OCC EXHIBIT NO. ______

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to R.C. 4928.143, in the Form of an Electric Security Plan.	)))))	Case No. 16-1852-EL-SSO
In the Matter of the Application of Ohio Power Company for Approval of Certain Accounting Authority.	)))	Case No. 16-1853-EL-AAM

SUPPLEMENTAL TESTIMONY OF DANIEL J. DUANN, Ph.D.

IN OPPOSITION TO THE JOINT STIPULATION AND RECOMMENDATION

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

October 11, 2017

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I. INTRODUCTION

Q1. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION.

A1. My name is Daniel J. Duann. My business address is 10 West Broad Street, Suite 1800, Columbus, Ohio, 43215. I am a Principal Regulatory Analyst with the Office of the Ohio Consumers' Counsel ("OCC").

Q2. HAVE YOU FILED TESTIMONY EARLIER IN THIS PROCEEDING?

A2. Yes. I filed a direct testimony in this proceeding on May 2, 2017. I will refer to that testimony as Duann Direct Testimony.[1] My qualifications and experience are summarized in that testimony and will not be repeated here.

II. PURPOSE AND RECOMMENDATIONS

Q3. WHAT IS THE PURPOSE OF YOUR TESTIMONY FILED TODAY?

A3. The purpose of my testimony today is to explain and support OCC's position regarding the Joint Stipulation and Recommendation ("Settlement") filed by Ohio Power Company ("AEP Ohio" or "Utility") on August 25, 2017.[2] My testimony today addresses mainly those issues related to the level of profits the utility should be able to charge customers. Specifically, I address the return on equity ("ROE"),

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[1] See *In the Matter of the Application of Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Revised Code, in the Form of an Electric Security Plan*, PUCO Case Nos., 16-1852-EL-SSO et al., Direct Testimony of Daniel J. Duann, Ph.D. (May 2, 2017).

[2] See PUCO Case Nos., 16-1852-EL-SSO et al., Joint Stipulation and Recommendation (August 25, 2017).

rate of return ("ROR"), and pre-tax weighted average cost of capital ("WACC") for all riders with a capital component and the methodology used to calculate the Significantly Excessive Earnings Test ("SEET"). I am also responding to certain issues discussed in the testimonies in support of the Settlement filed by AEP Ohio on September 13, 2017. Other OCC witness will address additional issues related to the Settlement and the Amended Application filed by AEP Ohio on November 23, 2016 ("Application").[3]

Q4. WHAT WERE THE RECOMMENDATIONS OF THE DUANN DIRECT TESTIMONY FILED ON MAY 2, 2017?

A4. In my direct testimony, I concluded that the Public Utilities Commission of Ohio ("PUCO") should not adopt AEP Ohio's proposals related to the rate of return and SEET methodology in its Application. AEP Ohio's proposals in the Application were unreasonable and not benefiting the customers or the public interest. In that testimony, I recommended the PUCO:[4]

(1) Accept my proposed ROE of 9.30 percent and an after-tax rate of return (or WACC) of 7.67 percent[5] if the six applicable riders were approved;

(2) Reject the baseline ROE of 10.41 percent and the resulting

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[3] See PUCO Case Nos., 16-1852-EL-SSO et al., Application (November 23, 2016).

[4] See Duann Direct Testimony at 4-5.

[5] This rate of return (or after-tax WACC) of 7.67 percent is equivalent to a pre-tax WACC of 10.27 percent. Specifically, 10.27% = (0.4954 * 6.01%) + (0.5046 * 9.3%) * (7.84 / 5.05). The tax gross-up ratio (7.84 / 5.05) is based on information in the Application and Attachment B of the Settlement.

after-tax rate of return (or WACC) of 8.23 percent, and a pre-tax WACC of 11.16 percent proposed in the Application;

(3) Reject the proposed annual adjustment of the return on equity and cost of debt and the resulting WACC in calculating the rates of six applicable riders during the ESP period;

(4) Reject the "incentive" adder of 75 basis points to the baseline ROE for the Distribution Technology Rider; and

(5) Reject the request by AEP Ohio for PUCO's confirmation in advance of the SEET calculation methodology in future SEET proceedings.

Q5. DOES THE SETTLEMENT FILED BY AEP OHIO ON AUGUST 25, 2017 CHANGE THE RECOMMENDATIONS IN THE DUANN DIRECT TESTIMONY?

A5. No. The Settlement does not change the recommendations in the Duann Direct Testimony. Although the Settlement does remove or modify some unreasonable proposals included in AEP Ohio's Application,[6] it still proposes an overstated and

[6] For example, there will not be an annual adjustment to the baseline ROE, the embedded cost of debt, or the WACC prior to a new authorized ROE under the next AIR rate case order. The Settlement does include a potential one-time adjustment of the WACC due to potential financing or refinancing of debt in 2018. There will not be any "incentive" adder to the baseline ROE for any applicable rider until a new authorized ROE.

unreasonable return on equity of ten percent, a rate of return of 8.02 percent, and a pre-tax WACC of 10.82 percent.[7]

It is also unclear from the Settlement if any annual adjustment to the components of the WACC would be allowed after a new baseline ROE is authorized under the new AIR rate case order. In addition, the Settlement still includes a provision requesting the PUCO to confirm in advance the methodology of SEET calculation for future SEET proceedings. In this testimony, I will provide additional recommendations regarding the Settlement and the Application.

Q6. HOW DOES THE PUCO EVALUATE A SETTLEMENT?

A6. I understand that the PUCO typically evaluates a proposed settlement using a three-prong test.[8] Specifically, the PUCO will apply the following three prongs in deciding whether to adopt a proposed settlement:

(1) Is the proposed stipulation a product of serious bargaining among capable, knowledgeable parties?

(2) Does the proposed stipulation, as a package, benefit customers and the public interest?

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[7] See PUCO Case Nos., 16-1852-EL-SSO et al., Joint Stipulation and Recommendation, Attachment B (August 25, 2017).

[8] See, for example, *In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company, Individually and, if Their Proposed Merger is Approved, as a Merged Company (collectively, AEP Ohio) for an Increase in Electric Distribution Rates,* PUCO Case No. 11-351-EL-AIR et al. Opinion and Order at 8-10 (December 14, 2011).

(3) Does the proposed stipulation violate any important regulatory principle or practice?

Only when the PUCO determines that a proposed settlement, as a package, satisfies each and every one of the three prongs identified above will the PUCO adopt the settlement. In many instances, the PUCO will modify a proposed settlement to make it reasonable and in the public interest and not violate important regulatory principles, before adopting it.

Q7. SHOULD THE PUCO ADOPT THE SETTLEMENT?

A7. No. Based on the three-prong test outlined above, the PUCO should not adopt the Settlement. The baseline ROE and the resulting pre-tax WACC proposed in the Settlement and the request for a pre-determination of SEET methodology for future proceeding are unreasonable. These provisions, if adopted, would not benefit AEP Ohio's customers or the public interest. These provisions also violate important regulatory principles. Further, contrary to the claim by AEP Ohio, the Settlement, if adopted, does not comply with or promote state policies on electric services.[9] More specifically:

- The SEET provision in the Settlement is vague, unneeded, and unreasonable. A similar provision has been proposed by AEP Ohio in the past and was not adopted by the

[9] See PUCO Case Nos., 16-1852-EL-SSO et al., Direct Testimony of William A. Allen at 22-23 (September 13, 2017).

PUCO.[10]

- Similarly, the ten percent ROE proposed in the Settlement, even in combination with a potential adjustment to the embedded cost of debt and the WACC due to future debt refinancing, is overstated and unreasonable. This proposed ROE, if adopted by the PUCO, will result in unjust and unreasonable rates for AEP Ohio's customers. In this regard, the adoption of this unreasonable ROE, as proposed in the Settlement, does not advance or promote state electric policy of ensuring the availability to consumers of adequate, reliable, safe, efficient, nondiscriminatory, and reasonably priced retail electric service.[11]
- An authorized ROE of ten percent, coupled with the prospect of a number of costly initiatives by AEP Ohio in the near future, would further increase the rates and make electric services even less affordable for those at-risk populations in AEP Ohio's service territory. In this regard, the proposed Settlement does not advance or promote state policy of protecting at-risk population in the provision of electric services. The Ohio Legislature has stated that the

[10] See Duann Direct Testimony at 40.

[11] See Ohio Revised Code 4928.02 (A).

protection (of the availability and affordability of electric services) of at-risk populations is important particularly "when considering the implementation of any new advanced energy or renewable energy resource."[12] Guided by this specific state policy objective, it should be clear to everyone that the potential rate increase associated with the so-called "electricity experience-enhancing" initiatives such as PowerForward and Smart City should never be used as a tool to create additional unnecessary and unreasonable costs to be paid by AEP Ohio's customers. AEP Ohio's residential customers are already paying one of the highest rates for service in Ohio and may not want these types of "electric" services.[13] AEP Ohio's customers have been also paying a much higher monthly electricity bill than the customers of AEP Ohio's electric distribution affiliates in other states.[14]

- Further, this excessive and unreasonable ROE of ten percent, if adopted, will unreasonably enrich AEP Ohio's shareholders (that is American Electric Power Company,

[12] See Ohio Revised Code 4928.02 (L). It reads **"Protect at-risk populations, including, but not limited to, when considering the implementation of any new advanced energy or renewable energy resource;" (emphasis added).**

[13] See PUCO Case Nos., 16-1852-EL-SSO et al., Direct Testimony of James D. Williams at 5-7 (May 2, 2017).

[14] Id.

Inc. ["AEP"]) at the expense of its 1.2 million customers. This is a violation of the regulatory principle that the shareholders of a regulated utility should be provided the opportunity to earn a fair (but not excessive) return on their invested capital in comparison to other investments available.

Q8. WHAT MODIFICATIONS DO YOU RECOMMEND IF THE PUCO WERE TO ADOPT THE SETTLEMENT?

A8. I do not recommend the PUCO adopt the Settlement. However, if the PUCO were to adopt the Settlement, I recommend the following modifications in addition to those modifications recommended by other OCC witnesses in this proceeding. Specifically, I recommend:

(1) The proposed ROE of ten percent and the pre-tax WACC of 10.82 percent specified in Section C, Paragraph 5 of the Settlement, should be reduced to an ROE no higher than 9.30 percent and a pre-tax WACC no higher than 10.27 percent.[15] There is a strong argument that this 9.30 percent ROE for AEP Ohio should be reduced further given the strong financial performance of AEP Ohio and favorable

[15] This pre-tax WACC of 10.27 percent is equivalent to an after-tax WACC of 7.67 percent I recommended in the Duann Direct Testimony. The pre-WACC of 10.27 percent is calculated as following: 10.27% = (0.4954 * 6.01%) + (0.5046 * 9.3%) * (7.84 / 5.05). The capital structure, cost of debt, and the tax gross-up ratio (7.84 / 5.05) are based on information in the Attachment B of the Settlement.

regulatory environment recently cited by Moody's Investor Service in a two notch upgrade of AEP Ohio's credit rating.[16]

(2) The SEET provision specified in Section L of the Settlement be removed;

(3) The PUCO clarify that there will not be any annual adjustment or "incentive" adder to the baseline ROE or cost of debt through the entire ESP period except the potential one-time adjustment of WACC specified in Section C, Paragraph 5 of the Settlement, and

(4) The PUCO clarify that, for the purpose of updating the WACC to account for potential 2018 debt refinancing, AEP Ohio should use the same capital structure proposed in Attachment B of the Settlement.

[16] See Moody Investment Service *Rating Action: Moody's upgrades Ohio Power to A2, revises AEP rating outlook to positive from stable* (June 5, 2017). (Attachment DJD-1.)

III. EVALUATION OF THE ROE AND WACC ADJUSTMENT DUE TO DEBT REFINANCING PROPOSED IN THE SETTLEMENT

Q9. WHAT IS YOUR UNDERSTANDING OF THE REGULATORY PRINCIPLES COMMONLY USED IN SETTING A REASONABLE RATE OF RETURN FOR A REGULATED UTILITY?

A9. The regulatory principles for setting a reasonable rate of return (and its associated components such as return on equity, cost of debt, and capital structure) for a regulated utility in the United States are well-established and recognized. A public utilities commission, such as the PUCO, will typically set a reasonable rate of return for a regulated utility, such as AEP Ohio, by considering the following regulatory principles (or objectives):

(1) The resulting rates paid by the customers of the regulated utility (as set based on the authorized rate of return) should be just and reasonable;

(2) The regulated utility should have funds available to continue its normal course of business;

(3) The regulated utility should have access to capital (both equity and debt) at reasonable cost under current market conditions; and

(4) The shareholders of the regulated utility should have the opportunity to earn a fair (but not excessive) return on their

(5) invested capital in comparison to other investments available.

Q10. HAVE AEP OHIO OR OTHER SIGNATORY PARTIES PROVIDED AN EXPLANATION OR A JUSTIFICATION FOR A RETURN ON EQUITY OF TEN PERCENT AND THE WACC ADJUSTMENT PROPOSED IN THE SETTLEMENT?

A10. No. I have reviewed the Settlement and the testimonies in support of the Settlement and I could not identify any item that would explain or justify an ROE of ten percent for AEP Ohio or the potential WACC adjustment for future debt refinancing.

Q11. IS THE TEN PERCENT ROE PROPOSED IN THE SETTLEMENT REASONABLE FOR CUSTOMERS TO PAY AEP OHIO?

A11. No. The ten percent ROE proposed in the Settlement is excessive and unreasonable and would require customers to fund an unreasonable level of profits through the rates they pay. The additional item of adjusting the pre-tax WACC resulting from possible future debt refinancing is unlikely to lower the return (the pre-tax WACC) on AEP Ohio's capital investments and will not provide any benefits to its customers.

Q12. PLEASE EXPLAIN WHY THE TEN PERCENT ROE PROPOSED IN THE SETTLEMENT IS EXCESSIVE AND UNREASONABLE FOR CUSTOMERS TO PAY.

A12. As explained in the Duann Direct Testimony, a reasonable ROE for AEP Ohio customers to pay in this proceeding should be no higher than 9.30 percent.[17] Any ROE higher than 9.30 percent should be considered excessive and unreasonable for customers to pay. My estimation of a reasonable ROE of 9.30 percent for AEP Ohio was based on my review of the ROEs authorized for electric distribution utilities in recent years in many jurisdictions,[18] the financial and business risks of AEP Ohio and its parent company AEP,[19] and the current conditions of the financial markets and the U.S. economy. This estimated ROE of 9.30 percent also reflected several corrections I made to the methodology and data used by AEP Ohio to support its proposed ROE in its Application.[20]

It is worth noting that AEP Ohio has consistently earned a higher return on equity than most electric distribution utilities in Ohio.[21] AEP Ohio also has consistently earned the highest return on equity among the seven distribution subsidiaries of AEP in recent years.[22] Specifically, in 2016, AEP Ohio's earned ROE of 13.9

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[17] See Duann Direct Testimony at 4.

[18] See Duann Direct Testimony at 11-13. Specifically, the average ROE authorized is 9.31 percent for the 12 rate cases of delivery-only electric utilities that are similar to AEP Ohio decided in 2016.

[19] See Duann Direct Testimony at 8-10.

[20] See Duann Direct Testimony at 13-23.

[21] See Duann Direct Testimony at 8-9.

[22] See Duann Direct Testimony at 10.

percent was significantly higher than the average earned ROE of 10.1 percent for AEP's seven distribution subsidiaries. The 13.9 percent ROE was even higher than the earned ROE of AEP Transmission, 12.1 percent. An electric transmission utility is typically authorized a higher ROE and has typically earned a higher ROE then an electric distribution utility. These consistently high earned ROEs by AEP Ohio are another indication that AEP Ohio is a financially strong and stable electric utility.[23] The average authorized ROE was 9.31 percent for the rate cases of delivery-only electric utilities decided in 2016.[24] It will be counter to sound regulatory policy if the PUCO is to require customers to fund AEP Ohio with a significantly higher ROE than the average ROE authorized for electric distribution utilities in recent years.

Q13. ARE THERE ANY RECENT DEVELOPMENTS THAT MAY FURTHER SUPPORT YOUR CONCLUSION THAT THE TEN PERCENT ROE FOR CUSTOMERS TO PAY AEP OHIO IS EXCESSIVE AND UNREASONABLE?

A13. Yes. One of these developments was an unusual two-notch upgrade (from Baa1 to A2) of AEP Ohio's credit rating by Moody's Service in June 2017. The full report can be found in Attachment DJD-1. According to Moody's this two-notch upgrade "reflects the utility's strong financial performance and the supportive regulatory trend in Ohio."[25] Moody's further indicates that "OPCo's financial

[23] See Duann Direct Testimony at 8-9.

[24] See Duann Direct Testimony at 11.

[25] See Attachment DJD-1.

performance has been strengthened by the use of PUCO approved riders which increase cash flow predictability and reduce regulatory lag; these include a distribution investment rider, a storm damage rider and a rider for distribution revenue lost due to energy efficiency."[26]

Clearly, in the eyes of the rating agency, the financial and business risk profile of AEP Ohio has improved from recent past and is expected to continue improving in the future. AEP Ohio has been and would remain less risky than an average electric distribution utility. There is simply no valid reason for the PUCO to authorize a significantly higher ROE (such as the ten percent proposed in the Settlement) than the average authorized ROEs in recent years (such as the 9.31 percent in 2016) to a less risky electric utility such as AEP Ohio.

Q14. ARE THERE ANY ELECTRIC RATE CASES THAT MAY ALSO SUPPORT YOUR CONCLUSION THAT THE TEN PERCENT ROE FOR AEP OHIO CUSTOMERS TO PAY IS EXCESSIVE AND UNREASONABLE?

A14. Yes. After the filing of the Duann Direct Testimony in May 2017, I have reviewed several pending rate case proceedings in Ohio and in other states where AEP Ohio's affiliates are operating. My review of these pending rate cases provided me an updated perspective on the selection of a reasonable ROE for AEP Ohio. Based on my review, I am further convinced that at this time a

[26] *Id*.

reasonable ROE for an electric distribution utility similar to AEP Ohio should be significantly lower than the ten percent ROE proposed in the Settlement.

The first example is the pending rate case of Duke Energy Ohio Inc. ("Duke") (PUCO Case No. 17-0032-EL-AIR) before the PUCO. In that case, the PUCO Staff recommended a mid-point ROE of 9.73 percent and a mid-point rate of return of 7.47 percent.[27] The PUCO Staff's analysis in the Duke pending rate case is significant because the Staff has determined that AEP (the parent company of AEP Ohio), along with four other publicly-traded utility-holding companies, do comprise a reasonable proxy group for the purpose of estimating the ROE (or cost of equity) of Duke. In other words, the parent company of Duke and the parent company of AEP Ohio are probably considered by the PUCO Staff as similar in terms of their financial and business risks. Consequently, the recommended ROE for Duke at 9.73 percent by the PUCO Staff can be viewed as a useful point of reference for estimating a reasonable ROE for AEP Ohio at the same period of time. Furthermore, in its Discounted Cash Flow ("DCF") analysis in the pending Duke rate case, the PUCO Staff estimated the cost of equity (or ROE) for AEP (the parent company of AEP Ohio) to be 9.26 percent.[28] Obviously, the ROE of a parent company is not necessarily exactly the same as its subsidiary. But they are closely related to each other. The discussion here is to provide a perspective on setting a reasonable ROE for AEP Ohio. It does not mean that I agree and

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[27] See PUCO Case Nos. 17-0032-EL-AIR et al., Staff Report at 18-19 (September 26, 2017).

[28] See PUCO Case Nos. 17-0032-EL-AIR et al., Staff Report at 152 (September 26, 2017).

support every aspect of the analysis and recommendations made by the PUCO Staff in the pending Duke distribution rate case.

The second example is the pending rate case of Southwestern Electric Power Company (SWEPCO) in Texas (Texas PUC Docket No. 46449). In that case, SWEPCO, an affiliated electric distribution utility of AEP Ohio, is requesting a $60 million net rate increase and an ROE of ten percent. In the *Commission Staff's Proposed Findings of Fact and Conclusion of Law*, the Staff of the Public Utility Commission of Texas ("Texas PUC") concluded the ten percent ROE requested by SWEPCO was "an unreasonably high proposed ROE."[29] The Staff of the Texas PUC recommended, among other things, that:[30]

> "A reasonable application of discounted cash flow and risk premium models support a ROE of 9.3%."

> "A ROE of 9.3% will allow SWEPCO a reasonable opportunity to earn a reasonable return on its invested capital."

> "A 9.3% ROE is consistent with SWEPCO's business and regulatory risk."

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[29] See Texas PUC Docket No. 46449 (also Texas State Office of Administrative Hearing Docket No. 473-17-1764), *Commission Staff's Proposed Findings of Fact and Conclusions of Law* at 7 (July 24, 2017).

[30] *Id.*

> "A 9.3% ROE will support an investment grade bond rating for SWEPCO and provide sufficient cash flow to maintain SWEPCO's financial integrity."

The Staff of the Texas PUC also supported a cost of debt of 4.9 percent, and a capital structure of 51.54 percent long-term debt and 48.46 percent common equity.[31] The Staff of the Texas PUC recommended an overall rate of return of 7.03 percent for SWEPCO.[32]

The third example is the pending rate case of the Public Service Company of Oklahoma ("PSO") in Oklahoma (Oklahoma Corporation Commission Cause No. PUD 201700151). The PSO is also an affiliated electric distribution utility of AEP Ohio. In that case, PSO requested a base rate increase of $156 million and an ROE of ten percent on June 30, 2017. In a Responsive Testimony filed by the Staff of the Public Utility Division of the Oklahoma Corporation Commission, the Public Utility Division recommended, among other things, the following:[33]

(1) A cost of equity of 8.90%, which is the highest point in a range of reasonableness between 6.90% and 8.90%.

(2) A cost of debt of 4.60%, as proposed by the Company.

[31] See Texas PUC Docket No. 46449 (also Texas State Office of Administrative Hearing Docket No. 473-17-1764), Commission Staff's Proposed Findings of Fact and Conclusions of Law at 8 (July 24, 2017).

[32] 7.03% = 0.5154 * 4.9% + 0.4846 * 9.3%.

[33] See Oklahoma Corporation Commission Cause No. PUD 201700151, Responsive Testimony of Geoffrey M. Rush at 7 (September 21, 2017).

(3) A capital structure consisting of 51.5% debt and 48.5% equity."

Using the cost rates and capital structure identified above, the resulting rate of return for PSO, as recommended by the Public Utility Division, would be 6.69 percent.[34]

The significance of the SWEPCO and PSO pending rate cases is that both are the subsidiaries of AEP, same as AEP Ohio, and share similar financial (credit) risk of the same parent company. These three examples all indicated that a reasonable ROE for an electric distribution utility with somewhat similar business and financial risks to AEP Ohio is nowhere close to the ten percent proposed for AEP Ohio in the Settlement. Specifically, the recommended ROE for Duke is 9.73 percent, SWEPCO 9.30 percent, and PSO 8.90 percent. The recommended after-tax rate of return for Duke is 7.47 percent, SWEPCO 7.03 percent, and PSO 6.69 percent. All are significantly below the ROE (ten percent) and after-tax rate of return (8.02 percent) proposed for AEP Ohio in the Settlement.

The discussion of the three pending rate cases should be put in a proper context in this proceeding. After all, the three examples cited here are different utilities under different jurisdictions from AEP Ohio. Also, the ROE and ROR presented

[34] 6.69% = 0.5150 * 4.6% + 0.4850 * 8.9%.

here are only the recommendations by the Staffs of the regulatory agencies and they do not necessarily represent the final determinations by their respective regulatory agencies. Nevertheless, I believe the ROEs and RORs recommended by the Staffs of the regulatory agencies are relevant and deserve to be carefully considered by the PUCO in deciding what a reasonable rate of return should be for AEP Ohio in this proceeding. Given AEP Ohio's consistently higher earned ROE in recent years than those of Duke, SWEPCO, and PSO, it will be hard to argue that AEP Ohio is facing or will be facing a higher financial, business, and regulatory risk than its three peer electric utilities.

Q15. DOES THE UPDATE OF THE WACC RATE DUE TO POTENTIAL FUTURE DEBT REFINANCING PROVIDE ANY BENEFIT TO AEP OHIO'S CUSTOMERS?

A15. No. The update of the WACC rate as a result of possible future debt refinancing (or financing)[35] specified in the Settlement does not provide benefit to AEP Ohio's customers. My own analysis would show there is practically no chance that the WACC will be lower due to possible debt refinancing by AEP Ohio in 2018. This so-called, "one-time concession" by AEP Ohio is no concession at all. The potential update of the WACC should never be used to justify the increase in ROE from 9.30 percent to ten percent.

[35] See PUCO Case Nos., 16-1852-EL-SSO et al., Joint Stipulation and Recommendation, Section C, Paragraph 5 (August 25, 2017).

Q16. DOES AEP OHIO OR AEP COMMIT TO FUTURE LONG-TERM DEBT REFINANCING (OR FINANCING) IN THE SETTLEMENT?

A16. No. AEP Ohio and its parent Company AEP do not make any commitment regarding new long-term debt financing or refinancing prior to the next base rate case. Specifically, in Paragraph 5, Section C of the Settlement, states in part:[36]

> "**If** AEP Ohio completes a new long-term debt financing or refinancing prior to the next base rate case, the Company agrees to update its WACC rate within 90 days of closing for such transaction (to the extent such an update would be favorable to ratepayers)."

AEP Ohio does note that it is currently anticipating refinancing of long-term debt in 2018.[37] Even though AEP Ohio has approximately $350 million of long-term debt due in 2018,[38] it is not known at this time about the form (debt or equity or a combination of both) or the terms of any new financing for retiring the maturing debt.

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[36] *Id*. (emphasis added).

[37] *Id*.

[38] Ohio Power has a long-term debt of $350 million (Senior Note Series G) matures on 5/1/2018. The interest rate on this debt is 6.05%. The Prospectuses of this Outstanding Securities of Ohio Power can be found online at: https://www.aep.com/investors/FinancialFilingsAndReports/currentProspectus/docs/OPCo%20605,%20Series%20G,%20due%202018.pdf.

Q17. IF AEP OHIO WERE TO REFINANCE THE $350 MILLION DEBT BY ISSUING NEW DEBT IN 2018, WILL IT GET MORE FAVORABLE TERMS FOR THE NEW DEBT?

A17. There is no assurance that AEP Ohio will get more favorable terms in refinancing the $350 million debt in 2018. At this time, the interest rate in May 2018 for a utility bond with a similar credit rating and maturity (ten year) cannot be known with absolute certainty. It may be reasonable to assume that the interest rate for the new debt with a similar maturity of ten years will likely be lower than the interest rate (6.05 percent) of the debt to be retired in 2018. But AEP Ohio may choose issuing a new debt with a longer maturity and a higher interest rate than the one with a ten-year maturity. The interest rates in general in 2018 might stay the same or become higher than they are now if there were some unexpected developments in the financial market and the U.S. economy. In this proceeding, I am not aware that AEP Ohio has provided any formal estimation or guidance regarding the interest rate or other terms regarding its potential debt refinancing in 2018.

Q18. ARE THERE OTHER FACTORS THAT MAY REDUCE OR ELIMINATE ANY BENEFIT TO CUSTOMERS FOR POTENTIAL DEBT REFINANCING BY AEP OHIO IN 2018?

A18. Yes. There are several factors that may reduce or eliminate the benefit (which is to be achieved through a reduction in the WACC applicable in the calculation of Rider DIR and other riders) to customers for potential refinancing of AEP Ohio's long-term debt (at a lower interest rate) in 2018. Because of these factors, it is my expectation that there may only be a slight reduction in the overall embedded cost of debt for AEP Ohio and no reduction in the pre-tax WACC.

The first factor is there are certain one-time costs (such as the fees for investment advisors and attorneys) associated with a new debt financing. These one-time costs can be substantial and will reduce the benefit to customers (of any update of the embedded cost of debt and the WACC) resulting from future debt refinancing.

The second factor is the amount of debt to be refinanced by AEP Ohio in 2018. Even though the amount of debt refinancing may be substantial at $350 million, it is only a part (approximately 18 percent) of the total amount of long-term debt of $1,950 million (which may change at a later date) included in the capital structure and the calculation of the embedded cost of debt.[39] The interest cost of the remaining debts (those debts not being refinanced) will not be affected by the debt to be refinanced in 2018. So the reduction in the overall embedded cost of debt of AEP Ohio (as a result of the possible debt refinancing in 2018) will be limited.

The third factor is the likely change of the capital structure used in the calculation of the WACC. The capital structure to be used for updating the WACC at a future date may be quite different from the current one (49.54% of debt and

[39] See PUCO Case Nos., 16-1852-EL-SSO et al., Joint Stipulation and Recommendation, Attachment B (August 25, 2017).

50.46% of equity) shown in Attachment B of the Settlement. Based on the more updated financial information of AEP Ohio, it is my expectation that AEP Ohio will likely have a much higher percentage of equity in its capital structure when the WACC is to be updated than the one shown in Attachment B of the Settlement. A higher equity portion in the capital structure will invariably increase the pre-tax WACC.

Q19. WHAT IS YOUR ESTIMATE OF THE REDUCTION OF THE EMBEDDED COST OF DEBT OR THE WACC (IF ANY) DUE TO POTENTIAL DEBT REFINANCING IN 2018?

A19. As discussed earlier, due to the lack of a commitment on the part of AEP Ohio on debt refinancing and the uncertainty of future interest rates, it is difficult to quantify at this time the potential benefit (if any) to customers (through a reduction in the WACC) of future debt refinancing. Nevertheless, based on the financial information available in AEP's 2016 Annual Report[40] and certain assumptions I have made here, I am providing an estimate of the potential reduction in the overall embedded cost of debt or the WACC (if any) as a result of possible debt refinancing in 2018.

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[40] See online: https://www.aep.com/investors/FinancialFilingsAndReports/annualReportsProxies/docs/16annrep/2016AnnualReportAppendixAtoProxy.pdf. ("AEP 2016 Annual Report.")

Assuming the following:

(1) AEP Ohio does refinance its $350 million debt in 2018 through another debt issuing of the same amount and maturity;

(2) The interest rate of the new debt is 4.25% vs. 6.05% of the debt to be retired[41];

(3) The capital structure to be used in updating the WACC is similar to the capital structure at the end of 2016, that is long-term debt of $1,629.5 million and common equity $2,117.5 million;[42] and

(4) The overall weighted interested rate of long-term debt (including those to be –refinanced in 2018) as of December 31, 2016, is 5.98%.[43]

If AEP Ohio does go through the refinancing of $350 million in 2018 at an interest rate of 4.25%, it may save approximately $6.3 million in interest cost annually,[44] and its overall weighted interest rate will be reduced from 5.98 percent

[41] See online: https://www.aep.com/investors/FinancialFilingsAndReports/CurrentProspectus/docs/OPCo%20605,%20Series%20G,%20due%202018.pdf. The 4.25% interest rate of the new debt is chosen based on my review of the current interest rates of corporate bonds with similar credit ratings and different maturity such as ten-year, twenty-year or thirty-year.

[42] See online: https://www.aep.com/investors/FinancialFilingsAndReports/FERCFilings/docs/2016/Ohio%20Power%20Company.pdf.

[43] See AEP 2016 Annual Report at 206.

[44] $6.3 million = $350 million * (0.0605 – 0.0425).

to 5.59 percent. The updated embedded cost of debt as a result of debt refinancing is shown in Table 1. The work paper supporting this calculation is included as Attachment DJD-2.

Table 1
Updated Embedded Cost of Debt

	Amount Before Refinancing	Imputed or Reported Interest Rate (Before Refinancing)	Amount After Refinancing	Imputed or Reported Interest Rate (After Refinancing)
Debt to Be Refinanced	$350 million	6.05%	$350 million	4.250%
Remaining Debt	$1279.5 million	5.96%	$1279.5 million	5.96%
Total Long-Term Debt	$1629.5 million	5.98%	$1629.5 million	5.59%
Total Annual Interest Payment	$97.44 million		$91.14 million	

However, as a result of the change in the capital structure, the pre-tax WACC after debt refinancing will actually be higher at 11.21 percent[45] compared to the 10.82 percent WACC proposed in the Settlement. It should be noted that the updated WACC used in calculating the riders charged to AEP Ohio's customers would not increase to 11.21 percent and would remain at 10.82 percent as specified in the Settlement. Nevertheless, there is no decrease in the WACC, and consequently no benefit to customers, as a result of the debt refinancing in2018. The updated Weighted Average Cost of Capital is shown in Table 2.

[45] 11.21% = (0.4349 * 5.59%) + (0.5651 * 10%) * (0.0784 / 0.0505). The tax gross-up factor of 1.552475 (where 1.552475 = 0.0784 /0.0505) used here is the same gross-up factor used in Attachment B of the Settlement.

In other words, a debt refinancing in 2018 may save AEP Ohio a significant amount of interest cost, but none of the savings will be passed along to its customers because the updated WACC will not be lowered proportionally. In this particular instance, the updated WACC would actually be higher because the updated capital structure will have a higher portion in common equity than in the past.

Table 2
Updated Weighted Cost of Capital

	Amount	% of Total	% Cost	Weighted Cost (%)	Pre-Tax Weighted Cost
Long Term Debt	$1629.5 million	43.49%	5.59%	2.43%	2.43%
Common Equity	$2117.5 million	56.51%	10.00%	5.65%	8.77%
Total Capital	$3747 million	100.00%		8.08%	11.21%

Q20. WHAT IS YOUR RECOMMENDATION REGARDING THE UPDATE OF THE WACC DUE TO POTENTIAL DEBT REFINANCING BY AEP OHIO IN 2018 IF THE SETTLEMENT WERE ADOPTED BY THE PUCO?

A20. As discussed earlier, the change in the capital structure of AEP Ohio when and if the WACC is to be updated as a result of debt refinancing will likely reduce or eliminate any benefit (savings) to customers resulting from a lower interest rate in debt refinancing. So I recommend that, for the purpose of updating the WACC, the same capital structure specified in Attachment B of the Settlement instead of the capital structure at a future date, should be used. Doing so will ensure the savings of a lower interest rate as a result of potential debt refinancing in 2018 will be passed along to customers rather than retained by AEP Ohio. Adopting this recommendation will not interfere with the deployment of capital or any other corporate finance management by AEP Ohio or AEP.

Q21. WILL THE ADOPTION OF AN ROE OF TEN PERCENT FOR AEP OHIO, AS PROPOSED IN THE SETTLEMENT, VIOLATE IMPORTANT REGULATORY PRINCIPLES AND PRACTICES?

A21. Yes. It will. As discussed earlier, the adoption of an excessive and unreasonable ROE of ten percent will result in unjust and unreasonable rates for AEP Ohio's customers and will also reward the sole shareholder of AEP Ohio a return on its capital investments that far exceeds the returns the shareholder can earn from alternative investments. This is a violation of the two important regulatory principles I have outlined earlier in my testimony.

Q22. WILL THE ADOPTION OF AN ROE OF TEN PERCENT, AS PROPOSED IN THE SETTLEMENT, ADVANCE AND PROMOTE STATE ELECTRIC SERVICE POLICIES?

A22. No. The Settlement, with its overstated and unreasonable ROE, will not advance or promote Ohio state policies on electric services. As discussed earlier, an excessive and unreasonable ROE of ten percent, if adopted by the PUCO, will result in unjust and unreasonable rates for AEP Ohio's customers. This will not advance or promote state electric policy of ensuring the availability to consumers of adequate, reliable, safe, efficient, nondiscriminatory, and reasonably priced retail electric service.[46]

An excessive and unreasonable ROE of ten percent applied to a number of riders with significant capital investments such as the Distribution Investment Rider, Enhanced Service Reliability Rider, and gridSMART Phase II Rider, and potentially some new initiatives such as PowerForward and Smart City would likely increase the rates further and make electric services even less affordable for those at-risk populations in AEP Ohio's service territory. This does not advance or promote state policy of protecting at-risk population in the provision of electric services.[47]

An excessive and unreasonable ROE will make electric services more expensive than necessary in AEP Ohio's service territory. A higher price of electricity will reduce the purchasing power (that is the money left after paying for monthly electricity bills) of residential customers. A higher price of electricity will also increase the cost of doing business for the commercial and industrial customers in AEP Ohio's service territory and make them less competitive. This will not advance or promote the state policy of facilitating the state's effectiveness in the global economy.[48]

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[46] See RC 4928.02 (A).

[47] See RC 4928.02 (L).

[48] See RC 4928.02 (N).

Q23. IN SUMMARY, DOES THE ADOPTION OF AN ROE OF TEN PERCENT, AS PROPOSED IN THE SETTLEMENT, BENEFIT CUSTOMERS AND THE PUBLIC INTEREST?

A23. No. It does not benefit customers or the public interest. The excessive and unreasonable ROE of ten percent, if adopted by the PUCO as part of an overall settlement, will unnecessarily and unreasonably increase the costs to customers, will violate important and well-established regulatory principles, and will impede, not advance and promote, state policies on electric services.

IV. COMMENTS ON SEET PROVISION PROPOSED IN THE SETTLEMENT

Q24. IS THE PROPOSED SEET PROVISION IN THE SETTLEMENT VAGUE AND UNNECESSARY?

A24. Yes. The proposed SEET provision as described in Paragraph L of the Settlement is vague and unnecessary. As discussed in the Duann Direct Testimony, the PUCO's past opinions speak for themselves.[49] Also, the PUCO has used different approaches and methodologies in deciding the SEET cases of AEP Ohio and other Ohio electric utilities in the past.[50] There is no need to ask the PUCO to declare

[49] See Duann Direct Testimony at 41.

[50] *Id*.

in advance the methodology or methodologies (which have not been defined or identified in the Settlement or the Application) to be used in a future proceeding.

Q25. HAS THE PUCO REJECTED SIMILAR SEET PROPOSAL BY AEP OHIO IN THE PAST?

A25. Yes. AEP Ohio made a similar request in its most recently approved ESP and the PUCO did not approve the request by AEP Ohio in that proceeding.[51]

Q26. DOES THE PROPOSED SEET PROVISION IN THE SETTLEMENT BENEFIT CUSTOMERS AND THE PUBLIC INTEREST?

A26. No. It does not. This proposed provision will only unnecessarily and unreasonably restrict in advance the rights of intervening parties in future SEET proceedings. It does not benefit customers or the public interest.

V. CONCLUSION

Q27. DOES THIS CONCLUDE YOUR TESTIMONY?

A27. Yes. However, I reserve the right to supplement my testimony in the event that additional testimony is filed, or if new information or data in connection with this proceeding becomes available.

[51] See Duann Direct Testimony at 40.

CERTIFICATE OF SERVICE

I hereby certify that a true copy of the foregoing *Supplemental Testimony of Daniel J. Duann, Ph.D. on Behalf of the Office of the Ohio Consumers' Counsel*, was served via electronic transmission to the persons listed below on this 11th day of October 2017.

/s/ William J. Michael
William J. Michael
Assistant Consumers' Counsel

SERVICE LIST

Bojko@carpenterlipps.com
perko@carpenterlipps.com
mfleisher@elpc.org
cmooney@ohiopartners.org
paul@carpenterlipps.com
mleppla@theOEC.org
tdougherty@theOEC.org
lhawrot@spilmanlaw.com
dwilliamson@spilmanlaw.com
charris@spilmanlaw.com
ibatikov@vorys.com
whitt@whitt-sturtevant.com
campbell@whitt-sturtevant.com
glover@whitt-sturtevant.com
tony.mendoza@sierraclub.org
dborchers@bricker.com
eakhbari@bricker.com
sechler@carpenterlipps.com
cpirik@dickinsonwright.com
todonnell@dickinsonwright.com
wvorys@dickinsonwright.com
werner.margard@ohioattorneygeneral.gov
Robert.eubanks@ohioattorneygeneral.gov

Attorney Examiner:

Greta.see@puc.state.oh.us
Sarah.parrot@puc.state.oh.us

stnourse@aep.com
msmckenzie@aep.com
cmblend@aep.com
fdarr@mwncmh.com
mpritchard@mwncmh.com
Kurt.Helfrich@ThompsonHine.com
Stephanie.Chmiel@ThompsonHine.com
Michael.Austin@ThompsonHine.com
mkurtz@BKLlawfirm.com
kboehm@BKLlawfirm.com
jkylercohn@BKLlawfirm.com
rick.sites@ohiohospitals.org
mwarnock@bricker.com
dparram@bricker.com
rdove@attorneydove.com
rsahli@columbus.rr.com
mjsettineri@vorys.com
glpetrucci@vorys.com
ibatikov@vorys.com
joliker@igsenergy.com
mdortch@kravitzllc.com
amy.spiller@duke-energy.com
Elizabeth.watts@duke-energy.com
joe.halso@sierraclub.org

MOODY'S
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Rating Action: Moody's upgrades Ohio Power to A2, revises AEP rating outlook to positive from stable

Global Credit Research - 05 Jun 2017

Over $20 billion of consolidated debt and credit facilities outstanding

New York, June 05, 2017 -- Moody's Investors Service, ("Moody's") upgraded the ratings of Ohio Power Company (OPCo), including its senior unsecured bonds to A2 from Baa1, and revised the outlook for its parent company American Electric Power Company, Inc. (AEP Baa1) to positive from stable. The rating outlook for OPCo has changed to stable from positive. Concurrently, Moody's affirmed the ratings of AEP, including its Baa1 senior unsecured rating and its Prime-2 rating for commercial paper.

A full list of affected ratings is provided towards the end of this press release.

RATINGS RATIONALE

The upgrade of OPCo reflects the utility's strong financial performance and the supportive regulatory relationship that has been demonstrated in recent years as Ohio looks to finally complete the transition of its electricity markets to deregulation. The two notch upgrade in ratings reflects our general view of the supportive regulatory trend in Ohio, and OPCo's strong and predictable financial profile, which includes a ratio of cash from operations excluding changes in working capital (CFO pre-WC) to debt in the low 20% range over the long term. The upgrade also considers that many Ohio-based utilities were not upgraded in January 2014, when the majority of the US regulated utility sector was upgraded by one notch. At that time, the Ohio utilities were excluded from a broader sector upgrade due to perceived regulatory uncertainty in Ohio. As a result, OPCo's ratings remained unchanged. In the intervening time period, the Public Service Commission of Ohio (PUCO) rendered numerous credit supportive decisions, and OPCo's credit metrics have remained robust. The upgrade also considers the less volatile nature of OPCo's current operating profile, which consists entirely of regulated transmission and distribution systems.

The positive outlook for AEP recognizes the strong financial performance at OPCo along with several other of AEP's other retail subsidiaries, including Indiana Michigan Power Company (Baa1 positive), Appalachian Power Company (Baa1 stable), and AEP Transmission Company, LLC (A2 stable) and considers the company's overall strategy of focusing on growth in its transmission and distribution businesses. The outlook assumes the positive trends observed at most of AEP's subsidiaries will continue, and acknowledges financial credit metrics that are currently strong for AEP's Baa1 rating when compared to other multi-state, almost entirely regulated, utility holding companies such as Duke Energy Corporation (Baa1 stable) and Xcel Energy Inc. (A3 stable). The positive outlook also recognizes the limited amount (currently around 4%) of parent holding company debt within the consolidated AEP family.

For the last several years, as Ohio has been transitioning to a fully deregulated market for electricity, utilities in the state have been operating under individually tailored electric security plans (ESP), which are rate plans for the supply and pricing of electric generation service. The PUCO approved numerous ESPs for OPCo that included various riders and trackers and fuel cost adjustment mechanisms that supported the utility's financial health while achieving the state's deregulation goals. Most recently, in February 2017, the PUCO approved a global settlement agreement among OPCo, the PUCO staff, and various intervenors, that essentially resolved all prior transitional issues and should greatly simplify future filings.

OPCo completed the sale of its generation assets to an affiliate in December of 2013 and since mid-2015 has been purchasing all of the energy and capacity needed to serve its generation service customers at auction. Operations are now limited to transmission and distribution, and the utilities financial metrics are particularly strong when considered in light of these less volatile activities. For example, as of December 2016, OPCo's ratio of cash from operations excluding changes in working capital (CFO pre-WC) to total debt and CFO pre-WC minus dividends to total debt were about 31% and 24% respectively, which are both in the "Aa" scoring range for these metrics in our regulated electric and gas utilities methodology low risk business grids. As discussed below, although these very strong ratios are not considered sustainable, credit metrics are expected to remain appropriate for the rating.

OPCo's financial performance has been strengthened by the use of PUCO approved riders which increase cash flow predictability and reduce regulatory lag; these include a distribution investment rider, a storm damage rider and a rider for distribution revenues lost due to energy efficiency. Certain riders, including one for the phased-in recovery of prior deferred fuel balances, and another for the recovery of deferred capacity costs, were intended to manage the transition to a fully competitive generation supply. These transition riders will remain in place through 2018. As a result, we anticipate OPCo's cash flow credit metrics during this period will remain near their current levels. Post 2018, we expect OPCo's metrics to decline; however, assuming continued supportive regulatory treatment and modest rate increases, we anticipate they will remain appropriate for OPCo's current A2 rating, for example, we anticipate the ratio of CFO pre-WC to debt will remain above 20%.

AEP's ongoing earnings and cash flow have been very stable over the past several years with CFO pre-WC to debt metrics in the high-teens to low twenty percent range. Cash flow stability is supported by AEP's current corporate strategy of focusing on its core utility assets with more predictable earnings. AEP has been successful in de-risking its business by reducing its exposure to the volatile merchant power markets through its recent sale of four Midwest merchant generating plants, and agreements for the consolidation and/or shut down of others, a credit positive. Going forward, AEP's most significant growth area will be its transmission and distribution utilities. By 2019, we anticipate these less volatile businesses will make up over 45% of AEP's consolidated cash flow.

Outlook

The positive outlook for AEP assumes the positive momentum at its subsidiaries will continue as they implement their investment plans while maintaining supportive regulatory relationships. The outlook recognizes the potential for upward movement in the ratings if financial metrics remain near their current levels, for example, a ratio of CFO pre-WC to debt maintained in the high teens/low twenty percent range. The stable outlook for OPCo assumes the Ohio regulatory environment will continue to be credit supportive and that the ratio of CFO pre-WC to debt will remain above 20%.

Factors that could lead to an upgrade

At AEP an upgrade is likely if the ratio of CFO pre-WC to debt is maintained in the high teens to low twenty percent range while maintaining positive performance at its subsidiaries. An upgrade of one of its largest subsidiaries could also put upward pressure on the ratings. At OPCo, there could be upward pressure on the ratings if financial metrics remain robust beyond 2018; for example a ratio of CFO pre--WC to debt above 30% and CFO pre-WC minus dividends to debt in the twenty percent range, on a sustained basis.

Factors that could lead to a downgrade

If a more contentious regulatory environment were to develop at OPCo, or any of AEP's key jurisdictions, there could be downward pressure on the ratings. A ratio of CFO pre-WC to debt below 15% at AEP, or below 20% at APCo, for an extended period, could cause the ratings to move downward.

The principal methodology used in these ratings was Regulated Electric and Gas Utilities published in December 2013. Please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.

LIST OF AFFECTED RATINGS

..Affirmations:

Issuer: American Electric Power Company, Inc.

.... Junior Subordinated Shelf, Affirmed at (P)Baa2

.... Senior Unsecured Shelf, Affirmed at (P)Baa1

....Senior Unsecured Regular Bond/Debenture, Affirmed at Baa1

....Commercial Paper, Affirmed at P-2

..Upgrades:

Issuer: Ohio Power Company

....LT Issuer Rating , Upgraded to A2 from Baa1

....Senior Unsecured Regular Bond/Debenture, Upgraded to A2 from Baa1

....Senior Unsecured Medium-Term Note Program, Upgraded to (P)A2 from (P)Baa1

Issuer: Columbus Southern Power Company

....Senior Unsecured Regular Bond/Debenture, Upgraded to A2 from Baa1 (Assumed by Ohio Power Company)

Issuer: Ohio Air Quality Development Authority

....Senior Unsecured Revenue Bonds, Upgraded to A2 from Baa1

..Outlook Actions:

Issuer: American Electric Power Company, Inc.

....Outlook, Changed To Positive From Stable

Issuer: Ohio Power Company

....Outlook, Changed To Stable From Positive

Headquartered in Columbus, Ohio, AEP is a large electric utility holding company with ten vertically integrated or retail electric transmission and distribution utility subsidiaries operating in eleven states. The company also operates transmission companies within the eastern and southwestern regions of the United States. AEP has a regulated rate base of approximately $35 billion and serves about 5.4 million customers. OPCo is a wholly owned subsidiary of AEP engaged in electric transmission and distribution services to approximately 1.5 million customers in Ohio.

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Laura Schumacher

VP - Senior Credit Officer
Infrastructure Finance Group
Moody's Investors Service, Inc.
250 Greenwich Street
New York, NY 10007
U.S.A.
JOURNALISTS: 1 212 553 0376
Client Service: 1 212 553 1653

Jim Hempstead
MD - Utilities
Infrastructure Finance Group
JOURNALISTS: 1 212 553 0376
Client Service: 1 212 553 1653

Releasing Office:
Moody's Investors Service, Inc.
250 Greenwich Street
New York, NY 10007
U.S.A.
JOURNALISTS: 1 212 553 0376
Client Service: 1 212 553 1653

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MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

Calculation of Updated Embedded Cost of Debt of AEP Ohio

(1)	**Total amount of Long_term Debt**		**$1629.5 million**
(2)	**Weighted Interest Rate**		**5.98%**
(3)	**Total Annual Interest Cost**	(1) * (2)	**$97.44 million**
(4)			
(5)	**Amount of Debt To Be Financed**		**$350 million**
(6)	**Current Interest Rate**		**6.05%**
(7)	**Current Interest Cost**	(5) * (6)	**$21.18 million**
(8)			
(9)	**Annual Interest Cost of Remaining Debt**	(3) - (7)	**$76.26 million**
(10)			
(11)	**Re-financed Interest Rate**		**4.25%**
(12)	**Re-financed Interest Cost**	(5) * (11)	**$14.88 million**
(13)			
(14)	**Re-financed Total annual Interest Cost**	(14) + (17)	**$91.14 million**
(15)			
(16)	**Re-financed Weighted Interest Rate**	(19) / (1)	**5.59%**