EXHIBIT NO.

### BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

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

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

Filed: May 11, 2012

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### BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO REBUTTAL TESTIMONY OF WILLIAM A. ALLEN ON BEHALF OF OHIO POWER COMPANY

### 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,
- 4 Columbus, Ohio 43215.
- 5 Q. DID YOU PRESENT DIRECT TESTIMONY IN THIS PROCEEDING?
- 6 A. Yes.

### 7 **PURPOSE OF TESTIMONY**

### 8 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my rebuttal testimony is to 1) address certain adjustments to the
Company's capacity cost calculation proposed by Staff witnesses Smith, Harter
and Medine; 2) address FES witness Lesser's comparison of AEP Ohio's base
generation rates to AEP Ohio's requested capacity cost rates; 3) refute the
assumption in Staff's analysis that shopping load remains constant at 26%; and 4)
present an estimate of earnings for 2013 under the assumption that the Company
recovers its full cost of capacity from CRES providers (\$355.72/MW-day).

### 16 Q. WHAT EXHIBITS ARE YOU SPONSORING?

- 17 A. I am sponsoring the following exhibits:
- 18 Exhibit WAA-R1 Impact of Understated Fuel Cost on Staff's

19 Energy Credit

20 Exhibit WAA-R2 Comparison of Staff's Heat Rate to 2011 Actual

1		Exhibit WAA-R3	Impact of Incorrect Heat Rates on Staff's
2			Energy Credit
3		Exhibit WAA-R4	Impact of Overstated Market Prices on Staff's
4			Energy Credit
5		Exhibit WAA-R5	Impact of Excluding WPCo Load from
6			Energy Credit Calculation
7		Exhibit WAA-R6	Cross Impact of Fuel and Market
8		Exhibit WAA-R7	Cost of Service Adjustments
9		Exhibit WAA-R8	Estimate of AEP Ohio's Earnings
10			
11	<u>ENE</u>	RGY CREDIT ADJUSTME	<u>NTS</u>
12	Q.	HAVE YOU REVIEWE	D THE ENERGY CREDIT CALCULATIONS
13		PRESENTED BY STAFF	WITNESSES HARTER AND MEDINE IN THE
14		CASE?	
15	А.	Yes. I have reviewed their	energy credit calculations as well as the supporting
16		work papers.	
17	Q.	DID YOU MAKE ANY	OBSERVATIONS AS A RESULT OF YOUR
18		<b>REVIEW OF STAFF WI</b>	TNESSES HARTER AND MEDINE'S ENERGY
19		CREDIT CALCULATION	NS AND WORK PAPERS?
20	A.	Yes. My observations are a	as follows: 1) the analysis fails to reflect the impact of
21		the AEP Interconnection Ag	greement (AEP Pool); 2) the fuel cost data used in the
22		analysis is not reasonable;	3) the heat rate data for the generation resources of
23		AEP Ohio are not accura	te; 4) the market prices used in the analysis are

overstated; 5) the generation resources included in the analysis are not consistent with the actual generation resources of AEP Ohio<sup>1</sup>; 6) the full requirements obligation of AEP Ohio to serve Wheeling Power Company is not reflected in the analysis; and 7) the natural gas price forecast presented in the analysis significantly exceeds the current forward prices. Each of these errors significantly inflates the energy margins attributed to AEP Ohio by Staff witnesses Harter and Medine. Consequently, Staff's proposed energy credit is significantly overstated.

8 Throughout this section of my testimony I will address individual 9 elements of the analysis that was presented by Staff witnesses Harter and Medine. 10 While I present and quantify the impact of correcting specific errors in their analysis, this should not be construed as agreement with the overall methodology 11 12 presented by these Staff witnesses. Company witness Meehan presents an 13 independent analysis of the gross margins that AEP Ohio could realistically 14 expect to achieve during the period from June 2012 through May 2015. 15 Throughout my analysis I will be using actual 2011 values while Company witness Meehan uses projected values in his analysis. Therefore, the results 16 presented in my testimony will necessarily differ from those presented by 17 Company witness Meehan. 18

During the course of the hearing Staff witnesses presented three different versions of their calculation of an energy credit to apply in determining an appropriate capacity charge rate as well as three different sets of work papers. The initial calculation was revised twice to address errors that were identified

<sup>&</sup>lt;sup>1</sup> This error in the work papers of Staff witness Harter was largely, but not completely, corrected by Staff witness Medine as discussed later in my testimony.

prior to and during the hearing. The results of the three analyses are presented in
 the table below. For clarity, my analysis uses the Medine Revised Calculation
 and associated work papers as a starting point.

Version	Result	
Harter Initial Calculation	\$154.24/MW-day	
Harter Revised Calculation	\$127.38/MW-day	
Medine Revised Calculation	\$152.41/MW-day	

4

### 5 Q. YOU INDICATED THAT STAFF'S ANALYSIS FAILS TO REFLECT 6 THE IMPACT OF THE AEP INTERCONNECTION AGREEMENT. 7 PLEASE EXPLAIN.

8 Α. Staff witnesses Harter and Medine's analysis fails to reflect several elements of 9 the AEP Interconnection Agreement even though Staff witness Smith includes credits associated with capacity equalization payments under the AEP Pool in his 10 analysis. These elements include appropriate sharing of off-system sales (OSS) 11 12 margins and recognition of primary energy provided to other members of the AEP Interconnection Agreement. Thus Staff's calculation of an energy credit without 13 14 properly reflecting the AEP Pool Agreement's treatment of OSS margins and primary energy results in an energy credit that is overstated and a capacity charge 15 rate that is too low. Company witness Nelson discusses this topic in greater 16 17 detail.

### 18 Q. YOU INDICATED THAT THE FUEL COST DATA USED IN THE 19 ANALYSIS IS NOT REASONABLE. PLEASE EXPLAIN.

A. In reviewing the work papers of Staff witnesses Harter and Medine, I observed
that the fuel cost data appeared to be very low for certain of AEP Ohio generation

resources. Most notably, the fuel cost that Staff witnesses Harter and Medine 1 2 included for Gavin units 1 and 2 was between \$13/MWh and \$15/MWh which is 3 well below the level that I would expect. On cross examination, Staff witness 4 Medine admitted that the projected costs for the Gavin units used in Staff's analysis were "certainly aggressive." Gavin units 1 and 2, with a capacity of 5 approximately 1,300 MW each, are the largest generation resources of AEP Ohio. 6 7 A review of actual and forecasted fuel cost data for the Gavin units showed that the values used by Staff witnesses Harter and Medine were understated by over 8 9 \$5/MWh. This is a gross understatement of fuel costs. Based upon the Staff witnesses projected generation for the Gavin units this resulted in a 10 11 understatement of fuel cost in excess of \$390 million.

In addition to reviewing the fuel cost data that Staff witnesses Harter and Medine used for the Gavin units, I also reviewed the fuel cost data that was used for the other generation resources that were included in their analysis. I observed that the analysis included similar understatements of fuel costs for the other coal units listed in the final work papers of Staff witness Medine.

17 ON CROSS EXAMINATION STAFF WITNESS MEDINE TESTIFIED **O**: THAT "ANOMALOUS EVENTS" AT THE GAVIN PLANT SUCH AS 18 19 **ONE-TIME PAYMENTS TO SUPPLIERS IN 2008 IS THE REASON WHY** GAVIN'S ACTUAL FUEL COSTS ARE SIGNIFICANTLY HIGHER 20 THAN THE ROUGHLY \$14/MWH EVA USED FOR GAVIN IN ITS 21 DO YOU AGREE 22 AURORA MODEL RUNS. WITH THIS 23 **EXPLANATION?** 

A. No. The one-time payment Ms. Medine was referring to was booked directly to
fuel expense in 2008. It had no bearing on the \$21/MWh actual fuel costs of
Gavin reported in the FERC Form 1 for 2011 that were used as a comparison to
her projected \$13/MWh AURORA fuel cost. A review of historic and projected
fuel cost data for the Gavin units confirms that the 2011 actual fuel costs as
reported in FERC Form 1 are representative (if not conservative) of fuel costs that
can be expected during the 2012-2015 period.

8 Q. HAVE YOU QUANTIFIED THE IMPACT OF THESE FUEL COST
9 ERRORS ON THE ENERGY CREDIT CALCULATED BY STAFF
10 WITNESSES HARTER AND MEDINE?

Yes. I have conservatively estimated that the use of more reasonable fuel costs 11 Α. 12 would have reduced Staff's credit by \$70/MW-day. This analysis is included in 13 Exhibit WAA-R1. In preparing this analysis I calculated the difference in total 14 fuel costs that results from replacing Staff witness Harter and Medine's fuel costs 15 (on a dollar per megawatt hour basis) with the actual fuel costs from 2011 for 16 each coal unit included in the final work papers of Staff witness Medine (on a 17 dollar per megawatt hour basis) and multiplying that difference by the projected 18 generation for each of these units. This difference in fuel costs is then subtracted 19 from Staff's projected margins to determine the impact on their energy credit.

20 Q. YOU INDICATED THAT THE HEAT RATE DATA USED BY STAFF
21 WITNESSES HARTER AND MEDINE FOR THE GENERATION
22 RESOURCES OF AEP OHIO WAS NOT ACCURATE. PLEASE
23 EXPLAIN.

A. A comparison of the heat rates presented in Staff witnesses Harter and Medine's
 work papers to the actual heat rates for those plants/units indicated that they
 significantly understated the heat rates of the plants/units. A comparison of the
 heat rates used by Staff witnesses Harter and Medine to the actual heat rates for
 2011 is presented in Exhibit WAA-R2.

## 6 Q. IS IT DIFFICULT TO OBTAIN HEAT RATE DATA FOR THE PLANTS 7 INCLUDED IN STAFF WITNESS HARTER AND MEDINE'S WORK 8 PAPERS?

9 A. No, it is not. Actual heat rate data for these plants is publically and readily
10 available in the annually filed FERC Form 1 of AEP Ohio and AEP Generating
11 Company (AEG) on pages 402 and 403 in the line entitled "Average BTU per
12 kWh Net Generation."

### Q. DO YOU RECALL THE CROSS EXAMINATION OF STAFF WITNESS MEDINE RELATED TO THE HEAT RATE OF THE DARBY UNITS?

15 A. Yes. Staff witness Medine was not able to determine whether the heat rates 16 included in her analysis were reflective of the optimal heat rate that could be 17 achieved by the Darby units. The Darby units are powered with GE 7EA gas 18 turbines. The optimal heat rate for these units is 10,430 Btu/kWh versus the 19 9,000 Btu/kWh that Staff has used in their analysis. This is a significant and 20 obvious error that should have been identified and corrected by the Staff 21 witnesses as part of their quality control of the data used in their model.

## Q. HAVE YOU QUANTIFIED THE IMPACT OF THESE HEAT RATE ERRORS ON THE ENERGY CREDIT CALCULATED BY STAFF WITNESSES HARTER AND MEDINE?

Yes. I have estimated that the use of correct actual heat rates for the gas fired 4 A. 5 generation resources would have reduced Staff's energy credit by \$1.87/MW-day. This analysis is included in Exhibit WAA-R3. The impact of these heat rate 6 7 errors on the coal units is included in the fuel cost analysis I previously discussed so I have not separately calculated the impact here. The understated heat rates 8 9 that Staff witnesses Harter and Medine used for the gas fired generation resources of AEP Ohio results in overstated margins. To estimate the impact of correcting 10 11 the heat rates for the gas fired generation resources of AEP Ohio on Staff witness 12 Harter's margins, I have calculated the difference in fuel cost for each plant (on a dollar per megawatt hour basis) that results from applying the actual heat rates for 13 2011 to the delivered gas cost (on a dollar per BTU basis) used in his analysis. I 14 then multiplied this difference by the projected generation for each of these 15 plants/units to determine the dollar impact on fuel costs of these errors. This 16 17 difference in fuel costs is then subtracted from Staff's projected margins to determine the impact on the energy credit. 18

## 19 Q. YOU INDICATED THAT THE MARKET PRICES USED BY STAFF 20 WITNESSES HARTER AND MEDINE IN THEIR ANALYSIS ARE 21 OVERSTATED. PLEASE EXPLAIN.

A. A comparison of the market prices used in Staff witnesses Harter and Medine's
analysis to publically available forward market prices for the AEP Zone shows

that their market prices are overstated by over \$4/MWh over the three-year
 forecast period. Overstated market prices will have the impact of overstating the
 margins produced by the generating resources of AEP Ohio and, as a result, will
 overstate the energy credit calculated by Staff.

## Q. DO YOU RECALL THE CROSS EXAMINATION OF STAFF WITNESS MEDINE RELATED TO THE FORWARD MARKET PRICES THAT WERE TAKEN FROM THE SNL WEBSITE?

A. Yes. Staff witness Medine questioned the accuracy of the data because the
forward prices for 2014 and 2015 did not vary by month. The values presented by
SNL for 2014 and 2015 are annual average values. Q. HAVE YOU
QUANTIFIED THE IMPACT OF THE OVERSTATED MARKET PRICES
ON THE ENERGY CREDIT CALCULATED BY STAFF WITNESS
HARTER?

14 Yes. I have estimated that the use of current forward market prices for the AEP Α. Zone would have reduced Staff witness Harter's energy credit by \$50.42/MW-15 16 day. This analysis is included in Exhibit WAA- R4. To estimate the impact of using current forward market prices to determine the margins from the coal fired 17 18 and hydro generation resources of AEP Ohio I have calculated the difference in annual market prices (on a dollar per megawatt hour basis) and then multiplied 19 this difference by the projected generation for each of these plants/units to 20 determine the annual dollar impact on Staff witness Harter's margins. This 21 difference in margins is then subtracted from Staff's projected margins to 22 determine the impact on their energy credit. 23

I have not calculated the impact on Staff's energy credit related to margins
 from the gas-fired resources of AEP Ohio since the difference in market prices is
 correlated to the gas costs included in Staff's analysis. This is a conservative
 approach to making corrections to Staff's energy credit calculation.

## 5 Q. WERE THE GENERATION RESOURCES INCLUDED IN STAFF'S 6 ANALYSIS CONSISTENT WITH THE ACTUAL GENERATION 7 RESOURCES OF AEP OHIO?

A. No. While Staff witnesses Medine and Harter made several corrections to the
generation resources of AEP Ohio that they included in their analyses they never
fully reflected the actual generation resources of AEP Ohio. In Staff witness
Medine's final analysis, Amos unit 1 is listed as 100% owned by AEP Ohio while
the unit is actually owned entirely by Appalachian Power Company. AEP Ohio
actually has a 66.6% ownership share in Amos unit 3. Staff witness Medine also
failed to recognize AEP Ohio's OVEC entitlement.

Q. YOU INDICATED THAT THE FULL REQUIREMENTS OBLIGATION
 OF AEP OHIO TO SERVE WHEELING POWER COMPANY IS NOT
 REFLECTED IN STAFF WITNESS HARTER'S ANALYSIS. PLEASE
 EXPLAIN.

A. Staff witness Harter's calculation of off-system sales (OSS) margins produced by
the generation resources of AEP Ohio first compares the non-shopping retail sales
of AEP Ohio to the generation of AEP Ohio. He then calculates a margin for the
generation in excess of the non-shopping retail sales. He fails to account for the
full requirements contract between AEP Ohio and Wheeling Power Company.

1 The sales to Wheeling Power Company reduce the quantity of generation 2 available for off-system sales.

## Q. ON CROSS EXAMINATION, STAFF WITNESS HARTER INDICATED THAT THE HE BELIEVED THE WHEELING POWER CONTRACT WAS MARKET BASED. IS THAT CORRECT?

- A. No. The contract between Ohio Power Company and Wheeling Power Company
  is a cost-based full requirement contract and has been in place for over 50 years.
- 8 Q. HAVE YOU QUANTIFIED THE IMPACT OF NEGLECTING TO 9 ACCOUNT FOR THE FULL REQUIREMENTS CONTRACT WITH 10 WHEELING POWER COMPANY ON THE ENERGY CREDIT 11 CALCULATED BY STAFF WITNESSES HARTER AND MEDINE?
- Yes. I have estimated that recognizing the full requirements contract between 12 A. 13 Ohio Power Company and Wheeling Power Company would have reduced Staff 14 witnesses Harter and Medine's energy credit by \$5.00/MW-day. This analysis is 15 included in Exhibit WAA- R5. To estimate the impact of recognizing this full 16 requirements contract I have calculated the hourly average margins from Staff witness Medine's final work papers and then multiplied this value by the 17 18 projected hourly load for Wheeling Power Company. This value is then subtracted from Staff witness Harter and Medine's projected margins to determine 19 20 the impact on their energy credit. The Wheeling Power impact on the peak demands must also be addressed as shown in Exhibit WAA-R5. 21

## Q. YOU INDICATED THAT THE NATURAL GAS PRICE FORECAST PRESENTED IN STAFF'S ANALYSIS SIGNIFICANTLY EXCEEDS THE CURRENT FORWARD PRICES. PLEASE EXPLAIN.

4 Α. As I reviewed Staff's work papers I determined that the delivered natural gas 5 prices that Staff witnesses Harter and Medine used for AEP Ohio's gas units was 6 in excess of \$4/MMBTU. On cross examination both Staff witnesses Harter and Medine acknowledged that the projected natural gas prices used in their analysis 7 8 exceeded \$4/MMBTU at the Henry hub. Current natural gas price forecasts indicate significantly lower prices. On cross examination Staff witness Medine 9 admitted that EVA's current price projections for natural gas have been reduced 10 since the time they performed their analysis. A reduction in natural gas price 11 forecasts will reduce the projected market prices for electricity and as a result 12 reduce the energy credit proposed by the Staff witnesses. 13

14 Q. HAVE TESTIFIED THAT THE STAFF WITNESSES' YOU 15 UNDERESTIMATED COAL COSTS AND OVERESTIMATED MARKET 16 PRICES AND ULTIMATELY CALCULATED REVISIONS TO THEIR 17 ENERGY CREDIT TO REFLECT MORE APPROPRIATE 18 **ASSUMPTIONS.** WOULD EITHER OF THESE CORRECTIONS IMPACT THE UNIT DISPATCH THAT THE STAFF WITNESSES 19 **PROJECTED?** 20

A. Yes. Because the Staff witnesses' projected coal costs and market prices diverged
from reasonable levels in significant and opposite directions the unit dispatch will
be significantly impacted.

## Q. IN YOUR ANALYSIS DID YOU ATTEMPT TO ADDRESS THE CHANGE IN UNIT DISPATCH THAT WOULD OCCUR AS A RESULT OF REPLACING THE STAFF WITNESSES' COAL COST ASSUMPTIONS AND MARKET PRICE ASSUMPTIONS?

Yes. As projected market prices decline and projected coal costs increase there is 5 Α. 6 a potential that margins for certain generating units may change from positive to negative. In that case, the unit would not have been dispatched in the manner that 7 the Staff witnesses had projected. When margins are negative for a unit over a 8 9 long time horizon the unit will not run. To account for this change, I have calculated (consistent with the methodology described by Staff witness Medine) 10 which units would have negative margins on an annual basis and removed those 11 negative margins from my calculations. I have provided this calculation in 12 13 Exhibit WAA-R6 and will refer to this impact as the "Cross Impact of Fuel and 14 Market." This item ensures that the reduction in the energy credit that I have 15 calculated is not overstated.

### 16 Q. CAN YOU SUMMARIZE THE IMPACT ON STAFF WITNESS HARTER

### 17 AND MEDINE'S ENERGY CREDIT RELATED TO THE ERRORS THAT

### 18 YOU HAVE PREVIOUSLY DISCUSSED?

A. Yes. The table below provides a summary of the estimated impact of each of the
errors in Staff witness Harter's analysis that I have previously discussed. After
incorporating the corrections I have discussed, Staff witness Medine's final
energy credit is reduced to \$47.46/MW-day.

23

	(\$/MW-day)
Medine's Energy Credit	152.41
Understated Fuel Cost for Coal Units	(70.10)
Understated Heat Rate for Gas Units	(1.87)
Overstated Market Prices	(50.42)
Failure to Recognize Wheeling Power Contract	(5.00)
Cross Impact of Fuel and Market	22.44
Energy Credit after Adjustments	47.46

2

1

### 3 COST OF SERVICE ADJUSTMENTS

4 Q. DO YOU AGREE WITH STAFF WITNESS SMITH'S
5 RECOMMENDATION THAT CONSTRUCTION WORK IN PROGRESS
6 (CWIP) SHOULD BE EXCLUDED FROM THE RATE BASE USED TO
7 DETERMINE THE COMPANY'S COST OF CAPACITY?

8 A. No. Although Staff witness Smith makes several claims regarding the exclusion 9 of CWIP from rate base he fails to recognize that the Company has recovered 10 carrying costs on environmental CWIP through the Environmental Investment 11 Carrying Cost Rider (EICCR). The EICCR is collected through current standard 12 service offer (SSO) rates. Including, at a minimum, CWIP on environmental 13 investments in rate base would ensure that all customers utilizing the Company's 14 capacity resources, SSO customers and CRES providers, are treated similarly.

## Q. HOW WOULD INCLUSION OF CWIP IN RATE BASE IMPACT THE CAPACITY COST CALCULATION PERFORMED BY STAFF WITNESS SMITH?

18 A. Including the environmental CWIP of \$33.862 million in rate base would increase
 19 the capacity charge rate by \$1.11/MW-day and inclusion of non-environmental

1	CWIP of \$49.422 million in rate base would increase the capacity charge rate by
2	an additional \$1.64/MW-day. These calculations are provided in Exhibit WAA-
3	R7.

## 4 Q. DO YOU AGREE WITH STAFF WITNESS SMITH'S 5 RECOMMENDATION THAT THE PREPAID PENSION ASSET SHOULD 6 BE EXCLUDED FROM THE RATE BASE USED TO DETERMINE THE 7 COMPANY'S COST OF CAPACITY?

- 8 A. No. Prepaid pension assets are appropriate to include in the determination of rate
  9 base.
- 10 Q. HOW DID THE PUCO STAFF ADDRESS THE PREPAID PENSION

### 11 ASSET IN AEP OHIO'S MOST RECENT DISTRIBUTION RATE CASES?

- 12 A. In AEP Ohio's most recent distribution rate cases (11-0351-EL-AIR & 11-0352-
- 13 EL-AIR) the Staff "increased rated base to recognize a prepaid pension asset."
- 14 The Report by the Staff of the Public Utilities Commission of Ohio in the 11-351-
- 15 EL-AIR case goes on to state the following:

16 The Staff increased rate base to recognize a prepaid pension asset. The Applicant recorded a prepaid asset of \$86,403,823 for 17 additional pension cash contributions as of the date certain, August 18 31, 2010. The additional contributions represent cash investments 19 above the amount of the pension cost included in the cost of 20 service or the income statement. The additional contributions 21 benefit customers by reducing future pension costs through 22 increased earnings. In accordance with generally accepted 23 accounting principles under FASB No. 87 Employers' Accounting 24 25 for Pensions, the cumulative difference between the pension cost 26 and pension cash contributions is to be recorded on the balance sheet as an asset or liability. A prepaid asset is recorded if pension 27 contributions are greater than the pension cost. A liability is 28 recorded if pension contributions are less than the pension cost. 29 30

1 2 3 4 5 6 7 8		The prepaid pension asset is entirely supported by cash contributions in excess of pension cost. None of the additional pension contributions serve to prefund the pension obligation in advance. The Staff agrees with the Applicant's adjustment. Including the additional cash contributions in rate base, that will be expensed in the future, allows for ratemaking recognition of the cost of funds for the prepaid contributions.
9	Q.	HOW WOULD INCLUSION OF THE PREPAID PENSION ASSET IN
10		RATE BASE IMPACT THE CAPACITY COST CALCULATION
11		PERFORMED BY STAFF WITNESS SMITH?
12	Α.	Including the prepaid pension asset (net of ADIT) of \$96.116 million in rate base
13		would increase the capacity charge rate by \$3.20/MW-day.
14	Q.	DO YOU AGREE WITH STAFF WITNESS SMITH'S
15		RECOMMENDATION THAT SEVERANCE COSTS SHOULD BE
16		EXCLUDED FROM THE O&M EXPENSE ALLOCATED TO THE
17		GENERATION DEMAND FUNCTION?
18	A.	No. The severance costs were properly recorded as O&M expenses in 2010 and
19		the benefits associated with the severance program will be reflected in future
20		annual updates to the formula based capacity cost calculation presented by
21		Company witness Pearce.
22	Q.	HOW DID THE PUCO STAFF ADDRESS SEVERANCE COSTS IN AEP
23		OHIO'S MOST RECENT DISTRIBUTION RATE CASES?
24	Α.	In AEP Ohio's most recent distribution rate cases (11-0351-EL-AIR & 11-0352-
25		EL-AIR) the Staff recommended that 50% of the cost of the severance program
26		be amortized over a period of three years. Staff reduced the amount of the
27		amortization by 50% to reflect their position that the severance program benefited

£

both shareholders and ratepayers. In this case, the benefits of the severance
 program are flowing through 100% to CRES providers through reduced capacity
 charges and therefore no such reduction should be made.

4 Q. HOW WOULD INCLUSION OF A THREE-YEAR AMORTIZATION OF
5 THE COST OF THE SEVERANCE PROGRAM IMPACT THE
6 CAPACITY COST CALCULATION PERFORMED BY STAFF WITNESS
7 SMITH?

8 A. Amortizing the \$39.004 million in severance costs<sup>2</sup> (that Staff witness Smith
9 removed from O&M expense) over three years would increase the capacity
10 charge rate by \$4.07/MW-day<sup>3</sup>.

11Q.DOYOUAGREEWITHSTAFFWITNESSSMITH'S12RECOMMENDATION TO SIMPLY USE THE ROEsSTIPULATED TO

13 IN THE COMPANY'S MOST RECENT DISTRIBUTION RATE CASE?

- A. No. The risk profiles of the generation and distribution functions are not the
   same. The Commission has most recently recognized an ROE of 10.5% for
   certain generating assets of AEP Ohio.
- 17 Q. HOW WOULD INCLUSION OF THE 11.15% ROE AS PROPOSED BY
- 18 AEP OHIO IMPACT THE CAPACITY COST CALCULATION
   19 PERFORMED BY STAFF WITNESS SMITH?
- A. Including an 11.15% ROE versus the ROEs used by Staff witness Smith would
  increase the capacity charge rate by \$10.09/MW-day.

<sup>&</sup>lt;sup>2</sup> Page 51 lines 17-21 of the Direct Testimony of Staff witness Smith

 $<sup>^{3}</sup>$  (\$39.004M/3)÷9,061MW÷365days x 1.034126 = \$4.07/MW-day

### 1 Q. HOW WOULD INCLUSION OF A 10.5% ROE IMPACT THE CAPACITY

### 2 COST CALCULATION PERFORMED BY STAFF WITNESS SMITH?

A. Including a 10.5% ROE versus the ROEs used by Staff witness Smith would
increase the capacity charge rate by \$2.95/MW-day. Every 0.1% change in ROE
changes the capacity charge rate an additional \$1.08/MW-day.

### 6 Q. HAVE YOU PREPARED A SUMMARY OF THE ISSUES YOU HAVE

7 DISCUSSED REGARDING THE TESTIMONY AND

### 8 **RECOMMENDATIONS OF STAFF WITNESS SMITH?**

9 A. Yes. The table below provides a summary of impact on the capacity cost rate of

10 each of the items I have described related to the testimony of Staff witness Smith.

Issue	Impact (\$/MW-day)
Smith's Merged Capacity Rate	\$305.48
Include Environmental CWIP	\$1.11
Include Non-Environmental CWIP	\$1.64
Include Pre-Paid Pension Asset	\$3.20
Include Amortization of Severance Expense	\$4.07
Revise ROE to 11.15%	\$10.09
Merged Capacity Rate After Adjustments	\$325.59

11

12 Q. HAVE YOU CALCULATED WHAT STAFF'S CAPACITY RATE
13 WOULD BE IF YOU INCLUDED THE ADJUSTMENTS YOU HAVE
14 RECOMMENDED FOR THE ENERGY CREDIT AND COST OF
15 SERVICE ISSUES?

A. Yes. If you start with a capacity cost of \$325.59/MW-day and subtract an energy
credit of \$47.46/MW-day and ancillary service revenues of \$6.66/MW-day, the
resultant capacity rate would be \$271.47/MW-day.

### 1 **REVENUE COMPARISON**

### DO YOU RECALL TESTIMONY BY FES WITNESS LESSER IN WHICH 2 **Q**. 3 HE COMPARED THE COMPANY'S BASE GENERATION RATES TO 4 THE COMPANY'S FULL COST CAPACITY RATE? 5 Α. Yes, he provides a table (Lesser Table 1 at page 21) in his testimony showing his comparison of the company's base generation rates to the company's full cost 6 7 capacity rate. HAVE YOU REVIEWED THAT COMPARISON? 8 **Q**. 9 Α. Yes, I have. My first observation is that he did not update his table to reflect the current data presented by Company witnesses Roush and Thomas in the Modified 10 11 ESP 2 case. My second observation is that he incorrectly included ancillary services in his analysis. Ancillary service costs are recovered through the 12 Transmission Cost Recovery Rider (TCRR). My third observation is that if you 13 14 convert his "un-updated" rates into revenues (by simply multiplying the rates by the projected usage for each customer class) you see that the base generation 15 revenues and full cost capacity plus ancillary service revenues are very close as 16 17 shown in Table 1 below:

### 1 Table 1: Lesser Analysis Converted into Dollars

	Ba	ise	Generati	ion		
	R		С		1	Total
(\$/MWh)	22.15		26.27		17.07	21.34
(GWh)	14,616		14,317		19,262	48,195
(\$MM)	\$ 324	\$	376	\$	329	\$ 1,029
	 Capacity	' an	d Ancilla	ry S	<u>ervice</u>	
	R		С		I	Total
(\$/MWh)	28.77		23.37		16.69	22.34
(GWh)	14,616		14,317		19,262	48,195
(\$MM)	\$ 421	\$	335	\$	321	\$ 1,077
		Di	ifference			
(\$MM)						\$ 48
(%)						4.7%

2

If you prepare the same analysis that FES witness Lesser presented in his testimony and update his data for current rates and exclude ancillary service revenues you see that the base generation rate are essentially equivalent to the full cost capacity rates. See Table 2 below:

### 7 Table 2: Lesser Analysis Corrected and Converted into Dollars

	Ba	ase	Generati	on			
	R		С				Total
(\$/MWh)	23.82		28.1		18.25		22.87
(GWh)	14,616		14,317		19,262		48,195
(\$MM)	\$ 348	\$	402	\$	352	\$	1,102
	****	ς	<u>Capacity</u>		1	nene senere sene	
	R		С		l		Total
(\$/MWh)	30.01		23.01		17.29		22.85
(GWh)	14,616		14,317		19,262		48,195
(\$MM)	\$ 439	\$	329	\$	333	\$	1,101
		Di	ifference				
(\$MM)						\$	(1)
(%)							-0.1%

8

### 1 CURRENT SHOPPING LEVELS

## Q. STAFF WITNESS MEDINE TESTIFIED THAT THE CURRENT LEVEL OF SHOPPED LOAD IN AEP OHIO IS 26%. IS THAT A CORRECT AND CURRENT VALUE?

5 A. No. In my direct testimony I presented data showing that the level of shopped 6 load as of March 1, 2012 was 26%. Since that time the level of shopped load has 7 continued to increase. As of April 30, 2012, the level of shopped load has 8 increased to 30%. The table below provides a summary of the changes in 9 shopped load by customer class that have occurred over that period.

Class	March 1, 2012	April 30, 2012	Change
Residential	8.43%	12.74%	4.31%
Commercial	41.44%	46.65%	5.21%
Industrial	28.10%	31.16%	3.06%
Total	26.08%	30.19%	4.11%

10

### 11 ESTIMATE OF AEP OHIO'S EARNINGS

## Q. DO YOU RECALL A QUESTION FROM COMMISSIONER PORTER REGARDING THE PROJECTED EARNINGS OF AEP OHIO IF THE COMPANY COLLECTED A CAPACITY CHARGE RATE OF \$355.72/MW-DAY FROM CRES PROVIDERS?

16 A. Yes. I have updated the analysis that I presented as Exhibit WAA-1 in my direct 17 testimony to reflect recovery of a \$355.72/MW-day capacity charge from CRES 18 providers. I have held all other assumptions constant and simply removed the 19 capacity revenues that would have been recovered under an RPM-based pricing 20 mechanism and replaced those revenues with the revenues that would be 21 recovered based upon the Company's proposed cost-based mechanism. This

- estimate is provided in Exhibit WAA-R8 and demonstrates that the Company's
- 2 return on equity (ROE) would be a reasonable 12.2% in 2013.

### 3 <u>CONCLUSIONS</u>

### 4 Q. DOES THIS COMPLETE YOUR PRE-FILED REBUTTAL TESTIMONY?

5 A. Yes, it does.

### Impact of Understated Fuel Cost on Staff's Energy Credit

	Sta	ff Projected Fuel	F	uel Cost Based on	Und	erstatement of Fuel	Reduction in Staff
Plant		Cost		Actual 2011		Cost	Energy Credit*
Conesville	\$	528,232,158	\$	649,004,656	\$	120,772,498	\$ 11.20
Gavin	\$	866,338,192	\$	1,258,537,270	\$	392,199,078	\$ 36.37
Cardinal	\$	210,336,405	\$	276,853,743	\$	66,517,338	\$ 6.17
Zimmer	\$	128,904,363	\$	207,646,353	\$	78,741,990	\$ 7.30
Kammer	\$	44,289,699	\$	58,082,843	\$	13,793,144	\$ 1.28
Muskingum River	\$	137,009,410	\$	145,310,812	\$	8,301,402	\$ 0.77
Stuart	\$	298,051,215	\$	359,547,905	\$	61,496,690	\$ 5.70
Other	\$	37,024,661	\$	51,192,272	\$	14,167,611	\$ 1.31
Total	\$	2,250,186,102	\$	3,006,175,854	\$	755,989,752	\$ 70.10

\*(Understated Fuel Cost / 5CP / 365 days per year / 3 years ) \* % of Margins Retained

5 CP = 9061 % Margins Retained = 92%

### Comparison of Staff's Heat Rate to 2011 Actual

	Heatrate (BTU/kWh)			
Utility	Name	ID	Staff	2011 Actual
Columbus Southern Power Co	AEP Waterford Facility	55503-CTG1	7,000	
Columbus Southern Power Co	AEP Waterford Facility	55503-CTG2	7,000	7 200
Columbus Southern Power Co	AEP Waterford Facility	55503-CTG3	7,000	7,308
Columbus Southern Power Co	AEP Waterford Facility	55503-ST1	7,000	
Columbus Southern Power Co	Conesville	2840-3	10,319	
Columbus Southern Power Co	Conesville	2840-5	10,073	10,982
Columbus Southern Power Co	Conesville	2840-6	10,339	
Columbus Southern Power Co	Conesville	2840-4	9,429	10,551
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT1	9,000	
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT2	9,000	
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT3	9,000	
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT4	9,000	12,429
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT5	9,000	
Columbus Southern Power Co	Darby Electric Generating Station	55247-GT6	9,000	
Columbus Southern Power Co	Picway	2843-5	11,079	16,149
Ohio Power Co	General James M Gavin	8102-1	9,635	10,145
Ohio Power Co	General James M Gavin	8102-2	9,461	9,709
Ohio Power Co	Kammer	3947-1	9,128	5,705
Ohio Power Co	Kammer	3947-1	9,128 9,186	10,711
Ohio Power Co	Kammer	3947-2	9,180	10,711
Ohio Power Co	Muskingum River	2872-1	9,189	
Ohio Power Co	e e	2872-1	9,448 9,403	1
	Muskingum River			10.160
Ohio Power Co	Muskingum River	2872-3	9,634	10,169
Ohio Power Co	Muskingum River	2872-4	9,140	
Ohio Power Co	Muskingum River	2872-5	9,073	0.450
Ohio Power Co	Cardinal	2828-1	9,000	9,459
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-100	7,000	
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-1100	7,000	
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-1200	7,000	7,190
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-200	7,000	
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-2100	7,000	
Columbus Southern Power Co	Lawrenceburg Energy Facility	55502-2200	7,000	
Columbus Southern Power Co	J M Stuart	2850-1	9,381	
Columbus Southern Power Co	J M Stuart	2850-2	9,162	
Columbus Southern Power Co	J M Stuart	2850-3	9,370	
Columbus Southern Power Co	J M Stuart	2850-4	9,289	9,818
Columbus Southern Power Co	J M Stuart	2850-D1	10,850	-, -
Columbus Southern Power Co	J M Stuart	2850-D2	10,850	
Columbus Southern Power Co	J M Stuart	2850-D3	10,850	
Columbus Southern Power Co	J M Stuart	2850-D4	10,850	
Columbus Southern Power Co	W H Zimmer	6019-ST1	9,522	10,024
Ohio Power Co	Philip Sporn	3938-2	9,442	
Ohio Power Co	Philip Sporn	3938-4	9,417	11,807
Ohio Power Co	Philip Sporn	3938-5	8,924	
Columbus Southern Power Co	Walter C Beckjord	2830-6	9,680	9,217

\* Source - 2011 FERC Form 1

Exhibit WAA-R3 Page 1 of 4

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EVA Heat Rate	(BTU/kW)	All Years	7,000	7,000	7,000	7,000	9,000	9,000	9,000	6,000	9,000	9,000	7,000	7,000	7,000	7,000	7,000	7,000
		2015	38.91	38.90	38.90	38.98	49.21	49.22	49.11	49.11	49.00	49.38	38.65	38.58	38.58	38.61	38.58	38.62
	st (\$/MWh)	2014	34.97	35.00	34.99	34.85	43.87	43.93	43.67	43.74	43.95	43.53	34.69	34.70	34.73	34.63	34.72	34.72
	EVA Fuel Cost (\$/MWh)	2013	32.97	32.99	32.98	32.88	40.88	40.88	40.91	40.79	40.86	40.67	32.51	32.44	32.44	32.47	32.44	32.45
		2012	30.53	30.55	30.54	30.78	39.11	39.10	39.08	38.91	39.11	38.99	30.12	30.10	30.10	30.14	30.08	30.07
		Unit	55503-CTG1	55503-CTG2	55503-CTG3	55503-ST1	55247-GT1	55247-GT2	55247-GT3	55247-GT4	55247-GT5	55247-GT6	55502-100	55502-1100	55502-1200	55502-200	55502-2100	55502-2200
		Plant	AEP Waterford Facility	AEP Waterford Facility	AEP Waterford Facility	AEP Waterford Facility	Darby Electric Generating Station	Lawrenceburg Energy Facility										

Impact of Incorrect Heat Rates on Staff's Energy Credit

Exhibit WAA-R3 Page 2 of 4

						Actual 2011 Heat
			Fuel Cost \$/MMBTU	/MMBTU		Rate (BTU/kW)
Plant	Unit	2012	2013	2014	2015	All Years
AEP Waterford Facility	55503-CTG1	4.36	4.71	5.00	5.56	7,308
AEP Waterford Facility	55503-CTG2	4.36	4.71	5.00	5.56	7,308
AEP Waterford Facility	55503-CTG3	4.36	4.71	5.00	5.56	7,308
AEP Waterford Facility	55503-ST1	4.40	4.70	4.98	5.57	7,308
Darby Electric Generating Station	55247-GT1	4.35	4.54	4.87	5.47	12,429
Darby Electric Generating Station	55247-GT2	4.34	4.54	4.88	5.47	12,429
Darby Electric Generating Station	55247-GT3	4.34	4.55	4.85	5.46	12,429
Darby Electric Generating Station	55247-GT4	4.32	4.53	4.86	5.46	12,429
Darby Electric Generating Station	55247-GT5	4.35	4.54	4.88	5.44	12,429
Darby Electric Generating Station	55247-GT6	4.33	4.52	4.84	5.49	12,429
Lawrenceburg Energy Facility	55502-100	4.30	4.64	4.96	5.52	7,190
Lawrenceburg Energy Facility	55502-1100	4.30	4.63	4.96	5.51	7,190
Lawrenceburg Energy Facility	55502-1200	4.30	4.63	4.96	5.51	7,190
Lawrenceburg Energy Facility	55502-200	4.31	4.64	4.95	5.52	7,190
Lawrenceburg Energy Facility	55502-2100	4.30	4.63	4.96	5.51	7,190
Lawrenceburg Energy Facility	55502-2200	4.30	4.64	4.96	5.52	7,190

# Impact of Incorrect Heat Rates on Staff's Energy Credit

Exhibit WAA-R3 Page 3 of 4

		Corr	Corrected Fuel Cost (\$/MWh)	Cost (\$/MW	(h)		Generation (MWh)	n (MWh)	
Plant	Unit	2012	2013	2014	2015	2012	2013	2014	2015
AEP Waterford Facility	55503-CTG1	31.88	34.42	36.51	40.62	94,483	385,767	240,755	4,179
AEP Waterford Facility	55503-CTG2	31.89	34.45	36.54	40.61	93,422	393,878	244,953	4,185
AEP Waterford Facility	55503-CTG3	31.88	34.43	36.53	40.61	93,496	392,395	243,849	4,023
AEP Waterford Facility	55503-ST1	32.14	34.33	36.38	40.70	160,806	682,752	386,838	0
Darby Electric Generating Station	55247-GT1	54.01	56.45	60.59	67.95	15,218	78,594	32,676	1,330
Darby Electric Generating Station	55247-GT2	54.00	56.45	60.67	67.97	15,600	75,801	34,489	1,299
Darby Electric Generating Station	55247-GT3	53.96	56.49	60.30	67.82	10,960	62,563	22,050	628
Darby Electric Generating Station	55247-GT4	53.74	56.33	60.40	67.83	10,543	52,273	22,411	635
Darby Electric Generating Station	55247-GT5	54.01	56.43	60.69	67.67	10,069	59,026	20,970	255
Darby Electric Generating Station	55247-GT6	53.84	56.17	60.11	68.20	8,518	50,142	21,604	972
Lawrenceburg Energy Facility	55502-100	30.94	33.39	35.63	39.70	155,275	698,529	433,328	16,423
Lawrenceburg Energy Facility	55502-1100	30.91	33.33	35.64	39.63	108,239	472,448	302,803	12,161
Lawrenceburg Energy Facility	55502-1200	30.91	33.32	35.67	39.63	105,908	468,839	296,887	13,910
Lawrenceburg Energy Facility	55502-200	30.95	33.35	35.57	39.66	155,740	694,091	414,489	13,472
Lawrenceburg Energy Facility	55502-2100	30.90	33.32	35.66	39.62	105,542	470,171	302,686	13,401
Lawrenceburg Energy Facility	55502-2200	30.88	33.33	35.66	39.67	102,601	470,473	303,238	15,541

# Impact of Incorrect Heat Rates on Staff's Energy Credit

Exhibit WAA-R3 Page 4 of 4

			Change in Margin	Margin	
Plant	Unit	2012	2013	2014	2015
AEP Waterford Facility	55503-CTG1	\$ (126,940)	\$ (559,691)	\$ (370,466)	\$ (7,154)
AEP Waterford Facility	55503-CTG2	\$ (125,570)	\$ (571,824)	\$ (377,240)	\$ (7,163
AEP Waterford Facility	55503-CTG3	\$ (125,629)	\$ (569,378)	\$ (375,384)	\$ (6,884
AEP Waterford Facility	55503-ST1	\$ (217,816)	\$ (987,871)	\$ (593,102)	¢ -
Darby Electric Generating Station	55247-GT1	\$ (226,745)	\$ (1,224,011)	\$ (546,178)	\$ (24,929)
Darby Electric Generating Station	55247-GT2	\$ (232,415)	(1,180,492)	\$ (577,266)	\$ (24,366)
Darby Electric Generating Station	55247-GT3	\$ (163,174)	(975,082)	\$ (366,835)	\$ (11,744)
Darby Electric Generating Station	55247-GT4	\$ (156,304)	\$ (812,324)	\$ (373,469)	\$ (11,883
Darby Electric Generating Station	55247-GT5	\$ (150,025)	(918,878)	\$ (351,135)	\$ (4,769)
Darby Electric Generating Station	55247-GT6	\$ (126,528)	\$ (777,050)	\$ (358,295)	\$ (18,289)
Lawrenceburg Energy Facility	55502-100	\$ (126,964)	(616,307)	\$ (407,974)	\$ (17,227
Lawrenceburg Energy Facility	55502-1100	\$ (88,419)	\$ (416,057)	\$ (285,203)	\$ (12,736)
Lawrenceburg Energy Facility	55502-1200	\$ (86,515)	\$ (412,818)	\$ (279,855)	\$ (14,568)
Lawrenceburg Energy Facility	55502-200	\$ (127,395)	(611,746)	\$ (389,598)	\$ (14,119)
Lawrenceburg Energy Facility	55502-2100	\$ (86,184)	(413,976)	\$ (285,232)	\$ (14,032
Lawrenceburg Energy Facility	55502-2200	\$ (83,734)	(414,351)	\$ (285,745)	\$ (16,292)
Total		\$ (2.250.359	(2,250,359) \$ (11,461,854) \$	\$ (6,222,977) \$	\$ (206,155)

# Impact of Incorrect Heat Rates on Staff's Energy Credit

**Reduction in Staff Energy Credit** 

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1.07

3.19 \$ 1.73 \$ 0.14 \$

1.87

<u>Total</u> (20,141,345)

### **Exhibit WAA-R4** Page 1 of 1

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		EVA AEP Zone	AEP-DAYTON HUB	AEP Gen Hub	Variance
	Time Period	Price (2012 \$/MWh)	ATC \$/MWh *	(\$/MWh)**	(\$/MWh)
	2012_06	\$33.32	\$29.26	\$28.38	\$4.94
	2012_07	\$35.81	\$32.72	\$31.74	\$4.07
	2012_08	\$35.72	\$32.72	\$31.74	\$3.98
	2012_09	\$32.16	\$28.00	\$27.16	\$5.00
	2012_10	\$30.95	\$29.31	\$28.43	\$2.52
	2012_11	\$32.30	\$29.31	\$28.43	\$3.87
	2012_12	\$32.11	\$29.31	\$28.43	\$3.68
2012 Average Price		\$33.19	\$29.77	\$28.88	\$4.32
	2013_01	\$40.55	\$33.56	\$32.55	\$8.00
	2013_02	\$40.83	\$33.56	\$32.55	\$8.28
	2013_03	\$37.89	\$32.56	\$31.58	\$6.31
	2013_04	\$35.12	\$32.56	\$31.58	\$3.53
	2013_05	\$35.78	\$32.73	\$31.75	\$4.03
	2013_06	\$38.21	\$34.55	\$33.51	\$4.70
	2013_07	\$41.00	\$37.56	\$36.43	\$4.56
	2013_08	\$41.64	\$37.56	\$36.43	\$5.21
	2013_09	\$37.55	\$33.30	\$32.30	\$5.25
	2013_10	\$36.25	\$32.76	\$31.78	\$4.47
	2013_11	\$37.29	\$32.76	\$31.78	\$5.51
	2013_12	\$38.91	\$32.76	\$31.78	\$7.13
2013 Average Price		\$38.42	\$33.85	\$32.83	\$5.58
	2014_01	\$42.57	\$36.37	\$35.28	\$7.29
	2014_02	\$42.20	\$36.37	\$35.28	\$6.92
	2014_03	\$37.89	\$36.37	\$35.28	\$2.61
	2014_04	\$35.51	\$36.37	\$35.28	\$0.23
	2014_05	\$36.87	\$36.37	\$35.28	\$1.59
	2014_06	\$39.03	\$36.37	\$35.28	\$3.75
	2014_07	\$42.23	\$36.37	\$35.28	\$6.95
	2014_08	\$42.22	\$36.37	\$35.28	\$6.94
	2014_09	\$38.26	\$36.37	\$35.28	\$2.98
	2014_10	\$37.24	\$36.37	\$35.28	\$1.96
	2014_11	\$37.97	\$36.37	\$35.28	\$2.69
	2014_12	\$40.57	\$36.37	\$35.28	\$5.30
2014 Average Price		\$39.38	\$36.37	\$35.28	\$4.10
	2015_01	\$43.25	\$38.53	\$37.37	\$5.88
	2015_02	\$43.89	\$38.53	\$37.37	\$6.51
	2015_03	\$38.35	\$38.53	\$37.37	\$0.97
	2015_04	\$35.75	\$38.53	\$37.37	(\$1.63)
	2015_05	\$36.58	\$38.53	\$37.37	(\$0.80)
2015 Average Price		\$39.56	\$38.53	\$37.37	\$2.19
Total Period Average		\$37.88	\$34.61	\$33.57	\$4.31
	2012	2012	2014	2015	Total
Congration (MM/b)	<u>2012</u> 29.860.815	2013 39 172 824	<u>2014</u> 38 934 213	<u>2015</u> 16,695,375	<u>Total</u> 124,663,226
Generation (MWh)	29,860,815	39,172,824	38,934,213	2.19	4.36
Variance (\$/MWh)	4.32 \$128 021 806	5.58 \$218 752 540	4.10 \$159 608 014		4.56 \$543,806,699
Impact (\$)	\$128,921,806	\$218,752,540	\$159,608,014	\$36,524,339	\$543,800,099 650,42

Impact of Overstated Market Prices on Staff's Energy Credit

\*AEP Dayton Hub ATC Price Source: SNL Energy (www.SNL.com) as of 4-25-2012

\$103.79

\$17.33

\$75.73

\$50.42

\*\* AEP Gen Hub generally trades at a 3% discount to AD Hub

\$61.17

Impact (\$/MW-day)

### Impact of Excluding WPCo Load from Energy Credit Calculation

	Energy Credit	S								
	CSP	Year	Total Generation (MWh)	Off System Sales (MWh)	Gross Margin (2012 \$)	MLR <sup>1</sup>	Retained Margin (2012 \$)	Energy Credit (\$/MWd) <sup>2</sup>		
(1)	June-Dec	2012	9,238,414	822,462	57,483,325	19%	50,921,910	\$57.67		
(2)		2013	19,051,169	3,609,324	121,142,148	19%	98,376,727	\$65.32		
(3)		2014	16,603,470	2,041,381	119,843,987	19%	105,812,482	\$70.26		
(4)	Jan-May	2015	5,515,974	59,094	52,957,091	19%	52,411,263	\$84.12		
(5)		Total					1	\$68.07		
	OPCo	Year	Total Generation (MWh)	Off System Sales (MWh)	Gross Margin (2012 \$)	MLR <sup>1</sup>	Retained Margin <sup>1</sup> (2012 \$)	Energy Credit (\$/MWd)2		
(6)	June-Dec	2012	21,868,821	9,152,981	250,626,361	22%	170,178,962	\$161.14		
(7)		2013	25,629,397	3,857,070	426,080,707	22%	385,838,009	\$214.20		
(8)		2014	25,654,769	3,970,787	432,393,371	22%	391,453,715	\$217.32		
(9)	Jan-May	2015	11,281,816	2,296,000	188,181,389	22%	162,069,500	\$217.49		
(10)		Total						\$205.32		
	Merged	Year	Total Generation (MWh)	Off 5ystem 5ales (MWh)	Gross Margin (2012 \$)	MLR <sup>1</sup>	Retained Margin <sup>1</sup> (2012 \$)	Energy Credit (\$/MWd)2	% Retained	
(11)	June-Dec	2012	31,107,235	8,373,663	308,109,685	40%	254,734,719	\$131.37	83%	
(12)		2013	44,680,567	5,987,661	547,222,855	40%	504,342,136	\$152.50	92%	
(13)		2014	42,258,239	4,016,475	552,237,359	40%	521,922,064	\$157.81	95%	
(14)	Jan-May	2015	16,797,789	1,155,836	241,138,479	40%	231,196,780	\$168.98	96%	
(15)	L	Total	134,843,830		1,648,708,378		1,512,195,699	\$152.41	92%	
(16)	Average Margins	in \$/MW-day			\$166.17		\$152.41			
(17)	Margins Associate	ed with WPCO Load			110,968,863	x 92%	102,091,354			
(18)	Margins Exluding	WPCo Load			1,537,739,515		1,410,104,345			
(19)	Average Margins	Excl WPCo in \$/MW	-day		\$160.75		\$147.41			
(20)	Impact of Excludi	ng WPCo			\$5.42		\$5.00			
(21)	WPCo 5ales over	Period in MWh			9,367,077					

1: The MLR is applied only to off system sales. 2: This calculation uses the 5 CP Demand numbers presented in KDP-5 and reprinted below.

		CSP	OPCO	Merged	WPCO	Excl WPCo
(22)	CP-5 (MW)	4126	4935	9061	325	8736

Market
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Exhibit WAA-R6 Page 1 of 2

							Are Manhaet Drive	A Defect			Concertion		ſ
1	11-24 10	5			2015	- 100	2013 VIG	2014	2015	1010	2012	2014	2016
Plant	Unit ID	2012	2013	2014	5102	7107	5U13	5114	CTU2	7107			CTU2
Conesville	2840-3	33.80	28.24	28.24	28.24	28.88	32.83	35.28	37.37	444,031	0	0	0
Conesville	2840-4	44.89	46.30	46.24	45.70	28.88	32.83	35.28	37.37	1,376,981	2,575,123	2,512,688	997,476
Conesville	2840-5	33.70	37.00	36.93	35.44	28.88	32.83	35.28	37.37	1,170,893	2,126,457	2,091,505	852,113
Conesville	2840-6	33.70	36.92	36.85	35.39	28.88	32.83	35.28	37.37	1,066,426	1,993,266	1,955,637	820,312
Picway	2843-5	67.66	62.08	62.08	62.08	28.88	32.83	35.28	37.37	23,388	0	0	0
General James M Gavin	8102-1	25.48	28.22	28.08	27.05	28.88	32.83	35.28	37.37	6,101,568	10,406,813	10,403,928	4,301,187
General James M Gavin	8102-2	25.48	28.21	28.07	27.04	28.88	32.83	35.28	37.37	6,101,568	10,406,880	10,406,132	4,304,370
Kammer	3947-1	41.11	58.80	57.86	51.31	28.88	32.83	35.28	37.37	598,899	42,895	59,515	136,135
Kammer	3947-2	41.12	59.01	58.09	51.41	28.88	32.83	35.28	37.37	294,288	17,795	23,523	58,152
Kammer	3947-3	41.11	58.99	58.02	51.39	28.88	32.83	35.28	37.37	295,068	18,731	26,083	60,902
Muskingum River	2872-1	32.30	26.69	26.69	26.69	28.88	32.83	35.28	37.37	723,672	0	0	0
Muskingum River	2872-2	32.30	26.69	26.69	26.69	28.88	32.83	35.28	37.37	720,723	0	0	0
Muskingum River	2872-3	32.31	78.66	26.69	26.69	28.88	32.83	35.28	37.37	617,241	55	0	0
Muskingum River	2872-4	32.29	26.69	26.69	26.69	28.88	32.83	35.28	37.37	827,059	0	0	0
Muskingum River	2872-5	32.02	46.65	26.69	40.43	28.88	32.83	35.28	37.37	2,170,555	13,003	0	371,106
Racine	6006-1	3.88	3.88	3.88	3.88	28.88	32.83	35.28	37.37	9,544	17,504	17,504	7,960
Racine	6006-2	3.88	3.88	3.88	3.88	28.88	32.83	35.28	37.37	9,544	17,504	17,504	7,960
Cardinal	2828-1	25.49	27.40	27.30	26.59	28.88	32.83	35.28	37.37	2,680,992	4,572,720	4,572,720	1,891,519
J M Stuart	2850-1	34.45	36.49	36.38	35.58	28.88	32.83	35.28	37.37	490,143	905,398	937,452	360,154
J M Stuart	2850-2	34.45	36.37	36.31	35.52	28.88	32.83	35.28	37.37	607,974	1,125,612	1,087,054	438,639
J M Stuart	2850-3	34.45	35.67	35.65	35.10	28.88	32.83	35.28	37.37	580,821	1,121,429	1,085,715	431,685
J M Stuart	2850-4	34.45	36.15	36.10	35.39	28.88	32.83	35.28	37.37	590,286	1,103,652	1,059,314	426,818
J M Stuart	2850-D1	29.11	35.68	35.68	35.57	28.88	32.83	35.28	37.37	0	71	12	0
J M Stuart	2850-D2	29.11	35.68	35.68	35.57	28.88	32.83	35.28	37.37	0	73	12	0
J M Stuart	2850-D3	29.11	35.68	35.68	35.57	28.88	32.83	35.28	37.37	0	72	12	0
J M Stuart	2850-D4	29.11	35.68	35.68	35.57	28.88	32.83	35.28	37.37	0	72	12	0
W H Zimmer	6019-ST1	32.27	36.81	36.62	34.82	28.88	32.83	35.28	37.37	1,525,307	2,590,260	2,542,364	1,066,146
Philip Sporn	3938-2	47.31	60.42	59.71	54.87	28.88	32.83	35.28	37.37	355,947	54,890	61,749	65,216
Philip Sporn	3938-4	47.31	60.35	59.64	54.80	28.88	32.83	35.28	37.37	362,151	60,607	66,110	77,310
Philip Sporn	3938-5	0.00	0.00	0.00	0.00	28.88	32.83	35.28	37.37	0	0	0	0
Walter C Beckjord	2830-6	29.73	44.41	43.68	38.39	28.88	32.83	35.28	37.37	115,745	1,942	7,670	20,216

Exhibit WAA-R6 Page 2 of 2

## **Cross Impact of Fuel and Market**

Unit (D)         2013         2013         2014         20           2840-3         \$         (2,166,196)         \$						Unit Margins	argır	15		
2840-3         \$         (2,186,196)         \$ $5$ (3,451,269)         \$ $13$ 2840-5         \$         (5,643,218)         \$         (3,451,269)         \$ $13$ 2840-5         \$         (5,643,218)         \$         (8,860,738)         \$         (3,451,269)         \$ $11$ 2840-5         \$         (5,143,364)         \$         (8,146,387)         \$         (3,078,951)         \$ $84$ 2843-5         \$         (907,117)         \$         (1,13,647)         \$ $14,6387$ \$ $14,6387$ \$ $44,64$ 81022-1         \$ $(7,327),445$ \$ $(1,13,642)$ \$ $(1,34,175)$ \$ $14,73$ 9347-1         \$ $(7,327),445$ \$ $(1,13,642)$ \$ $(1,13,642)$ \$ $(1,13,1,175)$ \$ $(1,13,1,12)$ \$ $(1,13,1,12)$ \$ $(1,13,1,12)$ \$ $(1,13,1,12)$ \$ $(1,13,1,12)$ \$ $(1,13,1,12)$ \$ $(1,13,1,12)$ \$ $(1,13,12,12)$ \$ $(1,12,1,12,12)$	Plant	Unit ID		2012		2013		2014		2015
2840-4         5         (22,052,823)         5         (34,685,866)         5         (27,553,370)         5         (8, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3,	Conesville	2840-3	Ŷ	(2,186,196)	\$	3	ŝ	•	\$	1
2840-5         5         (5,43,218)         5         (8,66,738)         5         (3,451,269)         5         1,           2840-6         \$         (5,143,364)         \$         (8,146,387)         \$         (3,078,951)         \$         1,           2840-6         \$         (5,143,364)         \$         (8,146,387)         \$         (3,078,951)         \$         1,           8102-1         \$         20,705,992         \$         47,988,074         \$         7,482,7763         \$         44,           8102-2         \$         20,705,870         \$         48,112,548         \$         74,985,669         \$         44,           3947-1         \$         (1,13,642)         \$         (1,13,642)         \$         (1,13,642)         \$         (1,13,44,175)         \$         (1,13,44,175)         \$         (1,13,44,175)         \$         (1,13,44,175)         \$         (1,13,46,175)         \$         (1,13,44,175)         \$         (1,13,44,175)         \$         (1,13,44,175)         \$         (1,13,44,175)         \$         (1,13,44,175)         \$         (1,13,44,175)         \$         (1,12,44,175)         \$         (1,13,44,175)         \$         (1,12,44,175)         \$         (1,12,44,175)<	Conesville	2840-4	ş	(22,052,823)	Ş	(34,685,866)	ŝ	(27,553,370)	\$	(8,305,988)
2840-6         5         (5,143,364)         5         (8,146,387)         5         (3,078,951)         5         1,           2843-5         5         (907,177)         5         47,988,074         5         74,852,763         5         44,           8102-1         5         20,705,992         5         48,112,548         5         74,852,763         5         44,           8102-2         5         20,705,870         5         48,112,548         5         74,985,669         5         44,           3947-1         5         (1,13,642)         5         (1,13,642)         5         (1,13,642)         5         (1,13,642)         5         (1,13,642)         5         (1,13,642)         5         (1,13,642)         5         (1,13,642)         5         (1,13,642)         5         (1,13,642)         5         (1,13,642)         5         (1,13,642)         5         (1,13,642)         5         (1,13,642)         5         (1,13,642)         5         (1,13,642)         5         (1,13,642)         5         (1,13,642)         5         (1,12,44,41)         5         (1,12,44,41)         5         (1,12,44,41)         5         (1,12,44,41,42)         5         (1,12,44,41,12)         5 <td>Conesville</td> <td>2840-5</td> <td>ŝ</td> <td>(5,643,218)</td> <td>ş</td> <td>(8,860,738)</td> <td>Ş</td> <td>(3,451,269)</td> <td>ş</td> <td>1,647,278</td>	Conesville	2840-5	ŝ	(5,643,218)	ş	(8,860,738)	Ş	(3,451,269)	ş	1,647,278
2843-5         5         (907,177)         5         47,988,074         5         74,852,763         5         44, 5           8102-1         5         20,705,870         5         48,112,548         5         74,852,763         5         44, 5           8102-1         5         7,327,7451         5         (1,113,642)         5         (1,344,175)         5         (1, 3947-2         5         (3,602,033)         5         (489,974)         5         (1, 344,175)         5         (1, 344,176)         5         (1, 344,126)	Conesville	2840-6	ŝ	(5,143,364)	ŝ	(8,146,387)	ş	(3,078,951)	\$	1,628,215
8102-1         5         20,705,992         5         47,988,074         5         74,852,763         5         44,           8102-2         5         20,705,870         5         48,112,548         5         74,985,669         5         44,           3947-1         5         (7,327,745)         5         (1,113,642)         5         (1,344,175)         5         (1,344,175)         5         (1,344,175)         5         (1,336,69)         5         44,           3947-3         5         (3,609,035)         5         (488,974)         5         (1,344,175)         5         (1)           3947-3         5         (3,609,035)         5         (488,974)         5         (1,344,175)         5         (1)           2872-1         5         (3,609,035)         5         (488,974)         5         (1)         5         (1)           2872-3         5         (2,117,467)         5         (2,179,618)         5         (1)         5         (1)         5         (1)         5         (1)         5         (1)         5         (1)         5         (1)         5         (1)         5         (1)         5         (1)         5 <t< td=""><td>Picway</td><td>2843-5</td><td>ŝ</td><td>(907,177)</td><td>s</td><td>•</td><td>Ş</td><td></td><td>ŝ</td><td>I</td></t<>	Picway	2843-5	ŝ	(907,177)	s	•	Ş		ŝ	I
8102-2         5         20,705,870         5         48,112,548         5         74,985,669         5         44,           3947-1         5         (7,327,745)         5         (1,113,642)         5         (1,344,175)         5         (1,344,175)         5         (1,344,175)         5         (1,344,175)         5         (1,344,175)         5         (1,344,175)         5         (1,336,753)         5         (1,336,753)         5         (1,336,753)         5         (1,336,75)         5         (1,336,75)         5         (1,336,75)         5         (1,336,75)         5         (1,13,642)         5         (1,12,618)         5         (1,12,118)         5         (1,12	General James M Gavin	8102-1	ş	20,705,992	Ş	47,988,074	ş	74,852,763	ŝ	44,420,496
3947.1 $5$ $(7,327,745)$ $5$ $(1,13,642)$ $5$ $(1,344,175)$ $5$ $(1,344,125)$ $5$ $(1,344,125)$ $5$ $(1,344,126)$ $5$ $(1,1,244,136)$ $5$ $(1,1,1,1,1,126)$ $5$ $(1,1,1,1,1,1,126)$ $5$ $(1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,$	General James M Gavin	8102-2	ş	20,705,870	Ş	48,112,548	Ş	74,985,669	ŝ	44,484,141
3947.2 $(3,602,242)$ $(465,858)$ $(5,(557)$ $(5,(57))$ <td>Kammer</td> <td>3947-1</td> <td>ŝ</td> <td>(7,327,745)</td> <td>ş</td> <td>(1,113,642)</td> <td>ş</td> <td>(1,344,175)</td> <td>s</td> <td>(1,896,998)</td>	Kammer	3947-1	ŝ	(7,327,745)	ş	(1,113,642)	ş	(1,344,175)	s	(1,896,998)
3947.3         5 $(3,609,035)$ 5 $(489,974)$ 5 $(59,150)$ 5 $(15,12)$ 5 $(2,477,214)$ 5 $(2,477,214)$ 5 $(2,17,465,242)$ 5 $(2,17,465,242)$ 5 $(2,536)$ 5 $(2,536)$ 5 $(2,536)$ 5 $(2,536)$ 5 $(2,73,25)$ 5 $(2,17,467)$ 5 $(179,678)$ 5 $(2,732)$ 5 $(2,732)$ 5 $(2,732)$ 5 $(2,173,678)$ 5 $(2,6,831,760)$ 5 $(1,79,678)$ 5 $(2,732)$ 5 $(2,1,22,32)$ 5 $(2,1,22,32)$ 5 $(2,1,22,32)$ 5 $(2,1,22,32)$ 5 $(2,1,22,32)$ 5 $(2,1,22,32)$ 5 $(2,1,22,32)$ 5 $(2,1,22,32)$ 5 $(2,2,20)$ 5 $( 1,22,203)$ 5 $( 2,23)$ 5 $( 3,23,23,23)$ 5 $( 3,23,23,23)$ 5 $( 3,23,23,23)$ 5 $( 3,23,23,23)$ 5 $( 3,23,23)$ 5 $( 3,23,23)$ 5 $( 3,23,23)$ 5 $( 3,2,23,23)$ <td>Kammer</td> <td>3947-2</td> <td>ŝ</td> <td>(3,602,242)</td> <td>\$</td> <td>(465,858)</td> <td>ş</td> <td>(536,657)</td> <td>Ş</td> <td>(816,446)</td>	Kammer	3947-2	ŝ	(3,602,242)	\$	(465,858)	ş	(536,657)	Ş	(816,446)
2872.1       5 $(2,477,214)$ 5       -       5       -       5 $2872.2$ 5 $(2,466,242)$ 5       -       5       -       5 $2872.2$ 5 $(2,117,467)$ 5 $(2,536)$ 5       -       5 $2872.4$ 5 $(2,117,467)$ 5 $(2,536)$ 5       -       5       1 $2872.4$ 5 $(2,831,760)$ 5 $(179,678)$ 5       -       5       1 $2872.4$ 5 $(2,831,760)$ 5 $(179,678)$ 5       5       20, $2872.4$ 5 $(2,831,760)$ 5 $(179,678)$ 5       5       1 $6006.1$ 5 $238,578$ 5 $506,824$ 5       5       5       1 $2850.11$ 5 $24,844,296$ 5 $36,498,367$ 5 $20,796$ 5       2       2 $2850.12$ 5 $(3,237,396)$ 5 $(3,236,547)$ 5 $(402,208)$ 5       2 $2850.11$ 5 $(3,237,396)$ 5	Kammer	3947-3	ş	(3,609,035)	ş	(489,974)	\$	(593,150)	ŝ	(853,302)
2872-2       \$ $(2,466,242)$ \$       \$	Muskingum River	2872-1	ŝ	(2,477,214)	ŝ	£.	ŝ	•	s	1
2872-3       \$ (2,117,467)       \$ (2,536)       \$       \$ (2,117,467)         2872-4       \$ (2,820,449)       \$       \$ (179,678)       \$       \$ (1, 28,112)         2872-5       \$ (6,831,760)       \$ (179,678)       \$       \$ (1, 28,111)       \$ (1, 28,111)         6006-1       \$ 238,578       \$ 506,824       \$ 549,611       \$ (1, 28,424)       \$ 20, 20, 20, 20, 20, 20, 20, 20, 20, 20,	Muskingum River	2872-2	s	(2,466,242)	ŝ	•	ŝ		\$	•
2872.4       \$ $(2,820,449)$ \$ $<$ \$       \$ <td>Muskingum River</td> <td>2872-3</td> <td>ş</td> <td>(2,117,467)</td> <td>Ş</td> <td>(2,536)</td> <td>\$</td> <td>90. -</td> <td>ş</td> <td>-</td>	Muskingum River	2872-3	ş	(2,117,467)	Ş	(2,536)	\$	90. -	ş	-
2872-5       \$ (6,831,760)       \$ (179,678)       \$ 549,611       \$ (1,         6006-1       \$ 238,578       \$ 506,824       \$ 549,611       \$ (1,         6006-2       \$ 238,578       \$ 506,824       \$ 549,611       \$ (2,         2870-1       \$ 238,578       \$ 506,824       \$ 549,611       \$ (2,         2850-1       \$ (2,730,108)       \$ (3,308,726)       \$ (1,028,424)       \$ 20,         2850-1       \$ (2,730,108)       \$ (3,308,726)       \$ (1,121,765)       \$ 20,         2850-2       \$ (3,390,769)       \$ (3,308,726)       \$ (1,121,765)       \$ 40,         2850-3       \$ (3,237,396)       \$ (3,181,094)       \$ (402,208)       \$ 20,         2850-11       \$ (3,290,558)       \$ (3,56,947)       \$ (402,208)       \$ 406,952)       \$ 40         2850-12       \$ (3,237,396)       \$ (3,66,947)       \$ (402,208)       \$ (402,208)       \$ (402,208)       \$ (402,208)       \$ 20,         2850-14       \$ (3,209,558)       \$ (3,66,947)       \$ (866,952)       \$ (5)       \$ 25,       \$ 2850-14       \$ (2,73,588)       \$ (10,291,422)       \$ (12,91,54)       \$ 20,       \$ 21,       \$ 21,       \$ 21,       \$ 21,       \$ 21,       \$ 21,       \$ 21,       \$ 21,       \$ 21,       <	Muskingum River	2872-4	ş	(2,820,449)	ş	•	Ş	-	Ş	1
6006-1         5         238,578         5         506,824         5         549,611         5           6006-2         5         238,578         5         506,824         5         549,611         5         20,           2828-1         5         9,093,197         5         24,844,296         5         36,498,367         5         20,           2850-1         5         (2,730,108)         5         (3,308,726)         5         (1,028,424)         5         20,           2850-1         5         (3,390,769)         5         (3,308,726)         5         (1,121,765)         5         4           2850-1         5         (3,237,396)         5         (3,181,094)         5         (402,208)         5         5           2850-11         5         (3,290,558)         5         (3,56,947)         5         (402,208)         5         5           2850-12         5         (3,290,558)         5         (3,66,947)         5         (402,208)         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5 <td>Muskingum River</td> <td>2872-5</td> <td>ş</td> <td>(6,831,760)</td> <td>ŝ</td> <td>(179,678)</td> <td>ş</td> <td></td> <td>Ş</td> <td>(1,134,466)</td>	Muskingum River	2872-5	ş	(6,831,760)	ŝ	(179,678)	ş		Ş	(1,134,466)
6006-2         5         238,578         5         506,824         5         549,611         5         20,           2826-1         \$         9,093,197         \$         24,844,296         \$         36,498,367         \$         20,           2850-1         \$         (2,730,108)         \$         (3,308,726)         \$         (1,028,424)         \$         0           2850-1         \$         (3,390,769)         \$         (3,308,720)         \$         (1,121,765)         \$         0           2850-2         \$         (3,390,769)         \$         (3,181,094)         \$         (402,208)         \$         0           2850-11         \$         (3,237,396)         \$         (3,181,094)         \$         (402,208)         \$         0           2850-11         \$         (3,290,558)         \$         (3,66,947)         \$         (402,208)         \$         0           2850-12         \$         (3,290,558)         \$         (3,66,947)         \$         (402,208)         \$         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5	Racine	6006-1	ŝ	238,578	ŝ	506,824	ş	549,611	ş	266,608
2828-1       \$ 9,093,197       \$ 24,844,296       \$ 36,498,367       \$ 20,         2850-1       \$ (2,730,108)       \$ (3,308,726)       \$ (1,028,424)       \$ 0         2850-2       \$ (3,390,769)       \$ (3,308,726)       \$ (1,121,765)       \$ 0         2850-3       \$ (3,237,396)       \$ (3,181,094)       \$ (402,208)       \$ 9         2850-4       \$ (3,290,558)       \$ (3,656,947)       \$ (866,952)       \$ 9         2850-11       \$ (3,290,558)       \$ (3,656,947)       \$ (866,952)       \$ 9         2850-12       \$ (3,290,558)       \$ (3,656,947)       \$ (866,952)       \$ 9         2850-12       \$ (3,290,558)       \$ (3,656,947)       \$ (866,952)       \$ 9       \$ 9         2850-13       \$ (3,290,558)       \$ (3,050)       \$ (3,121,208)       \$ (10,291,452)       \$ 15       \$ 2,         2850-14       \$ (6,560,256)       \$ (10,291,422)       \$ (15,14,242)       \$ (15,173,588)       \$ (10,291,422)       \$ 2,       \$ 3,338.5       \$ 2,       \$ 3,338.5       \$ 2,       \$ 3,338.5       \$ 1,514,2421       \$ 1,506,509)       \$ 1,1       \$ 2,1       \$ 2,1       \$ 2,1       \$ 3,338.5       \$ 2,1,23,2421       \$ 2,1       \$ 2,1       \$ 2,1       \$ 2,1       \$ 2,1       \$ 2,1       \$ 3,338.	Racine	6006-2	ş	238,578	Ş	506,824	ŝ	549,611	ŝ	266,608
2850-1       \$ (2,730,108)       \$ (3,308,726)       \$ (1,028,424)       \$ 0         2850-2       \$ (3,390,769)       \$ (3,984,520)       \$ (1,121,765)       \$ 0         2850-3       \$ (3,237,396)       \$ (3,181,094)       \$ (402,208)       \$ 0         2850-4       \$ (3,290,558)       \$ (3,656,947)       \$ (402,208)       \$ 0         2850-11       \$ (3,290,558)       \$ (3,656,947)       \$ (402,208)       \$ 0         2850-11       \$ (3,290,558)       \$ (3,566,947)       \$ (402,208)       \$ 0         2850-11       \$ (3,290,558)       \$ (3,656,947)       \$ (402,203)       \$ 0         2850-121       \$ (3,290,558)       \$ (3,021,65)       \$ (5)       \$ 0       \$ 0         2850-123       \$ (5,173,586)       \$ (10,291,452)       \$ (5)       \$ (5)       \$ 2,0         2850-124       \$ (6,560,256)       \$ (1,514,421)       \$ (1,505,403)       \$ 2,1         2850-124       \$ (6,560,256)       \$ (1,514,421)       \$ (1,505,403)       \$ (1,20         3938-4       \$ (6,560,256)       \$ (1,514,421)       \$ (1,50,540)       \$ (1,51         3938-4       \$ (6,560,256)       \$ (1,514,421)       \$ (1,510,540)       \$ (1,21         2830-5       \$ (98,936)       \$ (1,514,421) <td>Cardinal</td> <td>2828-1</td> <td>ŝ</td> <td>9,093,197</td> <td>Ş</td> <td>24,844,296</td> <td>ŝ</td> <td>36,498,367</td> <td>ŝ</td> <td>20,402,066</td>	Cardinal	2828-1	ŝ	9,093,197	Ş	24,844,296	ŝ	36,498,367	ŝ	20,402,066
2850.2       \$ (3,390,769)       \$ (3,984,520)       \$ (1,121,765)       \$ 402,208)       \$ 2         2850.3       \$ (3,237,396)       \$ (3,181,094)       \$ (402,208)       \$ 9         2850.4       \$ (3,290,558)       \$ (3,656,947)       \$ (402,208)       \$ 9         2850.11       \$ (3,290,558)       \$ (3,656,947)       \$ (402,208)       \$ 9         2850.12       \$ (3,290,558)       \$ (3,656,947)       \$ (402,208)       \$ 9         2850.11       \$ (3,290,558)       \$ (3,656,947)       \$ (402,208)       \$ 9         2850.12       \$ (3,290,558)       \$ (2007)       \$ (5)       \$ 15         2850.13       \$ (5,173,586)       \$ (10,291,452)       \$ (5)       \$ 2,         2850.14       \$ (5,173,586)       \$ (10,291,452)       \$ (5)       \$ 2,         3938.2       \$ (6,560,256)       \$ (1,514,427)       \$ (1,506,509)       \$ 11,         3938.4       \$ (6,560,256)       \$ (1,514,242)       \$ (1,607,494)       \$ 11,         2830.6       \$ (98,936)       \$ (1,514,242)       \$ (1,610,548)       \$ (1,110,548)       \$ 11,         3938.4       \$ (6,560,256)       \$ (1,514,242)       \$ (1,610,548)       \$ 11,       \$ 11,         2830.6       \$ (9,636)       \$ (1	J M Stuart	2850-1	Ş	(2,730,108)	Ş	(3,308,726)	ŝ	(1,028,424)	ş	647,177
2850-3       \$ (3,237,396)       \$ (3,181,094)       \$ (402,208)       \$ '10,201,402)       \$ '10,201,402)       \$ '10,201,402)       \$ '10,201,402)       \$ '10,201,402)       \$ '10,201,402)       \$ '10,201,402)       \$ '10,201,402)       \$ '10,201,402)       \$ '10,201,402)       \$ '10,201,402)       \$ '10,201,402)       \$ '10,201,402)       \$ '10,201,402)       \$ '10,201,402)       \$ '10,201,402)       \$ '10,201,402)       \$ '10,201,402)       \$ '10,201,402)       \$ '11,201,517)       \$ '11,201,517)       \$ '11,201,517)       \$ '11,201,517)       \$ '11,201,517)       \$ '11,201,548)       \$ '11,201,548)       \$ '11,201,548)       \$ '11,201,548)       \$ '11,201,548)       \$ '11,201,548)       \$ '11,201,548)       \$ '11,201,548)       \$ '11,201,548)       \$ '11,201,548)       \$ '11,201,548)       \$ '11,201,548)       \$ '11,201,548) <td>J M Stuart</td> <td>2850-2</td> <td>ş</td> <td>(3,390,769)</td> <td>ŝ</td> <td>(3,984,520)</td> <td>Ş</td> <td>(1,121,765)</td> <td>ŝ</td> <td>813,809</td>	J M Stuart	2850-2	ş	(3,390,769)	ŝ	(3,984,520)	Ş	(1,121,765)	ŝ	813,809
2850.4       \$ (3,290,558)       \$ (3,656,947)       \$ (866,952)       \$ 4         2850-D1       \$ (3,290,558)       \$ (3,656,947)       \$ (55)       \$ (5)       \$         2850-D2       \$ (207)       \$ (207)       \$ (5)       \$ (5)       \$       \$ (5)       \$         2850-D3       \$ -       \$ (207)       \$ (205)       \$ (5)       \$ (5)       \$       \$       \$ (5)       \$       \$       \$ (5)       \$       \$       \$ (5)       \$       \$       \$ (5)       \$       \$       \$ (5)       \$       \$       \$ (5)       \$       \$       \$       \$ (5)       \$	J M Stuart	2850-3	ş	(3,237,396)		(3,181,094)	ŝ	(402,208)	ŝ	980,607
2850-D1     \$     (5)     \$     (5)     \$       2850-D2     \$     \$     (207)     \$     (5)     \$       2850-D3     \$     \$     (207)     \$     (5)     \$       2850-D4     \$     \$     (204)     \$     (5)     \$       6019-571     \$     (5,173,586)     \$     (10,291,452)     \$     (5)     \$       3938-2     \$     (6,560,256)     \$     (1,514,242)     \$     (1,508,509)     \$     (1,508,509)     \$     (1,508,509)     \$     (1,508,509)     \$     \$     1,510,548)     \$     \$     1,510,548)     \$     \$     1,510,548)     \$     \$     1,510,548)     \$     \$     1,510,548)     \$     \$     1,510,548)     \$     \$     1,510,548)     \$     \$     1,510,548)     \$     \$     1,510,548)     \$     \$     1,510,548)     \$     \$     1,510,548)     \$     \$     1,510,548)     \$     \$     1,510,548)     \$     \$     1,510,548)     \$     \$     1,510,548)     \$     \$     1,510,548)     \$     \$     1,510,548)     \$     \$     1,510,548)     \$     \$     1,510,548)     \$     \$     \$     \$     \$	J M Stuart	2850-4	ş	(3,290,558)	\$	(3,656,947)	ŝ	(866,952)	ŝ	848,923
2850-D2     \$     -     \$     (207)     \$     (5)     \$       2850-D3     \$     -     \$     (205)     \$     (5)     \$       2850-D4     \$     -     \$     (204)     \$     (5)     \$       6019-5T1     \$     (5,173,586)     \$     (10,291,452)     \$     (5)     \$     2,       3938-2     \$     (6,560,256)     \$     (1,508,509)     \$     (1,508,509)     \$     (1,508,509)     \$     (1,508,509)     \$     (1,508,509)     \$     (1,508,509)     \$     (1,508,509)     \$     \$     1,508,509)     \$     (1,508,509)     \$     (1,508,509)     \$     \$     1,508,509)     \$     \$     1,508,509)     \$     \$     1,508,509)     \$     \$     1,508,509)     \$     \$     1,508,509)     \$     \$     1,508,509)     \$     \$     1,508,509)     \$     \$     1,508,509)     \$     \$     1,508,509)     \$     \$     1,508,509)     \$     \$     1,508,509)     \$     \$     1,508,509)     \$     \$     1,508,509)     \$     \$     1,508,509)     \$     \$     1,508,509)     \$     \$     1,508,509)     \$     \$     1,508,509)     \$	J M Stuart	2850-D1	Ş	•	\$	(203)	ŝ	(5)	~	'
2850-D3     \$     -     \$     (205)     \$     (5)     \$       2850-D4     \$     -     \$     (204)     \$     (5)     \$       6019-5T1     \$     (5,173,586)     \$     (10,291,452)     \$     (5)     \$       3938-2     \$     (6,560,256)     \$     (1,514,242)     \$     (1,508,509)     \$     (1,<	J M Stuart	2850-D2	Ş	•	\$	(207)	ŝ	(5)	ŝ	•
2850-D4         5         (204)         5         (5)         5           6019-5T1         5         (5,173,586)         5         (10,291,452)         5         (3,410,517)         5         2,           3938-2         5         (6,560,256)         5         (1,508,509)         5         (1,<	J M Stuart	2850-D3	ş	I	\$	(205)	Ş	(2)	ş	•
6019-571         5         (5,173,586)         5         (10,291,452)         5         (3,410,517)         5         2,           3938-2         \$         (6,560,256)         \$         (1,514,242)         \$         (1,508,509)         \$         (1,<	J M Stuart	2850-D4	ŝ	•	Ş	(204)	ŝ	(5)	ŝ	1
3938-2         \$         (6,560,256)         \$         (1,508,509)<	W H Zimmer	6019-ST1	Ş	(5,173,586)	ŝ	(10,291,452)	ŝ	(3,410,517)	ŝ	2,721,398
3938.4         \$         (6,674,342)         \$         (1,667,497)         \$         (1,610,548)         \$         (1, 5         \$         (1,610,548)	Philip Sporn	3938-2	Ş	(6,560,256)	ŝ	(1,514,242)	ŝ	(1,508,509)	\$	(1,140,828)
3938-5         \$ <td>Philip Sporn</td> <td>3938-4</td> <td>\$</td> <td>(6,674,342)</td> <td>ş</td> <td>(1,667,497)</td> <td>ŝ</td> <td>(1,610,548)</td> <td>ŝ</td> <td>(1,347,072)</td>	Philip Sporn	3938-4	\$	(6,674,342)	ş	(1,667,497)	ŝ	(1,610,548)	ŝ	(1,347,072)
2830-6 \$ (98,936) \$ (22,475) \$ (64,447) \$	Philip Sporn	3938-5	Ş		ŝ	v	~	'	\$	-
	Walter C Beckjord	2830-6	\$	(98,936)	\$	(22,475)	ŝ	(64,447)	ş	(20,439)

22.44

Sum of Negative Margins

\$ (98,340,883) \$ (81,572,451) \$ (46,570,959) \$ (15,515,538) \$ (241,999,832)

**Reduction in Staff Energy Credit** 

### Cost of Service Adjustments

### Prepaid Pension Asset

	CSP		OPCo		AEP	Ohio	Source
Prepaid Pension Asset	\$	39,795,915	\$	73,652,528	\$	113,448,443	Exhibit RCS-1/2 Schedule B pg 5 & pg 22
Associated ADIT	\$	(3,627,511)	\$	(13,705,181)	\$	(17,332,692)	Exhibit RCS-1/2 Schedule B-1
	\$	36,168,404	\$	59,947,347	\$	96,115,751	
Weighted Cost of Capital		7.78%		7.97%		7.90%	Exhibit RCS-1/2 Schedule B pg 1
Return on Rate Base	\$	2,813,902	\$	4,777,804	\$	7,591,705	
income Tax @ 35%	\$	984,866	\$	1,672,231	\$	2,657,097	
Revenue Requirement	\$	3,798,767	\$	6,450,035	\$	10,248,802	
5 CP Demand						9061	
Days per Year						365	
Impact on Capacity Charge Rate					\$	3.10	
Loss Factor						1.034126	i
Final Impact on Capacity Charge Ra	ite				\$	3.20	

### Cost of Service Adjustments

### Pollution Control CWIP

	CSP		OPCo		AEP	Ohio	Source
Pollution Control CWIP	\$	22,821,421	\$	10,860,321	\$	33,681,742	Exhibit RCS-1/2 Schedule B pg 1
Weighted Cost of Capital		7.78%	i	7.97%	6	7.84%	Exhibit RCS-1/2 Schedule B pg 1
Return on Rate Base	\$	1,775,507	\$	865,568	\$	2,641,074	
income Tax @ 35%	\$	621,427	\$	302,949	\$	924,376	
Revenue Requirement	\$	2,396,934	\$	1,168,516	\$	3,565,450	
5 CP Demand						9061	
Days per Year						365	i
Impact on Capacity Charge Rate					\$	1.08	
Loss Factor						1.034126	5
Final Impact on Capacity Charge R	ate				\$	1.11	

### Exhibit WAA-R7 Page 3 of 5

### **Cost of Service Adjustments**

### Non-Pollution Control CWIP

	CSP		OPCo		AEP	Ohio	Source
Non-Pollution Control CWIP	\$	27,563,093	\$	21,859,033	\$	49,422,126	Exhibit RCS-1/2 Schedule B pg 1
Weighted Cost of Capital		7.78%	ı	7.97%	1	7.86%	5 Exhibit RCS-1/2 Schedule B pg 1
Return on Rate Base	\$	2,144,409	\$	1,742,165	\$	3,886,574	
Income Tax @ 35%	\$	750,543	\$	609,758	\$	1,360,301	
Revenue Requirement	\$	2,894,952	\$	2,351,923	\$	5,246,874	
5 CP Demand						9061	L
Days per Year						365	5
Impact on Capacity Charge Rate					\$	1.59	
Loss Factor						1.034126	5
Final Impact on Capacity Charge Rat	e				\$	1.64	

### Exhibit WAA-R7 Page 4 of 5

### Cost of Service Adjustments

### Impact of Change in ROE - Ohio Power

Per Staff - Ohio Power	Total Company	Weighted	Cost of	Weighted Cost of
Long-Term Debt	\$ Total Company Capitalization 2,734,580,000	Cost Ratio 45.93%	Capital 5.27%	Capital 2.42%
Preferred Stock	\$ 16,626,000	0.28%	3.87%	0.01%
Common Stock	\$ 3,202,486,000	53.79%	10.30%	5.54%
Total	\$ 5,953,692,000	100.00%		7.97%
At 11.15% - Ohio Power	Total Company	Weighted	Cost of	Weighted Cost of
Long-Term Debt	\$ Capitalization 2,734,580,000	Cost Ratio 45.93%	Capital 5.27%	Capital 2.42%
Preferred Stock	\$ 16,626,000	0.28%	3.87%	0.01%
Common Stock	\$ 3,202,486,000	53.79%	11.15%	6.00%
Total	\$ 5,953,692,000	100.00%		8.43%
Change				0.46%
Rate Base				\$ 3,475,504,866
Return on Rate Base				\$ 15,890,505
Income Tax @ 35%				\$ 5,561,677
Revenue Requirement				\$ 21,452,182
5 CP Demand				9,061
Days per Year				365
Impact on Capacity Charge Rate				\$ 6.49
Loss Factor				1.034126
Final Impact on Capacity Charge Rate				\$ 6.71

### Exhibit WAA-R7 Page 5 of 5

### **Cost of Service Adjustments**

### Impact of Change in ROE - CSP

Per Staff - CSP	Total Company	Weighted	Cost of	Weighted Cost of
	Capitalization	Cost Ratio	Capital	Capital
Long-Term Debt	\$ 1,442,745,000	49.36%	5.50%	2.71%
Preferred Stock	\$ -	0.00%	0.00%	0.00%
Common Stock	\$ 1,480,405,000	50.64%	10.00%	5.06%
Total	\$ 2,923,150,000	100.00%		7.78%
At 11.15% - CSP	Total Company	Weighted	Cost of	Weighted Cost of
	Capitalization	Cost Ratio	Capital	Capital
Long-Term Debt	\$ 1,442,745,000	49.36%	5.50%	2.71%
Preferred Stock	\$ -	0.00%	0.00%	0.00%
Common Stock	\$ 1,480,405,000	50.64%	11.15%	5.65%
Total	\$ 2,923,150,000	100.00%		8.36%
Change				0.58%
Rate Base				\$ 1,375,724,666
Return on Rate Base				\$ 8,012,330
Income Tax @ 35%				\$ 2,804,315
Revenue Requirement				\$ 10,816,645
5 CP Demand				9,061
Days per Year				365
Impact on Capacity Charge Rate				\$ 3.27
Loss Factor				1.034126
Final Impact on Capacity Charge Rate				\$ 3.38

### Exhibit WAA-R8

	Ohio Power Company							
		2012		2013				
	\$ millions	\$ millions	RÓE	\$ millions	\$ millions	RÓE		
Projected Earnings (Two Tiered Capacity Pricing)		471	10.4%		331	7.3%		
Estimate of February 23, 2012 Ruling:								
Additional Switching net of OSS Margins and Capacity Revenues	(194)			(341)				
Income Taxes	68			119				
Total adjustment (after-Tax)		(126)			(222)			
Projected Earnings (all capacity at RPM)		344	7.6%		109	2.4%		
Remove RPM Capacity Revenue				(70)				
Add Capacity Revenue @ 356/MW-day	-			753				
Income Taxes				(239)				
Total adjustment (after-Tax)					444			
Projected Earnings (all capacity \$356/MW-day)					553	12.2%		

### **CERTIFICATE OF SERVICE**

The undersigned hereby certifies that a true and correct copy of Ohio Power Company's Pre-filed Rebuttal Testimony of William A. Allen have been served upon the below-named counsel and Attorney Examiners by electronic mail to all Parties this 11<sup>th</sup> day of May, 2012.

> <u>/s/ Steven T. Nourse</u> Steven T. Nourse

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in

Case No(s). 10-2929-EL-UNC

Summary: Testimony Rebuttal Testimony of William A. Allen electronically filed by Mr. Steven T Nourse on behalf of American Electric Power Service Corporation