

EXHIBIT NO. _____

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)	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)	

PUBLIC VERSION OF
SUPPLEMENTAL DIRECT TESTIMONY OF
PHILIP J. NELSON
ON BEHALF OF
COLUMBUS SOUTHERN POWER COMPANY
AND
OHIO POWER COMPANY

RECEIVED-2011 JUL 1 PM 3:49
PUCO

Filed: July 1, 2011

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 De Date Processed 7/1/2011

1

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO
SUPPLEMENTAL DIRECT TESTIMONY OF
PHILIP J. NELSON
ON BEHALF OF
COLUMBUS SOUTHERN POWER COMPANY
AND
OHIO POWER COMPANY

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

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

5 **Q. ARE YOU THE SAME PHILIP J. NELSON THAT FILED DIRECT**
6 **TESTIMONY IN THIS PROCEEDING ON JANUARY 27, 2011?**

7 A. Yes.

8 **Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL TESTIMONY IN**
9 **THIS PROCEEDING?**

10 A. The purpose of my supplemental testimony is provide additional information on the
11 Turning Point Solar Project (TPS Project) that was discussed beginning at page 22 of
12 my direct testimony filed in this proceeding. In this supplemental testimony I provide
13 an estimated revenue requirement for the project over its expected life and provide
14 the key assumptions used to develop the cost estimate. I present the total estimated
15 revenue requirement as a levelized \$/MWH to provide a representative estimate of the
16 project costs over its useful life. Company witness Roush uses the expected revenue
17 requirement for Phase 1 of the project to develop the appropriate rates to be charged

1 in the GRR rider upon the completion of the initial phase of the project and the
2 process for adjusting these rates for actual costs as required over its estimated life.

3 **Q. WHAT EXHIBITS ARE YOU SPONSORING IN THIS PROCEEDING?**

4 A. I am sponsoring Exhibit PJN-4 (Public & COMPETITIVELY-SENSITIVE
5 CONFIDENTIAL versions) which provides the estimated revenue requirement for
6 the project over its life based upon the set of major assumptions listed in the exhibit.

7 **Q. WHAT ARE THE MAJOR COST COMPONENTS OF THE TPS PROJECT?**

8 A. The majority of the costs for TPS Project will be the capital costs, since there is no
9 fuel and O&M is expected to be rather modest. The capital for the project will be
10 composed of an equity investment by AEP Ohio¹, equity investment by third party
11 investors, and debt. The capital costs of the three construction phases of the project
12 will be recovered through capital leases between AEP Ohio and Turning Point Solar
13 Generation LLC (TPS Generation). The general corporate structure and relationship
14 between the entities is set out in Company witness Godfrey's supplemental direct
15 testimony and illustrated in Exhibit JFG-7. Because TPS Generation is considered a
16 "Variable Interest Entity" as it relates to the lease, the assets associated with TPS
17 Project will be consolidated on AEP Ohio's balance sheet. Company witness Mitchell
18 describes the accounting for the lease in more detail. Also, expected to be in the lease
19 payments are the expenses billed to TPS Generation by AEPSC in connection with
20 the planned Business Services Agreement between AEPSC and TPS Generation. In

¹ Case No. 10-1261-EL-UNC the Commission accepted Columbus Southern Power's commitment to invest \$20M of equity in the Turning Point Solar Project. In anticipation of the merger of Columbus Southern Power and Ohio Power by the time these equity investments are made, the investment is referred to as an AEP Ohio investment.

1 connection with this project AEP Ohio will directly incur O&M, property taxes, and
2 the costs of capital investments not included in the lease with TPS generation.

3 **Q. WILL ADDITIONAL CAPITAL INVESTMENT BE REQUIRED OVER THE**
4 **LIFE OF THE FACILITY?**

5 Yes, capital investment/replacement is expected to occur after the initial three phase
6 construction period, since certain of the components are not expected to last as long
7 as others and will need to be replaced before the lease term of 25 years is over. The
8 inverters are one such item that is expected to be replaced sometime during the life of
9 the Project.

10 **Q. WILL THESE CAPITAL EXPENDITURES BE ROLLED INTO THE LEASE?**

11 A. No, the Company does not expect these capital expenditures to become part of the
12 leases. It is anticipated that these capital expenditures will be made directly by AEP
13 Ohio, as lessee, and the GRR rate will be adjusted as necessary to recover the
14 additional capital carrying cost.

15 **Q. HAVE YOU CALCULATED THE REVENUE REQUIREMENT FOR THE**
16 **TPS PROJECT?**

17 A. Yes, Exhibit PJN-4 provides the expected revenue requirement of the TPS Project. The
18 components of the revenue requirement are the lease payment between TPS Generation
19 and AEP Ohio, O&M expenses associated with the operation of the facility, and taxes.
20 It is expected that over the life of the facility certain other capital investments will need
21 to be made to keep it in operation. These investments will be made directly by AEP
22 Ohio pursuant to the lease agreement. There will be cost of capital, depreciation and
23 taxes associated with the additional investments that will be added to the revenue

1 requirement when they occur. The revenue requirement is based on a set of assumptions
2 listed on page 1 of Exhibit PJN-4. This estimated revenue requirement will be used to
3 establish the initial rates for the GRR. As discussed by Company witness Roush, the
4 GRR will be trued up to the actual costs of the project.

5 **Q. WHAT ARE THE KEY ASSUMPTIONS USED TO DEVELOP THE**
6 **REVENUE REQUIREMENT ESTIMATE?**

7 A. The major assumptions used in the development of the revenue requirement are listed
8 on the first page of Exhibit PJN-4. They include the anticipation that RUS debt
9 financing is received, along with approximately \$7.5 million of financing from the Ohio
10 Air Quality Development Authority (OAQDA). There is the potential for forgiveness
11 of up to \$5.6 million of the OAQDA loan, assuming the project meets certain job
12 creation targets as described by Company witness Godfrey but this has not been
13 reflected in the estimated revenue requirement. The estimated revenue requirement
14 reflects a favorable ruling from the IRS on the tax issues as discussed in Company
15 witness Kelley's testimony. The revenue requirement is based on a 75% debt to 25%
16 equity capital structure. It reflects total equity investment of \$50 million, with \$20
17 million provided by AEP Ohio.

18 **Q. IS THE COMPANY ASKING FOR A CASH RETURN ON CONSTRUCTION**
19 **WORK IN PROGRESS (CWIP) FOR THE FACILITY?**

20 A. No. The Company is proposing to begin recovery when the first phase of the project
21 goes in service, which is expected to be January 1, 2013. During construction of the
22 facility the project will be accruing AFUDC which will be recovered through the lease
23 payment.

1 **Q. PLEASE DESCRIBE THE LEASE PAYMENT BETWEEN AEP OHIO AND**
2 **TPS GENERATION.**

3 A. The lease payment results from the facilities lease agreement between AEP Ohio and
4 TPS Generation. The total lease payment made to TPS Generation will include the
5 costs associated with the capital lease or leases, and other expenses incurred directly by
6 TPS Generation such as the Business Services Agreement. The lease payments will
7 increase as additional phases of the project go into service. The capital lease payment
8 is composed the financing costs of the lease and the amortization of the capital
9 investment. The initial capital investment or principal component of the lease is set out
10 in Exhibit PJN-4, page 7. The return component of the lease is based on the capital
11 structure and cost of capital presented in Exhibit PJN-4, page 10. It is anticipated that
12 there will be three separate capital leases between TPS Generation and AEP Ohio
13 consistent with the three phases of the project. The capital investment by AEP Ohio
14 and the other investors in the project will be repaid over the life of the facility through
15 the lease payment. The financing cost and principal amortization of the three capital
16 leases are presented on pages 4 through 6 of Exhibit PJN-4.

17 **Q. BESIDES THE CAPITAL RECOVERY COMPONENT, WHAT ARE THE**
18 **OTHER COMPONENTS OF THE ESTIMATED REVENUE REQUIREMENT**
19 **INCLUDED IN EXHIBIT PJN-4?**

20 A. In addition to the capital recovery component, there are the other costs which I have
21 included in the development of the estimated revenue requirement presented on page 2
22 of Exhibit PJN-4. They are the Business Service Agreement charges (which are part of
23 the total lease payment), as well as items directly incurred by AEP Ohio, including

1 O&M expenses, property taxes and costs associated with additional capital investment.

2 Estimated tax benefits associated with the project were also reflected.

3 **Q. HOW WILL THE REVENUE REQUIREMENT BE RECOVERED THROUGH**
4 **THE GRR?**

5 A. I have provided the estimated revenue requirement to Company witness Roush, who
6 develops the estimated rates that recover the first phase cost of the Turning Point
7 project.

8 **Q. DO YOU HAVE AN ESTIMATE OF THE LEVELIZED COST PER MWH**
9 **OVER THE LIFE OF THE PROJECT?**

10 A. Yes, based on the revenue requirement and assumptions previously described and our
11 current information on the operation and output of the facility it is estimated that the
12 levelized cost is \$257 per MWh. The calculation is shown on page 13 of Exhibit PJN-
13 4.

14 **Q. DOES THIS CONCLUDE YOUR SUPPLEMENTAL DIRECT TESTIMONY?**

15 A. Yes it does.

Key Assumptions to Develop Estimated Revenue Requirement

1. AEP Ohio receives a favorable private letter ruling from the IRS.
2. Cost of solar panels – assumes a panel cost of \$[REDACTED]W (dc) for phase one, \$[REDACTED]W for phase two and \$[REDACTED]W for phase three
3. Cost of AEP Ohio equity– assumes AEP Ohio's cost of equity is 11.15%, based on expert testimony in AEP Ohio 2011 Distribution rate case.
4. Third party equity - is assumed to be brought into the project at an after-tax cost of [REDACTED] %.
5. Cost of RUS debt – is based on the long-term financing rates currently being offered by the RUS.
6. OAQDA Loan - is available for the Phase 1 investment, but not the available for Phase 2 and 3. No debt forgiveness is included in estimated revenue requirement
7. Tax Benefits - AEP Ohio makes a Tax Loan to TPS Generation to facilitate providing tax benefits to the ratepayer (see assumption 1) as a rate of 5.80%. The loan life of the AEP Tax Loan is approximately 25 years,
8. Cost of construction debt – uses the 1-month LIBOR plus a spread of 200 bps as the cost of the construction financing. The model also assumes a 1% up-front fee and a 0.50% commitment fee.
9. Property tax abatement/PILOT – assumes the TPS Project would qualify for an Enterprise Zone abatement of \$9,000/MW for the first 15 years of each phase, at which point the property tax payments will revert back to the normal personal property rate.
10. O&M Expenses - AEP Ohio will pay all operating and maintenance costs associated with the project The annual O&M expense consists of charges for labor, contract services, material and supplies, insurance.
11. O&M inflation rate – assumes a 2% annual increase in O&M expenses.
12. Energy Production – The long-term production forecast for the project is derived from a Black & Veatch Production Estimate Report dated 5/12/11 and assumes an initial capacity factor for each phase at [REDACTED]%. B&V estimates that the annual degradation in efficiency is [REDACTED] % per year.

**TPS PROJECT
ESTIMATED REVENUE REQUIREMENT (\$000)
BASED ON 25 YEAR PROJECT LIFE AND KEY ASSUMPTIONS**

Year	Revenue Requirement					Annual Revenue Requirement
	Lease Expense	O&M Expense*	Tax Benefits	Property Tax	Additional Capital Carrying Costs	
Ref.	Pgs. 3	Pg. 8	Page 9		Pg. 11	
2013	\$ 9,081	\$ 900	\$ (1,583)	\$ 180	\$ -	\$ 8,579
2014	\$ 14,540	\$ 1,079	\$ (3,366)	\$ 315	\$ -	\$ 12,569
2015	\$ 19,597	\$ 1,264	\$ (5,556)	\$ 449	\$ -	\$ 15,755
2016	\$ 19,603	\$ 1,290	\$ (6,828)	\$ 449	\$ -	\$ 14,514
2017	\$ 19,610	\$ 1,315	\$ (7,720)	\$ 449	\$ -	\$ 13,655
2018	\$ 19,616	\$ 1,342	\$ (8,207)	\$ 449	\$ 9	\$ 13,210
2019	\$ 19,623	\$ 1,368	\$ (8,336)	\$ 449	\$ 26	\$ 13,130
2020	\$ 19,630	\$ 1,396	\$ (8,168)	\$ 449	\$ 48	\$ 13,355
2021	\$ 19,637	\$ 1,424	\$ (7,811)	\$ 449	\$ 70	\$ 13,769
2022	\$ 19,644	\$ 1,452	\$ (7,388)	\$ 449	\$ 102	\$ 14,260
2023	\$ 19,651	\$ 1,481	\$ (6,959)	\$ 449	\$ 263	\$ 14,885
2024	\$ 19,658	\$ 1,511	\$ (6,524)	\$ 449	\$ 519	\$ 15,613
2025	\$ 19,666	\$ 1,541	\$ (6,082)	\$ 449	\$ 862	\$ 16,437
2026	\$ 19,674	\$ 1,572	\$ (5,631)	\$ 449	\$ 1,198	\$ 17,261
2027	\$ 19,681	\$ 1,603	\$ (5,174)	\$ 449	\$ 1,529	\$ 18,089
2028	\$ 19,689	\$ 1,635	\$ (4,709)	\$ 828	\$ 1,862	\$ 19,305
2029	\$ 19,698	\$ 1,668	\$ (4,234)	\$ 1,043	\$ 2,200	\$ 20,375
2030	\$ 19,706	\$ 1,702	\$ (3,750)	\$ 1,209	\$ 2,549	\$ 21,415
2031	\$ 19,714	\$ 1,736	\$ (3,257)	\$ 1,140	\$ 2,913	\$ 22,245
2032	\$ 19,723	\$ 1,770	\$ (2,752)	\$ 1,071	\$ 3,279	\$ 23,090
2033	\$ 19,732	\$ 1,806	\$ (2,237)	\$ 1,002	\$ 3,448	\$ 23,751
2034	\$ 19,741	\$ 1,842	\$ (1,711)	\$ 946	\$ 3,464	\$ 24,282
2035	\$ 19,750	\$ 1,879	\$ (1,171)	\$ 899	\$ 3,321	\$ 24,678
2036	\$ 19,759	\$ 1,916	\$ (620)	\$ 861	\$ 3,202	\$ 25,118
2037	\$ 19,769	\$ 1,955	\$ (54)	\$ 823	\$ 3,073	\$ 25,566
2038	\$ 11,001	\$ 1,648	\$ 68	\$ 458	\$ 2,934	\$ 16,110
2039	\$ 5,515	\$ 1,417	\$ 107	\$ 215	\$ 2,764	\$ 10,017

Phase 1 Starts 01/01/2013

Phase 2 Starts 01/01/2014

Phase 3 Starts 01/01/2015

Lease Payments (\$000)

Year Ref.	Lease Assoc. with Capital Investment			Other Lease Items*	Total Est. Lease Payment
	Phase 1 Pg. 4	Phase 2 Pg. 5	Phase 3 Pg. 6		
2013	\$ 8,778			\$ 303	\$ 9,081
2014	\$ 8,778	\$ 5,453		\$ 309	\$ 14,540
2015	\$ 8,778	\$ 5,453	\$ 5,051	\$ 315	\$ 19,597
2016	\$ 8,778	\$ 5,453	\$ 5,051	\$ 321	\$ 19,603
2017	\$ 8,778	\$ 5,453	\$ 5,051	\$ 328	\$ 19,610
2018	\$ 8,778	\$ 5,453	\$ 5,051	\$ 334	\$ 19,616
2019	\$ 8,778	\$ 5,453	\$ 5,051	\$ 341	\$ 19,623
2020	\$ 8,778	\$ 5,453	\$ 5,051	\$ 348	\$ 19,630
2021	\$ 8,778	\$ 5,453	\$ 5,051	\$ 355	\$ 19,637
2022	\$ 8,778	\$ 5,453	\$ 5,051	\$ 362	\$ 19,644
2023	\$ 8,778	\$ 5,453	\$ 5,051	\$ 369	\$ 19,651
2024	\$ 8,778	\$ 5,453	\$ 5,051	\$ 376	\$ 19,658
2025	\$ 8,778	\$ 5,453	\$ 5,051	\$ 384	\$ 19,666
2026	\$ 8,778	\$ 5,453	\$ 5,051	\$ 392	\$ 19,674
2027	\$ 8,778	\$ 5,453	\$ 5,051	\$ 399	\$ 19,681
2028	\$ 8,778	\$ 5,453	\$ 5,051	\$ 407	\$ 19,689
2029	\$ 8,778	\$ 5,453	\$ 5,051	\$ 416	\$ 19,698
2030	\$ 8,778	\$ 5,453	\$ 5,051	\$ 424	\$ 19,706
2031	\$ 8,778	\$ 5,453	\$ 5,051	\$ 432	\$ 19,714
2032	\$ 8,778	\$ 5,453	\$ 5,051	\$ 441	\$ 19,723
2033	\$ 8,778	\$ 5,453	\$ 5,051	\$ 450	\$ 19,732
2034	\$ 8,778	\$ 5,453	\$ 5,051	\$ 459	\$ 19,741
2035	\$ 8,778	\$ 5,453	\$ 5,051	\$ 468	\$ 19,750
2036	\$ 8,778	\$ 5,453	\$ 5,051	\$ 477	\$ 19,759
2037	\$ 8,778	\$ 5,453	\$ 5,051	\$ 487	\$ 19,769
2038		\$ 5,453	\$ 5,051	\$ 497	\$ 11,001
2039			\$ 5,051	\$ 464	\$ 5,515

*Expense incurred in connection with services provided in the Business Services Agreement.

TPS Lease Payment Calculation (\$000)

Parameters			Lease Summary		
Lease Amount	\$	98,447.72	Scheduled Payment	\$	2,194.48
Annual Lease Rate		7.538%	Scheduled Number of Payments		100
Lease Period in Years		25	Actual Number of Payments		
Number of Payments Per Year		4	Total Early Payments	\$	-
Start Date of Lease		12/31/2012	Total Financing Cost	\$	121,000.24
Lease Holder: TPS Generation			Annual Payment	\$	8,778.00

Phase 1

Pmt No.	Payment Date	Balance	Lease Payment	Amortization	Financing Cost	Ending Balance
1	3/31/2013	\$ 98,447.72	\$ 2,194.48	\$ 339.26	\$ 1,855.22	\$ 98,108.48
2	7/1/2013	98,108.48	2,194.48	345.65	1,848.83	97,762.81
3	10/1/2013	97,762.81	2,194.48	352.17	1,842.31	97,410.64
4	12/31/2013	97,410.64	2,194.48	358.80	1,835.68	97,051.84
5	3/31/2014	97,051.84	2,194.48	365.56	1,828.92	96,686.27
6	7/1/2014	96,686.27	2,194.48	372.45	1,822.03	96,313.82
7	10/1/2014	96,313.82	2,194.48	379.47	1,815.01	95,934.35
8	12/31/2014	95,934.35	2,194.48	386.62	1,807.86	95,547.73
9	3/31/2015	95,547.73	2,194.48	393.91	1,800.57	95,153.82
10	7/1/2015	95,153.82	2,194.48	401.33	1,793.15	94,752.49
11	10/1/2015	94,752.49	2,194.48	408.89	1,785.59	94,343.59
12	12/31/2015	94,343.59	2,194.48	416.60	1,777.88	93,926.99
13	3/31/2016	93,926.99	2,194.48	424.45	1,770.03	93,502.54
14	7/1/2016	93,502.54	2,194.48	432.45	1,762.03	93,070.09
15	10/1/2016	93,070.09	2,194.48	440.60	1,753.88	92,629.50
16	12/31/2016	92,629.50	2,194.48	448.90	1,745.58	92,180.59
17	3/31/2017	92,180.59	2,194.48	457.36	1,737.12	91,723.23
18	7/1/2017	91,723.23	2,194.48	465.98	1,728.50	91,257.25
19	10/1/2017	91,257.25	2,194.48	474.76	1,719.72	90,782.49
20	12/31/2017	90,782.49	2,194.48	483.71	1,710.77	90,298.78
21	3/31/2018	90,298.78	2,194.48	492.82	1,701.66	89,805.96
22	7/1/2018	89,805.96	2,194.48	502.11	1,692.37	89,303.85
23	10/1/2018	89,303.85	2,194.48	511.57	1,682.91	88,792.28
24	12/31/2018	88,792.28	2,194.48	521.21	1,673.27	88,271.06
25	3/31/2019	88,271.06	2,194.48	531.04	1,663.44	87,740.03

Payments from 26 to 74 omitted

75	10/1/2031	44,781.21	2,194.48	1,350.59	843.89	43,430.62
76	12/31/2031	43,430.62	2,194.48	1,376.04	818.44	42,054.58
77	3/31/2032	42,054.58	2,194.48	1,401.97	792.51	40,652.61
78	7/1/2032	40,652.61	2,194.48	1,428.39	766.09	39,224.21
79	10/1/2032	39,224.21	2,194.48	1,455.31	739.17	37,768.90
80	12/31/2032	37,768.90	2,194.48	1,482.73	711.74	36,286.17
81	3/31/2033	36,286.17	2,194.48	1,510.68	683.80	34,775.49
82	7/1/2033	34,775.49	2,194.48	1,539.14	655.33	33,236.35
83	10/1/2033	33,236.35	2,194.48	1,568.15	626.33	31,668.20
84	12/31/2033	31,668.20	2,194.48	1,597.70	596.78	30,070.50
85	3/31/2034	30,070.50	2,194.48	1,627.81	566.67	28,442.69
86	7/1/2034	28,442.69	2,194.48	1,658.48	535.99	26,784.20
87	10/1/2034	26,784.20	2,194.48	1,689.74	504.74	25,094.47
88	12/31/2034	25,094.47	2,194.48	1,721.58	472.90	23,372.88
89	3/31/2035	23,372.88	2,194.48	1,754.02	440.46	21,618.86
90	7/1/2035	21,618.86	2,194.48	1,787.08	407.40	19,831.78
91	10/1/2035	19,831.78	2,194.48	1,820.75	373.72	18,011.03
92	12/31/2035	18,011.03	2,194.48	1,855.07	339.41	16,155.96
93	3/31/2036	16,155.96	2,194.48	1,890.02	304.45	14,265.94
94	7/1/2036	14,265.94	2,194.48	1,925.64	268.84	12,340.29
95	10/1/2036	12,340.29	2,194.48	1,961.93	232.55	10,378.36
96	12/31/2036	10,378.36	2,194.48	1,998.90	195.58	8,379.46
97	3/31/2037	8,379.46	2,194.48	2,036.57	157.91	6,342.89
98	7/1/2037	6,342.89	2,194.48	2,074.95	119.53	4,267.94
99	10/1/2037	4,267.94	2,194.48	2,114.05	80.43	2,153.89
100	12/31/2037	2,153.89	2,194.48	2,113.30	40.59	0.00

TPS Lease Payment Calculation (\$000)

Parameters		Loan Summary	
Lease Amount	\$ 61,160.31	Scheduled Payment	\$ 1,363.31
Annual Lease Rate	7.538%	Scheduled Number of Payments	100
Lease Period in Years	25	Actual Number of Payments	
Number of Payments Per Year	4	Total Early Payments	\$ -
Start Date of Lease	12/31/2013	Total Financing Cost	\$ 75,170.99
		Annual Payment	\$ 5,453.00
Lease Holder: TPS Generation			

Phase 2

Pmt No.	Payment Date	Balance	Lease Payment	Amortization	Financing Cost	Ending Balance
1	3/31/2014	\$ 61,160.31	\$ 1,363.31	\$ 210.76	\$ 1,152.55	\$ 60,949.55
2	7/1/2014	60,949.55	1,363.31	214.74	1,148.58	60,734.81
3	10/1/2014	60,734.81	1,363.31	218.78	1,144.53	60,516.03
4	12/31/2014	60,516.03	1,363.31	222.90	1,140.41	60,293.13
5	3/31/2015	60,293.13	1,363.31	227.11	1,136.21	60,066.02
6	7/1/2015	60,066.02	1,363.31	231.39	1,131.93	59,834.64
7	10/1/2015	59,834.64	1,363.31	235.75	1,127.57	59,598.89
8	12/31/2015	59,598.89	1,363.31	240.19	1,123.13	59,358.70
9	3/31/2016	59,358.70	1,363.31	244.71	1,118.60	59,113.99
10	7/1/2016	59,113.99	1,363.31	249.33	1,113.99	58,864.66
11	10/1/2016	58,864.66	1,363.31	254.02	1,109.29	58,610.64
12	12/31/2016	58,610.64	1,363.31	258.81	1,104.50	58,351.83
13	3/31/2017	58,351.83	1,363.31	263.69	1,099.62	58,088.14
14	7/1/2017	58,088.14	1,363.31	268.66	1,094.66	57,819.48
15	10/1/2017	57,819.48	1,363.31	273.72	1,089.59	57,545.76
16	12/31/2017	57,545.76	1,363.31	278.88	1,084.43	57,266.88
17	3/31/2018	57,266.88	1,363.31	284.13	1,079.18	56,982.75
18	7/1/2018	56,982.75	1,363.31	289.49	1,073.82	56,693.26
19	10/1/2018	56,693.26	1,363.31	294.94	1,068.37	56,398.32
20	12/31/2018	56,398.32	1,363.31	300.50	1,062.81	56,097.81
21	3/31/2019	56,097.81	1,363.31	306.16	1,057.15	55,791.65
22	7/1/2019	55,791.65	1,363.31	311.93	1,051.38	55,479.72
23	10/1/2019	55,479.72	1,363.31	317.81	1,045.50	55,161.90
24	12/31/2019	55,161.90	1,363.31	323.80	1,039.51	54,838.10
25	3/31/2020	54,838.10	1,363.31	329.90	1,033.41	54,508.20

Payments from 26 to 74 omitted

75	10/1/2032	27,820.18	1,363.31	839.05	524.26	26,981.13
76	12/31/2032	26,981.13	1,363.31	854.86	508.45	26,126.27
77	3/31/2033	26,126.27	1,363.31	870.97	492.34	25,255.29
78	7/1/2033	25,255.29	1,363.31	887.38	475.93	24,367.91
79	10/1/2033	24,367.91	1,363.31	904.11	459.21	23,463.80
80	12/31/2033	23,463.80	1,363.31	921.14	442.17	22,542.66
81	3/31/2034	22,542.66	1,363.31	938.50	424.81	21,604.16
82	7/1/2034	21,604.16	1,363.31	956.19	407.12	20,647.97
83	10/1/2034	20,647.97	1,363.31	974.21	389.11	19,673.76
84	12/31/2034	19,673.76	1,363.31	992.57	370.75	18,681.20
85	3/31/2035	18,681.20	1,363.31	1,011.27	352.04	17,669.92
86	7/1/2035	17,669.92	1,363.31	1,030.33	332.98	16,639.60
87	10/1/2035	16,639.60	1,363.31	1,049.74	313.57	15,589.85
88	12/31/2035	15,589.85	1,363.31	1,069.53	293.79	14,520.33
89	3/31/2036	14,520.33	1,363.31	1,089.68	273.63	13,430.64
90	7/1/2036	13,430.64	1,363.31	1,110.22	253.10	12,320.43
91	10/1/2036	12,320.43	1,363.31	1,131.14	232.18	11,189.29
92	12/31/2036	11,189.29	1,363.31	1,152.45	210.86	10,036.84
93	3/31/2037	10,036.84	1,363.31	1,174.17	189.14	8,862.66
94	7/1/2037	8,862.66	1,363.31	1,196.30	167.01	7,666.37
95	10/1/2037	7,666.37	1,363.31	1,218.84	144.47	6,447.52
96	12/31/2037	6,447.52	1,363.31	1,241.81	121.50	5,205.71
97	3/31/2038	5,205.71	1,363.31	1,265.21	98.10	3,940.50
98	7/1/2038	3,940.50	1,363.31	1,289.06	74.26	2,651.44
99	10/1/2038	2,651.44	1,363.31	1,313.35	49.97	1,338.10
100	12/31/2038	1,338.10	1,363.31	1,312.88	25.22	0.00

TPS Lease Payment Calculation (\$000)

Parameters		Loan Summary	
Lease Amount	\$ 56,645.14	Scheduled Payment	\$ 1,262.67
Annual Lease Rate	7.538%	Scheduled Number of Payments	100
Lease Period in Years	25	Actual Number of Payments	
Number of Payments Per Year	4	Total Early Payments	\$ -
Start Date of Lease	12/31/2014	Total Financing Cost	\$ 69,621.48
		Annual Payment	\$ 5,051.00

Lease Holder: TPS Generation

Phase 3

Pmt No.	Payment Date	Balance	Lease Payment	Amortization	Financing Cost	Ending Balance
1	3/31/2015	\$ 56,645.14	\$ 1,262.67	\$ 195.20	\$ 1,067.46	\$ 56,449.94
2	7/1/2015	56,449.94	1,262.67	198.88	1,063.78	56,251.06
3	10/1/2015	56,251.06	1,262.67	202.63	1,060.04	56,048.43
4	12/31/2015	56,048.43	1,262.67	206.45	1,056.22	55,841.98
5	3/31/2016	55,841.98	1,262.67	210.34	1,052.33	55,631.64
6	7/1/2016	55,631.64	1,262.67	214.30	1,048.36	55,417.34
7	10/1/2016	55,417.34	1,262.67	218.34	1,044.32	55,198.99
8	12/31/2016	55,198.99	1,262.67	222.46	1,040.21	54,976.54
9	3/31/2017	54,976.54	1,262.67	226.65	1,036.02	54,749.89
10	7/1/2017	54,749.89	1,262.67	230.92	1,031.75	54,518.97
11	10/1/2017	54,518.97	1,262.67	235.27	1,027.40	54,283.70
12	12/31/2017	54,283.70	1,262.67	239.70	1,022.96	54,043.99
13	3/31/2018	54,043.99	1,262.67	244.22	1,018.44	53,799.77
14	7/1/2018	53,799.77	1,262.67	248.82	1,013.84	53,550.95
15	10/1/2018	53,550.95	1,262.67	253.51	1,009.15	53,297.44
16	12/31/2018	53,297.44	1,262.67	258.29	1,004.38	53,039.15
17	3/31/2019	53,039.15	1,262.67	263.16	999.51	52,775.99
18	7/1/2019	52,775.99	1,262.67	268.12	994.55	52,507.87
19	10/1/2019	52,507.87	1,262.67	273.17	989.50	52,234.70
20	12/31/2019	52,234.70	1,262.67	278.32	984.35	51,956.38
21	3/31/2020	51,956.38	1,262.67	283.56	979.10	51,672.82
22	7/1/2020	51,672.82	1,262.67	288.91	973.76	51,383.92
23	10/1/2020	51,383.92	1,262.67	294.35	968.32	51,089.57
24	12/31/2020	51,089.57	1,262.67	299.90	962.77	50,789.67
25	3/31/2021	50,789.67	1,262.67	305.55	957.12	50,484.12

Payments from 26 to 74 omitted

75	10/1/2033	25,766.35	1,262.67	777.11	485.56	24,989.24
76	12/31/2033	24,989.24	1,262.67	791.75	470.92	24,197.49
77	3/31/2034	24,197.49	1,262.67	806.67	456.00	23,390.82
78	7/1/2034	23,390.82	1,262.67	821.87	440.79	22,568.95
79	10/1/2034	22,568.95	1,262.67	837.36	425.31	21,731.59
80	12/31/2034	21,731.59	1,262.67	853.14	409.53	20,878.44
81	3/31/2035	20,878.44	1,262.67	869.22	393.45	20,009.23
82	7/1/2035	20,009.23	1,262.67	885.60	377.07	19,123.63
83	10/1/2035	19,123.63	1,262.67	902.29	360.38	18,221.34
84	12/31/2035	18,221.34	1,262.67	919.29	343.38	17,302.05
85	3/31/2036	17,302.05	1,262.67	936.61	326.05	16,365.44
86	7/1/2036	16,365.44	1,262.67	954.26	308.40	15,411.18
87	10/1/2036	15,411.18	1,262.67	972.25	290.42	14,438.93
88	12/31/2036	14,438.93	1,262.67	990.57	272.10	13,448.36
89	3/31/2037	13,448.36	1,262.67	1,009.24	253.43	12,439.12
90	7/1/2037	12,439.12	1,262.67	1,028.25	234.41	11,410.87
91	10/1/2037	11,410.87	1,262.67	1,047.63	215.03	10,363.24
92	12/31/2037	10,363.24	1,262.67	1,067.37	195.29	9,295.87
93	3/31/2038	9,295.87	1,262.67	1,087.49	175.18	8,208.38
94	7/1/2038	8,208.38	1,262.67	1,107.98	154.68	7,100.40
95	10/1/2038	7,100.40	1,262.67	1,128.86	133.81	5,971.53
96	12/31/2038	5,971.53	1,262.67	1,150.13	112.53	4,821.40
97	3/31/2039	4,821.40	1,262.67	1,171.81	90.86	3,649.59
98	7/1/2039	3,649.59	1,262.67	1,193.89	68.78	2,455.70
99	10/1/2039	2,455.70	1,262.67	1,216.39	46.28	1,239.31
100	12/31/2039	1,239.31	1,262.67	1,215.96	23.35	0.00

Turning Point Solar CAPEX Summary

Exhibit PJN-4
Page 7

Item	MW (AC) % # of Panels Panel Watts (DC) DC/AC	Phase 1			Phase 2			Phase 3		
		20			15			14.9		
Owner Furnished Equipment		40.1%			30.1%			29.9%		
Isofoton Panel Quote, \$		100,000			75,000			72,000		
Isofoton Panel Quote, \$ / W		240			240			250		
Inverter Cost, \$		1.20			1.20			1.21		
AEP Substation (69kv) upgrades										
Owner Furnished Equipment total										
EPC Costs										
Sitework										
Concrete Foundations										
Architectural										
Mechanical										
Electrical										
Substation										
Transmission Line										
Misc Indirects										
EPC Project Indirects ¹										
EPC Costs total										
Other Costs										
Title Insurance										
AEP Development Costs										
TPS Development Costs ²										
TPS Developer Fee ²										
Other Costs total										
Base TOTAL Capex										
AFUDC (Including Loan Fees) ³										
Total Capitalization		\$ 216,253,168			\$ 8,300,700			\$ 90,147,018		
								\$ 61,160,312		
								\$ 56,645,142		

Note 1: Engineering, contractor escalation & contingencies, contractor overheads & profit
Note 2: TPS Development Costs + TPS Developer Fee = Purchase Price
Note 3: Interest during construction for development phase included in phase 1 figure

O&M, A&G and Property Taxes (\$000)

<u>Year</u>		<u>Labor</u>		<u>Insurance</u>		<u>General Overhead</u>		<u>Total O&M</u>
2013	\$	488	\$	210	\$	202	\$	900
2014	\$	498	\$	376	\$	206	\$	1,079
2015	\$	508	\$	546	\$	210	\$	1,264
2016	\$	518	\$	557	\$	214	\$	1,290
2017	\$	528	\$	568	\$	219	\$	1,315
2018	\$	539	\$	580	\$	223	\$	1,342
2019	\$	550	\$	591	\$	228	\$	1,368
2020	\$	561	\$	603	\$	232	\$	1,396
2021	\$	572	\$	615	\$	237	\$	1,424
2022	\$	583	\$	628	\$	242	\$	1,452
2023	\$	595	\$	640	\$	246	\$	1,481
2024	\$	607	\$	653	\$	251	\$	1,511
2025	\$	619	\$	666	\$	256	\$	1,541
2026	\$	631	\$	679	\$	261	\$	1,572
2027	\$	644	\$	693	\$	267	\$	1,603
2028	\$	657	\$	707	\$	272	\$	1,635
2029	\$	670	\$	721	\$	277	\$	1,668
2030	\$	683	\$	735	\$	283	\$	1,702
2031	\$	697	\$	750	\$	289	\$	1,736
2032	\$	711	\$	765	\$	294	\$	1,770
2033	\$	725	\$	780	\$	300	\$	1,806
2034	\$	740	\$	796	\$	306	\$	1,842
2035	\$	754	\$	812	\$	312	\$	1,879
2036	\$	770	\$	828	\$	319	\$	1,916
2037	\$	785	\$	845	\$	325	\$	1,955
2038	\$	801	\$	516	\$	331	\$	1,648
2039	\$	817	\$	262	\$	338	\$	1,417

Net Tax Benefits (\$000)

Year	Interest on Loan to GenCo	FAS 109 Add-Back Rev Req	Interest on ACC DFT	Net Tax Benefit
2013	\$ (1,634)	\$ 340	\$ (288)	\$ (1,583)
2014	\$ (2,657)	\$ 550	\$ (1,259)	\$ (3,366)
2015	\$ (3,607)	\$ 746	\$ (2,695)	\$ (5,556)
2016	\$ (3,531)	\$ 746	\$ (4,042)	\$ (6,828)
2017	\$ (3,451)	\$ 746	\$ (5,015)	\$ (7,720)
2018	\$ (3,367)	\$ 746	\$ (5,585)	\$ (8,207)
2019	\$ (3,277)	\$ 746	\$ (5,805)	\$ (8,336)
2020	\$ (3,182)	\$ 746	\$ (5,732)	\$ (8,168)
2021	\$ (3,082)	\$ 746	\$ (5,475)	\$ (7,811)
2022	\$ (2,975)	\$ 746	\$ (5,159)	\$ (7,388)
2023	\$ (2,863)	\$ 746	\$ (4,842)	\$ (6,959)
2024	\$ (2,744)	\$ 746	\$ (4,526)	\$ (6,524)
2025	\$ (2,618)	\$ 746	\$ (4,210)	\$ (6,082)
2026	\$ (2,484)	\$ 746	\$ (3,893)	\$ (5,631)
2027	\$ (2,343)	\$ 746	\$ (3,577)	\$ (5,174)
2028	\$ (2,194)	\$ 746	\$ (3,261)	\$ (4,709)
2029	\$ (2,036)	\$ 746	\$ (2,944)	\$ (4,234)
2030	\$ (1,868)	\$ 746	\$ (2,628)	\$ (3,750)
2031	\$ (1,691)	\$ 746	\$ (2,311)	\$ (3,257)
2032	\$ (1,503)	\$ 746	\$ (1,995)	\$ (2,752)
2033	\$ (1,304)	\$ 746	\$ (1,679)	\$ (2,237)
2034	\$ (1,094)	\$ 746	\$ (1,362)	\$ (1,711)
2035	\$ (871)	\$ 746	\$ (1,046)	\$ (1,171)
2036	\$ (636)	\$ 746	\$ (730)	\$ (620)
2037	\$ (386)	\$ 746	\$ (413)	\$ (54)
2038	\$ (169)	\$ 406	\$ (169)	\$ 68
2039	\$ (47)	\$ 195	\$ (41)	\$ 107

COST OF CAPITAL (\$000)

Tax Rate 36.5%

TPS GENERATION

<u>Source</u>	<u>\$ Thousands</u>	<u>Cost</u>	<u>Imbedded Cost</u>	<u>Weight</u>	<u>Weighted Pre-Tax Cost</u>	<u>Weighted Cost</u>
OAQDA Loan						
AEP Ohio Loan						
RUS Debt						
AEP Equity						
Other Equity						
Total						

AEP Ohio

<u>Source</u>	<u>\$ Thousands</u>	<u>Pre-Tax Cost</u>	<u>Imbedded Cost</u>	<u>Weight</u>	<u>Weighted Pre-Tax Cost</u>	<u>Weighted Cost</u>
Debt	\$ 4,177,325	5.34%	5.34%	47.06%	2.51%	2.51%
Preferred Equity	\$ 16,625	6.93%	4.40%	0.19%	0.01%	0.01%
Common Equity	\$ 4,682,891	17.56%	11.15%	52.75%	9.26%	5.88%
Total	\$ 8,876,841			100.00%	11.79%	8.40%

Revenue Requirement on Additional Capital Expenditures (\$ 000)

Year	Total CapEx	Cumulative CapEx	Accumulted Deprec.	Net Plant	DFIT	Rate Base	Pre-Tax Return	Depreciation Expense	A&G @ 2.45%	Revenue Requirement
2012	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2013	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2014	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 54	\$ 54	\$ (2)	\$ 51	\$ (3)	\$ 48	\$ 6	\$ 2	\$ 1	\$ 9
2019	\$ 96	\$ 149	\$ (9)	\$ 140	\$ (14)	\$ 126	\$ 15	\$ 7	\$ 4	\$ 26
2020	\$ 139	\$ 288	\$ (23)	\$ 265	\$ (34)	\$ 231	\$ 27	\$ 14	\$ 7	\$ 48
2021	\$ 142	\$ 430	\$ (45)	\$ 385	\$ (61)	\$ 324	\$ 38	\$ 21	\$ 11	\$ 70
2022	\$ 203	\$ 633	\$ (77)	\$ 555	\$ (97)	\$ 458	\$ 54	\$ 33	\$ 16	\$ 102
2023	\$ 894	\$ 1,527	\$ (163)	\$ 1,365	\$ (176)	\$ 1,189	\$ 140	\$ 85	\$ 37	\$ 263
2024	\$ 1,450	\$ 2,977	\$ (339)	\$ 2,638	\$ (350)	\$ 2,288	\$ 270	\$ 176	\$ 73	\$ 519
2025	\$ 1,977	\$ 4,954	\$ (646)	\$ 4,308	\$ (631)	\$ 3,677	\$ 433	\$ 308	\$ 121	\$ 862
2026	\$ 2,017	\$ 6,971	\$ (1,098)	\$ 5,873	\$ (995)	\$ 4,878	\$ 575	\$ 452	\$ 171	\$ 1,198
2027	\$ 2,057	\$ 9,028	\$ (1,708)	\$ 7,320	\$ (1,400)	\$ 5,920	\$ 698	\$ 610	\$ 221	\$ 1,529
2028	\$ 2,098	\$ 11,127	\$ (2,493)	\$ 8,634	\$ (1,811)	\$ 6,823	\$ 804	\$ 785	\$ 273	\$ 1,862
2029	\$ 2,140	\$ 13,267	\$ (3,472)	\$ 9,794	\$ (2,197)	\$ 7,597	\$ 896	\$ 979	\$ 325	\$ 2,200
2030	\$ 2,183	\$ 15,450	\$ (4,670)	\$ 10,780	\$ (2,529)	\$ 8,250	\$ 973	\$ 1,198	\$ 379	\$ 2,549
2031	\$ 2,227	\$ 17,677	\$ (6,115)	\$ 11,561	\$ (2,787)	\$ 8,775	\$ 1,034	\$ 1,445	\$ 433	\$ 2,913
2032	\$ 2,201	\$ 19,878	\$ (7,836)	\$ 12,042	\$ (2,954)	\$ 9,088	\$ 1,071	\$ 1,720	\$ 487	\$ 3,279
2033	\$ 1,406	\$ 21,284	\$ (9,757)	\$ 11,527	\$ (2,994)	\$ 8,533	\$ 1,006	\$ 1,921	\$ 521	\$ 3,448
2034	\$ 780	\$ 22,063	\$ (11,808)	\$ 10,256	\$ (2,852)	\$ 7,404	\$ 873	\$ 2,051	\$ 541	\$ 3,464
2035	\$ 187	\$ 22,251	\$ (13,896)	\$ 8,354	\$ (2,525)	\$ 5,830	\$ 687	\$ 2,089	\$ 545	\$ 3,321
2036	\$ 191	\$ 22,442	\$ (16,033)	\$ 6,409	\$ (2,034)	\$ 4,375	\$ 516	\$ 2,136	\$ 550	\$ 3,202
2037	\$ 117	\$ 22,558	\$ (18,208)	\$ 4,350	\$ (1,422)	\$ 2,928	\$ 345	\$ 2,175	\$ 553	\$ 3,073
2038	\$ 59	\$ 22,618	\$ (20,413)	\$ 2,205	\$ (719)	\$ 1,486	\$ 175	\$ 2,205	\$ 554	\$ 2,934
2039	\$ -	\$ 22,618	\$ (22,618)	\$ -	\$ 39	\$ 39	\$ 5	\$ 2,205	\$ 554	\$ 2,764

Annual MWh Production

Year	Phase I MW	Phase II MW	Phase III MW	Phase I MWh	Phase II MWh	Phase III MWh	Total MWh
2013	20.0	0.0	0.0				
2014	20.0	15.0	0.0				
2015	20.0	15.0	14.9				
2016	20.0	15.0	14.9				
2017	20.0	15.0	14.9				
2018	20.0	15.0	14.9				
2019	20.0	15.0	14.9				
2020	20.0	15.0	14.9				
2021	20.0	15.0	14.9				
2022	20.0	15.0	14.9				
2023	20.0	15.0	14.9				
2024	20.0	15.0	14.9				
2025	20.0	15.0	14.9				
2026	20.0	15.0	14.9				
2027	20.0	15.0	14.9				
2028	20.0	15.0	14.9				
2029	20.0	15.0	14.9				
2030	20.0	15.0	14.9				
2031	20.0	15.0	14.9				
2032	20.0	15.0	14.9				
2033	20.0	15.0	14.9				
2034	20.0	15.0	14.9				
2035	20.0	15.0	14.9				
2036	20.0	15.0	14.9				
2037	20.0	15.0	14.9				
2038	0.0	15.0	14.9				
2039	0.0	0.0	14.9				

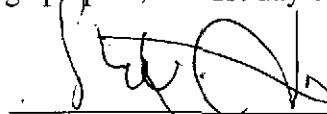
CALCULATION OF LEVELIZED RATE PER MWh

Discount Rate 8.40%

Year	Revenue		MWh	Years	Discount Factor	Discounted	
	Requirement	\$000				Requirement	\$000
2013	\$	8,579		0.5	0.96	\$	8,240
2014	\$	12,569		1.5	0.89	\$	11,136
2015	\$	15,755		2.5	0.82	\$	12,877
2016	\$	14,514		3.5	0.75	\$	10,944
2017	\$	13,655		4.5	0.70	\$	9,498
2018	\$	13,210		5.5	0.64	\$	8,476
2019	\$	13,130		6.5	0.59	\$	7,772
2020	\$	13,355		7.5	0.55	\$	7,293
2021	\$	13,769		8.5	0.50	\$	6,936
2022	\$	14,260		9.5	0.46	\$	6,626
2023	\$	14,885		10.5	0.43	\$	6,380
2024	\$	15,613		11.5	0.40	\$	6,174
2025	\$	16,437		12.5	0.36	\$	5,996
2026	\$	17,261		13.5	0.34	\$	5,809
2027	\$	18,089		14.5	0.31	\$	5,615
2028	\$	19,305		15.5	0.29	\$	5,528
2029	\$	20,375		16.5	0.26	\$	5,382
2030	\$	21,415		17.5	0.24	\$	5,219
2031	\$	22,245		18.5	0.22	\$	5,001
2032	\$	23,090		19.5	0.21	\$	4,789
2033	\$	23,751		20.5	0.19	\$	4,544
2034	\$	24,282		21.5	0.18	\$	4,285
2035	\$	24,678		22.5	0.16	\$	4,018
2036	\$	25,118		23.5	0.15	\$	3,772
2037	\$	25,566		24.5	0.14	\$	3,542
2038	\$	16,110		25.5	0.13	\$	2,059
2039	\$	10,017		26.5	0.12	\$	1,181
Levelized Rate	\$	257	/MWh				

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing Public Version of Supplemental Direct Testimony of Philip J. Nelson on behalf of Columbus Southern Power Company and Ohio Power Company has been served upon the below-named counsel via First Class mail, postage prepaid, this 1st day of July, 2011.



Steven T. Nourse

William L. Wright
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

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

Thomas J. O'Brien
Terrence O'Donnell
Christopher Montgomery
Lisa G. McAlister
Matthew W. Warnock
Bricker & Eckler LLP
100 South Third Street
Columbus, OH 43215-4291

John W. Bentine
Mark S. Yurick
Zachary D. Kravitz
Chester Willcox & Saxbe, LLP
65 East State Street, Suite 1000
Columbus, OH 43215

Terry Etter
Michael E. Idzkowski
Maureen R. Grady
Ohio Consumers' Counsel
10 W. Broad Street Suite 1800
Columbus OH 43215

Dorothy K. Corbett
Duke Energy Retail Sales, LLC
139 East Fourth Street
1303-Main
Cincinnati Ohio 45202

Richard L. Sites
Ohio Hospital Association
155 East Broad Street, 15th Floor
Columbus, OH 43215-3620

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

James F. Lang
Laura C. McBride
N. Trevor Alexander
Calfee, Halter & Griswold LLP
1400 KeyBank Center
800 Superior Avenue
Cleveland, OH 44114

Michael R. Smalz
Joseph V. Maskovyak
Ohio Poverty Law Center
555 Buttlers Avenue
Columbus, OH 43215

Jay E. Jadwin
AEP Retail Energy Partners LLC
155 West Nationwide Blvd, Suite 500
Columbus, OH 43215

M. Howard Petricoff
Stephen M. Howard
Michael J. Settineri
Vorys, Sater, Seymour and Pease LLP
52 East Gay Street
Columbus, OH 43215

Glen Thomas
1060 First Avenue, Ste. 400
King of Prussia, PA 19406

Laura Chappelle
4218 Jacob Meadows
Okemos, MI 48864

David I. Fein
Constellation Energy Group, Inc.
550 W. Washington Blvd., Ste. 300
Chicago, IL 60661

Cynthia Former Brady
Constellation Energy Resources, LLC
550 W. Washington Blvd., Ste. 300
Chicago, IL 60661

William L. Massey
Covington & Burling, LLP
1201 Pennsylvania Ave., NW
Washington, DC 20004

Joel Malina
COMPETE Coalition
1317 F Street, NW, Ste 600
Washington, DC 20004

Henry W. Eckhart
Natural Resources Defense Council
1200 Chambers Road, Ste 106
Columbus, OH 43212

Shannon Fisk
Senior Attorney
Natural Resources Defense Council
2 N. Riverside Plaza, Suite 2250
Chicago, IL 60606

Christopher L. Miller
Gregory H. Dunn
Asim Z. Haque
Schottenstein Zox & Dunn Co., LPA
250 West Street
Columbus, OH 43215

Sandy I-ru Grace
Exelon Business Services Company
101 Constitution Avenue NW
Suite 400 East
Washington, DC 20001

Jesse A. Rodriguez
Exelon Generation Company, LLC
300 Exelon Way
Kennett Square, PA 19348

Kenneth P. Kreider
Keating Muething & Klekamp PLL
One East Fourth Street
Suite 1400
Cincinnati, OH 45202

Holly Rachel Smith
Holly Rachel Smith, PLLC
Hitt Business Center
3803 Rectortown Road
Marshall, VA 20115

Steve W. Chriss
Manager, State Rate Proceedings
Wal-Mart Stores, Inc.
2011 SE 10th Street
Bentonville, AR 72716-0550

Mark A. Hayden
FirstEnergy Service Company
76 South Main Street
Akron, OH 44308

Barth E. Royer
Bell & Royer Co., LPA
33 South Grant Avenue
Columbus, OH 43215-3927

Gary A. Jeffries
Dominion Resources Services, Inc.
501 Martindale Street, Suite 400
Pittsburgh, PA 15212-5817

Tara C. Santarelli
Environmental Law & Policy Center
1207 Grandview Avenue, Suite 201
Columbus, OH 43212

E. Camille Yancey
Nolan Moser
Trent A. Dougherty
Ohio Environmental Council
1207 Grandview Avenue, Suite 201
Columbus, Ohio 43212-3449

Douglas G. Bonner
Emma F. Hand
Keith C. Nusbaum
SNR Denton US LLP
1301 K Street NW
Ste. 600, East Tower
Washington, DC 20005

Philip B. Sineneng
Thompson Hine LLP
41 S. High Street, Ste. 1700
Columbus, Ohio 43215

Gregory J. Poulos
EnerNOC, Inc.
101 Federal Street, Ste. 1100
Boston, MA 02110