Company Exhibit______

BEFORE THE
PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. 4928.143 in the Form of an Electric Security Plan	)	Case No. 14-1297-EL-SSO

SECOND SUPPLEMENTAL TESTIMONY OF

EILEEN M. MIKKELSEN

ON BEHALF OF

OHIO EDISON COMPANY
THE CLEVELAND ELECTRIC ILLUMINATING COMPANY
THE TOLEDO EDISON COMPANY

MAY 4, 2015

INTRODUCTION

Q. PLEASE STATE YOUR NAME, POSITION, AND BUSINESS ADDRESS.

A. My name is Eileen M. Mikkelsen. I am employed by FirstEnergy Service Company as the Director of Rates and Regulatory Affairs for the FirstEnergy Corp. Ohio utilities (Ohio Edison Company ("Ohio Edison"), The Cleveland Electric Illuminating Company ("CEI") and The Toledo Edison Company ("Toledo Edison") (collectively, the "Companies"). My business address is 76 South Main Street, Akron, Ohio 44308.

Q. HAVE YOU PROVIDED WRITTEN TESTIMONY BEFORE IN THESE PROCEEDINGS?

A. Yes. I submitted written direct testimony on August 4, 2014 in which I provided an overview and support of the application for the Companies' fourth electric security plan entitled Powering Ohio's Progress (also referred to as "ESP IV"). My testimony also addressed a number of policy issues and included some specific recommendations related to the Powering Ohio's Progress filing. I also submitted supplemental testimony on December 22, 2014 in which I provided an overview of the Stipulation and explained why the terms and conditions of the Stipulation are more favorable in the aggregate than the expected results that would otherwise apply under a market rate offer ("MRO"). My supplemental testimony also discusses the criteria the Commission has used in the past when considering stipulated agreements and how the Stipulation in this proceeding meets these criteria.

Q. WHAT IS THE PURPOSE OF YOUR SECOND SUPPLEMENTAL TESTIMONY IN THIS PROCEEDING?

A. The purpose of my second supplemental testimony is to provide an overview of how the Companies' Application addresses the factors identified in the Commission's February 25, 2015 Opinion and Order in AEP Ohio's third electric security plan case, Case No. 13-2385-EL-SSO ("AEP Ohio Order"), to provide an introduction of the supplemental witnesses and an overview of how their supplemental testimony further addresses the factors identified in the AEP Ohio Order, to illustrate the impact closure of the Plants would have on electric prices and to address certain issues raised in the AEP Ohio Order as they relate to the Retail Rate Stability Rider ("Rider RRS") proposed in the Companies' Application.

AEP OHIO ORDER FACTORS

Q. HAVE YOU REVIEWED THE AEP OHIO ORDER IN CASE NO. 13-2385-EL-SSO RELATED TO AEP OHIO'S PROPOSED PPA RIDER AND THE PROPOSED TRANSACTION?

A. Yes. I reviewed the AEP Ohio Order in that regard and during that review I noted that the Commission identified certain factors that the Commission will balance, but not be bound by, in deciding whether to approve the AEP Ohio request for cost recovery in a future proceeding.

Q. PLEASE SUMMARIZE THE FACTORS LISTED IN THE AEP OHIO ORDER RELATED TO AEP OHIO'S PROPOSED PPA RIDER.

A. The AEP Ohio Order included four factors related to the PPA Rider: 1) financial need of the generating plant; 2) necessity of the generating facility, in light of future reliability concerns, including supply diversity; 3) description of how the generating plant is compliant with all pertinent environmental regulations and its plan for compliance with pending environmental regulations; and 4) the impact that a closure of the generating plant would have on electric prices and the resulting effect on economic development within the state.

Q. DID THE COMPANIES' APPLICATION AND DIRECT TESTIMONY IN THIS PROCEEDING ADDRESS THE FACTORS IDENTIFIED IN THE AEP OHIO ORDER?

A. Yes. The Companies' Application and testimony in this proceeding addressed the factors identified in the AEP Ohio Order.

Q. HOW DOES THE COMPANIES' APPLICATION AND DIRECT TESTIMONY ADDRESS THE FIRST AEP OHIO ORDER FACTOR, FINANCIAL NEED OF THE GENERATING PLANT?

A. Mr. Moul's testimony addresses the financial need of the Davis-Besse Nuclear Power Station ("Davis-Besse") and the W.H. Sammis Plant ("Sammis") (collectively, the "Plants") and how markets have not and are not providing sufficient revenue to ensure the continued operation of the Plants. Mr. Ruberto's Attachment JAR-1 (Revised) illustrates the financial need of the plants that are included in the Economic Stability Program by demonstrating that the aggregate market revenues from the Plants and the FES 4.85% interest in the Ohio Valley Electric Cooperative ("OVEC") are less than the projected costs of the Plants and OVEC in the near term. More generally, Mr. Rose's testimony addresses the developments which have lowered market prices over the past few years contributing to the financial need of the Plants and OVEC.

Q. ARE THE COMPANIES FILING SUPPLEMENTAL TESTIMONY TO FURTHER ADDRESS THE FIRST AEP OHIO ORDER FACTOR?

A. Yes. Mr. Moul's supplemental testimony further illustrates the financial need of the Plants and OVEC and describes in more detail why simply covering avoidable costs does not assure the continued operation of the Plants. In addition, Dr. Makovich's supplemental testimony describes the "missing money" problem that exists in the U.S. power market today and how the "missing money" problem contributes to the financial need at both Davis-Besse and Sammis.

Q. HOW DOES THE APPLICATION AND DIRECT TESTIMONY ADDRESS THE SECOND AEP OHIO ORDER FACTOR, NECESSITY OF THE GENERATING FACILITY, IN LIGHT OF FUTURE RELIABILITY CONCERNS, INCLUDING SUPPLY DIVERSITY?

A. Mr. Moul's direct testimony discusses the necessity of maintaining the reliability benefits of resource diversity, both from a fuel source and asset class perspective. Mr. Strah's direct testimony explains how the continued operation of the Plants and OVEC is needed to promote stability and certainty for the Companies' delivery system. Mr. Cunningham's direct testimony (as adopted by Mr. Phillips and referred to hereafter as "Mr. Phillips' direct testimony") describes: (1) a conservative estimate of the transmission investment that would be necessary to maintain reliability based on PJM planning criteria if the Plants were to close; (2) the increase in transmission system power losses that would occur; and (3) the increased risk of transmission system instability due to the greater distance between generation sources and load if the Plants were to close.

Q. ARE THE COMPANIES FILING SUPPLEMENTAL TESTIMONY TO FURTHER ADDRESS THE SECOND AEP OHIO ORDER FACTOR?

A. Yes. Mr. Moul's supplemental testimony discusses the need to continue to operate the Plants in light of future reliability concerns, including supply diversity. Mr. Phillips' supplemental testimony describes why the continued operation of Sammis and Davis-Besse are necessary from a reliability perspective even if transmission upgrades identified in the transmission impact study were to occur. Mr. Phillips highlights the important role generating plants play in the real time operation of the transmission system. Dr. Makovich's supplemental testimony describes the value of power supply diversity and why preserving a diverse power supply is important to retail customers.

Q. HOW DOES THE APPLICATION AND DIRECT TESTIMONY ADDRESS THE THIRD AEP OHIO ORDER FACTOR, DESCRIPTION OF HOW THE GENERATING PLANT IS COMPLIANT WITH ALL PERTINENT ENVIRONMENTAL REGULATIONS AND ITS PLAN FOR COMPLIANCE WITH PENDING ENVIRONMENTAL REGULATIONS?

A. Mr. Harden's direct testimony addresses the Sammis and Davis-Besse environmental compliance.

Q. ARE THE COMPANIES FILING SUPPLEMENTAL TESTIMONY TO FURTHER ADDRESS THE THIRD AEP OHIO ORDER FACTOR?

A. Yes. Mr. Evans' supplemental testimony provides additional information regarding the current compliance for the Plants with all pertinent environmental regulations. Mr. Evans also describes the plan for compliance with pending environmental regulations that are final and awaiting action by the state or the Companies.

Q. HOW DOES THE APPLICATION AND DIRECT TESTIMONY ADDRESS THE FOURTH AEP OHIO ORDER FACTOR, IMPACT THAT A CLOSURE OF THE GENERATING PLANT WOULD HAVE ON ELECTRIC PRICES AND THE RESULTING EFFECT ON ECONOMIC DEVELOPMENT WITHIN THE STATE?

A. Mr. Phillips' direct testimony describes the incremental transmission investment that would need to be recovered from customers if all the lines were reconductored. Mr. Ruberto's direct testimony describes the $2 billion in rate stabilization credits that customers would forego if the Plants and OVEC were to close. Ms. Murley's direct testimony describes the economic benefit associated with the continued operation of the Sammis and Davis-Besse plants.

Q. ARE THE COMPANIES FILING ADDITIONAL TESTIMONY TO FURTHER ADDRESS THE FOURTH AEP OHIO FACTOR?

A. Yes. Mr. Phillips' supplemental testimony describes the range of investment that would be necessary to maintain reliability if Davis-Besse and Sammis were removed from the transmission grid. These investments would increase electric prices.

My second supplemental testimony describes the impact on electric prices for the Companies' customers and customers of other Electric Distribution Utilities ("EDUs"), municipal electric systems and rural cooperatives that would result from the investments described in Mr. Phillips' supplemental testimony and from foregoing the benefits of Rider RRS as described in Mr. Ruberto's direct testimony. In addition, I summarize a number of factors raised by the Companies' witnesses that could also exert upward pressure on electric prices.

Dr. Makovich's supplemental testimony describes the value of supply diversity and addresses why the retirements of existing base load power plants, like Davis-Besse and Sammis, can increase electric prices.

Ms. Murley's supplemental testimony further describes the economic development impact on the State of Ohio if Davis-Besse and Sammis were to close.

IMPACT OF PLANT CLOSURE ON ELECTRIC PRICES

Q. IF SAMMIS AND DAVIS-BESSE WERE TO CLOSE, WOULD IT HAVE AN EFFECT ON ELECTRIC PRICES?

A. Yes. Information provided by Mr. Phillips and Mr. Ruberto demonstrates that if the Plants close, electric prices will increase.

Q. HOW WOULD ELECTRIC PRICES INCREASE IF THE INVESTMENTS DESCRIBED IN MR. PHILLIPS' DIRECT AND SUPPLEMENTAL TESTIMONY WERE NECESSITATED BY CLOSURE OF THE PLANTS?

A. Mr. Phillips' testimony provides that if Sammis and Davis-Besse closed additional transmission investments of at least $436.5 million would need to be made to maintain reliability. Mr. Phillips further describes the difficulty in estimating today precisely how the dollars spent to maintain reliability would be allocated to various Companies since the final allocation is very dependent upon the solution chosen. By way of recent example, Mr. Phillips points to the recent experience with cost allocations resulting from the transmission projects necessitated by the retirement of 2,400 MWs of coal plants in Ohio between 2012 and 2015. Assuming costs associated with the transmission projects needed to maintain reliability if the Plants were to retire were allocated in a similar fashion, my Attachment EMM-1 shows the estimated nominal increase in revenue requirements for the Companies' customers arising from the increased transmission spend is $1.7 billion. The net present value of the revenue requirement associated with the increased transmission spend for the Companies' customers is $534 million. Mr. Phillips further testified that the initial conservative estimate for transmission investments of $436.5 million assumed all of the overloaded facilities were remedied by reconductoring when it was very likely that lines would need to be rebuilt or perhaps even replaced with more expensive new facilities. This would necessarily increase the cost of the transmission upgrades. Under that set of assumptions, Mr. Phillips' estimates the transmission investments could be nearly $1.1 billion. Using the same allocation assumptions but the higher investment, my Attachment EMM-2 shows the estimated nominal increase in revenue requirements for the Companies' customers under the rebuild or replace scenario would be $4.1 billion. The net present value of the revenue requirement associated with the rebuild or replace scenario for the Companies' customers would be $1.3 billion.

If the Plants were to close, the electric prices for the Companies' customers could increase between $1.7 billion and $4.1 billion related to additional transmission investment, depending on the final determination by PJM and the transmission owners regarding the ultimate combination of new facilities and reconductored or rebuilt existing facilities.

Q. WOULD THERE BE OTHER EFFECTS ON ELECTRIC PRICES IF THE PLANTS WERE TO CLOSE?

A. Yes. In addition to the increases in transmission related prices, customers would be deprived of the benefit from the retail rate stabilization credits shown in Attachment JAR-1 (Revised) to Mr. Ruberto's testimony. As a result, customers' future rates would increase nominally by $2.018 billion dollars. The net present value of the foregone retail rate stability credits is $770 million.

Q. IN TOTAL, WHAT IS THE ESTIMATED IMPACT ON ELECTRIC PRICES ASSOCIATED WITH TRANSMISSION INVESTMENT AND FOREGONE RETAIL RATE STABILITY CREDITS?

A. Taking these two elements together, the Companies' customers could see an increase in electric prices ranging from $3.7 billion to $6.1 billion and a net present value increase ranging from $1.3 billion to $2.1 billion

Q. WOULD THERE BE OTHER EFFECTS ON ELECTRIC PRICES IF SAMMIS AND DAVIS-BESSE CLOSED?

A. Yes. There likely would be additional upward pressure on electric prices beyond the impacts noted above if the Plants closed. This upward pressure is less readily quantifiable but nevertheless would contribute to higher electric prices. As the Companies' witnesses have shown, there would likely be at least five other adverse impacts on electric prices as a result of the closure of the Sammis and Davis-Besse.

First, as Mr. Rose points out, as coal plants retire and demand grows, natural gas plants increasingly will set the marginal price in the energy markets. Because natural gas plants have higher variable costs than coal plants, like Sammis, the expected result would be an increase in energy prices. Mr. Rose further points out that retirements of units will also result in an increase in capacity prices. Dr. Makovich concludes that the retirement of Sammis and Davis-Besse in combination with thousands of megawatts of other coal-fired generation in Ohio and elsewhere would result in retail power prices in Ohio that are higher and more volatile than would otherwise occur.

Second, as Mr. Strah discusses, plant closures may lead to increased load shedding, which adversely affects the Companies' delivery system. As Mr. Strah describes, when "cold" load is brought back for an entire circuit, there is a higher likelihood of equipment and line failures, which would require the Companies to incur additional costs which would, in turn, need to be recovered from customers.

Third, as Mr. Phillips points out, even with additional reliability related transmission investment, there will be higher transmission system line losses which will result in higher electric prices. Further, Mr. Phillips also describes the outages that will be necessary during the transmission upgrades which could result in higher congestion costs.

Fourth, as Ms. Murley demonstrates, the Plants' closure will have an impact on economic development in the areas of those plants and in Ohio. If the Plants close, I would expect the demand for energy and capacity in our service territories would be reduced. If demand is reduced, revenue requirements would need to be recovered over fewer billing determinants which, all else equal, would result in higher electric prices.

Fifth, the limitation on the State's flexibility to implement the Clean Power Plan because of the retirement of a zero carbon resource -- namely Davis-Besse -- could result in an overall higher cost to comply.

Q. ARE THE TRANSMISSION RELATED PRICE INCREASES LIMITED TO THE COMPANIES' CUSTOMERS?

A. No. Electric customers of other utilities, municipal electric systems and rural electric cooperatives would be impacted, at a minimum, by higher transmission rates. As Mr. Phillips states, the transmission investment required to maintain reliability if the Plants were to close is allocated such that some of the costs for the transmission upgrades will be paid for by other electric customers in Ohio and in other states. Precisely what share of these costs other electric customers would be required to pay would depend upon the final solutions chosen to remedy the transmission reliability concerns.

Some of the other effects on electric prices described above may also put additional upward pressure on the electric prices paid by electric customers of other utilities, municipal electric systems and rural electric cooperatives in the State of Ohio and beyond.

<u>ISSUES RAISED IN AEP OHIO ORDER RELATED TO PROPOSED RIDER RRS</u>

Q. WAS AEP OHIO ORDERED TO INCLUDE CERTAIN OTHER ADDITIONAL PROVISIONS IN ITS PPA RIDER PROPOSAL?

A. Yes, AEP Ohio was directed in its PPA rider proposal to:

1. Provide for rigorous Commission oversight of the rider;

2. Commit to full information sharing with the Commission and its Staff; and

3. Include an alternative plan to allocate the rider's financial risk between both the Company and its ratepayers.

Q. HAVE THE COMPANIES ADDRESSED THESE PROVISIONS IN THEIR DIRECT TESTIMONY AND APPLICATION?

A. Yes. In my direct testimony, I provide a detailed explanation of the rigorous Commission oversight proposed for Rider RRS. In addition to addressing the Commission's concerns about Commission oversight and information sharing by the Companies, the review process also serves as a mechanism to allocate the financial risk associated with Rider RRS between the Companies and the customers. The Companies' proposal contemplates that the Commission would conduct periodic reviews to assure itself that actions taken by the Companies when selling the output from the Plants and OVEC into the PJM market were not unreasonable. Further, the Commission would review the actual costs to assure itself they are not unreasonable. The Companies, not their customers, would be responsible for the adjustments made to Rider RRS based on actions deemed unreasonable by the Commission.

Q. WHAT IS YOUR UNDERSTANDING OF HOW THE SEVERABILITY PROVISION SET FORTH ON PAGES 25-26 OF THE AEP OHIO ORDER WOULD APPLY TO THE COMPANIES?

A. I understand that this provision would be triggered if, after the Commission approves the Companies' Electric Security Plan IV ("ESP IV"), including the Economic Stability

Program, and the Companies accept the Commission's Order, then a court of competent jurisdiction invalidates the Rider RRS in whole or in part, the provision would require the Companies to continue all other provisions of the ESP IV as previously approved by the Commission and accepted by the Companies.

Q. HOW WOULD THE COMPANIES ADDRESS THE SEVERABILITY ISSUE?

A. I understand that the Commission is trying to make sure that there is an ESP in place for customers to rely on if any or all of Rider RRS is rejected by a court of competent jurisdiction. From the Companies' standpoint, the terms of the stipulation filed on December 22, 2014 ("Stipulation"), were agreed to as part of an overall package - - the principal piece of which was Rider RRS. The Companies propose, in light of the foregoing concern, to rely upon a common practice that would allow parties to work to return the party negatively impacted by the court's order to a position as close to its original position. Similarly, in this case, should a court reject Rider RRS, the Companies' proposal would require the Signatory Parties to work in good faith and on an expedited basis, not to exceed 60 days, to cure any court determined deficiency. The Companies would then file (or jointly file with Signatory Parties) the modified Rider RRS, or its successor provision, with the Commission for expedited approval, and such approval shall not be withheld if the modified Rider RRS, or its successor provision, provides a reasonable remedy to cure the deficiency. During this process, the ESP IV would either remain in effect or, depending on timing, go into effect including all the agreed upon stipulated provisions, consistent with the Commission's prior approval of the ESP IV. The Companies' agreement to permit the Stipulation provisions to go into effect in this manner (rather than terminate pursuant to the terms of the Stipulation) is contingent upon the Signatory Parties supporting the modified Rider RRS, or its successor provision. This proposed resolution is appropriate because the Companies and the Signatory Parties have worked hard to create an ESP IV, each recognizing that Rider RRS is a critical component for the Companies. The Signatory Parties would have an opportunity to express any concerns with the modified Rider RRS, or its successor provision to the Commission. However, if such concerns are not accepted by the Commission, then any Signatory Party that opposed the modified Rider RRS or its successor provision would forfeit its Stipulation provisions.

CONCLUSION

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes. I reserve the right to supplement my testimony.

Attachment EMM-1

Estimated Revenue Requirement Associated with Avoided Transmission Investment **($ in Millions)**

(1)	Full Transmission Upgrade ($M)	$436.50	Source: Phillips Supplemental Testimony
(2)	Companies' Allocation	82.00%	Source: Phillips Supplemental Testimony
(3)	Companies' Allocated Amount ($M)	**$357.93**	Calculation: (1) x (2)
(4)			
(5)	Assume book life of investment	42 years	Source: ATSI Formula Rate Filing (Attachment H)
(6)	Assume tax life of investment	15 years	Assumed tax life of investment
(7)			
(8)	Assume debt ratio	40.32%	Source: ATSI Formula Rate Filing (Attachment H)
(9)	Assume equity ratio	59.68%	Source: ATSI Formula Rate Filing (Attachment H)
(10)	Assume debt cost	5.68%	Source: ATSI Formula Rate Filing (Attachment H)
(11)	Assume equity cost	12.38%	Source: ATSI Formula Rate Filing (Attachment H)
(12)	Overall ROR	9.68%	Calculation: ((8) x (10)) + ((9) x (11))
(13)			
(14)	State Income Tax Rate	1.40%	Source: ATSI Formula Rate Filing (Attachment H)
(15)	Federal Income Tax rate	35.00%	Source: ATSI Formula Rate Filing (Attachment H)
(16)	Composite Income Tax Rate	35.91%	Calculation: (15) + ((1 - (15)) x (14))
(17)	Property Tax	3.18%	Source: ATSI Formula Rate Filing (Attachment H)

Revenue Requirement Calculation

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)
Year	Net Book Balance	Book Depr. Expense	Tax Depreciation Rate	Tax Depreciation Expense	DIT Expense	ADIT	Rate Base Balance	Interest Expense	Equity Return	CIT Expense	Property Tax	Revenue Req.	Present Value
1	$357.93	$8.52	8.750%	$31.32	$8.19	$0.00	$357.93	$8.19	$26.44	$6.63	$11.39	$69.37	$63.25
2	$349.41	$8.52	9.125%	$32.66	$8.67	$8.19	$341.22	$7.81	$25.21	$5.46	$11.39	$67.06	$55.75
3	$340.89	$8.52	8.213%	$29.40	$7.50	$16.86	$324.03	$7.42	$23.94	$5.92	$11.39	$64.68	$49.03
4	$332.36	$8.52	7.391%	$26.46	$6.44	$24.35	$308.01	$7.05	$22.76	$6.31	$11.39	$62.47	$43.17
5	$323.84	$8.52	6.652%	$23.81	$5.49	$30.79	$293.05	$6.71	$21.65	$6.64	$11.39	$60.40	$38.06
6	$315.32	$8.52	5.987%	$21.43	$4.64	$36.28	$279.04	$6.39	$20.62	$6.92	$11.39	$58.47	$33.59
7	$306.80	$8.52	5.905%	$21.14	$4.53	$40.92	$265.88	$6.09	$19.64	$6.48	$11.39	$56.65	$29.68
8	$298.28	$8.52	5.905%	$21.14	$4.53	$45.45	$252.83	$5.79	$18.68	$5.94	$11.39	$54.85	$26.20
9	$289.75	$8.52	5.905%	$21.14	$4.53	$49.98	$239.78	$5.49	$17.72	$5.40	$11.39	$53.04	$23.10
10	$281.23	$8.52	5.905%	$21.14	$4.53	$54.50	$226.73	$5.19	$16.75	$4.86	$11.39	$51.24	$20.35
11	$272.71	$8.52	5.905%	$21.14	$4.53	$59.03	$213.67	$4.89	$15.79	$4.32	$11.39	$49.44	$17.90
12	$264.19	$8.52	5.905%	$21.14	$4.53	$63.56	$200.62	$4.59	$14.82	$3.78	$11.39	$47.63	$15.72
13	$255.66	$8.52	5.905%	$21.14	$4.53	$68.09	$187.57	$4.29	$13.86	$3.24	$11.39	$45.83	$13.79
14	$247.14	$8.52	5.905%	$21.14	$4.53	$72.62	$174.52	$3.99	$12.89	$2.70	$11.39	$44.03	$12.08
15	$238.62	$8.52	5.905%	$21.14	$4.53	$77.15	$161.47	$3.70	$11.93	$2.15	$11.39	$42.22	$10.56
16	$230.10	$8.52	0.738%	$2.64	-$2.11	$81.68	$148.42	$3.40	$10.97	$8.26	$11.39	$40.42	$9.22
17	$221.58	$8.52	0.000%	$0.00	-$3.06	$79.57	$142.00	$3.25	$10.49	$8.94	$11.39	$39.54	$8.22
18	$213.05	$8.52	0.000%	$0.00	-$3.06	$76.51	$136.54	$3.12	$10.09	$8.71	$11.39	$38.78	$7.35
19	$204.53	$8.52	0.000%	$0.00	-$3.06	$73.45	$131.08	$3.00	$9.68	$8.49	$11.39	$38.03	$6.58
20	$196.01	$8.52	0.000%	$0.00	-$3.06	$70.39	$125.62	$2.87	$9.28	$8.26	$11.39	$37.27	$5.88
21	$187.49	$8.52	0.000%	$0.00	-$3.06	$67.33	$120.16	$2.75	$8.88	$8.03	$11.39	$36.52	$5.25
22	$178.97	$8.52	0.000%	$0.00	-$3.06	$64.27	$114.70	$2.62	$8.47	$7.81	$11.39	$35.76	$4.69
23	$170.44	$8.52	0.000%	$0.00	-$3.06	$61.21	$109.23	$2.50	$8.07	$7.58	$11.39	$35.01	$4.18
24	$161.92	$8.52	0.000%	$0.00	-$3.06	$58.15	$103.77	$2.37	$7.67	$7.36	$11.39	$34.25	$3.73
25	$153.40	$8.52	0.000%	$0.00	-$3.06	$55.09	$98.31	$2.25	$7.26	$7.13	$11.39	$33.50	$3.33
26	$144.88	$8.52	0.000%	$0.00	-$3.06	$52.03	$92.85	$2.12	$6.86	$6.90	$11.39	$32.74	$2.97
27	$136.35	$8.52	0.000%	$0.00	-$3.06	$48.97	$87.39	$2.00	$6.46	$6.68	$11.39	$31.99	$2.64
28	$127.83	$8.52	0.000%	$0.00	-$3.06	$45.91	$81.93	$1.87	$6.05	$6.45	$11.39	$31.23	$2.35
29	$119.31	$8.52	0.000%	$0.00	-$3.06	$42.85	$76.46	$1.75	$5.65	$6.23	$11.39	$30.48	$2.09
30	$110.79	$8.52	0.000%	$0.00	-$3.06	$39.79	$71.00	$1.62	$5.25	$6.00	$11.39	$29.72	$1.86
31	$102.27	$8.52	0.000%	$0.00	-$3.06	$36.72	$65.54	$1.50	$4.84	$5.77	$11.39	$28.97	$1.65
32	$93.74	$8.52	0.000%	$0.00	-$3.06	$33.66	$60.08	$1.37	$4.44	$5.55	$11.39	$28.22	$1.47
33	$85.22	$8.52	0.000%	$0.00	-$3.06	$30.60	$54.62	$1.25	$4.04	$5.32	$11.39	$27.46	$1.30
34	$76.70	$8.52	0.000%	$0.00	-$3.06	$27.54	$49.16	$1.12	$3.63	$5.10	$11.39	$26.71	$1.16
35	$68.18	$8.52	0.000%	$0.00	-$3.06	$24.48	$43.69	$1.00	$3.23	$4.87	$11.39	$25.95	$1.02
36	$59.66	$8.52	0.000%	$0.00	-$3.06	$21.42	$38.23	$0.87	$2.82	$4.64	$11.39	$25.20	$0.91
37	$51.13	$8.52	0.000%	$0.00	-$3.06	$18.36	$32.77	$0.75	$2.42	$4.42	$11.39	$24.44	$0.80
38	$42.61	$8.52	0.000%	$0.00	-$3.06	$15.30	$27.31	$0.62	$2.02	$4.19	$11.39	$23.69	$0.71
39	$34.09	$8.52	0.000%	$0.00	-$3.06	$12.24	$21.85	$0.50	$1.61	$3.96	$11.39	$22.93	$0.63
40	$25.57	$8.52	0.000%	$0.00	-$3.06	$9.18	$16.39	$0.37	$1.21	$3.74	$11.39	$22.18	$0.55
41	$17.04	$8.52	0.000%	$0.00	-$3.06	$6.12	$10.92	$0.25	$0.81	$3.51	$11.39	$21.42	$0.49
42	$8.52	$8.52	0.000%	$0.00	-$3.06	$3.06	$5.46	$0.12	$0.40	$3.29	$11.39	$20.67	$0.43
Total	$0.00	$357.93			$0.00		$0.00	$134.84	$435.30	$243.91	$478.49	$1,650.47	$533.68

Net Present Value	$533.68

(B) Balance at beginning of year
(C) Calculation: Line 3 / Line 5
(D) Source: MACRS tax depreciation schedule
(E) Calculation: Column D x Line 3
(F) Calculation: (Column E - Column C) x Line 16
(G) Calculation: Prior Year Column F + Prior Year Column G
(H) Calculation: Column B - Column G
(I) Calculation: Column H x Line 8 x Line 10
(J) Calculation: Column H x Line 9 x Line 11
(K) Calculation: Column J x Line 16 / (1-Line 16) - Column F
(L) Calculation: Line 3 x Line 17
(M) Calculation: Column C + Column F + Column I + Column J + Column K + Column L
(N) Calculation: Net present value of Column M based on Line 12

Attachment EMM-2

Estimated Revenue Requirement Associated with Avoided Transmission Investment ($ in Millions)

(1)	Full Transmission Upgrade ($M)	$1,086.50	Source: Phillips Supplemental Testimony
(2)	Companies' Allocation	82.00%	Source: Phillips Supplemental Testimony
(3)	Companies' Allocated Amount ($M)	**$890.93**	Calculation: (1) x (2)
(4)			
(5)	Assume book life of investment	42 years	Source: ATSI Formula Rate Filing (Attachment H)
(6)	Assume tax life of investment	15 years	Assumed tax life of investment
(7)			
(8)	Assume debt ratio	40.32%	Source: ATSI Formula Rate Filing (Attachment H)
(9)	Assume equity ratio	59.68%	Source: ATSI Formula Rate Filing (Attachment H)
(10)	Assume debt cost	5.68%	Source: ATSI Formula Rate Filing (Attachment H)
(11)	Assume equity cost	12.38%	Source: ATSI Formula Rate Filing (Attachment H)
(12)	Overall ROR	9.68%	Calculation: ((8) x (10)) + ((9) x (11))
(13)			
(14)	State Income Tax Rate	1.40%	Source: ATSI Formula Rate Filing (Attachment H)
(15)	Federal Income Tax rate	35.00%	Source: ATSI Formula Rate Filing (Attachment H)
(16)	Composite Income Tax Rate	35.91%	Calculation: (15) + ((1 - (15)) x (14))
(17)	Property Tax	3.18%	Source: ATSI Formula Rate Filing (Attachment H)

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)
Revenue Requirement Calculation													
Year	Net Book Balance	Book Depr. Expense	Tax Depreciation Rate	Tax Depreciation Expense	DIT Expense	ADIT	Rate Base Balance	Interest Expense	Equity Return	CIT Expense	Property Tax	Revenue Req.	Present Value
1	$890.93	$21.21	8.750%	$77.96	$20.38	$0.00	$890.93	$20.39	$65.82	$16.51	$28.36	$172.67	$157.43
2	$869.72	$21.21	9.125%	$81.30	$21.58	$20.38	$849.34	$19.44	$62.75	$13.58	$28.36	$166.92	$138.76
3	$848.50	$21.21	8.213%	$73.17	$18.66	$41.95	$806.55	$18.46	$59.59	$14.73	$28.36	$161.01	$122.04
4	$827.29	$21.21	7.391%	$65.85	$16.03	$60.61	$766.68	$17.55	$56.64	$15.71	$28.36	$155.50	$107.47
5	$806.08	$21.21	6.652%	$59.27	$13.67	$76.64	$729.44	$16.69	$53.89	$16.53	$28.36	$150.35	$94.74
6	$784.87	$21.21	5.987%	$53.34	$11.54	$90.31	$694.56	$15.90	$51.31	$17.22	$28.36	$145.53	$83.61
7	$763.65	$21.21	5.905%	$52.61	$11.27	$101.84	$661.81	$15.15	$48.90	$16.12	$28.36	$141.01	$73.87
8	$742.44	$21.21	5.905%	$52.61	$11.27	$113.12	$629.32	$14.40	$46.50	$14.78	$28.36	$136.52	$65.21
9	$721.23	$21.21	5.905%	$52.61	$11.27	$124.39	$596.83	$13.66	$44.09	$13.43	$28.36	$132.03	$57.50
10	$700.02	$21.21	5.905%	$52.61	$11.27	$135.67	$564.35	$12.92	$41.69	$12.09	$28.36	$127.54	$50.64
11	$678.80	$21.21	5.905%	$52.61	$11.27	$146.94	$531.86	$12.17	$39.29	$10.74	$28.36	$123.06	$44.55
12	$657.59	$21.21	5.905%	$52.61	$11.27	$158.22	$499.37	$11.43	$36.89	$9.40	$28.36	$118.57	$39.14
13	$636.38	$21.21	5.905%	$52.61	$11.27	$169.49	$466.89	$10.69	$34.49	$8.05	$28.36	$114.08	$34.33
14	$615.17	$21.21	5.905%	$52.61	$11.27	$180.77	$434.40	$9.94	$32.09	$6.71	$28.36	$109.59	$30.07
15	$593.95	$21.21	5.905%	$52.61	$11.27	$192.04	$401.91	$9.20	$29.69	$5.36	$28.36	$105.10	$26.30
16	$572.74	$21.21	0.738%	$6.58	-$5.26	$203.32	$369.42	$8.45	$27.29	$20.55	$28.36	$100.61	$22.95
17	$551.53	$21.21	0.000%	$0.00	-$7.62	$198.06	$353.47	$8.09	$26.11	$22.25	$28.36	$98.41	$20.47
18	$530.32	$21.21	0.000%	$0.00	-$7.62	$190.44	$339.87	$7.78	$25.11	$21.69	$28.36	$96.53	$18.31
19	$509.10	$21.21	0.000%	$0.00	-$7.62	$182.83	$326.28	$7.47	$24.11	$21.13	$28.36	$94.65	$16.37
20	$487.89	$21.21	0.000%	$0.00	-$7.62	$175.21	$312.68	$7.16	$23.10	$20.56	$28.36	$92.77	$14.63
21	$466.68	$21.21	0.000%	$0.00	-$7.62	$167.59	$299.09	$6.85	$22.10	$20.00	$28.36	$90.89	$13.07
22	$445.47	$21.21	0.000%	$0.00	-$7.62	$159.97	$285.49	$6.53	$21.09	$19.44	$28.36	$89.02	$11.67
23	$424.25	$21.21	0.000%	$0.00	-$7.62	$152.35	$271.90	$6.22	$20.09	$18.87	$28.36	$87.14	$10.41
24	$403.04	$21.21	0.000%	$0.00	-$7.62	$144.74	$258.30	$5.91	$19.08	$18.31	$28.36	$85.26	$9.29
25	$381.83	$21.21	0.000%	$0.00	-$7.62	$137.12	$244.71	$5.60	$18.08	$17.75	$28.36	$83.38	$8.28
26	$360.61	$21.21	0.000%	$0.00	-$7.62	$129.50	$231.11	$5.29	$17.07	$17.19	$28.36	$81.50	$7.38
27	$339.40	$21.21	0.000%	$0.00	-$7.62	$121.88	$217.52	$4.98	$16.07	$16.62	$28.36	$79.62	$6.58
28	$318.19	$21.21	0.000%	$0.00	-$7.62	$114.27	$203.92	$4.67	$15.07	$16.06	$28.36	$77.75	$5.85
29	$296.98	$21.21	0.000%	$0.00	-$7.62	$106.65	$190.33	$4.36	$14.06	$15.50	$28.36	$75.87	$5.21
30	$275.76	$21.21	0.000%	$0.00	-$7.62	$99.03	$176.73	$4.04	$13.06	$14.93	$28.36	$73.99	$4.63
31	$254.55	$21.21	0.000%	$0.00	-$7.62	$91.41	$163.14	$3.73	$12.05	$14.37	$28.36	$72.11	$4.12
32	$233.34	$21.21	0.000%	$0.00	-$7.62	$83.79	$149.54	$3.42	$11.05	$13.81	$28.36	$70.23	$3.65
33	$212.13	$21.21	0.000%	$0.00	-$7.62	$76.18	$135.95	$3.11	$10.04	$13.25	$28.36	$68.35	$3.24
34	$190.91	$21.21	0.000%	$0.00	-$7.62	$68.56	$122.35	$2.80	$9.04	$12.68	$28.36	$66.48	$2.88
35	$169.70	$21.21	0.000%	$0.00	-$7.62	$60.94	$108.76	$2.49	$8.04	$12.12	$28.36	$64.60	$2.55
36	$148.49	$21.21	0.000%	$0.00	-$7.62	$53.32	$95.16	$2.18	$7.03	$11.56	$28.36	$62.72	$2.26
37	$127.28	$21.21	0.000%	$0.00	-$7.62	$45.71	$81.57	$1.87	$6.03	$10.99	$28.36	$60.84	$2.00
38	$106.06	$21.21	0.000%	$0.00	-$7.62	$38.09	$67.97	$1.56	$5.02	$10.43	$28.36	$58.96	$1.76
39	$84.85	$21.21	0.000%	$0.00	-$7.62	$30.47	$54.38	$1.24	$4.02	$9.87	$28.36	$57.08	$1.56
40	$63.64	$21.21	0.000%	$0.00	-$7.62	$22.85	$40.78	$0.93	$3.01	$9.31	$28.36	$55.21	$1.37
41	$42.43	$21.21	0.000%	$0.00	-$7.62	$15.24	$27.19	$0.62	$2.01	$8.74	$28.36	$53.33	$1.21
42	$21.21	$21.21	0.000%	$0.00	-$7.62	$7.62	$13.59	$0.31	$1.00	$8.18	$28.36	$51.45	$1.06
Total	$0.00	$890.93			$0.00		$0.00	$335.64	$1,083.50	$607.13	$1,191.02	$4,108.22	$1,328.40

Net Present Value	$1,328.40

(B) Balance at beginning of year
(C) Calculation: Line 3 / Line 5
(D) Source: MACRS tax depreciation schedule
(E) Calculation: Column D x Line 3
(F) Calculation: (Column E - Column C) x Line 16
(G) Calculation: Prior Year Column F + Prior Year Column G
(H) Calculation: Column B - Column G
(I) Calculation: Column H x Line 8 x Line 10
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(K) Calculation: Column J x Line 16 / (1-Line 16) - Column F
(L) Calculation: Line 3 x Line 17
(M) Calculation: Column C + Column F + Column I + Column J + Column K + Column L
(N) Calculation: Net present value of Column M based on Line 12