AMERICAN ELECTRIC POWER

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March 23, 2012

The Honorable Greta See
Attorney Examiner
Public Utilities Commission of Ohio
180 East Broad Street
Columbus, Ohio 43215

Re: *Ohio Power Company*, Case No. 10-2929-EL-UNC

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Dear Ms. See:

On March 14, 2012, you issued a scheduling entry that, among other things, afforded Ohio Power Company (dba AEP Ohio) an opportunity to update or revise the testimony that was filed on August 31, 2011 in this proceeding. Today, AEP Ohio is filing the enclosed testimony to be sponsored by the following witnesses during the upcoming evidentiary hearing:

Richard E. Munczinksi, AEP
Frank C. Graves, The Brattle Group
Kelly D. Pearce, PhD, AEP
Dana E. Horton, AEP
William A. Allen, AEP

With the exception of Mr. Allen, the four remaining witnesses had previously filed testimony on August 31, 2011 and are now submitting an updated/revised version of their Direct Testimony. For those four witnesses, a redlined version of testimony is also being submitted solely for the convenience of the parties so that they can see the specific changes made from the August 31, 2011 versions (regarding the exhibits of Dr. Pearce, only a portion of KDP-7 changed). During the April 17, 2012 hearing, AEP Ohio will sponsor and introduce for admission into the evidentiary record the clean, updated version of each piece of testimony that is being filed today. Please note that the testimony of William A. Klun that was filed on August 31, 2011 is no longer being sponsored and should be considered withdrawn.

Thank you for your attention to this matter.

Respectfully Submitted,

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

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

REDLINED DIRECT TESTIMONY OF
RICHARD E. MUNCZINSKI
KELLY D. PEARCE
FRANK C. GRAVES
DANA E. HORTON
ON BEHALF OF
COLUMBUS SOUTHERN POWER COMPANY
AND
OHIO POWER COMPANY

Filed: March 23, 2012

EXHIBIT NO. ______

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

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

DIRECT TESTIMONY OF
RICHARD E. MUNCZINSKI
ON BEHALF OF
~~COLUMBUS SOUTHERN POWER COMPANY~~
~~AND~~
OHIO POWER COMPANY

Filed: ~~August 31, 2011~~March 23, 2012

INDEX TO DIRECT TESTIMONY OF
RICHARD E. MUNCZINSKI

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO
DIRECT TESTIMONY OF
RICHARD E. MUNCZINSKI
ON BEHALF OF
~~COLUMBUS SOUTHERN POWER~~
~~AND~~
OHIO POWER COMPANY

PERSONAL DATA

Q. WHAT IS YOUR NAME AND BUSINESS ADDRESS?

A. My name is Richard E. Munczinski and my business address is One Riverside Plaza, Columbus, Ohio 43215.

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

A. I am employed by the American Electric Power Service Corporation (AEPSC), a unit of American Electric Power (AEP). My title is Senior Vice President – Regulatory Services, over regulatory activities across AEP's operating companies, including ~~Columbus Southern Power Company (CSP) and~~ Ohio Power Company (OPCo), hereby ~~collectively~~ referred to as AEP Ohio or the Compan~~ies~~y.

Q. WHAT ARE YOUR RESPONSIBILITIES AS SENIOR VICE PRESIDENT –REGULATORY SERVICES?

A. I am directly responsible for overseeing AEP's regulatory activities before eleven state regulatory commissions and the Federal Energy Regulatory Commission (FERC). Additionally, I am AEP's Chief Reliability Compliance Officer. In this role, I oversee the development and implementation of strategic policy within AEP to ensure compliance with North American Reliability Corporation (NERC) reliability standards for the AEP system, as well as AEP's participation in regional transmission organization (RTOs).

Q. WHAT IS YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND?

A. I earned a bachelor of engineering degree in electrical engineering and a master's degree in management science from Stevens Institute of Technology in Hoboken, New Jersey. I am a member of the Institute of Electrical and Electronics Engineers.

Prior to joining AEP, I was an electrical engineer for Ebasco Services Inc., New York. I joined AEP in 1978 in the Project Engineering department and transferred to Corporate Planning and Budgeting in 1982. I became Director of Rate Case Management in 1992 and Vice President of Regulatory Services in 1996 leading the regulatory approval process for the merger with Central and South West Corporation (CSW). I was named Senior Vice President - Corporate Planning and Budgeting in 1998 and Senior Vice President - Shared Services in 2008. I have served in my current role as Senior Vice President-Regulatory Services of AEP since January 2010.

Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE A REGULATORY AGENCY?

A. I have testified or submitted testimony before the regulatory commissions in the states of Ohio, Virginia, West Virginia, Michigan, Arkansas, Indiana, Kentucky, Louisiana, Oklahoma, Texas and before the Federal Energy Regulatory Commission (FERC).

PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I am AEP Ohio's overall policy witness supporting AEP Ohio's position that ~~CSP and OPCo~~it should be allowed to collect its~~their~~ capacity costs from Competitive Retail Electric Service (CRES) providers. AEP Ohio maintains that its position is consistent with the terms and conditions in the existing PJM Interconnection, LLC (PJM) Reliability Assurance Agreement (RAA), as further discussed by Company witness Horton. I have also been advised by counsel that, under the terms of the RAA, the wholesale capacity rate to be charged by ~~CSP and OPCo~~the Company to CRES providers should be decided not by the Commission, but rather in a case that is currently pending rehearing at FERC. Nonetheless, as directed by the Public Utilities Commission of Ohio's (Commission) ~~August 11~~March 7, 201~~1~~2 Entry, the Compan~~ies~~y's testimony and exhibits, as updated from the filing made on August 31, 2011, will provide the Commission with the necessary evidence regarding the appropriate capacity cost and a fair compensation mechanism pertaining to capacity charges to be paid by CRES providers for use of AEP Ohio's capacity. Additionally, I will explain why it is important that neither shareholders nor non-shopping customers should subsidize CRES providers in their use of AEP Ohio capacity. My testimony is supported by other witnesses testifying on behalf of AEP Ohio in these proceedings and takes into account AEP

Ohio's comments and reply comments previously filed in this proceeding, Case No. 10-2929-EL-UNC (Capacity Charges) case.

<u>WITNESSES AND SPONSORED TESTIMONY</u>

Q. HOW IS THE COMPAN~~IES~~Y'S CAPACITY CHARGES CASE FILING ORGANIZED?

A. AEP Ohio has five witnesses supporting various key issues for the Capacity Charges case. The following table summarizes and serves to introduce the witnesses, the general subject area each is sponsoring, and a brief description of the respective testimony.

Table 1: Witnesses in the Capacity Charges Case

Witness	Subject Area	General Description of Testimony
Richard E. Munczinski (AEP)	Policy Witness	• Background of Case • AEP Ohio's position
~~William A. Klun (MJ Beck Consulting)~~William A. Allen (AEP)	~~Independent Generation Finance Witness~~Financial Analysis	• Quantify Financial Harm Associated with RPM-priced capacity • Current Shopping Levels~~Shortfalls of RPM relative to financing generation~~
Frank C. Graves (The Brattle Group)	Independent RPM Capacity Market Witness	• Cost difference between PJM RPM price and AEP's embedded costs • Economic issues in CRES capacity pricing
Dana E. Horton (AEP)	PJM Capacity Market Witness	• PJM's FRR and RPM capacity options • FRR rules and procedures • RPM auction process
Kelly D. Pearce (AEP)	Cost of Capacity Witness	• AEP Ohio's cost of capacity • Formula rate description • Energy credit • CRES self-supply option

<u>BACKGROUND OF THE CASE</u>

Q. PLEASE DESCRIBE THE HISTORY OF THE CAPACITY CHARGES CASE WITH RESPECT TO AEP OHIO.

A. On November 1, 2010, AEP Ohio filed an application with the Federal Energy Regulatory Commission (FERC) in FERC Docket No. ER11-1995-000. On November 24, 2010, at the direction of FERC, AEP Ohio refiled its application in FERC Docket No. ER11-2183-000. As a Fixed Resource Requirement (FRR) entity, AEP Ohio's application proposed to implement an existing clause within the PJM RAA to change the basis of compensation for use of its capacity by CRES providers to an AEP Ohio cost-based method.

Prior to 2007, and during the PJM Reliability Pricing Model (RPM) auction development phase, AEP, as well as other parties, expressed concern over the long-term negative impacts of the RPM capacity market on vertically integrated utilities and their customers. Thus, as discussed in the testimony of Company witness Horton, Section D.8 of Schedule 8.1 (Schedule D) of the PJM RAA, or the FRR provision, was drafted to ensure that FRR entities could request a cost-based method of recovering their capacity costs. Under FRR, there are essentially three alternatives for pricing capacity provided to CRES providers: 1) a properly designed retail state compensation mechanism and in the absence of such a mechanism, 2) rates based on the PJM RPM capacity auction price, and 3) a method based on the FRR entity's costs (a formula cost-based method) or such other cost basis shown to be just and reasonable.

AEP Ohio has self-supplied its capacity as a FRR entity since the RPM inception in June 2007, thus opting out of the PJM RPM auction market for purposes of meeting its load obligations each year through planning year 2014/2015. Since the RPM auction inception, AEP Ohio has been compensated at the adjusted PJM RPM auction price for supplying capacity associated with load lost to CRES providers who choose not to self-supply their own capacity. The CRES providers who choose not to self-supply merely act as a middle-man on capacity flowing from AEP Ohio. While the RPM auction prices have fluctuated significantly, the auction price for the next several years have dropped to levels that would prevent AEP Ohio from receiving anything remotely approaching full compensation from CRES providers for AEP Ohio capacity costs.

In its November 2010 FERC application, AEP Ohio proposed cost-based formula tariffs that were based on the Companies’ 2009 FERC Form 1 filings.[1] AEP Ohio made this application to remedy the situation where CRES providers were receiving a subsidy for their use of the Compan~~ies~~y’s capacity due to the use of RPM auction prices. Additionally, AEP Ohio filed this 2009 information in Ohio in this Capacity Charges case. Company witness Pearce provides an update to these rates based on 2010 information and provides the evidence of the proper level of compensation to be recovered from CRES providers who utilize AEP Ohio’s capacity.

In response to AEP Ohio’s November 2010 application to the FERC, the Commission represented to FERC that as of December 8, 2010 it was "adopt[ing] as the state compensation mechanism for the Companies the current capacity

[1] At the time of this filing, the merger of Ohio Power Company’s predecessor companies, Columbus Southern Power Company and Ohio Power Company, had not been finalized. Hence, for 2009 and 2010, formula calculations were done for each company in recognition of their status as separate legal entities. The merger was effective as of December 31, 2011.

charges established by the three-year capacity auction conducted by PJM," which is the PJM RPM auction price.

On January 20, 2011, FERC issued an Order rejecting the AEP Ohio rate proposal, not on the merits, but due to the Commission's December 8, 2010 order stating that it was adopting an interim state compensation mechanism. AEP Ohio's application for rehearing of FERC's January 20, 2011 Order remains pending before FERC. AEP Ohio also filed a complaint case, FERC Docket No. EL11-32-000, to seek modifications to Schedule D of the RAA designed to clarify the original intent as understood by AEP Ohio. The purpose of that filing was to confirm that any state compensation mechanism must compensate FRR entities for capacity costs through charges included in retail rates and to preserve the FRR entities' right to submit filings under Section 205 of the Federal Power Act to establish just and reasonable FRR charges. Otherwise, utilities may be forced to accept rates at below cost levels.

Q. DID AEP OHIO RENEW ITS FRR ELECTION FOR THE 2015/2016 PLANNING YEAR?

A. No. AEP Ohio did not pursue an FRR election for the 2015/2016 Planning Year. On March 7, 2012 AEP Ohio advised PJM that it would become an RPM entity for purposes of capacity pricing for the 2015/2016 Planning Year. To be clear, this decision means that the load of AEP Ohio will be in the RPM market starting in mid-2015 and does not mean that all of the generation assets currently owned by AEP Ohio will enter the RPM capacity market at that time. There is an upcoming PJM process related to designation of particular units and that has not presently been completed.

Q. WHAT IS THE SIGNIFICANCE OF AEP OHIO BECOMING AN RPM ENTITY IN THE PJM CAPACITY MARKET?

A. AEP Ohio status as an RPM entity starting on June 1, 2015 means that the pricing issues in this case become transitional in nature and only need to address the period from June 1, 2012 through May 31, 2015.

AEP OHIO'S POSITION

Q. PLEASE BRIEFLY SUMMARIZE AEP OHIO'S POSITION IN THIS CAPACITY CHARGES CASE.

A. AEP Ohio's position in the pending FERC proceeding and in this Ohio Capacity Charges proceeding, which is set forth in detail in the Compan~~ies~~y's January 7, 2011 Application for Rehearing in this docket, is that the current capacity pricing mechanism undercompensates AEP Ohio for the capacity it provides to CRES providers. The impact on AEP Ohio's ability to be compensated for its costs has become significant due to the trend in RPM auction prices, as well the growth in shopping by AEP Ohio customers whose CRES providers take advantage of the capacity supplied by AEP Ohio as opposed to supplying their own capacity. These concerns prompted the November 2010 FERC filing. On advice of counsel, it is my understanding that CSP and OPCo have the right under the RAA to request that FERC establish the wholesale rate that the companies may charge for capacity to CRES providers, which right they exercised in the November 2010 FERC filing, as amplified by the FERC complaint. However, given the FERC's order on the Compan~~ies~~y's November 2010 filing and the Commission's entry in this case, AEP Ohio will present evidence as to the proper level of compensation to be recovered from CRES providers who utilize AEP Ohio's capacity.

Q. WHAT ARE THE CONSEQUENCES OF ALIGNING A STATE COMPENSATION MECHANISM WITH THE PJM RPM PRICE?

A. Aligning the state compensation mechanism to the PJM RPM wholesale price means that Ohio capacity is solely influenced by the administrative PJM and RPM's auction process and its participants who may not have Ohio's best interests in mind. To the extent that the Commission's December 8, 2010 Entry eliminated other options for capacity compensation, it would, in my view, undermine the ability to provide just and reasonable compensation to AEP Ohio and the ability to provide customers with reliable and adequate service. During the development phase of the RPM, the FERC addressed these concerns by establishing alternative, non-RPM auction based methods for establishing capacity prices for FRR entities.

Additionally, the RPM clearing price is a one-year price projected three years in advance. As shown in the historical auction clearing prices presented in Exhibit KDP-7 in the testimony of Company witness Pearce, these prices can fluctuate dramatically from year to year. This provides little or no incentive to invest in Ohio asset generation.

Q. WHY IS IT APPROPRIATE TO TIE CAPACITY PRICES CHARGED TO CRES PROVIDERS TO AEP OHIO'S COST OF CAPACITY?

A. There are several reasons why CRES providers that are passing through AEP Ohio's capacity should pay for use of that capacity based on AEP Ohio's costs. First, it is important that neither shareholders nor non-shopping customers subsidize CRES providers for use of AEP Ohio's capacity. Reliance on AEP Ohio to supply capacity to CRES providers while not requiring those providers to pay the cost of that capacity is inequitable. Second, cost-based compensation represents a long-term view of affordable and reliable capacity for Ohio customers in contrast to the short-term RPM-based pricing. Finally, because AEP Ohio is an FRR entity, its capacity is dedicated to its Ohio customers. This includes those customers who choose to shop and are served by CRES providers who opt to utilize AEP Ohio's capacity. Accordingly, such capacity dedication comes hand in hand with rates that are based on AEP Ohio's costs and not on the RPM market.

Q. HOW DOES AEP OHIO RECOVER ITS CAPACITY COSTS FROM RETAIL CUSTOMERS THAT TAKE GENERATION SERVICE FROM AEP OHIO?

A. As described and submitted in AEP Ohio's Initial Comments filed in this proceeding, AEP Ohio, as a Load Serving Entity (LSE) in PJM, does not participate in the PJM RPM auction market for the purposes of meeting AEP Ohio's load obligation. The cost of AEP Ohio's capacity resources that are used by the CRES providers who fail to secure their own resources are recovered from non-shopping retail customers through state jurisdiction, Commission-approved generation rates. Such rates for January 2012 through May 2014 are the subject of the Company's current 2012-2014 ESP case and are intended to cover AEP Ohio's cost of generation, including the cost of capacity. However, CRES providers who serve shopping customers, and who choose not to self-supply capacity, are currently required to pay only the PJM RPM-based auction price. Thus, while these CRES providers are using AEP Ohio's capacity resources, they avoid paying the embedded generation capacity costs that are on the books of AEP Ohio. Accordingly, AEP Ohio is forced to absorb the cost of an unreasonable and ultimately unsustainable subsidy to CRES providers in Ohio. The bottom line is CRES providers should provide fair compensation to AEP Ohio for its capacity just as non-shopping customers do.

While the Commission opined in the December 8th Order that AEP Ohio has other mechanisms for the recovery of capacity costs from retail customers, this is not true. Shopping customers do not pay AEP Ohio for capacity costs, they pay the capacity charged by CRES providers. Non-shopping customers only pay SSO generation rates. AEP Ohio is not receiving compensation for CRES-related capacity costs through any of its retail rate mechanisms. The Commission's interim compensation mechanism, based on the RPM-based pricing, does not provide adequate compensation for its costs of providing capacity to CRES providers.

Q. WHAT IS THE APPROPRIATE LEVEL OF COMPENSATION THAT AEP OHIO SHOULD RECEIVE FROM CRES PROVIDERS FOR USE OF AEP OHIO'S CAPACITY?

A. AEP Ohio should be allowed just and reasonable compensation from CRES providers based on AEP Ohio's embedded cost of capacity that will allow for continued investment in Ohio generation resources. Such charges will not create a subsidy, as is currently occurring. Such charges will facilitate long-term resource adequacy and reliability.

Q. WHY DID AEP OHIO DECIDE TO REQUEST A CHANGE IN FRR COMPENSATION METHODS?

A. As other AEP Ohio witnesses support, adjusted RPM-based capacity rates tend to fluctuate over time while embedded cost-based rates are relatively stable. At this particular time in the market cycle, adjusted RPM-based capacity rates are below AEP Ohio's embedded costs. As reflected in Exhibit KDP-7 in the testimony of Company witness Pearce, the adjusted RPM-based rates not only fluctuate year to year, but are well below the cost of a new combined cycle unit (Gross CONE). Therefore, AEP Ohio determined that it was time to utilize the cost-based method with the full understanding that it would require FERC approval of the proposed rates. Based on 2010 FERC Form 1 data, as calculated by Company witness Pearce, capacity rates are \$327.59/MW-day for Columbus Southern Power ~~SP~~(CSP) and \$379.23/MW-day for OPCo or \$355.72/MW-day on a combined basis for AEP Ohio.

Q. WHAT ARE THE IMPACTS TO AEP OHIO IF THE RATES BASED ON EXISTING RPM AUCTION PRICES REMAIN THE ONLY APPROVED COST COMPENSATION MECHANISM?

A. ~~At 100% shopping, the impacts to AEP Ohio could exceed $485M for 2011, $771M for 2012, and $971M for 2013. At 50% shopping the impacts to AEP Ohio could exceed $242M for 2011, $386M for 2012, and $486M for 2013. These financial impacts will obviously impact the long-term generation capacity investment within the state.~~ AEP Ohio would experience serious financial harm, the details of which are separately discussed by AEP Ohio witness Allen in his testimony.

Q. WHAT ARE THE LONG-TERM GENERATION CAPACITY SUPPLY CONCERNS ASSOCIATED WITH THE CURRENT RPM-BASED CAPACITY PRICING MECHANISM?

A. During the development phase of the RPM model, the Ohio Commission had concerns with protecting a state's generation resource adequacy. As stated in the Commission's comments in FERC Docket No. EL05-148-000:

> "…PJM's rules do not recognize the need to recover reasonable investment costs nor the timely repayment of debt—bedrock principles required for financing an industry as capital intensive as the electricity industry." (p.14).

The Commission goes on to state:

> "Generator owners cannot long survive on recovery of the short run marginal cost of energy alone, but must consistently recover some of their long run marginal costs as well." (p.14).

The Ohio Commission's previous state policy recognized an obligation to ensure adequate supply of generation resources for the customers of Ohio and, as a result, they approved AEP Ohio's standard service offer pricing in the 2009-2011 ESP case. Additionally, the state compensation mechanism alternative was drafted into the PJM RAA to address these generation supply concerns as discussed by Company witness Horton.

While AEP Ohio believes the November 2010 FERC application for the cost-based method will address long-term supply concerns, if the Commission seeks to establish a properly designed non-interim state compensation mechanism, then the rate must ensure reasonable compensation for costs incurred by suppliers that build or have built generation. A just and reasonable state compensation mechanism should provide for the compensation of embedded costs of generation, but also provide incentives for investment in generation. A state compensation mechanism that is based on short-term RPM auction prices would amount to an abdication of the authority to ensure long-term generation adequacy and reliability within the state.

Q. HOW CAN THE COMMISSION ADDRESS THESE CONCERNS AND PROMOTE INVESTMENT IN THE STATE OF OHIO?

A. By allowing AEP Ohio to be appropriately compensated for its costs associated with capacity, the Commission will provide the investment community with more certainty, eliminate some regulatory risk, and ensure sustained investment within the state of Ohio. Without the Commission's support of an appropriate and reasonable cost compensation mechanism, it would be imprudent and irresponsible for AEP Ohio to invest long-term capital in an unclear, unstable cost recovery environment. If left unaddressed or as reflected in the Commission's December 2010 order regarding an interim state compensation mechanism, this uncertainty, coupled with increasing environmental mandates puts Ohio customers at risk for long-term in-state generation capacity deficiencies.

Q. MANY OHIO CRES PROVIDERS HAVE EXPRESSED CONCERN WITH ALLOWING THE COMPANY TO RECOVER ITS CAPACITY COSTS AND HOW THAT MIGHT IMPACT COMPETITION WITHIN THE STATE OF OHIO. HOW DO YOU RESPOND?

A. Implementing a just and reasonable mechanism to allow AEP Ohio to recover its capacity costs from CRES providers actually provides for a more equal and fair competitive market in Ohio for generation services. If CRES providers choose not to self-supply, the Compan~~ies~~y must provide the capacity resources to the CRES provider. Commission support of recovery of capacity costs through appropriate wholesale charges to CRES providers will mitigate the anticompetitive subsidy that currently flows to CRES providers which use AEP Ohio's capacity. I am advised by counsel that the subsidy undermines the explicit state policy referenced in Ohio Revised Code §4928.02 (H) and allows for CRES providers to pay a much lower rate than AEP Ohio non-shopping customers who use the same capacity resources.

<u>CONCLUSION</u>

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. AEP Ohio maintains that the Commission, as well as the FERC, must honor the long recognized distinction between its authority to regulate retail electric rates and the FERC's authority over wholesale electric rates, whether the rates relate to sale of energy or the sale of capacity. AEP Ohio has consistently maintained the legal position (through counsel) that the RAA, even with implicit FERC approval, cannot alter the bright-line between retail rate regulation and wholesale rate regulation. A properly designed state compensation mechanism to compensate a FRR entity for its capacity obligations must, at a minimum, allow the FRR entity to recover its costs of providing capacity to support shopping. Otherwise, the state compensation mechanism will not appropriately compensate the FRR entity for capacity.

Second, AEP Ohio disagrees that the Commission's interim compensation mechanism, based on the RPM auction-based pricing, provides adequate compensation for its costs of providing capacity to CRES providers. Moreover, AEP Ohio is not receiving compensation for those capacity costs through any of its retail rates charged to shopping or non-shopping customers.

Third, as demonstrated by Company witnesses Allen's and Pearce's testimon~~y~~ies, AEP Ohio is not receiving adequate compensation for performing its FRR capacity obligations, and the gap between its costs and the compensation for those costs is increasing at an alarming rate. T~~T~~he failure to recover just and adequate compensation for its FRR capacity obligations is threatening AEP Ohio's financial stability and is a significant disincentive for generation investment within the state of Ohio.

Furthermore, in this proceeding there is the additional issue of what is in the best interests of Ohio and the retail customers of Ohio. The Commission should not be looking to use the short-term market auction prices at the expense of longer-term stability, reliability and investment in generation. That is a "penny-wise, pound-foolish" approach that could be disastrous in the long run. The Commission also should not allow a subsidy to CRES providers by permitting artificially low capacity rates to prevail. Non-shopping customers pay capacity charges that recover embedded costs. CRES providers, who choose not to self-supply, should also pay capacity charges that recover embedded costs.

Q. DOES THAT CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

EXHIBIT NO. ______

BEFORE
THE PUBLIC UTILTIES 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

DIRECT TESTIMONY OF
FRANK C. GRAVES
ON BEHALF OF
~~COLUMBUS SOUTHERN POWER COMPANY~~
~~AND~~
OHIO POWER COMPANY

Filed: ~~August 31, 2011~~
March 23, 2012

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO
DIRECT TESTIMONY OF
FRANK C. GRAVES
ON BEHALF OF
~~COLUMBUS SOUTHERN POWER COMPANY~~
~~AND~~
OHIO POWER COMPANY

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND TITLE.

A. My name is Frank C. Graves. I am a Principal at *The Brattle Group*, where I am also co-leader of the Utility Practice Area. My firm is located at 44 Brattle Street, Cambridge, MA, 02138.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I will explain why it is appropriate for ~~Columbus Southern Power Company (CSP) and~~ Ohio Power Company (OPCo) (also referred to as "AEP Ohio") to be able to charge Competitive Retail Electric Service (CRES) providers within its franchise service territories an amount for capacity that reflects the embedded (fully allocated accounting) cost of the assets AEP Ohio must hold under its Fixed Resource Requirements (FRR) obligations as a member of PJM, rather than using the capacity price set in PJM's Reliability Pricing Model (RPM) auctions.

Q. ARE YOU REVIEWING OR ASSESSING THE SPECIFIC PARAMETERS OF AEP OHIO'S EMBEDDED COST CALCULATIONS AND THEIR FAITHFULNESS TO THE TRUE COST OF SERVICE?

A. No. I am not commenting on the accuracy of AEP Ohio's calculations or formulas for specifying the embedded capacity cost, nor on whether those costs are fully reflected in their proposed rates. Rather, I am commenting on the policy question of whether ~~(assuming such calculations are accurate) the~~ it would be just and reasonable for AEP Ohio ~~proposal is just and reasonable~~ to use embedded cost pricing for capacity, especially in light of whether it could have an undue, adverse impact on retail power marketing or wholesale generation competition.

Q. WHAT IS YOUR EDUCATIONAL BACKGROUND AND RELEVANT EXPERTISE?

A. I have an M.S. in Management from the MIT Sloan School of Management with a concentration in finance, and a B.A. in Mathematics from Indiana University. I have been consulting to the electric industry for over 30 years on matters related to long term resource planning, pricing, prudence, risk management, fuel and power procurement, environmental compliance, market forecasting and performance, regulatory policy impacts, and other long term influences on utility assets, costs, and obligations.

I have appeared numerous times as an expert witness before state and federal courts and regulatory bodies, including the Federal Energy Regulatory Commission (FERC), and utility commissions (or administrative law judges for them) in Ohio, Illinois, Pennsylvania, Wisconsin, Kentucky, Michigan, Massachusetts, Vermont, New York, Virginia, Texas, California, New Mexico, and Utah to explain tradeoffs and likely costs and benefits of utility activities and decisions. I have also been a witness in state and federal courts regarding contract disputes between energy companies.

In regard to the topics at issue in this proceeding, I have been very active in consulting on the design of terms and conditions, supply procurement mechanisms, and pricing and valuation of Default, or Standard Service Offer, in states with retail access, as well as in how those service designs interact with market performance and the viability of the incumbent utility and retail electric providers. A detailed description of my expertise is attached as Appendix A to this testimony.

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS AND OPINIONS.

A. The unique circumstances in PJM of AEP Ohio as an FRR entity obligated to supply all the capacity needs of any/all load in its franchise territory make it inappropriate to require usinge a PJM RPM-based price as the tariffed rate for transferring AEP Ohio's capacity to CRES providers. The current RPM price is much lower than AEP Ohio's embedded costs, so it would not be compensatory for AEP Ohio. This difference will increase in the next two years, as RPM prices for 2012/2013 and 2013/2014 are even lower than at present. RPM prices are short term (one-year) rates that do not reflect the costs of serving the long term, more binding and broader reliability obligations that AEP Ohio faces (as an FRR utility) but that a CRES provider does not.

In addition to current RPM prices being below AEP Ohio's embedded cost, PJM market energy prices also are quite low right now, largely due to the recession and the dramatic emergence of inexpensive shale gas. This combination of low capacity and energy prices is making CRES providers more active than in the recent past, facilitating their marketing but also making it essential that the price they face for capacity from AEP Ohio be fair and compensatory. Requiring ~~Using~~ an RPM-based price (without other cost recovery mechanisms) ~~-~~would introduce uneconomic bypass opportunities for the CRES providers, at the expense of AEP Ohio customers and shareholders. While such bypass would undoubtedly increase the prevalence of retail providers in AEP Ohio's service territory, it would not be fostering efficient competition.

CONTEXT FOR THE DISPUTE

Q. PLEASE PROVIDE A BRIEF SUMMARY OF YOUR UNDERSTANDING OF THE BACKGROUND FOR THIS DISPUTE.

A. The disputed issue in this case which I am addressing is whether AEP Ohio's charge for releasing capacity to CRES providers that provide retail electric supply services in AEP Ohio's territories should be based on AEP Ohio's own embedded costs of service for the underlying generation assets it is required to hold as an FRR provider, or should be based on the one-year market value of capacity as it has arisen in PJM's Reliability Pricing Model (RPM) for three-year forward planning reserve obligations. AEP has proposed a compromise position but reserves its ~~rights~~right to an ~~the former,~~ embedded cost basis (with formula rates). Some intervenors ~~-while commenters (and the interim policy of the PUCO)~~ tend to prefer the PJM RPM auction price basis.

The cost difference between the two viewpoints is material. For the PJM Planning Year beginning June 1, 2011, the RPM auction price of capacity in the AEP region (unconstrained PJM) is $116.16/MW-day, but when this is scaled up for PJM reserve margins and capacity loss factors, it is $145.79 in AEP Ohio's service territories. In contrast, the correspondingly adjusted embedded cost of service for AEP Ohio's generation plant is $355.72/MW-day. If this is reduced for the ~~recent past~~ energy operating margins that would have been available last summer to AEP Ohio in PJM's wholesale markets, the net cost becomes $338.14/MW-day. Those energy margins would likely be smaller now, due to falling PJM prices. By comparison, the "Net CONE" value for the PJM estimated "net cost of new entry" was $171.40/MW-day for this time frame when the RPM price was struck[1]. Net CONE is the carrying cost for a new gas combustion turbine peaker, reduced by the energy margins such a unit would have earned on average in the prior three years at actual PJM spot prices.

These discrepancies between AEP Ohio's embedded cost, and Net CONE and RPM prices will become larger in the next two years, because RPM prices (including scaling factors) will be $20.01/MW-day and $33.71/MW-day for 2012/13 and 2013/2014 respectively while Net CONE values for these same planning years are $276.09/MW-day and $317.95/MW-day respectively (see direct testimony of Company witness Pearce at exhibit KDP-7).

Q. WHY IS THE PJM RPM PRICE SO MUCH LOWER THAN AEP OHIO'S EMBEDDED COSTS?

A. There are several reasons. First, AEP Ohio's cost reflects the average capital and fixed costs of its fleet of generation, which includes approximately 13,000 MW of plants of a variety of ages and technologies, but is largely comprised of baseload

[1] See testimony of Company witness Pearce for details on these cost calculations.

coal plants. The PJM price reflects <u>(in part)</u> the net cost of a gas peaker, which is a less capital-intensive type of generation than most of AEP Ohio's fleet. Second, the PJM RPM price moves up or down relative to a peaker's cost depending on how much capacity is available in the PJM market, what bid prices are offered by generators and other resources, and the location of the demand curve. That is, it reflects the marginal value of capacity as it was expected/set three years ago, when the PJM auction for 2011/12 capacity obligations was conducted in 2008. To the extent there was excess supply offered in that auction compared to PJM's target reserve margins, resulting capacity prices will be low, often much below Net CONE. For 2011/12, the auction cleared at slightly over an 18% reserve margin. The available capacity through 2014/15 <u>also</u> exceeds planning reserve targets, contributing to low RPM prices. For the past several years, RPM prices have been below Net CONE largely because the kinds of capacity that have been attracted to participating in RPM auctions have been mostly plant life extensions and capacity upgrades, demand-response resources, and expanded transmission capacity -- all of which tend to cost less per MW than a new plant (and especially, less than a baseload coal plant). Further, load growth (hence need for capacity) was reduced due to the economic downturn.

The kinds of incremental capacity resources that RPM has attracted are sufficient for maintaining reliability over the next few years (which is precisely what PJM intended), but they are not necessarily the same kinds of resources that would be preferred for long term resource planning that is focused on minimizing lifecycle costs of power, risks, and addressing other kinds of social policy considerations. AEP Ohio's resources were chosen in the latter context, hence are much different in character and carrying costs.

Retail providers would understandably like to have AEP Ohio provide capacity at as low a cost as possible, so some ~~they~~ have ~~are~~ advocated that~~ing~~ the PJM RPM price basis be required. However, as explained below, this would not be compensatory for AEP Ohio, which has a longer, more binding reliability obligation as a FRR utility than the CRES providers incur as short term Load Serving Entities (LSE). Requiring the application of ~~Thus, applying~~ the RPM-based price would introduce an uneconomic bypass opportunity for CRES providers, at the expense of AEP Ohio customers and shareholders. While such bypass would undoubtedly increase the prevalence of retail providers in AEP Ohio's service territory in the short run, it would not be fostering efficient or durable competition. It is more likely that if market prices increase materially, CRES providers will turn their former AEP Ohio customers back to AEP Ohio as the default service provider.

Q. WHY DOES AEP OHIO NEED TO RECOVER ITS EMBEDDED CAPACITY COSTS FROM CRES PROVIDERS WHILE OTHER OHIO UTILITIES DO NOT?

A. ~~In PJM, only~~ Upon joining PJM, AEP ~~and Duke have e~~elected to be an FRR supplier~~s~~ of capacity to its~~their~~ service territory. ~~territories (and Duke will not start serving in this role until January 2012).~~. This means AEP Ohio is not a participant in PJM's RPM auctions or capacity procurement (except insofar as it has capacity not needed for its native load -- and its auction participation is limited to 1300 MW). However, ~~, but~~ it still is obligated to PJM to provide long term capacity (5-year minimum commitment, initially) for all the load in its distribution franchise territories, regardless of whether those customers are new or old, or whether their energy supply comes from AEP Ohio or a third-party CRES provider. Concomitantly, CRES providers in AEP Ohio's territory must have previously notified PJM and AEP of their intentions to become FRR entities themselves for their expected retail loads and have obtained the needed capacity in prior bilateral procurements, or else they must buy capacity from AEP Ohio at the rates which are in dispute today.

Q. IF RETAIL SUPPLIERS WHO WISH TO BE SELLING ELECTRICITY IN AEP OHIO'S TERRITORY ALREADY COULD HAVE HAD ACCESS TO ALTERNATIVE CAPACITY IN PJM FOR 2011 AND BEYOND, WHY WOULD THEY NOT HAVE OBTAINED IT?

A. Apparently many did not choose to procure such capacity and import it into AEP Ohio's territory. This is understandable, for two reasons. First, they may have had few or no committed retail customers three years in advance; a shorter contracting horizon is more typical for retail electric services. Second, they may have been uncertain about the energy prices that would prevail in 2012~~1~~ (which are the larger part of their overall cost of generation they could offer to retail customers), so they did not foresee the opportunity to sell retail services that has arisen with the recent decline in energy costs. However, short term market circumstances are now favorable, and as a result, they would now like to procure their capacity under current RPM prices.

ECONOMIC ISSUES IN CRES CAPACITY PRICING

Q. ABOVE, YOU SHOWED WHAT CRES PROVIDER'S COSTS WILL BE IF THE CAPACITY PORTION OF THE CRES PROVIDER'S BILL IS BASED ON RPM PRICES RATHER THAN AEP'S COSTS. WHY ISN'T THIS A DESIRABLE RESULT? IF THE CRES PROVIDER PASSED ON THAT REDUCTION AND ITS SERVICES WOULD BE CHEAPER, SHOULDN'T CUSTOMERS HAVE ACCESS TO THAT SERVICE?

A. First, it is not assured that CRES providers would pass on the lower costs to customers, rather than keep most of the savings for themselves. But even if they did, this is not a desirable result from an overall economic viewpoint (even though it might seem like one to the customers of CRES providers), because customer switching (under RPM-based pricing) would not be occurring due to an actual economic advantage (or societal efficiency gain) in the supply of electric power service by those CRES providers (in lieu of AEP Ohio). Rather, it would simply involve the resale of AEP Ohio's capacity at a discount, subsidizing CRES providers at the expense of AEP Ohio, which would be taking a loss on the resale of their existing capacity (potentially reallocating those shortfalls to non-shopping AEP Ohio customers). In essence, it would be an uneconomic bypass, not efficiency gains from true competition. For instance, being able to sell retail services based on RPM capacity costs will not induce CRES providers to take ~~appropriate~~ responsibility for their own capacity development/procurement in the future. To the contrary, it would encourage them to avoid such commitments, and it would give them the incentive and opportunity to become active sellers in years when RPM prices turn out to be below AEP Ohio's embedded costs, and not when the reverse occurs.

Q. WHY WOULD EXTENDING CAPACITY TO CRES PROVIDERS AT RPM-BASED PRICES CREATE A FINANCIAL LOSS FOR AEP?

Absent the recovery mechanism AEP Ohio has proposed, it only collects its cost of capacity from retail customers to the extent they are non-shopping customers. If customers switch to a CRES provider, AEP Ohio is still liable for their capacity needs. Embedded in AEP Ohio's retail rates are the same costs it is requesting FERC to approve for its capacity resale to CRES providers (except insofar as a cost-indexed formula is used for the CRES rate).

Q. IF CUSTOMERS WERE TO SWITCH TO A CRES PROVIDER THAT COULD USE AEP CAPACITY AT RPM-BASED PRICES, WOULD AEP SIMPLY INCUR A LOSS EQUAL TO THE DIFFERENCE BETWEEN ITS EMBEDDED CAPACITY COSTS AND THE RPM-BASED PRICE, OR WOULD THERE BE OFFSETTING SAVINGS OR MARKET OPPORTUNITIES TO MITIGATE THE LOSS?

A. If customers leave for a CRES provider, AEP Ohio would be relieved of its obligation to provide the energy supply component of electricity service to those customers. This means it could resell the energy that would have otherwise been needed at the PJM LMP price for locally produced power. After subtracting out the average production costs, AEP Ohio would have net operating margins which partially offset its need to recover the full embedded cost of the released capacity.

Of course, the prices and quantities of these wholesale market energy revenues are highly uncertain and circumstantial.

Q. IF THE COMMISSION DOES INCLUDE ENERGY CREDITS, SHOULD IT CONSIDER PUTTING A LIMIT OR FLOOR ON THE OFFSETTING ENERGY CREDITS IN THE CALCULATION OF ITS NET CAPACITY CHARGE?

A. Yes, I also understand that AEP Ohio is recommending limitations on any such energy credit mechanism, as discussed by Company witness Pearce. The concern is that energy operating margins could become occasionally so high that if fully deducted, the net capacity costs would become negative. In that situation, AEP would be paying the CRES to take its capacity, thereby effectively giving all of the value of offsystem wholesale margins to the CRES providers. This would create a perverse situation in which the CRES provider could enjoy wholesale energy savings benefits from netback capacity prices, even though it was not participating in wholesale markets at all, and even though it did not provide any of the initial capital investment or managerial acumen to build, maintain, or market that generation whose energy happened to become deep in the money.

Q. SHOULD THE COMMISSION BE CONCERNED THAT THERE LIKELY WOULD BE LESS CRES PROVIDER ACTIVITY IN THE AEP OHIO SERVICE TERRITORY UNDER AEP OHIO'S PROPOSAL THAN WITH RPM-BASED PRICES FOR CAPACITY?

A. No, the focus should be on fairness and on genuine competition, not just entry by CRES providers. It is very likely that there would be less near-term CRES activity under AEP Ohio's proposal, but this is not a basis for concluding there would be adverse impacts on bonafide retail competition from approving the cost-based rates AEP Ohio has requested. The chance that there may be less CRES activity under AEP Ohio's proposal than under RPM pricing is not the appropriate focus. If AEP Ohio were to charge~~d~~ nothing at all for its capacity to CRES providers, that would encourage even more CRES entrants to the regional market. But that establishes a market of free riders, not one of more capable suppliers having truly lower costs or superior service. The AEP Ohio embedded rates are currently higher than the RPM-based prices, hence undoubtedly less advantageous to CRES providers than RPM-based charges, but that is not the same as saying there would be harm to competition from charging the AEP Ohio formula rates. AEP Ohio should not be put in a position where it has to subsidize its competitors in order to "foster competition." Such competition would be ~~entirely~~ artificial and only sustainable to the continuing extent of the subsidy. Bonafide competitors should have to take over the service obligation to their customers on comparable terms to the way AEP provides that service today, i.e., with a long term commitment for their capacity adequacy.

Simply fostering retail competition for its own sake, especially if success is measured in terms of how many customers have switched away from a utility default provider, is not an appropriate or informative metric of economic benefit or efficiency. Increasing customer switching to CRES providers could be achieved in numerous ways that have no social economic benefit whatsoever, except to the retail providers themselves. For instance, a huge surcharge could be added to the default service charge in order to make it easier for CRES providers to beat the default price. This would attract CRES entrants, but again not because they have a true lower cost of providing the service. Rather, it would be because of a wealth transfer or subsidy involved to improve their position relative to other participants.

Q. WOULD THERE BE ADVERSE, UNECONOMIC CONSEQUENCES FROM IMPLEMENTING RPM-BASED CAPACITY PRICING?

A. Yes, I think that is likely, unless there is an agreement on other financial stabilization measures. Reliability in a power pool is inherently a public good, which tends to invite "free-riders". That is, if one party provides capacity resources needed for reliability to its customers but cannot restrict those reliability benefits to just its own customers (e.g., due to Kirchoff's Laws of electricity flow on an interconnected network), then other suppliers and customers automatically benefit. This tends to create an incentive to let others solve the capacity development problem/obligation. Precisely for that reason, PJM (and other reliability monitoring agencies) imposes a pro rata requirement on all LSEs to supply or obtain capacity on equivalent terms, to the same extent, or else they cannot gain the benefits of pool membership. The CRES proposal effectively asks that they be allowed to be partial LSEs, not providing capacity over the same horizon as AEP Ohio or even other retail service providers (e.g. in default service auctions). They essentially ~~simply~~ want to rent the capacity that others are paying for on a shorter term basis, at currently low RPM rates.

If CRES providers gained access to AEP Ohio's capacity at RPM-based rates, they would have little or no incentive to contract forward for FRR capacity in the future, in a manner that would actually signal their need and willingness to pay for it to potential developers. To the contrary, they would be being rewarded and encouraged to wait. Similarly, AEP Ohio would now be bearing a disincentive to develop future capacity, because it would know that there are future "free-riders" waiting and expecting to pay less than cost for it.

Q. DO YOU BELIEVE THE RPM-BASED PRICING ADVOCATED BY CRES PROVIDERS IS OPPORTUNISTIC AND WOULD NOT BE SOUGHT UNDER DIFFERENT MARKET CIRCUMSTANCES?

A. Yes, I do. If AEP Ohio's embedded rate was below the RPM-based rate, as could happen in a tight market, it is very hard to imagine that CRES providers would be insisting on paying the RPM-based rate rather than having access to the then-low AEP Ohio embedded rate. They appear to be ~~re clearly~~ seeking a "lower of cost or market" rate under circumstances where the market price happens to be the lower of the two.

Q. IS THERE A NEED FOR CAPACITY EXPANSION IN THE AEP REGION OF PJM AT THIS TIME, AND DOES THIS AFFECT WHETHER IT IS MORE APPROPRIATE TO USE RPM PRICES THAN AEP OHIO'S EMBEDDED COSTS?

A. Right now, and perhaps even for the next several years, there is no apparent need for new capacity in and around AEP or much of PJM, at least in regard to maintaining adequate reliability; regional reserve margins are generally above planning targets. There may be other reasonable motives and opportunities for expanding or changing the capacity mix in PJM, but those considerations are not reflected in, nor fostered by, the RPM price so far, and they will not be differentially satisfied by CRES providers facing RPM prices rather than embedded costs. However, it is possible that pending EPA regulations may induce coal plant retirements that create a new, longer term and larger need for capacity expansion than the RPM market yet reflects ~~or can respond to~~.

Q. WHAT ABOUT THE EFFICIENCY OF PRICES SEEN BY GENERATION CUSTOMERS?

A. Customers of AEP Ohio are currently not seeing the short run prices of capacity in their retail service. Instead, they are seeing average costs, as is appropriate to AEP Ohio's full cost recovery. However, the underlying resources were chosen in a process that considered the best available long-term solutions at the time they were built, and in fact the overall effect of those choices is that AEP Ohio generation has been mostly comparable to or cheaper than the PJM market for the past several years. This is not efficient, but it is attractive to customers and at the same time fair to AEP's investors, who are enjoying reliable cost recovery for having put those resources in place. RPM-based capacity prices would provide a more efficient short term signal, but they would not necessarily induce long term efficient choices by customers, if customers were able to use switching simply to enjoy the "lower of cost or market" alternative (and dodge responsibility for long term development costs). Other adjustments would be needed to offset this impact.

~~**Q. THE EFFICIENCY OF THE PRICE FACING SHOPPING CUSTOMERS DOES SEEM TO DEPEND ON WHETHER RPM OR EMBEDDED COSTS ARE USED, CORRECT?**~~

~~A. Yes, that is correct, but only partially so, as the overall efficiency also depends on how customers are charged for the costs of the risks to AEP Ohio for customers' ability to shop and return to default service. That is, shopping customers would see the most efficient price, in principle, if it was a combination of the PJM RPM-based price for capacity plus market energy costs (LMPs plus adders for losses, transmission congestion, and other services as needed for load following and risk management). However, they would be gaining access to that exercise that choice opportunistically – the "lower of cost or market" choice described previously. Recognizing this, AEP Ohio has designed an option-based POLR surcharge to compensate it for the cost of the risk to AEP Ohio for customer's ability to shop and return to default service that assumes the capacity costs to CRES providers will be the proposed embedded cost rate. These POLR rights would be much more costly if the switching options had been priced based on the RPM-based capacity prices.~~[2]

Q. DOES THE USE OF FORMULA RATES FOR SETTING THE EMBEDDED COST OF AEP OHIO'S CAPACITY TO CRES PROVIDERS CREATE ANY UNDUE TRANSFER OF RISKS OR INCENTIVES THAT COULD DISTORT WHOLESALE GENERATION MARKETS?

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[2] ~~It is important to appreciate that this POLR option charge in no way covers the capacity costs of supporting retail customers. It is solely related to the cost of risk that is intrinsic to customers enjoying the right to opportunistically choose the lower cost of two alternatives.~~

A. I believe the question of whether a formula rate is appropriate for AEP Ohio's situation is a separate question from whether CRES providers should have access to AEP Ohio's capacity at embedded costs. I have not reviewed the terms of the proposed formula in detail, though I am aware of its general nature. It is correct to observe that merchant generation companies (who do not have a franchise load under embedded rates for selling their output) do not have a comparable mechanism for recovering their costs of generation capital and operating costs, or any changes to those costs that may arise from shifting regulations or market conditions. This provides a certain degree of financial advantage to AEP Ohio's generation, and embedded pricing to CRES providers continues that advantage.

However, it is also true that the unregulated generation companies enjoy some advantages and flexibilities in power supply and pricing that AEP Ohio's generation does not. In particular, merchant generators do not have an obligation to serve beyond the extent to which they voluntarily enter ~~contract~~ forward sales contracts. If market conditions become unattractive (e.g, if fuel costs rise, or environmental compliance upgrades are too costly to complete and remain profitable in the wholesale markets), they can retire units and not replace them. That is, they do not need to build unless or until market prices are attractive. And under some~~those~~ circumstances (of unexpectedly high demand or low supply), the market price of power may ~~also~~ rise ~~as much or~~ more than the operating costs on their existing infra-marginal units, allowing them to harvest large profits. This is a risky situation (not assured of occurring), but they do have the possibility of large upside gains in tight markets that AEP Ohio does not enjoy under its cost of service arrangements – and such gains might be substantial for a company like AEP Ohio with many baseload units having low operating costs. Overall, this does mean there are differences in risks, incentives and opportunities facing AEP Ohio compared to merchant generators, but those differences arise because the AEP Ohio generation faces different obligations and constraints as well.

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS.

A. I conclude that the proposed use of embedded costs for AEP Ohio's CRES capacity rate is just and reasonable, and that its approval would have no adverse impacts on efficient retail competition. In contrast, requiring the ~~proposed~~ RPM-based rate without other financial compensation adjustments would simply entail AEP Ohio being forced to subsidize its own bypass.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

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

DIRECT TESTIMONY OF
KELLY D. PEARCE
ON BEHALF OF
~~COLUMBUS SOUTHERN POWER COMPANY~~
~~AND~~
OHIO POWER COMPANY

Filed: March 23, 2012~~August 31, 2011~~

INDEX TO DIRECT TESTIMONY OF
KELLY D. PEARCE

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO
DIRECT TESTIMONY OF
KELLY D. PEARCE
ON BEHALF OF
~~COLUMBUS SOUTHERN POWER COMPANY~~
~~AND~~
OHIO POWER COMPANY

PERSONAL BACKGROUND

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Kelly D. Pearce. My business address is 155 West Nationwide Boulevard, Columbus, Ohio 43215.

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

A. I am employed by American Electric Power Service Corporation (AEPSC) as Director-Contracts and Analysis.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I received a Bachelor of Science degree in Mechanical Engineering from Oklahoma State University in 1984. I received Master of Science and Doctor of Philosophy degrees in Nuclear Engineering from the University of Michigan in 1986 and 1991 respectively. I received a Master of Science in Industrial Administration degree from Carnegie Mellon University in 1994.

From 1986 to 1988 I worked for a subsidiary of Olen Corporation. From 1991 to 1996 I worked for the United States Department of Energy within the Office of Fossil Energy. My responsibilities included serving as a Contracting Officer's

Representative in the oversight and administration of government-funded research of advanced generation and environmental remediation technologies and projects. I also supported strategic studies for deployment and commercialization of these technologies as well as administration and support of Government research and development solicitations. I was promoted twice during this time.

In 1996 I joined AEPSC as a Rate Consultant I. In 2001, I was promoted to Senior Regulatory Consultant. My responsibilities included preparation of class cost-of-service studies and rate design for AEP operating companies and the preparation of special contracts and regulated pricing for retail customers. In 2003 I transferred to Commercial Operations as Manager of Cost Recovery Analysis. In 2007 I was promoted to Director of Commercial Analysis. During this period, I was responsible for analyzing the financial impacts of Commercial Operations-related activities. I also supported settlement of AEP's generation pooling agreements among the operating companies.

In 2010 I transferred to Regulatory Services in my current position of Director-Contracts and Analysis. My group is responsible for performing financial analyses concerning AEP's generation resources and load obligations, various settlement support for AEP's power pools and regulatory support in areas that relate to commercial operations. In addition, my group is responsible for AEP's formula rate contracts.

I am a registered Professional Engineer in Ohio and West Virginia.

Q. HAVE YOU PREVIOUSLY TESTIFIED IN REGULATORY PROCEEDINGS?

A. Yes. I submitted testimony and testified before the Public Utilities Commission of Ohio (Commission) on behalf of Columbus Southern Power Company (CSP) and Ohio Power Company (OPCo) in Case No. 11-346-EL-SSO, et al, i.e., the Stipulation.

In addition, I submitted testimony to the Virginia State Corporation Commission (VASCC) in Case Numbers PUE-2001-00011 and PUE-2011-00034 and submitted testimony and testified before the VASCC in Case No. PUE-2001-00306. I also submitted testimony and testified before the Indiana Utility Regulatory Commission in Cause No. 43992. My testimony in these proceedings was on behalf of operating companies that are affiliates of ~~Columbus Southern Power Company~~ ~~(~~CSP~~)~~ and ~~Ohio Power Company (~~OPCo~~), hereby collectively referred to as AEP Ohio or the Companies~~. For clarity, it should be noted that due to the CSP and OPCo merger, the merged entity, OPCo, will subsequently be referred to as AEP Ohio.

PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to first discuss the market structure and capacity obligations that require the use of ~~CSP's and OPCo'~~AEP Ohio's generation capacity and the costs associated with this capacity used to support generation service to switching customers. I will then introduce, describe and support the formula rates proposed by AEP Ohio~~CSP and OPCo~~. Theise rates, if adopted, would be utilized to compensate AEP Ohio for capacity that is used by Competitive Retail Electric Service (CRES) providers to serve the former AEP Ohio generation customers in cases where the CRES providers choose not to provide their own capacity. In addition, I will explain some of the specific shortcomings of the use of the PJM Interconnection, L.L.C (PJM) Reliability Pricing Model (RPM) capacity clearing prices as a pricing mechanism for this capacity.

As will be shown in my testimony, the current calculations are based upon 2010 Federal Energy Regulatory Commission (FERC) Form 1 (FF1) information. Since CSP and OPCo were separate entities during that period, the calculations are performed separately for the two, pre-merger companies and then combined to determine a merged AEP Ohio capacity rate. Consequently, within my testimony CSP and OPCo will subsequently refer to the separate, pre-merger entities and for clarity, I will refer to the merged entity as AEP Ohio or the Company.

EXHIBITS

Q. ARE YOU SPONSORING ANY EXHIBITS IN THIS PROCEEDING?

A. Yes, I am sponsoring seven Exhibits identified as follows:

Exhibit KDP-1: Formula Template for CSP,

Exhibit KDP-2: Formula Template for OPCo,

Exhibit KDP-3: Formula Template for CSP populated with 2010 data,

Exhibit KDP-4: Formula Template for OPCo populated with 2010 data,

Exhibit KDP-5: Energy credit for CSP and OPCo,

Exhibit KDP-6: Merged CSP and OPCO Capacity Value

Exhibit KDP-7: PJM Capacity Values

Q. WERE THESE EXHIBITS PREPARED UNDER YOUR SUPERVISION AND DIRECTION?

A. Yes.

APPLICABLE MARKET AND CAPACITY OBLIGATION

Q. WHAT IS THE RATIONALE FOR THE FORMULA RATES PROPOSED?

A. As explained by AEP Ohio witnesses Munczinski and Horton, ~~CSP and OPCo~~ AEP Ohio elected to utilize the Fixed Resource Requirement (FRR) option to provide or "self-supply" capacity to meet their load serving entity (LSE) obligations rather than acquire this capacity through the PJM RPM market. Since ~~the Companies are~~ AEP Ohio is self-supplying its ~~their~~ own generation resources to satisfy these load obligations, the costs to provide this capacity is the actual embedded capacity cost of AEP Ohio's ~~CSP's and OPCo's~~ generation.

Q. UNDER THE FRR OPTION HOW LONG IS THE COMMITMENT TO PROVIDE CAPACITY TO CRES PROVIDERS?

A. In accordance with PJM rules AEP Ohio must make this commitment three years in advance. The Company is ~~ies are~~ then fully committed and locked-in to providing the capacity resources needed for all of the loads that are contained in the~~ir~~ forecasted load requirement, plus the additional capacity necessary to satisfy the required Installed Reserve Margin (IRM).

Q. HOW DOES RETAIL CHOICE IMPACT THIS PROCESS?

A. At the time the Company ~~ies~~ completed its portion of the AEP ~~their~~ PJM FRR capacity plan, it~~they must~~ included all of its forecasted retail load~~s~~ within the AEP Zone, which was ~~are~~ then used to determine the capacity obligation. Subsequently, if CRES providers sign up any of this AEP Ohio ~~ese~~ load~~s~~, the CRES providers are required and obligated to reimburse the Company~~ies~~ for their capacity costs that have already been committed to serve this load during the PJM Planning Year (PY) that is for the 12-month period from June to May.

Q. IS THERE ANY EXCEPTION THAT ALLOWS AEP OHIO TO REDUCE ITS CAPACITY OBLIGATION TO ACCOUNT FOR LOADS SERVED BY CRES PROVIDERS?

A. Yes, there is one exception. If a CRES provider had notifie~~s~~d AEP Ohio prior to the submittal of its capacity plan for a future planning year, which occurs three years before delivery~~,~~ that the CRES provider will supply its own generation capacity for that year, then AEP Ohio would have ~~may~~ reduced its own capacity resources by an equivalent amount for that year. The CRES provider could have ~~may~~ elected this option for load it ha~~s~~d already signed up for the applicable planning year and/or for load it anticipate~~s~~d serving or hope~~s~~d to sign up in the three years prior to the applicable planning year.

Q. SO IF CRES PROVIDERS D~~O~~ID NOT AVAIL THEMSELVES OF THIS OPTION, HOW IS THE CAPACITY OBLIGATION OF THESE CUSTOMERS MET?

A. It is unchanged. ~~If~~ Since CRES providers cho~~o~~se not to self-supply, then AEP Ohio~~CSP and OPCo~~ was *required* to ~~*must*~~ commit the capacity necessary to serve all customer ~~load~~loads, *including loads already committed to a CRES provider for the future period.* In short, in that situation, shopping customers' capacity obligations continue to be met by the capacity resources of AEP Ohio.

Q. HOW IS AEP OHIO IMPACTED BY THIS RESULT?

A. AEP Ohio continues to maintain and provide the capacity resources for shopping customers, but no longer receive these customers' generation revenues.

Q. IS THERE ANY COMPENSATION MADE TO AEP OHIO FOR THIS CAPACITY COMMITMENT?

A. Yes. Under the Commission's current interim compensation mechanism, CRES providers reimburse AEP Ohio a capacity payment that is based on the RPM clearing price.

Q. DO THESE PAYMENTS PROVIDE AN APPROPRIATE LEVEL OF COMPENSATION?

A. No, they do not provide an appropriate level of compensation. CRES providers have chosen to use the capacity of AEP Ohio, as opposed to self supplying capacity, and as such should fairly compensate the Company~~ies~~ for the cost of that capacity. The formula rate that I describe below provides fair and appropriate compensation for use of the Company's~~ies'~~ capacity.

FORMULA RATE DESCRIPTION

Q. PLEASE GENERALLY DESCRIBE THE DEVELOPMENT OF THE FRR-BASED REIMBURSEMENT RATES PROPOSED BY AEP OHIO~~CSP AND OPCO~~.

A. ~~CSP and OPCo~~ AEP Ohio utilized a formula rate approach for this capacity that is based upon the average cost of serving AEP Ohio's ~~CSP's and OPCo's~~ LSE obligation load, both the load served directly by ~~CSP and OPCo~~ AEP Ohio or by a CRES provider, on a ~~$~~dollar per ~~/~~MegaWatt-day basis. By CRES providers paying a rate that is based upon average costs, they are neither subsidizing nor being subsidized by AEP Ohio~~CSP and OPCo~~.

Q. PLEASE PROVIDE AN EXAMPLE OF THE SUBSIDIZATION THAT CAN OCCUR.

A. Under FRR, the Compan~~ies are~~y is providing its~~their~~ own generation resources to provide the capacity obligation. The costs associated with these assets tend to be fairly constant or "fixed" over the near term. If switched load is still served using these assets, but the CRES providers are allowed to pay a rate that is above or below those costs, then the CRES providers are inappropriately subsidizing or being subsidized by AEP Ohio.

Q. WHAT ARE SOME OF THE ADVANTAGES OF THE FORMULA RATE APPROACH?

A. Formula rates are currently utilized in many states by AEP for other wholesale sales. As previously stated, the formula rates use an average allocation of cost between the parties based on common cost allocation mechanisms.

Second, the formula rate approach provides a high degree of transparency. The bulk of the input information can be tied back to the ~~Federal Energy Regulatory Commission (FERC) Form 1 (~~FF1~~)~~ annual reports of the Company~~companies~~ and the various work papers are readily available to the affected parties upon request for rate verification. What is ~~are~~ approved as the rate~~s are~~ is the formula~~s~~ itself~~themselves~~. Following approval, the rate~~s are~~ is simply updated using the next year's accounting information. As a result, updating the rate becomes a straightforward, fairly mechanical process and the updates are readily available for regulatory review.

Under the Company's~~ies~~ proposal, rates will be known prior to the beginning of a given PJM PY.

Q. WHAT IS THE SOURCE OF THE RATE TEMPLATE THAT IS PROPOSED IN THIS PROCEEDING?

A. The formula rate template selected for this rate development is modeled after the template recently approved by FERC to derive the capacity charges applied to wholesale sales made by Southwestern Electric Power Company (SWEPCo), an AEP Ohio-affiliated operating company, to the Cities of Minden, Louisiana and Prescott, Arkansas. These cities are full requirements customers taking both capacity and energy from SWEPCO under long term agreements. This formula rate was the subject of a lengthy negotiation between the seller and purchasers and FERC Staff. In addition, it adopts various modifications originating from FERC Staff. As such, this template represents a fair and reasonable formula for calculation of capacity costs. The capacity portion of this formula rate template was used to develop the proposed AEP Ohio ~~CSP and OPCo~~ capacity rates.

Q. HOW ARE THE RATES UPDATED?

A. Under AEP Ohio's proposal, the Company~~ies~~ will utilize a given year's FF1 annual report shortly after it is available to update the capacity rates that will be available for the subsequent PJM PY. For example, once the 2011 FF1 becomes available, currently required by FERC no later than April 18, 2012, AEP Ohio will update the capacity rates and have it ~~them~~ available no later than May 31, 2012. This is ~~ese are~~ the rates that will be in effect for the PJM PY 2012/2013 that runs from June 1, 2012 through May 31, 2013. The same process will be used for each subsequent year as long as such rates are in effect, currently anticipated to end after the PJM PY 2014/2015.

CAPACITY RATE

Q. PLEASE DESCRIBE THE CAPACITY PORTION OF THE RATE IN DETAIL.

A. The blank or unpopulated formula rate templates ~~for the Companies~~ are provided in Exhibits KDP-1 and KDP-2 for CSP and OPCo, respectively. These Exhibits utilize common cost allocation principles in that they are used to compute an average per unit cost that includes the cost of capital on assets and actual expenses incurred. The final daily charge calculation that would be used to compute the individual CRES providers' bills based on their applicable MW capacity is shown on page 1 of each of these Exhibits. This is the same calculation performed today by AEP to bill CRES providers for load they are currently serving. The cost based capacity rate calculation, before application of the loss factor, is shown on page 2 of these Exhibits. As seen throughout these Exhibits, the specific references for the inputs are clearly shown. The FF1 annual reports are utilized heavily throughout these templates for source data. In certain instances, additional detail is obtained from the Companies' books and records (CBR), such as the income statements.

Q. ARE THERE ANY ITEMS IN PARTICULAR TO NOTE?

A. Yes. As shown on page 6, line 4 of Exhibits KDP-1 and KDP-2, the annual production costs are reduced by the amount of revenues that are collected from other wholesale entities related to capacity transactions. These revenues include capacity transactions with affiliates and non-affiliates alike. As a result, CRES providers will get the benefit of these transactions and are not paying for any capacity cost that is associated with transactions to other wholesale entities, including affiliates and PJM RPM market participants.

Also, as shown on page 5, line 8 of these Exhibits, only 50% of the non-pollution control construction work in progress (CWIP) is included, which, as previously explained, is a result of the templates used to develop these rates.

Q. ARE THERE ANY DIFFERENCES RELATIVE TO THE FERC-APPROVED TEMPLATES FOR MINDEN AND PRESCOTT?

A. Yes. The Company has made three significant modifications to the templates relative to the capacity portion of the rates approved at FERC:

- the peaks used to determine the capacity rates,
- the Return on Equity (ROE), and
- the elimination of a post-period reconciliation and the resulting use of end-of-year account balances rather than annual average amounts.

Q. PLEASE DESCRIBE THE FIRST CAPACITY MODIFICATION.

A. As noted on page 2 of Exhibits KDP-1 and KDP-2, the denominator is based on the average CSP and OPCo peak demands that are coincident with the PJM five highest daily summer peak demands. This is appropriate in order to be consistent with the demands used to charge CRES providers today through the PJM settlement process.

Q. PLEASE DESCRIBE THE SECOND CAPACITY MODIFICATION.

A. The ROE approved in the original template was 11.10%. The ROE has been modified to a fixed 11.15% to be consistent with the ROE proposed in CSP's and OPCo's ~~pending~~ distribution proceedings, Case Numbers 11-0351-EL-AIR and 11-

0352-EL-AIR supported by AEP Ohio witness Avera. Unlike the other formula inputs that will be updated annually, AEP Ohio proposes that the ROE remain fixed for the term that this rate is applicable, absent any appropriate regulatory filing or filings to modify the ROE.

Q. PLEASE DESCRIBE THE THIRD CAPACITY MODIFICATION.

A. The capacity formula rates are traditionally reconciled for other wholesale customers between the rates charged and revenues collected during a period and the actual costs incurred by the seller during that same period, computed after the fact. This is performed by collecting or crediting the difference between these revenues and actual costs in a subsequent period, commonly referred to as a "true-up". This is appropriate for the other wholesale customers so that no under- or over-collection occurs and the seller ultimately collects the precise costs incurred to serve these customers. However, the formula rates for other wholesale customers are generally applied under long-term contracts.

Because it would be impractical and administratively burdensome to perform such a true-up with CRES providers, who can enter and leave the market at will and are likely to have load that is changing over the period due to customer switching, AEP Ohio is not proposing any such reconciliation. This results in a benefit to CRES providers as well since it would not result in a source of uncertainty regarding their capacity rate over the period.

In other words, as an example, the 2011 FF1 actual accounting data will be used to determine the capacity rate charged to CRES providers for the PJM PY 2012/2013 with no subsequent reconciliation or true-up. This will provide rate certainty for CRES providers during the planning year. However, since there is no true-up, the lag between the historic costs and actual costs for the rate-effective period should be minimized as much as practical. Consequently, AEP Ohio ~~CSP and OPCo~~ proposes to utilize only the end-of-year rate base balances for the formula calculations rather than average annual values from the historic period. The end-of-year rate base balances will be closer to the rate base in effect during the applicable PJM PY than an average rate base which uses more dated balances. Even this end-of-year balance may potentially understate the average rate base for the PJM PY in which these capacity rates are in effect.

ENERGY CREDIT

Q. IS AEP OHIO PROPOSING AN ENERGY CREDIT AS ON OFFSET TO THE CAPACITY RATES?

A. No, it is not.

Q. WHY IS SUCH AN ENERGY CREDIT OFFSET UNWARRANTED?

A. PJM has completely separated the markets for capacity and energy in contrast to traditional generation sources that combine the sourcing of enough power to satisfy the peak and on-going customer demands, measured in MegaWatts (MWs) or kiloWatts (kWs) with enough of that power integrated over time to satisfy customers' energy requirements, measured in MegaWatt-hours (MWhs) or kiloWatt-hours (kWhs). As a result, obtaining capacity through PJM's RPM market or through a FRR plan does not provide any rights or a call option on energy at any price. Energy must be separately procured by all PJM load-serving entities. Consequently, the capacity rates proposed by AEP Ohio are appropriate for charging CRES providers.

Q. IF THE PUBLIC UTILITIES COMMISSION OF OHIO SHOULD CHOOSE TO ADOPT AN ENERGY CREDIT, DO YOU HAVE ANY COMMENTS REGARDING HOW SUCH A CREDIT SHOULD BE DETERMINED?

A. Yes I do. While AEP Ohio is not proposing an energy credit, it is ~~only~~ proposing a methodology to be used should the Commission choose to adopt such a credit. In addition to the formula rate template proposed by AEP Ohio for capacity, ~~the Companies have~~AEP Ohio has also included a template for the calculation of the energy costs, including fuel, used to serve formula rate customers' energy requirements. This calculation can be easily adapted for the purpose of determining the amount of such an energy credit if such a capacity rate reduction is adopted by this Commission. It is part of the same template accepted by FERC for the Cities of Minden and Prescott and therefore is consistent with the capacity portion of the formula and has also undergone the same regulatory scrutiny.

Q. HOW WOULD SUCH AN ENERGY CREDIT BE DETERMINED?

A. The formula rate templates are generally offered to customers under long term, multi-year agreements for full requirements service and therefore require these other wholesale customers to purchase energy for their own load at a rate tied to the applicable operating company's energy cost. Such a right and obligation will not exist for CRES providers once they become the Load Serving Entity (LSE) for shopping customers. CRES providers compensate AEP Ohio for the Companies' capacity in only one-year, short-term, increments. AEP Ohio's proposal is straightforward. Simply put, the energy credit is the difference between market-based revenues and the Companies' energy cost.

Q. PLEASE EXPLAIN.

A. The credit is calculated as the difference between the revenues that the CSP and OPCo historic load shapes, including all shopping and non-shopping load, would be valued at using the hourly Locational Marginal Prices (LMP) that settle in the PJM Day-Ahead (DA) market, less the cost-basis of this energy. The 2010 energy cost-basis rates are provided in Exhibits KDP-1 through KDP-4. The energy credit revenues and final energy credit are provided in KDP-5.

Q. PLEASE DESCRIBE THE REVENUE CALCULATION.

A. The previous year's hourly load for ~~CSP and OPCo~~ AEP Ohio would be collected following the end of a given year along with the hourly AEP GenHub prices based on the actual PJM DA LMPs. The total market-based revenue is simply the product of the hourly loads and the hourly LMPs summed across the entire year. This represents a fair and reasonable proxy for the energy revenue that could have been obtained by CSP and OPCo by selling equivalent generation into the market rather than utilizing it to directly serve load.

Q. WHY DID ~~CSP AND OPCO~~ AEP OHIO SELECT THE ENTIRE LOAD SHAPE OF SHOPPING AND NON-SHOPPING LOAD?

A. First, attempting to provide an individual energy credit for each CRES provider for the load they serve would be administratively burdensome and extremely difficult to compute on an ongoing basis. In addition, given that there will be a lag between the time period for which the energy credit is computed and the time period to which it is applied, it would provide gaming opportunities for CRES providers.

Q. PLEASE DESCRIBE THE COST BASIS OF THE ENERGY.

A. The cost basis is ~~would be~~ the energy rate computed using the same formula rates described for capacity, which provides for a consistent and straightforward solution. All of the formula rate benefits described previously during the capacity discussion apply equally well to energy -- they provide the same level of transparency and have already undergone, and easily accommodate, regulatory scrutiny.

Q. IS AEP OHIO PROPOSING ANY MODIFICATIONS TO THE ORIGINAL TEMPLATES USED FOR SUCH AN ENERGY COST COMPUTATION?

A. Yes. AEP Ohio is proposing the following two modifications to the template used for the other- wholesale customers if an energy credit is adopted:

- no deferrals of costs, and
- no off-system sales (OSS) margin sharing.

Q. PLEASE DESCRIBE THE FIRST MODIFICATION TO THE ENERGY TEMPLATE~~MODIFICATION~~.

A. From an economic dispatch perspective, the cost-basis of the energy credit should be the actual, non-deferred cost, particularly of fuel. No consideration should be given for fuel costs that are deferred for later collection. This most accurately reflects the actual commercial operation of AEP Ohio's generation units in the PJM energy market. As a consequence, this also would lead to the most accurate determination of a suitable proxy for the energy value of the load shape associated with the CSP and OPCo loads. It would eliminate timing differences between when deferrals are incurred and when they are recovered. For long-term contracts, customers likely incur both sides of the transaction. For CRES providers, their load may vary greatly from period to period and elimination of the deferrals will ensure that they would neither be advantaged nor disadvantaged by the timing differences of such deferrals and subsequent recoveries.

Q. PLEASE DESCRIBE THE SECOND MODIFICATION TO THE ENERGY TEMPLATE~~MODIFICATION~~.

A. AEP Ohio would determine an energy credit for the load shape only, which makes this consistent with retail customers taking service under AEP Ohio's ~~CSP's and OPCo's~~ standard service offers. While it may be viewed by some as reasonable to provide an energy credit based on the AEP Ohio ~~CSP and OPCo~~ loads, it would not be reasonable to provide yet an additional credit for other sales that would be made beyond that load. As stated previously, the capacity component of the rate already includes a credit for other capacity sales. Consequently, CRES providers would not be charged for surplus capacity that may be utilized to generate other OSS.

Q. ONCE THE VALUE OF THE ENERGY BASED ON THE LOAD SHAPE IS COMPUTED, DOES AEP OHIO PROPOSE ANY ADJUSTMENTS TO THAT ENERGY CREDIT?

A. Yes. The energy value is computed as though it were the result of an incremental energy sale. Consequently, it would be appropriate to apply the same type of sharing to this value for purposes of obtaining and providing an energy credit if one is adopted.

First, the energy value of such a credit must be treated as though it were an OSS for purposes of sharing through the AEP Interconnection Agreement (IA). The IA requires that OSS are shared between the AEP operating companies that are part of this agreement. As a result, while AEP-Ohio retains the generation revenues from its non-shopping customers, it would only receive an allocated share from any resulting incremental energy sale. The IA allocator for such sales is the Member Load Ratio (MLR)~~ for CSP and OPCo~~.

Second, AEP Ohio ~~OPCo~~ would subsequently allocate a portion of its MLR-share of such an energy sale to the West Virginia jurisdiction due to its firm, full requirements wholesale contract with Wheeling Power Company, an AEP Operating Company.

Third, AEP Ohio proposes that any energy credit be further reduced by 50% to reflect the margin sharing percentage used above the base in the Minden and Prescott templates. CRES providers who purchase capacity on a year-to-year basis should not receive the full offset received by long term full requirements wholesale customers.

Q. SHOULD THERE BE ANY LIMITS TO THE ENERGY CREDIT IF IT IS ADOPTED?

A. Yes. The energy credit computed as described above should further be capped at 40% of the capacity charge that would be applicable with no energy credit. The reason for this is that in high price wholesale periods, the energy credit could get so large as to greatly reduce any capacity payment whatsoever from CRES providers. Such a result would be a clear subsidy to these CRES providers. Wholesale markets are volatile and the capacity rates proposed have a lag. Consequently, CRES providers could simply wait until a high energy price market period has come and gone and subsequently obtain capacity at extremely low rates due to an excessive energy credit, perhaps when the value of such energy is much lower.

In addition, the energy credit is only a proxy. AEP Ohio would utilize information from the previous year as though it did not serve the entire internal load of ~~CSP and OPCo~~ AEP Ohio and instead sold an equivalent hour-by-hour amount of energy into that market during the period. However, that clearly did not happen, at least up through 2011, since AEP Ohio did serve or is serving most of that energy. In a very strong wholesale market, retail choice may be less and AEP Ohio will serve much if not most of the load. Clearly, daily market-based revenues cannot be extracted from generation that is serving the AEP Ohio load. Consequently, applying no cap whatsoever could result in an overstated proxy for the energy credit, with the amount of the overstatement likely to correlate somewhat with the level of wholesale prices. In consideration of AEP Ohio's exposure to the variations in historic-versus-current pricing and amount of energy served without seeking any true-up, the energy credit cap and resulting capacity charge floor affords some protection for the Companies through the collection of at least 60% of the capacity costs they incur. In return, CRES providers may still get the benefit of very large energy credits for capacity.

Q. HOW WAS THE 40% CAP ON THE ENERGY CREDIT AND RESULTING 60% FLOOR ON THE CAPACITY CHARGE TO CRES PROVIDERS OBTAINED?

A. While AEP Ohio proposes no energy credit, the 40% energy credit cap and resulting 60% floor of the capacity rate were selected by AEP Ohio as fair and reasonable values if the Commission should adopt this credit. Further, as will be shown later, this level of credit cap represents more than twice the largest energy credit adjustment that has ever been determined for the computation of similar credits for new entrants in the PJM market.

PROPOSED CAPACITY RATES

Q. PLEASE PROVIDE THE CAPACITY COMPENSATION RATES PROPOSED BY THE COMPANIES.

A. The formula rate templates shown in Exhibits KDP-1 and KDP-2 have been populated with information from the 2010 CSP and OPCo FF1s. These populated templates are shown in Exhibits KDP-3 and KDP-4 for CSP and OPCo respectively. As seen on page 1 of Exhibits KDP-3 and KDP-4, the capacity compensation rates ~~proposed by the Companies~~ would have been ~~are~~ $327.59/MW-day for CSP and $379.23/MW-day for OPCo for the PJM PY 2011/2012. If approved by the Commission, ~~these capacity rates would be applicable for the remainder of the PJM PY 2011/2012 that runs through May 31, 2012. These~~ the AEP Ohio rates will be computed ~~would be updated~~ each spring as previously described for the subsequent PJM PY. The first applicable rate ~~update~~ would occur using 2011 FF1 information for the PJM PY that begins June 1, 2012.

Q. IF THE COMMISSION ADOPTS AN ENERGY CREDIT USING AEP OHIO'S METHODOLOGY, WHAT IS THE RESULTING ENERGY CREDIT?

A. The 2010 energy credits using the AEP Ohio methodology is shown in Exhibit KDP-5. As shown on page 2 of this Exhibit, the energy credits, ~~if adopted,~~ would have been $7.73/MW-day and $9.94/MW-day for CSP and OPCo respectively. These credits would have reduced the capacity rates to $319.86/MW-day for CSP and $369.29/MW-day for OPCo for the PJM PY 2011/2012.

Q. WHAT ARE THE IMPACTS ON THESE RATES DUE TO THE CSP AND OPCO MERGER?~~ARE THERE ANY OTHER BENEFITS THAT RESULT FROM THE PROPOSED RATES?~~

A. ~~Yes. Another benefit to AEP Ohio's proposal is that the individual Companies' rates can be easily combined into a single AEP Ohio rate. The Companies are currently seeking regulatory approval for their merger. If approved by the Commission, the rates can easily be combined to provide a single merged rate applicable to CRES providers. For example, a~~As shown in Exhibit KDP-6, the current merged rate would be $355.72/MW-day. If the Commission were to adopt an energy credit using the AEP Ohio methodology, this rate would be reduced to $338.14/MW-day. ~~Following the merger,~~ Beginning with 2011, AEP Ohio w~~ould~~ill only file one FF1 and it would be the basis for computing the updated FRR capacity compensation rate beginning with the PJM PY 2012/2013.

~~In addition, AEP Ohio's Electric Security Plan (ESP) is currently under consideration by the Commission. This proposal includes various non-bypassable riders related to capacity costs. To the extent these riders are adopted by the Commission, some costs will be born directly by all end use customers. In that event, the formula rates as proposed are well positioned to accommodate corresponding adjustments as necessary to ensure that any capacity-related amounts collected through non-bypassable riders are removed from the capacity charges. For example, any costs collected through the proposed non-bypassable Environmental Investment~~

~~Carrying Cost Rider (EICCR) would be removed from the CRES provider capacity charge. All such adjustments will be readily available for regulatory inspection.~~

RATE COMPARISONS

Q. **WOULD YOU COMPARE THE PROPOSED RATE~~S~~ WITH THE PJM RATES?**

A. Yes. The past, present and future RPM rates are shown in Table I below.

Table I - PJM Capacity Market Values
Values based on Unforced Capacity (UCAP) MW
All Capacity Values are expressed in $/MW-day

PJM Planning Year	Gross CONE ($/MW-day)	Net CONE ($/MW-day)	RPM BRA Clearing ($/MW-day)	Final Zonal Capacity Price[2] ($/MW-day)	Billed RPM Capacity Rate ($/MW-day)
2007/2008	197.29~~$210.26~~	$171.87	$40.80	$40.80	$46.73
2008/2009	197.83~~$210.73~~	$172.25	$111.92	$111.92	$129.71
2009/2010	197.83~~$210.73~~	$172.27	$102.04	$104.82	$126.33
2010/2011	197.83~~$210.93~~	$174.29	$174.29	$182.85	$220.96
2011/2012	197.29~~$210.35~~	$171.40	$110.00	$116.16	$145.79
2012/2013[1,3]	309.23~~$330.51~~	$276.09	$16.46	$16.52 [3]	$20.01 [3]
2013/2014[1]	334.89~~$357.41~~	$317.95	$27.73	TBD	$33.71
2014/2015[1]	351.30~~$374.72~~	$342.23	$125.99	TBD	$153.89

CONE = Cost of New Entry

BRA= Base Residual Auction

Notes

[1]Future planning periods utilize preliminary scaling factors.

[2] Includes the affects of incremental auctions and ILR.

[3] Include the first and second incremental auction results but are not yet final.

Exhibit KDP-7 includes these same values along with various other PJM RPM market information, including the maximum potential clearing prices in the PJM Base Residual Auctions, based on 150% of Net Cost of New Entry (CONE). Exhibit KDP-7 also shows the standard PJM RPM adjustments used to convert the RPM Zonal Capacity Price into the effective billing rate, which is the appropriate RPM rate for comparisons to the proposed rate since these rates reflect what has been and would be the effective rate billed to CRES Providers.

The current capacity rate charged to CRES providers is shown in the last column of Table I above and column (l) of Exhibit KDP-7 and is $145.79/MW-day. This includes the initial Base Residual Auction clearing price of $110.00/MW-day adjusted to the Final Zonal Capacity Price of $116.16/MW-day due to the impacts of incremental auctions and Interruptible Load for Reliability, as well as the standard multipliers associated with the PJM RPM construct, including the scaling factor, forecast pool requirement and losses, to arrive at the current effective RPM billed capacity rate of $145.79/MW-day. Consequently the capacity rates proposed by AEP Ohio, based on the current PJM PY, would represent a 144~~25~~% ($355.72~~27.59~~/$145.79) increase ~~for CSP and a 160% ($379.23/$145.79) increase for OPCo~~.

It should be noted that, while the proposed capacity rates represents a large increases relative to the current and future RPM prices shown in column (l) of Exhibit KDP-7, the AEP Ohio proposed capacity rate~~s are~~ is much closer to the maximum rate that could have occurred in the current PY based on the PJM demand ~~supply~~ curve utilized. That value was $322.69/MW-day including all appropriate multipliers that ~~are currently~~ have been used to bill for capacity. Furthermore, the Maximum RPM rate used in the demand ~~supply~~ curve has increased~~s~~ dramatically and was $627.04/MW-day in the PJM PY 2014/2015 ~~most recent~~ auction, including the impacts of the PJM billing multipliers shown in Exhibit KDP-7.

In addition, the Net CONE value ~~i~~has trended~~ing~~ upward significantly. As shown in Table I and Exhibit KDP-7,~~-~~ column (d), the $342.23/MW-day Net CONE value used for the PJM PY 2014/2015 RPM auction is nearly twice the $171.40/MW-day Net CONE value used for the current period auction. The most recent Net CONE value provided by PJM is still $320.63/MW-day. If one accepts the economically simplifying assumption referenced by AEP Ohio witness Horton that the RPM capacity prices will tend, on average, to clear near the NCONE value, then the ~~Companies'~~AEP Ohio proposed capacity compensation rate~~s~~ is within 11% of the ~~approach these same~~ Net CONE future value~~s~~s.

Q. DO YOU HAVE ANY COMPARISONS TO MAKE REGARDING AEP OHIO'S PROPOSED CAP ON THE ENERGY CREDIT IF SUCH A CREDIT IS ADOPTED?

A. Yes. As mentioned earlier, AEP Ohio proposes that if the Commission adopts an energy credit, then the energy credit should be capped at no more than 40% of the capacity rate without the credit. As shown in Table I and Exhibit KDP-7, the ~~Gross-to-Net~~ energy ~~A~~adjustments (shown in column (e) in Exhibit KDP-7) are always less than 20% of the Gross CONE values (shown in column (c) of Exhibit KDP-7). This adjustment is the result of an energy credit being applied to the Gross CONE. Consequently, capping the AEP Ohio energy credit at 40% of the capacity rates without the energy credit will provide the potential for more than twice the energy adjustments that have thus far ever been made in reducing Gross CONE to Net CONE.

~~CRES PROVIDER SELF-SUPPLY OPTION~~

~~**Q. HOW WILL THE CRES PROVIDER SELF-SUPPLY OPTION BE ACCOMMODATED AND SETTLED?**~~

~~A. As stated previously, CSP's and OPCo's capacity rates are avoidable or by-passable by CRES providers if they supply capacity to meet their own loads prior to the Companies submitting their FRR plan three years prior to the delivery year.~~

~~**Q. IF A CRES PROVIDER COMMITS LESS CAPACITY THAN IT NEEDS FOR A GIVEN PJM PLANNING YEAR, HOW WILL THE COST OF THE SHORTFALL BE COMPENSATED?**~~

~~A. The cost of any shortfall would be addressed in the same manner as though the CRES provider did not provide any capacity. The MWs of the shortfall will be compensated at the Companies' proposed rates. For example, if a CRES provider serves 100 MW of capacity and chooses to self-supply none of it, the provider would pay for 100 MW at the proposed capacity rates. If the CRES Provider self-supplies 100 MW and then serves 150 MW during the PY, the CRES provider will compensate CSP and OPCo for 50 MW at the proposed capacity rates.~~

~~**Q. IF A CRES PROVIDER COMMITS MORE CAPACITY THAN IT SUBSEQUENTLY NEEDS FOR A GIVEN PJM PY FOR THE LOAD IT SERVES AND THE OBLIGATION REMAINS WITH OR GOES BACK TO CSP AND OPCO, HOW WILL CSP AND OPCO ACCOMMODATE THIS LOAD?**~~

~~A. If a CRES provider commits capacity to serve load, and then AEP Ohio must wind up serving a portion of that load as currently required, AEP Ohio will make their best~~

~~efforts to provide or obtain the shortfall capacity necessary to serve this load at the least expensive cost possible. This will benefit all customers.~~

~~Q. SHOULD THE CRES PROVIDER WHO OVER-COMMITTED CAPACITY MAKE THIS CAPACITY AVAILABLE TO AEP OHIO?~~

~~A. Yes. In the event of this scenario, since CSP and OPCo by direction of the CRES provider reduced their own capacity obligations and then subsequently are required to reacquire these obligations, the CRES provider should be obligated to make the capacity available to AEP Ohio. This availability should be in the form of a call option, which is the right, but not an obligation, to purchase this capacity from the CRES provider. The strike price of the call option, which is the price at which the transaction occurs if the holder of the call option elects to exercise it, should be the lower of the final RPM price or the applicable capacity rate of the Companies. In other words, AEP Ohio may unilaterally obtain the capacity from another source or purchase it from the CRES provider at the strike price.~~

~~Q. WHY SHOULD THE STRIKE PRICE BE SET AT THE LOWER OF RPM PRICE OR THE CAPACITY RATE?~~

~~A. The CRES provider may unilaterally, and with no input from AEP Ohio whatsoever, provide however much capacity that it believes it will serve during the applicable planning year. There should be no incentives for CRES providers to (a) supply capacity with which they have no earnest interest in serving load but instead commit it only to cause AEP Ohio to lower its own obligations and then (b) to sell this capacity to AEP Ohio when the Companies become short capacity for reasons created by the same CRES providers. Such actions, I believe, are not inconsistent with~~

~~actions alleged years ago in the California energy market that generation owners purposely withheld generation from the spot market only until the market was higher and then sold it back into that market. Similarly, CRES providers should not be given the incentive to purposely create a capacity shortage for AEP Ohio and then profit from it.~~

~~Consequently, AEP Ohio should be under no obligation to purchase the capacity, even at the strike price, if they can provide or acquire capacity less expensively. If capacity is not available at a lower rate, the CRES provider should be under the obligation to sell the surplus capacity to AEP Ohio at the lower of the RPM price or CSP's and OPCo's capacity rate if such capacity cannot be located at a less expensive price elsewhere. If AEP Ohio does not exercise the option to purchase the excess capacity from the CRES provider, the CRES provider may dispose of the surplus capacity in anyway it sees fit, such as selling it to a third party, provided such disposition is permitted by all applicable PJM and/or state rules. This combination would provide the most benefit to the Ohio customers.~~

~~Q. IS THIS TREATMENT CONSISTENT WITH THE REST OF THE CSP AND OPCO PROPOSAL?~~

~~A. Yes it is. Some may argue that the payments between CSP and OPCo and CRES providers for this capacity should somehow be "symmetrical" in that they should be at the same rate, whether it be at an RPM rate or a CSP and OPCo or other rate. The fact is that the obligations and opportunities of AEP Ohio and CRES providers regarding serving load are not symmetrical. CSP and OPCo *must* provide capacity for all of the loads within their service territories that CRES Providers *choose* not to~~

~~serve. Subsequently, CSP and OPCo then *must* accept back load obligations which CRES providers *choose* not to sign up during the applicable planning year for whatever reason.~~

~~Q. DOES AEP OHIO HAVE ANY PROPOSALS REGARDING THE ABILITY OF CRES PROVIDERS TO SELF-SUPPLY THEIR OWN CAPACITY?~~

~~A. In addition to the constraints described above, AEP Ohio proposes that each individual CRES provider be limited to supplying no more capacity for a given PJM PY than twice the capacity that is required to serve the load that the CRES provider is actually serving on January 1 of the year in which the FRR Plan for that planning year is submitted to PJM.~~

~~For example, if a CRES provider is currently serving load that requires 100 MW of capacity on January 1, 2012, that CRES provider may elect to self-supply up to 200 MW of capacity into the applicable FRR plan for the 2015/2016 PY that will be submitted during the first quarter of 2012. This limit would allow each CRES provider to self-supply approximately 25% more load each planning year.~~

~~OTHER ISSUES~~

~~Q. DO YOU HAVE ANY OTHER COMMENTS YOU WOULD LIKE TO MAKE ABOUT THE CSP AND OPCO FORMULA RATE PROPOSAL?~~

~~A. Yes. I understand that there is an open question regarding these capacity payments in terms of the appropriate jurisdictional forum, either this Commission or the FERC. While this appears to be a legal question best argued among the attorneys, it is my layman's understanding that much of these arguments may depend on whether these transactions are considered wholesale or retail.~~

~~Simply that I believe these to be wholesale transactions for capacity between AEP Ohio and the CRES providers. As such, it is hoped that, speaking from an operational rather than a legal viewpoint, the Commission will either affirm these transactions as wholesale and/or to designate them as wholesale transactions going forward.~~

~~Under AEP Ohio's proposal, CRES providers may self-supply their own capacity rather than obtain it from AEP Ohio as previously described. If these capacity transactions are designated as retail, it is assumed that the option to provide capacity, rather than purchase capacity from AEP Ohio, must then be eliminated. This is assumed since it is not clear how such an option could be accommodated if it is retail customers, rather than CRES providers, who are supplying their own capacity.~~

~~Q. DO YOU HAVE ANY OTHER COMMENTS?~~

~~A. Yes. CSP and OPCo were required to make an initial minimum five-year commitment under either RPM or FRR. Consequently, there is no cause for concern regarding AEP Ohio frequently moving between these two capacity options based on the applicable rates. Should the Companies choose to move to the RPM market, under the current PJM rules, it will be for a minimum of five years and cannot begin until the next auction period.~~

~~Further, for those who may suggest that AEP Ohio should move to RPM, this does not appear to me to be the forum to discuss such a move. Right now, PJM does allow a self-supply option, the Companies chose that option for reasons stated by AEP Ohio witness Horton, and AEP Ohio is currently locked into that option through~~

~~at least PJM PY 2014/2015. Attempting to include a lengthy debate into this proceeding on the appropriate past, present and future option for AEP Ohio, i.e., RPM or FRR, would simply cloud the fundamental question that must now be determined within the scope of this proceeding, namely, the appropriate reimbursement for the Companies for their own capacity provided to CRES providers while they are under the FRR plan.~~

Q. DOES THIS COMPLETE YOUR DIRECT TESTIMONY?

A. Yes it does.

PJM Capacity Market Values

Values based on Unforced Capacity (UCAP) MW

PJM PY (a)	RPM Reserve Margin Cleared (%) (b)	Gross CONE[4] ($/MW-day) (c)	Net CONE[5] ($/MW-day) (d)	Energy & AS Adjustment ($/MW-day) (e)	150% NCONE ($/MW-day) (f)=1.5x(d)	RPM BRA Clearing ($/MW-day) (g)	Final Zonal Capacity Price[2] ($/MW-day) (h)	Scaling Factor (i)	FPR (j)	Losses (k)	RPM Rate ($/MW-day) (l)=(h)x(i)x(j)x(k)	Maximum RPM Rate ($/MW-day) (m)=(f)x(i)x(j)x(k)
2007/2008	19.20%	$197.29	$171.87	($36.02)	$257.81	$40.80	$40.80	1.02635	1.07900	1.034126	$46.73	$295.24
2008/2009	17.50%	$197.83	$172.25	($36.12)	$258.38	$111.92	$111.92	1.03811	1.07960	1.034126	$129.71	$299.45
2009/2010	17.80%	$197.83	$172.27	($36.12)	$258.41	$102.04	$104.82	1.07964	1.07950	1.034126	$126.33	$311.44
2010/2011	16.50%	$197.83	$174.29	($34.36)	$261.44	$174.29	$182.85	1.07870	1.08330	1.034126	$220.96	$315.93
2011/2012	18.10%	$197.29	$171.40	($36.52)	$257.10	$110.00	$116.16	1.12037	1.08330	1.034126	$145.79	$322.69
2012/2013[1,3]	20.90%	$309.23	$276.09	($50.92)	$414.14	$16.46	$16.52	1.08177	1.08270	1.034126	$20.01	$501.60
2013/2014[1]	20.30%	$334.89	$317.95	($36.97)	$476.93	$27.73	TBD	1.08812	1.08040	1.034126	$33.71	$579.81
2014/2015[1]	20.60%	$351.30	$342.23	($30.46)	$513.35	$125.99	TBD	1.09276	1.08090	1.034126	$153.89	$627.04

PY = Planning Year
RPM = Reliability Pricing Model

CONE = Cost of New Entry
NCONE = Net Cost of New Entry

BRA= Base Residual Auction
FPR = Forecast Pool Requirement

Notes

1. Future planning periods utilize preliminary scaling factors.
2. Includes the affects of incremental auctions and ILR.
3. Columns h-m reflect the results of the 1st and 2nd incremental auctions but are not yet final
4. Gross CONE is stated on an Installed Capacity Basis.
5. Net CONE includes energy and ancillary services (AS) adjustment and forced outage adjustment.

RPM data sourced from the RPM Auction User Information page at: http://www.pjm.com/markets-and-operations/rpm/rpm-auction-user-info.aspx

EXHIBIT NO. ______

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

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

DIRECT TESTIMONY OF
DANA E. HORTON
ON BEHALF OF
~~COLUMBUS SOUTHERN POWER COMPANY~~
~~AND~~
OHIO POWER COMPANY

Filed: ~~August~~March 23~~1~~, 201~~1~~2

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO
DIRECT TESTIMONY OF
DANA E. HORTON
ON BEHALF OF
~~COLUMBUS SOUTHERN POWER COMPANY~~
~~AND~~
OHIO POWER COMPANY

PERSONAL BACKGROUND

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Dana Earl Horton. My business address is 1 Riverside Plaza, Columbus, Ohio 43215. I am employed as Director – RTO Policy in the Regulatory Services Department of American Electric Power Service Corporation (AEP). American Electric Power Service Corporation is agent for AEP Ohio, which is comprised of ~~Columbus Southern Power Company and~~ Ohio Power Company, hereby referred to as AEP or the Company.

Q. PLEASE PROVIDE YOUR EDUCATION AND WORKING CAREER BACKGROUND.

A. I graduated from Muskingum College in New Concord, Ohio, in 1979 with a Bachelor of Arts in Accounting. I also received a Masters of Business Administration from Miami (Ohio) University in 1980. I worked for Ernst & Whinney as a CPA from 1980-83 before I joined AEP in January 1984. During my tenure at AEP, I have held positions in the Controllers Department, Trading & Marketing, Commercial Operations, and most recently in Regulatory Services. My main responsibility since AEP joined PJM in 2004 has been as an advocate for AEP in the PJM stakeholder process. In this role I work extensively with the stakeholder process under which PJM transmission and market rules are established. As relevant to this testimony, I was part of the AEP team that participated in the PJM stakeholder process leading up to the adoption of the rules implementing the Reliability Pricing Model ("RPM") and the Fixed Resource Requirement ("FRR") that initially was developed in 2006. As one of the key members of the AEP negotiating team, I was present at the Federal Energy Regulatory Commission ("FERC") offices during each of the RPM/FRR settlement discussions. For the reasons I discuss below, AEP was at the center of the discussions around the FRR and was one of the most active participants in the stakeholder process that led up to the FRR rules at issue in this proceeding, including several key provisions in the PJM Tariff and PJM's Reliability Assurance Agreement ("RAA"). [1]

Q. PLEASE EXPLAIN THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING.

A. The primary purpose of my testimony is to describe the RPM and FRR options to supply capacity, the development of the FRR and why AEP chose this option. In addition, I will provide background and explanations for certain provisions in the FRR procedures including the requirements for alternative retail suppliers (called CRES providers in Ohio) with respect to their capacity obligations.

Q. **PLEASE EXPLAIN THE METHODS FOR SUPPLY AND PROCUREMENT OF CAPACITY IN PJM.**

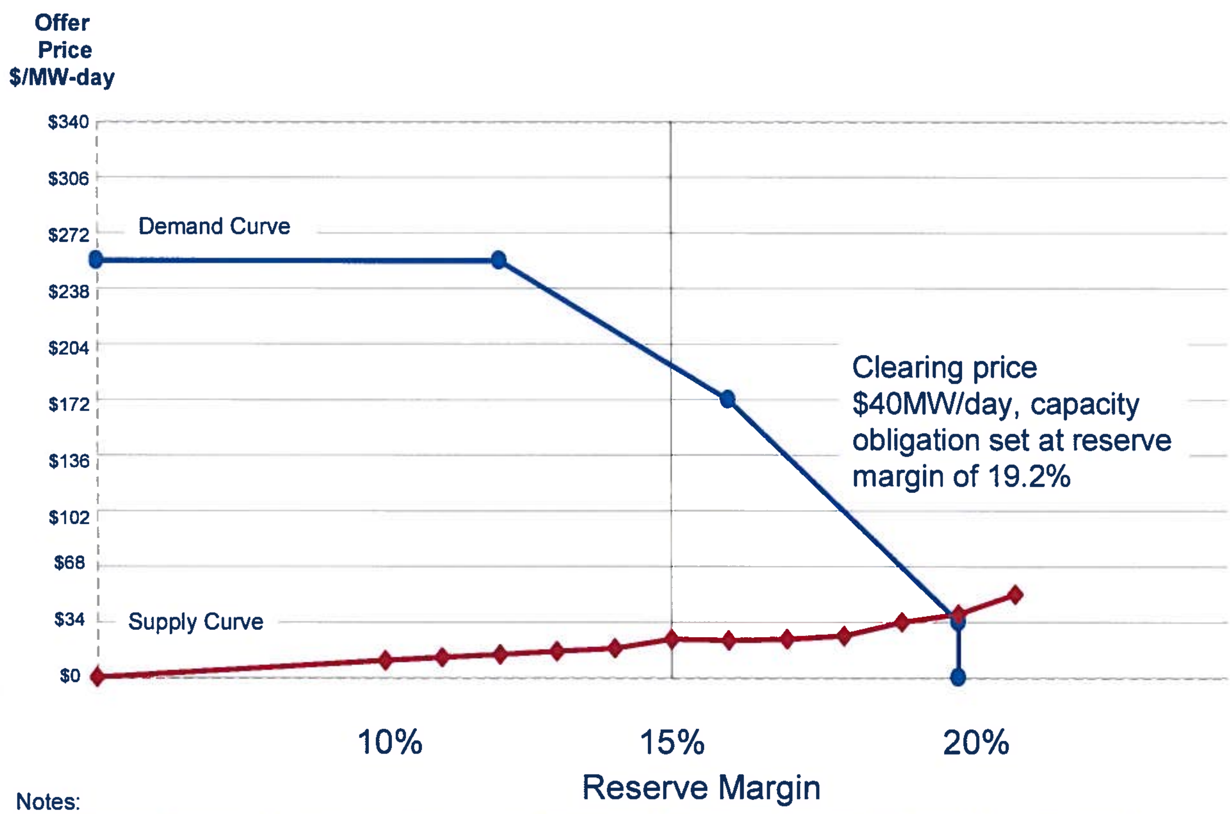
A. There are two methods in PJM for the supply and procurement of capacity – RPM and FRR.

Q. PLEASE BRIEFLY EXPLAIN THE RPM CAPACITY OPTION.

[1] PJM's Reliability Assurance Agreement defines protocols necessary for maintaining reliability on the PJM system.

A. The RPM is an administratively determined market approach. Under the RPM, PJM clears the supply offers from generators against an administrative demand curve to arrive at both a price and a quantity paid by Load Serving Entities (LSEs) for their capacity and reserve obligations. Figure 1 below graphically represents the supply and demand curves for a Base Residual Auction. The Base Residual Auction is what PJM calls the initial auction used to set the RPM clearing prices three years in advance of the delivery year.

Figure 1: Example of Supply/Demand Curve – Entire PJM Region



Notes:
- Demand curve is administratively set by PJM. Maximum clearing price = 1.5 x Net CONE = $25(5)8/MW-day in graph.
- Supply curve is based on offers by generators in RPM capacity market.
- Net CONE is equivalent to $172/MW-day. Net CONE is defined as the cost of new entry for a gas peaking unit. PJM uses this value as the basis for determining the RPM demand curve.

In the graph above, the top line is the administrative demand curve. It is generally a downward sloping curve. This means that the more MWs which are purchased, the lower the price paid per MW of capacity. PJM calls this the Variable Resource Requirement curve.

The upward sloping curve is the supply curve. This curve is developed through actual offers submitted by generators into the RPM auction.

In this graph, the two curves cross where the price equals approximately \$40/MW-day and the quantity of capacity procured is approximately at a 19.2% reserve margin. The graph shows that all the loads in this zone will need to purchase capacity equal to a 19.2% reserve margin at \$40/MW-day. So, as a simplistic example, an LSE with a 100MW peak load obligation in the 2007/08 delivery year, which is participating in the RPM auction process, will pay \$1.7M (100MWs x 1.192 x \$40/MW-day x 365 days = \$1.7M) to PJM for its capacity obligations in this particular example, which is representative of the 2007/08 delivery year auction.

Q. IS THE \$40/MW-DAY THE PRICE PAID BY THE CRES PROVIDER?

A. No. The \$40/MW-day in the example is indicative of what the initial RPM auction cleared for the 2007/08 delivery year. As Witness Pearce describes in his testimony (and Exhibit KDP-7), the rate charged to CRES providers must include adjustments to the initial base auction for MWs cleared in the incremental auctions, and then grossed up for PJM's scaling factors (for reserves and load changes) and losses. For 2007/08, the initial clearing price was approximately \$40/MW-day, while the final capacity charge to CRES providers was approximately \$46/MW-day.

Q. PLEASE EXPLAIN THE FRR OPTION.

A. The FRR was developed to allow a utility the ability to provide its own capacity resources for its load obligations and not be subject to the RPM capacity market fluctuations (i.e. volatile clearing prices and reserve margins). Under the FRR option, the LSE supplies its own capacity obligations through its own generating fleet, or through bi-lateral arrangements with another supplier. If an LSE has a 100MW capacity obligation and chose FRR, the LSE could supply this capacity from its own generation fleet without making any payments to PJM.

Q. WHY WAS THE FRR OPTION DEVELOPED AS ANOTHER METHOD FOR SUPPLYING CAPACITY?

A. It was important to have an appropriate mechanism for LSEs that owned or controlled sufficient generation to meet their own load and reserve margin obligations. AEP advocated strongly at FERC and during the stakeholder negotiations for the FRR option. This option was important to AEP, because:

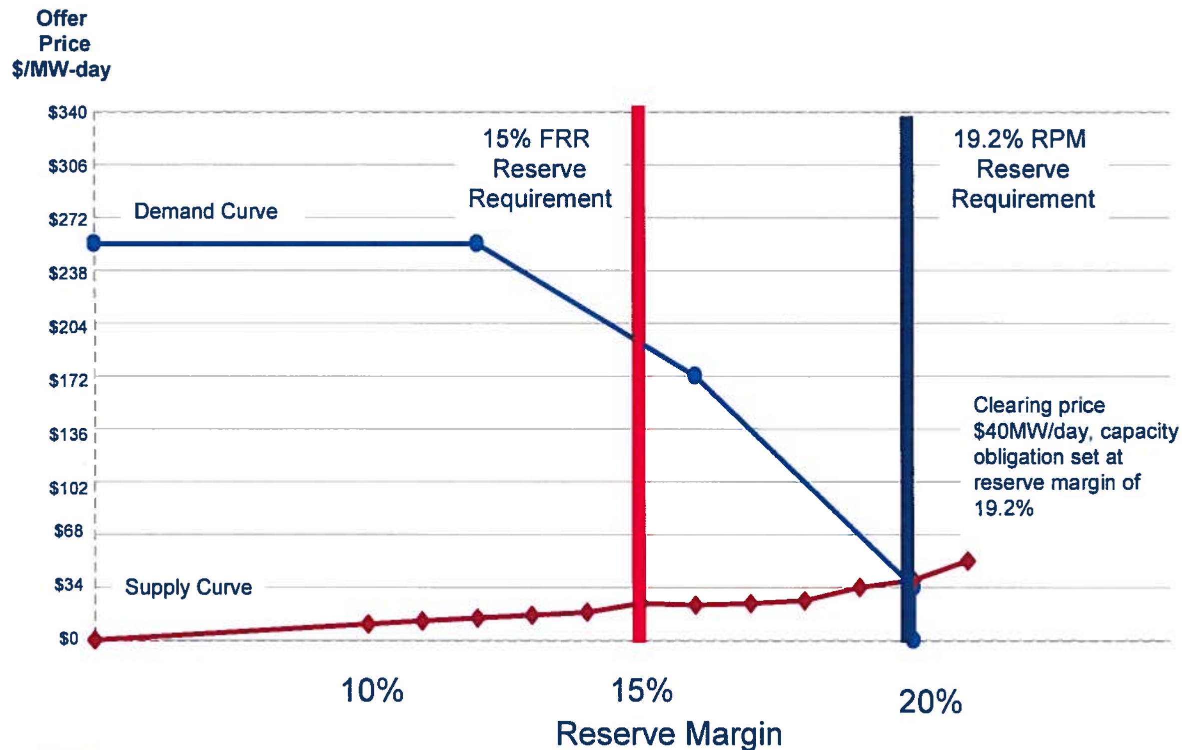
- FRR was consistent with the Company's regulatory framework. AEP utilities in PJM were among the few remaining vertically integrated utilities that retained their generation to meet the load obligations of their customers. For AEP, the FRR mechanism allowed it to continue to recover its embedded generation costs associated with the customers it serves through existing Commission approved rate structures. Conversely, many of the other PJM utilities have segregated their load from their generation, either by divesting their generation to third parties or transferring it to affiliated generation companies.
- It did not make sense for AEP to offer its own generation into a capacity auction and then essentially be required to buy it back to satisfy its load obligation, since the Company had sufficient generation to meet its own load obligation.

- AEP was at risk for being required to purchase more capacity than necessary because of the potential for the RPM auction to clear at a higher reserve margin level than the Company carried on its system.

Q. WHAT WAS THE OUTCOME OF THIS INITIAL DECISION?

A. At the time AEP initially made the decision to choose FRR, the FRR reserve requirement as set by PJM was 15%. In 2007/08, the auction actually cleared at a 19.2% reserve margin. If we had chosen RPM in 2007/08, AEP would have purchased an additional 4.2% of capacity to meet the RPM reserve margin that was not necessary to meet the Company's internal load obligations. See Figure 2 for a graphic representation of this difference.

Figure 2: Comparison of Reserve Requirements FRR vs RPM



Notes:
• Demand curve is administratively set by PJM. Maximum clearing price = 1.5 x Net CONE = $25(5)8/MW-day in graph.
• Supply curve is based on offers by generators in RPM capacity market.
• Net CONE is equivalent to $172/MW-day. Net CONE is defined as the cost of new entry for a gas peaking unit. PJM uses this value as the basis for determining the RPM demand curve.

Q. WHY WAS THE RPM RESERVE MARGIN HIGHER THAN THE FRR RESERVE MARGIN?

A. The key difference is in how the reserve margins are determined for FRR and RPM. For FRR, the reserve margin used is the reserve margin PJM calculates for the entire PJM RTO for planning purposes. However, the reserve margin for RPM is set by supply offers and an administratively set demand curve. Figure 2 above shows this relationship graphically.

Q. WHAT WOULD THIS ADDITIONAL 4.2% IN CAPACITY RESERVES HAVE COST AEP AND ITS CUSTOMERS?

A. In the 2007/08 period, this additional capacity obligation would have cost AEP and its customers an additional $15.7M.

Q. HOW DID YOU DERIVE THIS NUMBER?

A. AEP's total company peak load in PJM is approximately 22,000MWs. If the Company had been required to carry an additional 4.2% in capacity reserves, AEP would have been obligated to supply 925MWs of additional capacity for 2007/08 (4.2% of 22,000MWs). With the billed RPM capacity rate of $46.73/MW-day (which is the $40/MW-day clearing price grossed up for reserve margin and losses), the total cost would have been 925MWs x $46.73/MW-day x 365 days = $15.7M.

Q. PLEASE COMPARE THE RESERVE MARGIN FOR FRR TO THE RESERVE MARGIN FOR RPM FOR ALL THE YEARS THE AUCTION HAS CLEARED TO DATE.

A. There have been eight RPM auctions held since the initiation of the capacity auctions for the 2007/08 delivery year. The average target reserve margin set annually by PJM has been approximately 15.5% from 2007/08 through 2014/15. The average reserve margin cleared in the RPM auction in these eight years has been approximately 19% in the AEP zone. The difference is 3.5%. With the average RPM clearing price for all auctions being approximately $90/MW-day, AEP has saved its customers $25M annually (22,000MWs x 3.5% x $90/MW-day x 365 days = $25M) by choosing FRR.

Q. BACK TO THE INITIAL DEVELOPMENT OF THE FRR OPTION, HOW DID FERC RULE ON FRR IN ITS INITIAL OPINION?

A. FERC agreed that it was not necessary or appropriate to force utilities such as AEP to participate in the RPM auction. In their April 20, 2006 Initial Order, FERC states in paragraph 110 that "We agree with AEP that LSEs and states should have the option of choosing an alternative to the forward procurement auction if they identify sufficient capacity to meet their loads…."

At that point, as part of the settlement process at FERC, PJM and the PJM stakeholders entered into negotiations to develop the FRR process. These deliberations focused on the preparation of rules that enabled utilities such as AEP to meet their capacity obligations through use of their own generation (including bi-lateral arrangements) and to maintain reserve margins established by the PJM planning process rather than through the auction process. This provided benefits to native load customers by giving the LSEs choices for meeting capacity requirements.

Q. WERE YOU PART OF THE FERC SETTLEMENT NEGOTIATIONS RELATING TO THE FRR RULES?

A. Yes. The development of the FRR was largely driven by AEP. The AEP team (including myself) was at the core of and very active in the PJM stakeholder deliberations relating to these issues. These discussions took place under FERC Docket ER05-1410.

Q. PLEASE EXPLAIN HOW A CRES PROVIDER SERVING LOAD IN THE SERVICE TERRITORY OF AN FRR ENTITY MAY SUPPLY ITS CAPACITY REQUIREMENT.

A. The CRES provider has two options for supplying its capacity requirement. These include: 1) supplying its own capacity (with its own generation or through a bi-lateral contract) or 2) paying the FRR entity to supply capacity for the CRES provider.

Q. DURING THE FERC SETTLEMENT PROCESS, DID THE STAKEHOLDERS DISCUSS THE LEVEL OF COMPENSATION FOR CAPACITY TO BE PAID BY CRES PROVIDERS TO FRR ENTITIES?

A. Yes. The stakeholders held several discussions throughout the FERC settlement process regarding the compensation level for capacity that CRES retail LSEs would pay to the FRR entities in the event that the CRES provider did not have sufficient generation resources to enable them to meet their capacity requirements.

Q. WHY WAS IT NECESSARY TO DISCUSS THE CAPACITY COMPENSATION TO BE PAID BY CRES PROVIDERS?

A. Under the FRR rules, AEP is ultimately responsible for ensuring adequate capacity resources to meet the load obligation in its service territory, except for capacity that is self-supplied by a CRES provider. This includes not only the load served by AEP, but also any load that has switched to a CRES provider. To fulfill the total capacity requirement for the AEP service territory, the Company supplies capacity resources to meet the Company's load obligation while the CRES provider has the option of either 1) paying AEP to supply its capacity obligation or 2) providing its own resources to meet its capacity obligation. Therefore, this compensation discussion was necessary to ensure that the FRR entity was adequately compensated for supplying capacity resources used by a CRES provider.

Q. WERE THERE MULTIPLE OPTIONS DISCUSSED FOR CHARGING CRES PROVIDERS FOR THE CAPACITY COVERED UNDER AN FRR PLAN?

A. Yes. The PJM stakeholders ultimately agreed upon three options for determining an adequate capacity reimbursement price for CRES providers. The first approach, which would initially serve as a default mechanism, would be for the charges to track the market clearing price set in the RPM auctions. However, the major drawback was that there was no guarantee the auction prices would reimburse an FRR entity for its embedded cost of capacity. So, the stakeholders agreed upon another method under which the level of capacity compensation would be based on the FRR's embedded capacity costs.

Further, during the PJM stakeholder process, there also was a discussion about the possibility that any state utility commission might seek to implement a retail choice program with rules that require shopping customers to pay capacity-related charges directly to the incumbent utility. Although AEP was not aware of any such retail mechanism in any of the states in which AEP utilities operated, the Company did not oppose the inclusion of a provision that would accommodate the possibility that Ohio or another retail-choice state might one day decide to implement such a capacity charge directly to a retail customer (as opposed to a wholesale charge to a CRES provider). AEP fully expected that any such provision within our regulated jurisdictions would allow the Company to recover the costs for the capacity it is obligated to supply.

Q. HAS THE PUBLIC UTILITY COMMISSION OF OHIO (COMMISSION) VOICED SUPPORT FOR THE FRR PLAN SINCE ITS INCEPTION?

A. Yes. The Commission staff referred to FRR in public comments filed at FERC provided in advance of a FERC Staff Technical Conference on June 7, 2006. In the first sentence of their comments, the Commission staff said they "would like to compliment the FERC for accepting the traditional resource requirement approach (the Fixed Resource Requirement option) as a legitimate alternative to RPM. The Ohio Staff would like to request that, in developing the rules for the two alternatives, the FERC needs to ensure that a resource supplier is treated equitably in terms of the [Installed Reserve Margin (IRM)] requirement, the penalties for violating an IRM requirement, and the appropriate length of a resource commitment, regardless of what alternative the supplier chooses."

Q. DID THE COMMISSION PARTICIPATE IN THE RPM AND FRR NEGOTIATIONS?

A. The Commission staff was present at many of the sessions in Washington D.C. Because of the nature of the settlement negotiations, I am not permitted to disclose any details of positions voiced or taken during the discussions.

Q. YOU HAVE DISCUSSED THE RESERVE MARGIN BENEFITS OF CHOOSING FRR. WERE THERE OTHER BENEFITS THAT RESULTED FROM CHOOSING FRR?

A. Yes. In addition to the reserve margin benefits noted above, the FRR plan allows AEP the flexibility to substitute generating units within its fleet for meeting the Company's FRR capacity obligations in case of significant unit outages. In other words, AEP can utilize generating units that **are not** committed as capacity resources to replace generating units that **are** committed capacity resources in the event of unforeseen operational issues. This flexibility allows AEP the ability to minimize, or possibly eliminate, financial penalties assessed by PJM associated with non-performance of a committed capacity resource.

Q. HAS AEP BENEFITED FROM THIS FLEXIBILILTY?

A. Yes. In 2009, AEP experienced an extended, but unexpected outage with a committed capacity resource that lasted for over a year. Fortunately, under the FRR, AEP was able to substitute other uncommitted capacity resources within the AEP fleet for this unit in order to avoid most of the penalties that PJM would have assessed had AEP been in RPM. The RPM rules do not allow LSEs to hold some units in reserve to cover unexpected forced outages.

Q. IS THERE A FINANCIAL BENEFIT TO THIS FLEXIBILITY?

A. Yes. To illustrate the financial implications of being able to manage the risk of forced outages, if AEP would find itself 1000 MW short of capacity due to an unexpected forced outage, the penalty provisions for the 2009/10 delivery year would be 120% of the RPM clearing price. This would equate to $44M of penalties for a 1000 MW shortage (1000MWs x 365 days x 120% x $102/MW-day RPM clearing price).

Q. WOULD AEP HAVE REALIZED THE SAME BENEFITS IN RPM?

A. No. Under RPM AEP would have to offer 100% of its capacity into the auction and not hold any capacity in reserves to address forced outage situations.

Q. ARE THE CRES PROVIDERS EXPOSED TO THESE PENALTY PROVISIONS IF THEY DO NOT BRING THEIR OWN CAPACITY TO SERVE THEIR RETAIL OBLIGATIONS?

A. No. If a CRES provider relies on AEP for its capacity requirement, AEP is responsible for 100% of the penalties associated with non-performance under the FRR, and does not pass on to the CRES providers any of the penalties incurred.

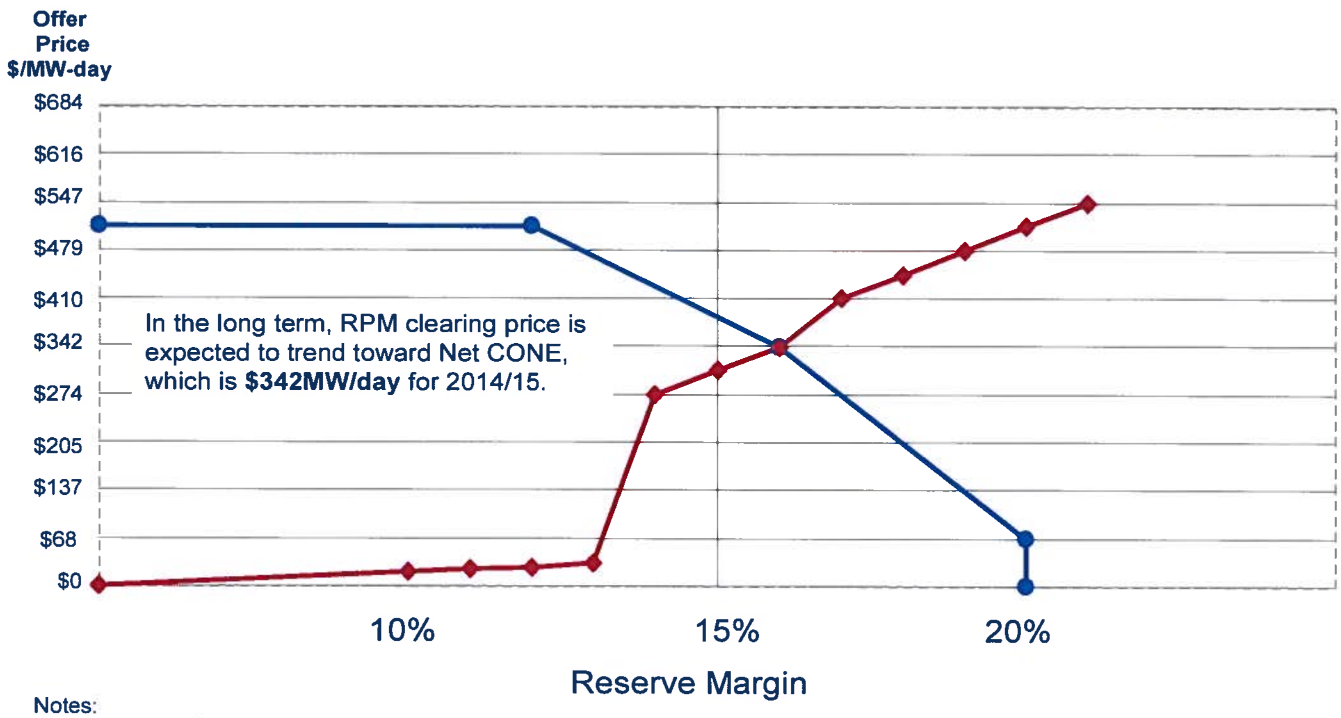
Q. PLEASE ILLUSTRATE THE IMPACT OF USING THE RPM AUCTION CLEARING PRICE ON THE CAPACITY CHARGE PAID BY CRES PROVIDERS AND THE FRR ENTITY.

A. For 2012/13, the RPM auction clearing price in the AEP zone was approximately $20/MW-day. This is equivalent to a $0.83/MWH adder to the energy cost ($20/MW-day/24 hours). The average PJM wholesale energy costs in 2010 were

$48.34/MWH. The $0.83/MWH for capacity is only 1.7% of the energy price using these illustrative numbers.

However, if the RPM capacity auction clearing price continues to rise to Net CONE, the clearing price will be closer to $342/MW-day (the Net CONE used for the 2014/15 auction, as represented in Figure 3 below). This would equate to a $14.25/MWH ($342/MW-day / 24 hours) cost for capacity. This $14.25/MWH for capacity is over 29% of the 2010 energy cost of $48.34/MWH.

Figure 3: Long Run RPM Auction Clearing Price at Net CONE



Notes:

- Demand curve is administratively set by PJM. Maximum clearing price = 1.5 x Net CONE = $513/MW-day in graph.
- Maximum reserve margin cleared = 20%, or target reserve margin (15% in example) + 5%.
- Supply curve is based on offers by generators in RPM capacity market.
- Net CONE is equivalent to $342/MW-day. Net CONE is defined as the cost of new entry for a gas peaking unit. PJM uses this value as the basis for determining the RPM demand curve.

Q. WHAT HAS PJM STATED FOR THE FUTURE OF CAPACITY SUPPLIES AND RPM AUCTION CLEARING PRICES?

A. PJM believes that in the long run, capacity prices will likely average close to the Net CONE prices ($342/MW-day for the 2014/15 RPM auction), even if there is continued volatility in the short run. PJM is supported in this opinion by independent consultant Professor Benjamin Hobbs[2], who provided opinions and analytical work as part of the RPM development process. Professor Hobbs supported the premise that in the long run Net CONE would be the value that would attract the necessary reserve levels of primarily gas units in the RPM capacity market.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

[2] See PJM Interconnection, L.L.C., June 30, 2008 informational filing at FERC in Docket Nos. ER05-1410-000 and EL05-148-000.

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing Columbus Southern Power Company's and Ohio Power Company's redlined testimony of Richard E. Munczinski, Kelly D. Pearce, Frank C. Graces, Dana E. Horton, and William A. Allen has been served upon the below-named counsel via electronic mail this 23rd day of March, 2012.

Steven T. Nourse

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