u> | <u>Description</u> | <u>Residential</u> | <u>GS-1, FL</u> | <u>GS-2/3/4, SBS, EHG, EHS, SS</u> | <u>AL/OL, SL</u> | <u>Total</u> |
|-----------------|---|--------------------|-----------------|------------------------------------|------------------|----------------|
| 1 | 5 CP Demand | 3,886 | 127 | 5,339 | - | 9,352 |
| 2 | Allocation Percentage | 41.55% | 1.36% | 57.09% | 0.00% | 100.00% |
| 3 | Class Allocation of Revenue Requirement | \$ 180,003,043 | \$ 5,882,755 | \$ 247,307,321 | \$ - | \$ 433,193,119 |
| 4 | All Metered kWh | 23,293,335,360 | 1,185,141,933 | 50,183,788,149 | 353,401,225 | 75,015,666,667 |
| 5 | Proposed RSR Rate \$/MWh | 7.7277 | 4.9638 | 4.9280 | 0.0000 | 5.7747 |
| 6 | Proposed Collection | \$ 180,003,908 | \$ 5,882,808 | \$ 247,305,708 | \$ - | \$ 433,192,423 |
| 7 | Revenue Verification | | | | \$ | 696 |
| 8 | Current RSR Rate \$/MWh | 5.3154 | 3.4143 | 3.3897 | 0.0000 | |
| 9 | Addition to RSR Rate \$/MWh | 2.4123 | 1.5495 | 1.5383 | 0.0000 | |

Line 1 Average Demand at time of PJM's five highest peak loads for AEP Ohio
 Line 2 Class 5 CP Demand (Line 3) Divided by Total 5 CP Demand
 Line 3 Retail Stability Rider Revenue Requirement - Estimated Balance as of **October 1, 2016**
 Line 4 AEP Ohio Forecast Metered kWh - 20 months
 Line 5 Line 3 Divided by Line 4
 Line 6 Line 4 Times Line 5
 Line 7 Line 3 Total Minus Line 6 Total
 Line 8 Input
 Line 9 Line 5 Minus Line 8

CERTIFICATE OF SERVICE

In accordance with Rule 4901-1-05, Ohio Administrative Code, the PUCO's e-filing system will electronically serve notice of the filing of this document upon the following parties. In addition, I hereby certify that a service copy of the foregoing Direct Testimony of William A. Allen was sent by, or on behalf of, the undersigned counsel to the following parties of record this 7th day of June, 2016, via electronic transmission.

/s/ Steven T. Nourse

Steven T. Nourse

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Summary: Testimony - Direct Testimony of William A. Allen on behalf of Ohio Power Company
electronically filed by Mr. Steven T Nourse on behalf of Ohio Power Company