OCC 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 Section 4928.143, Revised	)	
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.	)	
Certain Recounting Rationty.	)	

### DIRECT TESTIMONY OF IBRAHIM SOLIMAN

### On Behalf of The Office of the Ohio Consumers' Counsel 10 West Broad Street, Suite 1800 Columbus, Ohio 43215-3485

May 4, 2012

## List of Attachments

IS-A Ibrahim Soliman Testimony Annual Calculation IS-B Option One IS-C Option One OCC Monthly Calculation IS-D Option One AEP Monthly Calculation IS-E Option Two Annual Calculation Option Two IS-F OCC Calculation Option Two IS-G AEP Calculation

### 1 I. INTRODUCTION

2

### 3 Q1. PLEASE STATE YOUR NAME, ADDRESS AND POSITION.

- *A1.* My name is Ibrahim Soliman. My business address is 10 West Broad Street,
  Suite 1800, Columbus, Ohio 43215-3485. I am employed by the Office of the
  Ohio Consumers' Counsel ("OCC") as a Senior Regulatory Analyst.
- 7

### 8 Q2. WHAT IS YOUR EDUCATIONAL BACKGROUND?

- *A2.* I earned a Bachelor of Business Administration degree from Cairo University in
  10 1976 with a major in accounting. I have completed many regulatory training
  programs. I retired from the PUCO on July 2010 after 30 years of service. I am a
  Certified Public Accountant ("CPA"), Certified Internal Auditor ("CIA"), and
  Certified Management Accountant ("CMA").
- 14

# 15 Q3. PLEASE SUMMARIZE YOUR WORK EXPERIENCE.

*A3*. I joined the OCC in January 2011 as a Senior Regulatory Analyst. Prior to my 16 17 employment with the OCC, I worked for the Public Utilities Commission of Ohio ("PUCO" or "Commission") from July 1980 until July 2010. During my thirty 18 years tenure with the Staff of the Commission ("Staff"), I held several positions as 19 Utility Auditor, Utility Supervisor, and Utility Administrator. My current duties 20 21 as an OCC Senior Regulatory Analyst include investigating and analyzing utility 22 applications for increases in rates. I also participate in other cases and investigations in the electric, gas, and water industries. 23

1	<i>Q4</i> .	HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE THIS
2		COMMISSION?
3	<i>A4</i> .	Yes. During my employment with the Staff of the PUCO and with OCC I
4		submitted testimony before the Commission in several electric, gas, and water
5		cases as shown on Attachment IS-A.
6		
7	Q5.	WHAT DOCUMENTS HAVE YOU REVIEWED IN THE PREPARATION OF
8		YOUR TESTIMONY?
9	A5.	I have reviewed the Modified Electric Security Plan ("Modified ESP")
10		Application filed on March 30, 2012 by the Ohio Power Company ("AEP Ohio"
11		or "Company"); AEP Ohio's supporting testimonies and associated workpapers;
12		and certain AEP Ohio responses to OCC Interrogatories.
13		
14		I have also reviewed the filings made in Case Nos. 11-4920-EL-RDR and 4921-
15		EL-RDR, which include the AEP Ohio application and the Comments and Reply
16		Comments filed by parties to that case. Also, I have reviewed the Report of the
17		PUCO's Consultant, Energy Ventures Analysis and Larkin & Associates, filed in
18		AEP Ohio's Fuel Adjustment Clause ("FAC") Audit cases. <sup>1</sup>

<sup>&</sup>lt;sup>1</sup> See In the Matter of the .... Case Nos. 10-268, 269, 870, 871, 1286, 1288-EL-FAC.

- 1 II. PURPOSE OF TESTIMONY
- 2
- 3 Q6. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THESE
- 4 **PROCEEDINGS**?
- 5 *A6.* My testimony addresses the proper calculation of carrying charges on deferred 6 fuel.
- 7
- 8 Q7. WHAT IS YOUR RECOMMENDATION REGARDING THE CALCULATION
   9 OF CARRYING CHARGES ON THE DEFERRED FUEL EXPENSES
   10 DURING THE ESP 1 DEFERRAL PERIOD (2009-2011)?
- A7. I recommend that the Commission adjust the deferred fuel principal amount by 11 the related Accumulated Deferred Income Tax ("ADIT") when computing 12 13 carrying costs. The ADIT represents a non-investor supplied fund. It is a costfree source of funds provided by federal and state governments and available to 14 the Company to finance the deferred fuel cost. Utility customers, therefore, 15 should not pay carrying charges to AEP Ohio on a source of funds that is without 16 cost to AEP Ohio. Also, I recommend that the Company be permitted to collect 17 only the deferred fuel balance, plus adjusted carrying charges, that the 18 Commission approves. OCC witness Duann provides testimony on the 19 appropriate amount of deferred fuel issue. 20

1	<i>Q8</i> .	IS YOUR RECOMMENDATION CONSISTENT WITH OTHER PARTIES'
2		<b>RECOMMENDATIONS REGARDING THE ADIT ISSUE?</b>
3	<i>A8</i> .	Yes. In the 2010 FAC Audit Report, the Auditors, Energy Ventures Analysis and
4		Larkin & Associated PLLC, recommended that the Commission should
5		reconsider the income tax savings related to the deductibility of fuel expenses,
6		and how the ADIT provides non-investor supplied capital that is financing a
7		portion of the deferred fuel balances. Also, the PUCO Staff's Comments and
8		Recommendations submitted April 3, 2012 in Cases 11-4920-EL-RDR and 11-
9		4921-EL-RDR, raised the same concern. The PUCO Staff in their comments
10		recommended that the ADIT reduce the principal deferred fuel balance for the
11		purposes of calculating the carrying cost at the end of each year of the ESP 1
12		period (2009-2011). Similar recommendations were made by Industrial Energy
13		Users-Ohio, Ohio Energy Group, and Ormet Primary Aluminum Corporation in
14		their Comments and Reply Comments.
15		
16	Q9.	WOULD YOU PLEASE EXPLAIN HOW THE ACCUMULATED
17		DEFERRED INCOME TAX FOR AEP OHIO WAS CREATED?
18	A9.	The accumulated deferred income tax associated with the deductibility of total
19		fuel expenses was created during the deferral period (2009-2011). During that
20		period the Company deducted the entire fuel expense incurred from its taxable
21		income. This reduced the Company's tax obligations. On its books the Company
22		expensed a fuel expense amount equal to FAC fuel revenue and deferred the
23		under-recovered fuel expense. This treatment creates a temporary book-tax

1		timing difference. Accordingly, the Company achieved income tax savings
2		during the deferral period. These tax savings reduced the amount of money
3		needed to finance the deferred fuel cost. Therefore, for every \$1.00 that the
4		Company spent on fuel, it would have to borrow only \$0.65 and the remaining
5		\$0.35 is provided as a direct <b>reduction</b> in federal income tax.
6		
7	Q10.	HOW SHOULD THE ACCUMULATED DEFERRED INCOME TAX
8		REDUCE THE AMOUNT OF CARRYING CHARGES?
9	A10.	There are two approaches to address ADIT. Under the first approach, the
10		Commission could require the Company to recalculate the carrying charges by
11		reducing the principal deferred fuel balance before applying the carrying charge
12		rate at the end of each year of the ESP 1 period (2009-2011). That would reduce
13		the carrying charge portion of the deferred fuel balance. This approach would
14		flow through the tax savings in the year when fuel expense was incurred. See
15		Attachments IS-B, IS-C and IS-D for illustration. Under a second approach, the
16		Commission could direct the Company to calculate carrying charges net of ADIT
17		by reducing the unamortized deferred fuel balance by the unamortized ADIT
18		balance before applying the carrying charge rate during the recovery period. That
19		would also reduce the carrying charge portion of the deferred fuel balance. This
20		method normalizes the tax savings over the recovery period and would protect
21		customers by eliminating the financing of non-investor supplied funds. See
22		Attachments IS-E, IS-F and IS-G for illustration.

#### 1 Q11. WHICH APPROACH DO YOU RECOMMEND THE COMMISSION

2 **ADOPT?** 

3	<i>A11</i> .	Both approaches reduce the fuel balance by the ADIT and associated carrying
4		charges. Both would protect customers from paying higher carrying charges on
5		non-investor supplied funds. The first approach reflects the tax savings
6		immediately in the calculation of the carrying charges while the second approach
7		amortizes the tax savings over the recovery period. I recommend that the
8		Commission adopt the second approach because it is consistent with GAAP and
9		the Commission policy on the treatment of ADIT associated with temporary
10		book-tax timing differences in the rate-setting process. It is also easy to calculate
11		and verify during the recovery period.

12

#### 13 Q12. DID OTHER PARTIES PROPOSE SIMILAR RECOMMENDATIONS TO

14

# THE COMMISSION TO SOLVE THE ADIT ISSUE?

Yes. Comments filed in Case Nos. 11-4920-EL-RDR and 11-4921-EL-RDR, by *A12*. 15 the PUCO Staff recommended ADIT adjustment to reduce the principal deferred 16 fuel balance for purposes of the carrying cost calculation at the end of each year 17 of the ESP 1 period (2009-2011). This approach is similar to approach one 18 discussed above. Industrial Energy Users-Ohio and Ohio Energy Group 19 recommended that the Company calculate carrying charges net of ADIT during 20 the amortization period. This approach is similar to approach two discussed 21 above. Also Ormet Primary Aluminum Corporation recommended that the tax 22 savings realized by the Company should be passed on to customers. 23

### 1 III. OCC RECOMMENDATION

2		
3	Q13.	WHAT IS YOUR RECOMMENDATION TO THE COMMISSION
4		REGARDING THE ACCURATE THE CALCULATION OF CARRYING
5		CHARGES SUBJECT TO RECOVERY FROM CUSTOMERS IN THE PIRR?
6	<i>A13</i> .	The Commission should disallow collecting from customers any extra carrying
7		charges on non-investor supplied capital. Ignoring the tax savings that the
8		Company was able to achieve would result in overcharging customers. I
9		recommend that the Commission adopt the second approach explained above.
10		
11	IV.	CONCLUSION
12		
13	<b>Q</b> 14.	DOES THIS CONCLUDE YOUR TESTIMONY AT THIS TIME?
14	<i>A14</i> .	Yes. However, I reserve the right to incorporate new information that may
15		subsequently become available. I also reserve the right to supplement my
16		testimony in the event that AEP Ohio, PUCO Staff or other parties submit new
17		information or if additional information is provided through discovery.

#### **CERTIFICATE OF SERVICE**

I hereby certify that a true copy of the foregoing Direct Testimony of Ibrahim

Soliman was served via electronic transmission to the persons listed below on this 4th day

of May, 2012.

<u>/s/ Maureen R. Grady</u> Maureen R. Grady Assistant Consumers' Counsel

#### **PARTIES SERVED**

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AEs: greta.see@puc.state.oh.us Jonathan.tauber@puc.state.oh.us

### Ibrahim Soliman Testimony Submitted

Date	Docket	Company
01/30/1986	85-554-EL-AIR	Toledo Edison
11/07/1988	88-170-EL-AIR et al.	Toledo Edison, CEI
01/23/1990	89-616-EL-AIT et al.	Columbia Gas
04/23/1990	89-1001-EL-AIR	Ohio Edison
01/23/1992	91-418-EL-AIR	Columbus Southern Power
07/13/1994	93-487-TP-ALT et al.	Ohio Bell
03/20/1995	94-0578-EL-CMR et al.	CEI
01/16/1996	95-0299-EL-AIR et al.	Toledo Edison, CEI
01/30/2008	07-0551-EL-AIR et al.	FirstEnergy (Ohio Edison, CEI, Toledo Edison)
08/22/2008	07-0829-GA-AIR et al.	East Ohio Gas
11/07/2008	08-0917-EL-SSO et al.	Columbus Southern Power, Ohio Power
04/20/2009	09-0038-GA-UNC	Dominion East Ohio
10/14/2009	09-0458-GA-RDR	Dominion East Ohio
04/05/2010	09-1875-GA-UNC	Dominion East Ohio
10/24/2011	10-351-EL-AIR	Columbus Southern Power
10/24/2011	10-352-EL-AIR	Ohio Power

Ending Bala         Ending Bala           2009         2010         2011         as of 12/31/2           100         120         130         as of 12/31/2           100         120         120         130           35         42         45.5         332.40         33           11.15%         11.15%         11.15%         31         40         33           107.25         2.47.90         342.40         33         33         40         33           11.15%         11.15%         11.15%         11.15%         33         40         33           107.25         2.47.90         41.4.97         40         40         40	Calculation of Carrying Charges Net of ADIT Numbers are in Millions Option one - Flow Though Method			ŭ	
120 130 107.25 247.90 42 45.5 185.25 332.40 35 11.15% 11.15% 20.66 37.06 64 247.90 414.97 414		5005	2010	2011	Ending Balance as of 12/31/2011
0     107.25     247.90       35     42     45.5       35     42     45.5       65.00     185.25     332.40       35     55.00     185.25       31.15%     11.15%     35.06       7.25     20.66     37.06       107.25     247.90     414.97	<ol> <li>Deferred Fuel Balance Per Year *</li> </ol>	100	021	130	350
35     42     65.55       65.00     185.25     332.40       11.15%     11.15%     11.15%       7.25     20.66     37.06       107.25     247.30     414.37	(2) Carrying cost Plus Pervious Fuel Balance	0	107.25	247.90	0.00
(3) 65.00 185.25 332.40 33 11.15% 11.15% 11.15% 7.25 20.66 37.06 6 107.25 247.90 414.97	<ol> <li>Related Income Tax Savings (ADIT) (1) x 35%</li> </ol>	35	42	45.5	
1115% 1115% 1115% 7.25 20.66 37.06 6 107.25 247.90 414.97 41	(4) Balance Financed by the Company (1) + (2) - (3)	65.00	185.25	332.40	350.00
7.25 20.66 37.06 6 107.25 247.90 414.97 41	(5) Carrying Charge Rate	11.15%	11.15%	11.15%	
107.25 247.90 414.97 41	(6) Carrying Cost (4) x (5)	7.25	20.66	37.06	64.97
	<ol> <li>Ending Balance - Fuel &amp; Carrying Cost (1)+(6)</li> </ol>	107.25	247.90	414.97	12,414
					00

	Ending Balance as of 12/31/2011	350	0.00	0	350.00		80.07	430.07
AEP	2011	130	256.92	•	386.92	X51.11	43.14	430.07
A	2010	120	21.11	0	21.152	11.15%	25.77	256.92
	6002	100 1	•	0	100.00	11.15%	21.15	111.15

	Over	Collection								
	Total	Payment		414.96	81.14	496.10			·	
		2018	69.06	] 50.63	1.82	70.872	34,53	5.27%	1.82	0.00
		2017	134.56	65.51	7E.2	70.872	101.81	5.27%	5.37	69.06
		2016	196.70	62.14	8.73	70.872	165.63	5.27%	8.73	134.56
y		2015	255.66	58.95	11.92	70.872	226.18	5.27%	20.11	196.70
		2014	311.58	55.93	14.95	70.872	283.62	5.27%	14.95	255.66
		2013	364.64	53.05	17.82	70.872	338.11	5.27%	17.82	311.58
		2012	414.97	50.33	20.54	70.872	389.80	5.27%	20.54	364.64

(5) Balance Subject to Carrying Charge (1) - ((2) / 2)

(8) Ending Balance (1) - (2) + (3)

Carrying Cost (5 x (6) (6) Carrying Charge Rate

(4) Total Annual Payment (2) + (3)

(2) Annual Payment - Principat (1) Deferred Fuel Balance

Recovery Period

(3) Annual - Interest

			AFD					
							Total	
2012	2013	2014	2015	2016	2017	2018	Payment	
430.07	377.90	26-22E	264.96	203.86	139.46	11.57		
52.16	54.98	57.96	61.10	64.40	67.89	71.57	430.06	15.10
67.12	18.47	15.49	22.35	9.05	5.56	1.89	84.09	567
73.451	73.451	73.451	73.451	73.451	73.451	73.451	514.16	18.05
403.98	350.41	<b>M2.592</b>	234.41	171.66	105.51	35.7 <b>8</b>		
5.27%	5.27%	5.27%	5.27%	5.27%	5.27%	5.27%		
62.12	18.47	15.49	12.35	9.05	5.56	1.89		
377.90	22.52	264.96	203.86	139.46	11.57	0.00		
21 21 21 21 21 21			18.47 73.451 7 350.41 2 350.41 2 18.47 18.47 322.92 2	18.47 15.49 73.451 73.451 350.41 293.94 5.27% 5.27% 18.47 15.49 322.92 264.96	18.47 15.49 12.35 73.451 73.451 73.451 350.41 293.34 24.41 5.27% 5.27% 5.27% 18.47 15.49 12.35 322.92 264.96 203.86	18.47         15.49         12.35         9.05           73.451         73.451         73.451         73.451         7           350.41         29.39.46         234.41         171.166         11           350.41         29.39.46         5.27%         5.27%         5.27%         5           18.47         15.49         12.35         9.05         322.92         264.96         203.46         139.46	18.47         15.49         12.35         9.05         5.56           73.451         73.451         73.451         73.451         73.451           350.41         293.94         234.41         171.66         105.51           350.41         293.94         234.41         171.66         105.51           5.27%         5.27%         5.27%         5.27%         5.27%           18.47         15.49         12.35         9.05         5.56           322.92         264.96         203.46         139.46         71.57	18.47         15.49         12.35         9.05         5.56         1.49           73.451         73.451         73.451         73.451         73.451         73.451         73.451           350.41         293.94         234.41         171.66         105.51         35.78           350.41         293.94         234.41         171.66         105.51         35.78           5.27%         5.27%         5.27%         5.27%         5.27%         5.27%           18.47         15.49         12.35         9.05         5.56         1.49           32.192         264.96         203.86         139.46         71.57         0.00

• Estimated Numbers are used for Illustration, However Actual Numbers will be used when they are available.

ATTACHMENT IS-B

#### occ

Option One Deferred Balance \$414,965,485.73

Cost of Debt Amortization Period

CE 40E 72						13-6
65,485.73						
5.27%						
7 Years						
		Beginning	Total			Ending
	Date	Balance	Payment	Principal	Interest	Balance
1	1/1/2012	414,965,485.73	5,917,874.81	4,095,484.72	1,822,390.09	410,870,001.01
2	2/1/2012	410,870,001.01	5,917,874.81	4,113,470.72	1,804,404.09	406,756,530.29
3	3/1/2012	406,756,530.29	5,917,874.81	4,131,535.71	1,786,339.10	402,624,994.58
4	4/1/2012	402,624,994.58	5,917,874.81	4,149,680.04	1,768,194.77	
5	5/1/2012	398,475,314.53				398,475,314.53
6	6/1/2012	394,307,410.48	5,917,874.81	4,167,904.05	1,749,970.76	394,307,410.48
7			5,917,874.81	4,186,208.10	1,731,666.71	390,121,202.38
	7/1/2012	390,121,202.38	5,917,874.81	4,204,592.53	1,713,282.28	385,916,609.85
8	8/1/2012	385,916,609.85	5,917,874.81	4,223,057.70	1,694,817.11	381,693,552.15
9	9/1/2012	381,693,552.15	5,917,874.81	4,241,603.96	1,676,270.85	377,451,948.19
10	10/1/2012	377,451,948.19	5,917,874.81	4,260,231.67	1,657,643.14	373,191,716.52
11	11/1/2012	373,191,716.52	5,917,874.81	4,278,941.19	1,638,933.62	368,912,775.33
12	12/1/2012	368,912,775.33	5,917,874.81	4,297,732.87	1,620,141.94	364,615,042.46
13	1/1/2013	364,615,042.46	5,917,874.81	4,316,607.08	1,601,267.73	360,298,435.38
14	2/1/2013	360,298,435.38	5,917,874.81	4,335,564.18	1,582,310.63	355,962,871.20
15	3/1/2013	355,962,871.20	5,917,874.81	4,354,604.53	1,563,270.28	351,608,266.67
16	4/1/2013	351,608,266.67	5,917,874.81	4,373,728.51	1,544,146.30	347,234,538.16
17	5/1/2013	347,234,538.16	5,917,874.81	4,392,936.46	1,524,938.35	342,841,601.70
18	6/1/2013	342,841,601.70	5,917,874.81	4,412,228.78	1,505,646.03	338,429,372.92
19	7/1/2013	338,429,372.92	5,917,874.81	4,431,605.81	1,486,269.00	333,997,767.11
20	8/1/2013	333,997,767.11	5,917,874.81	4,451,067.95	1,466,806.86	329,546,699.16
21	9/1/2013	329,546,699.16	5,917,874.81	4,470,615.56	1,447,259.25	325,076,083.60
22	10/1/2013	325,076,083.60	5,917,874.81	4,490,249.01	1,427,625.80	320,585,834.59
23	11/1/2013	320,585,834.59	5,917,874.81	4,509,968.69	1,407,906.12	316,075,865.91
24	12/1/2013	316,075,865.91	5,917,874.81	4,529,774.97	1,388,099.84	311,546,090.94
25	1/1/2014	311,546,090.94	5,917,874.81	4,549,668.23	1,368,206.58	306,996,422.71
26	2/1/2014	306,996,422.71	5,917,874.81	4,569,648.85	1,348,225.96	302,426,773.86
27	3/1/2014	302,426,773.86	5,917,874.81	4,589,717.23	1,328,157.58	297,837,056.63
28	4/1/2014	297,837,056.63	5,917,874.81	4,609,873.74	1,308,001.07	293,227,182.89
29	5/1/2014	293,227,182.89	5,917,874.81	4,630,118.77	1,287,756.04	288,597,064.13
30	6/1/2014	288,597,064.13	5,917,874.81	4,650,452.70	1,267,422.11	283,946,611.43
31	7/1/2014	283,946,611.43	5,917,874.81	4,670,875.94	1,246,998.87	279,275,735.48
32	8/1/2014	279,275,735.48	5,917,874.81	4,691,388.87	1,226,485.94	274,584,346.61
33	9/1/2014	274,584,346.61	5,917,874.81	4,711,991.89	1,205,882.92	269,872,354.73
34	10/1/2014	269,872,354.73	5,917,874.81	4,732,685.39	1,185,189.42	265,139,669.34
35	11/1/2014	265,139,669.34	5,917,874.81	4,753,469.76	1,164,405.05	260,386,199.58
36	12/1/2014	260,386,199.58	5,917,874.81	4,774,345.42	1,143,529.39	255,611,854.16
37	1/1/2015	255,611,854.16	5,917,874.81	4,795,312.75	1,122,562.06	250,816,541.41
38	2/1/2015	250,816,541.41	5,917,874.81	4,816,372.17	1,101,502.64	246,000,169.24
39	3/1/2015	246,000,169.24	5,917,874.81	4,837,524.07		
40	4/1/2015	241,162,645.18	5,917,874.81	4,858,768.86	1,080,350.74	241,162,645.18
41	5/1/2015	236,303,876.32	5,917,874.81	4,880,106.95	1,059,105.95	236,303,876.32
42	6/1/2015	231,423,769.37	5,917,874.81	4,901,538.76	1,037,767.86	231,423,769.37
43	7/1/2015	226,522,230.61	5,917,874.81		1,016,336.05	226,522,230.61
44	8/1/2015	221,599,165.93		4,923,064.68	994,810.13	221,599,165.93
45	9/1/2015	216,654,480.79	5,917,874.81	4,944,685.14	973,189.67	216,654,480.79
46		211,688,080.24	5,917,874.81	4,966,400.55	951,474.26	211,688,080.24
40	10/1/2015		5,917,874.81	4,988,211.32	929,663.49	206,699,868.92
	11/1/2015	206,699,868.92	5,917,874.81	5,010,117.89	907,756.92	201,689,751.03
48	12/1/2015	201,689,751.03	5,917,874.81	5,032,120.65	885,754.16	196,657,630.38
49	1/1/2016	196,657,630.38	5,917,874.81	5,054,220.05	863,654.76	191,603,410.33
50		191,603,410.33	5,917,874.81	5,076,416.50	841,458.31	186,526,993.83
51	3/1/2016	186,526,993.83	5,917,874.81	5,098,710.43	819,164.38	181,428,283.40
52	4/1/2016	181,428,283.40	5,917,874.81	5,121,102.27	796,772.54	176,307,181.13
53	5/1/2016	176,307,181.13	5,917,874.81	5,143,592.44	774,282.37	171,163,588.69
54	6/1/2016	171,163,588.69	5,917,874.81	5,166,181.38	751,693.43	165,997,407.31
55	7/1/2016	165,997,407.31	5,917,874.81	5,188,869.53	729,005.28	160,808,537.78
56	8/1/2016	160,808,537.78	5,917,874.81	5,211,657.31	706,217.50	155,596,880.47
57		155,596,880.47	5,917,874.81	5,234,545.18	683,329.63	150,362,335.29
58	• •	150,362,335.29	5,917,874.81	5,257,533.55	660,341.26	145,104,801.74
59	11/1/2016	145,104,801.74	5,917,874.81	5,280,622.89	637,251.92	139,824,178.85

	Le la	Over Collection	18,088,426.44	15,099,678.55	2,988,747.89	
	-	AEP	515,189,910.48	430,065,164.22	85,124,746.26	
			497,101,484.04	414,965,485.67	82,135,998.37	
84	12/1/2018	5,891,999.18	5,917,874.81	5,891,999.11	25,875.70	0.07
83	11/1/2018	11,758,235.74	5,917,874.81	5,866,236.56	51,638.25	5,891,999.18
82	10/1/2018	17,598,822.39	5,917,874.81	5,840,586.65	77,288.16	11,758,235.74
81	9/1/2018	23,413,871.28	5,917,874.81	5,815,048.89	102,825.92	17,598,822.39
80	8/1/2018	29,203,494.08	5,917,874.81	5,789,622.80	128,252.01	23,413,871.28
79	7/1/2018	34,967,801.96	5,917,874.81	5,764,307.88	153,566.93	29,203,494.08
78	6/1/2018	40,706,905.61	5,917,874.81	5,739,103.65	178,771.16	34,967,801.96
77	5/1/2018	46,420,915.23	5,917,874.81	5,714,009.62	203,865.19	40,706,905.61
76	4/1/2018	52,109,940.55	5,917,874.81	5,689,025.32	228,849.49	46,420,915.23
75	3/1/2018	57,774,090.81	5,917,874.81	5,664,150.26	253,724.55	52,109,940.55
74	2/1/2018	63,413,474.78	5,917,874.81	5,639,383.97	278,490.84	57,774,090.81
73	1/1/2018	69,028,200.74	5,917,874.81	5,614,725.96	303,148.85	63,413,474.78
72	12/1/2017	74,618,376.51	5,917,874.81	5,590,175.77	327,699.04	69,028,200.74
71	11/1/2017	80,184,109.44	5,917,874.81	5,565,732.93	352,141.88	74,618,376.51
70	10/1/2017	85,725,506.40	5,917,874.81	5,541,396.96	376,477.85	80,184,109.44
69	9/1/2017	91,242,673.80	5,917,874.81	5,517,167.40	400,707.41	85,725,506.40
68	8/1/2017	96,735,717.59	5,917,874.81	5,493,043.78	424,831.03	91,242,673.80
67	7/1/2017	102,204,743.23	5.917.874.81	5,469,025.65	448,849.16	96,735,717.59
66	6/1/2017	107,649,855.76	5,917,874.81	5,445,112.53	472,762.28	107,049,833.78
65	5/1/2017	113,071,159.73	5,917,874.81	5,421,303.97	496,570.84	107,649,855.76
64	4/1/2017	118,468,759.24	5,917,874.81	5,397,599.51	520,275.30	113.071.159.73
63	3/1/2017	123,842,757.93	5,917,874.81	5,373,998.70	543.876.11	118,468,759.24
62	2/1/2017	129,193,259.02	5,917,874.81	5,350,501.08	567,373.73	123,842,757.93
61	1/1/2017	134,520,365.22	5,917,874.81	5,327,106.21	590,768.60	129,193,259.02
60	12/1/2016	139,824,178.85	5,917,874.81	5,303,813.62	614,061.19	134,520,365.22

#### AEP

Option One

\$430,065,164.59 Cost of Debt

5.27%

7 Years

**Amortization Period** 

rears						
		Beginning	Total			Ending
	Date	Balance	Payment	Principal	Interest	Balance
1	1/1/2012	430,065,164.59	6,133,213.22	4,244,510.37	1,888,702.85	425,820,654.22
2	2/1/2012	425,820,654.22	6,133,213.22	4,263,150.85	1,870,062.37	421,557,503.37
3	3/1/2012	421,557,503.37	6,133,213.22	4,281,873.18	1,851,340.04	417,275,630.18
4	4/1/2012	417,275,630.18	6,133,213.22	4,300,677.74	1,832,535.48	412,974,952.44
5	5/1/2012	412,974,952.44	6,133,213.22	4,319,564.89	1,813,648.33	408,655,387.55
6	6/1/2012	408,655,387.55	6,133,213.22	4,338,534.98	1,794,678.24	404,316,852.58
7	7/1/2012	404,316,852.58	6,133,213.22	4,357,588.38	1,775,624.84	399,959,264.20
8	8/1/2012	399,959,264.20	6,133,213.22	4,376,725.45	1,756,487.77	395,582,538.75
9	9/1/2012	395,582,538.75	6,133,213.22	4,395,946.57	1,737,266.65	391,186,592.18
10	10/1/2012	391,186,592.18	6,133,213.22	4,415,252.10	1,717,961.12	386,771,340.08
11	11/1/2012	386,771,340.08	6,133,213.22	4,434,642.42	1,698,570.80	382,336,697.66
12	12/1/2012	382,336,697.66	6,133,213.22	4,454,117.89	1,679,095.33	377,882,579.77
13	1/1/2013	377,882,579.77	6,133,213.22	4,473,678.89	1,659,534.33	373,408,900.88
14	2/1/2013	373,408,900.88	6,133,213.22	4,493,325.80	1,639,887.42	368,915,575.08
15	3/1/2013	368,915,575.08	6,133,213.22	4,513,058.99	1,620,154.23	364,402,516.09
16	4/1/2013	364,402,516.09	6,133,213.22	4,532,878.84	1,600,334.38	359,869,637.26
17	5/1/2013	359,869,637.26	6,133,213.22	4,552,785.73	1,580,427.49	355,316,851.53
18	6/1/2013	355,316,851.53	6,133,213.22	4,572,780.05	1,560,433.17	350,744,071.48
19	7/1/2013	350,744,071.48	6,133,213.22	4,592,862.17	1,540,351.05	346,151,209.31
20	8/1/2013	346,151,209.31	6,133,213.22	4,613,032.49	1,520,180.73	341,538,176.82
21	9/1/2013	341,538,176.82	6,133,213.22	4,633,291.39	1,499,921.83	336,904,885.42
22	10/1/2013	336,904,885.42	6,133,213.22	4,653,639.26	1,479,573.96	332,251,246.16
23	11/1/2013	332,251,246.16	6,133,213.22	4,674,076.50	1,459,136.72	327,577,169.66
24	12/1/2013	327,577,169.66	6,133,213.22	4,694,603.48	1,438,609.74	322,882,566.18
25	1/1/2014	322,882,566.18	6,133,213.22	4,715,220.62	1,417,992.60	318,167,345.56
26	2/1/2014	318,167,345.56	6,133,213.22	4,735,928.29	1,397,284.93	313,431,417.27
27	3/1/2014	313,431,417.27	6,133,213.22	4,756,726.91	1,376,486.31	308,674,690.35
28	4/1/2014	308,674,690.35	6,133,213.22	4,777,616.87	1,355,596.35	303,897,073.48
29	5/1/2014	303,897,073.48	6,133,213.22	4,798,598.57	1,334,614.65	299,098,474.91
30	6/1/2014	299,098,474.91	6,133,213.22	4,819,672.42	1,313,540.80	294,278,802.49
31	7/1/2014	294,278,802.49	6,133,213.22	4,840,838.81	1,292,374.41	289,437,963.68
32	8/1/2014	289,437,963.68	6,133,213.22	4,862,098.16	1,271,115.06	284,575,865.52
33	9/1/2014	284,575,865.52	6,133,213.22	4,883,450.88	1,249,762.34	279,692,414.64
34	10/1/2014	279,692,414.64	6,133,213.22	4,904,897.37	1,228,315.85	274,787,517.27
35	11/1/2014	274,787,517.27	6,133,213.22	4,926,438.04	1,206,775.18	269,861,079.23
36 37	12/1/2014	269,861,079.23	6,133,213.22	4,948,073.31	1,185,139.91	264,913,005.92
38	1/1/2015 2/1/2015	264,913,005.92	6,133,213.22	4,969,803.60	1,163,409.62	259,943,202.32
39	3/1/2015	259,943,202.32 254,951,572.99	6,133,213.22	4,991,629.32	1,141,583.90	254,951,572.99
40	4/1/2015	249,938,022.10	6,133,213.22	5,013,550.90	1,119,662.32	249,938,022.10
41	5/1/2015	244,902,453.36	6,133,213.22 6,133,213.22	5,035,568.74	1,097,644.48	244,902,453.36
42	6/1/2015	239,844,770.08	6,133,213.22	5,057,683.28 5,079,894.94	1,075,529.94	239,844,770.08
43	7/1/2015	234,764,875.14	6,133,213.22	5,102,204.14	1,053,318.28	234,764,875.14
44	8/1/2015	229,662,671.00	6,133,213.22	5,124,611.32	1,031,009.08	229,662,671.00
45	9/1/2015	224,538,059.68	6,133,213.22	5,147,116.91	1,008,601.90	224,538,059.68
46	10/1/2015	219,390,942.77	6,133,213.22		986,096.31	219,390,942.77
47	11/1/2015	214,221,221.44	6,133,213.22	5,169,721.33 5,192,425.02	963,491.89	214,221,221.44
48	12/1/2015	209,028,796.42	6,133,213.22	5,215,228.42	940,788.20 917,984.80	209,028,796.42
49	1/1/2016	203,813,567.99	6,133,213.22	5,238,131.97		203,813,567.99
50	2/1/2016	198,575,436.03	6,133,213.22		895,081.25	198,575,436.03
51	3/1/2016	193,314,299.93	6,133,213.22	5,261,136.10 5,284,241.25	872,077.12 848,971.97	193,314,299.93 188,030,058.68
52	4/1/2016	188,030,058.68	6,133,213.22	5,307,447.88	848,971.97	188,030,058.68
53	5/1/2016	182,722,610.80	6,133,213.22	5,330,756.42	802,456.80	177,391,854.38
54	6/1/2016	177,391,854.38	6,133,213.22	5,354,167.33	779,045.89	172,037,687.05
55	7/1/2016	172,037,687.05	6,133,213.22	5,377,681.04	755,532.18	166,660,006.01
56	8/1/2016	166,660,006.01	6,133,213.22	5,401,298.03	731,915.19	161,258,707.98
57	9/1/2016	161,258,707.98	6,133,213.22	5,425,018.73	708,194.49	155,833,689.25
58	10/1/2016	155,833,689.25	6,133,213.22	5,448,843.60	684,369.62	150,384,845.65
59	11/1/2016	150,384,845.65	6,133,213.22	5,472,773.11	660,440.11	144,912,072.54
	, _,	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-,	-,,./J.LL	200/440.11	4,J&L,U/L,J4

	Ŀ	Over Collection	18,088,426.44	15,099,678.55	2,988,747.89	
		220	497,101,484.04	414,965,485.67	82,135,998.37	
		AEP	515,189,910.48	430,065,164.22	85,124,746.26	
84	12/1/2018	6,106,396.33	6,133,213.22	6,106,395.96	26,817.26	0.37
83	11/1/2018	12,186,092.30	6,133,213.22	6,079,695.96	53,517.26	6,106,396.33
82	10/1/2018	18,239,205.01	6,133,213.22	6,053,112.71	80,100.51	12,186,092.30
81	9/1/2018	24,265,850.70	6,133,213.22	6,026,645.69	106,567.53	18,239,205.01
80	8/1/2018	30,266,145.10	6,133,213.22	6,000,294.40	132,918.82	24,265,850.70
79	7/1/2018	36,240,203.43	6,133,213.22	5,974,058.33	159,154.89	30,266,145.10
78	6/1/2018	42,188,140.40	6,133,213.22	5,947,936.97	185,276.25	36,240,203.43
77	5/1/2018	48,110,070.23	6,133,213.22	5,921,929.83	211,283.39	42,188,140.40
76	4/1/2018	54,006,106.63	6,133,213.22	5,896,036.40	237,176.82	48,110,070.23
75	3/1/2018	59,876,362.82	6,133,213.22	5,870,256.19	262,957.03	54,006,106.63
74	2/1/2018	65,720,951.53	6,133,213.22	5,844,588.71	288,624.51	59,876,362.82
73	1/1/2018	71,539,984.98	6,133,213.22	5,819,033.45	314,179.77	65,720,951.53
72	12/1/2017	77,333,574.92	6,133,213.22	5,793,589.94	339,623.28	71,539,984.98
71	11/1/2017	83,101,832.59	6,133,213.22	5,768,257.67	364,955.55	77,333,574.92
70	10/1/2017	88,844,868.76	6,133,213.22	5,743,036.17	390,177.05	83,101,832.59
69	9/1/2017	94,562,793.71	6,133,213.22	5,717,924.95	415,288.27	88,844,868.76
68	8/1/2017	100,255,717.24	6,133,213.22	5.692.923.53	440,289.69	94,562,793.71
67	7/1/2017	105,923,748.66	6,133,213.22	5,668,031.42	465,181.80	100,255,717.24
66	6/1/2017	111,566,996.82	6,133,213.22	5,643,248.16	489.965.06	105,923,748.66
65	5/1/2017	117,185,570.08	6,133,213.22	5,618,573.26	514,639.96	111,566,996.82
64	4/1/2017	122,779,576.33	6,133,213.22	5,594,006.25	539.206.97	117,185,570.08
63	3/1/2017	128,349,122.98	6,133,213.22	5,569,546.65	563,666.57	122,779,576.33
62	2/1/2017	133,894,316.99	6,133,213.22	5.545.194.01	612,265.37 588,019.21	133,894,316.99 128,349,122.98
61	1/1/2017	139,415,264.84	6.133.213.22	5,496,807.70 5,520,947.85	636,405.52	139,415,264.84
60	12/1/2016	144,912,072.54	6,133,213.22	E 40C 007 70	COC 405 50	

Calculation of Carrying Charges Net of ADIT Numbers are in Millions Option Two - Normalization Method

<b>Option Two - Normalization Method</b>		0	ы	
	5005	2010	2011	Ending Balance as of 12/31/2011
(1) Deferred Fuel Balance Per Year *	100	120	061	350
(2) Carrying cost Plus Pervious Fuel Balance	•	21.11	256.92	0.00
<ol> <li>Related Income Tax Savings (ADIT) (1) x 35%</li> </ol>	ŝ	Ş	45.5	1225
(4) Balance Subject to Carrying Charge (1) + (2)	100.00	231.15	386.92	227.50
(5) Carrying Charge Rate	NSI.LI	11.15%	X31.11	
(6) Cerrying Cost (4) x (5)	311	15.77	43.14	80.07
(7) Ending Batance - Fuel & Carrying Cost (1)+(2)+(6)	31.115	256.92	130.07	10.054

350	8.0	122.5	227.50		80.07	10.05	ğ	
8	•	0	100.00	11.15%	11.15	21.11		
021	111.15	•	51.152	X51.11	25.77	256.92		
130	256.92	٥	386.92	X51.11	41.EA	430.07	Γ	

350.00

80.07 430.07

	Over Collection																0070	81.72	81.72				
	Total Pavment				430.06	56.91	486.98					ſ	Total Payment				430.06	84.09	514.16	. <u> </u>			-
	2018	 99.99	175	81.18	68.68	68.0	69.568	16.84	5.27%	0.89	80		2018	72.17	٩	12.11	<u>ןיגו</u> י	1.89	73.451	32.78	5.27%	1.89	
	2017	5/-951	R	£7.66	<b>66.05</b>	352	69.568	<b>56.71</b>	X12.2	3.52	68.68		2017	139.46	•	139.46	67.89	5.56	73.451	106.51	5.27%	5.56	
	2016	198.29	52.5	145.79	63.56	6.01	69.568	10.911	\$27%	6.01	134.73		2016	38.E02	•	203.86	64.40	9 <b>.</b> 6	73.451	171.66	\$77%	9.05	
g	2015	259.49	Q2	189.49	61.19	2E.8	69.568	158.89	¥15.2	6.37	198.29	93V	2015	264.96	0	264.96	61.10	32.21	73.451	19.462	5.27%	12.35	
	2014	318.44	87.5	<b>10.062</b>	58.95	10.62	69.568	201.46	X75.2	10.62	259.49		2014	322.92	•	322.92	57.96	15.49	73.451	293.94	5.27%	15.49	
	100	375.26	8	270.26	56.82	12.75	69.568	241.85	5.27%	11.75	318.44		5013	377.90	-	06.77E	54.98	18.47	13Y-EL	350.41	\$12.2	18.47	
	2017	430.07	122.5	307.57	54.80	14.76	69.568	280.16	5.27%	14.76	375.26		2012	430.07	0	430.07	52.16	62.12	73.451	403.98	5.27%	21.29	

(7) Balance Subject to Carrying Charge (3) - ((4) / 2)

(10) Ending Balance (1) - (4) + (5)

(9) Carrying Cost (7) x (8)

(B) Carrying Charge Rate

(6) Total Annual Payment (4) + (5)

(3) Deferred Fuel Balance net of ADIT (1) - (2)

(1) Deferred Fuel Balance

(2) ADIT Balance

Recovery Period

(4) Annual Payment - Principal

(5) Annual - Interest

Estimated Numbers are used for Illustration, However Actual Numbers will be used when they are available

(10) Ending Belance (1) - (4) + (5)

(9) Carrying Cost (7) x (8) (8) Carrying Charge Rate

8

71.57

203.85 139.46

377.90 322.92 264.96

(7) Balance Subject to Carrying Charge (3) - ((4) / 2)

(6) Total Annual Payment (4) + (5)

(3) Deferred Fuel Balance net of ADIT (1) - (2)

(1) Deferred Fuel Balance

(2) ADIT Balance

Recovery Period

(4) Annual Payment - Principal

(5) Annuel - Interest

ATTACHMENT IS-E

Ending Balance as of 12/31/2011

2011 5

2010

2009

OCC Option Two ADIT Deferred Balance Cost of Debt Amortization Period

7 Years

Years								
		Beginning		Balance	Total			Ending
_	Date	Balance	ADIT	Net of ADIT	Payment	Principal	Interest	Balance
1	1/1/2012	430,065,164.59	122,500,000.00	307,565,164.59	5,844,558.70	4,493,835.02	1,350,723.68	425,571,329.57
2	2/1/2012	425,571,329.57	121,041,666.67	304,529,662.90	5,844,558.70	4,507,165.93	1,337,392.77	421,064,163.64
3	3/1/2012	421,064,163.64	119,583,333.34	301,480,830.30	5,844,558.70	4,520,555.39	1,324,003.31	416,543,608.25
4	4/1/2012	416,543,608.25	118,125,000.01	298,418,608.24	5,844,558.70	4,534,003.65	1,310,555.05	412,009,604.61
5	5/1/2012	412,009,604.61	116,666,666.68	295,342,937.93	5,844,558.70	4,547,510.96	1,297,047.74	407,462,093.64
6	6/1/2012	407,462,093.64	115,208,333.35	292,253,760.29	5,844,558.70	4,561,077.60	1,283,481.10	402,901,016.04
7	7/1/2012	402,901,016.04	113,750,000.02	289,151,016.02	5,844,558.70	4,574,703.82	1,269,854.88	398,326,312.22
8	8/1/2012	398,326,312.22	112,291,666.69	286,034,645.53	5,844,558.70	4,588,389.88	1,256,168.82	393,737,922.34
9	9/1/2012	393,737,922.34	110,833,333.36	282,904,588.98	5,844,558.70	4,602,136.05	1,242,422.65	389,135,786.29
10	10/1/2012	389,135,786.29	109,375,000.03	279,760,786.26	5,844,558.70	4,615,942.58	1,228,616.12	384,519,843.71
11	11/1/2012	384,519,843.71	107,916,666.70	276,603,177.01	5,844,558.70	4,629,809.75	1,214,748.95	379,890,033.96
12	12/1/2012	379,890,033.96	106,458,333.37	273,431,700.59	5,844,558.70	4,643,737.81	1,200,820.89	375,246,296.15
13	1/1/2013	375,246,296.15	105,000,000.04	270,246,296.11	5,844,558.70	4,657,727.05	1,186,831.65	370,588,569.10
14	2/1/2013	370,588,569.10	103,541,666.71	267,046,902.39	5,844,558.70	4,671,777.72	1,172,780.98	365,916,791.38
15	3/1/2013	365,916,791.38	102,083,333.38	263,833,458.00	5,844,558.70	4,685,890.10	1,158,668.60	361,230,901.28
16	4/1/2013	361,230,901.28	100,625,000.05	260,605,901.23	5,844,558.70	4,700,064.45	1,144,494.25	356,530,836.83
17	5/1/2013	356,530,836.83	99,166,666.72	257,364,170.11	5,844,558.70	4,714,301.05	1,130,257.65	351,816,535.78
18	6/1/2013	351,816,535.78	97,708,333.39	254,108,202.39	5,844,558.70	4,728,600.18	1,115,958.52	347,087,935.60
19	7/1/2013	347,087,935.60	96,250,000.06	250,837,935.54	5,844,558.70	4,742,962.10	1,101,596.60	342,344,973.50
20	8/1/2013	342,344,973.50	94,791,666.73	247,553,306.77	5,844,558.70	4,757,387.09	1,087,171.61	337,587,586.40
21	9/1/2013	337,587,586.40	93,333,333.40	244,254,253.00	5,844,558.70	4,771,875.44	1,072,683.26	332,815,710.96
22	10/1/2013	332,815,710.96	91,875,000.07	240,940,710.89	5,844,558.70	4,786,427.41	1,058,131.29	328,029,283.55
23	11/1/2013	328,029,283.55	90,416,666.74	237,612,616.81	5,844,558.70	4,801,043.29	1,043,515.41	323,228,240.26
24	12/1/2013	323,228,240.26	88,958,333.41	234,269,906.85	5,844,558.70	4,815,723.36	1,028,835.34	318,412,516.90
25	1/1/2014	318,412,516.90	87,500,000.08	230,912,516.82	5,844,558.70	4,830,467.90	1,014,090.80	313,582,049.01
26	2/1/2014	313,582,049.01	86,041,666.75	227,540,382.26	5,844,558.70	4,845,277.19	999,281.51	308,736,771.82
27	3/1/2014	308,736,771.82	84,583,333.42	224,153,438.40	5,844,558.70	4,860,151.52	984,407.18	303,876,620.30
28	4/1/2014	303,876,620.30	83,125,000.09	220,751,620.21	5,844,558.70	4,875,091.17	969,467.53	299,001,529.13
29	5/1/2014	299,001,529.13	81,666,666.76	217,334,862.37	5,844,558.70	4,890,096.43	954,462.27	294,111,432.70
30	6/1/2014	294,111,432.70	80,208,333.43	213,903,099.27	5,844,558.70	4,905,167.59	939,391.11	289,206,265.12
31	7/1/2014	289,206,265.12	78,750,000.10	210,456,265.02	5,844,558.70	4,920,304.94	924,253.76	284,285,960.18
32	8/1/2014	284,285,960.18	77,291,666.77	206,994,293.41	5,844,558.70	4,935,508.76	909,049.94	279,350,451.42
33	9/1/2014	279,350,451.42	75,833,333.44	203,517,117.98	5,844,558.70	4,950,779.36	893,779.34	274,399,672.06
34	10/1/2014	274,399,672.06	74,375,000.11	200,024,671.95	5,844,558.70	4,966,117.02	878,441.68	269,433,555.05
35	11/1/2014	269,433,555.05	72,916,666.78	196,516,888.27	5,844,558.70	4,981,522.03	863,036.67	264,452,033.01
36	12/1/2014	264,452,033.01	71,458,333.45	192,993,699.56	5,844,558.70	4,996,994.70	847,564.00	259,455,038.31
37 38	1/1/2015 2/1/2015	259,455,038.31	70,000,000.12	189,455,038.19	5,844,558.70	5,012,535.32	832,023.38	254,442,502.99
39	3/1/2015	254,442,502.99	68,541,666.79	185,900,836.20	5,844,558.70	5,028,144.19	816,414.51	249,414,358.79
40		249,414,358.79	67,083,333.46	182,331,025.33	5,844,558.70	5,043,821.61	800,737.09	244,370,537.18
40	4/1/2015	244,370,537.18	65,625,000.13	178,745,537.05	5,844,558.70	5,059,567.88	784,990.82	239,310,969.30
42	5/1/2015 6/1/2015	239,310,969.30	64,166,666.80	175,144,302.50	5,844,558.70	5,075,383.30	769,175.40	234,235,585.99
43	7/1/2015	234,235,585.99	62,708,333.47	171,527,252.52	5,844,558.70	5,091,268.18	753,290.52	229,144,317.81
44	8/1/2015	229,144,317.81	61,250,000.14	167,894,317.67	5,844,558.70	5,107,222.82	737,335.88	224,037,094.99
45	9/1/2015	224,037,094.99 218,913,847.46	59,791,666.81	164,245,428.18	5,844,558.70	5,123,247.53	721,311.17	218,913,847.46
46	10/1/2015	213,774,504.85	58,333,333.48 56,875,000.15	160,580,513.98	5,844,558.70	5,139,342.61	705,216.09	213,774,504.85
47	11/1/2015	208,618,996.47	55,416,666.82	156,899,504.70 153,202,329.65	5,844,558.70	5,155,508.38	689,050.32	208,618,996.47
48	12/1/2015	203,447,251.34	53,958,333.49	149,488,917.85	5,844,558.70	5,171,745.14	672,813.56	203,447,251.34
49	1/1/2016	198,259,198.14	52,500,000.16	145,759,197.98	5,844,558.70 5,844,558.70	5,188,053.20	656,505.50 640 135 81	198,259,198.14
50	2/1/2016	193,054,765.25	51,041,666.83	142,013,098.42	5,844,558.70	5,204,432.89	640,125.81	193,054,765.25
51	3/1/2016	187,833,880.74	49,583,333.50	138,250,547.24	5,844,558.70	5,220,884.51 5,237,408.38	623,674.19 607,150.32	187,833,880.74
52	4/1/2016	182,596,472.36	48,125,000.17	134,471,472.19	5,844,558.70	5,254,004.82	590,553.88	182,596,472.36
53	5/1/2016	177,342,467.54	46,666,666.84	130,675,800.70	5,844,558.70	5,270,674.14	573,884.56	177,342,467.54
54	6/1/2016	172,071,793.40	45,208,333.51	126,863,459.89	5,844,558.70	5,287,416.67	557,142.03	166,784,376.75
55	7/1/2016	166,784,376.73	43,750,000.18	123,034,376.55	5,844,558.70	5,304,232.73	540,325.97	161,480,144.00
56	8/1/2016	161,480,144.00	42,291,666.85	119,188,477.15	5,844,558.70	5,321,122.64	523,436.06	156,159,021.36
57	9/1/2016	156,159,021.36	40,833,333.52	115,325,687.84	5,844,558.70	5,338,086.72	506,471.98	150,820,934.64
58	10/1/2016	150,820,934.64	39,375,000.19	111,445,934.45	5,844,558.70	5,355,125.30	489,433.40	145,465,809.33
59	11/1/2016	145,465,809.33	37,916,666.86	107,549,142.47	5,844,558.70	5,372,238.72	472,319.98	140,093,570.62
60	12/1/2016	140,093,570.62	36,458,333.53	103,635,237.09	5,844,558.70	5,389,427.28	455,131.42	134,704,143.3
61	1/1/2017	134,704,143.33	35,000,000.20	99,704,143.13	5,844,558.70	5,406,691.34	437,867.36	129,297,451.99
62	2/1/2017	129,297,451.99	33,541,666.87	95,755,785.12	5,844,558.70	5,424,031.21	420,527.49	123,873,420.7
63	3/1/2017	123,873,420.78	32,083,333.54	91,790,087.24	5,844,558.70	5,441,447.23	403,111.47	118,431,973.5
64	4/1/2017	118,431,973.55	30,625,000.21	87,806,973.34	5,844,558.70	5,458,939.74	385,618.96	112,973,033.8
65	5/1/2017	112,973,033.81	29,166,666.88	83,806,366.93	5,844,558.70	5,476,509.07	368,049.63	107,496,524.7
66	6/1/2017	107,496,524.74	27,708,333.55	79,788,191.19	5,844,558.70	5,494,155.56	350,403.14	102,002,369.1
67	7/1/2017	102,002,369.18	26,250,000.22	75,752,368.96	5,844,558.70	5,511,879.55	332,679.15	96,490,489.65
68	8/1/2017	96,490,489.63	24,791,666.89	71,698,822.74	5,844,558.70	5,529,681.37	314,877.33	90,960,808.2
69	9/1/2017	90,960,808.26	23,333,333.56	67,627,474.70	5,844,558.70	5,547,561.37	296,997.33	85,413,246.8
70	10/1/2017	85,413,246.89	21,875,000.23	63,538,246.66	5,844,558.70	5,565,519.90	279,038.80	79,847,726.9
71	11/1/2017	79,847,726.99	20,416,666.90	59,431,060.09	5,844,558.70	5,583,557.29	261,001.41	74,264,169.6
72	12/1/2017	74,264,169.69	18,958,333.57	55,305,836.12	5,844,558.70	5,601,673.90	242,884.80	68,662,495.7
73	1/1/2018	68,662,495.79	17,500,000.24	51,162,495.55	5,844,558.70	5,619,870.07	224,688.63	63,042,625.7
74	2/1/2018	63,042,625.71	16,041,666.91	47,000,958.80	5,844,558.70	5,638,146.16	206,412.54	57,404,479.50
75	3/1/2018	57,404,479.56	14,583,333.58	42,821,145.98	5,844,558.70	5,656,502.50	188,056.20	51,747,977.0
76	4/1/2018	51,747,977.06	13,125,000.25	38,622,976.81	5,844,558.70	5,674,939.46	169,619.24	46,073,037.6
				,		JJJ77,333.90	103,017.24	-0,073,037.6

77	5/1/2018	46,073,037.60	11,666,666.92	34,406,370.68	5,844,558.70	5,693,457.39	151.101.31	40,379,580.21
78	6/1/2018	40,379,580.21	10,208,333.59	30,171,246.62	5,844,558.70	5,712,056.64	132,502.06	34,667,523.57
79	7/1/2018	34,667,523.57	8,750,000.26	25,917,523.31	5,844,558.70	5,730,737.58	113,821.12	28,936,785.99
80	8/1/2018	28,936,785.99	7,291,666.93	21,645,119.06	5,844,558.70	5,749,500.55	95,058.15	23,187,285.44
81	9/1/2018	23,187,285.44	5,833,333.60	17,353,951.84	5,844,558.70	5,768,345.93	76,212.77	17,418,939.51
82	10/1/2018	17,418,939.51	4,375,000.27	13,043,939.24	5,844,558.70	5,787,274.07	57,284.63	11,631,665.44
83	11/1/2018	11,631,665.44	2,916,666.94	8,714,998.50	5,844,558.70	5,806,285.33	38,273.37	5,825,380.11
84	12/1/2018	5,825,380.11	1,458,333.61	4,367,046.50	5,844,558.70	5,825,380.09	19,178.61	0.02
		occ		-	490,942,930.80	430,065,164.56	60,877,766.24	
	-	AEP			515,189,910.48	430,065,164.22	85,124,746.26	
		Over Collection			24,246,979.68	(0.35)	24,246,980.03	
	-							

AEP	
Option Two	
ADIT	\$0.00
Deferred Balance	\$430,065,164.59

5.27%

7 Years

Years								
		Beginning		Balance	Total			Ending
. –	Date	Balance	ADIT	Net of ADIT	Payment	Principal	Interest	Balance
1	1/1/2012	430,065,164.59	•	430,065,164.59	6,133,213.22	4,244,510.37	1,888,702.85	425,820,654.22
2	2/1/2012	425,820,654.22	•	425,820,654.22	6,133,213.22	4,263,150.85	1,870,062.37	421,557,503.37
3	3/1/2012	421,557,503.37	-	421,557,503.37	6,133,213.22	4,281,873.18	1,851,340.04	417,275,630.18
5	4/1/2012 5/1/2012	417,275,630.18 412,974,952.44		417,275,630.18 412,974,952.44	6,133,213.22	4,300,677.74	1,832,535.48	412,974,952.44
6	6/1/2012	408,655,387.55	8	408,655,387.55	6,133,213.22 6,133,213.22	4,319,564.89 4,338,534.98	1,813,648.33 1,794,678.24	408,655,387.55
7	7/1/2012	404,316,852.58		404,316,852.58	6,133,213.22	4,357,588.38	1,775,624.84	404,316,852.58 399,959,264.20
8	8/1/2012	399,959,264.20	· .	399,959,264.20	6,133,213.22	4,376,725.45	1,756,487.77	395,582,538.75
9	9/1/2012	395,582,538.75	-	395,582,538.75	6,133,213.22	4,395,946.57	1,737,266.65	391,186,592.18
10	10/1/2012	391,186,592.18		391,186,592.18	6,133,213.22	4,415,252.10	1,717,961.12	386,771,340.08
11	11/1/2012	386,771,340.08		386,771,340.08	6,133,213.22	4,434,642.42	1,698,570.80	382,336,697.66
12	12/1/2012	382,336,697.66	•	382,336,697.66	6,133,213.22	4,454,117.89	1,679,095.33	377,882,579.77
13	1/1/2013	377,882,579.77	-	377,882,579.77	6,133,213.22	4,473,678.89	1,659,534.33	373,408,900.88
14	2/1/2013	373,408,900.88	•	373,408,900.88	6,133,213.22	4,493,325.80	1,639,887.42	368,915,575.08
15	3/1/2013	368,915,575.08	-	368,915,575.08	6,133,213.22	4,513,058.99	1,620,154.23	364,402,516.09
16	4/1/2013	364,402,516.09	•	364,402,516.09	6,133,213.22	4,532,878.84	1,600,334.38	359,869,637.26
17	5/1/2013	359,869,637.26	•	359,869,637.26	6,133,213.22	4,552,785.73	1,580,427.49	355,316,851.53
18 19	6/1/2013	355,316,851.53	-	355,316,851.53	6,133,213.22	4,572,780.05	1,560,433.17	350,744,071.48
20	7/1/2013 8/1/2013	350,744,071.48 346,151,209.31	•	350,744,071.48	6,133,213.22	4,592,862.17	1,540,351.05	346,151,209.31
21	9/1/2013	341,538,176.82		346,151,209.31 341,538,176.82	6,133,213.22 6,133,213.22	4,613,032.49	1,520,180.73	341,538,176.82
22	10/1/2013	336,904,885.42	•	336,904,885.42	6,133,213.22	4,633,291.39 4,653,639.26	1,499,921.83 1,479,573.96	336,904,885.42 332,251,246.16
23	11/1/2013	332,251,246.16	•	332,251,246.16	6,133,213.22	4,674,076.50	1,459,136.72	327,577,169.66
24	12/1/2013	327,577,169.66		327,577,169.66	6,133,213.22	4,694,603.48	1,438,609.74	322,882,566.18
25	1/1/2014	322,882,566.18		322,882,566.18	6,133,213.22	4,715,220.62	1,417,992.60	318,167,345.56
26	2/1/2014	318,167,345.56	•	318,167,345.56	6,133,213.22	4,735,928.29	1,397,284.93	313,431,417.27
27	3/1/2014	313,431,417.27	-	313,431,417.27	6,133,213.22	4,756,726.91	1,376,486.31	308,674,690.35
28	4/1/2014	308,674,690.35	-	308,674,690.35	6,133,213.22	4,777,616.87	1,355,596.35	303,897,073.48
29	5/1/2014	303,897,073.48	-	303,897,073.48	6,133,213.22	4,798,598.57	1,334,614.65	299,098,474.91
30	6/1/2014	299,098,474.91	-	299,098,474.91	6,133,213.22	4,819,672.42	1,313,540.80	294,278,802.49
31	7/1/2014	294,278,802.49	•	294,278,802.49	6,133,213.22	4,840,838.81	1,292,374.41	289,437,963.68
32 33	8/1/2014	289,437,963.68	•	289,437,963.68	6,133,213.22	4,862,098.16	1,271,115.06	284,575,865.52
34	9/1/2014 10/1/2014	284,575,865.52 279,692,414.64	-	284,575,865.52	6,133,213.22	4,883,450.88	1,249,762.34	279,692,414.64
35	11/1/2014	274,787,517.27	-	279,692,414.64 274,787,517.27	6,133,213.22 6,133,213.22	4,904,897.37 4,926,438.04	1,228,315.85 1,206,775.18	274,787,517.27
36	12/1/2014	269,861,079.23	-	269,861,079.23	6,133,213.22	4,948,073.31	1,185,139.91	269,861,079.23 264,913,005.92
37	1/1/2015	264,913,005.92		264,913,005.92	6,133,213.22	4,969,803.60	1,163,409.62	259,943,202.32
38	2/1/2015	259,943,202.32	-	259,943,202.32	6,133,213.22	4,991,629.32	1,141,583.90	254,951,572.99
39	3/1/2015	254,951,572.99		254,951,572.99	6,133,213.22	5,013,550.90	1,119,662.32	249,938,022.10
40	4/1/2015	249,938,022.10	-	249,938,022.10	6,133,213.22	5,035,568.74	1,097,644.48	244,902,453.36
41	5/1/2015	244,902,453.36	•	244,902,453.36	6,133,213.22	5,057,683.28	1,075,529.94	239,844,770.08
42	6/1/2015	239,844,770.08	•	239,844,770.08	6,133,213.22	5,079,894.94	1,053,318.28	234,764,875.14
43	7/1/2015	234,764,875.14	•	234,764,875.14	6,133,213.22	5,102,204.14	1,031,009.08	229,662,671.00
44	8/1/2015	229,662,671.00	•	229,662,671.00	6,133,213.22	5,124,611.32	1,008,601.90	224,538,059.68
45 46	9/1/2015 10/1/2015	224,538,059.68	-	224,538,059.68	6,133,213.22	5,147,116.91	986,096.31	219,390,942.77
47	11/1/2015	219,390,942.77 214,221,221.44		219,390,942.77 214,221,221.44	6,133,213.22 6,133,213.22	5,169,721.33 5,192,425.02	963,491.89	214,221,221.44
48	12/1/2015	209,028,796.42		209,028,796.42	6,133,213.22	5,215,228.42	940,788.20 917,984.80	209,028,796.42 203,813,567.99
49	1/1/2016	203,813,567.99	-	203,813,567.99	6,133,213.22	5,238,131.97	895,081.25	198,575,436.03
50	2/1/2016	198,575,436.03	•	198,575,436.03	6,133,213.22	5,261,136.10	872,077.12	193,314,299.93
51	3/1/2016	193,314,299.93		193,314,299.93	6,133,213.22	5,284,241.25	848,971.97	188,030,058.68
52	4/1/2016	188,030,058.68	-	188,030,058.68	6,133,213.22	5,307,447.88	825,765.34	182,722,610.80
53	5/1/2016	182,722,610.80	-	182,722,610.80	6,133,213.22	5,330,756.42	802,456.80	177,391,854.38
54	6/1/2016	177,391,854.38	-	177,391,854.38	6,133,213.22	5,354,167.33	779,045.89	172,037,687.05
55	7/1/2016	172,037,687.05	-	172,037,687.05	6,133,213.22	5,377,681.04	755,532.18	166,660,006.01
56 57	8/1/2016 9/1/2016	166,660,006.01 161,258,707.98	•	166,660,006.01 161,258,707.98	6,133,213.22 6,133,213.22	5,401,298.03 5,425,018.73	731,915.19 708,194.49	161,258,707.98
58	10/1/2016	155,833,689.25		155,833,689.25	6,133,213.22	5,448,843.60		155,833,689.25 150,384,845.65
59	11/1/2016	150,384,845.65	-	150,384,845.65	6,133,213.22	5,472,773.11	684,369.62 660,440.11	144,912,072.54
60	12/1/2016	144,912,072.54	-	144,912,072.54	6,133,213.22	5,496,807.70	636,405.52	139,415,264.84
61	1/1/2017	139,415,264.84	-	139,415,264.84	6,133,213.22	5,520,947.85	612,265.37	133,894,316.99
62	2/1/2017	133,894,316.99	-	133,894,316.99	6,133,213.22	5,545,194.01	588,019.21	128,349,122.98
63	3/1/2017	128,349,122.98	•	128,349,122.98	6,133,213.22	5,569,546.65	563,666.57	122,779,576.33
64	4/1/2017	122,779,576.33	•	122,779,576.33	6,133,213.22	5,594,006.25	539,206.97	117,185,570.08
65	5/1/2017	117,185,570.08	-	117,185,570.08	6,133,213.22	5,618,573.26	514,639.96	111,566,996.82
66	6/1/2017	111,566,996.82	•	111,566,996.82	6,133,213.22	5,643,248.16	489,965.06	105,923,748.66
67	7/1/2017	105,923,748.66	-	105,923,748.66	6,133,213.22	5,668,031.42	465,181.80	100,255,717.24
68	8/1/2017	100,255,717.24	-	100,255,717.24	6,133,213.22	5,692,923.53	440,289.69	94,562,793.71
69	9/1/2017	94,562,793.71	-	94,562,793.71	6,133,213.22	5,717,924.95	415,288.27	88,844,868.76
70			•	88,844,868.76	6,133,213.22	5,743,036.17	390,177.05	83,101,832.59
71 72		83,101,832.59 77,333,574.92	•	83,101,832.59 77,333,574.92	6,133,213.22	5,768,257.67 5 793 589 94	364,955.55	77,333,574.92
73		71,539,984.98	-	71,539,984.98	6,133,213.22 6,133,213.22	5,793,589.94 5,819,033.45	339,623.28 314,179.77	71,539,984.98 65,720,951.53
74			-	65,720,951.53	6,133,213.22	5,844,588.71	288,624.51	59,876,362.82
75				59,876,362.82	6,133,213.22	5,870,256.19	262,957.03	54,006,106.63
76			-	54,006,106.63	6,133,213.22	5,896,036.40	237,176.82	48,110,070.23

77	5/1/2018	48,110,070.23		48.110.070.23	6,133,213.22	5,921,929.83	211,283.39	42,188,140.40
<i>''</i>	3/ 4/ 2010	40,110,070.23	-	40,110,070.23	0,133,213.22	3,321,323.03	211,203.39	42,100,140.40
78	6/1/2018	42,188,140.40		42,188,140.40	6,133,213.22	5,947,936.97	185,276.25	36,240,203.43
79	7/1/2018	36,240,203.43	•	36,240,203.43	6,133,213.22	5,974,058.33	159,154.89	30,266,145.10
80	8/1/2018	30,266,145.10	•	30,266,145.10	6,133,213.22	6,000,294.40	132,918.82	24,265,850.70
81	9/1/2018	24,265,850.70	-	24,265,850.70	6,133,213.22	6,026,645.69	106,567.53	18,239,205.01
82	10/1/2018	18,239,205.01	•	18,239,205.01	6,133,213.22	6,053,112.71	80,100.51	12,186,092.30
83	11/1/2018	12,186,092.30	•	12,186,092.30	6,133,213.22	6,079,695.96	53,517.26	6,106,396.33
84	12/1/2018	6,106,396.33	•	6,106,396.33	6,133,213.22	6,106,395.96	26,817.26	0.37
	¢.	AEP		-	515,189,910.48	430,065,164.22	85,124,746.26	
		200			490,942,930.80	430,065,164.56	60,877,766.24	
		Over Collection			24,246,979.68	(0.35)	24,246,980.03	

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### Case No(s). 11-0346-EL-SSO, 11-0348-EL-SSO, 11-0349-EL-AAM, 11-0350-EL-AAM

Summary: Testimony Direct Testimony of Ibrahim Soliman on Behalf of the Office of the Ohio Consumers' Counsel electronically filed by Patti Mallarnee on behalf of Grady, Maureen