

#### BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

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

MOTION OF COLUMBUS SOUTHERN POWER COMPANY AND OHIO POWER COMPANY FOR LEAVE TO FILE INADVERTENTLY OMITTED PAGES OF TESTIMONY AND REQUEST FOR EXPEDITED RULING

Columbus Southern Power Company ("CSP)" and Ohio Power Company ("OPCo") (collectively, "AEP Ohio") request leave to file missing pages of testimony for Dr. Chantale LaCasse. During the duplication process for the filing, the last five pages of the prepared testimony were inadvertently omitted through a clerical error. In accordance with Rule 4901-1-12(C), Ohio Admin. Code, AEP Ohio requests an expedited ruling in response to these requests.

> This is to certify that the images appearing are an accurate and complete reproduction of a case file document delivered in the regular course of business. Technician

This motion is supported by the attached memorandum in support.

Respectfully Submitted,

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#### MEMORANDUM IN SUPPORT

On July 6, 2011, AEP Ohio filed three picces of supplemental testimony supporting its proposed Provider of Last Resort charges. The next day, counsel learned that a duplication error occurred during the July 6, 2011 filing process for AEP Ohio's supplemental POLR testimony, resulting in five pages being inadvertently omitted from the testimony of Dr. Chantale LaCasse. Upon being advised of the error, counsel sent the missing pages out to the parties via electronic mail (the approved method for service in this case) on July 7, 2011. While it is not uncommon in practice before the Commission to correct such matters through a revised filing, AEP Ohio would like to ensure that there are no subsequent objections to this testimony being admitted into the record and, in an abundance of caution, is requesting leave to file the corrected copy that includes the missing pages. Accordingly, AEP Ohio seeks leave to file the enclosed corrected version of Dr. LaCasse's testimony that includes the missing pages and constitutes the full document.

Respectfully submitted,

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

CORRECTED VERSION OF
DIRECT TESTIMONY OF
DR. CHANTALE LACASSE
ON BEHALF OF
COLUMBUS SOUTHERN POWER COMPANY
AND
OHIO POWER COMPANY

### INDEX TO DIRECT TESTIMONY OF CHANTALE LACASSE

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5.	The Company's Method to Estimate the Cost of Shopping-Related Risk is Reasonable
6.	Conclusion

# BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO DIRECT TESTIMONY OF DR. CHANTALE LACASSE ON BEHALF OF COLUMBUS SOUTHERN POWER COMPANY AND OHIO POWER COMPANY

#### 1 PERSONAL DATA

2	Q.	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
3	Α.	My name is Chantale LaCasse. My business address is 1255 23 <sup>rd</sup> St NW, Washington
4		DC, 20037.
5	Q.	PLEASE INDICATE BY WHOM YOU ARE EMPLOYED AND IN WHAT
6		CAPACITY.
_		The state of the s

- 7 A. I am a Senior Vice President with NERA Economic Consulting ("NERA").
- 8 BUSINESS EXPERIENCE
- 9 Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL BACKGROUND
  10 AND BUSINESS EXPERIENCE.
- 11 A. I received a Bachelor of Social Science Degree in Economics from the University of
  12 Ottawa (Canada) in 1983 and a Bachelor of Arts Degree in Mathematics also from the
  13 University of Ottawa in 1984. I received a Master of Arts Degree in Economics in
  14 1986 and a Ph.D. in Economics in 1991 from the University of Western Ontario
  15 (Canada).
- Before joining NERA in 2001, I held various full-time academic positions in

  Canada where I taught economics to graduate and undergraduate students, and

  conducted original research on competitive bidding processes and other issues in

economic policy. My consulting experience at NERA has principally consisted of designing and implementing competitive bidding processes for the procurement of default service for electric utilities. My recent engagements include assisting electric utilities in Pennsylvania and in New Jersey with the design and implementation of competitive bidding processes for the procurement of default service for their customers. In particular, I lead the NERA team that manages the default service auctions for the FirstEnergy Pennsylvania electric utilities (Pennsylvania Power Company, Metropolitan Edison Company, and Pennsylvania Electric Company).

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In 2004 the Public Utilities Commission of Ohio ("PUCO" or "Commission") ordered the FirstEnergy Ohio Electric Distribution Utilities ("EDUs") to hold a descending-price clock auction as a market test for their filed Rate Stabilization Plan. The PUCO had the choice between accepting the results of the auction to procure full-requirements service for FirstEnergy's Standard Service Offer ("SSO") Load for the period January 1, 2006 to December 31, 2008, and rejecting the auction results in favor of the Rate Stabilization Plan Pricing. I provided advice regarding the detailed auction rules, designed the bidding procedure, and served as Auction Manager. I am familiar with the auctions that the FirstEnergy Ohio EDUs currently conduct to procure full-requirements supply for SSO customers under their Electric Security Plan ("ESP"). The auctions use a descending-price clock format in which bidders bid on all products simultaneously over multiple rounds. In a round, a bidder bids by stating the number of tranches it wishes to supply at prices announced by the Auction Manager. If there is excess supply on a product, the price is reduced in the next round, and bidders submit new bids at the reduced prices. The auction closes when

1		supply is just sufficient for what is needed. The Ohio market test auction that I
2		managed and the auctions of the Pennsylvania FirstEnergy EDUs that I currently
3		implement, among others, also use this same descending-clock auction format to
4		procure full-requirements tranches. My curriculum vitae is attached as Exhibit CL-1.
5	Q.	HAVE YOU SUBMITTED TESTIMONY BEFORE AS A WITNESS BEFORE A
6		REGULATORY COMMISSION?
7	A.	Yes. I have testified or submitted testimony before regulatory commissions in the
8		states of Illinois, New Jersey, Pennsylvania, Texas, and before the Federal Energy
9		Regulatory Commission. Additionally, I have submitted testimony before the Public
10		Utilities Commission of Ohio in Case No. 08-917-EL-SSO and in Case No. 08-918-
11		EL-SSO on behalf of Columbus Southern Power Company ("CSP") and Ohio Power
12		Company ("OPCo"), referred to collectively as "the Company" or "AEP Ohio".
13	PURP	POSE OF TESTIMONY
14	Q.	WHAT ARE THE PURPOSES OF YOUR TESTIMONY IN THIS
15	÷	PROCEEDING?
16	A.	The purposes of my testimony are:
17		• To explain the nature of the shopping-related risk faced by any SSO provider,
18		whether an EDU or a winning supplier at an SSO auction;
19		• To discuss methods by which the cost associated with this shopping-related risk
20		may be quantified;
21		• To explain that the valuation of an option is an appropriate method to measure the

To describe additional analyses associated with shopping-related risk.

cost associated with this shopping-related risk; and

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	1 (	0.	WHAT	MATERIALS	HAVE	YOU	REVIEWED	IN	PREPARING	TH
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#### 2 TESTIMONY?

- 3 A. I have reviewed testimony and analyses related to the calculation of the POLR charge
- 4 in Case No. 08-917-EL-SSO and in Case No. 08-918-EL-SSO ("the "09-11 ESP")
- 5 filed by the Company and I have reviewed testimony and analyses related to the
- 6 calculation of the POLR charge in Case No. 11-346-EL-SSO and in Case No. 11-348-
- 7 EL-SSO (the "12-14 ESP") filed by the Company. I have had an opportunity to
- 8 discuss the POLR option analyses with AEP personnel. I have also reviewed the
- 9 Company's responses to interrogatories in this proceeding and the testimony filed by
- intervenors on remand in the 09-11 ESP.

#### 11 O. WHAT EXHIBITS ARE YOU SPONSORING IN THIS PROCEEDING?

- 12 A. I am sponsoring Exhibits CL-1 through CL-2.
- 13 SSO PROVIDERS INCUR COSTS ASSOCIATED WITH SHOPPING-RELATED
- 14 RISK
- 15 O. ARE YOU FAMILIAR WITH THE EDU'S OBLIGATION TO PROVIDE A
- 16 SSO?
- 17 A. Yes. I am familiar with the provisions of Ohio law requiring EDUs such as AEP
- 18 Ohio to provide to all consumers, on a comparable and non-discriminatory basis
- within its certified service territory, a SSO of all competitive retail electric services
- 20 necessary to maintain essential electric service, including a firm supply of electric
- 21 generation service. I understand that EDUs can provide their SSO through either an
- ESP or a Market Rate Offer ("MRO").

Under either option, the EDU's POLR obligation is to provide default generation service for any customer that does not acquire generation service from a competitive retail electric service ("CRES") provider at a price (the "SSO Price") that is substantially fixed. Another obligation of the EDU is to provide the SSO to any group of customers served by a CRES provider that defaults on its service obligations. Collectively, I will refer to these obligations as the EDU's POLR obligations, which exist under both the ESP and MRO options.

Q.

A.

## WHAT IS THE NATURE OF THE SHOPPING-RELATED RISK AND COSTS THAT THE EDU ASSUMES AS A RESULT OF ITS POLR OBLIGATIONS AND THE CUSTOMERS' ABILITY TO SWITCH?

The EDU must honor the SSO Price regardless of market price fluctuations during the term of the rate plan. The customers' ability to shop and market price fluctuations lead to customer demand that is variable and uncertain, which imposes a costly risk upon the EDU. The obligation to maintain a stable price in the face of demand that fluctuates with market conditions prevents the EDU from optimally managing its generation on a forward basis and imposes costs on the EDU in conditions both of rising and of declining market prices.

If market prices fall sufficiently, CRES providers will be able to beat the SSO price and customers will have an incentive to take service from a CRES provider. An EDU, such as AEP Ohio, that uses its own generation assets to meet its SSO obligation would find that a portion of the output that it expected to use to serve SSO customers would instead need to be sold at below expected prices leading to a loss in revenue. If instead market prices rise sufficiently, customers that are taking service

from a CRES provider will find it advantageous to return to the SSO. An EDU would be required to divert a portion of the output of its own generation assets or purchase from the market to meet its SSO obligation at a higher than expected cost. The EDU takes on a costly risk in conditions both of market prices that rise and of market prices that decline with respect to the SSO price.

## 6 Q. WHAT WOULD BE THE SITUATION OF AN EDU WITHOUT POLR 7 OBLIGATIONS?

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Absent its POLR obligations, an EDU that uses its own generation assets would be in a position to manage its generation output optimally on a forward basis. A significant aspect of optimally managing generation output is hedging the financial exposure to the spot market through forward sales. The ESP does not provide a firm hedge because customers may leave and take service from a CRES provider when prices decline. Further, when customers do take service from a CRES provider, the EDU retains the obligation to serve these customers should they return to the SSO, making forward sales outside of the ESP that could be used to hedge the financial exposure to the spot market risky. An electric utility without POLR obligations could use a fully flexible approach in managing its generation. Such an electric utility could, on the basis of current market conditions and its expectation of the future, have a varying portion of its generation output locked in at prevailing market prices. For example, after a period of rising market prices, an EDU that would expect market prices to start declining may choose to lock in a greater proportion of its generation output at prevailing market prices. The EDU in Ohio with POLR obligations cannot avail itself of the full array of strategies for managing its generation.

#### 1 Q. WHAT COSTS DOES AN EDU FACE AS A RESULT OF ITS POLR

#### OBLIGATIONS UNDER AN ESP AND THE CUSTOMERS' ABILITY TO

#### 3 SWITCH?

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Under an ESP, the EDU will propose and the Commission will determine an ESP price. If SSO customers did not have the ability to shop, so that demand did not vary with market conditions, the ESP price would fully recover the requested average generation rate, which would result in a specific revenue for the Company. But because SSO customers can shop, the EDU assumes additional risk and costs. If market prices fall sufficiently so that SSO customers shop, a portion of the generation output that the EDU expected would serve SSO customers instead would be sold at prices below the ESP price, leading to a shortfall in revenue. If instead market prices rise sufficiently so that customers taking service from CRES providers return to the SSO, the EDU would divert a portion of the generation output that could have been sold at those higher market prices to serve SSO customers, or the EDU would purchase from the market at those higher market prices to serve SSO customers, leading to additional unexpected cost. Absent compensation for this shopping-related risk and these additional costs, an EDU whose customers can shop would be in a worse position than an EDU whose customers do not shop, and this is the case whether prices rise or fall during the ESP period.

## 20 Q. HOW DO EDUS WITHOUT GENERATION ASSETS MANAGE THE 21 SHOPPING-RELATED RISKS OF THEIR SSO CUSTOMERS?

A. A common method used by EDUs without generation assets to manage the costs and risks associated with POLR obligations is to transfer these risks to procure supply for

their SSO customers using a competitive bidding process for full-requirements contracts. Under such contracts, winning bidders agree to bear the various POLR risks including shopping-related risk. A competitive procurement process is used to arrive at a market determination of the costs associated with providing full-requirements service and all related risks. Bidders must quantify the costs of these risks prior to bidding. I expect that the clearing prices for auctions conducted to date in Ohio reflect the bidders' assessment of all risks associated with providing SSO supply including shopping-related risk since winning suppliers are required to meet a percentage of SSO load that fluctuates with shopping. An EDU that uses such a procurement process in effect transfers the POLR risks to the winning bidders.

A.

#### O. HOW DO BIDDERS IN SSO AUCTIONS ASSESS SHOPPING-RELATED RISK?

I expect bidders in SSO auctions to utilize different sophisticated and proprietary strategies to manage POLR risks, including shopping-related risk, which they bear when they accept the obligations of the full-requirements contract. A bidder in an SSO auction can be expected to quantify the cost of POLR risks, including shopping-related risk, on the basis of the strategies that it employs to manage such risks. For example, in an environment with little or no shopping, a bidder may partially hedge the risk of increased shopping by acquiring an instrument that would increase in value if market prices declined (such as a gas or power put option). Conversely, in an environment with significant shopping, a bidder may partially hedge the risk of returning customers by acquiring an instrument that would increase in value if market prices increased (such as a gas or power call option). The costs of such instruments would be part of the quantification of such risks. A bidder that does not hedge a

particular risk, such as shopping-related risk, may use a financial model such as Black-Scholes (or Black) or statistical analyses such as Monte Carlo simulations to price residual risk and measure the cost of self-insurance. The competitive aspect of the procurement process means that winning bidders tend to be those that are most efficient at managing POLR risks. The POLR price paid by SSO customers includes the bidders' costs for bearing the POLR risks associated with supplying these customers.

## 8 Q. CAN SHOPPING-RELATED RISK BE ESTIMATED BY COMPARING THE 9 VISIBLE COST COMPONENTS OF SSO SUPPLY AND THE PRICE BID BY

#### 10 BIDDERS AT SSO AUCTIONS?

- A. The cost of meeting a POLR load shape can be estimated using market data on the prices of each cost component and hourly loads. The difference between this estimate and the price that results from a competitive solicitation for full-requirements contracts would include all risks faced by the SSO supplier, including uncertainty in demand, cost component risk, and shopping-related risk. This measure captures all risks that the SSO supplier assumes together and does not separately estimate shopping-related risk.
- Q. WHY IS THE DIFFERENCE BETWEEN THE PRICE FROM THE SSO

  AUCTION AND THE COST OF MEETING A POLR LOAD SHAPE

  SOMETIMES REFERRED TO AS A PREMIUM?
- A. The difference between the estimate of costs to meet the POLR load shape and the price that results from a competitive solicitation for full-requirements is sometimes referred to as a "premium". It is in fact in some ways analogous to an insurance

premium as supply purchased through the auction provides customers with the certainty of a stable POLR price in the face of fluctuating market conditions. Should market prices rise, an SSO customer may remain on the SSO and avoid the rise in market prices. A customer taking service from a CRES provider (and who pays the POLR charge) may return to the SSO and avoid paying the increase in the price of its retail electric service. The SSO provides customers with an insurance policy against rising market prices while providing them the opportunity to take advantage of declining market prices by shopping. This insurance policy provides customers the security of a price for their electric service that need not exceed the SSO price approved by the Commission. Like any insurance policy, it is valuable for the customer to be insured whether or not prices in fact rise during the SSO term. Like any insurance policy, there is a cost to the insurer of providing the protection. The premium reflects the costs of bearing POLR risks recognizing that there are a variety of ways to manage such risks.

A.

## Q. DOES AN EDU THAT USES ITS OWN GENERATION ASSETS BEAR SHOPPING-RELATED RISK TO THE SAME DEGREE AS A WINNING SUPPLIER IN AN SSO AUCTION?

Yes. An EDU that uses its own generation assets to meet its SSO obligation also bears shopping-related risk to the same degree as winning bidders in a competitive solicitation for SSO supply. The winning bidder in a competitive solicitation for SSO supply is compensated for bearing shopping-related risk with respect to the portion of POLR load that it serves. An EDU that uses its own generation assets to meet its SSO obligation bears the shopping-related risk for 100% of the SSO load. Such an

1	EDU accepts effectively the same POLR obligations as a winning bidder that wins a
2	full-requirements contract in a competitive solicitation but it does so for 100% of the
3	SSO load.

- Q. WOULD METHODS THAT BIDDERS IN SSO AUCTIONS USE TO
  QUANTIFY SHOPPING-RELATED RISK BE APPLICABLE TO AN EDU
  THAT USES ITS OWN GENERATION ASSETS TO MEET ITS POLR
  OBLIGATIONS?
- Yes. Since obligations and risks are common to both situations, namely the situation 8 A. 9 of a bidder that wins at an SSO auction and serves a percentage of the POLR load and 10 the situation of an EDU that uses its own generation assets to meet its POLR obligations, I believe it is reasonable and appropriate to assume that the approaches 11 12 used to quantify shopping-related risk would be very similar in the two situations. 13 The same methods described above in connection with bidders in SSO auctions could 14 be applied by an EDU to quantify its cost for assuming shopping-related risk. I do 15 not mean that the EDU and the winning bidder in an SSO auction are in identical 16 circumstances. However, both the EDU and the winning bidder face shopping-17 related risk and the tools that can be used to cost such risk are common to both.

#### 18 Q. ARE YOU AWARE OF ANALYSES THAT QUANTIFY SHOPPING-19 RELATED RISK FOR SSO-TYPE SERVICE?

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A. I am aware of analyses that quantify risk factors associated with providing supply for customers that take SSO-type service and these risk factors include shopping-related risk. One such study was prepared by The Northbridge Group ("Northbridge") for Philadelphia Electric Company ("PECO"). The study compared

the prices from competitive procurement of supply for SSO-type service in various states to a "build-up" of the costs of providing the full-requirements service absent uncertainty or risk. A significant element of that risk is shopping-related risk. Exhibit CL-2 shows the results for the Northbridge study. The estimated percentage allowance for risks over the cost items ranges from 3% to 8%, with only one observation below 4%. The majority of observations are between 5% and 8%. When applied to a Competitive Benchmark in the \$80/MWh range, the resulting premium is between \$4/MWh and \$6.4/MWh.

This premium covers more risks than just shopping-related risk. However, in the states examined by Northbridge, "opt-out aggregation" is not a factor and opt-out aggregation would have the effect of exacerbating shopping-related risk. While not completely comparable, there are many similarities and offsetting factors that render the premium analysis of Northbridge at the least informative. I would note that Northbridge's analysis was intended to demonstrate that the premium in prices from the competitive procurement of supply for SSO-type service was not excessive and thus there was no bias in the study toward overstating the premium.

#### Q. CAN YOU CITE TO ANOTHER STUDY?

A.

Yes. The Staff of the Illinois Commerce Commission ("ICC Staff") in a report entitled "Post-Auction Public Report of the Staff" analyzed the results of the 2006 Illinois full-requirements auction. Using a methodology similar to Northbridge, ICC Staff quantified the premium embedded in the price over and above the visible market price of the components of full-requirements service. The table below provides their results. The ICC staff quantified premiums of 7% to 12% for Commonwealth Edison

Company ("ComEd") and 18% to 25% for the Ameren Illinois Utilities ("Ameren").

Again, while shopping-related risk is not the only risk quantified by this analysis, the

premiums are certainly informative.

	Comparis	on of Auction C without Ri			Projection	s	
Customer Classes	Utility	Auction Products	Auction Prices	Projections w/out Risk Premiums	Implied Premiums	Implied Premium Percent	
요	ComEd	CPP-B 17-mo	\$63.96	\$59.74	\$4.22	7%	
Small mercia rs		СРР-В 29-то	\$64.00	\$57.84	\$6.17	11%	
Residential and Small t Medium Commercial Customers		CPP-B 41-mo	\$63.33	\$56.46	\$6.87	12%	
	idential a ledium Ca Custo	Ameren	BGS-FP 17-mo	\$64.77	\$54.68	\$10.09	18%
			BGS-FP 29-mo	\$64.75	\$53.72	\$11.03	21%
		BGS-FP 41-mo	\$66.05	\$52.69	\$13.36	25%	

#### 5 THE COMPANY'S METHOD TO ESTIMATE THE COST ASSOCIATED WITH

#### 6 SHOPPING-RELATED RISK IS REASONABLE

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#### 7 Q. HOW DID THE COMPANY QUANTIFY SHOPPING-RELATED RISK?

A. The Company quantified the shopping-related risk by calculating the value of an option using a Black model implemented with a binomial expansion that implemented the switching rules appropriate to each customer class. Company Witness Thomas refers to this model as the constrained option model (Direct Testimony, p. 18, line 8). All calculations were done on a per kWh basis, by customer class.

#### 1 Q. IS THIS A REASONABLE METHOD OF QUANTIFYING SHOPPING-

#### 2 RELATED RISK?

A. Yes. The value of the option is essentially the expected value of the difference between the ESP price and the market price at which customers choose to shop. This is also the amount by which realized revenue for the EDU can be expected to be below the ESP revenue that the EDU would have received absent the customer shopping. The model assumes that the EDU takes on its POLR obligations at the ESP strike price and it assumes that if market prices exceed the ESP price customers will not switch as the ESP price is more economically advantageous.

#### 10 Q. DOES AN OPTION VALUATION MEASURE THE COST INCURRED BY

#### 11 THE EDU?

A.

An option valuation measures the expected cost on an *a priori* basis. While the actual, after-the-fact cost may differ from the expected cost, from a ratemaking perspective, the expected cost is the relevant measure. The EDU may choose to hedge a portion of the cost or to absorb the cost of the shopping-related risk. Before the fact, the expected cost is measured and reflected in rates so that customers receive an ESP price that is mostly fixed. After the fact, the cost would vary. Reflecting this varying cost in rates would defeat the purpose of an ESP price, which is to provide customers a price that is mostly fixed. Instead of the Company managing and hedging the shopping-related risk, these activities would be moved into a regulated framework where these costs would need to be reviewed for prudence. The creativity and effectiveness with which the Company manages these risks could then be

1		restricted. However, the expected cost exists regardless of how the EDU ultimately
2		chooses to manage that risk.
3	Q.	DO YOU BELIEVE IT IS LIKELY THAT THE CONSTRAINED OPTION
4		MODEL MAY NOT BE ABLE TO CAPTURE THE FULL COMPLEXITY OF
5		EACH FACTOR THAT MAY IMPACT THE VALUE OF THE OPTION?
6	A.	Yes, a model is a model and not an exact reflection of what would happen. The
7		calculation of the option value is complicated and I would expect this or any model to
8		make a number of simplifying assumptions that may not reflect the full complexity of
9		the situation. The fact that some parameters or assumptions may not be modeled
10		precisely does not mean that the estimates of shopping-related risk using an option
11		valuation method need be biased or that reasonable measurements cannot be made.
12	Q.	DOES THE CONSTRAINED OPTION MODEL TAKE INTO ACCOUNT
13		THAT SOME CUSTOMERS MAY NOT SWITCH TO A CRES PROVIDER
14		WHEN IT IS ECONOMICALLY ADVANTAGEOUS TO DO SO?
15	A.	No, it does not. The constrained option model does not account for the fact that not
16		all customers necessarily switch to a CRES provider the moment that it may be
17		advantageous to do so. There are transaction costs that vary depending on the
18		customer.
19	Q.	IN YOUR VIEW, WOULD THIS FACTOR TEND TO UNDERSTATE OR
20		OVERSTATE THE POLR CHARGE?
21	A.	The presence of transaction costs would imply that, at any given time when prices
22		have fallen compared to the ESP price, some but not all customers may consider
23		switching to a CRES provider. This factor limits the degree to which customers take

1	full advantage of the option and thus limits the cost of providing the option. In m	ıу
2	view this factor tends to overstate the POLR charge	

- Q. DOES THE CONSTRAINED OPTION MODEL USE ANNUAL OR
  MONTHLY VOLATILITIES? WOULD THIS FACTOR TEND TO
- 5 UNDERSTATE OR OVERSTATE THE POLR CHARGE?
- A. The constrained option model uses a single, annual volatility, as discussed by
  Company Witness Thomas. Customers, with a limited set of restrictions, can switch
  monthly and as monthly volatilities are greater than annual volatilities, the cost of the
  monthly option is not fully captured. In my view, this factor tends to understate the
  POLR charge.
- 11 Q. DOES THE CONSTRAINED OPTION MODEL CONSIDER THE FULL
  12 DYNAMICS OF MARKET PRICES? WOULD THIS FACTOR TEND TO
  13 UNDERSTATE OR OVERSTATE THE POLR CHARGE?
- A. No, the constrained option model does not consider the full dynamics of market prices. The constrained option model only considers whether prices either rise or fall.

  The constrained option model does not consider more complex scenarios where, for example, market prices may first fall but then rise again afterwards.

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In my view, this factor tends to understate the POLR charge. Consideration of the full dynamics of market prices will tend to increase the cost of providing the option and thus increase the POLR charge. For example, if prices decline and it is economically rational for customers to choose service from a CRES provider, the EDU would still need to consider the possibility that prices may turn around and rise sufficiently subsequent to the decline that customers would want to switch back to the

SSO. The EDU could leave its supply unhedged and stand ready to serve returning customers. In that case, the EDU is exposed to prices falling down even further, and to a greater shortfall of revenue compared to expectations as the EDU sells its generation output at an even lower price. Alternatively, the EDU could enter into a new sale for the remaining term of the ESP at the lower, then-market price. If prices turn around and rise sufficiently that customers return, the EDU will have to divert a portion of the output of its own generation assets or purchase from the market to meet its SSO obligation at a higher than expected cost.

DOES THE MODEL ASSUME THAT THE OPTION PREMIUM IS PAID AT

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Q.

- 10 THE DATE AT WHICH THE OPTION IS VALUED? WOULD THIS 11 FACTOR TEND TO UNDERSTATE OR OVERSTATE THE POLR CHARGE? 12 A. Yes, the constrained option model assumes that the option premium is paid at the date 13 at which the option is valued. However, under the ESP, the POLR charge is paid over the course of the ESP or on average 14.5 months after the valuation date. Given 14 a 1% discount rate, this would lead to about a 1.2% understatement of the POLR 15 16 charge.
- 17 Q. IS IT POSSIBLE TO ESTIMATE THE MAGNITUDE OF THE FACTORS
  18 THAT YOU TESTIFY WOULD TEND TO OVERSTATE THE POLR
  19 CHARGE?
- A. I identify one source of overstatement, namely the possibility that not all customers
  may avail themselves at once of the option the moment that it is economically
  advantageous to do so. This factor is difficult to quantify. However, I have reviewed
  Ohio switching and aggregation data, and I note that a significant portion of customer

switching in Ohio appears to be the result of "opt-out" aggregation. The Supplemental Exhibits from Company Witness Thomas show updated levels of switching for the period Q1 2009 through Q1 2011. With aggregation, large groups of customers do leave SSO all at once. Thus, I would estimate that this last source of potential overstatement is not very significant.

Q.

A.

## ARE YOU AWARE THAT AEP OHIO USES RETAIL PRICES IN THE CONSTRAINED OPTION MODEL AND IS THIS A REASONABLE ASSUMPTION?

Yes, I am aware that the model uses retail prices. If customers shop to take service from a CRES provider, AEP Ohio will lose sales that it otherwise would have made if those customers had remained on SSO. It is very difficult to hypothesize what specific sales will replace the lost retail sales to SSO customers. In my opinion, it is reasonable to use prevailing retail prices to estimate the revenue that AEP Ohio would receive from replacement sales.

The assumption that AEP Ohio replaces lost sales to SSO Customers who shop by other retail sales should not be taken literally. It is certainly possible that AEP Ohio would make replacement sales in other utilities' full requirements auctions but it is not necessarily the case. AEP Ohio's replacement sales could instead be made at wholesale, on a spot or on a forward basis. AEP Ohio may sell a number of the components of the retail sales on a wholesale basis including capacity, energy in block or shaped sales, and ancillary services. Such sales may or may not include other components such as basis risk or obligations associated with alternative energy requirements.

The prevailing retail market price is used as a proxy for the revenue that AEP Ohio could receive from replacement sales even if such sales are made at wholesale. This proxy is reasonable in that it assumes that AEP Ohio could not sell separately a portion of the wholesale power components that would be needed for a retail sale for more than the bundled retail price. Thus the assumption that AEP Ohio would replace the lost revenue from SSO Customers by retail sales is a reasonable one. To the extent that AEP Ohio realizes in replacement sales revenue from only a portion of the components that it would be included in its retail SSO sales, the assumption overstates the revenue that AEP Ohio can realize when SSO customers shop. Overstating the revenue that AEP Ohio can realize in replacement sales means that AEP Ohio's cost from shopping-related risk is understated, and thus that the POLR charge that is calculated to compensate AEP Ohio for that cost is understated as well. DOES THE ASSUMPTION THAT ALTERNATE SALES ARE AT A RETAIL PRICE TAKE THE SALE OF CAPACITY TO CRES PROVIDERS INTO ACCOUNT? Yes. If SSO customers shop, AEP Ohio will be able to sell capacity to CRES providers that do not have qualified FRR capacity and AEP Ohio will receive revenue from those sales. The basis for the retail price, as it may evolve over time, is the competitive benchmark price. The capacity component of the competitive benchmark price is the price of qualified FRR capacity that CRES providers would pay. The

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embedded in the competitive benchmark price.

model assumes that the replacement sales that AEP Ohio would make are at a retail

price and thus the model assumes that AEP Ohio receives for its capacity the payment

1	Q.	DOES THAT MEAN THAT IF AEP OHIO ACTUALLY MAKES A RETAIL
2		SALE AS A REPLACEMENT SALE, AEP OHIO WILL BE PAID TWICE
3		FOR CAPACITY?
4	·A.	No, it does not, as capacity can only be sold once. If customers shop and AEP Ohio
5		sells capacity to CRES providers that do not have FRR qualified capacity, this
6		capacity is not available for another retail sale. If AEP Ohio makes a retail sale as a
7		replacement sale, AEP Ohio would purchase capacity for that specific retail sale and
8		the price of the retail sale would compensate AEP Ohio for that purchase. For
9		example, if this retail sale were within the PJM footprint, AEP would purchase
10		capacity at the price established by the Reliability Pricing Model ("RPM"), and the
11		price for the retail sale would be expected to compensate AEP for capacity at the
12		RPM price as well.
13	Q.	IS THERE A DOUBLE-COUNT CAUSED BY THE SITUATION WHERE
14		AEP OHIO RETAINS OFF-SYSTEM (WHOLESALE) MARGINS?
15	A.	No. If market prices rise and are above the ESP price, customers will not switch.
16		Hence, if market prices rise, there are no wholesale margins resulting from switching
17		that AEP Ohio could share with customers. If market prices decrease sufficiently,
18		SSO customers will switch to CRES providers. AEP Ohio could make replacement

If AEP Ohio shared wholesale margins from switching with customers, the POLR cost would rise. The POLR cost is measured by the difference between sales

sales at wholesale. These replacement sales would be at prevailing wholesale market

prices, which are below market prices assumed at the time the ESP was proposed.

This is what gives rise to the POLR cost.

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at the ESP price and revenue from replacement sales if customers switch. If AEP Ohio shared margins from replacement wholesale sales when customers switch, the POLR cost would be measured as the difference in revenue between sales at the ESP price and replacement sales, *plus* the wholesale margins that flowed back to customers. Hence, there is no gain to customers. The margins that would be shared would simply increase the cost of shopping-related risk and thus the POLR charge.

## 7 Q. HAVE YOU CONSIDERED THE POTENTIAL MITIGATING IMPACT OF 8 THE FUEL ADJUSTMENT CLAUSE ON THE POLR COST?

A.

Yes. I believe the circumstances where the fuel adjustment clause may play a role are limited to the following. First, prices fall and SSO customers switch to service from a CRES provider. AEP Ohio enters into forward sales to hedge its exposure to the spot market. Second, prices rise sufficiently so that customers return to SSO. AEP Ohio, having entered into replacement sales when prices fell, would now have to purchase energy to serve these customers. These purchases would be made at a price that would render the ESP price unprofitable.

Assuming that the higher purchased power prices could be passed through the fuel adjustment clause, the fuel adjustment clause would increase the ESP price and would mitigate this impact. However, the impact would only be fully mitigated if all costs that AEP Ohio incurred to serve returning SSO customers in this scenario could be recovered through the fuel adjustment clause. AEP Ohio would be both using generation to support the wholesale sales associated with forward hedging activity and to serve returning SSO customers. There may well be controversy over what fuel

and purchased power costs should be attributed to SSO sales so that it is not certain that the fuel adjustment clause would fully mitigate the impact.

Further, the model that AEP Ohio uses to estimate the POLR cost does not capture scenarios where prices drop, customers switch, AEP Ohio enters into alternate term sales to hedge its exposure to the spot market, and then prices rise and customers return to SSO. Hence, the fact the fuel adjustment clause could mitigate the impact of this scenario does not mean that AEP Ohio has overstated POLR costs. At most, the fact that the fuel adjustment clause may mitigate these costs could imply that the model does not understate POLR cost by virtue of the fact that AEP Ohio does not quantify costs of this nature.

#### 11 O. PLEASE SUMMARIZE YOUR TESTIMONY ON THIS SUBJECT.

12 A. The option valuation as a methodology for measuring the cost associated with
13 shopping-related risk is reasonable and conceptually valid. I identify factors that
14 would tend to overstate the POLR charge and factors that would tend to understate
15 the POLR charge, but in my opinion the results appear to be conservative estimates of
16 the POLR charge.

#### CONCLUSION

#### 18 Q. DOES THIS CONCLUDE YOUR SUPPLEMENTAL DIRECT TESTIMONY?

19 A. Yes, it does.



#### Exhibit CL-1

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### CHANTALE LACASSE SENIOR VICE PRESIDENT

Dr. Chantale LaCasse is a Senior Vice President with NERA Economic Consulting. Her practice concentrates on helping energy clients design, implement, and manage auctions. Before joining NERA in 2001, Dr. LaCasse was a respected academic in Canada; she trained Ph.D. students in game theory and she conducted research in auctions, competition policy, and other issues in economic policy. At NERA, Dr. LaCasse testified as an expert witness before state regulatory agencies on matters related to the design and implementation of auctions. She has provided conceptual advice to utilities and regulators on the design of auctions for and she has developed detailed rules for their implementation. She has provided advice on competition issues and has held the TD MacDonald Chair at the Competition Bureau. She has been involved in the design and management of auctions in several jurisdictions in the United States, including New Jersey, Illinois, Ohio, Pennsylvania, as well as in other countries such as Canada, Spain, and Ireland. Dr. LaCasse is fluent in English and French and has a good knowledge of Spanish.

#### Education

University of Western Ontario

Ph.D., Economics, 1991 M.A., Economics, 1986

University of Ottawa

B.A. Honors, Mathematics, 1984 B.Soc.Sc. Honors, Economics, 1983

#### **Professional Experience**

2005-	NERA Economic Consulting Senior Vice President Provide advice on competitive bidding processes, auctions, procurement, market design, regulatory issues, and antitrust matters.
2003-2005	Vice President
2001-2003	Senior Consultant Member of team that advised energy market participants on market design, regulatory issues, and antitrust matters.
1998-2000	University of Alberta, Department of Economics Associate Professor
1997-1998	Competition Bureau, Industry Canada T.D. MacDonald Chair of Industrial Economics
	Universitat Autonoma de Barcelona, Departament d'Economia I d'Història Econòmica
1997	Visiting Professor
1996-1997	University of Toronto, Institute for Policy Analysis Visiting Professor
1998	University of Ottawa, Department of Economics Associate Professor
1991-1998	Assistant Professor
1990-1991	Lecturer
1989-1990	Brock University, Department of Economics Lecturer

#### **Honors and Professional Activities**

John Vanderkamp Prize for the best article in Canadian Public Policy/Analyse de politiques for 2000 (for the article with Vicky Barham and Rose Anne Devlin, "Are the New Child-Support Guidelines 'Adequate' or 'Reasonable'?" Vol. XXVI, No. 1)

Named T.D. MacDonald Chair of Industrial Economics at the Competition Bureau, Industry Canada, 1997-1998

Courses taught include Microeconomics, Law and Economics, Industrial Organization, Game Theory, Probability, and Statistics

Professional Development for attorneys, *The Economics of Competition Policy*, Competition Bureau, March 1998

Referee, L'actualité économique, Journal of Labor Economics, The American Economic Review, The Energy Journal, Canadian Journal of Economics, Dialogue

#### **Consulting Experience**

Auction Manager for the four New Jersey Electric Distribution Companies for the sale of their Solar Renewable Energy Credits.

Advice to the New England Independent System Operator on rules of the market for capacity.

Procurement Administrator for the Illinois Power Agency's 2010 procurement of renewable energy and renewable energy credits through twenty-year contracts.

Solicitation Manager for Jersey Central Power & Light, Atlantic City Electric, and Rockland Electric in their SREC-Based Financing Program for the procurement of long-term solar contracts.

Auction Manager for Public Service Electric and Gas for the sale of their Solar Renewable Energy Credits.

Expert testimony and advice to Penn Power concerning its Default Service Program in Pennsylvania.

Lead of team serving as Independent Evaluator for Met-Ed, Penelec, and Penn Power implementing its descending-price auctions to procure supply under their Default Service Programs in Pennsylvania.

Part of team retained by the Illinois Power Agency to manage RFPs for block energy and renewable energy credits on behalf of Commonwealth Edison:

• 2011

- 2010
- 2009

Part of team advising PECO and implementing its RFPs to procure supply under its Default Service Program

Part of team that manages RFPs for PPL Electric Utilities to procure supply under its Default Service Program in Pennsylvania.

Lead of team advising Commonwealth Edison Company on its Procurement Plan and the design of RFPs for block energy and renewable energy products.

Lead of team that provides advice to the Legal Services Commission in its design of a Best Value Tendering system for criminal defense services (UK).

Part of team that designed and managed the CESUR auctions for the Comisión Nacional de Energía (Spain).

Advice to NY Independent System Operator on their design of a forward capacity market.

Bidding advice for an energy auction client.

Part of team that managed RFPs for PPL Electric Utilities (Pennsylvania) for its Bridge Plan.

Auction Manager for Commonwealth Edison Company and the Ameren Utilities for their procurement of supply for default service (2005-2006).

Part of team that advised Penelec and Met-Ed on their RFP for retail customers in Pennsylvania.

Part of team that advised Penn Power on its RFP for POLR Load in Pennsylvania and that managed the process.

Expert testimony and auction design advice for Commonwealth Edison Company and the Ameren Utilities in support of their proposal to use an auction for the procurement of their default service customers (2005).

Part of team that served as Independent Auction Manager for a clock auction for the FirstEnergy Ohio Utilities:

- 2005
- 2004

Part of team that advised Acquirente Unico on power auction.

Part of team that advised the Ministry of Energy (Ontario, Canada) for their procurement of new generation capacity.

Expert testimony on the use of sealed bid auctions for the sale of generation assets.

Auction Manager for the four New Jersey utilities (PSE&G, JCP&L, AECO, and RECO) in their electronic clock auctions (fixed price and hourly electric price) for the provision of Basic Generation Service:

- 2010-2011
- 2009-2010
- 2008-2009
- 2007-2008
- 2006-2007
- 2005-2006
- 2004-2005
- 2003-2004
- 2002-2003
- 2001-2002.

Part of team that advised the four New Jersey utilities (PSE&G, JCP&L, AECO, RECO) on their proposal for an auction for the provision of Basic Generation Service:

- 2010-2011
- 2009-2010
- 2008-2009
- 2007-2008
- 2006-2007
- 2005-2006
- 2004-2005
- 2003-2004
- 2002-2003
- 2001-2002.

Advice on market definition in Canadian competition matter.

Part of team that advised PJM Interconnection, New York ISO, and the New England ISO on the design of markets for capacity.

Financial evaluation of bids for the Commission of Energy Regulation (Ireland) in their tender for additional capacity.

Part of team that advised the Commission of Energy Regulation (Ireland) regarding their tender for additional capacity.

RFP Manager for JCP&L's RFP for Green Power.

Part of team that advised Public Service Electric & Gas on design of auction for provision of Basic Generation Service.

Part of NERA and Navigant Consulting team that reported on competitiveness of Alberta wholesale electricity market and advised the Alberta Balancing Pool on long-term options for management of unsold Power Purchase Arrangements.

Part of team that advised Singapore IDA on design on Singapore 3G and 2G electronic auctions.

Provided on-site bidding advice for EPCOR in the PPA auction (Alberta, Canada).

Provided advice to Industry Canada in preparation for their first spectrum auction.

As part of a team from the Competition Bureau, evaluated spectrum auction rules for Canada.

Part of team that first drafted the Intellectual Property Enforcement Guidelines issued by the Competition Bureau, Industry Canada.

Provided expert opinion on a merger, a price-fixing case and a monopolization case while T.D. MacDonald Chair at the Competition Bureau.

#### **Testimony**

Regulatory hearings held by the New Jersey Board of Public Utilities. September 2010. Oral testimony regarding the advantages of the auction process proposed by the four New Jersey utilities.

Pennsylvania Power Company (Docket No. P-2010-2157862). Petition for the approval of its Default Service Plan filed with the Commonwealth of Pennsylvania Public Utility Commission. Direct Testimony (February 2010).

Regulatory hearings held by the New Jersey Board of Public Utilities. September 2009. Oral testimony regarding the advantages of the auction process proposed by the four New Jersey utilities.

Metropolitan Edison Company (Docket No. P-2009-2093053) and Pennsylvania Electric Company (Docket No. P-2009-2093054). Petition for the approval of their Default Service Plan filed with the Commonwealth of Pennsylvania Public Utility Commission. Direct Testimony (March 10, 2009). Rebuttal Testimony (June 12, 2009).

PECO Energy Company, Docket No. P-2008-2062739, testimony on behalf of the Petition of PECO Energy Company for Approval of its Default Service Program and Rate Mitigation Plan filed with the Commonwealth of Pennsylvania Public Utility Commission. Direct testimony (September 10, 2008), Supplemental testimony (November 14, 2008). Rebuttal testimony (January 30, 2009).

Regulatory hearings held by the New Jersey Board of Public Utilities. September 2008. Oral testimony regarding the advantages of the auction process proposed by the four New Jersey utilities.

Regulatory hearings held by the New Jersey Board of Public Utilities. September 2007. Oral testimony regarding the advantages of the auction process proposed by the four New Jersey utilities.

Illinois Commerce Commission, Docket No. 06-0800, Investigation of Rider CPP of Commonwealth Edison Company, and Rider MV of Central Illinois Light Company d/b/a AmerenCILCO, of Central Illinois Public Service Company d/b/a AmerenCIPS, and of Illinois Power Company d/b/a AmerenIP, pursuant to Commission Orders regarding the Illinois Auction. Direct testimony (March 2007), Rebuttal testimony (April 2007) on potential improvements to the Illinois Auction. Testimony before the Illinois Commerce Commission (April 25, 2007).

Regulatory hearings held by the New Jersey Board of Public Utilities. September 2006. Oral testimony regarding the advantages of the auction process proposed by the four New Jersey utilities.

Committee Hearing of the Telecommunications and Utilities Committee of the New Jersey General Assembly, June 2006. Oral testimony regarding New Jersey procurement of electricity and market trends.

Regulatory hearings held by the New Jersey Board of Public Utilities. April 2006. Oral testimony regarding the procurement process to be used in 2007.

Commonwealth of Pennsylvania Public Utility Commission, Docket No. P-00052188, testimony on behalf of the Petition of Pennsylvania Power Company for approval of their Interim POLR Supply Plan. Direct testimony (October 11, 2005), Supplemental testimony (November 11, 2005) and rebuttal testimony (December 23, 2005). Testimony before the Commonwealth of Pennsylvania Public Utility Commission (January 10, 2006).

Illinois Commerce Commission, Docket 05-0159, Commonwealth Edison Company proposed tariffs filed pursuant to Article IX of the Public Utilities Act defining a competitive supply procurement process and, pursuant to Section 16-112(a) of the Act, establishing a market value methodology to be effective post-2006; providing for Power Purchase Options and for recovery of transmission charges post-2006; and enabling subsequent restructuring of rates and unbundling of prices for bundled service pursuant to Sections 16-109A and 16-111(a) of the Act. Direct testimony (February 2005), Rebuttal testimony (July 2005), Surrebuttal testimony (August 2005) on auction design and management. Testimony before the Illinois Commerce Commission (September 8-9, 2005).

Illinois Commerce Commission, Dockets 05-0160, 05-0161, 05-0162 (consolidated), Central Illinois Light Company, Central Illinois Public Service Company, Illinois Power Company (the "Ameren Companies") proposed tariffs to establish basic generation services, the procurement process by which the Companies will acquire supply to provide basic generation services, and the method by which auction prices will be translated into prices that customers will pay. Direct

testimony (February 2005), Rebuttal testimony (July 2005), and Surrebuttal testimony (August 2005) on auction design and management. Testimony before the Illinois Commerce Commission (September 8-9, 2005).

Regulatory hearings held by the New Jersey Board of Public Utilities. September 2004. Oral testimony regarding the advantages of the auction process proposed by the four New Jersey utilities.

Public Utility Commission of Texas, SOAH Docket No. 473-04-2459 and PUC Docket No. 29206, Application of Texas-New Mexico Power Company, First choice Power, Inc and Texas Generating Company, L.P. to finalize stranded costs under PURA 39.262. Rebuttal Testimony regarding the choice of a sealed bid auction (April 8, 2004). Testimony before the Commission (April 17, 2004).

Regulatory hearings held by the New Jersey Board of Public Utilities. September 2003. Oral testimony regarding the advantages of the auction process proposed by the four New Jersey utilities.

Regulatory hearings held by the New Jersey Board of Public Utilities. September 2002. Oral testimony regarding the advantages of the auction process proposed by the four New Jersey utilities.

Regulatory hearings held by the New Jersey Board of Public Utilities. September 2001. Oral testimony regarding the advantages of the auction process proposed by the four New Jersey utilities.

#### **Publications**

"Maryland versus New Jersey: Is There a Best Competitive Bid Process?" (with Thomas Wininger), *The Electricity Journal*, Vol. 20, Issue 3, April 2007, pp. 46-59.

"Chores" (with Clara Ponsatí and Vicky Barham), Games and Economic Behavior, Vol. 39, No. 2, May 2002, pp. 237-281.

"The Intellectual Property Enforcement Guidelines and the Treatment of Innovation: Assessment and Comparison with the U.S. approach" (with Brian Rivard), Canadian Competition Record, Vol. 20, No. 3, Summer 2001, pp. 90-109.

"Child-Support Guidelines and the Welfare of Children" (with Vicky Barham and Rose Anne Devlin), *Policy Options*, March 2000.

"Are the New Child-Support Guidelines 'Adequate' or 'Reasonable'?" (with Vicky Barham and Rose Anne Devlin), Canadian Public Policy, Vol. XXVI, No. 1, 2000.

"Federal Sentencing Guidelines and Mandatory Minimum Sentences: Do Defendants Bargain in the Shadow of the Judge?" (with A. Abigail Payne), *Journal of Law & Economics*, Vol. XLII, No. 1, Part 2, April 1999; reprinted in *The Economics of Crime*, Volume 3, Isaac Ehrlich and Zhiqiang Liu editors, International Library of Critical Writings in Economics series, pp. 274-298.

"Morality's Last Chance" (with Don Ross), Chapter 16 in Modeling, Rationality, Morality and Evolution, Peter Danielson (editor), New York: Oxford University Press, 1998, pp. 340-375.

"Secret Reserve Prices in a Bidding Model with a Resale Option" (with Ignatius J. Horstmann), American Economic Review, Vol. 87, No. 4, September 1997, pp.663 684.

"Toward a New Philosophy of Positive Economics" (with Don Ross), Dialogue, *Canadian Philosophical Review*, Vol. XXXIV (Special Issue: Economics and Philosophy), No. 3, 1995, pp. 467 93.

"Bid Rigging and the Threat of Government Prosecution," RAND Journal of Economics, Vol. 26, No. 3, Autumn 1995, pp. 398 417.

"On the Renewal of Concern for the Security of Oil Supply" (with André Plourde), *The Energy Journal*, Vol. 16, No. 2, 1995, pp. 123.

"The Microeconomic Interpretation of Games" (with Don Ross), *PSA 1994*, Volume 1, D. Hull, M. Forbes and R. Burian eds., Proceedings of the 1994 Biennial Meeting of the Philosophy of Science Association, New Orleans, 1994, pp. 379–387.

"Towards an Operational Definition of Security of Oil Supply" (with André Plourde) in Volume 1 of Coping with the Energy Future: Markets and Regulations, Denis Babusiaux, editor; Proceedings of the 15th Annual International Conference of the International Association for Energy Economics, Tours, 1992, pp. F39 F46.

"Reply to Norman, 'Has Rational Economic Man a Heart?" (with Don Ross), Eidos, VIII, 2, 1991, pp. 235 246.

"Compte Rendu: Éléments de Microéconomie par Louis Eeckhoudt et Francis Calcoen," L'Actualité Économique, Vol. 67, No. 3, septembre 1991, pp. 418 421.

#### Presentations (Last 7 Years)

"Lowering Prices by Raising Costs: Market Rule Responses to 'Sponsored' Entry", presentation and panel discussion, Harvard Electricity Policy Group, Rancho Palos Verdes, California, February 24, 2011.

"The Role of the Independent Evaluator", presentation and panel discussion, Wholesale Load-Serving Procurement Roundtable, Western Power Trading Forum, May 20, 2008.

"Retail Procurement", presentation and panel discussion, Harvard Electricity Policy Group fortyeighth plenary session, John F. Kennedy School of Government, Cambridge, Massachusetts, October 4, 2007.

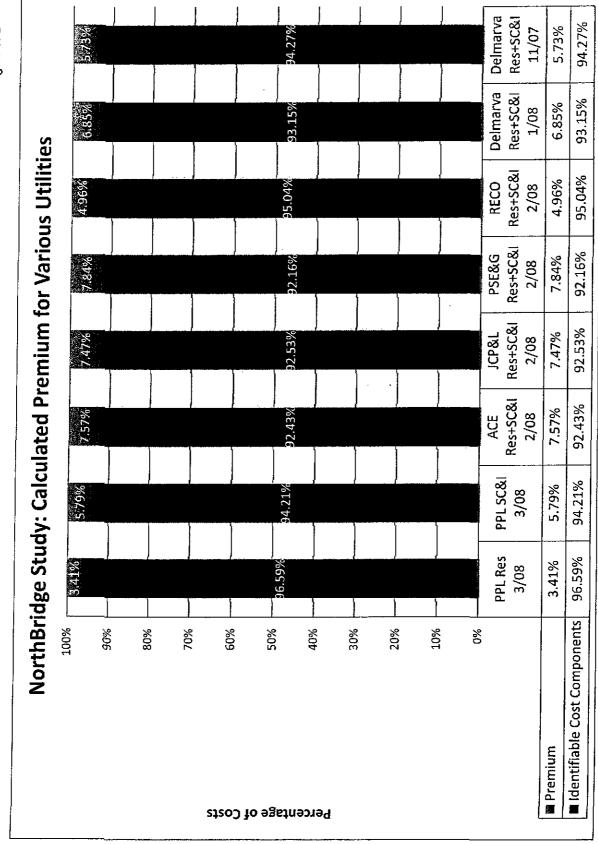
"Managing a Fair and Transparent Auction Process", NARUC convention, Miami, November 14, 2006.

"Challenges of Utility Procurement in a High Cost Environment", Ninth Annual Energy Conference held by McDermott, Will & Emery, Washington, DC, October 19, 2006.

"Auction Models," Resource Procurement in Restructured Markets, Edison Electric Institute, Seattle, WA, September 2004.

"Auctions and POLR Procurement," Beyond 2006: Making Competition Work, The Institute for Regulatory Policy Studies, Illinois State University, Springfield, IL, May 2004.

May 2011



## Source:

Direct testimony of Scott G. Fisher filed before the Pennsylvania Public Utility Commission, in the Petition of PECO Energy Company for Approval of its Default Service Program and Rate Mitigation Plan, September 10, 2008, Docket No. P-2008-2062739.

#### CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing Columbus Southern Power Company's and Ohio Power Company's Motion for Leave and Corrected Version of Direct Testimony of Dr. Chantale LaCasse has been served upon the below-named counsel via electronic mail, this 8th day of July, 2011.

Steven T. Nourse

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