

**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 ) Case No. 11-346-EL-SSO  
Standard Service Offer Pursuant to Section ) Case No. 11-348-EL-SSO  
4928.143, Revised 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 ) Case No. 11-350-EL-AAM  
Accounting Authority. )

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**DIRECT TESTIMONY OF**

**KENNETH J. JENNINGS**

**ON BEHALF OF**

**DUKE ENERGY COMMERCIAL ASSET MANAGEMENT, INC.**

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May 4, 2012

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## **I. INTRODUCTION**

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

2   A.   My name is Kenneth J. Jennings, and my business address is 139 East Fourth  
3       Street, Cincinnati, Ohio 45202.

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

5   A.   I am employed by Duke Energy Commercial Enterprise, Inc., (DECES) as  
6       Director of Market Policy & RTO Services.  DECES provides various  
7       administrative and other services to Duke Energy Commercial Asset  
8       Management, Inc., (DECAM) and other affiliated companies of Duke Energy  
9       Corporation (Duke Energy).

10  **Q.   PLEASE BRIEFLY DESCRIBE YOUR EDUCATION AND**  
11  **PROFESSIONAL EXPERIENCE.**

12  A.   I received an A.A.S. in Manufacturing Technology, and a B.S. in Manufacturing  
13       from Northern Kentucky University in 1991 and 1993, respectively.  I also  
14       completed a Masters Degree in Business Administration from Thomas More  
15       College in 2005.  I have attended many seminars, workshops and forums on  
16       generation resource planning, generation unit performance management, and  
17       other business, and electric and gas utility related topics.  Prior to joining Cinergy  
18       Corp. (Cinergy), I was employed by Philips Services Corporation as a Project  
19       Engineer and by Aurora Casket Company as a Process Engineer.  I began working  
20       for Cinergy in 1999 in the Engineering and Construction Group of Cinergy  
21       Generation Resources, LLC.  I have held positions, such as Manager of Business  
22       Analysis, Station Performance Engineer at Miami Fort Station in North Bend,

1 Ohio, Technical Analysis Engineer in the Business Development Support Group,  
2 and Conditioned Based Maintenance Team Lead over thermal performance of all  
3 Cincinnati Gas & Electric generation facilities in Cincinnati. I was promoted to  
4 my current position in April of 2006.

5 **Q. PLEASE DESCRIBE YOUR DUTIES AS DIRECTOR OF MARKET**  
6 **POLICY & RTO SERVICES.**

7 A. I am responsible for establishing and maintaining a working relationship with  
8 PJM Interconnection, L.L.C. (PJM) and stakeholders in order to shape market  
9 policy and ensure compliance with market rules in PJM for the 3,100 MWs of  
10 gas-fired generation in PJM that is owned and operated by DECAM and for the  
11 generation owned by Duke Energy Ohio, Inc.

12 I am also the subject matter expert for Duke Energy with regard to PJM. I  
13 actively participate in the PJM stakeholder process, where I am the voting  
14 member for Duke Energy. I also follow the Federal Energy Regulatory  
15 Commission (FERC) proceedings related to PJM activities and have actively  
16 participated in settlements, such as the PJM Reliability Pricing Model (RPM)  
17 settlement at the FERC.

18 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC**  
19 **UTILITIES COMMISSION OF OHIO?**

20 A. Yes.

21 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**  
22 **PROCEEDING?**

23 A. The purpose of my testimony is to address the obligations of an entity functioning

1 as a Fixed Resource Requirement (FRR) in PJM. Ohio Power Company (AEP  
2 Ohio) has suggested that its contractual obligations as an FRR entity preclude the  
3 implementation of market-based, competitive pricing until the end of the 2014-  
4 2015 planning year. At that time, AEP Ohio's status as an FRR entity will have  
5 expired and AEP Ohio will procure any needed capacity resources through PJM's  
6 RPM auctions.

## II. DISCUSSION

### 7 **Q. PLEASE DESCRIBE PJM'S CAPACITY MARKET.**

8 A. The PJM capacity market is designed to ensure the adequate availability of  
9 necessary resources that can be called upon to ensure the reliability of the electric  
10 transmission grid. In PJM, the capacity market structure provides transparent  
11 forward capacity market signals to support infrastructure investment. RPM  
12 procurement auctions are conducted three years in advance of the actual prompt  
13 year in order to allow bidders to complete construction on their projects if they are  
14 to clear the auction. The PJM capacity market provides incentives for the  
15 development of generation, demand response, energy efficiency, and transmission  
16 solutions. In addition to a forward price signal, the RPM construct also provides a  
17 locational price signal, in order to recognize and quantify the locational value of  
18 capacity.

19 PJM utilizes four auctions up to the prompt year in order to procure the  
20 correct amount of capacity supply for the actual demand in the delivery year. The  
21 first auction, called the Base Residual Auction (BRA), typically occurs in May for  
22 the delivery year beginning in June three years into the future. Then, around

1           September of the following year, PJM will hold a First Incremental Auction.  
2           Around July of the following year, PJM will hold its Second Incremental Auction.  
3           Finally, around six months later, in February, after the final effective Equivalent  
4           Forced Outage Rate in Demand (EFOR<sub>d</sub>) ratings are posted, PJM will hold its  
5           Third Incremental Auction. This occurs five months before the beginning of the  
6           delivery year, which starts on June 1. Each incremental auction is an opportunity  
7           for both suppliers and PJM to balance their respective capacity positions, meaning  
8           that, if a supplier sold too much capacity due to changes in EFOR<sub>d</sub>, it can buy  
9           back some of the capacity that it previously sold in the BRA or a previous  
10          Incremental Auction. Similarly, if PJM finds that the peak load forecast was too  
11          high or too low, and it subsequently procured too much or too little in the BRA, it  
12          can sell back or buy more capacity to balance to the actual reliability  
13          requirements.

14                 There is also an alternate way to participate in PJM's capacity construct,  
15          which is essentially an opt-out provision called the FRR. The FRR alternative  
16          provides a Load Serving Entity (LSE) with the option to submit an FRR Capacity  
17          Plan and meet a fixed capacity resource requirement. This allows the LSE to opt  
18          out of PJM's RPM Auction Process and match its reliability requirement to  
19          resources it owns or procures through contracts, while also still being permitted to  
20          sell some or all of its excess supply into RPM auctions up to the FRR Limit. The  
21          FRR limit is the lesser of 25 percent of the Preliminary Unforced Capacity  
22          Obligation or 1,300 MW.

1 **Q. PLEASE EXPLAIN HOW CAPACITY IS PRICED UNDER THESE TWO**  
2 **ALTERNATIVES.**

3 A. Under the Reliability Pricing Model (RPM), capacity prices are determined by the  
4 results of the base residual and incremental auctions. Under the FRR alternative,  
5 the price for capacity is determined by the applicable PJM Agreements,<sup>1</sup> which  
6 establish a default capacity pricing consistent with the capacity price in the  
7 unconstrained portions of the PJM Region. AEP Ohio has historically relied upon  
8 the default pricing mechanism and has charged CRES providers based upon RPM.

9 **Q. WHAT ARE THE OBLIGATIONS OF AN FRR ENTITY IN RESPECT OF**  
10 **CAPACITY?**

11 A. An FRR entity, such as AEP Ohio, must meet the capacity requirements for its  
12 footprint for the planning year(s) in question, relative to the load that has not  
13 elected to be in the RPM auction or procure capacity on their own behalf in order  
14 to self-supply its own FRR Plan. To fulfill this obligation, AEP Ohio will obtain  
15 firm capacity from qualified capacity resources in an amount that would satisfy  
16 the criteria for an FRR Alternative Capacity Plan, under PJM's applicable rules  
17 and manuals.

18 **Q. DO THE CONTRACTUAL COMMITMENTS IMPOSED UPON AN FRR**  
19 **ENTITY PRECLUDE IMMEDIATE ADOPTION OF MARKET-BASED**  
20 **PRICING?**

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<sup>1</sup> The term "PJM Agreements," as used in this testimony, refers to all governing documents under PJM, including, but not limited to, the PJM tariff (or OATT), the Reliability Assurance Agreement (RAA), the Operating Agreement (OA), and the Transmission Owner Agreements (TOA).

1 A. No. Again, the PJM Agreements dictate the applicable pricing for capacity under  
2 the FRR alternative. And those agreements establish, as the default mechanism, a  
3 market-based price.

4 **Q. YOU STATED PREVIOUSLY THAT SUPPLIERS CAN ELECT TO**  
5 **PROCURE CAPACITY ON THEIR OWN OR SELF-SUPPLY. PLEASE**  
6 **ELABORATE ON THIS PROCESS, APPLICABLE TO THE FRR**  
7 **ALTERNATIVE.**

8 A. Yes, under Schedule 8.1 Section D.9 of the Reliability Assurance Agreement  
9 (RAA), a retail LSE is permitted to self-supply capacity in lieu of allowing the  
10 FRR entity to supply its obligation. In such a case, approximately sixty days prior  
11 to the PJM BRA, the LSE would notify PJM of its intent to self-supply for the  
12 delivery year. The BRA occurs three years prior to the actual start date of the  
13 delivery period. The retail LSE must then submit a resource plan to PJM  
14 approximately one month before the BRA. PJM will then reduce the capacity  
15 obligation for the primary FRR entity. At that point, the primary FRR entity can  
16 procure its own capacity resources through bilateral contracts or can self-supply  
17 the capacity with its own resources, and submit its own FRR plan to PJM.

18 **Q. ASSUMING AEP OHIO IS ABLE TO CHARGE ABOVE-MARKET**  
19 **PRICING TO CRES PROVIDERS, DO THE PJM AGREEMENTS**  
20 **PERMIT A TRANSITION PERIOD TO ALLOW OTHER LSEs TO OPT**  
21 **OUT AND SELF-SUPPLY CAPACITY PRIOR TO IMPLEMENTING**  
22 **SUCH PRICING?**



1 A. Yes. And if AEP Ohio were permitted to alter the historic pricing of capacity, it  
2 would only be appropriate to allow CRES providers that had relied upon this  
3 historic pricing an open window to opt out and arrange to self-supply the capacity  
4 necessary to supply the load that they serve. This could be accomplished either  
5 directly with PJM or through unit-specific bilateral transactions with AEP Ohio  
6 submitted in PJM's eRPM market software tool. It is noteworthy that, in the  
7 Duke Energy Ohio zone, LSEs that elected to opt out of Duke Energy Ohio's  
8 FRR plan provided unit-specific capacity to PJM, and PJM then reduced the Duke  
9 Energy Ohio FRR reliability obligation. AEP could operate in the same manner.  
10 This should also put PJM in the position of supporting the administration and  
11 billing of the FRR plan for AEP.

12 **Q. COULD THIS OPEN WINDOW OCCUR IN THE MIDDLE OF THE PJM**  
13 **PLANNING YEAR?**

14 A. Yes, capacity trading occurs in the units of dollars per MW-Day and, thus, can be  
15 transferred for a term as short as one day. For example, if a market participant  
16 has two 50 MW generators, one that is committed to an FRR plan and another that  
17 is not, the generator that is not committed to the FRR plan is permitted to replace  
18 the one that is at any time within the planning year, as long as the period of  
19 replacement exceeds one day and the start date has not yet occurred. So if the  
20 first unit that is committed to the FRR plan suffers a catastrophic failure on June  
21 30, 2012, the market participant is free to relieve the failed unit from its FRR  
22 obligation and substitute the second unit into the FRR plan with a start date of  
23 July 1, 2012, for a duration at the discretion of the market participant. Therefore,

1 if AEP Ohio is permitted to perpetuate a capacity price greater than the market for  
2 switched customers, then a deadline should be provided to CRES suppliers for the  
3 purpose of an opt-out from the AEP Ohio FRR plan going forward, for all  
4 planning years for which the RPM BRA has already been held.

5 Thus, prior to the expiration of the deadline the CRES supplier would  
6 provide to PJM or transfer to AEP Ohio the replacement capacity needed to cover  
7 the respective obligation for each of the delivery years which are applicable.  
8 Capacity may be transferred in and out of the FRR plan on a daily basis as long as  
9 the FRR plan is never left delinquent. For example, if the CRES supplier were to  
10 transfer 50 MWs of capacity to AEP Ohio, AEP Ohio would then move the 50  
11 MWs into the FRR plan, the FRR plan would become 50 MWs long. AEP Ohio  
12 could then remove 50 MWs of its own resources from the FRR plan and find an  
13 alternate use for that capacity; selling it bilaterally, selling it into an incremental  
14 auction, or otherwise.

15 **Q. WHAT HAPPENS IF THE OPT-OUT CAPACITY SUPPLIED IS**  
16 **GREATER THAN THE CRES OBLIGATION OR VICE VERSA?**

17 A. A CRES supplier's obligation and opt-out supply are always netted. To the extent  
18 that a CRES supplier over-supplies its obligation, then it receives a payment equal  
19 to the FRR entity's Reliability Charge rate times the quantity over-supplied. If an  
20 under-supply instance occurs, then the CRES supplier would pay an amount equal  
21 to the FRR entity's Reliability Charge rate times the quantity under-supplied.

22 **Q. HAVE ANY OTHER OHIO UTILITIES IN PJM PARTICIPATED IN THE**  
23 **MARKET AS FRR ENTITIES?**

1 A. Yes. Upon their transition from the Midwest Independent System Operator, Inc.,  
2 to PJM, both FirstEnergy and Duke Energy Ohio elected status as FRR entities.  
3 FirstEnergy will be an FRR entity until May 31, 2013, and Duke Energy Ohio  
4 will be an FRR entity until May 31, 2015.

5 **Q. WHAT PRICING MECHANISM DID THESE ENTITIES USE UPON**  
6 **ELECTING TO BECOME FRR ENTITIES?**

7 A. FirstEnergy held out-of-time FRR Transition Auctions for each of the two  
8 delivery periods for which they were an FRR entity. Those auctions were  
9 administered by PJM and monitored by Monitoring Analytics, LLC, PJM's  
10 Independent Market Monitor. The clearing prices for these auctions set the price  
11 for LSEs and were very similar to the RPM price. Duke Energy Ohio elected to  
12 use the RPM price which is the default price provided for in Schedule 8.1 of the  
13 RAA.

14 **Q. DID THESE OTHER ENTITIES ALLOW LSEs TO OPT OUT OF THE**  
15 **THEIR RESPECTIVE FRR PLANS?**

16 A. Yes. In every case, both FirstEnergy and Duke Energy Ohio provided the  
17 necessary flexibility for LSEs to either be served by the FRR plan or to self-  
18 supply through opt-out resources.

### III. CONCLUSION

19 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

20 A. Yes.