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Columbus, OH 43215-2373
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August 31, 2011

Chairman Todd A. Snitchler
Public Utilities Commission of Ohio
Ohio Power Siting Board
180 East Broad Street
Columbus, Ohio 43215-3793

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RE:

In the Matter of the Commission Review)
of the Capacity Charges of) Case No. 10-2929-EL-UNC
Columbus Southern Power Company)
and Ohio Power Company)

Dear Chairman Snitchler:

Attached please find the testimony of Columbus Southern Power Company and Ohio Power Company (AEP Ohio) witnesses in the above listed docket required to be filed today in the procedural schedule issued in the August 11, 2011 Entry. Those witnesses providing pre-filed direct testimony are:

Richard E. Munczinski
✓ William A. Klun
Frank C. Graves
Dana E. Horton
Kelly D. Pearce

Please contact me if there are any questions.

Cordially,

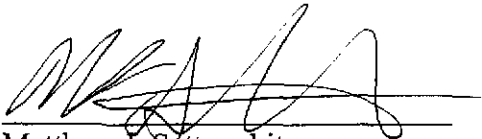
Matthew J. Satterwhite
Senior Counsel

Testimony attached

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.
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AUG 31 2011

CERTIFICATE OF SERVICE

I hereby certify that this letter and the testimony accompanying it was served by electronically pursuant to the August 11, 2011 Entry in this case, upon counsel for the entities below on this August 31, 2011.


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FILE

EXHIBIT NO. _____

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Commission Review of)
the Capacity Charges of Ohio Power) Case No. 10-2929 -EL-UNC
Company and Columbus Southern Power)
Company)

DIRECT TESTIMONY OF
WILLIAM A. KLUN
ON BEHALF OF
COLUMBUS SOUTHERN POWER COMPANY
AND
OHIO POWER COMPANY

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WILLIAM A. KLUN

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BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO
DIRECT TESTIMONY OF
WILLIAM A. KLUN
ON BEHALF OF
COLUMBUS SOUTHERN POWER COMPANY
AND
OHIO POWER COMPANY

1 **PERSONAL BACKGROUND**

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

3 A. My name is William A. Klun and my business address is 160 Varick Street, 12th
4 Floor, New York, New York 10013.

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

6 A. I am a Senior Advisor with M.J. Beck Consulting, LLC, a consulting firm which
7 specializes in the energy and utility industries. My consulting practice area is energy
8 and utility finance.

9 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL**
10 **BACKGROUND.**

11 A. In addition to my current position at M.J. Beck Consulting, LLC, I am on the Board
12 of Advisors of, and shareholder in, Skystream Markets, Inc., a developer of
13 comprehensive trading platforms for the energy commodity markets; I am also a
14 principal shareholder in Certain Energy, LLC, a development company focused on
15 renewable fuels.

16 From 2004 to 2006, I was the Senior Advisor, Direct Investments, with RNK
17 Capital, an \$800 million investment firm focused on renewable and alternative

1 energy. In this capacity, I evaluated, structured, and managed energy and emissions-
2 related financings. From 2001 until 2004, I was the co-head of DZ Bank's energy
3 corporate finance group in the Americas, where I managed a \$600 million loan
4 portfolio in the electric power, oil and gas and refining sectors. From 1997 until
5 2001, I was a senior consultant with PA Consulting (formerly Hagler Bailly), where I
6 specialized in financial advisory engagements in the utility sector.

7 I have a BS from the School of Foreign Service (*Cum Laude*), Georgetown
8 University and an MBA Finance from the Wharton School, the University of
9 Pennsylvania, as well as an MA in International Affairs from the University of
10 Pennsylvania.

11
12 **PURPOSE OF TESTIMONY**

13 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

14 A. The purpose of my testimony is to discuss the shortfalls of the PJM Reliability
15 Pricing Model ("RPM") relative to the true financing environment (and related costs)
16 that will be necessary to assure adequate generation build. My testimony addresses
17 the realities of finance in electric generation. These realities do not substantively
18 support the RPM as a mechanism to maintain development of adequate capacity in
19 AEP Ohio's service territory. The RPM has been designed to be a short-term
20 capacity-balancing mechanism. As such, it does not address the capital markets
21 conditions associated with the introduction of new capacity. My testimony will
22 include the following discussions: (1) primary financing considerations in generation
23 finance and the material inconsistencies of these conventions with the RPM, and (2)

1 the structure of the generation finance market and the inability of the RPM to reflect
2 characteristics such as market illiquidity and financial market cycles.

3
4 **EXHIBITS**

5 **Q. ARE YOU SPONSORING ANY EXHIBITS IN THIS PROCEEDING?**

6 A. Yes, I am sponsoring two exhibits identified as follows:

7 Exhibit WAK-1: Recent examples of transactions in generation finance

8 Exhibit WAK-2: Current generation lenders/underwriters

9 **Q. WERE THESE EXHIBITS PREPARED UNDER YOUR SUPERVISION AND**
10 **DIRECTION?**

11 A. Yes.
12

13 **FINANCING CONSIDERATIONS IN GENERATION FINANCE**

14 **Q. WHAT ARE THE PRIMARY FINANCIAL MARKET CONSIDERATIONS**
15 **FOR FINANCING POWER PLANT CONSTRUCTION?**

16 A. The primary considerations of debt finance are cash flow coverage, interest rate, and
17 remedies/recourse in the event of default or insolvency. The primary concerns of
18 equity finance depend on the risk/reward profile of the underlying equity investor.
19 Both debt and equity financiers share a common concern about the term (length) of
20 the investment. The projected cash flows must be adequate to satisfy the cash flow
21 needs of the debt financier and the total return expectations of the equity financier.
22 Generation assets, by nature of their capital intensity, have longer economic payback
23 periods. Therefore, both debt and equity financiers develop financing scenarios based

1 on longer-term, not shorter-term, horizons. If that horizon is too short, the debt
2 financier will not have visibility over the necessary time frame to develop reasonable
3 assurance of meeting coverage needs and the equity financier will have deferred
4 paybacks, at best. As a result, the typical financing horizon of a generation project is
5 a minimum of 10 years. A shorter financing horizon means that project economics
6 will not support new generation build.

7 **Q. HOW IS THIS INCONSISTENT WITH THE RPM?**

8 **A.** The RPM is capped at a three-year time horizon. This is inconsistent with the
9 fundamental conventions of generation finance. Generation assets are long-term
10 assets with long-term financing structures, by necessity. A developer of new
11 generation could not realistically look to the RPM as the capital recovery instrument.
12 An illustrative example will demonstrate this point:

- 13 • Let us assume a developer would be willing to bid in to the RPM with the
14 hope of using this mechanism to provide sufficient return to incent new
15 construction. They would be relying on a short-term instrument which does
16 not reflect the true financing horizon. The bid price would naturally be high
17 (in order to satisfy the needs of both debt and equity financiers). In addition,
18 we can realistically assume that this hypothetical developer would face
19 competition from other bidders willing to satisfy their capital recovery
20 objectives over the three year horizon (potentially at a much lower price since,
21 assumedly, they had already substantially recovered their capital cost).

22 In a competitive environment, the hypothetical developer could hope for
23 partial (not full) capital cost recovery. This will not satisfy either the developer's

1 debt or equity financiers, since they will have significant exposure remaining at the
2 end of the three year horizon. Thus, the RPM horizon is directly at odds with the
3 investment horizon expected by debt and equity financiers.

4 The term of the RPM is simply too short to be used by investors (both debt
5 and equity) as a mechanism for financing new construction. Investors rely on cash
6 flows beyond the first three years to service debt and provide a return on equity
7 investment. Investors would be reluctant to finance a project where cash flows
8 cannot be projected with any degree of certainty beyond the first three years. To do so
9 would leave them exposed to substantial uncertainty and to account for this they will
10 either require a substantial risk premium (pushing up the cost of new generation) or
11 will simply not invest.

12 13 **FINANCIAL MARKET STRUCTURE**

14 **Q. WHAT IS THE CURRENT STRUCTURE OF GENERATION FINANCE?**

15 A. While equity participants vary, the debt finance market is supported by either bond
16 investors or banks. Bond market participation in these transactions, post-financial
17 crisis, is still at a low level. In the case of banks, they finance these transactions
18 either using their own balance sheets or they spread the financing exposure by selling
19 pieces of the transaction through syndication to a wide group of banks. The use of
20 'syndication' in generation finance is currently at a low level. More common are so
21 called 'club underwritings' typically involving a smaller group of banks.

22 In a club underwriting, this bank group will lend the total amount required, up to the
23 aggregate exposure limit mandated by the respective bank group's individual senior

1 management. Almost all recent generation finance transactions have been done on
2 this basis. This means that the banks participating in these transactions are doing so
3 with their balance sheets.

4 I have included recent examples of such financings in Exhibit WAK-1.

5 **Q. HOW IS THE CURRENT STRUCTURE OF GENERATION FINANCE**
6 **RELATED TO THE RPM?**

7 A. Developers currently face a substantial challenge in financing new generation due to
8 an illiquid financing environment. The total pool of capital available to finance these
9 transactions is structurally restricted to bank market appetite. As illustrated by Exhibit
10 WAK-2, this is a limited pool of capital. This important aspect of financing new
11 generation is not captured in the RPM mechanism. This is because the RPM
12 compensates short-term capacity, and hence the potential costs of the structural
13 illiquidity are not captured. These material financing issues would be evident in new
14 build transactions (i.e. 10 year) not the short-term 3 year “capacity balancing” RPM.
15 Furthermore, the willingness of the bank groups to lend is dependent on the financial
16 health of the participating banks. This is not self-evident. There is great market
17 concern about the condition of the European banks (who have traditionally been
18 anchors in the generation finance markets).

19 **Q. ARE THERE OTHER EXAMPLES OF STRUCTURAL ISSUES IN**
20 **FINANCIAL MARKETS WHICH EFFECT FINANCING OF NEW**
21 **GENERATION?**

1 A. Yes. Financial markets are not static. They are subject to cycles and dislocations
2 which restrict the supply of investment funds and have a significant impact on
3 financing terms and conditions.

4 **Q. CAN YOU PROVIDE SOME RECENT EXAMPLES OF FINANCIAL**
5 **MARKET CYCLES?**

6 A. Yes. Most recently, the financial crisis of 2008 was devastating to the energy finance
7 markets. Many critical financing sources simply disappeared from the market. The
8 contraction in the financing community resulted in unprecedented spikes in funding
9 costs and terms restrictions. The average long-term utility debt yield spiked to almost
10 9% (compared to a typical yield of 4.5%). This cycle was preceded by the
11 generation finance crisis of 2003-2004, which was precipitated by the Enron
12 bankruptcy. Similar to 2003-2004, funding sources fled the market in 2008. Capital
13 costs increased dramatically and capital available for new construction slowed to a
14 trickle.

15 **Q. HOW DO FINANCIAL MARKET CYCLES RELATE TO THE RPM?**

16 A. The ability to finance projects is not simply a factor of interest rate or required rate of
17 return on a given investment. It also depends on the supply of investment funds in
18 the financial markets which would be employed to finance these projects. The RPM is
19 not structured to deal with the realities of financial market conditions, which include
20 periodic “busts” in which funds dry up and capital costs skyrocket. The RPM is a
21 “short-term capacity balancing” vehicle, not a capacity construction vehicle. The
22 horizon is too short to account for the capital market fluctuations associated with new

1 build. However, utilities are charged with the mission of providing adequate capacity
2 into the foreseeable future. They must contend with these fluctuations.

3 **Q. WHAT ARE THE CONCLUSIONS TO YOUR TESTIMONY?**

4 A. The market design goals as structured under the RPM auction are incompatible with
5 the goals of long-term capacity generation investment. As noted earlier, investors
6 rely on cash flows beyond the first three years to service debt and provide a return on
7 equity investment. As such they would be reluctant to finance a project where cash
8 flows cannot be projected with any degree of certainty beyond the first three years.
9 Coupled with the inability of the RPM to reflect financial market characteristics such
10 as market illiquidity and financial market cycles, an alternative approach to incenting
11 new generation (such as a cost based mechanism) is more appropriate.

12 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

13 A. Yes.

RECENT TRANSACTIONS IN GENERATION FINANCE

	Transaction A	Transaction B
Date of Transaction	June 27, 2011	Aug. 24, 2011
Project Sponsor	Calpine	NRG
Plant Name	Russell City	El Segundo
Financing Amount	\$844M	\$690M
Financing Type	Construction loan and term loan	Construction loan and term loan
Interest Rate*	LIBOR plus 2.25%	LIBOR plus 2.25%
<i>Length of Term Loan**</i>	<i>10 years</i>	<i>10 years</i>
Financing Method	Club Underwriting	Club Underwriting
Details	This new natural gas generation project is located in Hayward, CA. A Calpine affiliate owns 75% of the project, while GE Energy Financial Services owns the balance.	NRG is replacing the two oldest units at the El Segundo plant, which have a combined capacity of 350 MW, with a 560 MW combined-cycle power plant. The new generation facility will operate under a 10-year tolling agreement with Southern California Edison.

*LIBOR refers to the London inter-bank offered rate and is commonly-used basis for pricing debt.

**Note the length of term loan in each case is ten years.

CURRENT GENERATION LENDERS/UNDERWRITERS

Institution:

Banco Santander
BancoSabadell
Bank of Montreal
BBVA
CIBC
CIT
CoBank
Credit Agricole
DekaBank
DnB Nor
DZ Bank
Helaba
ING Capital
LBBW
Llyods Bank
Mizuho
Royal Bank of Scotland
Scotia Capital
Societe Generale
Sumitomo Mitsui
Union Bank of California
WestLB

TOTAL: 22