

FILE

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COMPANIES REMAND EXHIBIT NO. \_\_\_\_\_

BEFORE  
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of )  
Columbus Southern Power Company for )  
Approval of an Electric Security Plan; an ) Case No. 08-917-EL-SSO  
Amendment to its Corporate Separation )  
Plan; and the Sale or Transfer of Certain )  
Generating Assets. )

In the Matter of the Application of )  
Ohio Power Company for Approval of an ) Case No. 08-918-EL-SSO  
Electric Security Plan; and an Amendment )  
to its Corporate Separation Plan. )

REBUTTAL TESTIMONY OF  
LAURA J. THOMAS  
ON BEHALF OF  
COLUMBUS SOUTHERN POWER COMPANY  
AND  
OHIO POWER COMPANY

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LAURA J. THOMAS

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BEFORE  
THE PUBLIC UTILITIES COMMISSION OF OHIO  
DIRECT TESTIMONY OF  
LAURA J. THOMAS  
ON BEHALF OF  
COLUMBUS SOUTHERN POWER COMPANY  
AND  
OHIO POWER COMPANY

1    **PERSONAL DATA**

2    **Q.    PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3    A.    My name is Laura J. Thomas. My business address is 1 Riverside Plaza, Columbus,  
4           Ohio 43215.

5    **Q.    DID YOU PREVIOUSLY FILE TESTIMONY IN THIS CASE?**

6    A.    Yes, I previously filed Direct Testimony in this case addressing the appropriate  
7           charges for the Companies as providers of last resort (POLR) service to customers.

8  
9    **PURPOSE OF TESTIMONY**

10   **Q.    WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY IN THIS**  
11       **PROCEEDING?**

12   A.    The purpose of my rebuttal testimony is to address certain issues raised by the  
13           Intervenors regarding the POLR charges. In particular, I respond to the following  
14           three areas:

- 15           1. The timing of when POLR costs should be determined;
- 16           2. Treatment of various non-price factors; and
- 17           3. How the constrained model determines prices, predicts the switching of  
18           customers, and how the resulting cost is charged to customers.

1 **TIMING OF THE DETERMINATION OF POLR COSTS**

2 **Q. WHAT POSITIONS DO INTERVENORS TAKE REGARDING WHEN THE**  
3 **POLR COST SHOULD BE DETERMINED THAT YOU ARE RESPONDING**  
4 **TO IN THIS TESTIMONY?**

5 A. There are many references throughout the Intervenor's direct testimony and the cross-  
6 examination concerning the method to determine the POLR costs. For example, OCC  
7 Witness Thompson, on page 36 of his direct testimony, states that there should be an  
8 "...attempt to identify tangible, independently verifiable, out of pocket expenses  
9 associated with the Companies' POLR obligation. Likewise, IEU witness Lesser, on  
10 page 3 of his direct testimony, uses the term "actual out of pocket costs" as it relates  
11 to the Companies' POLR cost. On page 8 of his direct testimony, IEU witness  
12 Murray uses the term "actual incremental costs of satisfying the POLR function". In  
13 summary, they advocate an after-the-fact determination of out-of-pocket expenses.

14 **Q. IS THE AFTER-THE-FACT DETERMINATION OF OUT-OF-POCKET**  
15 **EXPENSES ADVOCATED BY INTERVENORS THE PROPER WAY TO**  
16 **DETERMINE THE COST OF THE COMPANIES' POLR OBLIGATION?**

17 A. No, it is not. There are several reasons why an up-front determination of POLR cost  
18 (rather than after-the-fact as proposed by Intervenor's) is the proper way to determine  
19 the Companies' cost of the POLR obligation. I will address three primary reasons.

20 First, the POLR charge should be set at the beginning of the ESP period  
21 because that is when the Companies make their commitment to providing stable  
22 regulated SSO generation rates for the forward ESP period. It is at that time that the  
23 Companies' obligations begin and the Companies take on the risk of uncertainty with

1 regard to their POLR obligations. At the point in time when the ESP commitment  
2 begins, and for the full term of the ESP, the Companies undertake the risk of  
3 uncertainty as to what market prices will do or how costs may change, as well as the  
4 risk of uncertainty as to what customer migration will occur in each direction (away  
5 from and returning to the SSO).

6 Second, if customers know the POLR cost up front, then they are able to plan  
7 accordingly by determining their switching options and savings. It enables customers  
8 to evaluate their option to continue to pay the POLR cost which enables them to  
9 return to SSO generation rates if they so choose and their option to waive paying  
10 POLR in exchange for returning to the Companies at market-based rates. On the  
11 other hand, if an after-the-fact approach were developed and used, customers would  
12 face the unknown risks and would not know until afterward whether any decision to  
13 shop, and possibly waive the POLR charge, was going to provide a net benefit. Thus,  
14 the purpose and effect of a stabilized SSO serving as a safety net for shopping would  
15 be diminished. In this regard, using an after-the-fact method to measure POLR costs  
16 (even assuming it is feasible or makes sense) could perversely operate to inhibit  
17 shopping and would limit customer options regarding waiver of the POLR charge.

18 Third, any after-the-fact analysis would still involve some type of cost  
19 estimation and modeling. Although inappropriate, any such analysis of the cost of the  
20 Companies' POLR risk (both migration and return) would be the same as using future  
21 information to reshape the past – something that makes little sense. Assumptions  
22 would need to be made regarding what the Companies would have done differently  
23 had they known in advance that prices were going to be what they actually turned out

1 to be. Other assumptions would be made about what actions the Companies would  
2 have taken had they known which customers (and their corresponding load) were  
3 going to shop, when those customers were going to shop, what customers would  
4 return, and when those customers would return. No matter what actually happens,  
5 any such after-the-fact re-enactment would embody a complex series of iterative  
6 questions as to “what would the Companies have done differently, had they known  
7 that development was going to happen?” In any event, the Companies’ actual risk of  
8 customer migration and return, incurred at the time of the ESP commitment to SSO  
9 rates, cannot be determined by a speculative re-enactment.  
10

11 **NON-PRICE FACTORS**

12 **Q. ARE YOU AWARE OF THE SEVERAL NON-PRICE FACTORS LISTED ON**  
13 **PAGE 20 OF THE DIRECT TESTIMONY OF OCC WITNESS THOMPSON**  
14 **AND PAGES 13-14 OF THE DIRECT TESTIMONY OF IEU WITNESS**  
15 **MURRAY THAT THOSE WITNESSES STATE SHOULD BE CONSIDERED**  
16 **IN THE DETERMINATION OF THE COMPANIES’ COST OF THE POLR**  
17 **OBLIGATION?**

18 A. Yes. OCC witness Thompson lists several non-price factors on page 20 of his  
19 testimony and IEU witness Murray also lists non-price factors on pages 13-14 of his  
20 testimony. Their lists include items such as customer inertia, customer loyalty, the  
21 time to review and sign contracts, as well as other customer behavioral factors.

1   **Q.   DID THE COMPANIES QUANTIFY THE NON-PRICE FACTORS**  
2       **IDENTIFIED BY THE INTERVENORS IN DETERMINING THE COST OF**  
3       **THE RISK OF THE COMPANIES' POLR OBLIGATION?**

4   A.   No, the Companies did not. In general, these types of non-price factors are  
5       behavioral factors that will vary by individual customer and the Companies have no  
6       way of knowing this information for a given customer, let alone for all customers.  
7       The factors provided by OCC witness Thompson and IEU witness Murray are all  
8       perceived limitations on customer switching, as further discussed below. However,  
9       there are offsetting factors as well. For example, under opt-out aggregation, large  
10      numbers of customers will switch at once. Under opt-out aggregation, customers will  
11      be switched to a CRES provider unless they take specific action to "opt out" and  
12      choose not to be switched. In such cases, there will be customers who end up  
13      switching that would not have done so independently, thereby creating an offset to the  
14      factors mentioned by the Intervenor witnesses. Such opt-out aggregation activity is  
15      continuously increasing for the Companies. In the past three months, ten new entities  
16      (municipalities, townships, etc.) in the Companies' service territory have  
17      implemented opt-out aggregation and their customers have either recently switched or  
18      are in the process of switching.

19           Besides community aggregation, there are also other customers that will  
20      switch just because they can or because they will receive other benefits or services  
21      beyond the price of generation from a CRES provider; these factors operate to offset  
22      any perceived limitations on shopping relied upon by Intervenor.

1           Accordingly, the Companies' approach, for modeling purposes, was to assume  
2           customers would be price responsive. Non-price factors, which work in both  
3           directions, are not known and therefore were not modeled.

4   **Q.   DOES THIS SAME LOGIC APPLY TO OTHER FACTORS SUCH AS TERM**  
5           **OF CONTRACT AS STATED BY IEU WITNESS MURRAY ON PAGE 14 OF**  
6           **HIS DIRECT TESTIMONY?**

7   A.   Yes, it does. The Companies are not privy to the terms and conditions of contracts  
8           between a customer and their specific CRES provider. The Companies only know  
9           when the customer has provided the Companies with notice of switching, but have no  
10          further information as to the term of the contract or the provisions that may hold  
11          either the customer or the CRES supplier to that term. For example, the Companies  
12          do not have information as to provisions that allow either the customer or the supplier  
13          to end the contract, any provisions by which a supplier may return the customer to the  
14          SSO or any contract provisions which might cause the customer to seek to otherwise  
15          modify their contract due to price changes or other reasons. The circumstances and  
16          outcome of such developments will vary by both customer and CRES provider and  
17          are not known to the Companies.

18          Accordingly, in its determination of the cost of providing POLR service, the  
19          Companies quantified those factors which it knows and it did not quantify other  
20          factors which it does not and will not know.

21   **Q.   IEU WITNESS MURRAY STATES THAT THE COMPANIES OMITTED A**  
22           **SWITCHING RULE APPLICABLE TO CERTAIN CUSTOMERS ON PAGE**  
23           **12 OF HIS DIRECT TESTIMONY. DO YOU AGREE?**



1 A. No, I do not. IEU Witness Murray makes note of the requirement for certain  
2 *commercial and industrial customers to provide a minimum notice of 90 days before*  
3 *switching to a CRES provider. This requirement is implicitly accounted for in the*  
4 *Companies' determination of their POLR cost. When a customer provides a 90-day*  
5 *notice to switch suppliers, they have made a decision based on forward-looking*  
6 *information regarding the pricing, terms and conditions that they may be served under*  
7 *by a CRES provider. Otherwise, they would not provide the Companies with a notice*  
8 *of switching. On the other hand, after a customer provides a 90-day notice, they may*  
9 *or may not end up actually switching to a CRES provider in 90 days. This could*  
10 *occur sometime after 90 days or not at all because the notice is distinct from the*  
11 *actual enrollment. Because the model assumes that customers will switch when it is*  
12 *to their economic interest to do so, this is consistent with the assumption that the*  
13 *customer has provided such the 90-day notice because they have enough forward-*  
14 *looking information to determine that it is in their economic interest to switch*  
15 *suppliers and provide notice of switching.*

16

17 **CONSTRAINED MODEL PRICING AND SWITCHING**

18 **Q. DO OCC WITNESS THOMPSON AND IEU WITNESS MURRAY ADDRESS**  
19 **THE ASSUMPTION THAT CUSTOMERS WILL BE PRICE RESPONSIVE**  
20 **REGARDLESS OF THE LEVEL OF PROJECTED SAVINGS?**

21 A. Yes. OCC witness Thompson states on page 20 of his testimony, "the model assumes  
22 that all customers (100 percent) will switch for as little as a penny in generation  
23 prices..." In this statement, his reference to "a penny" is relative to generation prices

1 in \$/MWH. On page 12 of his testimony, IEU witness Murray describes the issue as  
2 “the constrained model assumes immediate switching whenever market prices fall  
3 below the PTC.” In this case, PTC refers to the price to compare which is the ESP  
4 SSO generation rate. These criticisms do not accurately portray the operation of the  
5 constrained option model, as further explained below.

6 **Q. ARE WITNESSES’ MURRAY AND THOMPSON CORRECT ABOUT THE**  
7 **IMMEDIATE SWITCHING FOR EVERY PENNY UNDER THE MODEL?**

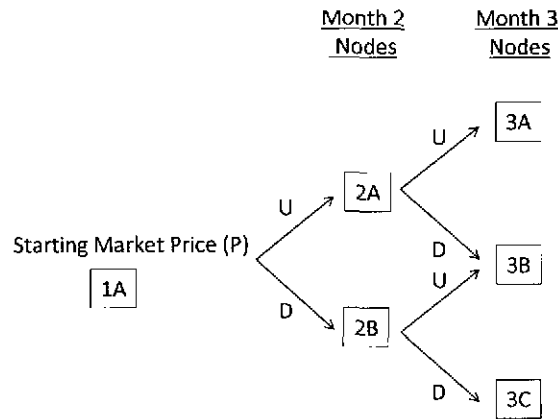
8 A. No, the testimonies of witnesses Murray and Thompson fail to properly describe the  
9 model. First, it should be clarified that all customers are not dealt with in the model  
10 as a single group. Each class of customers (residential, commercial and industrial)  
11 for each operating company is modeled separately.

12 Next, in order to illustrate how they fail to properly describe the model, a  
13 review of the basic steps of the constrained model and the changes in generation  
14 prices that occur would be helpful in clearing up this matter. The basic steps of the  
15 constrained model are:

- 16 1. The constrained model considers possible total “price paths” for a kWh over the  
17 term of the ESP. The price movements in the model are dictated by the measure  
18 of volatility and the time between the movements (1 month). For example, if the  
19 term was limited to only three months, the following Diagram 1 illustrates all  
20 possible price moves where P equals the starting price, U denotes that the Price  
21 moves up and D denotes that the Price moves down from where it was previously.  
22 Resulting from these price moves are multiple price paths that end in three  
23 distinct nodes or price points (3A through 3C) that occur in the third month as

designated in the following diagram. In reality, there are many more price paths and nodes for the term of 36 months that was modeled by the Companies.

Diagram 1



- Implicit in the model is the assumption that customer choices are analyzed over the entire term and not just for one month at a time. At each node, there are multiple strategies (combinations of exercising options to take power at either SSO rates or at market rates) that can be used. The least cost per kWh strategy is selected for each node. Least cost strategies from future nodes are brought backward (using probability weighted averages and discounting) to earlier nodes to be part of the decision-making process for those nodes. The switching constraints act to reduce the number of strategies that can be used at any node.

For example, using Diagram 1, there are three nodes (3A through 3C) in the last month. The least cost option for each of the three nodes is determined based on the market price at each node, the ESP price and which price provides the least cost or best outcome for the customer. The outcomes for nodes 3A and 3B are then averaged (probability weighted) and discounted back to node 2A. The same process occurs for nodes 3B and 3C back to node 2B.

1                   This process is then repeated for nodes 2A and 2B. The least cost  
2                   option for each node is determined as the least cost option using all strategies  
3                   available to the customer, including those strategies from the nodes for month 3.  
4                   The least cost outcomes for nodes 2A and 2B are then averaged (probability  
5                   weighted) and discounted back to node 1A. The above process of determining the  
6                   least cost strategy occurs for node 1A and the least cost per kWh is adjusted for  
7                   the number of months or length of the term. This process results in the least cost  
8                   or most economic decision for a kWh over the term.

9           3. The Companies' determination of the POLR cost for the 36-month ESP period  
10           can be viewed as putting together several small trees like that described above.  
11           After determining the least cost per kWh strategy for each node, each cost is  
12           brought back to the prior month to be included in the decision-making process for  
13           prior month nodes. The decision-making process takes into account the impacts  
14           of the switching constraints. As previously described, the process continues for  
15           all nodes, resulting in the Companies' POLR obligation cost per kWh which is the  
16           least cost and most economic result for the customer.

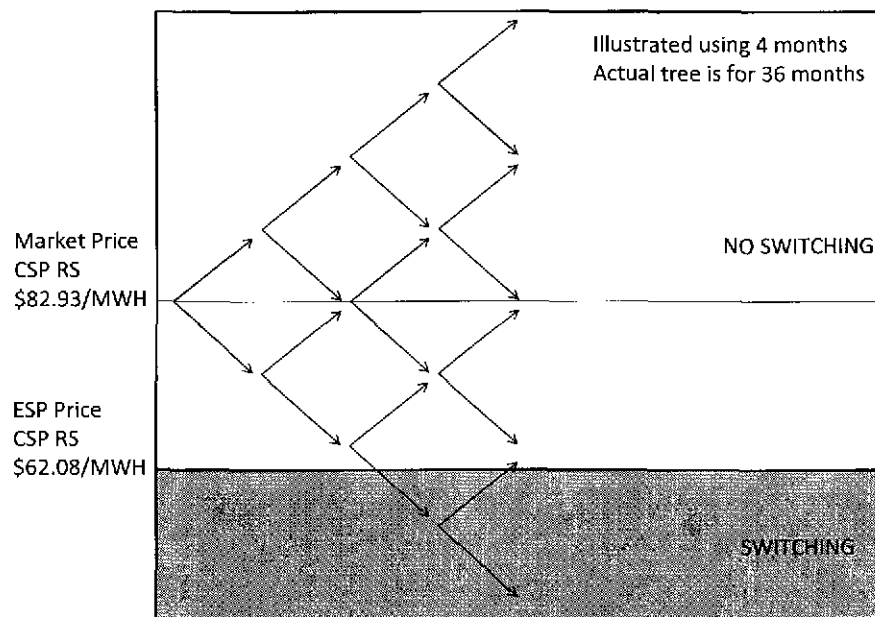
17   **Q.    BASED ON THIS SUMMARY OF THE CONSTRAINED MODEL, HOW DO**  
18   **PRICE MOVEMENTS AND CUSTOMER SWITCHING COME INTO PLAY?**

19   A.   Returning to the price paths as described above, the price movements in the paths in  
20   the Companies' determination of the 2009-2011 POLR cost were typically about 10%  
21   of the market price. Using the market prices from the testimony of Staff witness  
22   Johnson as discussed in my direct testimony, 10% equates to a typical price

1 movement of \$7/MWH to \$8/MWH. Clearly this is greater than the “penny” per  
2 MWH referenced by OCC witness Thompson.

3 Customer switching is assumed to occur when the market price drops below  
4 the ESP price. Using the CSP Residential ESP price for 2011 (\$62.08/MWH) and  
5 Staff witness Johnson’s CSP residential market price for 2011 (\$82.93/MWH), the  
6 switching impact is illustrated in the following Diagram 2. Every change in market  
7 price does not result in customer switching, but rather switching would occur only  
8 when market prices moves sufficiently to drop below the ESP price. As also  
9 illustrated by the example, there are multiple strategies at each node, some which may  
10 involve switching, others which may not. Only the least cost strategy is used in  
11 determining the cost of the Companies’ POLR obligation. The illustrations would be  
12 similar using the remaining customer classes for the Companies.

13 Diagram 2



1   **Q.    ON PAGES 33-34 OF HIS DIRECT TESTIMONY AND IN HIS CROSS**  
2       **EXAMINATION, OCC WITNESS THOMPSON INDICATES THAT THE**  
3       **COMPANIES' DETERMINATION OF ITS POLR COST SOMEHOW**  
4       **RESULTS IN A CHARGE THAT IS 36 TIMES TOO GREAT. IS THAT**  
5       **CORRECT?**

6    A.   No. As described above, the constrained model computes a cost per kWh that  
7       appropriately reflects the term of the ESP. The determination of the Companies'  
8       POLR cost under the unconstrained model addressed by OCC witness Thompson is  
9       also done on a cost per kWh basis, using a single option. His statement is simply not  
10      correct. If it were, then the constrained model should result in a cost per kWh  
11      approximately 36 times less than the results of the unconstrained model. However, as  
12      shown in my direct testimony, the differences in the results are certainly not of this  
13      magnitude.


14               Regardless of whether the customer is charged the POLR cost per kWh either  
15      up front for all kWh, at the end of the term for all kWh, or as kWh are consumed,  
16      customers are only charged the POLR cost per kWh once for each kWh.

17   **Q.    DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

18   A.   Yes it does.

## 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 Rebuttal Testimony of Laura J. Thomas has been served upon the below-named counsel via electronic mail, this 25th day of July 2011.



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