FILE

BEFORE THE
PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to §4928.143, Ohio Rev. Code, in the Form of an Electric Security Plan	)))))	Case No. 11-346-EL-SSO Case No. 11-348-EL-SSO
In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Approval of Certain Accounting Authority.	))))	Case No. 11-349-EL-AAM Case No. 11-350-EL-AAM

DIRECT TESTIMONY OF DENNIS W. GOINS, PH.D.
ON BEHALF OF THE OMA ENERGY GROUP

Lisa G. McAlister, Counsel of Record
Matthew W. Warnock
BRICKER & ECKLER LLP
100 South Third Street
Columbus, OH 43215-4291
Telephone: (614) 227-2300
Facsimile: (614) 227-2390
E-mail: lmcalister@bricker.com
mwarnock@bricker.com

On behalf of the OMA Energy Group

BEFORE THE
PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to §4928.143, Ohio Rev. Code, in the Form of an Electric Security Plan.	)))))	Case No. 11-346-EL-SSO Case No. 11-348-EL-SSO
In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Approval of Certain Accounting Authority.	)))))	Case No. 11-349-EL-AAM Case No. 11-350-EL-AAM

DIRECT TESTIMONY OF DENNIS W. GOINS, PH.D.
ON BEHALF OF THE OMA ENERGY GROUP

TABLE OF CONTENTS

BEFORE THE
PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to §4928.143, Ohio Rev. Code, in the Form of an Electric Security Plan.	)))))	Case No. 11-346-EL-SSO Case No. 11-348-EL-SSO
In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Approval of Certain Accounting Authority.	))))	Case No. 11-349-EL-AAM Case No. 11-350-EL-AAM

DIRECT TESTIMONY OF DENNIS W. GOINS, PH.D.
ON BEHALF OF THE OMA ENERGY GROUP

INTRODUCTION AND QUALIFICATIONS

Q1. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A1. My name is Dennis W. Goins. I operate Potomac Management Group, an economics and management consulting firm. My business address is 5801 Westchester Street, Alexandria, Virginia 22310.

Q2. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A2. I received a Ph.D. degree in economics and a Master of Economics degree from North Carolina State University. I also earned a B.A. degree with honors in economics from Wake Forest University. Following graduate school I worked as a staff economist at the North Carolina Utilities Commission (NCUC). During my tenure at the NCUC, I testified in numerous cases involving electric, gas, and telephone utilities on such

issues as cost of service, rate design, intercorporate transactions, and load forecasting. While at the NCUC I also served as a member of the Ratemaking Task Force in the national Electric Utility Rate Design Study sponsored by the Electric Power Research Institute (EPRI) and the National Association of Regulatory Utility Commissioners (NARUC).

Since leaving the NCUC, I have worked as an economic and management consultant to firms and organizations in the private and public sectors. My assignments focus primarily on market structure, policy, planning, and pricing issues involving firms that operate in energy markets. For example, I have conducted detailed analyses of product pricing, cost of service, rate design, and interutility planning, operations, and pricing; prepared analyses related to utility mergers, transmission access and pricing, and the emergence of competitive markets; evaluated and developed regulatory incentive mechanisms applicable to utility operations; and assisted clients in analyzing and negotiating interchange agreements and power and fuel supply contracts. I have also assisted clients on electric power market restructuring issues in Arkansas, New Jersey, New York, South Carolina, Texas, and Virginia.

I have submitted testimony and affidavits and provided technical assistance in more than 150 proceedings before state and federal agencies as an expert in competitive market issues, regulatory policy, utility planning and operating practices, cost of service, and rate design. These agencies include the Federal Energy Regulatory Commission (FERC), the Government Accountability Office, the First Judicial District Court of Montana, the Circuit Court of Kanawha County, West Virginia, the Linn County District Court of Iowa, and regulatory agencies in Alabama, Arizona, Arkansas, Colorado, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, New Jersey, New York, North Carolina, Ohio, Oklahoma, South Carolina, Texas, Utah, Vermont, Virginia, West

Virginia, Wyoming, and the District of Columbia. Additional details of my educational and professional background are presented in the Appendix.

Q3. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?

A3. Yes. I have previously testified in eight other cases shown in the Appendix, *including several dealing with standard service offer rate issues* involving FirstEnergy.

Q4. ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

A4. I am appearing on behalf of the OMA Energy Group (OMAEG), a nonprofit entity formed by the Ohio Manufacturers Association to address energy issues on behalf of Ohio manufacturers. OMAEG members purchase electric power services from Columbus Southern Power Company (CSPC) and Ohio Power Company (OPC), operating subsidiaries of American Electric Power. I collectively refer to CSPC and OPC as "AEP Ohio."

Q5. WHAT ASSIGNMENT WERE YOU GIVEN WHEN YOU WERE RETAINED?

A5. I was asked to undertake two primary tasks:

1. Review the Standard Service Offer (SSO) filed by AEP Ohio in the form of an Electric Security Plan (ESP), focusing on issues related to rates and service for large general service customers.
2. Identify any major rate design and rate-related deficiencies in AEP Ohio's application, and recommend necessary changes.

Q6. WHAT INFORMATION DID YOU REVIEW IN CONDUCTING YOUR EVALUATION?

A6. I reviewed AEP Ohio's application, testimony, exhibits, and selected responses to requests for information. I also reviewed documents found on the Commission's web site from the 2008 ESP cases for CSPC (Case No. 08-917-EL-SSO) and OPC (Case No. 08-918-EL-SSO). In addition, I

reviewed, as necessary, relevant statutes and Commission orders and rules. Finally, I reviewed publicly available information related to the issues in my testimony.

CONCLUSIONS

Q7. WHAT CONCLUSIONS HAVE YOU REACHED?

A7. On the basis of my review and evaluation, I have concluded the following:

1. In its application—made pursuant to Revised Code §§4928.141 and 4928.143—AEP Ohio requests approval for its SSO in the form of a 29-month ESP with a term of January 1, 2012 through May 31, 2014.
2. AEP Ohio's proposed ESP continues many elements of its modified 2009-2011 ESP that the Commission approved in Case Nos. 08-917-EL-SSO and 08-918-EL-SSO. However, in its new ESP filing, AEP Ohio has proposed major changes in the design of SSO generation charges for its demand-metered general service customers, several new riders, and a provision allowing AEP Ohio to adjust its ESP rates under certain conditions related to its announced withdrawal from the AEP Pool.
3. AEP Ohio's current SSO generation rates for demand-metered general service customers reflect a traditional two-part rate design with separately stated demand and energy components. In its proposed ESP, AEP Ohio has abandoned the traditional two-part rate design and replaced it with an energy-only standard offer generation service rider (SOGSR) that is differentiated by delivery service voltage, load factor, and, in selected cases, seasonal time-of-use.
4. AEP Ohio's proposed ESP includes a carbon capture and sequestration rider (CCSR) designed to recover AEP Ohio's share of the commercial scale carbon capture and sequestration (CCS) coal facility being developed at the Mountaineer Plant site operated

by its affiliate Appalachian Power Company (APCo). During the proposed ESP, AEP Ohio's recovery request is limited to its share of the project's Phase I front-end engineering and design (FEED) study through the nonbypassable CCSR. The need for and reasonableness of the CCSR is called into question by AEP's announcement on July 14, 2011, that it had placed the CCS project on hold for an indeterminate period.

5. On December 17, 2010, AEP Ohio and the other affiliated members of the AEP Power Pool provided the required 3–year written notice to each other of their intent to terminate the existing AEP Pool agreement. As a result, AEP Ohio has requested approval of an ESP provision that will allow upward rate adjustments during the ESP's term to reflect significant increases in its generating costs associated with either of two conditions—termination of the current AEP Pool agreement, or replacement of the current pool agreement with a new one in which AEP Ohio is a participant. (Hereinafter I refer to this provision as the "Pool Adjustment Provision.") Under AEP Ohio's proposal, the rate adjustment provision would not be triggered unless the annual increase in its generating costs related to either of these conditions exceeds $35 million.

Q8. DOES YOUR TESTIMONY ADDRESS EVERY DEFICIENCY IN AEP OHIO'S APPLICATION?

A8. No. My testimony focuses on three key deficiencies that I identified. My decision not to discuss other deficiencies that may exist should not be construed as agreement with those components of AEP Ohio's application.

RECOMMENDATIONS

Q9. WHAT DO YOU RECOMMEND ON THE BASIS OF THESE CONCLUSIONS?

A9. I recommend that the Commission reject AEP Ohio's ESP as filed. Modifications to the ESP rates are necessary to provide proper incentives for nonresidential demand-metered customers to control peak demands and use electricity efficiently, and to protect SSO customers from unnecessary and potentially unjustified rate increases. More specifically, I recommend that the Commission:

- Reject AEP Ohio's proposed energy-only SOGSR applicable to demand-metered general service customers, and instead require AEP Ohio to retain the current two-part demand and energy rate design for SSO generation service to these customers.
- Reject the proposed CCSR. AEP's recent decision to put the CCS project on hold implies that the project may never be commercially viable, or ever used and useful in providing service to SSO retail customers in Ohio.
- Reject AEP Ohio's request for a Pool Adjustment Provision. AEP Ohio—not SSO customers—made the decision to withdraw from the AEP Pool agreement. As a result, SSO customers should not bear the entire financial risk of AEP Ohio's potentially receiving significantly lower capacity revenue payments than it receives under the current AEP Pool agreement. Moreover, as currently proposed, the Pool Adjustment Provision not only is asymmetrically biased against SSO customers,[1] but also attempts to make a cost-based adjustment to rates that AEP Ohio repeatedly informs us are market-based rates—not cost-based rates.

[1] For example, the proposed Pool Adjustment does not allow a downward adjustment in AEP Ohio's SSO rates if its generating capacity costs go down as a result of post-pool increases in capacity revenues.

AEP OHIO'S STRUCTURAL RATE DESIGN CHANGES

Q10. HAS AEP OHIO PROPOSED SIGNIFICANT CHANGES IN THE DESIGN OF SSO GENERATION SERVICE CHARGES FOR DEMAND-METERED GENERAL SERVICE CUSTOMERS?

A10. Yes. Current SSO base generation charges for AEP Ohio's demand-metered general service customers are reflected in traditional two-part rates with separately stated demand and energy charges. In the current case, AEP Ohio has abandoned the two-part rate design and opted instead for an energy-only rate.

Q11. HOW DID AEP OHIO DEVELOP THESE ENERGY-ONLY BASE GENERATION CHARGES?

A11. AEP Ohio designed the proposed base generation charges to reflect the market price and load relationships embodied in the pricing model described by AEP Ohio's witness David M Roush.[2] The charges do not reflect the underlying cost of AEP Ohio's generating capacity used to provide the SSO generation service. Instead, they reflect AEP Ohio's analysis of implied market prices for energy to serve various types of customer loads using the methodology applied in witness Laura Thomas' development of the competitive benchmark price.

Q12. WHAT REASONS DID AEP OHIO GIVE FOR MOVING FROM TWO-PART BASE GENERATION RATES TO AN ENERGY-ONLY RATE?

A12. According to AEP Ohio's witness Roush:[3]

- Current base "generation rates reflect an amalgamation of very old cost relationships, including any historical levels of cross-subsidization among customer classes."

[2] *See* the direct testimony of David M. Roush direct at 8 - 10.

[3] *Id.* at 10.

- Proposed ESP rates reflect post-merger CSPC and OPC—that is, the proposed ESP rates attempt to produce some pricing uniformity across the post-merger companies.
- Realigning rates consistent with market prices "should provide all customers with equivalent opportunities to shop."[4]
- Eliminating explicit demand charges "should make it easier for customers to evaluate competitive offers."[5]

Q13. IS MOVING TO AN ENERGY-ONLY BASE GENERATION CHARGE NECESSARY TO ACHIEVE AEP OHIO'S RATE DESIGN OBJECTIVES?

A13. No. Consider the following:

- Since AEP Ohio's proposed base generation rates are market-based—not cost-based—they ignore cost relationships, including historical interclass subsidies. Because AEP Ohio's proposed ESP rates do nothing to address historical cost relationships, we have no way to judge whether they have a positive or negative effect on historical interclass subsidies. Moreover, AEP Ohio's generation rates are not pure market prices. They are merely the result of a fairly complex and convoluted pricing model that arbitrarily *adjusts* prices to achieve certain results—for example, adjusting market prices for different load factors on the basis of results from a simple nonlinear regression model that does a relatively poor job of explaining the relationship between load factor and market prices.[6]
- An energy-only SSO generation rate is helpful, but not essential to move toward pricing uniformity across various CSPC and OPC general service classes. AEP Ohio could have used a traditional

[4] *Id.*

[5] *Id.*

[6] *See* AEP Ohio's response to OEG 1-001, Roush Exhibits 1 to 4 and Workpapers.xls, Tab Graph.

two-part demand and energy rate to achieve movement toward pricing uniformity.

- AEP Ohio could have developed two-part base generation rates to produce results consistent with market prices for demand-metered general service customers.
- AEP Ohio has produced no evidence that its current two-part base generation rates make comparisons with competitive offers difficult.

Q14. FROM A RATE DESIGN PERSPECTIVE, IS AN ENERGY ONLY BASE GENERATION RATE BETTER THAN THE TRADITIONAL TWO-PART RATES?

A14. No. Even though capacity products in competitive markets may be priced on a volumetric basis, they reflect costs that have traditionally been classified as fixed or demand-related cost and allocated and recovered on a demand basis. Recovering such costs on a volumetric basis is fair and reasonable only if they are properly assigned to the class or classes responsible for them, and then recovered using a rate design that recognizes such factors as the relationship between demand cost responsibility and load factor. AEP Ohio has made no attempt to do a cost-based allocation of the demand component of its market-based prices. Instead, AEP Ohio has attempted to reflect cost differences among customer loads in its proposed rate design changes for generation services by adjusting the SOGSR charges for service delivery voltage (secondary, primary, and transmission), load factor, and seasonal time-of-use. However, as I noted earlier, the SOGSR base generation charges are market-based charges—not cost-based charges. As a result, AEP Ohio's load factor adjustments do not reflect its generation cost of serving different types of load. They simply reflect AEP Ohio's effort to mimic how market prices for generation products might vary by the type of load served.

Q15. DO AEP OHIO'S PROPOSED ENERGY-ONLY BASE GENERATION RATES HAVE DISPARATE IMPACTS ON CUSTOMERS?

A15. Yes. As shown in Table 1 below, by switching from the traditional two-part base generation rate for demand-metered general service customers to an energy-only rate, AEP Ohio has shifted a significant share of its estimated market-based generation costs from lower load factor to higher load factor customers. For example, average base generation charges for Rate GS-3 general service primary customers with load factors below 50 percent will fall by more than 16 percent, while increasing or decreasing by around 2 percent for higher load factor customers (for example, load factors around 75 percent).

Table 1. Base Generation Charges - AEP Ohio Rate GS-3 Primary

Company	Demand kW/Mo	Load Factor	Avg Gen Charge (¢/kWh) Present	Avg Gen Charge (¢/kWh) Proposed	Increase ¢/kWh	Increase Percent
CSP	500	48.61	2.77	2.31	(0.46)	-16.58%
		62.50	2.15	2.08	(0.07)	-3.47%
		76.39	1.76	1.79	0.02	1.38%
OPC	500	48.61	2.75	2.31	(0.45)	-16.17%
		62.50	2.18	2.08	(0.10)	-4.80%
		76.39	1.82	1.79	(0.03)	-1.86%
CSP	4,000	48.61	2.77	2.31	(0.46)	-16.58%
		62.50	2.15	2.08	(0.07)	-3.47%
		76.39	1.76	1.79	0.02	1.38%
OPC	4,000	48.61	2.75	2.31	(0.45)	-16.17%
		62.50	2.18	2.08	(0.10)	-4.80%
		76.39	1.82	1.79	(0.03)	-1.86%

Source: AEP Ohio response to Staff 2-003 Attachment 1; charges exclude annualized fuel cost additions.

Q16. ARE THESE DISPARATE BASE GENERATION RATE IMPACTS MUTED BY THE MULTITUDE OF OTHER SSO CHARGES AND RIDERS THAT AEP OHIO HAS PROPOSED IN ITS ESP?

A16. Yes. As shown in Exhibits DWG-1 and DWG-2 as well as Table 2 below, the range of disparate bill impacts is significantly reduced when most (but

not all) of AEP Ohio's proposed SSO charges and riders are reflected in bill comparisons by load factor. However, muting total bill impacts does not alter a simple fact—AEP Ohio's proposed one-part base generation charges produce disparate and unreasonable customer impacts as shown in Table 1.

Table 2. Total Bill Impacts - AEP Ohio Rate GS-3 Primary

Company	Demand kW/Mo	Load Factor	Average Cost (¢/kWh)		Increase	
			Present	Proposed	$/Mo	Percent
CSP	500	48.61	9.35	9.00	(611)	-3.58%
		62.50	8.40	8.45	167	0.85%
		76.39	7.79	7.95	514	2.32%
OPC	500	48.61	9.33	8.94	(598)	-3.51%
		62.50	8.38	8.34	46	0.24%
		76.39	7.78	7.81	259	1.17%
CSP	4,000	48.61	9.11	8.76	(3,661)	-3.62%
		62.50	8.16	8.22	1,009	0.87%
		76.39	7.56	7.72	3,093	2.36%
OPC	4,000	48.61	9.17	8.78	(3,592)	-3.54%
		62.50	8.21	8.16	273	0.23%
		76.39	7.59	7.62	1,551	1.18%

Source: Exhibits DWG-1 and DWG-2.

Q17. HAVE YOU DEVELOPED TRADITIONAL TWO-PART RATES FOR DEMAND-METERED GENERAL SERVICE CUSTOMERS THAT PRODUCE MORE REASONABLE GENERATION BASE RATE IMPACTS?

A17. No, not at this time. However, in my opinion, two-part base generation rates for demand-metered customers served by CSPC and OPC could be developed that would not result in the disparate bill impacts produced by AEP Ohio's proposed one-part, energy-only base generation rates.

Q18. SHOULD THE COMMISSION REJECT AEP OHIO'S PROPOSED BASE GENERATION RATES FOR DEMAND-METERED GENERAL SERVICE CUSTOMERS?

A18. Yes. The Commission should require AEP Ohio to retain its current two-part base generation rate design for these customers.

Q19. IF THE COMMISSION DECLINES TO CONTINUE TWO-PART DEMAND AND ENERGY GENERATION SERVICE RATES FOR AEP OHIO'S DEMAND-METERED GENERAL SERVICE CUSTOMERS, CAN YOU IDENTIFY ANOTHER PRICING MODEL USED IN OHIO THAT MIGHT BE PREFERABLE TO AEP OHIO'S MARKET-BASED PRICING APPROACH?

A19. Yes. If the Commission rejects my recommendation to continue traditional two-part SOGSR charges for AEP Ohio, then I recommend using an approach similar to the pricing model reflected in FirstEnergy's ESP to set generation prices for AEP Ohio's SSO customers. FirstEnergy's current ESP—including its generation service rider (Rider GEN)—was approved in the Commission's final order in Case No. 10-388-EL-SSO.[7] Although FirstEnergy's Rider GEN has separately stated capacity and energy components, both components are recovered on a volumetric (energy) basis. However, unlike AEP Ohio's market-based pricing model, FirstEnergy's pricing model uses publicly available and transparent loss-adjusted estimates of capacity costs from the PJM-administered Fixed Resource Requirement auctions to identify each rate class' capacity cost responsibility and to set the capacity component of Rider GEN for each rate class.

[7] The order adopted a stipulation and recommendation presented by parties in the case. *In the matter of the application and stipulation and recommendation of Ohio Edison Company, The Cleveland Electric Illuminating and The Toledo Edison Company for Authority to Establish a Standard Service Offer pursuant to R.C. 4928.143 in the Form of an Electric Security Plan,* Case No. 10-388-EL-SSO, Opinion and Order (August 25, 2010); Third Entry on Rehearing (February 9, 2011).

The transparent and explicit recognition of capacity cost differences for different load shapes in FirstEnergy's Rider GEN differs markedly from AEP Ohio's market-based pricing model, and helps to ensure that the capacity component of FirstEnergy's firm energy purchases to serve SSO customers is properly allocated to various classes. A pricing model similar to FirstEnergy's could be used to allocate demand-related capacity costs to AEP Ohio's rate classes, and to set two-part volumetric SOGSR charges for each rate group—including demand-metered general service customers. In my opinion, this pricing approach would be preferable to the market-based pricing model proposed by AEP Ohio.

OTHER ISSUES

Q20. ARE THERE OTHER ELEMENTS OF AEP OHIO'S PROPOSED ESP THAT THE COMMISSION SHOULD DENY OR MODIFY?

A20. Yes. Two elements in particular are problematic. These elements deal with AEP Ohio's proposed:

- Carbon capture and sequestration rider.
- Provision to adjust ESP rates under certain conditions related to AEP Ohio's announced withdrawal from the AEP pool.

I briefly discuss each proposal below.

CARBON CAPTURE AND SEQUESTRATION RIDER

Q21. PLEASE DESCRIBE AEP OHIO'S PROPOSED CCSR.

A21. AEP Ohio's proposed nonbypassable CCSR is designed to recover its share of the commercial scale carbon capture and sequestration coal facility being developed at APCo's Mountaineer Plant site. Cost recovery under the CCSR during the ESP will be limited to AEP Ohio's share of the project's Phase I front-end engineering and design study costs. AEP Ohio estimates that the annual revenue requirement for the FEED study is

about $1.6 million, although the estimated annual revenue requirement for the completed CCS project is around $46.1 million.[8]

Q22. WOULD THE CCSR SHIFT THE FINANCIAL RISK OF THE COMMERCIALLY UNTESTED CCS TECHNOLOGY TO SSO CUSTOMERS?

A22. Yes. Under the proposed CCSR, AEP Ohio is shifting to SSO customers its share of the financial risk of a commercially untested technology in a project that may never be completed. Moreover, AEP Ohio is asking the Commission to insulate it via a nonbypassable CCSR charge from financial risks that competing suppliers would likely find hard to pass on to customers.

Q23. WHEN WILL THE CCS PROJECT BE COMPLETED?

A23. The project was originally scheduled to begin commercial operation in 2015. However, a recent announcement by AEP implies the project will almost certainly not be commercially available by 2015, and may never be completed. On July 14, 2011, AEP announced that it:

> ...is terminating its cooperative agreement with the U.S. Department of Energy and placing its plans to advance carbon capture and storage (CCS) technology to commercial scale on hold, citing the current uncertain status of U.S. climate policy and the continued weak economy as contributors to the decision.[9]

[8] *See* the direct testimony of AEP Ohio witness Phillip J. Nelson at 21.

[9] AEP's press release is shown in Exhibit DWG-3, and can also be found at http://www.aep.com/newsroom/newsreleases/?id=1704.

Q24. IN LIGHT OF THIS ANNOUNCEMENT, SHOULD THE COMMISSION APPROVE THE CCSR?

A24. No, not at this time. The CCSR is an unnecessary part of AEP Ohio's ESP. I recommend that the Commission reject the CCSR, and examine the issue of cost recovery for the CCS project in a separate proceeding.

POOL TERMINATION OR MODIFICATION PROVISION

Q25. HAVE CSPC AND OPC ANNOUNCED THEIR WITHDRAWAL FROM THE EXISTING AEP POWER POOL AGREEMENT?

A25. Yes. In December 2010, CSPC, OPC, and the other affiliate Pool members notified each other that they were terminating the existing pool agreement in three years. AEP Ohio cannot determine at this time whether the pool members will be able to negotiate a new, replacement pool agreement, or whether they will choose to operate as standalone energy companies when the existing pool agreement expires in 2013.

Q26. WHAT ROLE DOES THE ANNOUNCED TERMINATION OF THE AEP POWER POOL AGREEMENT PLAY IN AEP OHIO'S ESP?

A26. After the CSPC and OPC merger, AEP Ohio will have a capacity surplus position in the pool, and will receive capacity payments from capacity short pool members for this surplus capacity. AEP Ohio is concerned that when the existing pool agreement expires or is replaced by a new agreement, revenues it receives for this surplus capacity may decline relative to capacity revenues it receives under the existing pool agreement. In its ESP filing, AEP Ohio describes this potential decline in capacity payment revenues as an increase in its generating costs.

Q27. HAS AEP OHIO ADDRESSED THIS POTENTIAL DECLINE IN CAPACITY PAYMENT REVENUES IN ITS ESP?

A27. Yes. AEP Ohio has proposed including in its ESP what I call a Pool Adjustment Provision. This provision is designed to protect the company from annualized declines exceeding $35 million in generating capacity revenues that result from terminating the existing pool agreement.[10] If the $35-million threshold is triggered, AEP Ohio will be allowed to increase its ESP rates—although AEP Ohio's proposal is unclear if the increase will recover the entire capacity revenue shortfall up to and exceeding $35 million, or will only recover the shortfall above $35 million.

Q28. HAS AEP OHIO SPECIFIED EXACTLY HOW THE PROPOSED POOL ADJUSTMENT PROVISION WILL WORK?

A28. No. As I just mentioned, AEP Ohio has not specified by how much ESP rates will be increased if the $35-million threshold is triggered. Similarly, AEP Ohio is silent about whether it will use the provision to lower rates if its post-pool capacity revenues exceed capacity payment revenues under the existing pool agreement. AEP Ohio acknowledges that it cannot be precise about how the provision would work because of uncertainty regarding ongoing negotiations among existing pool members, and FERC's required approval of a new pool agreement.[11]

Q29. IS THE PROPOSED POOL ADJUSTMENT PROVISION CONSISTENT WITH AEP OHIO'S EMPHASIS ON MARKET-BASED RATES?

A29. No. AEP Ohio repeatedly emphasizes in its filing and discovery responses that its ESP rates are market-based rates—not cost-based rates. Yet AEP Ohio is proposing a cost-based adjustment to its market-based ESP rates to reflect revenue impacts that may result from actions it took in December 2010—not actions taken by SSO customers.

[10] *See* Nelson direct at 28-31.

Q30. SHOULD THE COMMISSION APPROVE THE POOL ADJUSTMENT PROVISION AS PART OF AEP OHIO'S ESP?

A30. No. SSO customers should not bear the entire financial risk of AEP Ohio's potentially receiving significantly lower capacity revenue payments than it receives under the current AEP Pool agreement. Moreover, as currently proposed, the Pool Adjustment Provision is asymmetrically biased against SSO customers, and also relies on cost-based adjustments to rates that AEP Ohio repeatedly informs us are market-based rates. The Commission should reject the provision.

Q31. DOES THIS COMPLETE YOUR DIRECT TESTIMONY?

A31. Yes.

[11] *Id.* at 30:16-19.

BEFORE THE
PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to §4928.143, Ohio Rev. Code, in the Form of an Electric Security Plan	)))))	Case Nos. 11-346-EL-SSO 11-348-EL-SSO
In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Approval of Certain Accounting Authority	))))	Case Nos. 11-349-EL-AAM 11-350-EL-AAM

EXHIBITS TO THE DIRECT TESTIMONY OF DENNIS W. GOINS, PH.D. ON BEHALF OF THE OMA ENERGY GROUP

July 25, 2011

EXHIBIT DWG-1

BILL IMPACT COMPARISONS: COLUMBUS SOUTHERN POWER COMPANY

COLUMBUS SOUTHERN POWER COMPANY
Case Nos. 11-346-EL-SSO and 11-348-EL-SSO
Typical Monthly Bill Comparison
(Annualized 2012)

Rate Code	Demand kW/mo (A)	Energy kWh/mo (B)	Load Factor (C)	Current Total Bill (D)	Avg Cost ¢/kWh (E)	Proposed Total Bill (F)	Avg Cost ¢/kWh (G)	Dollar Increase (H=F-D)	% Increase (I = H÷D)
GS-2 Secondary	10	2,500	34.72	315.25	12.61	301.70	12.07	(13.55)	-4.30%
	10	3,000	41.67	365.61	12.19	348.11	11.60	(17.50)	-4.79%
	10	4,500	62.50	516.68	11.48	474.69	10.55	(41.99)	-8.13%
	50	12,500	34.72	1,522.24	12.18	1,459.59	11.68	(62.65)	-4.12%
	50	15,000	41.67	1,774.03	11.83	1,691.64	11.28	(82.39)	-4.64%
	50	22,500	62.50	2,525.21	11.22	2,320.31	10.31	(204.90)	-8.11%
	100	25,000	34.72	3,025.37	12.10	2,901.35	11.61	(124.02)	-4.10%
	100	30,000	41.67	3,526.16	11.75	3,362.65	11.21	(163.51)	-4.64%
	100	45,000	62.50	5,028.51	11.17	4,619.99	10.27	(408.52)	-8.12%
	250	62,500	34.72	7,530.58	12.05	7,222.42	11.56	(308.16)	-4.09%
	250	75,000	41.67	8,782.54	11.71	8,375.67	11.17	(406.87)	-4.63%
	250	112,500	62.50	12,538.44	11.15	11,519.04	10.24	(1,019.40)	-8.13%
	500	125,000	34.72	15,039.25	12.03	14,424.21	11.54	(615.04)	-4.09%
	500	150,000	41.67	17,543.18	11.70	16,730.71	11.15	(812.47)	-4.63%
	500	225,000	62.50	25,054.97	11.14	23,017.45	10.23	(2,037.52)	-8.13%
	750	187,500	34.72	22,547.93	12.03	21,626.00	11.53	(921.93)	-4.09%
	750	225,000	41.67	26,303.83	11.69	25,085.75	11.15	(1,218.08)	-4.63%
	750	337,500	62.50	37,571.51	11.13	34,515.86	10.23	(3,055.65)	-8.13%
	1,000	250,000	34.72	30,056.61	12.02	28,827.78	11.53	(1,228.83)	-4.09%
	1,000	300,000	41.67	35,064.47	11.69	33,440.79	11.15	(1,623.68)	-4.63%
	1,000	450,000	62.50	50,088.05	11.13	46,014.27	10.23	(4,073.78)	-8.13%
	2,000	500,000	34.72	60,091.31	12.02	57,634.94	11.53	(2,456.37)	-4.09%
	2,000	600,000	41.67	70,107.03	11.68	66,860.94	11.14	(3,246.09)	-4.63%
	2,000	900,000	62.50	100,013.51	11.11	91,867.22	10.21	(8,146.29)	-8.15%
GS-2 Primary	50	5,000	13.89	822.83	16.46	801.85	16.04	(20.98)	-2.55%
	50	8,750	24.31	1,192.64	13.63	1,153.73	13.19	(38.91)	-3.26%
	50	12,500	34.72	1,562.44	12.50	1,497.65	11.98	(64.79)	-4.15%
	50	22,500	62.50	2,544.39	11.31	2,338.84	10.39	(205.55)	-8.08%
	100	10,000	13.89	1,510.98	15.11	1,470.30	14.70	(40.68)	-2.69%
	100	17,500	24.31	2,249.19	12.85	2,172.66	12.42	(76.53)	-3.40%
	100	25,000	34.72	2,984.60	11.94	2,856.29	11.43	(128.31)	-4.30%
	100	45,000	62.50	4,945.70	10.99	4,535.87	10.08	(409.83)	-8.29%
	250	25,000	13.89	3,569.85	14.28	3,470.04	13.88	(99.81)	-2.80%
	250	43,750	24.31	5,408.37	12.36	5,218.94	11.93	(189.43)	-3.50%
	250	62,500	34.72	7,246.90	11.60	6,928.01	11.08	(318.89)	-4.40%
	250	112,500	62.50	12,149.63	10.80	11,126.97	9.89	(1,022.66)	-8.42%
	500	50,000	13.89	6,996.61	13.99	6,798.28	13.60	(198.33)	-2.83%
	500	87,500	24.31	10,673.66	12.20	10,296.06	11.77	(377.60)	-3.54%
	500	125,000	34.72	14,350.71	11.48	13,714.20	10.97	(636.51)	-4.44%
	500	225,000	62.50	24,156.18	10.74	22,112.13	9.83	(2,044.05)	-8.46%
	1,000	100,000	13.89	13,850.15	13.85	13,454.74	13.45	(395.41)	-2.85%
	1,000	175,000	24.31	21,204.25	12.12	20,450.32	11.69	(753.93)	-3.56%
	1,000	250,000	34.72	28,558.35	11.42	27,286.60	10.91	(1,271.75)	-4.45%
	1,000	450,000	62.50	48,169.28	10.70	44,082.44	9.80	(4,086.84)	-8.48%
	1,500	150,000	13.89	20,703.68	13.80	20,111.21	13.41	(592.47)	-2.86%
	1,500	262,500	24.31	31,734.83	12.09	30,604.57	11.66	(1,130.26)	-3.56%
	1,500	375,000	34.72	42,765.98	11.40	40,858.99	10.90	(1,906.99)	-4.46%
	1,500	675,000	62.50	72,182.38	10.69	66,052.76	9.79	(6,129.62)	-8.49%
	2,000	200,000	13.89	27,557.22	13.78	26,767.68	13.38	(789.54)	-2.87%
	2,000	350,000	24.31	42,265.42	12.08	40,758.83	11.65	(1,506.59)	-3.56%
	2,000	500,000	34.72	56,973.62	11.39	54,431.39	10.89	(2,542.23)	-4.46%
	2,000	900,000	62.50	96,054.80	10.67	87,882.39	9.76	(8,172.41)	-8.51%
	3,000	300,000	13.89	41,264.29	13.75	40,080.61	13.36	(1,183.68)	-2.87%
	3,000	525,000	24.31	63,326.59	12.06	61,067.34	11.63	(2,259.25)	-3.57%
	3,000	750,000	34.72	85,388.89	11.39	81,576.18	10.88	(3,812.71)	-4.47%
	3,000	1,350,000	62.50	143,136.09	10.60	130,878.12	9.69	(12,257.97)	-8.56%

Source: AEP Ohio Exhibit DMR-7 modfied

COLUMBUS SOUTHERN POWER COMPANY
Case Nos. 11-346-EL-SSO and 11-348-EL-SSO
Typical Monthly Bill Comparison
(Annualized 2012)

Rate Code	Demand kW/mo (A)	Energy kWh/mo (B)	Load Factor (C)	Current Total Bill (D)	Avg Cost ¢/kWh (E)	Proposed Total Bill (F)	Avg Cost ¢/kWh (G)	Dollar Increase (H=F-D)	% Increase (I = H÷D)
GS-3 Secondary	50	17,500	48.61	1,838.30	10.50	1,776.02	10.15	(62.28)	-3.39%
	50	22,500	62.50	2,096.37	9.32	2,111.94	9.39	15.57	0.74%
	50	27,500	76.39	2,354.45	8.56	2,404.75	8.74	50.30	2.14%
	100	35,000	48.61	3,529.24	10.08	3,405.96	9.73	(123.28)	-3.49%
	100	45,000	62.50	4,045.39	8.99	4,077.80	9.06	32.41	0.80%
	100	55,000	76.39	4,561.54	8.29	4,663.42	8.48	101.88	2.23%
	250	87,500	48.61	8,602.06	9.83	8,295.78	9.48	(306.28)	-3.56%
	250	112,500	62.50	9,892.44	8.79	9,975.37	8.87	82.93	0.84%
	250	137,500	76.39	11,182.83	8.13	11,439.43	8.32	256.60	2.29%
	500	175,000	48.61	17,056.77	9.75	16,445.47	9.40	(611.30)	-3.58%
	500	225,000	62.50	19,637.53	8.73	19,804.66	8.80	167.13	0.85%
	500	275,000	76.39	22,218.30	8.08	22,732.77	8.27	514.47	2.32%
	1,000	350,000	48.61	33,966.18	9.70	32,744.86	9.36	(1,221.32)	-3.60%
	1,000	450,000	62.50	39,127.71	8.70	39,463.24	8.77	335.53	0.86%
	1,000	550,000	76.39	44,289.25	8.05	45,319.46	8.24	1,030.21	2.33%
	2,000	700,000	48.61	67,785.00	9.68	65,343.63	9.33	(2,441.37)	-3.60%
	2,000	900,000	62.50	77,967.38	8.66	78,639.71	8.74	672.33	0.86%
	2,000	1,100,000	76.39	87,870.49	7.99	89,932.18	8.18	2,061.69	2.35%
	3,000	1,050,000	48.61	101,148.16	9.63	97,486.74	9.28	(3,661.42)	-3.62%
	3,000	1,350,000	62.50	116,002.83	8.59	117,011.96	8.67	1,009.13	0.87%
	3,000	1,650,000	76.39	130,857.50	7.93	133,950.66	8.12	3,093.16	2.36%
	4,500	1,575,000	48.61	150,774.00	9.57	145,282.50	9.22	(5,491.50)	-3.64%
	4,500	2,025,000	62.50	173,056.00	8.55	174,570.33	8.62	1,514.33	0.88%
	4,500	2,475,000	76.39	195,338.00	7.89	199,978.39	8.08	4,640.39	2.38%
GS-3 Primary	50	17,500	48.61	1,919.59	10.97	1,856.84	10.61	(62.75)	-3.27%
	50	22,500	62.50	2,171.76	9.65	2,183.70	9.71	11.94	0.55%
	50	27,500	76.39	2,423.94	8.81	2,468.94	8.98	45.00	1.86%
	100	35,000	48.61	3,525.02	10.07	3,400.79	9.72	(124.23)	-3.52%
	100	45,000	62.50	4,029.37	8.95	4,054.51	9.01	25.14	0.62%
	100	55,000	76.39	4,533.73	8.24	4,625.01	8.41	91.28	2.01%
	250	87,500	48.61	8,341.33	9.53	8,032.65	9.18	(308.68)	-3.70%
	250	112,500	62.50	9,602.21	8.54	9,666.95	8.59	64.74	0.67%
	250	137,500	76.39	10,863.09	7.90	11,093.20	8.07	230.11	2.12%
	500	175,000	48.61	16,368.51	9.35	15,752.42	9.00	(616.09)	-3.76%
	500	225,000	62.50	18,890.27	8.40	19,021.01	8.45	130.74	0.69%
	500	275,000	76.39	21,412.02	7.79	21,873.51	7.95	461.49	2.16%
	1,000	350,000	48.61	32,422.86	9.26	31,191.96	8.91	(1,230.90)	-3.80%
	1,000	450,000	62.50	37,466.38	8.33	37,729.14	8.38	262.76	0.70%
	1,000	550,000	76.39	42,509.90	7.73	43,434.14	7.90	924.24	2.17%
	2,000	700,000	48.61	64,531.58	9.22	62,071.04	8.87	(2,460.54)	-3.81%
	2,000	900,000	62.50	74,477.92	8.28	75,004.72	8.33	526.80	0.71%
	2,000	1,100,000	76.39	84,145.00	7.65	85,994.75	7.82	1,849.75	2.20%
	4,000	1,400,000	48.61	127,558.41	9.11	122,638.61	8.76	(4,919.80)	-3.86%
	4,000	1,800,000	62.50	146,892.56	8.16	147,947.42	8.22	1,054.86	0.72%
	4,000	2,200,000	76.39	166,226.70	7.56	169,927.48	7.72	3,700.78	2.23%
	8,000	2,800,000	48.61	253,053.54	9.04	243,215.20	8.69	(9,838.34)	-3.89%
	8,000	3,600,000	62.50	291,721.83	8.10	293,832.83	8.16	2,111.00	0.72%
	8,000	4,400,000	76.39	330,390.12	7.51	337,792.95	7.68	7,402.83	2.24%
	10,000	3,500,000	48.61	315,801.10	9.02	303,503.50	8.67	(12,297.60)	-3.89%
	10,000	4,500,000	62.50	364,136.47	8.09	366,775.54	8.15	2,639.07	0.72%
	10,000	5,500,000	76.39	412,471.83	7.50	421,725.69	7.67	9,253.86	2.24%

Source: AEP Ohio Exhibit DMR-7 modfied

COLUMBUS SOUTHERN POWER COMPANY
Case Nos. 11-346-EL-SSO and 11-348-EL-SSO
Typical Monthly Bill Comparison
(Annualized 2012)

Rate Code	Demand kW/mo (A)	Energy kWh/mo (B)	Load Factor (C)	Current Total Bill (D)	Avg Cost ¢/kWh (E)	Proposed Total Bill (F)	Avg Cost ¢/kWh (G)	Dollar Increase (H=F-D)	% Increase (I = H÷D)
GS-4	3,000	600,000	27.78	70,325.91	11.72	50,269.07	8.38	(20,056.84)	-28.52%
	3,000	1,200,000	55.56	97,413.43	8.12	85,362.27	7.11	(12,051.16)	-12.37%
	3,000	1,350,000	62.50	104,063.00	7.71	92,451.16	6.85	(11,611.84)	-11.16%
	3,000	1,800,000	83.33	124,011.71	6.89	111,136.49	6.17	(12,875.22)	-10.38%
	5,000	1,000,000	27.78	104,058.74	10.41	82,881.81	8.29	(21,176.93)	-20.35%
	5,000	2,000,000	55.56	148,389.20	7.42	140,555.06	7.03	(7,834.14)	-5.28%
	5,000	2,250,000	62.50	159,471.81	7.09	152,369.87	6.77	(7,101.94)	-4.45%
	5,000	3,000,000	83.33	192,719.66	6.42	183,512.09	6.12	(9,207.57)	-4.78%
	8,000	1,600,000	27.78	153,924.11	9.62	131,067.04	8.19	(22,857.07)	-14.85%
	8,000	3,200,000	55.56	224,852.84	7.03	223,344.23	6.98	(1,508.61)	-0.67%
	8,000	3,600,000	62.50	242,585.02	6.74	242,247.94	6.73	(337.08)	-0.14%
	8,000	4,800,000	83.33	295,781.58	6.16	292,075.48	6.08	(3,706.10)	-1.25%
	10,000	2,000,000	27.78	187,167.69	9.36	163,190.53	8.16	(23,977.16)	-12.81%
	10,000	4,000,000	55.56	275,828.60	6.90	278,537.02	6.96	2,708.42	0.98%
	10,000	4,500,000	62.50	297,993.83	6.62	302,166.65	6.71	4,172.82	1.40%
	10,000	6,000,000	83.33	364,489.52	6.07	364,451.08	6.07	(38.44)	-0.01%
	15,000	3,000,000	27.78	270,276.64	9.01	243,499.24	8.12	(26,777.40)	-9.91%
	15,000	6,000,000	55.56	403,268.01	6.72	416,518.98	6.94	13,250.97	3.29%
	15,000	6,750,000	62.50	436,515.86	6.47	451,963.42	6.70	15,447.56	3.54%
	15,000	9,000,000	83.33	536,259.39	5.96	545,390.07	6.06	9,130.68	1.70%
	20,000	4,000,000	27.78	353,385.58	8.83	323,807.96	8.10	(29,577.62)	-8.37%
	20,000	8,000,000	55.56	530,707.42	6.63	554,500.94	6.93	23,793.52	4.48%
	20,000	9,000,000	62.50	575,037.88	6.39	601,760.20	6.69	26,722.32	4.65%
	20,000	12,000,000	83.33	708,029.25	5.90	726,329.06	6.05	18,299.81	2.58%
	30,000	6,000,000	27.78	519,603.48	8.66	484,425.39	8.07	(35,178.09)	-6.77%
	30,000	12,000,000	55.56	785,586.23	6.55	830,464.86	6.92	44,878.63	5.71%
	30,000	13,500,000	62.50	852,081.92	6.31	901,353.75	6.68	49,271.83	5.78%
	30,000	18,000,000	83.33	1,051,568.99	5.84	1,088,207.04	6.05	36,638.05	3.48%

Source: AEP Ohio Exhibit DMR-7 modified

EXHIBIT DWG-2

BILL IMPACT COMPARISONS: OHIO POWER COMPANY

OHIO POWER COMPANY
Case Nos. 11-346-EL-SSO and 11-348-EL-SSO
Typical Monthly Bill Comparison
(Annualized 2012)

Rate Code	Demand kW/mo (A)	Energy kWh/mo (B)	Load Factor (C)	Current Total Bill (D)	Avg Cost ¢/kWh (E)	Proposed Total Bill (F)	Avg Cost ¢/kWh (G)	Dollar Increase (H=F-D)	% Increase (I = H÷D)
GS-2	10	1,000	13.89	149.78	14.98	153.17	15.32	3.39	2.26%
Secondary	10	2,000	27.78	233.59	11.68	238.51	11.93	4.91	2.10%
	10	3,000	41.67	316.95	10.56	320.08	10.67	3.14	0.99%
	25	2,500	13.89	334.90	13.40	341.88	13.68	6.98	2.08%
	25	5,000	27.78	543.29	10.87	554.08	11.08	10.79	1.99%
	25	7,500	41.67	751.67	10.02	758.02	10.11	6.35	0.84%
	50	5,000	13.89	642.68	12.85	655.63	13.11	12.95	2.02%
	50	10,000	27.78	1,059.45	10.59	1,080.02	10.80	20.57	1.94%
	50	15,000	41.67	1,476.22	9.84	1,487.91	9.92	11.69	0.79%
	75	7,500	13.89	950.46	12.67	969.39	12.93	18.93	1.99%
	75	15,000	27.78	1,575.61	10.50	1,605.97	10.71	30.36	1.93%
	75	22,500	41.67	2,196.57	9.76	2,213.61	9.84	17.04	0.78%
	100	10,000	13.89	1,258.23	12.58	1,283.14	12.83	24.91	1.98%
	100	20,000	27.78	2,088.97	10.44	2,129.12	10.65	40.15	1.92%
	100	30,000	41.67	2,916.92	9.72	2,939.30	9.80	22.39	0.77%
	200	20,000	13.89	2,486.54	12.43	2,535.36	12.68	48.82	1.96%
	200	40,000	27.78	4,142.42	10.36	4,221.72	10.55	79.30	1.91%
	200	60,000	41.67	5,798.31	9.66	5,842.08	9.74	43.77	0.75%
	500	50,000	13.89	6,163.06	12.33	6,283.60	12.57	120.54	1.96%
	500	100,000	27.78	10,302.77	10.30	10,499.51	10.50	196.74	1.91%
	500	150,000	41.67	14,442.48	9.63	14,550.41	9.70	107.93	0.75%
	1,000	100,000	13.89	12,290.60	12.29	12,530.67	12.53	240.08	1.95%
	1,000	200,000	27.78	20,570.01	10.29	20,962.50	10.48	392.49	1.91%
	1,000	300,000	41.67	28,849.43	9.62	29,064.29	9.69	214.86	0.74%
	3,000	300,000	13.89	36,800.73	12.27	37,518.96	12.51	718.23	1.95%
	3,000	600,000	27.78	61,638.99	10.27	62,814.45	10.47	1,175.46	1.91%
	3,000	900,000	41.67	86,315.98	9.59	86,958.56	9.66	642.58	0.74%
	7,000	700,000	13.89	85,821.01	12.26	87,495.54	12.50	1,674.53	1.95%
	7,000	1,400,000	27.78	142,412.22	10.17	145,153.63	10.37	2,741.41	1.92%
	7,000	2,100,000	41.67	198,683.32	9.46	200,181.33	9.53	1,498.02	0.75%
GS-2	10	1,000	13.89	221.84	22.18	224.76	22.48	2.91	1.31%
Primary	10	2,000	27.78	303.83	15.19	307.82	15.39	3.99	1.31%
	10	3,000	41.67	385.36	12.85	387.24	12.91	1.88	0.49%
	25	2,500	13.89	390.57	15.62	396.35	15.85	5.79	1.48%
	25	5,000	27.78	594.38	11.89	602.86	12.06	8.48	1.43%
	25	7,500	41.67	798.20	10.64	801.40	10.69	3.20	0.40%
	50	5,000	13.89	671.01	13.42	681.58	13.63	10.57	1.58%
	50	10,000	27.78	1,078.64	10.79	1,094.60	10.95	15.95	1.48%
	50	15,000	41.67	1,486.28	9.91	1,491.68	9.94	5.40	0.36%
	75	7,500	13.89	951.45	12.69	966.81	12.89	15.36	1.61%
	75	15,000	27.78	1,562.90	10.42	1,586.33	10.58	23.43	1.50%
	75	22,500	41.67	2,170.16	9.65	2,177.76	9.68	7.61	0.35%
	100	10,000	13.89	1,231.89	12.32	1,252.04	12.52	20.15	1.64%
	100	20,000	27.78	2,044.36	10.22	2,075.27	10.38	30.91	1.51%
	100	30,000	41.67	2,854.04	9.51	2,863.84	9.55	9.81	0.34%
	200	20,000	13.89	2,350.85	11.75	2,390.15	11.95	39.30	1.67%
	200	40,000	27.78	3,970.20	9.93	4,031.01	10.08	60.81	1.53%
	200	60,000	41.67	5,589.55	9.32	5,608.16	9.35	18.61	0.33%
	500	50,000	13.89	5,699.33	11.40	5,796.07	11.59	96.74	1.70%
	500	100,000	27.78	9,747.70	9.75	9,898.24	9.90	150.54	1.54%
	500	150,000	41.67	13,796.07	9.20	13,841.11	9.23	45.04	0.33%
	1,000	100,000	13.89	11,280.14	11.28	11,472.62	11.47	192.49	1.71%
	1,000	200,000	27.78	19,376.88	9.69	19,676.95	9.84	300.07	1.55%
	1,000	300,000	41.67	27,473.62	9.16	27,562.70	9.19	89.07	0.32%
	3,000	300,000	13.89	33,603.36	11.20	34,178.82	11.39	575.46	1.71%
	3,000	600,000	27.78	57,893.59	9.65	58,791.81	9.80	898.22	1.55%
	3,000	900,000	41.67	82,022.56	9.11	82,287.78	9.14	265.22	0.32%
	7,000	700,000	13.89	78,249.81	11.18	79,591.21	11.37	1,341.40	1.71%
	7,000	1,400,000	27.78	133,562.30	9.54	135,656.81	9.69	2,094.51	1.57%
	7,000	2,100,000	41.67	188,554.67	8.98	189,172.18	9.01	617.51	0.33%

Source: AEP Ohio Exhibit DMR-7 modified

OHIO POWER COMPANY
Case Nos. 11-346-EL-SSO and 11-348-EL-SSO
Typical Monthly Bill Comparison
(Annualized 2012)

Rate Code	Demand kW/mo (A)	Energy kWh/mo (B)	Load Factor (C)	Current Total Bill (D)	Avg Cost ¢/kWh (E)	Proposed Total Bill (F)	Avg Cost ¢/kWh (G)	Dollar Increase (H=F-D)	% Increase (I = H÷D)
GS-2	10	1,000	13.89	418.14	41.81	420.96	42.10	2.81	0.67%
Subtransmission	10	2,000	27.78	498.95	24.95	502.75	25.14	3.80	0.76%
	10	3,000	41.67	579.29	19.31	580.97	19.37	1.67	0.29%
	25	2,500	13.89	578.27	23.13	583.80	23.35	5.53	0.96%
	25	5,000	27.78	779.13	15.58	787.14	15.74	8.01	1.03%
	25	7,500	41.67	980.00	13.07	982.68	13.10	2.68	0.27%
	50	5,000	13.89	844.39	16.89	854.45	17.09	10.06	1.19%
	50	10,000	27.78	1,246.11	12.46	1,261.13	12.61	15.01	1.20%
	50	15,000	41.67	1,647.84	10.99	1,652.20	11.01	4.37	0.26%
	75	7,500	13.89	1,110.51	14.81	1,125.10	15.00	14.59	1.31%
	75	15,000	27.78	1,713.09	11.42	1,735.11	11.57	22.02	1.29%
	75	22,500	41.67	2,311.48	10.27	2,317.53	10.30	6.05	0.26%
	100	10,000	13.89	1,376.62	13.77	1,395.74	13.96	19.12	1.39%
	100	20,000	27.78	2,177.27	10.89	2,206.30	11.03	29.03	1.33%
	100	30,000	41.67	2,975.12	9.92	2,982.85	9.94	7.73	0.26%
	200	20,000	13.89	2,438.29	12.19	2,475.53	12.38	37.24	1.53%
	200	40,000	27.78	4,033.98	10.08	4,091.04	10.23	57.05	1.41%
	200	60,000	41.67	5,629.68	9.38	5,644.14	9.41	14.46	0.26%
	500	50,000	13.89	5,614.89	11.23	5,706.50	11.41	91.61	1.63%
	500	100,000	27.78	9,604.12	9.60	9,745.26	9.75	141.13	1.47%
	500	150,000	41.67	13,593.36	9.06	13,628.02	9.09	34.66	0.25%
	1,000	100,000	13.89	10,909.22	10.91	11,091.44	11.09	182.21	1.67%
	1,000	200,000	27.78	18,887.69	9.44	19,168.96	9.58	281.27	1.49%
	1,000	300,000	41.67	26,866.16	8.96	26,934.48	8.98	68.32	0.25%
	3,000	300,000	13.89	32,086.56	10.70	32,631.20	10.88	544.64	1.70%
	3,000	600,000	27.78	56,021.97	9.34	56,863.77	9.48	841.81	1.50%
	3,000	900,000	41.67	79,796.11	8.87	79,999.06	8.89	202.95	0.25%
	7,000	700,000	13.89	74,441.22	10.63	75,710.73	10.82	1,269.50	1.71%
	7,000	1,400,000	27.78	128,925.80	9.21	130,888.68	9.35	1,962.88	1.52%
	7,000	2,100,000	41.67	183,090.25	8.72	183,562.48	8.74	472.22	0.26%
GS-3	10	3,500	48.61	369.19	10.55	358.21	10.23	(10.98)	-2.97%
Secondary	10	4,500	62.50	421.07	9.36	422.97	9.40	1.91	0.45%
	10	5,500	76.39	472.94	8.60	479.11	8.71	6.17	1.30%
	25	8,750	48.61	882.29	10.08	853.34	9.75	(28.94)	-3.28%
	25	11,250	62.50	1,011.98	9.00	1,015.24	9.02	3.26	0.32%
	25	13,750	76.39	1,141.67	8.30	1,155.58	8.40	13.92	1.22%
	50	17,500	48.61	1,736.05	9.92	1,677.16	9.58	(58.88)	-3.39%
	50	22,500	62.50	1,992.63	8.86	1,998.16	8.88	5.53	0.28%
	50	27,500	76.39	2,249.21	8.18	2,276.04	8.28	26.83	1.19%
	75	26,250	48.61	2,586.31	9.85	2,497.48	9.51	(88.82)	-3.43%
	75	33,750	62.50	2,971.18	8.80	2,978.97	8.83	7.79	0.26%
	75	41,250	76.39	3,356.05	8.14	3,395.80	8.23	39.75	1.18%
	100	35,000	48.61	3,436.56	9.82	3,317.80	9.48	(118.77)	-3.46%
	100	45,000	62.50	3,949.73	8.78	3,959.78	8.80	10.06	0.25%
	100	55,000	76.39	4,462.89	8.11	4,515.55	8.21	52.66	1.18%
	200	70,000	48.61	6,837.60	9.77	6,599.07	9.43	(238.53)	-3.49%
	200	90,000	62.50	7,863.93	8.74	7,883.04	8.76	19.11	0.24%
	200	110,000	76.39	8,890.26	8.08	8,994.58	8.18	104.32	1.17%
	500	175,000	48.61	17,040.72	9.74	16,442.89	9.40	(597.83)	-3.51%
	500	225,000	62.50	19,606.53	8.71	19,652.82	8.73	46.28	0.24%
	500	275,000	76.39	22,172.35	8.06	22,431.66	8.16	259.31	1.17%
	1,000	350,000	48.61	34,045.91	9.73	32,849.26	9.39	(1,196.66)	-3.51%
	1,000	450,000	62.50	39,177.54	8.71	39,269.11	8.73	91.57	0.23%
	1,000	550,000	76.39	44,309.17	8.06	44,826.79	8.15	517.62	1.17%
	3,000	1,050,000	48.61	101,544.39	9.67	97,952.42	9.33	(3,591.97)	-3.54%
	3,000	1,350,000	62.50	116,217.21	8.61	116,489.91	8.63	272.70	0.23%
	3,000	1,650,000	76.39	130,890.03	7.93	132,440.88	8.03	1,550.85	1.18%
	7,000	2,450,000	48.61	234,216.27	9.56	225,833.68	9.22	(8,382.59)	-3.58%
	7,000	3,150,000	62.50	268,452.86	8.52	269,087.82	8.54	634.96	0.24%
	7,000	3,850,000	76.39	302,689.45	7.86	306,306.77	7.96	3,617.32	1.20%

Source: AEP Ohio Exhibit DMR-7 modified

OHIO POWER COMPANY
Case Nos. 11-346-EL-SSO and 11-348-EL-SSO
Typical Monthly Bill Comparison
(Annualized 2012)

Rate Code	Demand kW/mo (A)	Energy kWh/mo (B)	Load Factor (C)	Current Total Bill (D)	Avg Cost ¢/kWh (E)	Proposed Total Bill (F)	Avg Cost ¢/kWh (G)	Dollar Increase (H=F-D)	% Increase (I = H÷D)
GS-3	10	3,500	48.61	436.30	12.47	423.55	12.10	(12.76)	-2.92%
Primary	10	4,500	62.50	487.41	10.83	486.49	10.81	(0.92)	-0.19%
	10	5,500	76.39	538.51	9.79	541.11	9.84	2.60	0.48%
	25	8,750	48.61	925.57	10.58	892.18	10.20	(33.40)	-3.61%
	25	11,250	62.50	1,053.33	9.36	1,049.54	9.33	(3.80)	-0.36%
	25	13,750	76.39	1,181.10	8.59	1,186.10	8.63	5.00	0.42%
	50	17,500	48.61	1,739.62	9.94	1,671.83	9.55	(67.79)	-3.90%
	50	22,500	62.50	1,992.34	8.85	1,983.75	8.82	(8.59)	-0.43%
	50	27,500	76.39	2,245.07	8.16	2,254.07	8.20	9.00	0.40%
	75	26,250	48.61	2,550.17	9.71	2,447.98	9.33	(102.19)	-4.01%
	75	33,750	62.50	2,929.25	8.68	2,915.87	8.64	(13.39)	-0.46%
	75	41,250	76.39	3,308.34	8.02	3,321.34	8.05	13.00	0.39%
	100	35,000	48.61	3,360.71	9.60	3,224.13	9.21	(136.58)	-4.06%
	100	45,000	62.50	3,866.16	8.59	3,847.98	8.55	(18.18)	-0.47%
	100	55,000	76.39	4,371.61	7.95	4,388.61	7.98	17.00	0.39%
	200	70,000	48.61	6,602.90	9.43	6,328.73	9.04	(274.17)	-4.15%
	200	90,000	62.50	7,613.80	8.46	7,576.43	8.42	(37.36)	-0.49%
	200	110,000	76.39	8,624.69	7.84	8,657.70	7.87	33.01	0.38%
	500	175,000	48.61	16,329.46	9.33	15,642.54	8.94	(686.92)	-4.21%
	500	225,000	62.50	18,856.70	8.38	18,761.80	8.34	(94.90)	-0.50%
	500	275,000	76.39	21,383.94	7.78	21,464.96	7.81	81.02	0.38%
	1,000	350,000	48.61	32,540.39	9.30	31,165.55	8.90	(1,374.84)	-4.23%
	1,000	450,000	62.50	37,594.87	8.35	37,404.07	8.31	(190.81)	-0.51%
	1,000	550,000	76.39	42,649.36	7.75	42,810.40	7.78	161.04	0.38%
	4,000	1,400,000	48.61	128,441.26	9.17	122,938.89	8.78	(5,502.37)	-4.28%
	4,000	1,800,000	62.50	147,696.45	8.21	146,930.22	8.16	(766.23)	-0.52%
	4,000	2,200,000	76.39	166,951.63	7.59	167,592.78	7.62	641.15	0.38%
	7,000	2,450,000	48.61	223,179.61	9.11	213,549.71	8.72	(9,629.90)	-4.31%
	7,000	3,150,000	62.50	256,876.18	8.15	255,534.53	8.11	(1,341.65)	-0.52%
	7,000	3,850,000	76.39	290,572.75	7.55	291,694.02	7.58	1,121.27	0.39%
GS-3	10	3,500	48.61	629.10	17.97	616.55	17.62	(12.55)	-2.00%
Subtransmission	10	4,500	62.50	679.66	15.10	678.48	15.08	(1.18)	-0.17%
	10	5,500	76.39	730.22	13.28	732.27	13.31	2.04	0.28%
	25	8,750	48.61	1,104.52	12.62	1,071.63	12.25	(32.88)	-2.98%
	25	11,250	62.50	1,230.92	10.94	1,226.48	10.90	(4.44)	-0.36%
	25	13,750	76.39	1,357.32	9.87	1,360.93	9.90	3.61	0.27%
	50	17,500	48.61	1,895.48	10.83	1,828.71	10.45	(66.77)	-3.52%
	50	22,500	62.50	2,145.48	9.54	2,135.60	9.49	(9.88)	-0.46%
	50	27,500	76.39	2,395.49	8.71	2,401.71	8.73	6.22	0.26%
	75	26,250	48.61	2,682.94	10.22	2,582.29	9.84	(100.65)	-3.75%
	75	33,750	62.50	3,057.94	9.06	3,042.62	9.02	(15.32)	-0.50%
	75	41,250	76.39	3,432.95	8.32	3,441.79	8.34	8.83	0.26%
	100	35,000	48.61	3,470.40	9.92	3,335.86	9.53	(134.53)	-3.88%
	100	45,000	62.50	3,970.41	8.82	3,949.64	8.78	(20.77)	-0.52%
	100	55,000	76.39	4,470.42	8.13	4,481.86	8.15	11.45	0.26%
	200	70,000	48.61	6,620.23	9.46	6,350.17	9.07	(270.06)	-4.08%
	200	90,000	62.50	7,620.26	8.47	7,577.73	8.42	(42.53)	-0.56%
	200	110,000	76.39	8,620.28	7.84	8,642.17	7.86	21.89	0.25%
	500	175,000	48.61	16,069.75	9.18	15,393.09	8.80	(676.66)	-4.21%
	500	225,000	62.50	18,569.81	8.25	18,461.98	8.21	(107.83)	-0.58%
	500	275,000	76.39	21,069.87	7.66	21,123.09	7.68	53.23	0.25%
	1,000	350,000	48.61	31,818.95	9.09	30,464.62	8.70	(1,354.32)	-4.26%
	1,000	450,000	62.50	36,819.06	8.18	36,602.40	8.13	(216.66)	-0.59%
	1,000	550,000	76.39	41,819.18	7.60	41,924.63	7.62	105.46	0.25%
	3,000	1,050,000	48.61	94,293.43	8.98	90,228.46	8.59	(4,064.97)	-4.31%
	3,000	1,350,000	62.50	108,571.71	8.04	107,919.73	7.99	(651.98)	-0.60%
	3,000	1,650,000	76.39	122,849.98	7.45	123,164.35	7.46	314.37	0.26%
	7,000	2,450,000	48.61	216,917.34	8.85	207,431.07	8.47	(9,486.27)	-4.37%
	7,000	3,150,000	62.50	250,233.31	7.94	248,710.69	7.90	(1,522.62)	-0.61%
	7,000	3,850,000	76.39	283,549.28	7.36	284,281.47	7.38	732.19	0.26%

Source: AEP Ohio Exhibit DMR-7 modified

OHIO POWER COMPANY
Case Nos. 11-346-EL-SSO and 11-348-EL-SSO
Typical Monthly Bill Comparison
(Annualized 2012)

Rate Code	Demand kW/mo (A)	Energy kWh/mo (B)	Load Factor (C)	Current Total Bill (D)	Avg Cost ¢/kWh (E)	Proposed Total Bill (F)	Avg Cost ¢/kWh (G)	Dollar Increase (H=F-D)	% Increase (I = H÷D)
GS-4	3,000	1,200,000	55.56	100,425.38	8.37	98,776.58	8.23	(1,648.80)	-1.64%
Primary	3,000	1,500,000	69.44	113,520.48	7.57	114,917.53	7.66	1,397.05	1.23%
	3,000	1,800,000	83.33	126,615.58	7.03	128,426.19	7.13	1,810.61	1.43%
	5,000	2,000,000	55.56	165,909.02	8.30	163,160.35	8.16	(2,748.67)	-1.66%
	5,000	2,250,000	62.50	176,821.60	7.86	176,611.14	7.85	(210.46)	-0.12%
	5,000	3,000,000	83.33	209,559.35	6.99	212,576.37	7.09	3,017.02	1.44%
	8,000	3,200,000	55.56	264,134.48	8.25	259,736.01	8.12	(4,398.47)	-1.67%
	8,000	3,600,000	62.50	281,594.61	7.82	281,257.27	7.81	(337.34)	-0.12%
	8,000	4,800,000	83.33	333,975.01	6.96	338,801.63	7.06	4,826.63	1.45%
	20,000	8,000,000	55.56	657,036.31	8.21	646,038.64	8.08	(10,997.67)	-1.67%
	20,000	10,000,000	69.44	744,336.98	7.44	753,644.97	7.54	9,307.99	1.25%
	20,000	12,000,000	83.33	831,637.64	6.93	843,702.71	7.03	12,065.07	1.45%
	50,000	20,000,000	55.56	1,639,290.91	8.20	1,611,795.23	8.06	(27,495.68)	-1.68%
	50,000	22,500,000	62.50	1,748,416.74	7.77	1,746,303.14	7.76	(2,113.60)	-0.12%
	50,000	30,000,000	83.33	2,075,794.23	6.92	2,105,955.40	7.02	30,161.17	1.45%
	125,000	50,000,000	55.56	4,094,927.39	8.19	4,026,186.69	8.05	(68,740.70)	-1.68%
	125,000	56,250,000	62.50	4,367,741.96	7.76	4,362,456.47	7.76	(5,285.49)	-0.12%
	125,000	75,000,000	83.33	5,186,185.69	6.91	5,261,587.11	7.02	75,401.42	1.45%
GS-4	3,000	1,200,000	55.56	93,694.72	7.81	91,925.31	7.66	(1,769.41)	-1.89%
Subtransmission	3,000	1,350,000	62.50	100,173.30	7.42	99,856.94	7.40	(316.36)	-0.32%
	3,000	1,800,000	83.33	119,609.06	6.64	121,070.49	6.73	1,461.43	1.22%
	5,000	2,000,000	55.56	154,487.40	7.72	151,537.72	7.58	(2,949.68)	-1.91%
	5,000	2,250,000	62.50	165,285.04	7.35	164,757.10	7.32	(527.93)	-0.32%
	5,000	3,000,000	83.33	197,677.96	6.59	200,113.02	6.67	2,435.06	1.23%
	8,000	3,200,000	55.56	245,676.42	7.68	240,956.34	7.53	(4,720.08)	-1.92%
	8,000	3,600,000	62.50	262,952.64	7.30	262,107.35	7.28	(845.30)	-0.32%
	8,000	4,800,000	83.33	314,781.32	6.56	318,676.82	6.64	3,895.49	1.24%
	20,000	8,000,000	55.56	610,432.50	7.63	598,630.79	7.48	(11,801.70)	-1.93%
	20,000	9,000,000	62.50	653,623.06	7.26	651,508.32	7.24	(2,114.74)	-0.32%
	20,000	12,000,000	83.33	783,194.76	6.53	792,931.99	6.61	9,737.23	1.24%
	50,000	20,000,000	55.56	1,522,322.69	7.61	1,492,816.94	7.46	(29,505.76)	-1.94%
	50,000	22,500,000	62.50	1,630,299.11	7.25	1,625,010.76	7.22	(5,288.35)	-0.32%
	50,000	30,000,000	83.33	1,954,228.36	6.51	1,978,569.93	6.60	24,341.57	1.25%
	125,000	50,000,000	55.56	3,802,048.19	7.60	3,728,282.29	7.46	(73,765.90)	-1.94%
	125,000	56,250,000	62.50	4,071,989.23	7.24	4,058,766.86	7.22	(13,222.37)	-0.32%
	125,000	75,000,000	83.33	4,881,812.35	6.51	4,942,664.78	6.59	60,852.42	1.25%
GS-4	3,000	1,200,000	55.56	90,765.61	7.56	89,574.66	7.46	(1,190.95)	-1.31%
Transmission	3,000	1,350,000	62.50	97,237.81	7.20	97,506.29	7.22	268.49	0.28%
	3,000	1,800,000	83.33	116,654.39	6.48	118,719.84	6.60	2,065.45	1.77%
	5,000	2,000,000	55.56	149,525.47	7.48	147,539.90	7.39	(1,985.58)	-1.33%
	5,000	2,250,000	62.50	160,312.47	7.12	160,759.28	7.14	446.81	0.28%
	5,000	3,000,000	83.33	192,673.44	6.42	196,115.20	6.54	3,441.76	1.79%
	8,000	3,200,000	55.56	237,665.27	7.43	234,487.74	7.33	(3,177.53)	-1.34%
	8,000	3,600,000	62.50	254,924.46	7.08	255,638.76	7.10	714.30	0.28%
	8,000	4,800,000	83.33	306,702.02	6.39	312,208.22	6.50	5,506.21	1.80%
	20,000	8,000,000	55.56	590,224.45	7.38	582,279.14	7.28	(7,945.31)	-1.35%
	20,000	9,000,000	62.50	633,372.41	7.04	635,156.67	7.06	1,784.25	0.28%
	20,000	12,000,000	83.33	762,816.31	6.36	776,580.33	6.47	13,764.02	1.80%
	50,000	20,000,000	55.56	1,471,622.40	7.36	1,451,757.61	7.26	(19,864.78)	-1.35%
	50,000	22,500,000	62.50	1,579,492.31	7.02	1,583,951.44	7.04	4,459.13	0.28%
	50,000	30,000,000	83.33	1,903,102.06	6.34	1,937,510.61	6.46	34,408.55	1.81%
	125,000	50,000,000	55.56	3,675,117.27	7.35	3,625,453.81	7.25	(49,663.46)	-1.35%
	125,000	56,250,000	62.50	3,944,792.06	7.01	3,955,938.38	7.03	11,146.32	0.28%
	125,000	75,000,000	83.33	4,753,816.42	6.34	4,839,836.30	6.45	86,019.88	1.81%

Source: AEP Ohio Exhibit DMR-7 modified

EXHIBIT DWG-3

AEP JULY 14, 2011 PRESS RELEASE REGARDING ITS CARBON CAPTURE AND SEQUESTRATION PROJECT

AMERICAN ELECTRIC POWER

NEWS from AEP

MEDIA CONTACT:
Pat D. Hemlepp
Director, Corporate Media Relations
614/716-1620

ANALYSTS CONTACT:
Julie Sherwood
Director, Investor Relations
614/716-2663

FOR IMMEDIATE RELEASE

AEP PLACES CARBON CAPTURE COMMERCIALIZATION ON HOLD, CITING UNCERTAIN STATUS OF CLIMATE POLICY, WEAK ECONOMY

COLUMBUS, Ohio, July 14, 2011 – American Electric Power (NYSE: AEP) is terminating its cooperative agreement with the U.S. Department of Energy and placing its plans to advance carbon dioxide capture and storage (CCS) technology to commercial scale on hold, citing the current uncertain status of U.S. climate policy and the continued weak economy as contributors to the decision.

"We are placing the project on hold until economic and policy conditions create a viable path forward," said Michael G. Morris, AEP chairman and chief executive officer. "With the help of Alstom, the Department of Energy and other partners, we have advanced CCS technology more than any other power generator with our successful two-year project to validate the technology. But at this time it doesn't make economic sense to continue work on the commercial-scale CCS project beyond the current engineering phase.

"We are clearly in a classic 'which comes first?' situation," Morris said. "The commercialization of this technology is vital if owners of coal-fueled generation are to comply with potential future climate regulations without prematurely retiring efficient, cost-effective generating capacity. But as a regulated utility, it is impossible to gain regulatory approval to recover our share of the costs for validating and deploying the technology without federal requirements to reduce greenhouse gas emissions already in place. The uncertainty also makes it difficult to attract partners to help fund the industry's share."

In 2009, AEP was selected by the Department of Energy (DOE) to receive funding of up to $334 million through the Clean Coal Power Initiative to pay part of the costs for installation of a commercial-scale CCS system at AEP's Mountaineer coal-fueled power plant in New Haven, W.Va. The system would capture at least 90 percent of the carbon dioxide (CO2) from 235 megawatts of the plant's 1,300 megawatts of capacity. The captured CO2, approximately 1.5

million metric tons per year, would be treated and compressed, then injected into suitable geologic formations for permanent storage approximately 1.5 miles below the surface.

Plans were for the project to be completed in four phases, with the system to begin commercial operation in 2015. AEP has informed the DOE that it will complete the first phase of the project (front-end engineering and design, development of an environmental impact statement and development of a detailed Phase II and Phase III schedule) but will not move to the second phase.

DOE's share of the cost for completion of the first phase is expected to be approximately $16 million, half the expenses that qualify under the DOE agreement.

AEP and partner Alstom began operating a smaller-scale validation of the technology in October 2009 at the Mountaineer Plant, the first fully-integrated capture and storage facility in the world. That system captured up to 90 percent of the CO2 from a slipstream of flue gas equivalent to 20 megawatts of generating capacity and injected it into suitable geologic formations for permanent storage approximately 1.5 miles below the surface. The validation project, which received no federal funds, was closed as planned in May after meeting project goals. Between October 2009 and May 2011, the life of the validation project, the CCS system operated more than 6,500 hours, captured more than 50,000 metric tons of CO2 and permanently stored more than 37,000 metric tons of CO2.

"The lessons we learned from the validation project were incorporated into the Phase I engineering for the commercial-scale project," Morris said.

American Electric Power is one of the largest electric utilities in the United States, delivering electricity to more than 5 million customers in 11 states. AEP ranks among the nation's largest generators of electricity, owning nearly 38,000 megawatts of generating capacity in the U.S. AEP also owns the nation's largest electricity transmission system, a nearly 39,000-mile network that includes more 765-kilovolt extra-high voltage transmission lines than all other U.S. transmission systems combined. AEP's transmission system directly or indirectly serves about 10 percent of the electricity demand in the Eastern Interconnection, the interconnected transmission system that covers 38 eastern and central U.S. states and eastern Canada, and approximately 11 percent of the electricity demand in ERCOT, the transmission system that covers much of Texas. AEP's utility units operate as AEP Ohio, AEP Texas, Appalachian Power (in Virginia and West Virginia), AEP Appalachian Power (in Tennessee), Indiana Michigan Power, Kentucky Power, Public Service Company of Oklahoma, and Southwestern Electric Power Company (in Arkansas, Louisiana and east Texas). AEP's headquarters are in Columbus, Ohio.

---

expectations are based on reasonable assumptions, any such statements may be influenced by factors that could cause actual outcomes and results to be materially different from those projected. Among the factors that could cause actual results to differ materially from those in the forward-looking statements are: the economic climate and growth in, or contraction within, AEP's service territory and changes in market demand and demographic patterns; inflationary or deflationary interest rate trends; volatility in the financial markets, particularly developments affecting the availability of capital on reasonable terms and developments impairing AEP's ability to finance new capital projects and refinance existing debt at attractive rates; the availability and cost of funds to finance working capital and capital needs, particularly during periods when the time lag between incurring costs and recovery is long and the costs are material; electric load and customer growth; weather conditions, including storms, and AEP's ability to recover significant storm restoration costs through applicable rate mechanisms; available sources and costs of, and transportation for, fuels and the creditworthiness and performance of fuel suppliers and transporters; availability of necessary generating capacity and the performance of AEP's generating plants; AEP's ability to recover Indiana Michigan Power's Donald C. Cook Nuclear Plant Unit 1 restoration costs through warranty, insurance and the regulatory process; AEP's ability to recover regulatory assets and stranded costs in connection with deregulation; AEP's ability to recover increases in fuel and other energy costs through regulated or competitive electric rates; AEP's ability to build or acquire generating capacity, including the Turk Plant, and transmission line facilities (including the ability to obtain any necessary regulatory approvals and permits) when needed at acceptable prices and terms and to recover those costs (including the costs of projects that are cancelled) through applicable rate cases or competitive rates; new legislation, litigation and government regulation, including requirements for reduced emissions of sulfur, nitrogen, mercury, carbon, soot or particulate matter and other substances or additional regulation of fly ash and similar combustion products that could impact the continued operation and cost recovery of AEP's plants; timing and resolution of pending and future rate cases, negotiations and other regulatory decisions (including rate or other recovery of new investments in generation, distribution and transmission service and environmental compliance); resolution of litigation (including AEP's dispute with Bank of America); AEP's ability to constrain operation and maintenance costs; AEP's ability to develop and execute a strategy based on a view regarding prices of electricity, natural gas and other energy-related commodities; changes in the creditworthiness of the counterparties with whom AEP has contractual arrangements, including participants in the energy trading market; actions of rating agencies, including changes in the ratings of debt; volatility and changes in markets for electricity, natural gas, coal, nuclear fuel and other energy-related commodities; changes in utility regulation, including the implementation of electric security plans and related regulation in Ohio and the allocation of costs within regional transmission organizations, including PJM and SPP; accounting pronouncements periodically issued by accounting standard-setting bodies; the impact of volatility in the capital markets on the value of the investments held by AEP's pension, other postretirement benefit plans and nuclear decommissioning trust and the impact on future funding requirements; prices and demand for power that AEP generates and sells at wholesale; changes in technology, particularly with respect to new, developing or alternative sources of generation; and other risks and unforeseen events, including wars, the effects of terrorism (including increased security costs), embargoes and other catastrophic events.

APPENDIX

QUALIFICATIONS OF

DENNIS W. GOINS

DENNIS W. GOINS

PRESENT POSITION

Economic Consultant, Potomac Management Group, Alexandria, VA

PREVIOUS POSITIONS

Vice President, Hagler, Bailly & Company, Washington, DC

Principal, Resource Consulting Group, Inc., Cambridge, MA

Senior Associate, Resource Planning Associates, Inc., Cambridge, MA

Economist, North Carolina Utilities Commission, Raleigh, NC

EDUCATION

College	Major	Degree
Wake Forest University	Economics	BA
North Carolina State University	Economics	ME
North Carolina State University	Economics	PhD

RELEVANT EXPERIENCE

Dr. Goins specializes in pricing, planning, and market structure issues affecting firms that buy and sell products in electricity and natural gas markets. He has extensive experience in evaluating competitive market conditions, analyzing power and fuel requirements, prices, market operations, and transactions, developing product pricing strategies, setting rates for energy-related products and services, and negotiating power supply and natural gas contracts for private and public entities. He has participated in more than 150 cases as an expert on competitive market issues, utility restructuring, power market planning and operations, utility mergers, rate design, cost of service, and management prudence before the Federal Energy Regulatory Commission, the General Accounting Office (now the Government Accountability Office), the First Judicial District Court of Montana, the Circuit Court of Kanawha County, West Virginia, the Linn County District Court of Iowa, and regulatory commissions in Alabama, Arizona, Arkansas, Colorado, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, New Jersey, New York, North Carolina, Ohio, Oklahoma, South Carolina, Texas, Utah, Vermont, Virginia, West Virginia, Wyoming, and the District of Columbia. He has also prepared an expert report on behalf of the United States regarding electricity pricing and contract issues in a case before the United States Court of Federal Claims.

Dennis W. Goins

PARTICIPATION IN REGULATORY, ADMINISTRATIVE, AND COURT PROCEEDINGS

1. Duke Energy Corporation *et al.*, before the Federal Energy Regulatory Commission, Docket No. EC11-60-000 (2011), on behalf of the North Carolina Electric Membership Corporation, re merger-related market power issues.
2. Resale Power Group of Iowa *et al.*, before the Linn County District Court of Iowa, Case No. LACV 054271 (2011), on behalf of Central Iowa Power Cooperative, re compensation for unauthorized transmission access.
3. Columbus Southern Power Company *et al.*, before the Public Utilities Commission of Ohio, Case No. 11-346-EL-SSO *et al.*, (2011), on behalf of the OMA Energy Group., re standard service offer electric security plan rate design issues.
4. Appalachian Power Company and Wheeling Power Company, dba American Electric Power, before the Public Service Commission of West Virginia, Case No. 11-0274-E-GI (2011), on behalf of Steel of West Virginia, Inc., re expanded net energy cost rate issues.
5. Rocky Mountain Power Company, before the Wyoming Public Service Commission, Docket No. 20000-384-ER-10 (2011), on behalf of Cimarex Energy Company, QEP Field Services Company, and Kinder Morgan Interstate Gas Transmission, re utility rates, cost-of-service, and resource acquisition issues.
6. Duke Energy Indiana, Inc., before the Indiana Utility Regulatory Commission, Cause No. 43955 (2011), on behalf of Nucor Steel and Steel Dynamics, Inc., re utility-sponsored energy efficiency programs.
7. Kansas City Power & Light Company, before the Missouri Public Service Commission, Case No. ER-2010-0355 (2010), on behalf of the U.S. Department of Energy (Federal Executive Agencies), re cost-of-service and rate design issues.
8. Appalachian Power Company and Wheeling Power Company, dba American Electric Power, before the Public Service Commission of West Virginia, Case No. 10-0699-E-42T (2010), on behalf of Steel of West Virginia, Inc., re cost-of-service and rate design issues.
9. Entergy Arkansas, Inc., before the Arkansas Public Service Commission, Docket No. 10-010-U (2010), on behalf of Arkansas Electric Energy Consumers, Inc., re industrial opt out of utility-sponsored energy efficiency programs.

10. Indiana Michigan Power Company, before the Indiana Utility Regulatory Commission, Cause No. 38702 – FAC 62-S1 (2010), on behalf of Steel Dynamics, Inc., re fuel and purchased power cost recovery.
11. Dominion North Carolina Power, before the North Carolina Utilities Commission, Docket No. E-22, Sub 459 (2010), on behalf of Nucor Steel-Hertford, re cost of service and retail rate design.
12. Entergy Texas, Inc., before the Public Utilities Commission of Texas, PUC Docket No. 37744 (2010), on behalf of Texas Cities, re cost of service and retail rate design.
13. Kentucky Utilities, Inc., before the Kentucky Public Service Commission, Case No. 2009-00548 (2010), on behalf of the Kentucky Industrial Utility Customers, re interruptible rates.
14. Louisville Gas and Electric Company, Inc., before the Kentucky Public Service Commission, Case No. 2009-00549 (2010), on behalf of the Kentucky Industrial Utility Customers, re interruptible rates.
15. Ohio Edison *et al.*, before the Public Utilities Commission of Ohio, Case No. 09-1948-EL-POR *et al.*, (2010), on behalf of Nucor Steel Marion, Inc., re energy efficiency and peak demand reduction portfolios.
16. Kauai Island Utility Cooperative, before the Hawaii Public Utilities Commission, Docket No. 2009-0050 (2010), on behalf of Kauai Marriott Resort & Beach Club, re retail cost allocation and rate design issues.
17. Entergy Arkansas, Inc., before the Arkansas Public Service Commission, Docket No. 09-024-U (2009), on behalf of Arkansas Electric Energy Consumers, Inc., re power plant environmental retrofit.
18. Appalachian Power Company, before the Virginia State Corporation Commission, Case No. PUE-2009-00030 (2009), on behalf of Steel Dynamics, Inc., re retail cost allocation and rate design issues.
19. Ohio Edison *et al.*, before the Public Utilities Commission of Ohio, Case No. 09-906-EL-SSO (2009), on behalf of Nucor Steel Marion, Inc., re market rate offer.
20. Dominion North Carolina Power, before the North Carolina Utilities Commission, Docket No. E-22, Sub 456 (2009), on behalf of Nucor Steel-Hertford, re fuel cost adjustment.
21. Appalachian Power Company, before the Virginia State Corporation Commission, Case No. PUE-2009-00068 (2009), on behalf of Steel Dynamics, Inc., re demand response programs.
22. Indiana Michigan Power Company, before the Indiana Utility Regulatory Commission, Cause No. 43750 (2009), on behalf of Steel Dynamics, Inc., re wind power purchased power agreement.

23. Entergy Arkansas, Inc., before the Arkansas Public Service Commission, Docket No. 07-085-TF (2009), on behalf of Arkansas Electric Energy Consumers, Inc., re energy efficiency cost recovery.
24. CenterPoint Energy Arkansas Gas, before the Arkansas Public Service Commission, Docket No. 07-081-TF (2009), on behalf of Arkansas Gas Consumers, Inc., re energy efficiency cost recovery.
25. South Carolina Electric & Gas Company, before the South Carolina Public Service Commission, Docket No. 2009-261-E (2009), on behalf of CMC Steel-SC, re DSM cost recovery surcharge.
26. Duke Energy Indiana, Inc., before the Indiana Utility Regulatory Commission, Cause No. 38707 FAC81 (2009), on behalf of Steel Dynamics, Inc., re fuel and purchased power cost recovery.
27. Potomac Electric Power Company, before the District of Columbia Public Service Commission, Formal Case No. 1076 (2009), on behalf of the General Services Administration, re retail cost allocation and standby rate design issues for distributed generation resources.
28. Appalachian Power Company, before the Virginia State Corporation Commission, Case No. PUE-2009-00039 (2009), on behalf of Steel Dynamics, Inc., re environmental and reliability cost recovery.
29. Indiana Michigan Power Company, before the Indiana Utility Regulatory Commission, Cause No. 38702 – FAC 63 (2009), on behalf of Steel Dynamics, Inc., re fuel and purchased power cost recovery.
30. Appalachian Power Company, before the Virginia State Corporation Commission, Case No. PUE-2009-302-00038 (2009), on behalf of Steel Dynamics, Inc., re fuel and purchased power cost recovery.
31. South Carolina Electric & Gas Company, before the South Carolina Public Service Commission, Docket No. 2008-302-E (2008), on behalf of CMC Steel-SC, re fuel and purchased power cost recovery.
32. South Carolina Electric & Gas Company, before the South Carolina Public Service Commission, Docket No. 2008-196-E (2008), on behalf of CMC Steel-SC, re base load review order for a nuclear facility.
33. Ohio Edison *et al.*, before the Public Utilities Commission of Ohio, Case No. 08-935-EL-SSO *et al.* (2008), on behalf of Nucor Steel Marion, Inc., re standard service offer via an electric security plan.
34. Ohio Edison *et al.*, before the Public Utilities Commission of Ohio, Case No. 08-936-EL-SSO (2008), on behalf of Nucor Steel Marion, Inc., re market rate offer via a competitive bidding process.

35. Alabama Power Company, before the Alabama Public Service Commission, Docket No. 18148 (2008), on behalf of CMC Steel Alabama, Nucor Steel Birmingham, Inc., and Nucor Steel Tuscaloosa, Inc, re energy cost recovery.
36. Entergy Texas, Inc., before the Public Utilities Commission of Texas, PUC Docket No. 35269 (2008), on behalf of Texas Cities, re jurisdictional allocation of system agreement payments.
37. Duke Energy Indiana, Inc., before the Indiana Utility Regulatory Commission, Cause No. 43374 (2008), on behalf of Nucor Steel and Steel Dynamics, Inc., re alternative regulatory plan.
38. Entergy Gulf States Inc., before the Public Utilities Commission of Texas, PUC Docket No. 34800 (2008), on behalf of Texas Cities, re affiliate transactions.
39. Commonwealth Edison Company, before the Illinois Commerce Commission, Docket No. 07-0566 (2008), on behalf of Nucor Steel Kankakee, Inc., re cost-of-service and rate design issues.
40. Ohio Edison *et al.*, before the Public Utilities Commission of Ohio, Case No. 07-0551-EL-AIR *et al.* (2008), on behalf of Nucor Steel Marion, Inc., re cost-of-service and rate design issues.
41. Appalachian Power Company dba American Electric Power, before the Public Service Commission of West Virginia, Case No. 06-0033-E-CN (2007), on behalf of Steel of West Virginia, Inc., re power plant cost recovery mechanism.
42. Oncor Electric Delivery Company and Texas Energy Future Holdings Limited Partnership, before the Public Utilities Commission of Texas, PUC Docket No. 34077 (2007), on behalf of Nucor Steel - Texas, re acquisition of TXU Corp. by Texas Energy Future Holdings Limited Partnership.
43. Arkansas Oklahoma Gas Company, before the Arkansas Public Service Commission, Docket No. 07-026-U (2007), on behalf of West Central Arkansas Gas Consumers, re gas cost-of-service and rate design issues.
44. Idaho Power Company, before the Idaho Public Utilities Commission, Case No. IPC-E-07-08 (2007), on behalf of the U.S. Department of Energy (Federal Executive Agencies), re cost-of-service and rate design issues.
45. Potomac Electric Power Company, before the District of Columbia Public Service Commission, Formal Case No. 1056 (2007), on behalf of the General Services Administration, re demand-side management and advanced metering programs.

46. South Carolina Electric & Gas Company, before the South Carolina Public Service Commission, Docket No. 2007-229-E (2007), on behalf of CMC Steel-SC, re cost-of-service and rate design issues.
47. Potomac Electric Power Company, before the Maryland Public Service Commission, Case No. 9092 (2007), on behalf of the General Services Administration, re retail cost allocation and standby rate design issues for distributed generation resources.
48. Potomac Electric Power Company, before the District of Columbia Public Service Commission, Formal Case No. 1053 (2007), on behalf of the General Services Administration, re retail cost allocation and standby rate design issues for distributed generation resources.
49. Entergy Gulf States Inc., before the Public Utilities Commission of Texas, PUC Docket No. 32907 (2006), on behalf of Texas Cities, re hurricane cost recovery.
50. Entergy Gulf States Inc., before the Public Utilities Commission of Texas, PUC Docket No. 32710/ SOAH Docket No. 473-06-2307 (2006), on behalf of Texas Cities, re reconciliation of fuel and purchased power costs.
51. Florida Power & Light Company, before the Florida Public Service Commission, Docket No. 060001-EI (2006), on behalf of the U.S. Air Force (Federal Executive Agencies), re fuel and purchased power cost recovery.
52. Arizona Public Service Company, before the Arizona Corporation Commission, Docket No. E-01345A-05-0816 (2006), on behalf of the U.S. Air Force (Federal Executive Agencies), re retail cost allocation and rate design issues.
53. PacifiCorp (dba Rocky Mountain Power), before the Utah Public Service Commission, Docket No. 06-035-21 (2006), on behalf of the U.S. Air Force (Federal Executive Agencies), re rate design issues.
54. South Carolina Electric & Gas Company, before the South Carolina Public Service Commission, Docket No. 2006-2-E (2006), on behalf of CMC Steel-SC, re fuel and purchased power cost recovery.
55. Entergy Gulf States Inc., before the Public Utilities Commission of Texas, PUC Docket No. 31544/ SOAH Docket No. 473-06-0092 (2006), on behalf of Texas Cities, re transition to competition rider.
56. Idaho Power Company, before the Idaho Public Utilities Commission, Case No. IPC-E-05-28 (2006), on behalf of the U.S. Department of Energy (Federal Executive Agencies), re cost-of-service and rate design issues.
57. Alabama Power Company, before the Alabama Public Service Commission, Docket No. 18148 (2005), on behalf of SMI Steel-Alabama, re energy cost recovery.

58. Florida Power & Light Company, before the Florida Public Service Commission, Docket No. 050001-EI (2005), on behalf of the U.S. Air Force (Federal Executive Agencies), re fuel and capacity cost recovery.
59. Entergy Gulf States Inc., before the Public Utilities Commission of Texas, PUC Docket No. 31315/ SOAH Docket No. 473-05-8446 (2005), on behalf of Texas Cities, re incremental purchased capacity cost rider.
60. Florida Power & Light Company, before the Florida Public Service Commission, Docket No. 050045-EI (2005), on behalf of the U.S. Air Force (Federal Executive Agencies), re cost-of-service and interruptible rate issues.
61. Arkansas Electric Cooperative Corporation, before the Arkansas Public Service Commission, Docket No. 05-042-U (2005), on behalf of Nucor Steel and Nucor-Yamato Steel, re power plant purchase.
62. Arkansas Electric Cooperative Corporation, before the Arkansas Public Service Commission, Docket No. 04-141-U (2005), on behalf of Nucor Steel and Nucor-Yamato Steel, re cost-of-service and rate design issues.
63. Dominion North Carolina Power, before the North Carolina Utilities Commission, Docket No. E-22, Sub 412 (2005), on behalf of Nucor Steel-Hertford, re cost-of-service and interruptible rate issues.
64. Public Service Company of Colorado, before the Colorado Public Utilities Commission, Docket No. 04S-164E (2004), on behalf of the U.S. Air Force (Federal Executive Agencies), re cost-of-service and interruptible rate issues.
65. CenterPoint Energy Houston Electric, LLC, *et al.*, before the Public Utility Commission of Texas, PUC Docket No. 29526 (2004), on behalf of the Coalition of Commercial Ratepayers, re stranded cost true-up balances.
66. PacifiCorp, before the Utah Public Service Commission, Docket No. 04-035-11 (2004), on behalf of the U.S. Air Force (United States Executive Agencies), re time-of-day rate design issues.
67. Arizona Public Service Company, before the Arizona Corporation Commission, Docket No. E-01345A-03-0347 (2004), on behalf of the U.S. Air Force (Federal Executive Agencies), re retail cost allocation and rate design issues.
68. Idaho Power Company, before the Idaho Public Utilities Commission, Case No. IPC-E-03-13 (2004), on behalf of the U.S. Department of Energy (Federal Executive Agencies), re retail cost allocation and rate design issues.

69. PacifiCorp, before the Utah Public Service Commission, Docket No. 03-2035-02 (2004), on behalf of the U.S. Air Force (United States Executive Agencies), re retail cost allocation and rate design issues.

70. *Dominion Virginia Power, before the Virginia State Corporation* Commission, Case No. PUE-2000-00285 (2003), on behalf of Chaparral (Virginia) Inc., re recovery of fuel costs.

71. Jersey Central Power & Light Company, before the New Jersey Board of Public Utilities, BPU Docket No. ER02080506, OAL Docket No. PUC-7894-02 (2002-2003), on behalf of New Jersey Commercial Users, re retail cost allocation and rate design issues.

72. Public Service Electric and Gas Company, before the New Jersey Board of Public Utilities, BPU Docket No. ER02050303, OAL Docket No. PUC-5744-02 (2002-2003), on behalf of New Jersey Commercial Users, re retail cost allocation and rate design issues.

73. South Carolina Electric & Gas Company, before the South Carolina Public Service Commission, Docket No. 2002-223-E (2002), on behalf of SMI Steel-SC, re retail cost allocation and rate design issues.

74. Montana Power Company, before the First Judicial District Court of Montana, *Great Falls Tribune et al. v. the Montana Public Service Commission*, Cause No. CDV2001-208 (2002), on behalf of a media consortium (*Great Falls Tribune*, *Billings Gazette*, *Montana Standard*, *Helena Independent Record*, *Missoulian*, Big Sky Publishing, Inc. dba *Bozeman Daily Chronicle*, the Montana Newspaper Association, *Miles City Star*, *Livingston Enterprise*, Yellowstone Public Radio, the Associated Press, Inc., and the Montana Broadcasters Association), re public disclosure of allegedly proprietary contract information.

75. Louisville Gas & Electric *et al.*, before the Kentucky Public Service Commission, Administrative Case No. 387 (2001), on behalf of Gallatin Steel Company, re adequacy of generation and transmission capacity in Kentucky.

76. PacifiCorp, before the Utah Public Service Commission, Docket No. 01-035-01 (2001), on behalf of Nucor Steel, re retail cost allocation and rate design issues.

77. TXU Electric Company, before the Public Utilities Commission of Texas, PUC Docket No. 23640/ SOAH Docket No. 473-01-1922 (2001), on behalf of Nucor Steel, re fuel cost recovery.

78. FPL Group *et al.*, before the Federal Energy Regulatory Commission, Docket No. EC01-33-000 (2001), on behalf of Arkansas Electric Cooperative Corporation, Inc., re merger-related market power issues.

79. Entergy Mississippi, Inc., *et al.*, before the Mississippi Public Service Commission, Docket No. 2000-UA-925 (2001), on behalf of Birmingham Steel-Mississippi, re appropriate regulatory conditions for merger approval.
80. TXU Electric Company, before the Public Utilities Commission of Texas, PUC Docket No. 22350/ SOAH Docket No. 473-00-1015 (2000), on behalf of Nucor Steel, re unbundled cost of service and rates.
81. PacifiCorp, before the Utah Public Service Commission, Docket No. 99-035-10 (2000), on behalf of Nucor Steel, re using system benefit charges to fund demand-side resource investments.
82. Entergy Arkansas, Inc. *et al.*, before the Arkansas Public Service Commission, Docket No. 00-190-U (2000), on behalf of Nucor-Yamato Steel and Nucor Steel-Arkansas, re the development of competitive electric power markets in Arkansas.
83. Entergy Arkansas, Inc. *et al.*, before the Arkansas Public Service Commission, Docket No. 00-048-R (2000), on behalf of Nucor-Yamato Steel and Nucor Steel-Arkansas, re generic filing requirements and guidelines for market power analyses.
84. ScottishPower and PacifiCorp, before the Utah Public Service Commission, Docket No. 98-2035-04 (1999), on behalf of Nucor Steel, re merger conditions to protect the public interest.
85. Dominion Resources, Inc. and Consolidated Natural Gas Company, before the Virginia State Corporation Commission, Case No. PUA990020 (1999), on behalf of the City of Richmond, re market power and merger conditions to protect the public interest.
86. Houston Lighting & Power Company, before the Public Utility Commission of Texas, Docket No. 18465 (1998) on behalf of the Texas Commercial Customers, re excess earnings and stranded-cost recovery and mitigation.
87. PJM Interconnection, LLC, before the Federal Energy Regulatory Commission, Docket No. ER98-1384 (1998) on behalf of Wellsboro Electric Company, re pricing low-voltage distribution services.
88. DQE, Inc. and Allegheny Power System, Inc., before the Federal Energy Regulatory Commission, Docket Nos. ER97-4050-000, ER97-4051-000, and EC97-46-000 (1997) on behalf of the Borough of Chambersburg, re market power in relevant markets.
89. GPU Energy, before the New Jersey Board of Public Utilities, Docket No. EO97070458 (1997) on behalf of the New Jersey Commercial Users Group, re unbundled retail rates.

90. GPU Energy, before the New Jersey Board of Public Utilities, Docket No. EO97070459 (1997) on behalf of the New Jersey Commercial Users Group, re stranded costs.

91. Public Service Electric and Gas Company, before the New Jersey Board of Public Utilities, Docket No. EO97070461 (1997) on behalf of the New Jersey Commercial Users Group, re unbundled retail rates.

92. Public Service Electric and Gas Company, before the New Jersey Board of Public Utilities, Docket No. EO97070462 (1997) on behalf of the New Jersey Commercial Users Group, re stranded costs.

93. DQE, Inc. and Allegheny Power System, Inc., before the Federal Energy Regulatory Commission, Docket Nos. ER97-4050-000, ER97-4051-000, and EC97-46-000 (1997) on behalf of the Borough of Chambersburg, Allegheny Electric Cooperative, Inc., and Selected Municipalities, re market power in relevant markets.

94. CSW Power Marketing, Inc., before the Federal Energy Regulatory Commission, Docket No.ER97-1238-000 (1997) on behalf of the Transmission Dependent Utility Systems, re market power in relevant markets.

95. Central Hudson Gas & Electric Corporation *et al.*, before the New York Public Service Commission, Case Nos. 96-E-0891, 96-E-0897, 96-E-0898, 96-E-0900, 96-E-0909 (1997), on behalf of the Retail Council of New York, re stranded-cost recovery.

96. Central Hudson Gas & Electric Corporation, supplemental testimony, before the New York Public Service Commission, Case No. 96-E-0909 (1997) on behalf of the Retail Council of New York, re stranded-cost recovery.

97. Consolidated Edison Company of New York, Inc., supplemental testimony, before the New York Public Service Commission, Case No. 96-E-0897 (1997) on behalf of the Retail Council of New York, re stranded-cost recovery.

98. New York State Electric & Gas Corporation, supplemental testimony, before the New York Public Service Commission, Case No. 96-E-0891 (1997) on behalf of the Retail Council of New York, re stranded-cost recovery.

99. Rochester Gas and Electric Corporation, supplemental testimony, before the New York Public Service Commission, Case No. 96-E-0898 (1997) on behalf of the Retail Council of New York, re stranded-cost recovery.

100. Texas Utilities Electric Company, before the Public Utility Commission of Texas, Docket No. 15015 (1996), on behalf of Nucor Steel-Texas, re real-time electricity pricing.

101. Central Power and Light Company, before the Public Utility Commission of Texas, Docket No. 14965 (1996), on behalf of the Texas Retailers Association, re cost of service and rate design.

102. Carolina Power & Light Company, before the South Carolina Public Service Commission, Docket No. 95-1076-E (1996), on behalf of Nucor Steel-Darlington, re integrated resource planning.

103. Texas Utilities Electric Company, before the Public Utility Commission of Texas, Docket No. 13575 (1995), on behalf of Nucor Steel-Texas, re integrated resource planning, DSM options, and real-time pricing.

104. Arkansas Power & Light Company, *et al.*, Notice of Inquiry to Consider Section 111 of the Energy Policy Act of 1992, before the Arkansas Public Service Commission, Docket No. 94-342-U (1995), Initial Comments on behalf of Nucor-Yamato Steel Company, re integrated resource planning standards.

105. Arkansas Power & Light Company, *et al.*, Notice of Inquiry to Consider Section 111 of the Energy Policy Act of 1992, before the Arkansas Public Service Commission, Docket No. 94-342-U (1995), Reply Comments on behalf of Nucor-Yamato Steel Company, re integrated resource planning standards.

106. Arkansas Power & Light Company, *et al.*, Notice of Inquiry to Consider Section 111 of the Energy Policy Act of 1992, before the Arkansas Public Service Commission, Docket No. 94-342-U (1995), Final Comments on behalf of Nucor-Yamato Steel Company, re integrated resource planning standards.

107. South Carolina Pipeline Corporation, before the South Carolina Public Service Commission, Docket No. 94-202-G (1995), on behalf of Nucor Steel, re integrated resource planning and rate caps.

108. Gulf States Utilities Company, before the United States Court of Federal Claims, *Gulf States Utilities Company v. the United States*, Docket No. 91-1118C (1994, 1995), on behalf of the United States, re electricity rate and contract dispute litigation.

109. American Electric Power Corporation, before the Federal Energy Regulatory Commission, Docket No. ER93-540-000 (1994), on behalf of DC Tie, Inc., re costing and pricing electricity transmission services.

110. Texas Utilities Electric Company, before the Public Utility Commission of Texas, Docket No. 13100 (1994), on behalf of Nucor Steel-Texas, re real-time electricity pricing.

111. Carolina Power & Light Company, *et al.*, Proposed Regulation Governing the Recovery of Fuel Costs by Electric Utilities, before the South Carolina Public Service Commission, Docket No. 93-238-E (1994), on behalf of Nucor Steel-Darlington, re fuel-cost recovery.

112. Southern Natural Gas Company, before the Federal Energy Regulatory Commission, Docket No. RP93-15-000 (1993-1995), on behalf of Nucor Steel-Darlington, re costing and pricing natural gas transportation services.

113. West Penn Power Company, *et al.*, v. State Tax Department of West Virginia, *et al.*, Civil Action No. 89-C-3056 (1993), before the Circuit Court of Kanawha County, West Virginia, on behalf of the West Virginia Department of Tax and Revenue, re electricity generation tax.

114. Carolina Power & Light Company, *et al.*, Proceeding Regarding Consideration of Certain Standards Pertaining to Wholesale Power Purchases Pursuant to Section 712 of the 1992 Energy Policy Act, before the South Carolina Public Service Commission, Docket No. 92-231-E (1993), on behalf of Nucor Steel-Darlington, re Section 712 regulations.

115. Mountain Fuel Supply Company, before the Public Service Commission of Utah, Docket No. 93-057-01 (1993), on behalf of Nucor Steel-Utah, re costing and pricing retail natural gas firm, interruptible, and transportation services.

116. Texas Utilities Electric Company, before the Public Utility Commission of Texas, Docket No. 11735 (1993), on behalf of the Texas Retailers Association, re retail cost-of-service and rate design.

117. Virginia Electric and Power Company, before the Virginia State Corporation Commission, Case No. PUE920041 (1993), on behalf of Philip Morris USA, re cost of service and retail rate design.

118. Carolina Power & Light Company, before the South Carolina Public Service Commission, Docket No. 92-209-E (1992), on behalf of Nucor Steel-Darlington.

119. Gulf States Utilities Company, before the Louisiana Public Service Commission, Docket No. U-17282, Rate Design (1992), on behalf of the Department of Energy, Strategic Petroleum Reserve.

120. Georgia Power Company, before the Georgia Public Service Commission, Docket Nos. 4091-U and 4146-U (1992), on behalf of Amicalola Electric Membership Corporation.

121. PacifiCorp, Inc., before the Federal Energy Regulatory Commission, Docket No. EC88-2-007 (1992), on behalf of Nucor Steel-Utah.

122. South Carolina Pipeline Corporation, before the South Carolina Public Service Commission, Docket No. 90-452-G (1991), on behalf of Nucor Steel-Darlington.

123. Carolina Power & Light Company, before the South Carolina Public Service Commission, Docket No. 91-4-E, 1991 Fall Hearing, on behalf of Nucor Steel-Darlington.

124. Sonat, Inc., and North Carolina Natural Gas Corporation, before the North Carolina Utilities Commission, Docket No. G-21, Sub 291 (1991), on behalf of Nucor Corporation, Inc.

125. Northern States Power Company, before the Minnesota Public Utilities Commission, Docket No. E002/GR-91-001 (1991), on behalf of North Star Steel-Minnesota.

126. Gulf States Utilities Company, before the Louisiana Public Service Commission, Docket No. U-17282, Phase IV-Rate Design (1991), on behalf of the Department of Energy, Strategic Petroleum Reserve.

127. Houston Lighting & Power Company, before the Public Utility Commission of Texas, Docket No. 9850 (1990), on behalf of the Department of Energy, Strategic Petroleum Reserve.

128. General Services Administration, before the United States General Accounting Office, Contract Award Protest (1990), Solicitation No. GS-00P-AC87-91, Contract No. GS-00D-89-B5D-0032, on behalf of Satilla Rural Electric Membership Corporation, re cost of service and rate design.

129. Carolina Power & Light Company, before the South Carolina Public Service Commission, Docket No. 90-4-E (1990 Fall Hearing), on behalf of Nucor Steel-Darlington, re fuel-cost recovery.

130. Gulf States Utilities Company, before the Louisiana Public Service Commission, Docket No. U-17282, Phase III-Rate Design (1990), on behalf of the Department of Energy, Strategic Petroleum Reserve, re cost of service and rate design.

131. Atlanta Gas Light Company, before the Georgia Public Service Commission, Docket No. 3923-U (1990), on behalf of Herbert G. Burris and Oglethorpe Power Corporation, re anticompetitive pricing schemes.

132. Ohio Edison Company, before the Ohio Public Utilities Commission, Case No. 89-1001-EL-AIR (1990), on behalf of North Star Steel-Ohio, re cost of service and rate design.

133. Gulf States Utilities Company, before the Louisiana Public Service Commission, Docket No. U-17282, Phase III-Cost of Service/Revenue Spread (1989), on behalf of the Department of Energy, Strategic Petroleum Reserve.

134. Northern States Power Company, before the Minnesota Public Utilities Commission, Docket No. E002/GR-89-865 (1989), on behalf of North Star Steel-Minnesota.

135. Gulf States Utilities Company, before the Louisiana Public Service Commission, Docket No. U-17282, Phase III-Rate Design (1989), on behalf of the Department of Energy, Strategic Petroleum Reserve.

136. Utah Power & Light Company, before the Utah Public Service Commission, Case No. 89-039-10 (1989), on behalf of Nucor Steel-Utah and Vulcraft, a division of Nucor Steel.

137. Soyland Power Cooperative, Inc. v. Central Illinois Public Service Company, Docket No. EL89-30-000 (1989), before the Federal Energy Regulatory Commission, on behalf of Soyland Power Cooperative, Inc., re wholesale contract pricing provisions

138. Gulf States Utilities Company, before the Public Utility Commission of Texas, Docket No. 8702 (1989), on behalf of the Department of Energy, Strategic Petroleum Reserve.

139. Houston Lighting and Power Company, before the Public Utility Commission of Texas, Docket No. 8425 (1989), on behalf of the Department of Energy, Strategic Petroleum Reserve.

140. Northern Illinois Gas Company, before the Illinois Commerce Commission, Docket No. 88-0277 (1989), on behalf of the Coalition for Fair and Equitable Transportation, re retail gas transportation rates.

141. Carolina Power & Light Company, before the South Carolina Public Service Commission, Docket No. 79-7-E, 1988 Fall Hearing, on behalf of Nucor Steel-Darlington, re fuel-cost recovery.

142. Potomac Electric Power Company, before the District of Columbia Public Service Commission, Formal Case No. 869 (1988), on behalf of Peoples Drug Stores, Inc., re cost of service and rate design.

143. Carolina Power & Light Company, before the South Carolina Public Service Commission, Docket No. 88-11-E (1988), on behalf of Nucor Steel-Darlington.

144. Northern States Power Company, before the Minnesota Public Utilities Commission, Docket No. E-002/GR-87-670 (1988), on behalf of the Metalcasters of Minnesota.

145. Ohio Edison Company, before the Ohio Public Utilities Commission, Case No. 87-689-EL-AIR (1987), on behalf of North Star Steel-Ohio.

146. Carolina Power & Light Company, before the South Carolina Public Service Commission, Docket No. 87-7-E (1987), on behalf of Nucor Steel-Darlington.

147. Gulf States Utilities Company, before the Louisiana Public Service Commission, Docket No. U-17282, Phase I (1987), on behalf of the Strategic Petroleum Reserve.

148. Gulf States Utilities Company, before the Public Utility Commission of Texas, Docket No. 7195 (1987), on behalf of the Strategic Petroleum Reserve.

149. Gulf States Utilities Company, before the Federal Energy Regulatory Commission, Docket No. ER86-558-006 (1987), on behalf of Sam Rayburn G&T Cooperative.

150. Utah Power & Light Company, before the Utah Public Service Commission, Case No. 85-035-06 (1986), on behalf of the U.S. Air Force.

151. Houston Lighting & Power Company, before the Public Utility Commission of Texas, Docket No. 6765 (1986), on behalf of the Strategic Petroleum Reserve.

152. Central Maine Power Company, before the Maine Public Utilities Commission, Docket No. 85-212 (1986), on behalf of the U.S. Air Force.

153. Gulf States Utilities Company, before the Public Utility Commission of Texas, Docket Nos. 6477 and 6525 (1985), on behalf of North Star Steel-Texas.

154. Ohio Edison Company, before the Ohio Public Utilities Commission, Case No. 84-1359-EL-AIR (1985), on behalf of North Star Steel-Ohio.

155. Utah Power & Light Company, before the Utah Public Service Commission, Case No. 84-035-01 (1985), on behalf of the U.S. Air Force.

156. Central Vermont Public Service Corporation, before the Vermont Public Service Board, Docket No. 4782 (1984), on behalf of Central Vermont Public Service Corporation.

157. Gulf States Utilities Company, before the Louisiana Public Service Commission, Docket No. U-15641 (1983), on behalf of the Strategic Petroleum Reserve.

158. Southwestern Power Administration, before the Federal Energy Regulatory Commission, Rate Order SWPA-9 (1982), on behalf of the Department of Defense.

159. Public Service Company of Oklahoma, before the Federal Energy Regulatory Commission, Docket Nos. ER82-80-000 and ER82-389-000 (1982), on behalf of the Department of Defense.

160. Central Maine Power Company, before the Maine Public Utilities Commission, Docket No. 80-66 (1981), on behalf of the Commission Staff.

161. Bangor Hydro-Electric Company, before the Maine Public Utilities Commission, Docket No. 80-108 (1981), on behalf of the Commission Staff.

162. Oklahoma Gas & Electric, before the Oklahoma Corporation Commission, Docket No. 27275 (1981), on behalf of the Commission Staff.

163. Green Mountain Power, before the Vermont Public Service Board, Docket No. 4418 (1980), on behalf of the PSB Staff.

164. Williams Pipe Line, before the Federal Energy Regulatory Commission, Docket No. OR79-1 (1979), on behalf of Mapco, Inc.

165. Boston Edison Company, before the Massachusetts Department of Public Utilities, Docket No. 19494 (1978), on behalf of Boston Edison Company.

166. Duke Power Company, before the North Carolina Utilities Commission, Docket No. E-7, Sub 173, on behalf of the Commission Staff.

167. Duke Power Company, before the North Carolina Utilities Commission, Docket No. E-100, Sub 32, on behalf of the Commission Staff.

168. Virginia Electric & Power Company, before the North Carolina Utilities Commission, Docket No. E-22, Sub 203, on behalf of the Commission Staff.

169. Virginia Electric & Power Company, before the North Carolina Utilities Commission, Docket No. E-22, Sub 170, on behalf of the Commission Staff.

170. Southern Bell Telephone Company, before the North Carolina Utilities Commission, Docket No. P-5, Sub 48, on behalf of the Commission Staff.

171. Western Carolina Telephone Company, before the North Carolina Utilities Commission, Docket No. P-58, Sub 93, on behalf of the Commission Staff.

172. Natural Gas Ratemaking, before the North Carolina Utilities Commission, Docket No. G-100, Sub 29, on behalf of the Commission Staff.

173. General Telephone Company of the Southeast, before the North Carolina Utilities Commission, Docket No. P-19, Sub 163, on behalf of the Commission Staff.

174. Carolina Power and Light Company, before the North Carolina Utilities Commission, Docket No. E-2, Sub 264, on behalf of the Commission Staff.

175. Carolina Power and Light Company, before the North Carolina Utilities Commission, Docket No. E-2, Sub 297, on behalf of the Commission Staff.

176. Duke Power Company, *et al.*, Investigation of Peak-Load Pricing, before the North Carolina Utilities Commission, Docket No. E-100, Sub 21, on behalf of the Commission Staff.

177. Investigation of Intrastate Long Distance Rates, before the North Carolina Utilities Commission, Docket No. P-100, Sub 45, on behalf of the Commission Staff.

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing Testimony was served upon the parties of record listed below this 25th day of July 2011 *via* electronic mail.

Lisa G. McAlister

Steven T. Nourse
Matthew J. Satterwhite
American Electric Power Corp.
1 Riverside Plaza, 29th Floor
Columbus, Ohio 43215
stnourse@aep.com
mjsatterwhite@aep.com

Dorothy K. Corbett
Duke Energy Retail Sales
139 East Fourth Street
1303-Main
Cincinnati, Ohio 45202
Dorothy.Corbett@duke-energy.com

Daniel R. Conway
Porter Wright Morris & Arthur
41 South High Street
Columbus, Ohio 43215
dconway@porterwright.com

David F. Boehm
Michael L. Kurtz
Boehm, Kurtz & Lowry
36 East Seventh Street. Suite 1510
Cincinnati, Ohio 45202
dboehm@bkllawfirm.com
mkurtz@bkllawfirm.com

Samuel C. Randazzo
Joseph E. Oliker
Frank P. Darr
McNees Wallace & Nurick
21 East State Street, 17th Floor
Columbus, Ohio 43215
sam@mwncmh.com
joliker@mwncmh.com
fdarr@mwncmh.com

Terry L. Etter
Maureen R. Grady
Office of the Ohio Consumers' Counsel
10 West Broad Street, Suite 1800
Columbus, Ohio 43215-3485
etter@occ.state.oh.us
grady@occ.state.oh.us

Richard L. Sites
Ohio Hospital Association
155 East Broad Street, 15th Floor
Columbus, Ohio 43215-3620
ricks@ohanet.org

Thomas J. O'Brien
Bricker & Eckler
100 South Third Street
Columbus, Ohio 43215-4291
tobrien@bricker.com

Colleen L. Mooney
Ohio Partners for Affordable Energy
231 West Lima Street
Findlay, Ohio 45840
cmooney2@columbus.rr.com

Jay E. Jadwin
American Electric Power Service Corporation
1 Riverside Plaza, 29th Floor
Columbus, Ohio 43215
jejadwin@aep.com

John W. Bentine
Mark S. Yurick
Chester Willcox & Saxbe, LLP
65 East State Street, Suite 1000
Columbus, Ohio 43215
jbentine@cwslaw.com
myurick@cwslaw.com

Michael R. Smalz
Joseph V. Maskovyak
Ohio Poverty Law Center
555 Buttles Avenue
Columbus, Ohio 43215
msmalz@ohiopovertylaw.org
jmaskovyak@ohiopovertylaw.org

William L. Massey
Covington & Burling, LLP
1201 Pennsylvania Ave., NW
Washington, DC 20004
wmassey@cov.com

Barth E. Royer
Bell & Royer Co., LPA
33 South Grant Avenue
Columbus, Ohio 43215-3927
barthroyer@aol.com

M. Howard Petricoff
Stephen M. Howard
Michael J. Settineri
Vorys, Sater, Seymour and Pease LLP
52 E. Gay Street
Columbus, Ohio 43215
mhpetricoff@vorys.com
smhoward@vorys.com
mjsettineri@vorys.com

E. Camille Yancey
Nolan Moser
Trent A. Dougherty
Ohio Environmental Council
1207 Grandview Avenue, Suite 201
Columbus, Ohio 43212-3449
camille@theoec.org
nolan@theoec.org
trent@theo ec. org

Glen Thomas
1060 First Avenue, Ste. 400
King of Prussia, Pennsylvania 19406
gthomas@gtpowergroup.com

Laura Chappelle
4218 Jacob Meadows
Okemos, Michigan 48864
laurac@chappelleconsulting.net

Henry W. Eckhart
2100 Chambers Road, Suite 106
Columbus, Ohio 43212
henryeckhart@aol.com

Jesse A. Rodriguez
Exelon Generation Company, LLC
300 Exelon Way
Kennett Square, Pennsylvania 19348
jesse.rodriguez@exeloncorp.com

Christopher L. Miller
Gregory H. Dunn
Asim Z. Haque
Schottenstein Zox & Dunn Co., LPA
250 West Street
Columbus, Ohio 43215
cmiller@szd.com
gdunn@szd.com
ahaque@szd.com

James F. Lang
Laura C. McBride
N. Trevor Alexander
Calfee, Halter & Griswold LLP
1400 KeyBank Center
800 Superior Avenue
Cleveland, OH 44114
jlang@calfee.com
lmcbride@calfee.com
talexander@,calfee.com

Sandy I-ru Grace
Exelon Business Services Company
101 Constitution Avenue N.W., Suite 400 East
Washington, DC 20001
sandy.grace@exeloncorp.com

Gary A. Jeffries
Dominion Resources Services, Inc.
501 Martindale Street, Suite 400
Pittsburgh, PA 15212-5817
gary.a.jeffries@dom.com

Kenneth P. Kreider
Keating Muething & Klekamp PLL
One East Fourth Street, Suite 1400
Cincinnati, Ohio 45202
kpkreider@kmklaw.com

Steve W. Chriss
Wal-Mart Stores, Inc.
2001 SE I0th Street
Bentonville, Arkansas 72716
stephen.chriss@wal-mart.com

Holly Rachel Smith
Holly Rachel Smith, PLLC
Hitt Business Center
3803 Rectortown Road
Marshall, Virginia 20115
holly@raysmithlaw.com

Mark A. Hayden
FirstEnergy Service Company
76 South Main St.
Akron, OH 44308
havdenm@firstenergvcorp.com

Gregory J. Poulos
EnerNOC, Inc.
101 Federal Street, Suite 1100
Boston, MA 02110
gpoulos@enernoc.com

Philip B. Sineneng
Thompson Hine LLP
Huntington Center
41 S. High Street, Suite 1700
Columbus, OH 43215
philip.sineneng@thompsonhine.com

Tara C. Santarelli
Environmental Law & Policy Center
1207 Grandview Ave., Suite 201
Columbus, Ohio 43212
tsantarelli@elpc.org

Emma F. Hand
SNR Denton US LLP
1301 K Street, NW, Suite 600, East Tower
Washington, DC 20005-3364
emma.hand@snrdenton.com