OCC Exhibit No. _____

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

DIRECT TESTIMONY OF

JONATHAN WALLACH Resource Insight, Inc.

ON BEHALF OF

THE OFFICE OF THE OHIO CONSUMERS' COUNSEL

10 West Broad Street, Suite 1800 Columbus, Ohio 43215

MAY 4, 2012

Table of Contents

| I. | Introduction and Summary | . 1 |
|------|-----------------------------|-----|
| II. | Modified ESP Proposal | 6 |
| III. | Interim Energy Auctions | 9 |
| IV. | Capacity Pricing | 16 |
| V. | Shopping Credit Alternative | 18 |

| Attachment 1 | AEP Ohio Response to OCC Interrogatory No. 2-44 | | |
|---------------|--|--|--|
| Exhibit JFW-1 | Professional Qualifications of Jonathan F. Wallach | | |
| Exhibit JFW-2 | Competitive Market Price for January through May of 2015 | | |

1 I. Introduction and Summary

2 Q: Please state your name, occupation, and business address.

- A: My name is Jonathan F. Wallach. I am Vice President of Resource Insight, Inc., 5
 Water Street, Arlington, Massachusetts.
- 5 Q: Please summarize your professional experience.
- A: I have worked as a consultant to the electric-power industry since 1981. From 1981
 to 1986, I was a research associate at Energy Systems Research Group. In 1987 and
 1988, I was an independent consultant. From 1989 to 1990, I was a senior analyst at
 Komanoff Energy Associates. I have been in my current position at Resource
 Insight since September of 1990.
- 11 Over the past thirty years, I have advised and testified on behalf of clients on a 12 wide range of economic, planning, and policy issues relating to the regulation of 13 electric utilities, including: electric-utility restructuring; wholesale-power market 14 design and operations; transmission pricing and policy; market-price forecasting; market valuation of generating assets and purchase contracts; power-procurement 15 16 strategies; risk assessment and mitigation; integrated resource planning; mergers 17 and acquisitions; cost allocation and rate design; and energy-efficiency program design and planning. 18
- 19

My resume is attached as Exhibit JFW-1.

20 Q: Have you testified previously in utility regulatory proceedings?

- A: Yes. I have sponsored expert testimony in more than fifty state, provincial, or
 federal proceedings in the U.S. and Canada, including in Ohio in Case No. 09-906 EL-SSO. Exhibit JFW-1 includes a detailed list of my previous testimony.
- 24 **Q:** On whose behalf are you testifying?

1 A: I am testifying on behalf of the Office of the Ohio Consumers' Counsel ("OCC").

2 Q: What is the purpose of your testimony?

3 On March 30, 2012, Columbus Southern Power Company and Ohio Power A: 4 Company ("AEP Ohio" or "the Company") filed for approval of an Electric Security Plan ("ESP"). My testimony addresses the measures proposed by AEP 5 6 Ohio as part of the ESP for transitioning to a fully competitive retail market. In 7 particular, my testimony assesses the reasonableness of the Company's proposal to conduct interim auctions for Standard Service Offer ("SSO") energy.¹ In addition, I 8 9 assess the Company's proposal to either offer capacity to government aggregators and Competitive Retail Electric Service ("CRES") suppliers at a discount to the 10 11 Company's estimate of capacity costs or provide a credit to shopping customers.

12 Q: Please describe the Company's application for an Electric Security Plan.

13 On January 27, 2011, the Company filed its second Electric Security Plan. This plan A: 14 was subsequently modified through a partial stipulation agreement reached on 15 September 7, 2011. The partial stipulation agreement was opposed by a number of parties, including OCC. Following an evidentiary hearing and briefing, the Public 16 17 Utilities Commission of Ohio ("Commission" or "PUCO"), in December of 2011, 18 initially adopted the stipulated plan with modifications. However, six weeks later, 19 the PUCO rejected the plan. On March 30, 2012, the Company filed an application 20 seeking approval of a revised electric security plan for a three-year period beginning June 1, 2012 through May 31, 2015 ("modified ESP"). 21

22 23 According to Company witness Robert P. Powers, the modified ESP comprises an "integrated package" of measures that will "expedite the transition to

¹ I do not address the Company's proposal for a full competitive bidding process at the end of the proposed ESP, since AEP Ohio did not provide any supporting documentation or detail in testimony or responses to discovery regarding this proposal.

competition faster than can be legally required."² These measures include: (1) 1 2 transfer of the Company's generating assets to an affiliate by January 1, 2014; (2) 3 purchase of power supply from the Company's generation affiliate to serve Standard Service Offer ("SSO") load through May 31, 2015; (3) implementation of 4 an auction process ("competitive bid process" or "CBP") for procuring energy and 5 capacity to serve SSO load starting June 1, 2015; (4) interim auctions for SSO 6 7 energy, and pricing of related capacity at \$255/MW-day, prior to June 1, 2015; and 8 (5) an offer to sell capacity to government aggregation efforts and CRES suppliers 9 at a discount to the Company's \$355.72/MW-day estimate of the full cost of 10 capacity, as proffered in Case No. 10-2929-EL-UNC. In addition, as an alternative 11 to the proposed provision of capacity at a discount to the Company's estimate of the 12 full cost of capacity, the Company offers to provide a shopping credit to customers 13 that switch from the SSO to competitive retail supply on a first-come, first-served 14 basis by customer class subject to a cap of \$350 million over the period June 2012 through December 2014. 15

16 **Q:** Please summarize your findings and conclusions.

A: The Company has failed to show that its proposal for transitioning to full retail
competition is reasonable and in the public interest. To the contrary, it appears that
AEP Ohio's proposals for transitioning to full competitive pricing by June 1, 2015
may impede any intended transition and be harmful to SSO customers. The plan as
structured does not appear to advance the state policy of ensuring access to
adequate, reliable, and reasonably priced electric service.

The Company's proposal to introduce market pricing for energy, but not for capacity, through the interim energy auctions is unreasonable, since it would likely

² Direct Testimony of Robert P. Powers in Support of AEP Ohio's Modified Electric Security Plan, Case No. 11-346-EL-SSO, March 30, 2012, p. 17.

1 increase rates to SSO customers compared to the SSO rates that would prevail if the 2 Company continued to price SSO energy at actual fuel costs collected through the Fuel Adjustment Charge ("FAC"). Moreover, the Company's proposal to price 3 energy, but not capacity, at market would unreasonably result in SSO rates that are 4 5 even further above fully competitive market prices than would be the case for rates that would prevail if the Company continued to price SSO energy at actual fuel 6 7 costs. In other words, the Company's proposal to introduce market pricing for 8 energy, but not for capacity, would result in SSO rates that are higher and more 9 above market than SSO rates without market pricing of energy. The Company's 10 proposal therefore fails to ensure that customers will be able to receive reasonably priced electric service. 11

12 Offering capacity at a discount to the Company's estimate of full capacity cost 13 may increase opportunities for competitive pricing by government aggregation 14 efforts or CRES suppliers. However, at this time, there is no certainty as to whether the Company's proposed pricing of capacity, in combination with the offer of an 15 energy-sales margin of \$3/MWh, is actually a "discount" to the actual net cost of 16 17 capacity. For example, testimony by witnesses for non-utility parties in Case No. 18 10-2929 indicate that the actual cost of capacity, accounting for the market value of 19 energy associated with that capacity, may be well below the "discount" capacity 20 prices proposed by AEP Ohio in the modified ESP.

Finally, it would be reasonable to implement the alternative proposal to provide a shopping credit to switching customers, but only if the Commission in Case No. 10-2929 were to set the price for capacity sales to competitive retail providers at the full embedded cost of capacity. In that event, it would be reasonable to set the shopping credit at a rate that reflects the expected margin from wholesale sales of energy from the Company's generating resources freed up by the migration of SSO customers to competitive retail supply. However, the Company has failed to

Page 4

show that its proposed credit of \$10/MWh reasonably reflects that expected sales
 margin.

If, instead, the capacity price approved in Case No. 10-2929 reflects an offset for the expected market value of energy associated with the Company's generating assets, then a shopping credit would not be appropriate. In that event, the sales margin would already be captured in the price paid by competitive retail suppliers to obtain capacity from AEP Ohio pursuant to the Company's PJM obligations as a fixed resource requirement ("FRR") entity.

9 Q: Please summarize your recommendations.

10 I recommend that the Commission reject the Company's proposal to conduct A: 11 interim energy-only auctions and to set SSO energy rates at auction-clearing prices. 12 In addition, I recommend that the Commission reject the proposal to price the 13 capacity associated with the energy procured through auction at \$255/MW-day. The 14 Company should not be allowed to conduct any auctions or to revise pricing for 15 SSO capacity or energy, until there can be a full competitive bid process that 16 provides for market pricing of both SSO capacity and energy at the end of the ESP 17 term. Furthermore, I recommend that any agreement between AEP Ohio and its 18 generation affiliate regarding the purchase of SSO power supply from that affiliate 19 provide that energy purchases be priced at the affiliate's cost of fuel for the full term 20 of the proposed ESP.

I also recommend that the Commission reject the Company's proposal for tiered pricing of capacity sales. Instead, all capacity sales to government aggregation efforts and CRES suppliers should be priced at the capacity cost approved in Case No. 10-2929.

Finally, I recommend that the Company provide a shopping credit to switching customers only if the capacity price approved in Case No. 10-2929 is set at the full embedded cost of capacity. In that event, the shopping credit should be
set at the expected margin from wholesale sales of energy from the Company's
generating resources freed up by the migration of SSO customers to competitive
retail supply.

5 II. Modified ESP Proposal

6 Q: Please describe AEP Ohio's proposal for a modified ESP.

A: For the three-year period from June 1, 2012 through May 31, 2015, AEP Ohio
proposes an ESP to satisfy its statutory obligations for a Standard Service Offer.
According to Company witness Powers, the modified ESP is designed to comply
with the Commission's directive to expedite market pricing for SSO load without
causing the Company financial harm during the transition to a fully competitive
retail market.³

As part of the modified ESP, AEP Ohio has proposed a number of measures
for transitioning to a fully competitive market, including:

Corporate Separation. The Company proposes to transfer the bulk of its generating assets and contracts to an affiliated generation company and to terminate the AEP Interconnection Agreement ("Pool Agreement") by January 1, 2014. The Company intends to seek approval of its corporate separation plan in separate filings with the Commission and with the Federal Energy Regulatory Commission.⁴

21 22 • **Power Purchase Agreement.** The Company proposes to enter into an agreement with its generation affiliate to purchase power supply to serve SSO

³ Powers Direct, p. 10.

⁴ *Id.*, pp. 21-22.

1 load from January 1, 2014 through May 31, 2015. From January 1 through 2 December 31 of 2014, the Company will purchase capacity at the base generation rate and energy (along with transmission and ancillary services) at 3 actual cost. From January 1, 2015 through the remaining term of the 4 agreement, the Company will purchase only capacity at a rate of \$255/MW-5 day. During this latter period, the Company will purchase energy to satisfy its 6 7 SSO requirements through an auction process and price that energy based on 8 the auction-clearing price.⁵

9 Competitive Bid Process. The Company indicates that it intends to conduct auctions for the purchase of full-requirements supply to serve SSO load at the 10 end of the term of the proposed ESP. In the interim, AEP Ohio proposes to 11 12 conduct energy-only auctions to serve 100% of its SSO energy requirements 13 from January 1 through May 31 of 2015. In addition, the Company has 14 indicated its willingness to conduct an energy-only auction to serve 5% of its SSO energy requirements in 2013 and 2014. The Company is not seeking 15 16 approval for its various auction proposals, and has indicated that it will file for approval sometime following the Commission's approval of its modified ESP 17 proposal.6 18

Capacity Pricing. The Company proposes two tiers of capacity prices for
 capacity sales to government aggregation efforts and CRES suppliers. The
 price for the first tier over the entire ESP period will be set at the RPM market
 price for the 2011-2012 Delivery Year of \$146/MW-day.⁷ This Tier-1 price

⁵ Direct Testimony of Philip J. Nelson in Support of AEP Ohio's Modified Electric Security Plan, Case No. 11-346-EL-SSO, March 30, 2012, p. 6.

⁶ Powers Direct, pp. 19-20.

⁷ The Company proposes to keep the Tier 1 price constant throughout the term of the ESP at the 2011-2012 RPM price, even though the RPM price will vary over that term. According to

1 will be applicable to capacity sales to serve up to a limit of 21% of SSO load 2 for the remainder of 2012, 31% of SSO load in 2013, and 41% of SSO load through the remaining term of the modified ESP. The price for the second tier 3 will be set at \$255/MW-day, and will be applicable to capacity sales in excess 4 of the Tier-1 limits.⁸ The Company alleges that these tier prices are below its 5 actual embedded cost of capacity, and proposes a new Retail Stability Rider to 6 7 collect from customers the lost revenues associated with discounted capacity 8 sales. Under the Company's proposal, the calculation of lost revenues 9 recovered from customers through the RSR will recognize an imputed 10 \$3/MWh credit to reflect the margin on wholesale sales of energy from the Company's generation assets that is freed up by migration of SSO load to 11 competitive supply.9 12

13 **Shopping Credit.** As an alternative to the provision of discounted capacity • and implementation of the RSR, the Company offers to provide a \$10/MWh 14 15 shopping credit for SSO customers that switch to competitive supply during the period June 1, 2012 through December 31, 2014. The proposed shopping 16 credit will be applicable to shopping load up to a limit of 20% of SSO load 17 18 from June 1, 2012 through May 1, 2013, 30% of SSO load from June 1, 2013 19 through May 31, 2014, and 40% of SSO load from June 1, 2014 through 20 December 31, 2014. In addition, AEP Ohio proposes a cap on its spending for

the Company's testimony in Case No. 10-2929, the RPM prices will be \$20.01/MW-day for 2012-2013, \$33.71/MW-day for 2013-2014, and \$153.89/MW-day for 2014-2015. See Exhibit KDP-7 of *Direct Testimony of Kelley D. Pearce on behalf of Ohio Power Company*, Case No. 10-2929-EL-UNC, March 23, 2012.

⁸ Direct Testimony of William A. Allen in Support of AEP Ohio's Modified Electric Security Plan, Case No. 11-346-EL-SSO, March 30, 2012, pp. 6-7.

⁹ *Id.*, pp. 13-14.

shopping credits of \$350 million over the period June 1, 2012 through
 December 31, 2014.¹⁰

3 III. Interim Energy Auctions

4 Q: How does AEP Ohio propose to secure power supply to serve SSO load during 5 the term of the modified ESP?

6 A: According to Mr. Powers, the Company would continue to meet the capacity 7 obligation and energy requirements associated with SSO load pursuant to the terms 8 of the Pool Agreement, until transfer of its generating assets, associated fuel 9 contracts, and power-supply contracts to a generation affiliate and termination of 10 the Pool Agreement on January 1, 2014. For 2014, AEP Ohio proposes to meet its 11 SSO capacity obligation and energy requirements through purchases of capacity 12 and energy (along with ancillary services) from its generation affiliate. From 13 January 1 through May 31 of 2015, the Company would continue to purchase 14 capacity from the generation affiliate, but would procure energy for SSO load through an auction process. 15

16 Q: How would SSO power supply be priced during the term of the proposed ESP?

A: From June 1, 2012 through December 31, 2013, SSO customers would pay for
power supply at the base generation rate plus actual fuel and other variable costs
recovered through the FAC. According to Company witness Philip J. Nelson, for
20 2014, SSO power supply from the generation affiliate would continue to be priced
at the base generation rate plus actual costs recoverable through the FAC. Finally,
from January 1 through May 31, 2015, capacity purchases from the generation

¹⁰ *Id.*, p. 16.

affiliate would be priced at \$255/MW-day, while energy procured through the SSO
 energy auction would be priced at the auction-clearing price.¹¹

Q: Why does AEP Ohio propose to purchase capacity from its generation affiliate, rather than through PJM's RPM market?

A: According to Mr. Nelson, the Company elected to self-supply its capacity
obligations under the FRR option of the RPM market. The FRR obligation to selfsupply will continue after the proposed transfer of the Company's generation assets
and contracts to the generation affiliate on January 1, 2014 and will terminate on
May 31, 2015.

Q: Why does the Company propose to discontinue purchasing energy from its generation affiliate after 2014?

A: The Company proposes to discontinue energy purchases from its generation
affiliate in order to introduce competition in the provision of SSO power supply. In
lieu of energy purchases from its affiliate, the Company proposes to instead procure
SSO energy supply through an auction process. According to Mr. Powers, "the
auction-based process will provide an opportunity for competitive suppliers and
marketers to bid for AEP Ohio's SSO load."¹²

Q: Would it be reasonable to discontinue energy purchases from the Company's
 generation affiliate for the first five months of 2015 in order to introduce
 competition in the provision of SSO power supply?

A: No, because providing the opportunity for competitive energy supply is likely to
 come at the expense of reasonable rates for SSO customers. Specifically, based on
 the Company's price projections, it appears that SSO customers will pay higher

¹¹ Nelson Direct, p. 7.

¹² Powers Direct, p. 20.

prices for generation service under the Company's proposal to discontinue energy
 purchases from its affiliate than if the Company were to continue such purchases in
 the first five months of 2015.

According to Company witness David M. Roush, the SSO generation rate for the period January 1 through May 31 of 2015 would be about \$62/MWh, if the Company were to continue purchasing capacity at the base generation rate proposed by the Company and energy at cost from its generation affiliate.¹³

8 In contrast, Company witness Laura J. Thomas estimates that purchasing capacity at \$255/MW-day and energy at the expected market price prevailing during 9 10 the first five months of 2015, as under the Company's proposal, would result in an SSO generation rate of about \$67/MWh.14 In other words, by Ms. Thomas' 11 12 estimates, the generation rate paid by SSO customers during the first five months of 13 2015 under the Company's proposal would likely be about 8.5% higher than if the 14 Company were to continue purchasing both energy and capacity at cost from its generation affiliate. 15

Q: Would the Company's proposal to discontinue energy purchases from its
 generation affiliate during the first five months of 2015 bring SSO rates more
 in line with competitive market prices for SSO supply?

A: No. To the contrary, the Company's proposal would unreasonably result in SSO
rates that are even further above fully competitive market prices than would be the
case for rates that would prevail if the Company continued to price SSO energy at

¹³Direct Testimony of David M. Roush in Support of AEP Ohio's Modified Electric Security Plan, Case No. 11-346-EL-SSO, March 30, 2012, Exhibit DMR-2.

¹⁴ This estimate is provided in the worksheet 'CBP 255' of the electronic spreadsheet file LJT WP 2012-03-30 Exhibits 2-4 and WPs.xls. This spreadsheet is included in the electronic workpapers for *Direct Testimony of Laura J. Thomas in Support of AEP Ohio's Modified Electric Security Plan*, Case No. 11-346-EL-SSO, March 30, 2012.

1 actual fuel costs. As shown in Exhibit JFW-2, I estimate a competitive market price 2 for full-requirements SSO supply (i.e., capacity and energy) of about \$60/MWh for 3 the first five months of 2015. As noted above, if the Company were to continue purchasing full-requirements supply from its generation affiliate, the SSO rate 4 during this same period of time would be about \$62/MWh, or about 3% in excess of 5 my estimate for the competitive market price. In contrast, under the Company's 6 7 proposal, the SSO rate would increase to about \$67/MWh, or about 12% higher 8 than my estimate of the competitive market price for the first five months of 2015. 9 Therefore, the Company's proposal does not ensure that reasonably priced electric 10 retail service will be available to the Company's customers.

Q: How did you derive your estimate of the competitive market price for fullrequirements SSO supply?

13 For all components of full-requirements SSO supply listed in Exhibit JFW-2 other A: 14 than capacity, I relied on Ms. Thomas' forecast of the market prices for those components. For the purposes of estimating the capacity component of the SSO rate 15 for the first five months of 2015, Ms. Thomas assumed a capacity price of 16 17 \$255/MW-day. In order to derive a capacity component based on a fully competitive capacity price, I adjusted Ms. Thomas' estimate of the capacity 18 19 component by the ratio of \$255/MW-day to \$153.89/MW-day, which is the RPM 20 price for the first five months of 2015.¹⁵

Q: What do you conclude with regard to the Company's proposal for SSO supply during the first five months of 2015?

¹⁵ The RPM price for the first five months of 2015 is provided in Exhibit KDP-7 of *Direct Testimony of Kelley D. Pearce on behalf of Ohio Power Company*, Case No. 10-2929-EL-UNC, March 23, 2012.

A: The Company's proposal to procure SSO energy supply through an auction process
would likely needlessly increase SSO generation rates. Consequently, I recommend
that the SSO agreement between AEP Ohio and its generation affiliate continue to
price capacity at the base generation rate and energy at the actual cost of fuel and
ancillary services from January 1 through May 31 of 2015.

Alternatively, for the period from January 1 through May 31 of 2015, AEP 6 7 Ohio should purchase SSO capacity from its generation affiliate at the prevailing 8 RPM market price. Under this alternative, the Company would procure power 9 supply to serve SSO energy requirements at market prices through an auction-based 10 process, consistent with the Company's current proposal. As a result, SSO 11 customers would pay no more than prevailing market prices for full-requirements 12 SSO supply. As noted above, I estimate that this alternative would result in SSO 13 rates that are about 3% lower than forecast by Company witness Roush.

Either alternative would likely result in more reasonably priced electric service than would be the case under the Company's proposal.

16 Q: Does the Company propose SSO energy auctions prior to 2015?

A: As noted above, the Company has indicated its willingness to conduct an energyonly auction to serve 5% of its SSO energy requirements in 2013 and 2014.
However, according to Mr. Powers, the Company is only willing to conduct such an
auction under the following conditions:

The terms and conditions of such an auction need to be clearly circumscribed up front and AEP Ohio must be made whole to avoid the financial exposure it would otherwise face, including financial impacts of the early auction under the AEP Pool Agreement.¹⁶

¹⁶ Powers Direct, p. 20.

As with the proposed interim energy auction for 2015, capacity for the
 auctioned SSO load would be priced at \$255/MW-day.

3 Q: Should the Commission take the Company up on its offer of an auction for 5% 4 of SSO load?

5 No. As with the proposed energy auction for 2015, this 5% auction would likely A: 6 result in SSO rates that are higher and more above market than would be the case 7 without the proposed auction.¹⁷ Moreover, customers would be at risk for further increases in SSO rates, to the extent that AEP Ohio is "made whole to avoid the 8 9 financial exposure it would otherwise face, including financial impacts of the early auction under the AEP Pool Agreement."¹⁸ Thus, in keeping with the policy of the 10 11 state to ensure reasonably priced electric service, the Commission should reject this portion of the ESP. 12

13 Q: How might the Company's proposal for a 5% interim auction increase SSO 14 rates?

A: The Company's projections indicate that the cost to serve 5% of SSO load in 2013
and 2014 with capacity priced at \$255/MW-day and energy priced at market would
exceed the cost with capacity priced at the base generation rate and energy priced at
the FAC. Specifically, according to Company witness David M. Roush, the SSO
generation rate for the 5% of load over the two-year period 2013 through 2014

¹⁷ Although the impact on SSO rates would be much less than from the 2015 auction, since only 5% of the SSO load would be priced at auction-clearing prices for energy and \$255/MW-day for capacity.

¹⁸ Powers Direct, p. 20.

would be about \$62/MWh, if the Company were to continue pricing capacity at the
 base generation rate and energy at the FAC.¹⁹

In contrast, Company witness Laura J. Thomas estimates that purchasing capacity at \$255/MW-day and energy at the expected market price prevailing during 2013 and 2014, as under the Company's proposal, would result in a price to serve that 5% of load of about \$64/MWh.²⁰ Thus, the Company's proposal would increase the cost to serve the 5% of load from \$62/MWh to \$64/MWh, or by about 3%.²¹

9 Q: How might the Company's proposal for a 5% interim auction result in SSO
10 rates that are more above market than would be the case without the proposed
11 auction?

Based on Ms. Thomas' forecast of the market price of energy for 2013 and 2014 12 A: 13 and the RPM clearing price for that same time period, I estimate a competitive 14 market price for full-requirements SSO supply (i.e., capacity and energy) of about \$52/MWh during those two years. As noted above, the SSO rate without the 5% 15 16 interim auction would be about \$62/MWh over those two years, or about 19% in 17 excess of my estimate for the competitive market price. Under the Company's 18 proposal, the SSO rate for that 5% of load would increase to \$64/MWh, or about 19 23% higher than my estimate of the competitive market price. Thus, the SSO rate

²⁰ This estimate is provided in the worksheet 'CBP 255' of the electronic spreadsheet file LJT WP 2012-03-30 Exhibits 2-4 and WPs.xls. This spreadsheet is included in the electronic workpapers for *Direct Testimony of Laura J. Thomas in Support of AEP Ohio's Modified Electric Security Plan*, Case No. 11-346-EL-SSO, March 30, 2012.

²¹ The Company's proposal would be expected to increase SSO rates by about 0.2%, since the Company's proposal increases costs on only 5% of total load.

¹⁹Direct Testimony of David M. Roush in Support of AEP Ohio's Modified Electric Security Plan, Case No. 11-346-EL-SSO, March 30, 2012, Exhibit DMR-2.

for the 5% of load would exceed the competitive market price by 23% under the
 Company's proposal for a 5% energy auction, but would exceed the market price by
 only 19% without the 5% energy auction.

4 IV. Capacity Pricing

5 Q: In Case No. 10-2929-EL-UNC, how does AEP Ohio propose to set the price of 6 capacity sold to government aggregators or CRES suppliers?

A: According to the pre-filed testimony of Company witness Kelly D. Pearce in Case
No. 10-2929, AEP Ohio proposes to price sales of Fixed Resource Requirement
capacity at the full embedded cost of the Company's generation resources. Dr.
Pearce estimates a capacity price based on full embedded cost of \$355.72/MWday.²²

12 Q: What is AEP Ohio proposing for the price of capacity in the instant13 proceeding?

14 In this proceeding, the Company is proposing to price capacity sales to government A: 15 aggregators and CRES providers at a discount to its estimate of the full cost of 16 capacity in Case No. 10-2929. Specifically, as discussed above, the Company 17 proposes two tiers of capacity prices for capacity sales to government aggregation 18 efforts and CRES suppliers. The price for the first tier will be set at the RPM market 19 price for the 2011-2012 Delivery Year of \$146/MW-day. This Tier-1 price will be 20 applicable to capacity sales to serve up to a limit of 21% of SSO load for the remainder of 2012, 31% of SSO load in 2013, and 41% of SSO load through the 21 22 remaining term of the modified ESP. The price for the second tier will be set at

²² Direct Testimony of Kelly D. Pearce on behalf of Ohio Power Company, Case No. 10-2929-EL-UNC, March 23, 2012, Exhibit KDP-6.

\$255/MW-day, and will be applicable to capacity sales in excess of the Tier-1
 limits.

3 Q: What is the basis for the tier prices proposed by AEP Ohio?

- A: The Company has not offered any cost basis or market basis for its proposed tier
 prices. Instead, the Company simply asserts that these proposals were developed as
 part of a stipulation package offer which the Company considers to be reasonable.
- Q: What does AEP Ohio propose with regard to revenue losses associated with the
 sale of capacity at a discount from the Company's estimate of the full cost of
 capacity?
- 10 A: The Company proposes to collect lost revenues associated with discounted capacity 11 sales from customers through the Retail Stability Rider. With the RSR, SSO 12 customers would effectively hold shareholders harmless for any capacity-price 13 discounts provided to government aggregators or CRES suppliers.²³

14 Q: Are the tier prices proposed by AEP Ohio reasonable?

A: The reasonableness of the tier prices proposed by AEP Ohio cannot be determined
at this time, because it is uncertain whether such prices represent a discount on the
actual cost of capacity for the Company's generation assets. For example, in his
pre-filed testimony in Case No. 10-2929 on behalf of FirstEnergy Solutions,
Jonathan Lesser estimates that the actual cost of the Company's capacity, reflecting
the market value of the energy associated with that capacity, amounts to about

²³ Customers served by competitive supply would also pay for a share of these lost revenues, to the extent that the RSR is paid by all distribution customers. However, customers served by competitive suppliers would presumably also benefit to the extent that the capacity-price discounts allow competitive retail suppliers to reduce their prices.

\$79/MW-day.²⁴ Based on this estimate, the Company's proposed pricing for both
 Tier 1 and Tier 2 capacity in this proceeding would be well above cost, not a
 discount on cost as alleged by AEP Ohio.

4 Q: What do you recommend with regard to the Company's proposed pricing of
5 FRR capacity sales?

A: I recommend that the Commission reject the Company's proposed pricing and
quantity limits for both Tier 1 and Tier 2 capacity. Instead, *all* capacity sales should
be priced at the rate approved in Case No. 10-2929.

9 V. Shopping Credit Alternative

Q: Is the Company's proposal to provide a credit to customers who switch to competitive retail service a reasonable alternative to pricing capacity at a discount to the full cost of capacity?

A: It would be reasonable to offer a credit to shopping customers, but only to the extent that such switching increases the Company's operating margins and to the extent that such operating margins are not already reflected in the price paid by competitive retail suppliers for purchases of FRR capacity from AEP Ohio. In other words, such margins should be credited either to competitive retail service providers through the priced charged for capacity or to switching customers via a shopping credit, but not both.

20 Q: How might migration to competitive retail supply increase operating margins?

²⁴ Direct Testimony of Jonathan A. Lesser on behalf of FirstEnergy Solutions Corporation, Case No. 10-2929-EL-UNC, April 4, 2012, p.7.

- A: Migration from SSO supply would free up AEP Ohio generation for sale into the
 wholesale market. Such sales would generate profits to the extent that the market
 prices paid for such sales exceed the operating costs required to support such sales.
- 4 Q: Did the Company establish the \$10/MWh value for its proposed shopping
 5 credit based on expected sales margins?
- A: Apparently not. According to the Company's response to OCC Interrogatory No. 244, the \$10/MWh value was selected simply because it would provide a \$10/month
 credit to a residential customer with usage of 1,000 kWh per month.²⁵
- 9 Q: Should the Company offer a shopping credit based on expected sales margins?
- A: Not necessarily. The Company should provide a shopping credit to switching customers only if such a credit is not already reflected in the capacity price approved in Case No.10-2929. If the capacity price approved in Case No. 10-2929 is set at the full embedded cost of capacity, without any adjustment to reflect the market value of the energy associated with that capacity, then AEP Ohio should set the shopping credit at the expected sales margin.
- 16 If, instead, the capacity price approved in Case No. 10-2929 reflects an offset 17 for the expected market value of energy associated with FRR capacity, then a 18 shopping credit would not be appropriate. In this case, the sales margin would 19 already be captured in the price paid by competitive retail suppliers for FRR 20 capacity.
- 21 Q: If the shopping credit were set at the expected sales margin, would the 22 Company's proposal to cap the total amount to be paid by the Company for 23 such credits be appropriate?

²⁵ The Company's response to OCC Interrogatory No. 2-44 is attached to this testimony as Attachment 1.

A: No. In this instance, the Company would simply be returning to shopping customers
through the shopping credit the additional margins attributable to those customers'
decisions to switch to competitive retail electric service. If the Company's spending
for such shopping credits were capped, then the Company would retain any
operating profits from customer switching in excess of the payment cap. As such, a
cap on the amount returned to shopping customers would not be appropriate.

7 Q: Does this complete your direct testimony?

8 A: Yes. However, I reserve the right to supplement my testimony in the event that AEP
9 Ohio, PUCO Staff, or other parties submit additional testimony, or if new
10 information or data in connection with this proceeding becomes available.

CERTIFICATE OF SERVICE

I hereby certify that a true copy of the foregoing Direct Testimony of Jonathan

Wallach was served via electronic transmission to the persons listed below on this 4th

day of May, 2012.

/s/ Maureen R. Grady____

Maureen R. Grady Assistant Consumers' Counsel

PARTIES SERVED

Werner.margard@puc.state.oh.us John.jones@puc.state.oh.us lmcalister@bricker.com MWarnock@bricker.com stnourse@aep.com mjsatterwhite@aep.com tobrien@bricker.com fdarr@mwncmh.com joliker@mwncmh.com ghummel@mwncmh.com ricks@ohanet.org msmalz@ohiopovertylaw.org jmaskovvak@ohiopovertvlaw.org Philip.sineneng@thompsonhine.com Dorothy.corbett@duke-energy.com myurick@taftlaw.com dconway@porterwright.com cmoore@porterwright.com haydenm@firstenergycorp.com mkurtz@BKLlawfirm.com dboehm@BKLlawfirm.com emma.hand@snrdenton.com doug.bonner@snrdenton.com dan.barnowski@snrdenton.com JLang@Calfee.com lmcbride@calfee.com talexander@calfee.com ssolberg@eimerstahl.com aaragona@eimerstahl.com dstahl@eimerstahl.com whitt@whitt-sturtevant.com thompson@whitt-sturtevant.com

jejadwin@aep.com mhpetricoff@vorys.com smhoward@vorys.com mjsettineri@vorys.com wmassey@cov.com henryeckhart@aol.com jesse.rodriguez@exeloncorp.com sandy.grace@exeloncorp.com kpkreider@kmklaw.com dmeyer@kmklaw.com holly@raysmithlaw.com BarthRoyer@aol.com Gary.A.Jeffries@dom.com gthomas@gtpowergroup.com laurac@chappelleconsulting.net Christopher.miller@icemiller.com Gregory.dunn@icemiller.com Asim.Haque@icemiller.com sjsmith@szd.com tsantarelli@elpc.org nolan@theoec.org trent@theoec.org cathy@theoec.org ned.ford@fuse.net gpoulos@enernoc.com sfisk@nrdc.org zkravitz@taftlaw.com aehaedt@jonesday.com dakutik@jonesday.com callwein@wamenergylaw.com Terrance.Mebane@ThompsonHine.com bpbarger@bcslawvers.com

vparisi@igsenergy.com mswhite@igsenergy.com kaelber@buckleyking.com walter@buckleyking.com judi.sobecki@dplinc.com randall.griffin@dplinc.com Carolyn.Flahive@ThompsonHine.com Stephanie.Chmiel@ThompsonHine.com rjhart@hahnlaw.com rremington@hahnlaw.com djmichalski@hahnlaw.com jhummer@uaoh.net tlindsey@uaoh.net ssalamido@cloppertlaw.com arthur.beeman@snrdenton.com cendsley@ofbf.org dane.stinson@baileycavalieri.com jmclark@vectren.com sbruce@oada.com rsugarman@keglerbrown.com matt@matthewcoxlaw.com mchristensen@columbuslaw.org toddm@wamenergylaw.com rburke@cpv.com bkelly@cpv.com eisenstatl@dicksteinshapiro.com lehfeldtr@dicksteinshapiro.com kinderr@dicksteinshapiro.com kwatson@cloppertlaw.com Thomas.millar@snrdenton.com James.rubin@snrdenton.com

AEs: <u>greta.see@puc.state.oh.us</u> Jonathan.tauber@puc.state.oh.us ATTACHMENT 1

AEP OHIO RESPONSE TO OCC INTERROGATORY NO. 2-44

OHIO POWER COMPANY'S RESPONSES TO THE OFFICE OF THEOHIO CONSUMERS' COUNSEL'S DISCOVERY REQUESTS PUCO CASE 11-346-EL-SSO and 11-348-EL-SSO - Modified ESP SECOND SET

INTERROGATORY

OCC-INT-2-044 Referring to Company Witness Allen's testimony at 16, with regard to the proposed shopping credit of \$10/MWh, please explain how the Company derived the proposed value for the shopping credit.

RESPONSE

The level of proposed shopping credit (\$10/MWh) was derived to provide a \$10/month shopping credit to a typical residential customer using 1,000 kWh. Additionally, a \$10/MWh represents a shopping credit for each revenue class of over 14%. This credit is one part of the alternative balanced package of terms in the proposed ESP.

Prepared by: William A. Allen

Qualifications of

JONATHAN F. WALLACH

Resource Insight, Inc. 5 Water Street Arlington, Massachusetts 02476

SUMMARY OF PROFESSIONAL EXPERIENCE

- 1990– Vice President, Resource Insight, Inc. Provides research, technical assistance, Present and expert testimony on electric- and gas-utility planning, economics, regulation, and restructuring. Designs and assesses resource-planning strategies for regulated and competitive markets, including estimation of market prices and utility-plant stranded investment; negotiates restructuring strategies and implementation plans; assists in procurement of retail power supply.
- 1989–90 Senior Analyst, Komanoff Energy Associates. Conducted comprehensive costbenefit assessments of electric-utility power-supply and demand-side conservation resources, economic and financial analyses of independent power facilities, and analyses of utility-system excess capacity and reliability. Provided expert testimony on statistical analysis of U.S. nuclear plant operating costs and performance. Co-wrote *The Power Analyst*, software developed under contract to the New York Energy Research and Development Authority for screening the economic and financial performance of non-utility power projects.
- 1987–88 Independent Consultant. Provided consulting services for Komanoff Energy Associates (New York, New York), Schlissel Engineering Associates (Belmont, Massachusetts), and Energy Systems Research Group (Boston, Massachusetts).
- 1981–86 **Research Associate, Energy Systems Research Group.** Performed analyses of electric utility power supply planning scenarios. Involved in analysis and design of electric and water utility conservation programs. Developed statistical analysis of U.S. nuclear plant operating costs and performance.

EDUCATION

BA, Political Science with honors and Phi Beta Kappa, University of California, Berkeley, 1980.

Massachusetts Institute of Technology, Cambridge, Massachusetts. Physics and Political Science, 1976–1979.

PUBLICATIONS

"The Future of Utility Resource Planning: Delivering Energy Efficiency through Distributed Utilities" (with Paul Chernick), *International Association for Energy Economics Seventeenth Annual North American Conference* (460–469). Cleveland, Ohio: USAEE. 1996.

"The Price is Right: Restructuring Gain from Market Valuation of Utility Generating Assets" (with Paul Chernick), *International Association for Energy Economics Seventeenth Annual North American Conference* (345–352). Cleveland, Ohio: USAEE. 1996.

"The Future of Utility Resource Planning: Delivering Energy Efficiency through Distribution Utilities" (with Paul Chernick), *1996 Summer Study on Energy Efficiency in Buildings* 7(7.47–7.55). Washington: American Council for an Energy-Efficient Economy, 1996.

"Retrofit Economics 201: Correcting Common Errors in Demand-Side-Management Cost-Benefit Analysis" (with John Plunkett and Rachael Brailove). In proceedings of "Energy Modeling: Adapting to the New Competitive Operating Environment," conference sponsored by the Institute for Gas Technology in Atlanta in April of 1995. Des Plaines, Ill.: IGT, 1995.

"The Transfer Loss is All Transfer, No Loss" (with Paul Chernick), *Electricity Journal* 6:6 (July, 1993).

"Benefit-Cost Ratios Ignore Interclass Equity" (with Paul Chernick et al.), *DSM Quarterly*, Spring 1992.

"Consider Plant Heat Rate Fluctuations," Independent Energy, July/August 1991.

"Demand-Side Bidding: A Viable Least-Cost Resource Strategy" (with Paul Chernick and John Plunkett), *Proceedings from the NARUC Biennial Regulatory Information Conference*, September 1990.

"New Tools on the Block: Evaluating Non-Utility Supply Opportunities With *The Power* Analyst, (with John Plunkett), *Proceedings of the Fourth National Conference on Micro-* computer Applications in Energy, April 1990.

REPORTS

"Green Resource Portfolios: Development, Integration, and Evaluation" (with Paul Chernick and Richard Mazzini) report to the Green Energy Coalition presented as evidence in Ontario EB 2007-0707.

"Risk Analysis of Procurement Strategies for Residential Standard Offer Service" (with Paul Chernick, David White, and Rick Hornby) report to Maryland Office of People's Counsel. 2008. Baltimore: Maryland Office of People's Counsel.

"Integrated Portfolio Management in a Restructured Supply Market" (with Paul Chernick, William Steinhurst, Tim Woolf, Anna Sommers, and Kenji Takahashi). 2006. Columbus, Ohio: Office of the Ohio Consumers' Counsel.

"First Year of SOS Procurement." 2004. Prepared for the Maryland Office of People's Counsel.

"Energy Plan for the City of New York" (with Paul Chernick, Susan Geller, Brian Tracey, Adam Auster, and Peter Lanzalotta). 2003. New York: New York City Economic Development Corporation.

"Peak-Shaving–Demand-Response Analysis: Load Shifting by Residential Customers" (with Brian Tracey). 2003. Barnstable, Mass.: Cape Light Compact.

"Electricity Market Design: Incentives for Efficient Bidding; Opportunities for Gaming." 2002. Silver Spring, Maryland: National Association of State Consumer Advocates.

"Best Practices in Market Monitoring: A Survey of Current ISO Activities and Recommendations for Effective Market Monitoring and Mitigation in Wholesale Electricity Markets" (with Paul Peterson, Bruce Biewald, Lucy Johnston, and Etienne Gonin). 2001. Prepared for the Maryland Office of People's Counsel, Pennsylvania Office of Consumer Advocate, Delaware Division of the Public Advocate, New Jersey Division of the Ratepayer Advocate, Office of the People's Counsel of the District of Columbia.

"Comments Regarding Retail Electricity Competition." 2001. Filed by the Maryland Office of People's Counsel in U.S. FTC Docket No. V010003.

"Final Comments of the City of New York on Con Edison's Generation Divestiture Plans and Petition." 1998. Filed by the City of New York in PSC Case No. 96-E-0897.

"Response Comments of the City of New York on Vertical Market Power." 1998. Filed by the City of New York in PSC Case Nos. 96-E-0900, 96-E-0098, 96-E-0099, 96-E-0891, 96-E-0897, 96-E-0909, and 96-E-0898.

"Preliminary Comments of the City of New York on Con Edison's Generation Divestiture Plan and Petition." 1998. Filed by the City of New York in PSC Case No. 96-E-0897.

"Maryland Office of People's Counsel's Comments in Response to the Applicants' June 5, 1998 Letter." 1998. Filed by the Maryland Office of People's Counsel in PSC Docket No. EC97-46-000.

"Economic Feasibility Analysis and Preliminary Business Plan for a Pennsylvania Consumer's Energy Cooperative" (with John Plunkett et al.). 1997. 3 vols. Philadelphia, Penn.: Energy Coordinating Agency of Philadelphia.

"Good Money After Bad" (with Charles Komanoff and Rachel Brailove). 1997. White Plains, N.Y.: Pace University School of Law Center for Environmental Studies.

"Maryland Office of People's Counsel's Comments on Staff Restructuring Report: Case No. 8738." 1997. Filed by the Maryland Office of People's Counsel in PSC Case No. 8738.

"Protest and Request for Hearing of Maryland Office of People's Counsel." 1997. Filed by the Maryland Office of People's Counsel in PSC Docket Nos. EC97-46-000, ER97-4050-000, and ER97-4051-000.

"Restructuring the Electric Utilities of Maryland: Protecting and Advancing Consumer Interests" (with Paul Chernick, Susan Geller, John Plunkett, Roger Colton, Peter Bradford, Bruce Biewald, and David Wise). 1997. Baltimore, Maryland: Maryland Office of People's Counsel. "Comments of the New Hampshire Office of Consumer Advocate on Restructuring New Hampshire's Electric-Utility Industry" (with Bruce Biewald and Paul Chernick). 1996. Concord, N.H.: NH OCA.

"Estimation of Market Value, Stranded Investment, and Restructuring Gains for Major Massachusetts Utilities" (with Paul Chernick, Susan Geller, Rachel Brailove, and Adam Auster). 1996. On behalf of the Massachusetts Attorney General (Boston).

"Report on Entergy's 1995 Integrated Resource Plan." 1996. On behalf of the Alliance for Affordable Energy (New Orleans).

"Preliminary Review of Entergy's 1995 Integrated Resource Plan." 1995. On behalf of the Alliance for Affordable Energy (New Orleans).

"Comments on NOPSI and LP&L's Motion to Modify Certain DSM Programs." 1995. On behalf of the Alliance for Affordable Energy (New Orleans).

"Demand-Side Management Technical Market Potential Progress Report." 1993. On behalf of the Legal Environmental Assistance Foundation (Tallahassee)

"Technical Information." 1993. Appendix to "Energy Efficiency Down to Details: A Response to the Director General of Electricity Supply's Request for Comments on Energy Efficiency Performance Standards" (UK). On behalf of the Foundation for International Environmental Law and Development and the Conservation Law Foundation (Boston).

"Integrating Demand Management into Utility Resource Planning: An Overview." 1993. Vol. 1 of "From Here to Efficiency: Securing Demand-Management Resources" (with Paul Chernick and John Plunkett). Harrisburg, Pa.:Pennsylvania Energy Office

"Making Efficient Markets." 1993. Vol. 2 of "From Here to Efficiency: Securing Demand-Management Resources" (with Paul Chernick and John Plunkett). Harrisburg, Pa.: Pennsylvania Energy Office.

"Analysis Findings, Conclusions, and Recommendations." 1992. Vol. 1 of "Correcting the Imbalance of Power: Report on Integrated Resource Planning for Ontario Hydro" (with Paul Chernick and John Plunkett).

"Demand-Management Programs: Targets and Strategies." 1992. Vol. 1 of "Building Ontario Hydro's Conservation Power Plant" (with John Plunkett, James Peters, and Blair Hamilton).

"Review of the Elizabethtown Gas Company's 1992 DSM Plan and the Demand-Side Management Rules" (with Paul Chernick, John Plunkett, James Peters, Susan Geller, Blair Hamilton, and Andrew Shapiro). 1992. Report to the New Jersey Department of Public Advocate.

"Comments of Public Interest Intervenors on the 1993–1994 Annual and Long-Range Demand-Side Management and Integrated Resource Plans of New York Electric Utilities" (with Ken Keating et al.) 1992.

"Review of Jersey Central Power & Light's 1992 DSM Plan and the Demand-Side Management Rules" (with Paul Chernick et al.). 1992. Report to the New Jersey Department of Public Advocate.

"Review of Rockland Electric Company's 1992 DSM Plan and the Demand-Side Management Rules" (with Paul Chernick et al.). 1992.

"Initial Review of Ontario Hydro's Demand-Supply Plan Update" (with David Argue et al.). 1992.

"Comments on the Utility Responses to Commission's November 27, 1990 Order and Proposed Revisions to the 1991–1992 Annual and Long Range Demand Side Management Plans" (with John Plunkett et al.). 1991.

"Comments on the 1991–1992 Annual and Long Range Demand-Side-Management Plans of the Major Electric Utilities" (with John Plunkett et al.). Filed in NY PSC Case No. 28223 in re New York utilities' DSM plans. 1990.

"Profitability Assessment of Packaged Cogeneration Systems in the New York City Area." 1989. Principal investigator.

"Statistical Analysis of U.S. Nuclear Plant Capacity Factors, Operation and Maintenance Costs, and Capital Additions." 1989.

"The Economics of Completing and Operating the Vogtle Generating Facility." 1985. ESRG Study No. 85-51A.

"Generating Plant Operating Performance Standards Report No. 2: Review of Nuclear Plant Capacity Factor Performance and Projections for the Palo Verde Nuclear Generating Facility." 1985. ESRG Study No. 85-22/2.

"Cost-Benefit Analysis of the Cancellation of Commonwealth Edison Company's Braidwood Nuclear Generating Station." 1984. ESRG Study No. 83-87.

"The Economics of Seabrook 1 from the Perspective of the Three Maine Co-owners." 1984. ESRG Study No. 84-38.

"An Evaluation of the Testimony and Exhibit (RCB-2) of Dr. Robert C. Bushnell Concerning the Capital Cost of Fermi 2." 1984. ESRG Study No. 84-30.

"Electric Rate Consequences of Cancellation of the Midland Nuclear Power Plant." 1984. ESRG Study No. 83-81.

"Power Planning in Kentucky: Assessing Issues and Choices—Project Summary Report to the Public Service Commission." 1984. ESRG Study No. 83-51.

"Electric Rate Consequences of Retiring the Robinson 2 Nuclear Plant." 1984. ESRG Study No. 83-10.

"Power Planning in Kentucky: Assessing Issues and Choices—Conservation as a Planning Option." 1983. ESRG Study No. 83-51/TR III.

"Electricity and Gas Savings from Expanded Public Service Electric and Gas Company Conservation Programs." 1983. ESRG Study No. 82-43/2.

"Long Island Without the Shoreham Power Plant: Electricity Cost and System Planning Consequences; Summary of Findings." 1983. ESRG Study No. 83-14S.

"Long Island Without the Shoreham Power Plant: Electricity Cost and System Planning Consequences; Technical Report B—Shoreham Operations and Costs." 1983. ESRG Study No. 83-14B.

"Customer Programs to Moderate Demand Growth on the Arizona Public Service Company System: Identifying Additional Cost-Effective Program Options." 1982. ESRG Study No. 82-14C.

"The Economics of Alternative Space and Water Heating Systems in New Construction in the Jersey Central Power and Light Service Area, A Report to the Public Advocate." 1982. ESRG Study No. 82-31.

"Review of the Kentucky-American Water Company Capacity Expansion Program, A Report to the Kentucky Public Service Commission." 1982. ESRG Study No. 82-45.

"Long Range Forecast of Sierra Pacific Power Company Electric Energy Requirements and Peak Demands, A Report to the Public Service Commission of Nevada." 1982. ESRG Study No. 81-42B.

"Utility Promotion of Residential Customer Conservation, A Report to Massachusetts Public Interest Research Group." 1981. ESRG Study No. 81-47

PRESENTATIONS

"Office of People's Counsel Case No. 9117" (with William Fields). Presentation to the Maryland Public Utilities Commission in Case No. 9117, December 2008.

"Electricity Market Design: Incentives for Efficient Bidding, Opportunities for Gaming." NASUCA Northeast Market Seminar, Albany, N.Y., February 2001.

"Direct Access Implementation: The California Experience." Presentation to the Maryland Restructuring Technical Implementation Group on behalf of the Maryland Office of People's Counsel. June 1998.

"Reflecting Market Expectations in Estimates of Stranded Costs," speaker, and workshop moderator of "Effectively Valuing Assets and Calculating Stranded Costs." Conference sponsored by International Business Communications, Washington, D.C., June 1997.

EXPERT TESTIMONY

- 1989 Mass. DPU on behalf of the Massachusetts Executive Office of Energy Resources. Docket No. 89-100. Joint testimony with Paul Chernick relating to statistical analysis of U.S. nuclear-plant capacity factors, operation and maintenance costs, and capital additions; and to projections of capacity factor, O&M, and capital additions for the Pilgrim nuclear plant.
- 1994 **NY PSC** on behalf of the Pace Energy Project, Natural Resources Defense Council, and Citizen's Advisory Panel. Case No. 93-E-1123. Joint testimony with John Plunkett critiques proposed modifications to Long Island Lighting Company's DSM programs from the perspective of least-cost-planning principles.
- 1994 Vt. PSB on behalf of the Vermont Department of Public Service. Docket No. 5270-CV-1 and 5270-CV-3. Testimony and rebuttal testimony discusses rate and bill effects from DSM spending and sponsors load shapes for measure- and program-screening analyses.
- 1996 New Orleans City Council on behalf of the Alliance for Affordable Energy. Docket Nos. UD-92-2A, UD-92-2B, and UD-95-1. Rates, charges, and integrated resource planning for Louisiana Power & Lights and New Orleans Public Service, Inc.
- 1996 New Orleans City Council Docket Nos. UD-92-2A, UD-92-2B, and UD-95-1. Rates, charges, and integrated resource planning for Louisiana Power & Lights and New Orleans Public Service, Inc.; Alliance for Affordable Energy. April, 1996.

Prudence of utilities' IRP decisions; costs of utilities' failure to follow City Council directives; possible cost disallowances and penalties; survey of penalties for similar failures in other jurisdictions.

1998 Massachusetts Department of Telecommunications and Energy Docket No. 97-111, Commonwealth Energy proposed restructuring; Cape Cod Light Compact. Joint testimony with Paul Chernick, January, 1998.

Critique of proposed restructuring plan filed to satisfy requirements of the electric-utility restructuring act of 1997. Failure of the plan to foster competition and promote the public interest.

Massachusetts Department of Telecommunications and Energy Docket No. 97-120, Western Massachusetts Electric Company proposed restructuring; Massachusetts Attorney General. Joint testimony with Paul Chernick, October, 1998. Joint surrebuttal with Paul Chernick, January, 1999.

Market value of the three Millstone nuclear units under varying assumptions of plant performance and market prices. Independent forecast of wholesale market prices. Value of Pilgrim and TMI-1 asset sales.

1999 Maryland PSC Case No. 8795, Delmarva Power & Light comprehensive restructuring agreement, Maryland Office of People's Counsel. July 1999.

Support of proposed comprehensive restructuring settlement agreement

Maryland PSC Case Nos. 8794 and 8808, Baltimore Gas & Electric Company comprehensive restructuring agreement, Maryland Office of People's Counsel. Initial Testimony July 1999; Reply Testimony August 1999; Surrebuttal Testimony August 1999.

Support of proposed comprehensive restructuring settlement agreement

Maryland PSC Case No. 8797, comprehensive restructuring agreement for Potomac Edison Company, Maryland Office of People's Counsel. October 1999.

Support of proposed comprehensive restructuring settlement agreement

Connecticut DPUC Docket No. 99-03-35, United Illuminating standard offer, Connecticut Office of Consumer Counsel. November 1999.

Reasonableness of proposed revisions to standard-offer-supply energy costs. Implications of revisions for other elements of proposed settlement.

2000 U.S. FERC Docket No. RT01-02-000, Order No. 2000 compliance filing, Joint Consumer Advocates intervenors. Affidavit, November 2000.

Evaluation of innovative rate proposal by PJM transmission owners.

2001 Maryland PSC Case No. 8852, Charges for electricity-supplier services for Potomac Electric Power Company, Maryland Office of People's Counsel. March 2001.

Reasonableness of proposed fees for electricity-supplier services.

Maryland PSC Case No. 8890, Merger of Potomac Electric Power Company and Delmarva Power and Light Company, Maryland Office of People's Counsel. September 2001; surrebuttal, October 2001. In support of settlement: Supplemental, December 2001; rejoinder, January 2002.

Costs and benefits to ratepayers. Assessment of public interest.

Maryland PSC Case No. 8796, Potomac Electric Power Company stranded costs and rates, Maryland Office of People's Counsel. December 2001; surrebuttal, February 2002.

Allocation of benefits from sale of generation assets and power-purchase contracts.

2002 **Maryland PSC** Case No. 8908, Maryland electric utilities' standard offer and supply procurement, Maryland Office of People's Counsel. Direct, November 2002; Rebuttal December 2002. Benefits of proposed settlement to ratepayers. Standard-offer service. Procurement of supply.

2003 **Maryland PSC** Case No. 8980, adequacy of capacity in restructured electricity markets; Maryland Office of People's Counsel. Direct, December 2003; Reply December 2003.

> Purpose of capacity-adequacy requirements. PJM capacity rules and practices. Implications of various restructuring proposals for system reliability.

2004 Maryland PSC Case No. 8995, Potomac Electric Power Company recovery of generation-related uncollectibles; Maryland Office of People's Counsel. Direct, March 2004; Supplemental March 2004, Surrebuttal April 2004.

Calculation and allocation of costs. Effect on administrative charge pursuant to settlement.

Maryland PSC Case No. 8994, Delmarva Power & Light recovery of generationrelated uncollectibles; Maryland Office of People's Counsel. Direct, March 2004; Supplemental April 2004.

Calculation and allocation of costs. Effect on administrative charge pursuant to settlement.

Maryland PSC Case No. 8985, Southern Maryland Electric Coop standard-offer service; Maryland Office of People's Counsel. Direct, July 2004.

Reasonableness and risks of resource-procurement plan.

2005 **FERC** Docket No. ER05-428-000, revisions to ICAP demand curves; City of New York. Statement, March 2005.

Net-revenue offset to cost of new capacity. Winter-summer adjustment factor. Market power and in-City ICAP price trends.

FERC Docket No. PL05-7-000, capacity markets in PJM; Maryland Office of People's Counsel. Statement, June 2005.

Inefficiencies and risks associated with use of administratively determined demand curve. Incompatibility of four-year procurement plan with Maryland standard-offer service.

FERC Dockets Nos. ER05-1410-000 & EL05-148-000, proposed marketclearing mechanism for capacity markets in PJM; Coalition of Consumers for Reliability, Affidavit October 2005, Supplemental Affidavit October 2006.

Inefficiencies and risks associated with use of administratively determined demand curve. Effect of proposed reliability-pricing model on capacity costs.

2006 **Maryland PSC** Case No. 9052, Baltimore Gas & Electric rates and markettransition plan; Maryland Office of People's Counsel, February 2006. Transition to market-based residential rates. Price volatility, bill complexity, and cost-deferral mechanisms.

Maryland PSC Case No. 9056, default service for commercial and industrial customers; Maryland Office of People's Counsel, April 2006.

Assessment of proposals to modify default service for commercial and industrial customers.

Maryland PSC Case No. 9054, merger of Constellation Energy Group and FPL Group; Maryland Office of People's Counsel, June 2006.

Assessment of effects and risks of proposed merger on ratepayers.

Illinois Commerce Commission Docket No. 06-0411, Commonwealth Edison Company residential rate plan; Citizens Utility Board, Cook County State's Attorney's Office, and City of Chicago, Direct July 2006, Reply August 2006.

Transition to market-based rates. Securitization of power costs. Rate of return on deferred assets.

Maryland PSC Case No. 9064, default service for residential and small commercial customers; Maryland Office of People's Counsel, Rebuttal Testimony, September 2006.

Procurement of standard-offer power. Structure and format of bidding. Risk and cost recovery.

FERC Dockets Nos. ER05-1410-000 & EL05-148-000, proposed marketclearing mechanism for capacity markets in PJM; Maryland Office of the People's Counsel, Supplemental Affidavit October 2006.

Distorting effects of proposed reliability-pricing model on clearing prices. Economically efficient alternative treatment.

Maryland PSC Case No. 9063, optimal structure of electric industry; Maryland Office of People's Counsel, Direct Testimony, October 2006; Rebuttal November 2006; surrebuttal November 2006.

Procurement of standard-offer power. Risk and gas-price volatility, and their effect on prices and market performance. Alternative procurement strategies.

Maryland PSC Case No. 9073, stranded costs from electric-industry restructuring; Maryland Office of People's Counsel, Direct Testimony, December 2006.

Review of estimates of stranded costs for Baltimore Gas & Electric.

2007 **Maryland PSC** Case No. 9091, rate-stabilization and market-transition plan for the Potomac Edison Company; Maryland Office of People's Counsel, Direct Testimony, March 2007. Rate-stabilization plan.

Maryland PSC Case No. 9092, rates and rate mechanisms for the Potomac Electric Power Company; Maryland Office of People's Counsel, Direct Testimony, March 2007.

Cost allocation and rate design. Revenue decoupling mechanism.

Maryland PSC Case No. 9093, rates and rate mechanisms for Delmarva Power & Light; Maryland Office of People's Counsel, Direct Testimony, March 2007.

Cost allocation and rate design. Revenue decoupling mechanism.

Maryland PSC Case No. 9099, rate-stabilization plan for Baltimore Gas & Electric; Maryland Office of People's Counsel, Direct, March 2007; Surrebuttal April 2007.

Review of standard-offer-service-procurement plan. Rate stabilization plan.

Connecticut DPUC Docket No. 07-04-24, review of capacity contracts under Energy Independence Act; Connecticut Office of Consumer Counsel, Joint Direct Testimony June 2007.

Assessment of proposed capacity contracts.

Maryland PSC Case No. 9117, residential and small-commercial standard-offer service; Maryland Office of People's Counsel. Direct and Reply, September 2007; Supplemental Reply, November 2007; Additional Reply, December 2007; presentation, December 2008.

Benefits of long-term planning and procurement. Proposed aggregation of customers.

Maryland PSC Case No. 9117, Phase II, residential and small-commercial standard-offer service; Maryland Office of People's Counsel. Direct, October 2007.

Energy efficiency as part of standard-offer-service planning and procurement. Procurement of generation or long-term contracts to meet reliability needs.

2008 **Connecticut DPUC 08-01-01**, peaking generation projects; Connecticut Office of Consumer Counsel. Direct (with Paul Chernick), April 2008.

Assessment of proposed peaking projects. Valuation of peaking capacity. Modeling of energy margin, forward reserves, other project benefits.

Ontario EB-2007-0707, Ontario Power Authority integrated system plan; Green Energy Coalition, Penimba Institute, and Ontario Sustainable Energy Association. Evidence (with Paul Chernick and Richard Mazzini), August 2008.

Critique of integrated system plan. Resource cost and characteristics; finance cost. Development of least-cost green-energy portfolio.

2009 Maryland PSC Case No. 9192, Delmarva Power & Lights rates; Maryland Office of People's Counsel. Direct, August 2009; Rebuttal, Surrebuttal, September 2009.

Cost allocation and rate design.

Wisconsin PSC Docket No. 6630-CE-302, Glacier Hills Wind Park certificate; Citizens Utility Board of Wisconsin. Direct and Surrebuttal, October 2009.

Reasonableness of proposed wind facility.

PUC of Ohio Case No 09-906-EL-SSO, standard-service-offer bidding for three Ohio electric companies; Office of the Ohio Consumers' Counsel. Direct, December 2009.

Design of auctions for SSO power supply. Implications of migration of First-Energy from MISO to PJM.

2010 **PUC of Ohio** Case No 10-388-EL-SSO, standard-service offer for three Ohio electric companies; Office of the Ohio Consumers' Counsel. Direct, July 2010.

Design of auctions for SSO power supply.

Maryland PSC Case No. 9232, Potomac Electric Power Co. administrative charge for standard-offer service; Maryland Office of People's Counsel. Reply, Rebuttal, August 2010.

Proposed rates for components of the Administrative Charge for residential standard-offer service.

Maryland PSC Case No. 9226, Delmarva Power & Light administrative charge for standard-offer service; Maryland Office of People's Counsel. Reply, Rebuttal, August 2010.

Proposed rates for components of the Administrative Charge for residential standard-offer service.

Maryland PSC Case No. 9221, Baltimore Gas & Electric cost recovery; Maryland Office of People's Counsel. Reply, August 2010; Rebuttal, September 2010; Surrebuttal, November 2010

Proposed rates for components of the Administrative Charge for residential standard-offer service.

Wisconsin PSC Docket No. 3270-UR-117, Madison Gas & Electric gas and electric rates; Citizens Utility Board of Wisconsin. Direct, Rebuttal, Surrebuttal, September 2010.

Standby rate design. Treatment of uneconomic dispatch costs.

Nova Scotia UARB Case No. NSUARB P-887(2), fuel-adjustment mechanism; Nova Scotia Consumer Advocate. Direct, September 2010.

Effectiveness of fuel-adjustment incentive mechanism.

Manitoba PUB, Manitoba Hydro rates; Resource Conservation Manitoba and Time to Respect Earth's Ecosystems. Direct, December 2010.

Assessment of drought-related financial risk.

2011 Mass. DPU 10-170, NStar–Northeast Utilities merger; Cape Light Compact. Direct, May 2011.

Merger and competitive markets. Competitively neutral recovery of utility investments in new generation.

Mass. DPU 11-5, -6, -7, NStar wind contracts; Cape Light Compact. Direct, May 2011.

Assessment of utility proposal for recovery of contract costs.

Wisc. PSC Docket No. 4220-UR-117, electric and gas rates of Northern States Power: Citizens Utility Board of Wisconsin. Direct, Rebuttals (2) October 2011; Surrebuttal, Oral Sur-Surrebutal November 2011;

Cost allocation and rate design. Allocation of DOE settlement payment.

Wisc. PSC Docket No. 6680-FR-104, fuel-cost-related rate adjustments for Wisconsin Power and Light Company: Citizens Utility Board of Wisconsin. Direct, October 2011; Rebutal, Surrebuttal, November 2011

Costs to comply with Cross State Air Pollution Rule.

2012 Maryland PSC Case No. 9149, Maryland IOUs' development of RFPs for new generation; Maryland Office of People's Counsel. March 2012.

Failure of demand-response provider to perform per contract. Estimation of cost to ratepayers.

Competitive Market Price January through May, 2015

Capacity Cost \$153.89/MW-day

| \$/MWh | | | | | |
|--------|-----------------------------------|-------------|------------|------------|--|
| | | Residential | Commercial | Industrial | |
| 1 | Simple Swap | 37.75 | 37.75 | 37.75 | |
| 2 | Basis Adjustment | 0.49 | 0.49 | 0.49 | |
| 3 | Load Following/Shaping Adjustment | 4.39 | 2.19 | 1.56 | |
| 4 | Capacity | 12.47 | 9.71 | 6.84 | |
| 5 | Ancillary Services | 0.85 | 0.85 | 0.85 | |
| 6 | Alternative Energy Requirement | 0.92 | 0.91 | 0.92 | |
| 7 | ARR Credit | (1.46) | (1.08) | (0.92) | |
| 8 | Losses | 2.73 | 1.63 | 0.72 | |
| 9 | Transaction Risk Adder | 3.12 | 2.85 | 2.64 | |
| 10 | Retail Administration | 5.00 | 5.00 | 5.00 | |
| | Class Total | 66.26 | 60.29 | 55.85 | |
| | Weighted Total | | 60.29 | | |