

RECEIVED-DOCKETING DIV

EXHIBIT NO. —
2012 JAN -3 PM 3:22

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

PUCO

In the Matter of the 2010 Annual Filing)
of Columbus Southern Power Company and)
Ohio Power Company Required by)
Rule 4901:1-35-10, Ohio Administrative)
Code.)

Case No. 11-4571-EL-UNC

Case No. 11-4572-EL-UNC

REBUTTAL TESTIMONY
OF
DR. ANIL MAKHIJA
ON BEHALF OF
COLUMBUS SOUTHERN POWER COMPANY
AND
OHIO POWER COMPANY

Filed: January 3, 2012

Case 11-4571-EL-UNC and Case 11-4572-EL-UNC are accurate and complete representations of the filed document delivered in the regular course of business.
technician SW Date Processed JAN 03 2012

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO
REBUTTAL TESTIMONY OF
DR. ANIL MAKHIJA
ON BEHALF OF
COLUMBUS SOUTHERN POWER COMPANY AND
OHIO POWER COMPANY
PUCO CASE NO. - 11-4571-EL-UNC
PUCO CASE NO. - 11-4572-EL-UNC

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

3 A. My name is Anil Kumar Makhija. My business address is 842 Fisher Hall, Fisher
4 College of Business, The Ohio State University, Columbus, Ohio 43210.

5 **Q. ARE YOU THE SAME ANIL K. MAKHIJA THAT FILED DIRECT**
6 **TESTIMONY IN THIS PROCEEDING?**

7 A. Yes.

8 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

9 A. The purpose of my testimony is to address several issues raised by the testimony of Staff
10 Witness Buckley.

11 **Q. WHAT ISSUES DOES STAFF WITNESS BUCKLEY'S TESTIMONY RAISE**
12 **THAT YOU WOULD LIKE TO ADDRESS?**

13 A. I raise two issues regarding Mr. Buckley's testimony. First, I address errors in the
14 implementation of the procedures he himself proposes. Second, I address concerns with
15 his approach.

16 First, even if we accept the conceptual basis underlying Mr. Buckley's approach
17 to SEET, I note errors in his implementation of his approach. Mr. Buckley ends up
18 picking firms in his comparable group that he explicitly wishes to exclude. He notes that

1 “Staff agrees with Mr. Hamrock, that the *electric utility industry* [italics added] is facing
2 unique challenges and therefore believes companies within the industry make up the best
3 group of comparable companies” (page 5, lines 3-6, Prefiled Testimony of Mr. Buckley,
4 Oct. 24, 2011). Yet, included in the SPDR Select Sector Fund—Utilities (XLU), whose
5 33 component firms constitute his set of comparables firms, there are a number of firms
6 not from the electric utility industry. In addition, Mr. Buckley includes AEP itself in the
7 comparison group, which is not appropriate. I discuss this issue in detail below.

8 When I correctly calculate the mean ROE, excluding AEP and five firms that are
9 not electric utilities but are improperly included in the comparison group (according to
10 Mr. Buckley’s own criteria), and otherwise faithfully follow Mr. Buckley’s procedures, I
11 find that the mean ROE for his group of comparables is 11.42%, which is similar to the
12 mean ROE of 11.48% for the comparable group that I have proposed. I also note that,
13 using an entirely different methodology, Mr. Vilbert reports mean returns for comparable
14 groups for Ohio Edison, Cleveland Illuminating, and Toledo Edison of 11.12%, 11.47%,
15 and 12.02%, respectively, a mean of 11.54% for the three First Energy firms.

16 The threshold for Mr. Buckley for ROEs for the purposes of SEET is 18.27%
17 (using a mean ROE of 11.42%), while I have proposed a threshold of 18.37%, where the
18 adder is 60% of the mean as applied by the Commission in its Opinion and Order in case
19 10-1261-EL-UNC in CSP’s and OP’s previous SEET case. Respectfully, I continue to
20 believe that the adder should reflect the variation of ROEs in the comparable group,
21 instead of the 60% of the mean which ignores the dispersion of ROEs within the
22 comparable group. Indeed, it is the standard practice to form such an adder with multiples
23 of standard deviations, corresponding to desirable levels of risk of a false positive

1 determination of a significantly excessive ROE when it is truly not excessive.
2 Furthermore, as I have suggested, an adder of 1.96 standard deviations reflects a
3 reasonable 5% risk of a false positive conclusion. (Makhija Direct documents a mean
4 ROE of 11.48% and standard deviation of ROEs in the comparable group of 5.68%,
5 which, with 1.96 standard deviations, gives a threshold ROE of 22.61%, $11.48\% +$
6 $1.96 * 5.68\%$.)

7 There is yet another implementation issue. Mr. Buckley reports a weighted
8 average ROE for the group of comparables in his Exhibit, which weights his mean
9 towards the firms with larger shareholder book equity values. I later discuss the
10 problems introduced by this implementation choice as well. Participants in the SEET
11 proceedings have emphasized the mean as the simple arithmetic average of the ROEs of
12 the firms in the comparable set. Indeed, the above cited mean ROE for Staff Witness
13 Buckley and for me are the correct simple arithmetic averages.

14 Besides the above implementation problems, in a second more fundamental issue,
15 I question the conceptual approach adopted by Mr. Buckley. The question is whether it is
16 appropriate to use the component firms of the SPDR Sector Select Fund – Utilities (XLU)
17 as the group of comparables for the purposes of the SEET. S. B. 221, in Section
18 4928.143 (F), explicitly requires us to form the comparable group with firms that match
19 the business and financial risk of the subject utility. As I discuss below, and as the
20 empirical evidence confirms, the choice of the component firms of the SPDR Sector
21 Select Fund – Utilities (XLU) fails this test.

1 **Q. SHOULD MR. BUCKLEY INCLUDE ALL 33 COMPONENT FIRMS OF THE**
2 **SPDR SECTOR SELECT FUND—UTILITIES (XLU) IN HIS COMPARABLE**
3 **GROUP?**

4 **A.** No. Mr. Buckley wants to include only electric utilities in his comparable set. But, the
5 33 firms in the SPDR Sector Select Fund – Utilities (XLU) include five firms that are not
6 listed as electric utilities (El Util --East, West, or Central) in Value Line: AES Corp
7 (Power), ONEOK Inc. (Oil/Gas Distr.), NRG Energy (Power), NISource Inc. (Nat. Gas),
8 and Nicor Inc. (Nat. Gas). In Exhibit I, I show in bold the five firms which are placed by
9 Value Line in industries other than Electric Utilities. Moreover, the parent of CSP and OP
10 should be excluded from their group of comparables, since they themselves are a part of
11 AEP. I have underlined AEP in Exhibit I, showing that it too is included as a comparison
12 firm in Staff Witness Buckley's matching firms. That leaves 27 electric utilities that fit
13 Mr. Buckley's own stated requirements.

14 **Q. DID YOU DETERMINE THE MEAN AND THRESHOLD VALUES FOR THE**
15 **CORRECT ROE MEASURE FOR THE 27 COMPONENT FIRMS OF THE SPDR**
16 **SECTOR SELECT FUND –UTILITIES (XLU) THAT MEET MR. BUCKLEY'S**
17 **REQUIREMENTS?**

18 **A.** Yes. The findings are reported in Exhibit II. They show that for the 27 electric utilities
19 that meet Mr. Buckley's requirements the mean ROE is 11.42%. This is based on a
20 simple arithmetic average. The mean ROE reported in Staff Witness Buckley's Exhibit is
21 the weighted average of the ROEs of the component firms in the SPDR (~11%). The
22 weights are the relative size of the average shareholders' book equities for 2010.

1 **Q. IS IT CORRECT TO CALCULATE THE MEAN ROE FOR THE**
2 **COMPARABLE GROUP BY FORMING A WEIGHTED AVERAGE OF THE**
3 **ROEs, AS DONE BY MR. BUCKLEY?**

4 A. No. It is not the correct procedure, nor has it been applied by other parties in the SEET
5 proceedings. Weighting by the shareholders' equity gives the ROEs of the larger firms
6 greater weights. To begin with, CSP and OP are relatively smaller firms compared to the
7 publicly traded component electric utilities in the SPDR Sector Select Fund – Utilities
8 (XLU). This weighting procedure exacerbates the problem by weighting towards the
9 ROEs of the largest firms. It is known that smaller firms are riskier (have higher betas,
10 for example). Thus, the weighted ROE procedure adopted by Mr. Buckley leads to
11 mismatching the risk of the comparable group to that of CSP and OP.

12 In contrast to the weighting procedure, the simple arithmetic average is preferable
13 because it gives the expectation for the ROE for the typical comparable firm. At the
14 bottom of Exhibit II, I report the mean and threshold ROEs for 27 component firms of the
15 SPDR Sector Select Fund – Utilities (XLU) that meet Mr. Buckley's requirements. The
16 arithmetic average ROE is 11.42%. The corresponding threshold ROE is 18.27%.

17 **Q. WHAT CONCERNS DO YOU HAVE ABOUT MR. BUCKLEY'S APPROACH,**
18 **IRRESPECTIVE OF THE IMPLEMENTATION ERRORS YOU HAVE NOTED**
19 **SO FAR?**

20 A. S. B. 221 requires that the business and financial risks are taken into account in
21 identifying the group of comparable firms. Business risk is the risk arising from day-to-
22 day business operations. For an electric utility the list of sources from which business
23 risk can arise is extensive. These are risks that an all-equity firm's business operations

1 face, which are separate from the additional risks that a firm with debt faces. Financial
2 risks arise from the debt obligations of the firm. Since principal and interest payments
3 take precedence over payments to common stockholders, debt leverage makes the
4 financial returns to common stockholders riskier. There is no reason to believe that all
5 electric utilities face the same business or financial risks. For example, not all electric
6 utilities engage in all three businesses, generation, transmission, and distribution, altering
7 the extent of business risks they face. Similarly, not all electric utilities have the same
8 leverage or credit rating, altering the extent of financial risks they face.

9 Mr. Buckley makes no attempt to determine the extent of business and financial
10 risks faced by CSP and OP. Instead, he asserts that the component firms of the SPDR
11 Sector Select Fund – Utilities (XLU) as a group represent the business and financial risks
12 faced by CSP and OP. We are provided with no evidence of such a match. Indeed, by
13 this logic the XLU firms would be a match for any utility, negating the mandate of S. B.
14 221 to compare a subject utility against firms that “face comparable business and
15 financial risks.”

16 In addition, there are reasons to think that the SPDR Select Sector Fund – Utilities
17 (XLU) is not a good match for business and financial risks for CSP and OP. Investment
18 managers who form the fund are expected to be looking for best investments probably
19 among large publicly-traded utilities that can accommodate substantial investor
20 purchases, not necessarily firms with typical risks among electric utilities and certainly
21 not risks faced by CSP and OP. This becomes clear when we examine the sizes of book
22 equity of firms in the SPDR and CSP. There is only one firm among the 33 component
23 firms of the SPDR with book equity less than that for CSP (Nicor’s 2010 year-end book

1 equity was \$1.1 b., while CSP's book equity was \$1.4 b. Nicor comes from the Gas
2 industry). Incidentally, investment managers' search for good investment vehicles in
3 2010 seems not to have panned out, since the index value of the fund barely moved over
4 the year (Jan. 4, 2010 fund index value of 31.08 to Dec. 31, 2010 fund index value of
5 31.04).

6 While the presence of non-electric utility firms among the component firms of
7 XLU is not in itself a reason to fear a mismatch with CSP and OP, the inclusion of such
8 firms without a check on their business and financial risk is a matter of concern. For
9 example, AES, a firm in the Power industry according to Value Line, is reported by Staff
10 Witness Buckley to have a negative net income, even though this is income before
11 discontinued, non-recurring, and extraordinary items. That is, the normal business of
12 AES yielded negative net income in 2010, which makes AES an atypical firm to match
13 with CSP or OP. By taking all SPDR firms as the matched sample, Buckley includes
14 firms facing risks that are atypical of the risks faced by CSP and OP. A comparison of
15 betas with AEP (beta = 0.70) also shows that each of the non-electric utility in the SPDR
16 in fact had higher betas: AES Corp. (beta=1.20), ONEOK Inc. (0.95), NRG Energy
17 (1.16), NISource Inc. (0.85), and Nicor Inc. (0.74).

18 Finally, to ensure that the five firms - AES Corp (Power), ONEOK Inc. (Oil/Gas
19 Distr.), NRG Energy (Power), NISource Inc. (Nat. Gas), and Nicor Inc. (Nat. Gas)-should
20 be dropped because they do not match CSP or OP in business and financial risk, I turn to
21 Makhija Direct. Makhija Direct considers each of these five firms, as it does all the 1700
22 firms in Value Line's Standard Edition, as potential candidates to match the business and
23 financial risks faced by CSP. It then forms a list of those that do match. None of the five

1 firms are found to match CSP in business and financial risk. Indeed, there are other firms
2 in the SPDR which also do not match CSP in business and financial risk, though at least
3 they come from the same electric utility industry.

4
5 **Q. DOES THAT CONCLUDE YOUR TESTIMONY?**

6 **A.** Yes, it does.

CERTIFICATE OF SERVICE

The under signed hereby certifies that a true and correct copy of the foregoing Columbus Southern Power Company's and Ohio Power Company's Rebuttal Testimony of Dr. Anil K. Makhija has been served upon the below-named counsel/parties via U S. mail and electronic mail, this 3rd day of January, 2012.


Daniel R. Conway

Werner L. Margard, III
Stephen A Reilly
Public Utilities Commission of Ohio
180 East Broad Street, 6th Floor
Columbus, OH 43215-3793

Samuel C. Randazzo
Joseph E. Olikier
Frank P. Darr
McNees Wallace & Nurick LLC
21 East State Street, 17th Floor
Columbus, OH 43215

Michael L Kurtz
David F Boehm
Boehm, Kurtz & Lowry
36 East Seventh Street, Suite 1510
Cincinnati, Ohio 45202

Lisa G. McAlister
Matthew W. Warnock
Bricker & Eckler LLP
100 South Third Street
Columbus, OH 43215-4291

Melissa R. Yost
Kyle L. Verrett
Ohio Consumers' Counsel
10 West Broad Street, Suite 1800
Columbus OH 43215

Colleen L. Mooney
Ohio Partners for Affordable Energy
231 West Lima Street
Findlay, OH 45840

Exhibit I
SPDR Select Sector Fund (XLU) Firms, Their Industries and Their 2010 ROEs

ROEs are taken from Prefiled Redirect Testimony of Joseph P. Buckley on December 20, 2011 on behalf of the Staff of the Public Utilities Commission of Ohio, Case Nos. 11-4571-EL-UNC and 11-4572-EL-UNC. The roe are based on Value Line's *Net Income Before Discontinued, Non-Recurrings & Extras*.

	Company Name	Ticker	Industry	roe, %
5.	AES CORP.	AES	Power	-1.54
48.	AMEREN CORP.	AEE	El Util-Cent	8.58
50.	AMER. ELEC. POWER	AEP	El Util-Cent	9.33
170.	CMS ENERGY CORP.	CMS	El Util-Cent	13.2
202.	CENTERPOINT ENERGY	CNP	El Util-Cent	15.14
258.	CONSOL. EDISON	ED	El Util-East	9.31
259.	CONSTELLATION ENERGY	CEG	El Util-East	4.07
291.	DTE ENERGY	DTE	El Util-Cent	9.69
319.	DOMINION RESOURCES	D	El Util-East	14.87
329.	DUKE ENERGY	DUK	El Util-East	7.97
343.	EDISON INT'L	EIX	El Util-West	11.29
359.	ENTERGY CORP.	ETR	El Util-Cent	14.85
367.	EXELON CORP.	EXC	El Util-East	19.6
394.	FIRSTENERGY CORP.	FE	El Util-East	11.59
513.	INTEGRYS ENERGY	TEG	El Util-Cent	8.89
662.	NRG ENERGY	NRG	Power	6.11
690.	NEXTERA ENERGY	NEE	El Util-East	14.27
691.	NICOR INC.	GAS	Nat Gas Util	12.93
693.	NISOURCE INC.	NI	Nat Gas Util	6.03
698.	NORTHEAST UTILITIES	NU	El Util-East	10.23
725.	ONEOK INC.	OKE	Oil/Gas Dist	14.37
735.	PG&E CORP.	PCG	El Util-West	10.3
741.	PPL CORP.	PPL	El Util-East	14.72
764.	PEPCO HOLDINGS	POM	El Util-East	6.5
777.	PINNACLE WEST CAPITA	PNW	El Util-West	9.44
795.	PROGRESS ENERGY	PGN	El Util-East	8.83
799.	PUBLIC SERV. ENTERPR	PEG	El Util-East	16.9
854.	SCANA CORP.	SCG	El Util-East	10.58
868.	SEMPRA ENERGY	SRE	El Util-West	11.18
894.	SOUTHERN CO.	SO	El Util-East	13.13
930.	TECO ENERGY	TE	El Util-East	11.42
1055.	WISCONSIN ENERGY	WEC	El Util-Cent	12.37
1064.	XCEL ENERGY INC.	XEL	El Util-West	9.46

Exhibit II
SPDR Select Sector Fund (XLU) Firms from Electric Utility Industry Only,
and Their 2010 ROEs

ROEs are taken from Prefiled Redirect Testimony of Joseph P. Buckley on December 20, 2011 on behalf of the Staff of the Public Utilities Commission of Ohio, Case Nos. 11-4571-EL-UNC and 11-4572-EL-UNC. The roe are based on Value Line's *Net Income Before Discontinued, Non-Recurrings & Extras*.

AEP is also excluded to avoid comparing firm with itself (component part)

	Company Name	Ticker	Industry	roe, %
48.	AMEREN CORP.	AEE	El Util-Cent	8.58
170.	CMS ENERGY CORP.	CMS	El Util-Cent	13.2
202.	CENTERPOINT ENERGY	CNP	El Util-Cent	15.14
258.	CONSOL. EDISON	ED	El Util-East	9.31
259.	CONSTELLATION ENERGY	CEG	El Util-East	4.07
291.	DTE ENERGY	DTE	El Util-Cent	9.69
319.	DOMINION RESOURCES	D	El Util-East	14.87
329.	DUKE ENERGY	DUK	El Util-East	7.97
343.	EDISON INT'L	EIX	El Util-West	11.29
359.	ENTERGY CORP.	ETR	El Util-Cent	14.85
367.	EXELON CORP.	EXC	El Util-East	19.6
394.	FIRSTENERGY CORP.	FE	El Util-East	11.59
513.	INTEGRYS ENERGY	TEG	El Util-Cent	8.89
690.	NEXTERA ENERGY	NEE	El Util-East	14.27
698.	NORTHEAST UTILITIES	NU	El Util-East	10.23
735.	PG&E CORP.	PCG	El Util-West	10.3
741.	PPL CORP.	PPL	El Util-East	14.72
764.	PEPCO HOLDINGS	POM	El Util-East	6.5
777.	PINNACLE WEST CAPITA	PNW	El Util-West	9.44
795.	PROGRESS ENERGY	PGN	El Util-East	8.83
799.	PUBLIC SERV. ENTERPR	PEG	El Util-East	16.9
854.	SCANA CORP.	SCG	El Util-East	10.58
868.	SEMPRA ENERGY	SRE	El Util-West	11.18
894.	SOUTHERN CO.	SO	El Util-East	13.13
930.	TECO ENERGY	TE	El Util-East	11.42
1055.	WISCONSIN ENERGY	WEC	El Util-Cent	12.37
1064.	XCEL ENERGY INC.	XEL	El Util-West	9.46

Variable	Obs	Mean	Min	Max
roe	27	11.4218%	4.07%	19.6%

Buckley's Threshold ROE for SEET Purposes= 11.42%*1.6 = 18.27%

Makhija's Threshold ROE for SEET Purposes= 11.48%*1.6 = 18.37%