

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Application of Ohio)
American Water Company to Increase Its) Case No. 11-4161-WS-AIR
Rates for Water and Sewer Service)
Provided to Its Entire Service Area.)

DIRECT TESTIMONY
of
DANIEL J. DUANN, Ph.D., CRRA

On Behalf of
The Office of the Ohio Consumers' Counsel
10 West Broad Street, Suite 1800
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March 1, 2012

ATTACHMENTS

DJD-A	SELECTED PUBLICATIONS OF DANIEL J. DUANN
DJD-B	LIST OF TESTIMONIES FILED BEFORE PUCO BY DANIEL J. DUANN
DJD-C	CALCULATION OF COST OF COMMON EQUITY AND RATE OF RETURN

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

2 ***A1.*** My name is Daniel J. Duann. My business address is 10 West Broad Street, Suite
3 1800, Columbus, Ohio, 43215-3485. I am a Principal Regulatory Analyst with
4 the Office of the Ohio Consumers' Counsel ("OCC").

5
6 ***Q2. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND***
7 ***PROFESSIONAL EXPERIENCE.***

8 ***A2.*** I received my Ph.D. degree in public policy analysis from the Wharton School,
9 University of Pennsylvania in 1984. I also have a M.S. degree in energy
10 management and policy from the University of Pennsylvania (1982) and a M.A.
11 degree in economics from the University of Kansas (1978). I completed my
12 undergraduate studies in business administration at the National Taiwan
13 University, Taiwan, Republic of China in 1977. I am a Certified Rate of Return
14 Analyst ("CRR") conferred by the Society of Utility and Regulatory Financial
15 Analysts in April 2011.
16
17 I was a Utility Examiner II in the Forecasting Section of the Ohio Division of
18 Energy, Ohio Department of Development, from 1983 to 1985. From 1985 to
19 1986, I was an economist with the Center of Health Policy Research at the
20 American Medical Association in Chicago. In 1986, I joined the Illinois
21 Commerce Commission as a senior economist in its Policy Analysis and Research
22 Division. I was employed as a senior institute economist at the National
23 Regulatory Research Institute ("NRRI") at The Ohio State University from 1987

1 to 1995. My work at NRRRI involved many areas of utility regulation and energy
2 policy. I was an independent business consultant from 1996 to 2007. A list of my
3 selected professional publications is attached as Attachment DJD-A.

4
5 I joined the OCC in January of 2008 as a Senior Regulatory Analyst. I was
6 promoted to Principal Regulatory Analyst in November 2011. My current
7 responsibilities are to assist OCC in participating in various regulatory
8 proceedings that include rate cases, alternative regulation, cost recovery filings,
9 fuel adjustment clauses, and service reliability by Ohio utilities.

10
11 ***Q3. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE THE***
12 ***PUBLIC UTILITIES COMMISSION OF OHIO?***

13 ***A3.*** Yes. I submitted expert testimony before the Public Utilities Commission of Ohio
14 (“PUCO” or “Commission”) in a number of cases involving electric, gas, and
15 water companies. All the cases in which I have submitted testimony are listed in
16 Attachment DJD-B.

17
18 ***Q4. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS***
19 ***PROCEEDING?***

20 ***A4.*** The purpose of my testimony is to support the objections of OCC and the City of
21 Marion regarding the rate of return and return on common equity
22 recommendations contained in the PUCO Staff Report. I recommend two
23 modifications to the methodology used by the PUCO Staff in setting a just and

1 reasonable rate of return for OAW in this proceeding. My recommended
2 adjustments, if adopted by the Commission, will lower the costs of water and
3 wastewater services to OAW's residential customers.
4

5 ***Q5. PLEASE DISCUSS YOUR EDUCATIONAL BACKGROUND AND WORK***
6 ***EXPERIENCE THAT ARE PARTICULARLY GERMANE TO YOUR***
7 ***TESTIMONY ON THESE MATTERS.***

8 ***A5.*** I am a trained economist and financial analyst with over twenty years of
9 experience in studying and analyzing the regulation of water, gas and electric
10 utilities in the United States. I am familiar with the major issues related to the
11 rate of return and cost of common equity determination in this OAW rate case. I
12 have filed testimonies or testified in three water rate cases regarding the
13 appropriate rate of return and return on common equity applicable to Ohio
14 American Water Company and Aqua Ohio, Inc.¹ I have also participated and
15 filed testimony in several proceedings regarding the rate of return and cost of
16 common equity of Ohio's electric utilities.²
17

18 ***Q6. WHAT DOCUMENTS HAVE YOU REVIEWED IN THE PREPARATION OF***
19 ***YOUR TESTIMONY?***

20 ***A6.*** I have reviewed the Ohio American Water Company's ("the Company" or
21 "OAW") Application to Increase Its Rates for Water and Sewer Service

¹ See PUCO Case Nos. 09-391-WS-AIR, 09-560-WW-AIR, and 09-1044-WW-AIR.

² See, for example, PUCO Case No. 11-4571-EL-UNC et al.

1 (“Application”) and supporting testimonies related to rate of return and return on
2 common equity.³ I also reviewed *A Report by the Staff of the Public Utilities*
3 *Commission of Ohio* (“Staff Report”)⁴ and associated work papers in this
4 proceeding and related Commission opinions, orders, and entries. I have also
5 reviewed relevant financial information in trade and general publications related
6 to OAW and the group of comparable water utilities.

7

8 **Q7. WHAT ARE YOUR RECOMMENDATIONS REGARDING OAW’S RATE**
9 **OF RETURN AND COST OF COMMON EQUITY IN THIS**
10 **PROCEEDING?**

11 **A7.** Based on my analysis and my review of the methodologies and results proposed
12 by the PUCO Staff and OAW, as well as the costs of long-term debt and common
13 equity of OAW and comparable water utilities, I recommend that the Commission
14 approve a cost of common equity of 8.47% and a rate of return of 7.44% in this
15 proceeding.

16

³*In the Matter of the Application of Ohio American Water Company to Increase Its Rates for Water Service and Sewer Service*, PUCO Case No. 11-4161-WS-AIR (August 1, 2011). The supporting testimonies were filed on August 15, 2011.

⁴ The Staff Report was issued on January 31, 2012.

**Q8. PLEASE SUMMARIZE YOUR ANALYSIS AND REVIEW REGARDING
THE ESTIMATION OF OAW'S RATE OF RETURN AND COST OF
COMMON EQUITY IN THIS PROCEEDING.**

A8. I accept the Company's proposed capital structure and embedded cost of long-term debt and preferred stock. I also support, in general, the methodology and results proposed by the PUCO Staff regarding OAW's cost of equity. However, I propose two adjustments to the PUCO Staff's estimation of the cost of common equity applicable to OAW in this proceeding. A summary of the capital structure, cost rates, and the overall rate of return proposed by OCC, the PUCO Staff, and OAW is shown in Table 1.⁵ See Attachment DJD-C for the detailed calculation of these rates of returns.

**TABLE 1: A SUMMARY OF PROPOSED CAPITAL STRUCTURE
COST RATES AND RATE OF RETURN**

		% of Total Costs (%)			Weighted Cost (%)		
		OCC	Staff	Company	OCC	Staff	Company
Long Term Debt	48.24%	6.32%	6.32%	6.32%	3.05%	3.05%	3.05%
Preferred Stock	1.07%	8.53%	8.53%	8.53%	0.09%	0.09%	0.09%
Common Equity	50.69%	8.47%	9.06% ⁶	11.50%	4.29%	4.59%	5.83%
Total Capital	100.00%				7.44%	7.74% ⁷	8.97%

⁵ In the Staff Report, the PUCO Staff proposed a range (8.24% to 9.24%) instead of one single number as the baseline cost of common equity. Then, the PUCO Staff further adjusted this baseline cost of equity upward to account for the effect of generic issuance cost only on the equity funding through external sources such as public offering of stocks for the final cost of common equity range of 8.54% to 9.58%.

⁶ The figure, 9.06% listed in Table 1 is the mid-point of the PUCO Staff's range of estimates of cost of equity, 8.54% to 9.58%.

⁷ The weighted cost of capital shown in Table 1 is the mid-point of the Staff's range of estimates, 7.47% to 8.00%.

1

2 ***Q9. PLEASE DESCRIBE THE PUCO STAFF'S PROPOSED METHODOLOGY***
3 ***IN ESTIMATING OAW'S COST OF COMMON EQUITY AND RATE OF***
4 ***RETURN.***

5 ***A9.*** The rate of return methodology used by the PUCO Staff in this proceeding is
6 similar to the methodology employed by the PUCO Staff in many previous utility
7 rate cases, including OAW's last two rate cases.⁸ In the Staff Report, the PUCO
8 Staff accepted the capital structure and cost rates of long-term debt and preferred
9 stock proposed by the Company.⁹ Then the PUCO Staff selected a group of
10 comparable companies consisting of four publicly-traded water utilities¹⁰ with a
11 market capitalization over \$500 million and which are included in the "Water
12 Utility" group in the Value Line Investment Survey Standard Edition.¹¹ The cost
13 of common equity estimate is the average of the results of the capital asset pricing
14 model ("CAPM") and the discounted cash flow ("DCF") model applied to the
15 four comparable water utilities.

16

17 For the CAPM, the PUCO Staff used the average of the betas reported in the
18 Value Line Investment Survey. The return on risk-free investments was based on

⁸See *In the Matter of the Application of Ohio American Water Company to Increase its Rates for Water and Sewer Service Provided in its entire Service Areas*, Case No. 09-391-WS-AIR (Staff Report) November 27, 2009, at 27-29, and see *In the Matter of the Application of Ohio American Water Company to Increase its Rates for Water and Sewer Service Provided in its entire Service Areas* Case No. 07-1112-WS-AIR (Staff Report) May 28, 2008 at 18-20.

⁹See Staff Report at 12.

¹⁰ American Water Works Company, Inc., American States Water Company, California Water Service Group, and Aqua America, Inc.

¹¹See Staff Report at 12.

1 the weighted average of 10-year and 30-year daily closing Treasury yields for the
2 period from November 18, 2010, to November 18, 2011. The proposed equity
3 risk premium was the spread of arithmetic means of total returns between equity
4 and risk-free investment, and published in the *Ibbotson Associates 2011*
5 *Yearbook: Stocks, Bonds, Bills and Inflation: Valuation Edition*. Using these
6 financial data input, the PUCO Staff estimates the cost of common equity using
7 the CAPM to be 7.26%.¹²

8
9 For the DCF model, the PUCO Staff calculated the internal rate of return (cost of
10 common equity) for each of the four comparable water utilities, and used the
11 average of the group as the cost of common equity for OAW. The internal rate of
12 return of an individual water utility is calculated based on the formula that the
13 current average stock price equates to the current value of an expected stream of
14 annual dividends. The PUCO Staff used the average daily closing price for the
15 period from November 18, 2010, through November 18, 2011. The PUCO Staff
16 adopted a non-constant growth rate for estimating future dividends. The growth
17 rates of the first five years of per share dividends are the average of estimates
18 from various investor news services.¹³ From the twenty-fifth year on, the growth
19 rates are assumed to be equal to the long-term growth rate of Gross National
20 Product (“GNP”) as reported by the U.S. Department of Commerce. Regarding
21 the growth rate of dividends per share for the sixth through twenty-fourth years,

¹²See *Ibid* at 13.

¹³ These investor news services are Yahoo, MSN, and Value Line.

1 the PUCO Staff assumed that the annual dividends vary between the two rates in a
2 linear fashion. Using the DCF model, the PUCO Staff calculates the cost of
3 common equity of OAW to be 10.23%.¹⁴

4
5 The PUCO Staff's baseline cost of common equity is the average of the costs of
6 common equity derived from the CAPM and the DCF model. The PUCO Staff
7 recommended a baseline cost of common equity of 8.74%. The PUCO Staff then
8 proposed a range for OAW's cost of equity, 8.24% to 9.24%, assuming a one
9 hundred basis point range of uncertainty.¹⁵ In setting the range of the proposed
10 cost of common equity, the PUCO Staff makes an additional allowance for equity
11 issuance and other costs, resulting in an adjustment factor of 1.03627. The PUCO
12 Staff's final recommended range of cost of equity is 8.54% to 9.58%.¹⁶ Based on
13 these cost rates of various capital items and the actual capital structure of OAW,
14 the PUCO Staff recommends a range for the overall rate of return to be 7.47% to
15 8.00%.¹⁷

16
17 ***Q10. DO YOU HAVE ANY CONCERNS REGARDING THE PUCO STAFF'S***
18 ***COST OF COMMON EQUITY AND RATE OF RETURN PROPOSED IN***
19 ***THIS PROCEEDING?***

20 ***A10.*** Yes.

¹⁴See *ibid* at 14.

¹⁵*Ibid.*

¹⁶*Ibid.*

¹⁷See *ibid* at 12.

1

2 ***Q11. PLEASE IDENTIFY THE CONCERNS YOU HAVE REGARDING THE***
3 ***PUCO STAFF'S PROPOSED COST OF COMMON EQUITY AND RATE OF***
4 ***RETURN.***

5 ***A11.*** My first concern is the PUCO Staff's adoption of an adjustment factor of 1.03627
6 to account for the equity issuance and other costs.¹⁸ This adjustment is
7 inappropriate. In its Application and testimony, OAW did not provide sufficient
8 support for an adjustment to its cost of equity for flotation or equity issuance
9 costs. Only a general discussion related to the recognition of flotation costs in the
10 allowed common equity cost rate was presented.¹⁹ OAW did not provide any
11 documentation or proof that the Company indeed incurred any issuance costs, or
12 that the Company would incur such costs in the reasonably near future.
13 Furthermore, in support of my opinion that the PUCO Staff's issuance cost
14 adjustment is not appropriate, I was advised by counsel that it is unreasonable and
15 unlawful for the Commission to make an upward adjustment to a utility's cost of
16 common equity when there is no evidence in the record that the utility is
17 contemplating the issuance of stock in the reasonably near future.
18
19 In this proceeding, this issuance cost adjustment unnecessarily increased the
20 PUCO Staff-proposed cost of common equity for OAW from a range of 8.24% to

¹⁸See *Ibid* at 14.

¹⁹See Direct Testimony of Pauline M. Ahern (August 15, 2011) at 60-62.

1 9.24% to a range of 8.54% to 9.58%.²⁰ It is my opinion that the customers of
2 OAW should not be asked to pay in rates for the non-specific and unsubstantiated
3 issuance costs.

4
5 My second concern is the expected equity risk premium used by the PUCO Staff
6 in its CAPM. The PUCO Staff's proposed equity risk premium of 6.0% was
7 inappropriate because it was based exclusively on the difference of arithmetic
8 mean total returns between large companies' stocks and long-term government
9 bonds.²¹ This approach will invariably and artificially increase the estimated
10 common equity cost of OAW under the CAPM. It is generally recognized that
11 the geometric mean is a more accurate measurement of the annualized
12 (compounded) total returns on equity.²² The exclusive use of arithmetic mean
13 total returns, as recommended in the Staff Report, tends to inflate the historical
14 annualized total rate of return, and thus, increases the expected risk premium in
15 most instances. A higher risk premium will always lead to a higher estimated cost
16 of common equity under the CAPM. In this instance, the customers of OAW are

²⁰See Staff Report at 14.

²¹See Staff Report at 13.

²²See, for example, *Ibbotson SBBI 2011 Valuation Yearbook* (Morningstar, Inc., Chicago, 2011) at 56.

once again being asked to pay rates that are higher than what has been justified in this proceeding.

Q12. PLEASE EXPLAIN YOUR PROPOSED ADJUSTMENTS TO THE PUCO STAFF'S RECOMMENDED COST OF COMMON EQUITY.

A12. I propose two adjustments to the PUCO Staff's analysis as contained in the Staff Report. First, the adjustment factor of 1.03627 should not be applied to the baseline cost of common equity to account for unspecified and unsubstantiated issuance and other costs. This OCC-proposed removal of the issuance cost adjustment factor will prevent customers from having to pay for an unjustified increase in the cost of common equity from 8.74% to 9.06%. (These two numbers are the midpoints of the ranges for the cost of common equity as proposed in the Staff Report.²³) Second, the expected risk premium used in the CAPM should be the average (5.2%) of the spreads of the arithmetic mean total returns (6%) and of the geometric mean total returns (4.4%) between large companies and government bonds as reported in the *Ibbotson Associates 2011 Yearbook: Stocks, Bonds, Bills and Inflation: Valuation Edition*.²⁴ This OCC-proposed adjustment will lower the result of the CAPM from 7.26% to 6.72%. The cost of common equity, as an average of the CAPM and the DCF Model, will be reduced from 8.74% to 8.48%.

²³See Staff Report at 14. The baseline (before the adjustment factor) range of the estimated cost of common equity is 8.24% to 9.24% with a mid-point of 8.74%. The range of the adjusted cost of common equity is 8.54% to 9.58% with a mid-point of 9.06%.

²⁴See *Ibbotson SBBI 2011 Valuation Yearbook* (Morningstar, Inc., Chicago, 2011) at 23.

1 If these two OCC-proposed adjustments are adopted by the Commission, a just
2 and reasonable rate of return for OAW will be 7.44%, instead of the PUCO
3 Staff's recommended range of 7.47% to 8.00%. The proposed OCC adjustments
4 to the rate of return will result in lower rates to the benefit of OAW's customers.
5 Accordingly, for the reasons above, OCC's adjustments should be adopted by the
6 Commission in this proceeding.

7

8 ***Q13. DOES THIS CONCLUDE YOUR TESTIMONY?***

9 ***A13.*** Yes. However, I reserve the right to supplement my testimony in the event that
10 the Company submits additional testimonies or that additional new information or
11 other data in connection with this proceeding becomes available. I also reserve
12 the right to supplement my testimony in the event that the PUCO Staff does not
13 support its recommendations made in the Staff Report and/or changes any of its
14 positions made in the Staff Report regarding cost of common equity and rate of
15 return.

CERTIFICATE OF SERVICE

I hereby certify that a copy of *Testimony of Daniel J. Duann, Ph.D. on Behalf of the Office of the Ohio Consumers' Counsel* was provided to the persons listed below served via U.S. mail this 1st day of March, 2012.

/s/ Melissa R. Yost

Melissa R. Yost

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Selected Publications of Daniel J. Duann, Ph.D.

Journal Articles

Regulation, The Cato Review of Business & Government, "Turning up the Heat in the Natural Gas Industry," Vol. 19, 1996, (with Kenneth W. Costello).

Managerial And Decision Economics, "Designing a Preferred Bidding Procedure for Securing Electric Generating Capacity," Vol. 12, 1991.

The Journal of Energy and Development, "Direct Gas Purchases by Local Distribution Companies: Supply Reliability and Cost Implications," Vol. 14, 1989.

Public Utilities Fortnightly, "Alternative Searching and Maximum Benefit in Electric Least-cost Planning," December 21, 1989.

Research Reports and Presentations

The National Regulatory Research Institute, *Pricing Local Distribution Services in A Competitive Market*, 1995.

Ninth NARUC Biennial Regulatory Information Conference, Ohio State University, *The Unbundling and Restructuring of Local Distribution Services in the Post-636 Gas Market*, 1994.

The National Regulatory Research Institute, *A Survey of Recent State Initiatives on EPACT and FERC Order 636*, 1994 (with Belle Chen).

The National Regulatory Research Institute, *Restructuring Local Distribution Services: Possibilities and Limitations*, 1994.

The National Regulatory Research Institute, *The FERC Restructuring Rule: Implications for Local Distribution Companies and State Public Utilities Commissions*, 1993.

The National Regulatory Research Institute, *A Synopsis of the Energy Policy Act of 1992: New Tasks for State Public Utility Commissions*, 1993.

International Symposium on Energy, Environment & Information Management, Argonne National Laboratory, *Natural Gas Vehicles: Barriers, Potentials, and Government Policies*, 1992.

The National Regulatory Research Institute, *Natural Gas Vehicles and the Role of State Public Service Commissions*, 1992 (with Youssef Hegazy).

The National Regulatory Research Institute, *Incentive Regulation for Local Gas Distribution Companies under Changing Industry Structure*, 1991 (with Mohammad Harunuzzaman, Kenneth W. Costello, and Sung-Bong Cho).

The National Regulatory Research Institute, *Discussion Papers on Competitive Bidding and Transmission Access and Pricing issues in the Context of Integrated Resource Planning*, 1990 (with Robert E. Burns, Kenneth Rose, Kevin Kelly, and Narayan Rau).

The National Regulatory Research Institute, *Gas Storage: Strategy, Regulation, and Some Competitive Implications*, 1990 (with Peter A. Nagler, Mohammad Harunuzzaman, and GovindarajanIyyuni).

The National Regulatory Research Institute, *State Gas Transportation Policies: An Evaluation of Approaches*, 1989 (with Robert E. Burns and Peter A. Nagler).

The National Regulatory Research Institute, *Direct Gas Purchases by Gas Distribution Companies: Supply Reliability and Cost Implications*, 1989, (with Robert E. Burns and Peter A. Nagler).

The National Regulatory Research Institute, *Competitive Bidding for Electric Generating Capacity: Application and Implementation*, 1988 (with Robert E. Burns, Douglas N. Jones, and Mark Eifert).

**Testimonies of Daniel J. Duann, Ph.D. CRRA
Before the Public Utilities Commission of Ohio within the Last Five years**

1. Application of The Dayton Power and Light Company for Approval of Its Electric Security Plan, Case No. 08-1094-EL-SSO.
2. Application of Ohio American Water Company to Increase Its Rates for Water and Sewer Service Provided to Its Entire Service Area, Case No. 09-391-WS-AIR.
3. Application of Aqua Ohio, Inc. for Authority to Increase its Rates and Charges in its Masury Division, Case No. 09-560-WW-AIR.
4. Application of Aqua Ohio, Inc. for Authority to increase its Rates and Charges in its Lake Erie Division, Case No. 09-1044-WW-AIR.
5. In the Matter of the Fuel Adjustment Clauses for Columbus Southern Power Company and Ohio Power Company, Case Nos. 09-872-EL-FAC and 09-873-EL-FAC.
6. In the Matter of the Application of Columbus Southern Power Company for Approval of an Electric Security Plan; an Amendment to its Corporate Separation Plan; and the Sale or Transfer of Certain Generating Asset (Remand), Case Nos. 08-917-EL-SSO et al.
7. In the Matter of the Application of The East Ohio Gas Company d/b/a Dominion East Ohio for Approval of Tariffs to Modify and further Accelerate its Pipeline Infrastructure Replacement Program and to Recover the Associated Costs et al., Case Nos. 11-2401-GA-ALT, and 08-169-GA-ALT.

8. In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to 4928.143, Ohio Rev. Code in the Form of an Electric Security Plan (ESP). Case Nos. 11-346-EL-SSO, et al.
9. In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Merge and Related Approval (ESP Stipulation). Case Nos. 10-2376-EL-UNC, et al.
10. In the Matter of the 2010 Annual Filing of Columbus Southern Power Company and Ohio Power Company Required by Rule 4901:1-35-10, Ohio Administrative Code. Case Nos. 11-4571-EL-UNC, et al.

**PUCO Staff's Proposed Return on Equity and Rate of Return
(Case No. 11-4161-WS-AIR)**

A. Return On Equity

CAPM

Average Beta	0.69
Spread of Mean Return	6.00%
Risk-free Return	3.13%
CAPM ROE	7.26%

DCF	10.23%
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Average of CAPM and DCF	8.74%
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Baseline Lower Bound	8.24%
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Baseline Upper Bound	9.24%
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Issuing Cost Adjustment Factor	1.03627
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ROE Lower Bound	8.54%
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ROE Upper Bound	9.58%
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ROE Midpoint	9.06%
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B. Rate of Return

	% of Total	% Cost	% Weighted Cost
Long Term Debt	48.24%	6.32%	3.05%
Preferred Stock	1.07%	8.53%	0.09%
Common Equity	50.69%	8.54% - 9.58%	4.33% - 4.86%
Total Capital	100.00%		7.47% - 8.00%
Rate of Return Midpoint			7.74%

SOURCE: Staff Report, pages 12-14, and Schedule D-1.

OCC's Proposed Return on Equity and Rate of Return (Case No. 11-4161-WS-AIR)

A. Return On Equity

CAPM

Average Beta	0.69
Spread of Mean Return	5.20%
Risk-free Return	3.13%
CAPM ROE	6.72%

DCF	10.23%
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Average of CAPM and DCF	8.47%
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Baseline Lower Bound

Baseline Upper Bound

Issuing Cost Adjustment Factor	1.00000
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ROE Lower Bound

ROE Upper Bound

ROE Midpoint	8.47%
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B. Rate of Return

	% of Total	% Cost	% Weighted Cost
Long Term Debt	48.24%	6.32%	3.05%
Preferred Stock	1.07%	8.53%	0.09%
Common Equity	50.69%	8.47%	4.29%
Total Capital	100.00%		7.43%

OAW's Proposed Return on Equity and Rate of Return (Case No. 11-4161-WS-AIR)

A. Return On Equity

CAPM	
Average Beta	0.75
Spread of Mean Return	7.53%
Risk-free Return	4.78%
 Estimated CAPM ROE	 10.34%
Estimated Risk Premium ROE	10.43%
Estimated DCF ROE	9.54%
Estimated Comparable Earning ROE	13.59%
 Indicated Baseline ROE	 11.00%
 Financial Risk Adjustment	 -0.22%
Flotation Cost Adjustment	0.12%
Business Risk Adjustment	0.60%
 Recommended ROE	 11.50%

B. Rate of Return

	% of Total	% Cost	% Weighted Cost
Long Term Debt	48.24%	6.32%	3.05%
Preferred Stock	1.07%	8.53%	0.09%
Common Equity	50.69%	11.50%	5.83%
 Total Capital	 100.00%		 8.97%

SOURCE: Application Schedules D-1, D-2, D-3, and D-4, and Direct Testimony and Exhibits of Pauline M. Ahern

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Case No(s). 11-4161-WS-AIR

Summary: Testimony Direct Testimony of Daniel J. Duann, Ph.D., CRRA, on Behalf of the Office of the Ohio Consumers' Counsel electronically filed by Ms. Deb J. Bingham on behalf of Yost, Melissa R. Ms.