OCC EXHIBIT NO. ______

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Annual Application of Duke Energy Ohio, Inc., for an Adjustment to the Capital Expenditure Rider Rate.	)))	Case No. 21-618-GA-RDR

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

On Behalf of
Office of the Ohio Consumers' Counsel

65 East State Street, Suite 700
Columbus, Ohio 43215

JANUARY 25, 2022

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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 65 East State Street, Suite 700, Columbus, OH 43215. I am the Co-Director for Traditional Regulation in the Analytical Services Department within the Office of the Ohio Consumers' Counsel ("OCC").

Q2. DR. DUANN, PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE AND EDUCATIONAL BACKGROUND.

A2. I joined OCC in January 2008 as a Senior Regulatory Analyst. I was promoted to the position of Principal Regulatory Analyst in 2011, and then to the position of Assistant Director in 2018. I began my current position in July 2021. My primary responsibility at OCC is to provide analytical support for OCC's participation in proceedings before the Public Utilities Commission of Ohio ("PUCO") and the Federal Energy Regulatory Commission ("FERC"). These proceedings include, among others, rate cases, cost of capital, fuel adjustment clause, standard service offer, and infrastructure replacement riders.

Prior to joining OCC, I was an independent consultant. Before that, I was a Senior Institute Economist at the National Regulatory Research Institute ("NRRI") at The Ohio State University. NRRI has been a policy research center funded by the National Association of Regulatory Utility Commissioners and state public utilities commissions since 1976. NRRI is currently located in Washington, DC and no longer a part of The Ohio State University. My work at NRRI involved research, publishing, and public services in the areas of regulatory and energy policy. Before NRRI, I held various positions with the Forecasting Section of the Ohio Division of Energy (which was later transferred to the PUCO), the Center of Health Policy Research at the American Medical Association, and the Policy Analysis and Research Division of the Illinois Commerce Commission.

I received my Ph.D. degree in Public Policy Analysis and M.S. degree in Energy Management and Policy from the University of Pennsylvania. I also have an M.A. degree in Economics from the University of Kansas. I completed my undergraduate study in Business Administration at the National Taiwan University, Taiwan, Republic of China. I have been a Certified Rate of Return Analyst by the Society of Utility and Regulatory Financial Analysts since 2011.

Q3. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY OR TESTIFIED BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO AND OTHER AGENCIES AND LEGISLATURES?

A3. Yes. I have submitted expert testimony or testified on behalf of the OCC before the PUCO in many proceedings. A list of these cases is included in Attachment DJD-01. I have also testified before the Illinois Commerce Commission and the

California Legislature (specifically, the Senate Committee on Energy and Public Utilities).

Q4. HAVE YOU PREVIOUSLY PUBLISHED OR PRESENTED IN ACADEMIC JOURNALS, TRADE PUBLICATIONS, AND PROFESSIONAL CONFERENCES?

A4. Yes. I have published in several academic journals and trade publications. I have also presented in conferences on issues related to utility regulation, energy policy, and emerging energy technology. A selected list of these publications and presentations is included as Attachment DJD-02.

II. PURPOSE AND RECOMMENDATION

Q5. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A5. My testimony supports OCC's recommendation that the PUCO should protect consumers by rejecting the outdated and unreasonable 9.16% pre-tax rate of return proposed by Duke Energy Ohio, Inc. ("Duke" or "Utility") in its Capital Expenditure Program Rider ("CEP") Rate Application.[1] The PUCO should protect Duke's 406,000 residential gas consumers against charges for inflated profits and debt costs that do not reflect the actual market conditions for return on equity or

[1] *In the Matter of the Application of Duke Energy Ohio, Inc. for an Adjustment to the Capital Expenditure Program Rider Rate*, PUCO Case No. 21-618-GA-RDR (April 23, 2021), "Application".

Duke's true cost of debt. The PUCO should adopt a pre-tax rate of return, as recommended by OCC, of no higher than 8.29%.

Q6. IS IT JUST AND REASONABLE FOR DUKE'S CUSTOMERS TO PAY A PRE-TAX RATE OF RETURN OF 9.16% THAT WAS DECIDED IN DUKE'S LAST RATE CASE?

A6. No. A pre-tax rate of return of 9.16% on Duke's CEP rate base is neither justified nor reasonable under current market conditions or established regulatory principles. Given the significant decline in the interest rates and cost of capital since 2012, continuing to use that return on equity and cost of debt will lead to excessive and unreasonable CEP charges for customers.

The reliance on a rate of return set nearly ten years ago under vastly different financial market conditions in setting current rates charged to consumers is problematic and unreasonable. It should not continue.

In a prior Dominion case, Commissioner Conway said during a public meeting announcing the PUCO's Order:

> [W]e have a utility that not unlike some other utilities hasn't been in for a rate case in quite a while so our policy of referring back to cost of capital values that were established in the most recent prior base rate case means that we refer back quite a distance in time, and during that period, as the

> record in this case and OCC and NOPEC have pointed out, there have been macro changes with regard to capital costs that have undoubtedly caused the cost of capital to decline in a material way.[2]

It is unfortunate (if not inexplicable) for consumers that both the PUCO Staff's Report[3] and the Audit Report by the PUCO-hired Auditor (Blue Ridge Consulting Services, Inc.)[4] did not specifically address this consumer protection issue. This issue of a utility overcharging consumers for its profits and debt costs should have been front and center at the PUCO.

Q7. DO YOU AGREE WITH THE ASSERTION OF DUKE THAT THE PRE-TAX RATE OF RETURN SHOULD NOT BE REVISED IN THIS PROCEEDING?

A7. No. In the supplemental testimony of Duke witness, Jay P. Brown, filed on January 18, 2022, Duke asserted that the pre-tax rate of return of Rider CEP should not be revised.[5] This assertion is without merit and should be rejected by the PUCO.

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[2] *See In the Matter of the East Ohio Gas Company d/b/a Dominion Energy Ohio for Approval of an Alternative Form of Regulation,* Case No. 19-468-GA-ALT, *available at* https://www.youtube.com/watch?v=d_ozIp9-4tQ (starting at 13:58). This is a webcasting of the PUCO Commission Meeting of December 30, 2020.

[3] *See* PUCO Case No. 21-618-GA-RDR, Staff's Review and Recommendation (October 22, 2021), (Staff Report).

[4] *See* PUCO Case No. 21-618-GA-RDR, Audit Report (October 14, 2021), (Audit Report).

[5] *See* PUCO Case No. 21-168-GA-RDR, Supplemental Testimony of Jay P. Brown at 18-19 (January 18, 2022).

First, based on my review of the stipulation and the order approving and modifying the stipulation in Case No. 19-791-GA-ALT, the PUCO did not set the pre-tax rate of return to be used for this proceeding. The PUCO order only approved the CEP program and the first-year CEP Rider charge.

Second, the Auditor in this proceeding does not endorse or support a specific pre-tax rate of return. The Auditor simply verified the 9.16% rate of return, as proposed by Duke in its Application, did reflect the approved pre-tax rate of return that was set in accordance with the rate case settlement in Case No. 12-1685-GA-AIR and adjusted to reflect a reduction in the corporate tax rate from 35% to 21%.[6] Consequently, the PUCO can and should re-set the pre-tax rate of return for CEP investments based on consideration of public interest (such as protecting consumers from unjust and unreasonable rates charged by a regulated utility) and sound regulatory principles.

Q8. DR. DUANN, WHAT DO YOU RECOMMEND REGARDING DUKE'S APPLICATION TO ADJUST ITS CEP RIDER RATES?

A8. For consumer protection, the PUCO should reject the pre-tax rate of return of 9.16% proposed by Duke. The PUCO should reduce the pre-tax rate of return used in calculating the CEP Rider charges to be no higher than 8.29%.

[6] Audit Report at 33.

My recommendation is based on the following conclusions: (1) the pre-tax rate of return of return of 9.16% was based on the rate of return components approved nearly 10 years ago in Duke's last gas rate case and it does not reflect current market conditions or current business and financial risks facing Duke; and (2) the use of the 9.16% pre-tax rate of return will hurt the consumers that the PUCO is supposed to protect because it will increase the annual CEP Rider revenue requirement (charges) to consumers by approximately $2.5 million in this proceeding while providing no offsetting benefits.

III. THE PUCO SHOULD REJECT DUKE'S PROPOSED PRE-TAX RATE OF RETURN OF 9.16% TO PROTECT CONSUMERS

Q9. WHAT ARE THE REGULATORY PRINCIPLES COMMONLY USED IN SETTING A REASONABLE RATE OF RETURN FOR A REGULATED UTILITY SUCH AS DUKE?

A9. The regulatory principles in setting a reasonable rate of return for regulated utilities, including the cost of equity ("return on equity" or "allowed profits") and cost of debt, are well-established. The fundamental regulatory principles regarding rate of return are best exemplified in the case of *Bluefield Water Works v. Public Service Comm'n,* 262 U.S. 679 (1923). In that case, the U.S Supreme Court ruled that:

> A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures.

Accordingly, for the purpose of this proceeding, the returns on the net rate base (net plant investment and deferrals) included in the CEP Rider charges should be commensurate with the current business and financial risks facing Duke and current financial market conditions.

Q10. WHAT IS THE PRE-TAX RATE OF RETURN THAT DUKE PROPOSES TO CHARGE CONSUMERS FOR ITS CAPITAL EXPENDITURE PROGRAM ("CEP")?

A10. Duke proposes to use a pre-tax rate of return of 9.16% in calculating the Rider CEP revenue requirement.[7] Duke indicates that this pre-tax rate of return reflects the rate of return components stipulated in Duke's last rate case, Case No. 12-1685-GA-AIR et al. Specifically, the 9.16% pre-tax rate of return is based on: a

[7] *See* Application, Schedule 1, Line 20.

cost of equity (or return on equity, ROE) of 9.84%, a cost of long-term debt of 5.32%, a capital structure of 46.7% debt and 53.3% equity, and a tax gross-up factor reflecting the federal income tax rate of 21% currently in place.

Q11. IS THE PUCO REQUIRED TO USE THE RATE OF RETURN SET IN THE LAST RATE CASE FOR SUBSEQUENT RIDERS THAT CUSTOMERS PAY?

A11. No. There is no requirement that the PUCO use the rate of return decided in the last rate case for any subsequent rider cases or other proceedings that involve a return on rate base. As stated earlier, the proper standards for the PUCO in making such a decision is the consideration of public interest and sound regulatory principles.

Q12. HAS THERE BEEN ANY FACTUAL SUPPORT PROVIDED FOR THE PRE-TAX RATE OF RETURN OF 9.16% PROPOSED IN THE APPLICATION?

A12. No. Neither Duke, the PUCO Staff, nor the Auditor has provided any factual support for using the pre-tax rate of return of 9.16%. This pre-tax rate of return is in turn based on a high cost of equity of 9.84% and a high cost of debt of 5.32%. Duke and the PUCO staff have provided no rate of return expert witness or any testimony to demonstrate Duke's current actual cost of long-term debt is 5.32% or cost of equity 9.84%.

Additionally, there is no evidence presented in this case that Duke cannot continue its CEP program without a pre-tax rate of return of 9.16%. The use of this inflated and unreasonable pre-tax rate of return of 9.16% will only enrich Duke at the expense of its gas consumers.

Q13. WHAT IS YOUR RECOMMENDED COST OF LONG-TERM DEBT FOR DUKE IN THIS PROCEEDING?

A13. I recommend that the PUCO apply a cost of debt of 4.03% in setting the pre-tax rate of return for Duke's CEP program in this proceeding.

As discussed in great detail in my testimony in Case 19-791-GA-ALT that was filed on January 13, 2021, this cost of debt of 4.03% properly reflects the reduction of Duke's cost of debt after the refinancing of debt at lower interest rates after 2012.[8] For example, Duke has sold three First Mortgage Bonds totaling $1.2 billion in 2019 and 2020: a $400 million bond due in 2029 with an interest rate of 3.65%, another $400 million bond due in 2049 with an interest rate of 4.30%, and a $400 million due in 2030 with an interest rate of 2.125% on May 21, 2020.[9] I have reviewed Duke's debt financing after 2020 and the current financial market conditions and the U.S. economy such as the interest rates of U.S. Treasury Bonds and corporate bonds. Based on these additional reviews, I

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[8] *See* PUCO Case 19-791-GA-ALT, Direct Testimony of Daniel J. Duann, Ph.D. at 20-24 (January 13, 2021).

[9] *Id.*

conclude a reasonable calculation of Duke's current cost of long-term debt is approximately 4.03%

Q14. WHAT IS YOUR RECOMMENDED COST OF EQUITY (OR RETURN ON EQUITY) THAT CUSTOMERS SHOULD PAY FOR DUKE'S CEP PROGRAM IN THIS PROCEEDING?

A14. As discussed in my testimony in Case 19-791-GA-ALT, Duke has not been facing any unusual and distinct business and financial risks in comparison to other regulated gas utilities.[10] Based on my review of the average ROEs authorized for gas distribution utilities in recent years (including 2021)[11] and Ohio's current favorable regulatory environment for gas utilities, I recommend a cost of equity of 9.36% for Duke in this proceeding. Specifically, according to S&P Global Market Intelligence published on October 28, 2021, the average ROE authorized for gas utilities nationwide was 9.54% in rate cases decided in the first nine months of 2021and 9.46% for cases decided in the full year of 2020. The 9.36% is a reasonable estimate of Duke's current cost of equity.

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[10] *Id.*

[11] *See* https://www.capitaliq.spglobal.com/web/client?auth=inherit#news/file?keyfileversion=1B172F43-BFF4-2161-CCE9-C31633A73132&KeyFileFormat=3&isNewsletter=1, the access may require subscription.

Q15. WHAT IS YOUR RECOMMENDED PRE-TAX RATE OF RETURN FOR DUKE IN THIS PROCEEDING?

A15. If my recommended cost of equity of 9.36% and cost of long-term debt of 4.03% were adopted and applied to the capital structure of 46.03% debt and 53.97% equity, the resulting pre-tax rate of return would be 8.29%. This capital structure is the same as what I recommended in Case 19-791-GA-ALT and it is also similar to the capital structure of gas utilities with rate case decided in recent years.[12]

Q16. WHAT ARE THE ADDITIONAL COSTS TO CONSUMERS AS A RESULT OF USING DUKE'S OUTDATED AND INFLATED PRE-TAX RATE OF RETURN?

A16. I calculate that the use of the 9.16% pre-tax rate of return (vs. the 8.29% pre-tax rate of return OCC recommends) would increase the CEP Rider charges by approximately $2.5 million ($2,453,580) for the twelve-month period covered in this proceeding. Because my calculation here is to illustrate the adverse impact of an inflated and unreasonable pre-tax rate of return, I will use the adjustments proposed and supplemented in the Audit Report, specifically Table 15 of the Audit Report, and calculate the revenue requirement accordingly.[13] However, this does not mean I support all the adjustments proposed and the resulting revenue requirements included in the Audit Report.

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[12] *Id.* For example, the average equity ratio of gas utilities for 2020 was 51.86%.

[13] *See* Audit Report at 37. The Auditor later withdrew Adjustment No. 7 in a Supplemental filing on November 8, 2021. Also see Table 2 of the Supplemental filing.

My calculation is shown in Table 1 and Table 2. It should be noted that the Rider CEP rates in Table 1 will be effective for six month and the difference in revenue requirements under the two different pre-tax rates of return is $926,947.[14] Similarly, the Rider CEP rates in Table 2 will be effective for six month and the difference in revenue requirement is $1,528,633.[15] The total adverse impact to consumer of using this inflated and unreasonable pre-tax rate of return of 9.16% over the twelve-month period is approximately $2,453,580.[16]

Table 1
Additional Cost to Consumers by Adopting the 9.16% Pre-Tax Rate of Return for 2013 to 2019 Investments

	Per Audit Report	**Per OCC Recommendation (for illustration purpose)**	**Difference for Consumer**
Rate Base	$212,631,495	$212,631,495	$0
Pre-tax Rate of Return	9.16%	8.29%	0.87%
Annualized Return on Rate Base	$19,477,043	$17,627,149	$1,849,894
Total Operating Expenses	$22,492,082	$22,492,082	$0
Annual Revenue Requirement	$41,969,125	$40,119,231	$1,849,894
Residential Share (72.35%)	$30,364,662	$29,026,263	$1,338,398
Number of Bills	4,872,985	4,872,985	0
Rider CEP Rates			
GSS/ECTA Residential (per month)	$6.23	$5.96	$0.27

[14] $926.947 = $1,849,894 / 2.

[15] $1,528,633 = $3,057,267 / 2.

[16] $2,453,580 = $926,947 + $1,528,633.

Table 2
Additional Cost to Consumers by Adopting the 9.16% Pre-Tax Rate of Return for 2013 to 2020 Investments

	Per Audit Report	Per OCC Recommendation (for illustration purpose)	Difference for Consumer
Rate Base	$351,410,000	$351,410,000	$0
Pre-tax Rate of Return	9.16%	8.29%	0.87%
Annualized Return on Rate Base	$32,189,156	$29,131,889	$3,057,267
Total Operating Expenses	$31,206,531	$31,206,531	$0
Annual Revenue Requirement	$61,395,687	$60,338,420	$3,057,267
Residential Share (72.35%)	$45,866,780	$43,654,846	$2,211,933
Number of Bills	4,928,018	4,928,018	0
Rider CEP Rates			
GSS/ECTA Residential (per month)	$9.31	$8.86	$0.45

Q17. DOES THE FINANCIAL EARNINGS REVIEW IN THE STAFF REPORT SUPPORT THE USE OF THE 9.16% PRE-TAX RATE OF RETURN PROPOSED IN THE APPLICATION?

A17. No. The Financial Earnings Review in the Staff Report has nothing to do with the adoption of the 9.16% pre-tax rate of return.[17] The Financial Earnings Review is a summary of the *overall* profitability of Duke in comparison to other local distribution companies (locally and nationwide). It is not a review of the earnings contributed by the Capital Expenditure Program to Duke's overall earnings. It is

[17] *See* Staff Report at 4.

certainly not a review of the reasonableness of the pre-tax rate of return included in the CEP Rider charges.

If anything, the Financial Earnings Review indicates that the 9.84% return on equity proposed in the Application is too high and thus unjust and unreasonable. Specifically, the Financial Earnings Review shows the 3-year average median earned profits by Ohio and nationwide local distribution companies (as calculated in the Staff Report) is only 7.94%. Duke is financially healthy and has no additional business or financial risks compared to an average local distribution company to justify a profit that is much higher than the national median.

IV. CONCLUSION

Q18. PLEASE SUMMARIZE YOUR RECOMMENDATIONS FOR CONSUMER PROTECTION IN THIS PROCEEDING.

A18. I recommend that the PUCO reject the pre-tax rate of return of 9.16% proposed by Duke and adopt a fair and reasonable pre-tax rate of return of no higher than 8.29% in updating the CEP Rider charges.

That 9.16% pre-tax rate of return based on a Duke rate case decision almost 10 years ago is outdated and unreasonable. The use of this outdated 9.16% pre-tax rate of return will impose higher and unjust rates for Duke's approximately

406,000 residential gas consumers. This is especially concerning when many Ohioans are still struggling financially and physically from the resurging pandemic, high inflation and energy costs, and uncertain economic prospects. The PUCO should protect Duke's consumers against charges for higher profits and debt costs that do not correspond with the actual market conditions for return on equity and for Duke's true cost of debt.

As observed by the U.S. Supreme Court nearly one hundred years ago in the landmark *Bluefield* decision, "[a] rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for investment, the money market, and business conditions generally."[18] This is precisely the situation here. The PUCO should adopt a pre-tax rate of return no higher than 8.29% for determining what consumers should pay if Rider CEP is approved.

Q19. DOES THIS CONCLUDE YOUR TESTIMONY?

A19. 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.

[18] *See Bluefield Water Works v. Public Service Comm'n, 262 U.S. 679 (1923).*

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing *Direct Testimony of Daniel J. Duann, Ph.D. on Behalf of Office of the Ohio Consumers' Counsel* has been served upon those persons listed below via electronic service this 25th day of January 2022.

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

The PUCO's e-filing system will electronically serve notice of the filing of this document on the following parties:

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List of Testimonies Filed Before PUCO

1. *Application of The Dayton Power and Light Company for Approval of Its Electric Security Plan*, Case No. 08-1094-EL-SSO (January 26, 2009).

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 (January 4,2010).

3. *Application of Aqua Ohio, Inc. for Authority to Increase its Rates and Charges in its Masury Division*, Case No. 09-560-WW-AIR (February 22, 2010).

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 (June 21, 2010).

5. *In the Matter of the Fuel Adjustment Clauses for Columbus Southern Power Company and AEP Company*, Case Nos. 09-872-EL-FAC and 09-873-EL-FAC (August 16, 2010).

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 (June 30, 2011).

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 (July 15, 2011).

8. *In the Matter of the Application of Columbus Southern Power Company and AEP 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 (July 25, 2011).

9. *In the Matter of the Application of Columbus Southern Power Company and AEP Company for Authority to Merge and Related Approval (ESP Stipulation)*, Case Nos. 10-2376-EL-UNC, et al (September 27, 2011).

10. *In the Matter of the 2010 Annual Filing of Columbus Southern Power Company and AEP Company Required by Rule 4901:1-35-10, Ohio Administrative Code,* Case Nos. 11-4571-EL-UNC and 11-4572-EL-UNC (October 12, 2011).

11. *In the Matter of the Application of Ohio American Water Company to Increase Its Rates for Water and Sewer Service Provided to Its Entire Service Area*, Case No. 11-4161-WS-AIR (March 1, 2012).

12. *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 (Modified ESP)*, Case Nos. 11-346-EL-SSO, et al (May 4, 2012).

13. *In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison 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. 12-1230-EL-SSO (May 21, 2012).

14. *In the Matter of the Application of Duke Energy Ohio, Inc., for an Increase in Electric Distribution Rates, et al.* Case Nos. 12-1682-EL-AIR (February 19, 2013).

15. *In the Matter of the Application of Duke Energy Ohio, Inc., for an Increase in Gas Rates,* Case Nos. 12-1685-GA-AIR, et al (February 25, 2013).

16. *In the Matter of the Application of Dayton Power & Light Company for Authority to Establish a Standard Service Offer in the Form Of an Electric Security Plan Pursuant to R.C. 4928.143,* Case No. 12-426-EL-SSO et al. (March 1, 2013).

17. *In the Matter of the Application of The Dayton Power and Light Company for Authority to Recover of Certain Storm-related Service Restoration Costs,* Case Nos. 12-3062-EL-RDR, et al. (January 31, 2014).

18. *In the Matter of the Application of The Dayton Power and Light Company for Authority to Recover of Certain Storm-related Service Restoration Costs,* Case Nos. 12-3062-EL-RDR, et al. (May 23, 2014).

19. *In the Matter of the Application of Aqua Ohio, Inc. to Increase Its Rates and Charges for Its Waterworks Service,* Case No. 13-2124-WW-AIR (August 4, 2014).

20. *In the Matter of the Application Seeking Approval of AEP Company's Proposal to Enter into an Affiliate Power Purchase Agreement for Inclusion in the Power Purchase Agreement Ride,* Case No. 14-1693-EL-RDR, et al. (September 11, 2015).

21. *In the matter of the Application of Duke Energy Ohio, Inc. for Approval of an Alternative Rate Plan Pursuant to R.C. 4929.05, Revised Code, for an Accelerated Service Line Replacement Program*, Case No. 14-1622-GA-ALT (November 6, 2015).

22. *In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Establish a Standard Service Offer Pursuant to R.C. 4928.141 in the Form of an Electric Security Plan,* Case No. 14-1297-EL-SSO (June 22, 2016).

23. *In the Matter of the Application of Ohio Power Company for Administration of the Significantly Excessive Earnings Test for 2014 under Section 4928.143 (F), Revised Code, and Rule 4901:1-35-10, Ohio Administrative Code,* Case No. 16-1105-El-UNC (August 15, 2016).

24. *In the Matter of the Application of Ohio Power Company for Administration of the Significantly Excessive Earnings Test for 2014 under Section 4928.143 (F), Revised Code, and Rule 4901:1-35-10, Ohio Administrative Code,* Case No. 16-1105-El-UNC (September 19, 2016).

25. *In the Matter of the Application of Aqua Ohio, Inc. for Authority to Increase Its Rates and Charges for Its Waterworks Service.* Case No. 16-0997-WW-AIR (December 19, 2016).

26. *In the Matter of the Application of Ohio Power Company for Administration of the Significantly Excessive Earnings Test for 2016 Under Section 4928.143(F), Revised Code, and Rule 4901:1-35-10, Ohio Administrative Code,* Case No. 17-1230-EL-UNC (January 12, 2018).

27. *In the Matter of the Annual Application of Duke Energy Ohio, Inc., for an Adjustment to Rider AMRP Rates.* Case No. 17-2318-GA-AIR (April 5, 2018).

28. *In the Matter of the Application of the Dayton Power and Light Company for an Increase in Electric Distribution Rates.* Case No. 15-1380-EL-AIR (April 11, 2018).

29. *In the Matter of the Application of Duke Energy Ohio, Inc., for an Increase in Distribution Rates.* Case No. 17-0032-EL-AIR et al., (June 25, 2018).

30. *In the Matter of the Determination of the Existence of Significantly Excessive Earnings Test for 2017 Under the Electric Security Plan of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company.* Case No. 18-0967-EL-UNC, (October 16, 2018).

31. *In the Matter of the Application of Suburban Natural Gas Company for an Increase in Gas Distribution Rates.* Case No. 18-1205-GA-AIR et al., (March 8, 2019).

32. *In the Matter of the Application of Suburban Natural Gas Company for an Increase in Gas Distribution Rates.* Case No. 18-1205-GA-AIR et al., (June 21, 2019).

33. *In the Matter of the Application of Northeast Ohio Gas Corp. for an Increase in Gas Distribution Rates.* Case No. 18-1720-GA-AIR et al., (July 25, 2019).

34. *In the Matter of the Application of Northeast Ohio Gas Corp. for an Increase in Gas Distribution Rates.* Case No. 18-1720-GA-AIR et al., (September 5, 2019).

35. *In the Matter of the Application of Ohio Power Company for Administration of the Significantly Excessive Earnings Test for 2018 Under Section 4029.143(F), Revised Code, and Rule 4901:1-35-10, Ohio Administrative Code.* Case No. 19-1098-EL-UNC, (August 30, 2019).

36. *In the Matter of the Application of Ohio Power Company for Administration of the Significantly Excessive Earnings Test for 2018 Under Section 4029.143(F), Revised Code, and Rule 4901:1-35-10, Ohio Administrative Code.* Case No. 19-1098-EL-UNC, (November 5, 2019).

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.

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