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COMMONWEALTH of VIRGINIA

Office of the Attorney General

Mark R. Herring
Attorney General

202 N. Ninth Street
Richmond, Virginia 23219
804-786-2071
FAX 804-786-1991
Virginia Relay Services
800-828-1120
7-1-1

July 30, 2020

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Mr. Joel H. Peck, Clerk
c/o Document Control Center
State Corporation Commission
P.O. Box 2118
Richmond, Virginia 23218

RE: ***Application of Appalachian Power Company, For a 2020 triennial review of its base rates, terms and conditions pursuant to § 56-585.1 of the Code of Virginia*** **Case No. PUR-2020-00015**

Dear Mr. Peck:

Please find attached for filing in the above-referenced matter, the testimony and exhibits of Mr. Ralph Smith being filed on behalf of the Office of Attorney General, Division of Consumer Counsel. Mr. Smith's testimony and exhibits contain information designated as confidential by Appalachian Power Company, which has been redacted.

Thank you for your assistance in this matter.

Yours truly,

/s/ C. Mitch Burton Jr.

Assistant Attorney General

cc: Service list

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

APPLICATION OF	)	
	)	
APPALACHIAN POWER COMPANY	)	
	)	
For a 2020 triennial review of the rates, terms and conditionspursuant to § 56-585.1 of the Code of Virginia	)))	Case No. PUR-2020-00015

DIRECT TESTIMONY AND EXHIBITS OF

RALPH C. SMITH, C.P.A.

ON BEHALF OF THE
OFFICE OF THE ATTORNEY GENERAL
DIVISION OF CONSUMER COUNSEL

JULY 30, 2020

REDACTED VERSION

Summary of Testimony – Ralph C. Smith

I address the results of the Consumer Counsel's review of the 2017, 2018, and 2019 historical earnings period for Appalachian Power Company ("APCo" or "Company").

My primary findings and recommendations are as follows:

- During the combined 2017-2019 triennial review period, as shown on Exhibit LA-1, Schedule A, for purposes of calculating a reasonable earned return under the statute, I calculate that APCo earned an ROE of approximately 11.12 percent, which exceeds the top of the APCO's authorized historical earnings band of 8.72 percent to 10.12 percent.

- APCo had earnings during the 2017-2019 triennial review period that exceeded the top of the earnings band of approximately $36.3 million (a revenue equivalent of approximately $59.4 million). (Derived from LA-1, Schedule A, page 1).

- APCo had earnings during the 2017-2019 triennial review period that exceeded the bottom of the earnings band of approximately $87.0 million (a revenue equivalent of approximately $142.4 million). (Derived from LA-1 Schedule A, page 1).

- APCo has requested an increase to its overall revenues as part of this case. My prospective ratemaking analysis presented on Exhibit LA-2 shows, however, that using APCo's actual cost of equity of 8.75 percent (supported by Dr. Woolridge), and with the adjustments recommended by Consumer Counsel, APCo will recover revenues in prospective rate year that will exceed the Company's cost, including a fair rate of return, by approximately $22.7 million.

- The results show that APCo's earnings were above the top of the ROE band in the 2017-2019 period and that APCo has a prospective revenue sufficiency for the test rate year.

DIRECT TESTIMONY AND EXHIBITS OF RALPH C. SMITH, C.P.A.

TABLE OF CONTENTS

Appendix and Exhibits

Appendix RCS-1, Qualifications of Ralph C. Smith

LA-1 2017, 2018 and 2019 Earnings Test Calculations
LA-2 Revenue Requirement Schedules
LA-3 Schedules Showing Recommended Adjustments
LA-4 Company Discovery Responses Regarding Coal Inventory
LA-5 Company Discovery Responses Regarding Non-Period Retired Generating Plant
LA-6 Company Discovery Responses and Regarding Wholesale Renewable Energy Credits
LA-7 Company Discovery Responses Regarding AMI Meters and Related Communications Equipment
LA-8 Company Discovery Responses Regarding Prepaid Pension and OPEB Benefit Related ADIT

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION
APPLICATION OF APPALACHIAN POWER COMPANY
CASE NO. PUR-2020-00015
DIRECT TESTIMONY AND EXHIBITS
OF
RALPH C. SMITH, C.P.A.

I. INTRODUCTION

Q. WHAT IS YOUR NAME, OCCUPATION AND BUSINESS ADDRESS?

A. My name is Ralph C. Smith. I am a Certified Public Accountant licensed in the State of Michigan and a senior regulatory consultant in the firm Larkin & Associates, PLLC, Certified Public Accountants, with offices at 15728 Farmington Road, Livonia, Michigan 48154.

Q. PLEASE DESCRIBE THE FIRM LARKIN & ASSOCIATES, PLLC.

A. Larkin & Associates, PLLC, is a Certified Public Accounting and Regulatory Consulting Firm. The firm performs independent regulatory consulting primarily for public service/utility commission staffs and consumer interest groups (public counsels, public advocates, consumer counsels, attorneys general, etc.) Larkin & Associates, PLLC has extensive experience in the utility regulatory field providing expert witness testimony in over 600 regulatory proceedings, including numerous gas, electric, water and wastewater, and telephone utility cases.

Q. MR. SMITH, PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND RECENT WORK EXPERIENCE.

A. I received a Bachelor of Science degree in Business Administration (Accounting Major) with distinction from the University of Michigan - Dearborn, in April 1979. I passed all parts of the C.P.A. examination on my first sitting in 1979, received my C.P.A. license in 1981, and received a certified financial planning

1 certificate in 1983. I also have a Master of Science in Taxation from Walsh
2 College, 1981, and a law degree (J.D.) cum laude from Wayne State University,
3 1986. In addition, I have attended a variety of continuing education courses in
4 conjunction with maintaining my accountancy license. I am a licensed Certified
5 Public Accountant and attorney in the State of Michigan. Since 1981, I have been
6 a member of the Michigan Association of Certified Public Accountants. I am also
7 a member of the Michigan Bar Association. I have also been a member of the
8 American Bar Association (ABA), and the ABA sections on Public Utility Law
9 and Taxation.

10 Q. **PLEASE SUMMARIZE YOUR PROFESSIONAL EXPERIENCE.**

11 A. Subsequent to graduation from the University of Michigan, and after a short
12 period of installing a computerized accounting system for a Southfield, Michigan
13 realty management firm, I accepted a position as an auditor with the predecessor
14 CPA firm to Larkin & Associates in July 1979. Before becoming involved in
15 utility regulation where the majority of my time for the past 41 years has been
16 spent, I performed audit, accounting, and tax work for a wide variety of
17 businesses that were clients of the firm.

18 During my service in the regulatory section of our firm, I have been
19 involved in rate cases and other regulatory matters concerning numerous electric,
20 gas, telephone, water, and sewer utility companies. My present work consists
21 primarily of analyzing rate case and regulatory filings of public utility companies
22 before various regulatory commissions, and, where appropriate, preparing

testimony and schedules relating to the issues for presentation before these regulatory agencies.

I have performed work in the field of utility regulation on behalf of industry, state attorneys general, consumer groups, municipalities, and public service commission staffs concerning regulatory matters before regulatory agencies in Alabama, Alaska, Arizona, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Hawaii, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, New Jersey, New Mexico, New York, Nevada, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, Puerto Rico, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, Washington, D.C., West Virginia, and Canada as well as the Federal Energy Regulatory Commission and various state and federal courts of law.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE VIRGINIA STATE CORPORATION COMMISSION ("SCC" OR "COMMISSION")?

A. Yes. I testified before the Commission in Case Nos. PUE-2006-00065, PUE-2008-00046, PUE-2011-00037, and PUE-2014-00026, involving the rate requests of Appalachian Power Company; in the 2008 rate case for Virginia-American Water Company, Case Nos. PUE-2008-00009, PUE-2015-00097, and PUR-2018-00175; and in the base rate cases for Virginia Electric and Power Company, Case Nos. PUE-2009-00019, PUE-2013-00020, and PUE-2015-0027. I also testified before the Commission in the Columbia Gas of Virginia rate case, Case No. PUR-2018-00131.

1 Q. **HAVE YOU PREVIOUSLY TESTIFIED BEFORE OTHER STATE**
2 **REGULATORY COMMISSIONS?**
3 A. Yes. I have previously submitted testimony before several other state regulatory
4 commissions.
5 Q. **HAVE YOU PREPARED AN EXHIBIT DESCRIBING YOUR**
6 **QUALIFICATIONS AND EXPERIENCE?**
7 A. Yes. I have attached Appendix RCS-1, which is a summary of my regulatory
8 experience and qualifications.
9 Q. **ON WHOSE BEHALF ARE YOU APPEARING?**
10 A. Larkin & Associates, PLLC, was retained by the Virginia Office of the Attorney
11 General, Division of Consumer Counsel ("Consumer Counsel") to review the
12 triennial rates, terms, and conditions of Appalachian Power Company ("APCo" or
13 "Company") for the provision of service. Accordingly, I am appearing on behalf
14 of Consumer Counsel.
15 Q. **ARE ANY ADDITIONAL WITNESSES APPEARING ON BEHALF OF**
16 **CONSUMER COUNSEL IN THIS CASE?**
17 A. Yes. Professional engineer Scott Norwood and cost of capital expert Dr. J.
18 Randall Woolridge are also presenting testimony on behalf of Consumer Counsel.
19 Mr. Norwood's testimony sponsors adjustments for the following areas: (1)
20 depreciation rates for prospective ratemaking; (2) demand charges related to Ohio
21 Valley Electric Corporation's Inter-Company Power Agreement; (3) AMI meters
22 and related communications equipment; and (4) depreciation expense related to
23 the disallowance of APCo's proposed shortening of the Amos plant's service life

from 2040 to 2032. Dr. Woolridge addresses APCo's cost of capital and return on equity that would apply prospectively.

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. I will address APCo's 2017, 2018 and 2019 earnings, and the Company's calculation of its prospective revenue requirement. In presenting my results, I have incorporated the recommendations of Consumer Counsel witnesses Norwood and Woolridge.

Q. WHAT EXHIBITS ARE BEING SUBMITTED WITH YOUR TESTIMONY?

A. The following exhibits are being submitted with my testimony:

- Exhibit LA-1 – 2017, 2018 and 2019 Earning Test Calculation Schedules
- Exhibit LA-2 – Revenue Requirement Summary Schedules
- Exhibit LA-3 – Adjustment Schedules
- Exhibit LA-4 – Company Discovery Responses Regarding Coal Inventory.
- Exhibit LA-5 – Company Discovery Responses Regarding Non-Period Retired Generating Plant.
- Exhibit LA-6 – Company Discovery Responses and Regarding Wholesale Renewable Energy Credits.
- Exhibit LA-7 – Company Discovery Responses Regarding AMI Meters and Related Communications Equipment.
- Exhibit LA-8 – Company Discovery Responses Regarding Prepaid Pension and OPEB Benefit Related ADIT.

1 **Rate of Return**

2 **Q. WHAT RATE OF RETURN DID YOU USE TO COMPUTE THE**
3 **PROSPECTIVE REVENUE REQUIREMENT FOR APCO?**

4 A. As shown on Schedule D of Exhibit LA-2, based on the recommendations of Dr.
5 Woolridge, for the prospective revenue requirement calculation I used APCo's
6 actual capital structure at December 31, 2019 and cost of debt. In presenting my
7 results for the prospective ratemaking period, I used an overall cost of capital of
8 6.94 percent, as shown on Exhibit LA-2, Schedule D. For the authorized return
9 on common equity ("ROE") I used 8.75 percent, based on the recommendation of
10 Dr. Woolridge.

11 For purposes of showing the effect of our adjustments, we have accepted
12 the Company's actual year-end capital structure.

13 **Impact of 10 Basis Point Change in Return on Equity**

14 **Q. WHAT IS THE APPROXIMATE IMPACT ON APCO'S PROSPECTIVE**
15 **REVENUE REQUIREMENT FROM CHANGES IN THE AUTHORIZED**
16 **ROE?**

17 A. For each change of 10 basis points in the ROE, the revenue requirement for
18 prospective ratemaking would change by approximately $1.65 million on the
19 Company's proposed rate base or $1.64 million on Consumer Counsel's adjusted
20 rate base.

II. SUMMARY OF TESTIMONY

Q. PLEASE SUMMARIZE YOUR TESTIMONY AND RECOMMENDATIONS.

A. My primary findings and recommendations are as follows:

- During the combined 2017-2019 triennial review period, as shown on Exhibit LA-1, Schedule A, I calculate that APCo had an ROE of approximately 11.12 percent.
- During the combined 2017-2019 triennial review period, after recommended adjustments, APCo had earnings that exceeded 10.12 percent, the top of end of its Commission-authorized earnings band.
- Ratemaking analysis presented on Exhibit LA-2 shows that at the ROE of 8.75 percent recommended by Consumer Counsel witness Woolridge and with the adjustments recommended by Consumer Counsel witness Scott Norwood and myself, the Company's has a revenue sufficiency of at least $22.7 million for the rate year ended December 31, 2021.

Q. ARE YOU ADDRESSING IN YOUR DIRECT TESTIMONY WHAT SHOULD BE DONE AS A RESULT OF THE 2017-2019 EARNINGS TEST?

A. No. I understand that there is an outstanding legal issue that could impact the manner in which refunds of overearnings are calculated in this case. Therefore, with respect to the earnings test my expert testimony is limited to calculating a reasonable earned return for APCO during the 2017-2019 period.

Q. WHAT ADJUSTMENTS HAVE YOU MADE TO THE 2017-2019 EARNINGS TEST RESULTS AND TO THE COMPANY'S CALCULATION OF THE PROSPECTIVE REVENUE REQUIREMENT?

A. As shown in Exhibit LA-3, I have made the following adjustments, which are described in my testimony and the testimony of Consumer Counsel witness Norwood:

- OAG-1, to remove APCo's proposed major storm cost for prospective ratemaking, consistent with the Commission's Order in Case No. PUE-2014-00026, where a similar issue was addressed for APCo in its most recent biennial earnings review.
- OAG-2, to remove APCo's proposed charitable contributions included in cost of service for prospective ratemaking.
- OAG-3, to adjust the coal inventory amounts in rate base to levels using a 35 day allowance of maximum daily burn for the 2017-2019 earnings test period.
- OAG-4 through OAG-7, to reverse the Company's earnings test adjustments that were made in December 2019 to impair the Clinch River, Glen Lyn and Kanawha River coal plants which APCo retired in the 2015-2016 time frame and for the Sporn Plant sales costs in excess of ARO liabilities which was part of APCo's December 2019 impairment write-off for Non-Period Retired Generating Units.

- OAG-8, to remove from the 2017-2019 triennial earnings period rate base, the rate base amounts for costs for the coal plants that APCo retired in the 2015-2016 time frame.
- OAG-9, to remove from the 2017-2019 triennial earnings period rate base, the rate base amounts relating to the Sporn Plant sales costs in excess of ARO liabilities and associated ADIT. As noted above, Sporn units 1 and 3 were retired in 2015.
- OAG-10, to remove from the 2017-2019 triennial earnings test period rate base, the ADIT related to remaining materials and supplies balances for the coal-fired generating units that were retired in 2015.
- OAG-11, to remove amortization expense for APCo's proposed regulatory asset related to the Company's claim that it had earnings during the 2017-2019 triennial review period that were below the bottom of its authorized earnings range.
- OAG-12, to remove the cost of wholesale renewable energy credits ("RECs") which APCo has conceded should be removed from the 2017-2019 earnings test and for prospective ratemaking.
- OAG-13, for interest synchronization, to reflect the impact of the different rate base to which the weighted cost of debt was applied to calculate the impact on income taxes for the interest tax deduction that is recognized for ratemaking purposes. This interest synchronization adjustment affects the 2017-2019triennial earnings test period and also affects the prospective ratemaking calculation of the revenue requirement.

- OAG-14, to reflect Consumer Counsel witness Norwood's recommended adjustment to decrease depreciation expense related to the disallowance of APCo's proposed shortening of the Amos plant's service life from 2040 to 2032 for the 2018 and 2019 earnings test period and for prospective ratemaking.
- OAG-15, to reflect Mr. Norwood's recommendation related to demand charges to Virginia jurisdictional customers associated with the Ohio Valley Electric Corporation ("OVEC") during the 2017-2019 earnings test period and for prospective ratemaking.
- OAG-16, to reflect Mr. Norwood's recommended adjustment to remove AMI meters and related communications equipment from the 2017-2019 earnings test period and for prospective ratemaking.
- OAG-17, to increase the ADIT related to APCo's prepaid pension asset to reflect proper matching. The Company did not allocate the ADIT on the pension asset proportionally for determining the Virginia jurisdictional cost of service. This adjustment also adjusts the Virginia jurisdictional ADIT related to the Company's other post-employment benefits (OPEB) balance.

III. BACKGROUND

Q. WHAT WAS APCO'S AUTHORIZED ROE RANGE THAT APPLIES TO THE 2017-2019 BIENNIAL EARNINGS REVIEW?

A. For the 2017-2019 triennial earnings review, APCo's authorized ROE was 9.42 percent. This ROE was established by the Commission in its Final Order in the

2018 ROE proceeding, Case No. PUR-2018-00048. As stated in that 2018 Final Order:

> In sum, as a factual matter, the Commission concludes that a fair ROE in this proceeding for APCo is 9.2%, which is supported by the record, is fair and reasonable to the Company within the meaning of the Code, permits the attraction of capital on reasonable terms, fairly compensates investors for the risks assumed, enables the Company to maintain its financial integrity, and satisfies all applicable constitutional standards. As a legal matter, the Commission herein approves an ROE of 9.42% as required by the statutory peer group floor.[1]

The Company's Application at page 6 states that:

> Section 56-585.1 A 8 of the Act establishes the parameters for the Commission's review of the Company's earnings during a triennial review proceeding such as this. Specifically, the Act establishes a 140 basis point band of earnings that ranges from 70 basis points above a previously authorized ROE to 70 basis points below that ROE (the "ROE band"). If the Company's earnings during the three years under review fall within that band, the Code does not permit the Company to request, or the Commission to grant, an adjustment to the Company's base rates."
>
> Based on the 9.42 percent ROE approved by the Commission in Case No. PUR-2018-00048, APCo's authorized ROE range in for the Triennial Review Period, on a combined basis, is 8.72 percent to 10.12 percent.

Q. WHAT RETURN ON EQUITY DOES APCO REPORT FOR THE 2017-2019 TRIENNIAL EARNINGS REVIEW PERIOD?

A. APCo reports an earned ROE of 8.24 percent for the combined 2017-2019 triennial earnings review period. I have reproduced APCo's calculations of this

[1] *Application of Appalachian Power Company, For the determination of the fair rate of return on common equity to be applied to its rate adjustment clauses*, Case No. PUR-2018-00048, Final Order at 7 (Nov. 7, 2018), https://scc.virginia.gov/docketsearch/DOCS/4cpc011.PDF.

on Exhibit LA-1, Schedule A, page 1, column 1, and Schedule A, page 3, column 4.

Q. WHAT WOULD BE THE RAMIFICATIONS IF APCO HAD EARNINGS IN EXCESS OF 10.12 PERCENT?

A. In this triennial review, the provisions of Va. Code § 56-585.1 A 8 direct that the three years under review (in this case, 2017, 2018, and 2019) are to be considered as a whole for purposes of the earnings determination. Consequently, the Company's historical ROE results for the triennial period of the three successive 12-month test periods ending December 31, 2019 must be evaluated in the context of whether they fall within or outside of the ROE earnings band of 8.72 to 10.12 percent. If the earned ROE is higher than 10.12 percent, which is the upper limit of the ROE earnings band, then action is required by law to refund a portion of those historical earnings.

IV. APCO'S DECEMBER 2019 IMPAIRMENT WRITE-OFF FOR NON-PERIOD RETIREMENTS

Q. DOES THE COMPANY'S FILING REFLECT IMPAIRMENTS RELATED TO COAL-FIRED GENERATING UNITS THAT WERE RETIRED IN PERIODS PRIOR TO THE CURRENT TRIENNIAL REVIEW PERIOD?

A. Yes. As discussed on page 8 of APCo's Application, the Company's 2019 earnings test reflects the recording of an expense in December 2019, which related to the remaining Virginia jurisdictional share of certain coal-generating assets that the Company retired early, which the Company has deemed as impaired.

Q. FOR WHICH RETIRED COAL-FIRED GENERATING UNITS DID THE COMPANY RECORD AN IMPAIRMENT WRITE-OFF IN DECEMBER 2019?

A. The retired coal-fired generating units for which the Company recorded an impairment write-off in December 2019 included: (1) the coal-fired portions of Clinch River Units 1 and 2 and all of Clinch River Unit 3 ("Clinch River"); (2) Glen Lyn Units 1 and 2 ("Glen Lyn"); (3) Kanawha River Units 1 and 2 (Kanawha River"); and (4) APCo's share of the Philip Sporn Plant ("Sporn").[2]

Q. WHEN WERE THOSE COAL-FIRED GENERATING UNITS RETIRED?

A. The coal-fired generating units listed above were retired during the 2015-2016 time frame. The pre-filed testimony of Debra L. Osborne provides the following update on APCo's generation fleet since 2015, which includes:

- In 2015, Amos Unit 3 was re-rated from 1,300 net MW to 1,330 net MW, as a result of a turbine upgrade and high pressure heater efficiency improvements.

- On or before May 31, 2015, APCo retired 1270 MWs of its older, less efficient coal-fired generating units. These units could not be economically retrofitted with environmental controls to comply with the stringent requirements of the U.S. Environmental Protection Agency's Mercury and Air Toxics Standards Rule. *The retired units consist of: Clinch River Unit 3, Glen Lyn Units 5&6, Kanawha River Units 1&2, and Sporn Units 1&3.*

- APCo completed the conversion of Clinch River Units 1&2 from coal- to gas-fired boilers in February and April of 2016, respectively. *As a result, assets related to the coal-fired operation of Clinch River Units 1&2 were retired.* Additionally, the retirement dates for Units 1&2 are being changed to 2025, as projected by the Company in Case No. PUE-2013-00037.

[2] See APCo's Application at page 8.

- In 2017, APCo sold Reusens, a hydro facility, to a third party.
- In 2019, APCo, along with co-owner AEP Generation Resources, Inc., transferred the Sporn Plant assets and liabilities to a third party.[3]

Q. WHAT AMOUNT OF IMPAIRMENT WRITE-OFF FOR THOSE NON-PERIOD RETIREMENTS DID APCO RECORD IN DECEMBER 2019?

A. In December 2019, APCo recorded an impairment write-off which charged to expense during the 2019 earnings review year an amount of $92.868 million on a total Company basis and $88.282 million on a Virginia jurisdictional basis.[4] The total Virginia jurisdictional impairment expense of $88.282 million was broken out by APCo as follows:

Description	Total Company Amount	Virginia Jurisdictional Demand Factor	Virginia Jurisdictional Amount
Impairment Cost of Clinch River, Glen Lyn and Kanawha River	$ 65,838,923	0.950620	$ 62,587,803
Impairment Cost of Retired Coal Plant ARO Assets	$ 18,323,013	0.950620	$ 17,418,223
Impairment Cost of Sporn Plant Sales Costs in Excess of ARO Liabilities	$ 6,221,496	0.950620	$ 5,914,279
Impairment Cost APCo of Remaining Materials & Supplies	$ 2,484,306	0.950620	$ 2,361,631
Total	$ 92,867,738		$ 88,281,936

Source: Staff 1-011

Q. IS THE COMPANY CITING ANY STATUTE TO JUSTIFY ITS DECEMBER 2019 IMPAIRMENT EXPENSE?

A. Yes. As discussed in Company witness Allen's Direct Testimony, the Company's rationale for recording the impairment expense in December 2019 is Virginia Code § 56.585.1 A 8 ("Subsection A 8"), as it was amended in 2018 by the Grid

[3] Osborne Direct Testimony at 6-7 (emphasis added).

[4] Company witness Allen indicated on page 9 of his Direct Testimony that the Virginia jurisdictional share of the total impairment expense adjustment was $88,294,888. However, in its response to Staff 1-016, the Company stated that the corrected Virginia jurisdictional total impairment cost was $88,281,936.

Transformation and Security Act ("GTSA"). Specifically, on page 8 of Mr. Allen's Direct Testimony, he states his understanding that in a triennial review proceeding, Subsection A 8 requires the following test for costs:

> Such costs shall be deemed to have been recovered from customers through rates for generation and distribution services in effect during the test periods under review unless such costs, individually or in the aggregate, together with the utility's other costs, revenues, and investments to be recovered through rates for generation and distribution services, result in the utility's earned return on its generation and distribution services for the combined test periods under review to fall more than 70 basis points below the fair combined rate of return authorized under subdivision 2 for such periods. In such cases, the Commission shall, in such triennial review proceeding, authorize deferred recovery of such costs and allow the utility to amortize and recover such deferred costs over future periods as determined by the Commission. The aggregate amount of such deferred costs shall not exceed an amount that would, together with the utility's other costs, revenues, and investments to be recovered through rates for generation and distribution services, cause the utility's earned return on its generation and distribution services to exceed the fair rate of return authorized under subdivision 2, less 70 basis points, for the combined test periods under review.

Q. WHAT EXPLANATION HAS APCO GIVEN FOR RECORDING AN IMPAIRMENT WRITE-OFF IN DECEMBER 2019 THAT RELATES TO COAL-FIRED GENERATING UNITS THAT WERE RETIRED IN 2015?

A. The Company has provided the following explanation for its change to the accounting treatment of the Non-Period Retirement Costs:

> In 2015, APCo retired the Sporn Plant, the Kanawha River Plant, the Glen Lyn Plant, Clinch River Unit 3 and the coal portions of Clinch River Units 1 and 2. The net book value of these plants was $93 million before cost of removal, including materials and supplies inventory and ARO asset balances. Based on management's interpretation of Virginia law and more certainty regarding APCo's triennial revenues, expenses and resulting earnings upon reaching the end of Virginia's statutory three-year review period, APCo recorded an impairment and pretax expense of $93 million related to its previously retired coal-fired generation

assets in December 2019. As a result, by law, these costs are deemed to have been substantially recovered by APCo during the triennial review period.[5]

Q. DO YOU AGREE WITH APCO'S PROPOSAL TO WRITE-OFF APPROXIMATELY $93 MILLION IN DECEMBER 2019 FOR AN IMPAIRMENT OF PREVIOUSLY RETIRED GENERATING UNITS?

A. No. APCo's impairment write-off relates to generating plants that were retired in 2015 and 2016, i.e., prior to the start of the current triennial review period. These costs are not properly includable in the 2017-2019 triennial review of APCo's earnings. Moreover, the impact of APCo's proposed impairment write-off on its earnings in the 2017-2019 review period is so large that this one maneuver alone takes the Company's earnings from being within the earnings band to pushing earnings below the bottom end of the ROE band that was established by the Commission in Case No. PUR-2018-00048.

Q. IS CONSUMER COUNSEL TAKING ISSUE WITH APCO'S LEGAL ANALYSIS UNDERLYING APCO'S DECEMBER 2019 IMPAIRMENT WRITE-OFF OF THE NON-PERIOD RETIREMENT COSTS?

A. Yes. Concurrent with the filing of testimony, Consumer Counsel is filing a legal memorandum concerning this issue. Consistent with the analysis presented in that legal memorandum and as explained in my testimony, APCo's December 31, 2019 impairment write-off is being removed from earnings test results, as shown in Exhibit LA-1, (which presents earnings test results for the 2017-2019 triennial

[5] Schedule 38.

review period), and in Exhibit LA-3 (which presents adjustments to APCo's earnings test results and prospective ratemaking results). On Exhibit LA-3, the adjustments related to removing the impacts of the Non-Period Retirement Costs are shown on Schedules OAG-4 through OAG-11 in adjustments OAG-4 through OAG-11. The elimination of APCo's impairment write-off, in itself, has such a significant impact on earnings test results for the 2017-2019 triennial review period that APCo's earnings are in fact not below the bottom of the earnings band, but rather comfortably within the top end of the earnings band. With the impact of other adjustments, APCo's earnings are above the top end of the band. Because of its significant impact, the issue of whether to accept or reject APCo's December 2019 impairment write-off for Non-Period Retirement Costs is one of, if not the most important, issues in the current triennial review case.

Q. DOES THE COMPANY'S RELIANCE ON § 56-585.1 A 8 AND SUBSEQUENT MODIFICATIONS TO THAT PROVISION JUSTIFY RECOGNIZING, IN THE VERY LAST MONTH OF THE 2017-2019 TRIENNIAL REVIEW PERIOD, AN IMPAIRMENT WRITE-OFF FOR UNITS THAT WERE RETIRED PRIOR TO THIS TRIENNIAL REVIEW PERIOD?

A. No. On the advice of counsel, the Company misplaces reliance on Subsection A 8, as modified by the 2018 GTSA, to justify this extraordinary adjustment to its earnings. The GTSA's version of Subsection A 8 has been superseded by new law – as reflected in HB 528 – that is applicable to this proceeding. But even

absent HB 528, under Subsection A 8, APCo improperly accounts for an out-of-period expense in its 2017-2019 Triennial Review period.

Q. SHOULD AN IMPAIRMENT BE RECOGNIZED AS A $93 MILLION EXPENSE IN DECEMBER 2019 FOR APCO GENERATING PLANTS THAT WERE RETIRED IN PAST PERIODS THAT PRECEEDED THE 2017-2019 TRIENNIAL REVIEW?

A. No. APCo's proposed recording of an impairment of approximately $93 million in December 2019 related to generating plants that were retired in 2015 and 2016 (years in which review of APCo's earnings had been suspended). APCo's proposed impairment write-off creates a substantial distortion of APCo's earnings in the 2017-2019 review period, and should not be permitted. APCo's last minute earnings test adjustment is not appropriate from an accounting perspective nor is it in the interest of APCo's ratepayers. Moreover, but for this extraordinary impairment write-off that was purportedly made pursuant to the provisions of the GTSA, the Company would be unable to justify its request to increase the rates paid by its customers.

Q. HOW DOES THE TIMING OF THE GENERATING PLANT RETIREMENTS AND APCO'S DECEMBER 2019 IMPAIRMENT WRITE-OFF CORRELATE WITH THE TIMING OF APCO'S EARNINGS REVIEWS?

A. As noted above, the generating plants for which APCo has recorded an impairment write-off in December 2019 were actually retired in 2015 and 2016.

So, the timing of the retirements and the timing of the impairment write-off are seriously mismatched.

The last time APCo had a base rate review was in 2014. APCo's earnings for the biennial review period, 2012-2013, were reviewed in Case No. PUE-2014-00026. The review in that case was conducted pursuant to the Virginia regulatory framework in which base rates of APCo were to be reviewed through biennial review proceedings.[6] During APCo's 2014 biennial review, the law provided that the Commission review the Company's earnings for the prior two years (i.e., 2012 and 2013). The Commission measures earnings by the amount of revenue available to the Company (after considering costs) to provide a return to its equity shareholders. If the Company earned too much or too little (i.e., had earnings outside of an authorized "earnings band"), the Commission was then authorized to order rate credits or increase prospective rates, respectively.

Q. HOW WERE THE RESULTS OF THE BIENNIAL EARNINGS REVIEWS EVALUATED AND APPLIED?

A. Each discrete outcome from an earnings test in a biennial review demanded a specific course of action under the Virginia Electric Utility Regulation Act, with possible available outcomes to include rate increases,[7] rate credits,[8] no action,[9] or rate reductions.[10]

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[6] Va. Code § 585.1 A 3.

[7] *Id.* § 56-585.1 A 8 a.

[8] *Id.* § 56-585.1 A 8 b.

[9] *Id.* § 56-585.1 A 2 g.

[10] *Id.* § 56-585.1 A 8 c.

1 Q. **WHAT WERE THE COMMISSION'S FINDINGS CONCERNING**
2 **APCO'S EARNINGS FOR THE 2012-2013 PERIOD AND HOW THOSE**
3 **RELATED TO THE EARNINGS BAND?**

4 A. The Commission found that APCo earned an ROE of 11.86%, i.e., more than 100
5 basis points over the Company's filed position, during the 2012-2013 Biennial
6 Review period.[11] This represented earnings of $24,366,969 on a revenue basis
7 above the authorized ROE of 10.9%.[12] According to the law in effect at that time,
8 the Commission directed that 60% of the amount of the overearnings be credited
9 to future customer bills and found the Company was entitled to retain 40% of the
10 overearnings.[13] This meant that APCo's customers received a credit of
11 $5,825,380.[14]

12 Q. **WERE APCO'S RATES REDUCED AT THAT TIME?**

13 A. No. Based on the law in effect at that time, the Commission could only reduce the
14 excessive base rates being paid by APCo's customers after **two** consecutive
15 biennial reviews with overearnings. The Commission could not reduce the
16 Company's rates in that 2014 biennial review case because APCo had only **one**
17 biennial review with overearnings but had not yet had **two** consecutive biennial

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[11] *Application of Appalachian Power Company, For a 2014 biennial review of the rates, terms and conditions for the provision of generation, distribution and transmission services pursuant to § 56-585.1 A of the Code of Virginia*, SCC Case No. PUE-2014-00026, Final Order at (Nov. 26, 2014), https://scc.virginia.gov/docketsearch/DOCS/303%2301!.PDF ("APCo 2014 Biennial Review Final Order") (SCC Annual Report not available).

[12] *See id.*

[13] *Id.*

[14] *Id.* The $5,825,380 amount is stated in the Order, and is apparently derived after a 50 basis points adjustment, thus it was not derived by applying 60% to the $24,366,969 amount. The $24,366,969 is the amount of revenue above 10.9 percent. The $5,825,380 represents 60 percent of the earnings OVER the top of the earnings band – in that case, 11.4 percent. *Id.*

reviews with overearnings, and thus the law in effect at that time prohibited the Commission from taking action to reduce APCo's base rates.[15] This was despite APCo's own admission that it anticipated in 2015 to earn annual revenues of $42 million in excess of its costs plus a fair rate of return.[16]

Q. WAS APCO SUBJECT TO REVIEWS FOR ITS 2014, 2015 OR 2016 EARNINGS?

A. No. Before the Company's next biennial review, which would have been filed in 2016 and involved a review of APCo's earnings for calendar years 2014 and 2015, the General Assembly removed the Commission's authority to review base rates of both APCo and Virginia Electric and Power Company.

Q. HOW DOES THE ISSUE OF APCO'S 2015 AND 2016 GENERATING PLANT RETIREMENTS AND THE TIMING OF THE RECOGNITION OF SUCH COSTS FOR VIRGINIA REGULATORY PURPOSES FIT INTO THIS FRAMEWORK?

A. One issue litigated during APCo's 2014 Biennial Review, which will be significant for this case, is related to the proper time period over which to amortize the remaining net book value of APCo's several coal-fired generation facilities that were retired in 2015 and 2016 as a result of being rendered uneconomical to continue to operate due to environmental regulations ("Non-Period Retirement Costs").

[15] Va. Code § 56-585.1 (2014).

[16] *See* APCo 2014 Biennial Review Final Order at 40, n.107.

1 Q. **IS A $93 MILLION IMPAIRMENT WRITE-OFF IN DECEMBER 2019 AN**
2 **APPROPRIATE AND REASONABLE WAY TO ADDRESS COST**
3 **RECOVERY RELATED TO THOSE COAL-FIRED PLANTS THAT**
4 **WERE RETIRED IN 2015 AND 2016?**
5 A. No, it is not. As explained in Consumer Counsel's legal memorandum addressing
6 this issue, the Company does have a right to the opportunity to recover its
7 investment of prudently-incurred costs, which could include the remaining net
8 book value of the retired coal-fired generating units and the other related costs
9 totaling approximately $93 million which have become the components of the
10 Company's December 2019 impairment write-off. However, reflecting that $93
11 million as an impairment write-off in December 2019, the last month of the
12 current triennial review period, is not an appropriate or reasonable way to address
13 cost recovery in the context of the current triennial review.
14 Q. **WHAT HAD APCO RECOMMENDED IN ITS LAST BIENNIAL REVIEW**
15 **FOR THE TREATMENT OF SUCH COSTS?**
16 A. The Company, in 2014, recommended that the Commission "roll in" the costs
17 associated with retiring those coal-fired generating units into the Company's
18 remaining coal generation depreciation schedule.[17] This would have allowed the

[17] *Application of Appalachian Power Company, For a 2014 biennial review of the rates, terms and conditions for the provision of generation, distribution and transmission services pursuant to § 56-585.1 A of the Code of Virginia*, SCC Case No. PUE-2014-00026, Direct Testimony of David A. Davis at t 10-11 (filed Mar. 31, 2014), https://scc.virginia.gov/docketsearch/DOCS/47rg01!.PDF.

Company to recover the retirement related costs of those units over the next 25 years, starting in 2015 and continuing through year 2040.[18]

Q. WHAT DID STAFF RECOMMEND IN APCO'S 2014 BIENNIAL REVIEW CASE FOR THE TREATMENT OF SUCH COSTS?

A. The Commission Staff objected to that APCo-proposed accounting treatment. Staff instead proposed that the depreciation of the facilities should match the actual service lives of the subject coal-fired generating units that were being retired. This would require that the Company amortize and recover the retirement related costs for those units over a much shorter time period, approximately by the end of 2015.[19]

Q. HOW WAS THAT ISSUE RESOLVED IN THE COMMISSION'S DECISION IN THAT CASE?

A. The issue was not specifically resolved in the Commission's decision in that case. The Commission, in its 2014 Biennial Review Final Order stated that it would address the issue in the then-scheduled 2016 Biennial Review.[20]

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[18] *Id.* ("Including the remaining net book value at retirement for Glen Lyn, Kanawha River and Spom plant in accumulated depreciation and recovering that cost over the remaining life of Amos and Mountaineer plants spreads the retired plant's remaining cost over 26 years benefiting customers by using a long recovery period while allowing APCo to recoup the remaining cost for the 2015 retirements where plants are being closed earlier than previously envisioned due to environmental regulations.").

[19] *Application of Appalachian Power Company, For a 2014 biennial review of the rates, terms and conditions for the provision of generation, distribution and transmission services pursuant to § 56-585.1 A of the Code of Virginia*, SCC Case No. PUE-2014-00026, Testimony of Scott A. Armstrong at 22-26 (filed Aug. 20, 2014), https://scc.virginia.gov/docketsearch/DOCS/2yvc01!.PDF

[20] APCo 2014 Biennial Review Final Order at 40-41.

1 Q. **WAS THERE A BIENNIAL REVIEW IN 2016 OF APCO'S 2014 AND 2015**
2 **EARNINGS?**
3 A. No, the anticipated 2016 biennial review of APCo's earnings for the years 2014
4 and 2015 was cancelled by the 2015 General Assembly.
5 Q. **HAS THE ABOVE-DESCRIBED HISTORY CREATED A "GAP" PERIOD**
6 **OF YEARS FOR WHICH APCO'S EARNINGS HAVE NOT BEEN**
7 **REVIEWED BY THE COMMISSION?**
8 A. Yes. APCo's earnings for the years 2014, 2015, and 2016, which include the
9 years in which those coal-fired generating units were actually retired, have not
10 been reviewed by the Commission under § 56-585.1. The Commission's review
11 of APCo's earnings is recommencing in the current case which encompasses a
12 review of earnings for the three-year period 2017-2019. As such, the period
13 covering the years 2014, 2015, and 2016, including the 2015-2016 period in
14 which APCo retired those coal-fired generating units, is not being reviewed.
15 Q. **WAS APCO REQUIRED TO PROVIDE THE COMMISSION WITH**
16 **UNAUDITED EARNINGS DURING THE GAP YEARS?**
17 A. Yes. During the period in which the Commission was prevented by law from
18 regulating APCo's base rates under § 56-585.1, the Commission issued a Report
19 that presented APCo's earnings *as reported by the Company* for base rates during
20 the combined 2014 and 2015 period.[21]

21 Over the 2014 and 2015 period, APCo's analysis indicates a
22 combined base rate generation and distribution earned ROE of

[21] State Corporation Commission, Report to the Commission on Electric Utility Regulation of the Virginia General Assembly and the Governor of the Commonwealth of Virginia at 8 (Sep. 1, 2016), https://rga.lis.virginia.gov/Published/2016/RD272/PDF.

9.83% on a regulatory accounting basis. Below is a chart detailing the ROE presented by APCo for calendar years 2014 and 2015 earnings as well as the ROE for the combined period:

APCO'S RETURN ON EQUITY

Year	Generation	Distribution	Total
2014	9.82%	4.96%	7.86%
2015	17.02%	4.38%	11.84%
Combined	13.37%	4.67%	9.83%

Thus, based on APCo's presentation of its earnings, which went un-reviewed by the Commission or any other party, and which ignored prior regulatory accounting adjustments approved by the Commission in the 2014 Biennial Review,

> The combined generation and distribution earned ROE of 9.83% is above the ROE most recently approved by the Commission for APCo of 9.70% by .13%, or approximately $630,000 of revenues. APCo's analysis did not include all of the regulatory accounting adjustments previously approved by the Commission in the Company's 2014 Biennial Review (for calendar years 2012 and 2013). While there is no quantification of the 2014/2015 effect of omitted adjustments on regulatory earnings, the effect of these omitted adjustments in APCo's 2014 biennial review found that regulatory earnings were increased by approximately .75% ($11.7 million) for 2012 and 1.45% ($21.2 million) for 2013.

For the year 2016, the Commission issued a separate report. Again, the report simply presented APCo's reported financial earnings for base rates for the year 2016 as reported by the Company.[22]

[22] State Corporation Commission, Reports to the Governor of the Commonwealth of Virginia, the Chairman of the Senate Committee on Commerce and Labor, the Chairman of the House Committee on

> APCo's analysis reflects a combined base rate generation and distribution earned ROE for calendar year 2016 of 11.09%, on a regulatory accounting basis. The 2016 separate generation and distribution earned ROEs presented by APCo were 15.75% and 4.89%, respectively. The combined generation and distribution earned ROE of 11.09% is above the ROE most recently approved by the Commission for APCo's RACs of 9.40% by 1.69 percentage points, or approximately $27.98 million of revenues, and is above the 9.70% ROE approved by the Commission in APCo's most recent biennial review by 1.39 percentage points, or approximately $22.66 million of revenues.
>
> APCo's analysis did not include all of the regulatory accounting adjustments previously approved by the Commission in APCo's 2014 Biennial Review (for calendar years 2012 and 2013). While there is no quantification of the 2016 effect of omitted adjustments on regulatory earnings, the effect of these omitted adjustments in APCo's 2014 biennial review increased regulatory earnings by approximately 0.75 percentage points ($11.7 million) for 2012 and 1.45 percentage points ($21.2 million) for 2013.

While it is important to recognize that these annual earnings went unaudited, it is clear that APCo earned in excess of its authorized return on equity during the 2014-2016 period. Based on these unaudited earnings during 2014-2016, it appears that APCo recovered tens, if not hundreds, of *millions* of dollars above the bottom of its authorized return on equity during this period.

Q. SHOULD APCO'S DECEMBER 2019 IMPAIRMENT WRITE-OFF FOR THE NON-PERIOD RETIREMENTS BE ACCEPTED?

A. No. APCo's proposed December 2019 impairment write-off for the non-period retirements is unreasonable and severely distorts the 2017-2019 triennial earnings review results, and should therefore be rejected. In my opinion, it would be highly unreasonable, and indeed unconscionable, to allow APCo to carry on its

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Commerce and Labor, and the Commission on Electric Utility Regulation of the Virginia General Assembly at 9-10 (Sep. 1, 2017), https://www.scc.virginia.gov/getattachment/4baba3c3-3aa0-4d9b-81a1-b7f8513a2bee/2017_veurcomb.pdf.

1 books throughout the 2017-2019 triennial review period, the approximately $93
2 million of Non-Period Retirement Costs associated with the 2015-2016 plant
3 retirements, and to include such amounts in earnings test rate base in each year,
4 and then to allow APCo to record an impairment write-off in December 2019 –
5 the very last month of the 36-month triennial review period – in order to instantly
6 produce under-earnings for the three-year period based on the December 2019
7 accounting entry. Moreover, APCo's proffered legal analysis underlying its
8 December 2019 impairment write-off for those generating units that were retired
9 in 2015 and 2016 is misplaced, as explained in the Consumer Counsel's legal
10 memorandum being filed concurrent with direct testimony.

11 **Q. CONSISTENT WITH STAFF'S RECOMMENDATION IN CASE NO.**
12 **PUE-2014-00026, COULD THE COSTS FOR THE RETIRED COAL-**
13 **FIRED GENERATING UNITS HAVE BEEN RECOGNIZED IN THE**
14 **PERIOD PRIOR TO 2017?**

15 A. Yes. As noted above, in Case No. PUE-2014-00026, Staff had recommended that
16 cost recognition for generating units that were being retired should match the
17 actual service lives of the subject coal units. This would require that the
18 Company amortize and recover the approximately $93 million over a period that
19 corresponded with the service life of those units and the costs would thus have
20 been amortized approximately by the end of 2015. In other words there would be
21 nothing remaining for the Non-Period Retirement Costs by the start of the current
22 2017-2019 triennial review period.

1 **Q. HOW WERE THE COMMISSION'S REVIEWS OF APCO'S EARNINGS**
2 **REESTABLISHED?**
3 A. In 2018, the General Assembly passed legislation, the GTSA, which purports to
4 resume the Commission's authority to review the base rates of APCo. While
5 structurally similar, the base rate reviews now occur as part of a Triennial Review
6 in place of the former Biennial Review schedule. APCo was required by the
7 GTSA to file its current Triennial Review on March 31, 2020, which APCo did.
8 **Q. DID ANY OF THE NON-PERIOD RETIREMENTS OCCUR DURING**
9 **THE CURRENT TRIENNIAL REVIEW PERIOD?**
10 A. No. These retirements occurred outside of the Triennial Review period that is the
11 subject of this case, which covers the years 2017, 2018, and 2019.
12 **Q. SHOULD APCO'S PROPOSED TREATMENT OF THOSE NON-PERIOD**
13 **RETIREMENT COSTS BE ALLOWED IN THE CURRENT TRIENNIAL**
14 **REVIEW PROCEEDING?**
15 A. No. As explained in Consumer Counsel's legal memo on this issue, when the
16 retirement decisions were made for these Non-Period Retirements, APCo did not
17 have any reasonable expectation that it could expense the total remaining book
18 value in December of 2019. Moreover, recognition of such an impairment write-
19 off in December 2019 would seriously distort APCo's earnings for the triennial
20 review period.

1 Q. **DOES CONSUMER COUNSEL'S LEGAL MEMO EXPLAIN THE**
2 **PROPOER APPLICATION OF THE STATUTORY FRAMEWORK**
3 **THAT SHOULD BE USED TO ADDRESS THIS ISSUE?**

4 A. Yes. On the advice of counsel, HB 528, which was passed during the most recent
5 legislative session, is applicable to this proceeding. HB 528 passed with the
6 following text:

7 Be it enacted by the General Assembly of Virginia:

8 1. § 1. Notwithstanding any other provision of law, the State
9 Corporation Commission shall determine the amortization period
10 for recovery of any appropriate costs due to the early retirement of
11 any electric generation facilities owned or operated by any Phase I
12 Utility or Phase II Utility, as such terms are defined in subdivision
13 A 1 of § 56-585.1 of the Code of Virginia. In making such
14 determination, the State Corporation Commission shall (i) perform
15 an independent analysis of the remaining undepreciated capital
16 costs; (ii) establish a recovery period that best serves ratepayers;
17 and (iii) allow for the recovery of any carrying costs that the
18 Commission deems appropriate.

19 Q. **UNDER THE STANDARDS ESTABLISHED IN HB 528, IS IT**
20 **APPROPRIATE FOR APCO TO EXPENSE IN DECEMBER 2019 THE**
21 **APPROXIMATELY $93 MILLION IN COSTS ASSOCIATED WITH THE**
22 **NON-PERIOD RETIREMENTS?**

23 A. No. APCo's earnings test adjustment to expense the Non-Period Retirement
24 Costs in December of 2019 is neither appropriate from an accounting perspective
25 nor in the interest of APCo's ratepayers. Only after APCo management
26 determined that it had "more certainty regarding APCo's triennial revenues"[23] –
27 before the adjustment APCo had earnings comfortably within its authorized

[23] APCo's Rate Case Schedule 42.

earnings band – did the Company adjust its accounting books to the point that now permits it to seek a base rate increase. Moreover, this decision came after APCo reported significant earnings above the bottom of its authorized ROE range during years 2014 through 2016. The Commission should reject the Company's proposed earnings test adjustment.

Q. HOW HAVE YOU TREATED APCO'S DECEMBER 2019 IMPAIRMENT WRITE-OFF FOR THE NON-PERIOD RETIREMENTS?

A. I have removed APCo's December 2019 impairment write-offs for the non-period retirements from the earnings test results for 2019. I have also removed from 2017, 2018, and 2019 earnings test period rate base and expenses the amounts that APCo had included in rate base and expenses for the Non-Period Retirements. The adjustments related to this are summarized on my Exhibit LA-1, Schedule B.1 and Schedule C.1 and are shown in detail on my Exhibit LA-3, on Schedules OAG-4 through OAG-10.

Q. IS THERE A RELATED ADJUSTMENT FOR PROSPECTIVE RATEMAKING?

A. Yes. For prospective ratemaking, as shown on Exhibit LA-3, Schedule OAG-11, I have made a related adjustment to remove the revenue requirement impact of APCo's claimed under-earnings. Without the Company's December 2019 impairment write-off for the Non-Period Retirements, the Company's earnings are not below the bottom of the earnings band for the 2017-2019 triennial review period. Consequently, the Company's claimed "regulatory asset" for such under-earnings has been removed for prospective ratemaking.

V. 2017, 2018AND 2019 TRIENNIAL REVIEW PERIOD EARNINGS

Q. WHAT DOES APCO CLAIM FOR ITS 2017, 2018, AND 2019 TRIENNIAL REVIEW PERIOD EARNINGS RESULTS?

A. APCo witness Allen states at page 6 of his Direct Testimony that for the combined 2017-2019 Triennial Review period, APCo's return was 8.24 percent, which was below the Commission authorized ROE of 9.42 percent (which is also below the earnings band of 8.72 to 10.12 percent). This is reflected in the Company's Schedule 11.

Q. WHERE DOES APCO PRESENT ITS EARNINGS TEST RESULTS FOR THE 2017-2019 TRIENNIAL REVIEW PERIOD?

A. The Company's Schedule 11 presents, on an earnings test basis, APCo's Rate of Return Statement for the earnings test years ended December 31, 2017, December 31, 2018 and December 31, 2019 for generation and distribution adjusted by the Company on a regulatory accounting basis. Column 1 of this schedule reflects the Virginia jurisdictional components of the Company's per books cost of service using a 13-month average rate base and common equity and excludes items related to the existing rate adjustment clauses pursuant to § 56-585.1 of the Code of Virginia. Column 2 of Schedule 11 reflects a series of regulatory accounting adjustments made by the Company, and Column 3 reflects the Company's adjusted Virginia jurisdictional cost of service.

1 Q. **DO YOU AGREE WITH THE RESULTS OF THE COMPANY'S**
2 **ANALYSIS ON ITS SCHEDULE 11?**
3 A. No, I do not. I show that, with Consumer Counsel's recommended adjustments,
4 during the 2017-2019 triennial review period the Company had earnings in excess
5 of 10.12 percent, i.e., in excess of the top band of its Commission-authorized
6 equity band. After reviewing the Company's regulatory accounting adjustments, I
7 conclude that certain items were inappropriately included in the Company's
8 earnings test calculation. Consumer Counsel witness Norwood and I have also
9 made recommendations which affect the calculation of APCo's earnings during
10 the 2017-2019 triennial review period. Therefore, I have made certain
11 adjustments to remove or adjust these items from APCo's earnings test results.
12 Q. **HAVE YOU PREPARED AN EXHIBIT SHOWING YOUR**
13 **RECOMMENDED 2017, 2018, AND 2019 EARNINGS TEST RESULTS?**
14 A. Yes. My earnings test calculations for each year in the 2017-2019 Triennial
15 Review period are presented in Exhibit LA-1, and reflects the results of the
16 adjustments that are being recommended by me and Consumer Counsel witness
17 Norwood.
18 Q. **WHAT CAPITAL STRUCTURE DID APCO USE TO COMPUTE ITS**
19 **2017, 2018 AND 2019 EARNINGS TEST CALCULATIONS?**
20 A. As explained on page 7 of Mr. Allen's Direct Testimony, the Company used an
21 end-of-test period capital structure and cost of capital for the 2017, 2018, and
22 2019 Earnings Tests, respectively.

1 **Q. WHAT CAPITAL STRUCTURE DID YOU USE TO COMPUTE THE**
2 **2017, 2018 AND 2019 EARNINGS TEST CALCULATIONS FOR APCO?**
3 A. I used the same capital structure that APCo used to evaluate the 2017, 2018, and
4 2019 earnings test results, as shown on Exhibit LA-1, Schedule 2017-2 (for
5 2017), Schedule 2018-2 (for 2018) and Schedule 2019-2 (for 2019).
6 **Q. WHAT IS THE RESULT OF YOUR ADJUSTMENTS ON APCO'S**
7 **EARNINGS TEST CALCULATION?**
8 A. After reflecting the adjustments discussed in Section VII, as shown on Exhibit
9 LA-1, Schedule A, I show on lines 28 and 29 that APCo earned 8.46 percent on
10 jurisdictional rate base and 11.12 percent on average common equity.
11 **Q. HOW DOES THAT COMPARE TO APCO'S FILING?**
12 A. As summarized on Exhibit LA-1, Schedule A, page 3, APCo's earnings test
13 calculations on its Schedule 11 show earnings on average common equity of 8.24
14 percent for 2017, 2018, and 2019 combined, which is below the earnings band of
15 8.72 to 10.12 percent. As summarized on Exhibit LA-1, Schedule A, pages 1 and
16 2, with Consumer Counsel's adjusted results, I show that APCo had earnings on
17 average common equity of 11.12 percent for 2017, 2018, and 2019 combined,
18 which is above the top of the authorized earnings band.
19 **Q. WHAT IS SHOWN ON EXHIBIT LA-1, SCHEDULE A?**
20 A. Schedule A of Exhibit LA-1 shows the adjusted earnings test results for the 2017-
21 2019 Triennial Review period.

Q. WHAT IS SHOWN ON THE OTHER SCHEDULES IN EXHIBIT LA-1?

A. For each year, 2017, 2018, and 2019, in the triennial review period, Exhibit LA-1 includes the following three schedules:

1) Rate of Return Statement - Earnings Test, which presents the adjusted Virginia jurisdictional earnings for that year;

2) Capital Structure and Cost Rates, which presents the capital structure, cost rates and overall cost of capital for that year; and

3) A summary of Consumer Counsel adjustments made to APCo's earnings test results for that year.

Q. PLEASE SUMMARIZE YOUR FINDINGS CONCERNING THE 2017, 2018, AND 2019 TRIENNIAL EARNINGS REVIEW.

A. As shown on Exhibit LA-1, Schedule A, page 1, in column 2, during the combined 2017, 2018 and 2019 triennial review period, I show that APCo had an earned ROE on its Virginia jurisdictional generation and distribution utility operations of 11.12 percent, which is above 10.12 percent, i.e., is above the top of its authorized ROE range.

VI. RATEMAKING ANALYSIS - PROSPECTIVE REVENUE SUFFICIENCY

Q. WHAT DOES APCO REQUEST FOR ITS RATEMAKING ANALYSIS?

A. At page 23 of Application, APCo states that the rate year to be used in the 2020 Triennial Review is the twelve month period ending December 31, 2021. APCo's ratemaking analysis shows a $64.907 million deficiency in the Company's revenues.

1 Q. **DO YOU AGREE WITH APCO'S CALCULATION OF A $64.907**
2 **MILLION BASE RATE REVENUE DEFICIENCY?**
3 A. No. Based on using the cost of capital and ROE recommended by Consumer
4 Counsel witness Woolridge and reflecting the adjustments recommended by
5 Consumer Counsel witness Norwood and myself, I calculate that APCo would
6 have a revenue sufficiency of at least $22.7 million for its Virginia jurisdictional
7 generation and distribution operations, as shown on Exhibit LA-2, Schedule A,
8 page 1.
9 Q. **WHAT IMPACT DOES THE RETURN ON EQUITY HAVE ON**
10 **WHETHER APCO HAS A PROSPECTIVE REVENUE DEFICIENCY**
11 **FOR THE RATE YEAR?**
12 A. As shown on Exhibit LA-2, Schedule D, I have reflected Dr. Woolridge's
13 recommended ROE of 8.75 percent rather than APCo's proposed ROE of 9.90
14 percent. As shown on Schedule A page 2, line 1, the impact on the prospective
15 revenue requirement associated with using 8.75 percent is approximately $19
16 million.
17 Each change of 10 basis points of ROE would impact the Company's
18 prospective revenue requirement by approximately $1.65 million on APCo's
19 proposed rate base or approximately $1.64 million on the Consumer Counsel's
20 adjusted rate base.
21 Q. **WHAT DOES EXHIBIT LA-2, SCHEDULE A SHOW?**
22 A. Exhibit LA-2, Schedule A presents APCo's calculation of its proposed rate year
23 revenue deficiency of $64.907 million in column A. Column A shows APCo's

proposed revenue requirement from Schedule 21 of its Application. As shown on line 7 of column A, APCo's Application shows a revenue deficiency of approximately $64.907 million for prospective ratemaking.

Column B shows the revenue requirement calculation that results from my recommendations and the recommendations of Consumer Counsel witnesses Norwood and Woolridge. Contrary to APCo's claimed revenue deficiency, as shown on line 7 of Column B, the results of my and Mr. Norwood's recommendations reflect a base rate revenue sufficiency for APCo's Virginia retail jurisdiction of approximately $22.7 million for APCo's combined Virginia jurisdictional generation and distribution operations.

Q. WHAT IS SHOWN ON EXHIBIT LA-2, SCHEDULE A, PAGE 2?

A. Schedule A, page 2, shows a reconciliation of APCo's calculated base rate revenue deficiency amount of approximately $64.907 million with the Virginia jurisdictional revenue sufficiency amount of approximately $22.7 million that I have calculated on Schedule A, page 1.

Q. WHAT IS SHOWN ON SCHEDULE A-1 OF EXHIBIT LA-2?

A. Schedule A-1 shows the derivation of the gross revenue conversion factor ("GRCF"). This factor is used on Schedule A, line 6, to convert the net operating income deficiency or sufficiency into an equivalent revenue requirement amount. As shown on Exhibit LA-2, Schedule A-1, I have used a GRCF of 1.326483to convert the earnings sufficiency for the rate year into a revenue sufficiency amount.

1 Q. **PLEASE BRIEFLY EXPLAIN SCHEDULES B AND C OF EXHIBIT LA-2.**

2 A. The adjustments presented on Schedule A which impact rate base are shown on
3 Schedule B. Schedule B.1 summarizes Consumer Counsel's recommended rate
4 base adjustments that affect the Virginia jurisdictional rate base for APCo that is
5 being used for prospective ratemaking purposes.

6 Schedule C presents adjusted net operating income. Schedule C.1
7 summarizes Consumer Counsel's recommended adjustments to revenue and
8 expenses applicable to the prospective ratemaking analysis. Schedule C.1 also
9 presents the impact on income tax expense resulting from each of Consumer
10 Counsel's recommended adjustments.

11 Q. **DO YOU HAVE ANOTHER EXHIBIT WHICH PRESENTS THE**
12 **DETAILS OF EACH ADJUSTMENT?**

13 A. Yes. The details of the recommended Consumer Counsel adjustments are shown
14 on Exhibit LA-3. Schedules OAG-1 through OAG-17 of Exhibit LA-3 present
15 supporting calculations for the adjustments that Consumer Counsel's witnesses
16 are sponsoring to net operating income for APCo's combined Virginia
17 jurisdictional generation and distribution operations.[24]

18 Q. **WHAT IS SHOWN ON EXHIBIT LA-2, SCHEDULE D?**

19 A. Exhibit LA-2, Schedule D includes the capital structure and cost rates that I used
20 to calculate my recommended revenue requirement in this case. As noted above,
21 I used an overall cost of capital of 6.94 percent based on the Company's

[24] The adjustments shown on Exhibit LA-3 include details for adjustments for the 2017, 2018, and 2019 earnings test period, as well as for the prospective December 31, 2021 rate year revenue requirement. Note that the some of the adjustments affect only the prospective ratemaking results, some affect only the earnings test results and some affect both the earnings test and prospective ratemaking results.

December 31, 2019 capital structure and an ROE of 8.75 percent based on the recommendations of Consumer Counsel witness Woolridge. For purposes of showing the effect of Consumer Counsel's adjustments, we have accepted the Company's actual year-end, capital structure.

Q. WHAT IS THE RESULTING BASE RATE REVENUE REQUIREMENT CHANGE FOR APCO?

A. As shown on Exhibit LA-2, Schedule A, column B, Consumer Counsel's recommended adjustments show that APCo has a base rate revenue sufficiency of at least $22.7 million for generation and distribution. This compares with APCo's filing, which shows a prospective revenue deficiency of $64.907 million.

Q. SHOULD THE FACT THAT YOU OR OTHER CONSUMER COUNSEL WITNESSES MAY NOT HAVE ADDRESSED SOME OF THE RATEMAKING ADJUSTMENTS PROPOSED BY APCO INDICATE THAT YOU AGREE WITH THE COMPANY'S ADJUSTMENTS OR BE ANY INDICATION THAT ADDITIONAL ADJUSTMENTS SHOULD NOT BE MADE?

A. No. Additionally, we reserve the right to review the testimony being filed by other parties including Commission's Staff and note that another party to this proceeding may have additional adjustments that merit consideration.

VII. RECOMMENDED ADJUSTMENTS

Q. WHAT IS SHOWN ON EXHIBIT LA-3?

A. Exhibit LA-3 presents the adjustments to rate base and operating expenses that are being recommended by Consumer Counsel's witnesses.

1 Q. **PLEASE DISCUSS EACH OF CONSUMER COUNSEL'S**
2 **RECOMMENDED ADJUSTMENTS TO RATE BASE AND OPERATING**
3 **EXPENSES.**
4 A. Each of Consumer Counsel's recommended revisions to rate base and operating
5 expenses is presented below in the same order in which such adjustments are
6 presented on Exhibit LA-3.

7 **OAG-1, Major Storm Damage Costs**

8 Q. **WHAT HAS APCO PROPOSED FOR MAJOR STORM EXPENSE FOR**
9 **PROSPECTIVE RATEMAKING?**
10 A. As shown in the Company's filing at Schedule 29, Adjustment DI-73, the
11 Company proposes to use a three-year average of 2017, 2018, and 2019 storm
12 costs, without labor costs, as the basis for its proposed major storm cost for
13 prospective ratemaking. The Company's proposed three-year average storm cost
14 of $11.594 million in total is $10.938 million on a Virginia jurisdictional basis.
15 Q. **PLEASE EXPLAIN THE ADJUSTMENT FOR THE REMOVAL OF**
16 **MAJOR STORM COST FOR PROSPECTIVE RATEMAKING.**
17 A. As shown on Exhibit LA-3, Schedule OAG-1, this adjustment removes the
18 $10.938 million of jurisdictional expense proposed by APCo. The Commission
19 confirmed in the APCo 2014 Biennial Review Final Order that under the statutory
20 framework for electric utility biennial earnings reviews and prospective
21 ratemaking, it was not appropriate to include estimated costs for future storm
22 damage in operating expenses for prospective ratemaking. At pages 41-42 of that
23 Order, the Commission stated that:

> We agree with Consumer Counsel and Staff that under the current statutory framework for biennial reviews, it is no longer appropriate to include an estimated cost for future major storm damage in operating expenses for prospective ratemaking. Section 56.585.1 A 8 allows APCo to defer and recover costs associated with "severe weather events" under certain circumstances. This statute provides APCo the opportunity to recover these costs. Thus, *we find that major storm damage expense should not be included as a normalized expense for ratemaking and should be removed from the prospective rate year.* We further note, as referenced by Consumer Counsel, that we required the same treatment by Dominion Virginia Power in its most recent biennial review.

(footnotes omitted) (emphasis added).

The basis for this decision as it related to biennial reviews is equally applicable to the triennial review process. Consequently, APCo's proposed expense of $11.594 million for major storm expense in total, and $10.938 million on a Virginia jurisdictional basis, should be removed for prospective ratemaking, which I have done on Exhibit LA-3, Schedule OAG-1.

<u>OAG-2, Charitable Contributions</u>

Q. PLEASE EXPLAIN THE ADJUSTMENT FOR CHARITABLE CONTRIBUTIONS.

A. As shown on Exhibit LA-3, Schedule OAG-2, this adjustment removes charitable contributions for prospective ratemaking. In 2019, the Commission established a new precedent for charitable contributions, indicating that they should be removed from the utility's cost of service for ratemaking purposes. Specifically, the Commission stated as follows:

> We find that all charitable donations should be removed from the cost of service for ratemaking purposes. The Commission has been moving in this direction in recent years. We find that ratepayers should not be charged for any of the utility's charitable

> contributions. A utility holds a monopoly franchise to provide reliable service at just and reasonable rates. We find that a utility is free to support charities of its choice with shareholder funds; however, captive ratepayers can choose their own charitable causes to support and should not have to pay for the utility's choices.[25]

In accordance with this precedent, APCo's charitable donations are being removed from the cost of service for ratemaking purposes. As shown on Exhibit LA-3, Schedule OAG-2, and on Exhibit LA-2, Schedule C.1, APCo's net operating income for prospective ratemaking is increased by $247,166 to reflect the removal of APCo's charitable donations.

<u>OAG-3, Coal Inventory</u>

Q. WHAT HAS APCO REFLECTED IN THE EARNINGS TEST PERIOD RATE BASE FOR COAL INVENTORY?

A. APCo included 13-month average cost for coal inventory in rate base for the 2017 earnings test year on a Virginia jurisdictional basis of $48.143 million, for the 2018 earnings test year of $28.785 million and for the 2019 earnings test year of $41.638 million. These coal inventory amounts are based on total average coal inventory levels of 1,924,652 tons for 2017, 1,179,066 tons for 2018 and 1,724,075 tons for 2019, all of which are excessive in comparison with the Company's proposed 1,049,345 tons of coal inventory for prospective ratemaking, and in comparison with other calculations, including but not limited to the Company's own coal inventory targets and to calculated coal inventory

[25] *Application of Washington Gas Light Company, For authority to increase existing rates and charges and to revise the terms and conditions applicable to gas service pursuant to § 56-237 of the Code of Virginia,* SCC Case No. PUR-2018-00080, Final Order at 17-18 (Dec. 20, 2019), https://scc.virginia.gov/docketsearch/DOCS/4kfv01!.PDF.

levels at 35-days of maximum burn for each year. Of particular concern are the 2017 coal inventory level of 1,924,652 tons and the 2019 coal inventory level of 1,724,075 tons, which are grossly excessive in comparison to APCo's proposed target level of 1,049,345 tons. These levels are also grossly excessive in comparison to 35-day maximum burn calculated levels that I have calculated, in comparison to the 35-day maximum burn levels for each year that APCo provided in response to OAG 12-268, and in comparison to 35-day adjusted average daily burn levels for each year.

Q. WHAT HAS APCO REFLECTED FOR COAL INVENTORY FOR PROSPECTIVE RATEMAKING?

A. For prospective ratemaking, APCo proposes an amount for coal inventory of $25.343 million on a Virginia jurisdictional basis. Basically, APCo has recognized that its recorded average coal inventory for the 2019 test year, which was based on an inventory of 1,724,075 tons, was unreasonably high, i.e., was too high to use for prospective ratemaking, and has thus reduced that $41.638 million amount, on a Virginia jurisdictional basis, down to a proposed allowance of $25.343 million for ratemaking purposes for the 2021 rate year, based on APCo's coal inventory targets. However, as I discuss below in the context of the level for coal inventory for prospective ratemaking, APCo's coal inventory targets which underpin the $25.343 million amount proposed by the Company for coal inventory for prospective ratemaking differ from the method of using 35 days of adjusted <u>average</u> daily coal burn to derive the level of tons needed for coal

1 inventory that was used in APCo's 2011 biennial review case, Case No. PUE-
2 2011-00037.

3 **Q. HAVE YOU REPRODUCED APCO'S REQUESTED COAL INVENTORY**
4 **AMOUNTS ON AN EXHIBIT?**

5 A. Yes. Exhibit LA-3, Schedule OAG-3, page 1, line 1, reproduces APCo's proposed
6 coal inventory allowances for the 2017, 2018 and 2019 earnings test periods, as
7 well as for prospective ratemaking. Exhibit LA-3, Schedule OAG-3, pages 2
8 through 5 contain additional information on APCo's coal inventory and my
9 recommended adjustments.

10 **Q. HOW WAS THE ALLOWANCE FOR COAL INVENTORY**
11 **DETERMINED IN APCO'S LAST TWO BIENNIEAL REVIEW CASES?**

12 A. In case No. PUE-2011-00037,[26] the Commission found that

13 [I]t is reasonable for coal inventory included in rate base to reflect
14 average burn rates - *as opposed to maximum burn rates* - and a
15 thirty-five-day supply of coal. We further conclude, as
16 recommended by Consumer Counsel, that it is reasonable to adjust
17 average coal consumption upward in this instance "to remove the
18 unusually low monthly burns that occurred in September, October
19 and November of 2010." We find that it is reasonable for this
20 purpose to utilize (i) Consumer Counsel's thirty-five-day average
21 coal consumption over the thirteen-month test period, as adjusted,
22 of 1,025,955 tons, and (ii) an average cost of consumed coal
23 (updated through March 201 1) of $67.357 per ton, which results
24 in a total [company] rate base coal inventory value of $69,105,251.
25 APCo has not established that [average burn rate] treatment has
26 previously, or will in the future, expose the Company or its
27 customers to risks of plant curtailments or shut downs due to a lack

[26] *Application of Appalachian Power company, For a 2011 biennial review of the rates, terms and conditions for the provision of generation, distribution and transmission services pursuant to § 56-585.1 A of the Code of Virginia,* Case No. PUE-2011-00037, Final Order at 28 (Nov. 30, 2011), https://scc.virginia.gov/docketsearch/DOCS/2h_%2301!.PDF(emphasis added).

> of coal, and we expect that the Company shall continue to meet its public service obligations in this regard.

In Case No. PUE-2014-00026, both Consumer Counsel and Staff proposed adjustments to APCo's 2012 and 2013 Earnings Test because the Company had grossly exceeded the approved coal inventory amount that the Commission had found reasonable to set rates in the preceding rate case. To Consumer Counsel these excessive amounts were on their face unreasonable, especially in light of the Commission's 2011 finding on this issue. Indeed, "[f]or this period, APCo's actual average coal inventory was *more than triple* the 35-day average daily burn rate this Commission found reasonable in APCo's 2011 biennial review and *more than triple* the same 35-day average daily burn rate level this Commission finds reasonable going forward in this proceeding."[27]

Nevertheless, for earnings test purposes for the 2012-2013 period, the Commission allowed APCo to use its actual coal inventory balance, based on the facts of that case. The Commission viewed the issue as one of management prudence, and not through the lens of what an appropriate level of coal inventory should be allowed to be included in rate base and earn a return for the Company. The Commission found that

> no party has identified even a single unreasonable action (or lack of action) on the Company's behalf in this matter. For example, no witness showed that any contract entered into by APCo, or that its administration of its contracts, was unreasonable. Indeed, Staff expressly acknowledges that it "has not asserted that the

[27] *Application of Appalachian Power Company, For a 2014 biennial review of the rates, terms and conditions for the provision of generation, distribution and transmission services pursuant to § 56-585.1 A of the Code of Virginia,* Case No. PUE-2014-00026, Final Order at 48 (Nov. 26, 2014) (Comm'n Dimitri dissenting).

> Company's management of coal inventory was imprudent." Based on the evidence in this record, we find that the Company's management of its coal inventory was reasonable and, as a result, that its actual 2012-2013 coal inventory amount is reasonable for purposes of determining earned return in this biennial review.[28]

Consumer Counsel continues to believe, however, that the question here should not be limited to whether the Company acted imprudently in managing its coal inventory. Holding that question aside, the inquiry is what reasonable regulatory signals need to be sent to the Company for it to manage its coal inventory in a reasonable manner.

The Commission has agreed with Consumer Counsel that "only a reasonable coal inventory amount should be included in rate base for regulatory purposes." Further: "[w]hether or not the coal inventory is reasonable for determining earned return must be based on the reasonableness of the Company's actions, not on the unforeseen vagaries of the market or the weather."[29] The key question identified by the Commission for the retrospective review of APCo's performance during the earnings test review period is therefore: "whether the Company's actual ... coal inventory is reasonable for determining earned return under the statute."[30] The Commission emphasized that future cases may present circumstances that warrant a different result:

> the approval of APCo's coal inventory . . . does not amount to a "blank check" for a utility to maintain any amount of coal inventory, no matter how excessive. The issue of reasonableness will also be present. In its next biennial review the Company will need to establish that it did not inventory unreasonable amounts of

[28] *Id.* at 15.
[29] *Id.*
[30] *Id.* at 17.

> coal in 2014-2015. For example, APCo will need to show that its actions to manage such inventory were reasonable based on the specific factual circumstances relevant to the next biennium. In short, although we find based upon the factual record in this case that APCo's actual 2012-2013 coal inventory is reasonable for determining earned return under the statute, the facts in a future proceeding may be different.[31]

Q. FOR WHAT PLANTS DOES APCO MAINTAIN A COAL INVENTORY?

A. For the 2017-2019 triennial review period and for prospective ratemaking, APCo maintains a coal inventory at the Mountaineer and Amos plants.

Q. IS AN ADJUSTMENT FOR COAL INVENTORY NEEDED FOR THE 2017, 2018 AND 2019 EARNINGS TEST PERIODS?

A. Yes. The Company's coal inventory request for the earnings test years, 2017, 2018, and 2019 continues to be grossly excessive in comparison with APCo's own targets that were used in APCO's own updated allowance for prospective ratemaking, and is excessive in comparison with calculated allowances based on 35 days of (adjusted) average daily coal burn in each of the earnings test years.

Q. PLEASE EXPLAIN THE ADJUSTMENT FOR COAL INVENTORY FOR EACH YEAR IN THE EARNINGS TEST PERIOD.

A. As shown on Exhibit LA-3, Schedule OAG-3, pages 2 through 4 of 5, APCo included a 13-month average cost for coal inventory in rate base for the earnings test years as follows:

- $101,845,990 for the 2017 earnings test year for 1,924,652 tons,
- $60,577,177 for the 2018 earnings test year for 1,179,066 tons, and
- $90,837,282 for the 2019 earnings test year, for 1,724,075 tons of coal.

[31] *Id.*

Those coal inventory levels and the related coal inventory dollar amounts, particularly for 2017 and 2019, are grossly excessive in with APCo's own proposed going forward allowance of $55.288 million (total company) which equates to 1,049,345 tons, which is shown on my Exhibit LA-3, Schedule OAG-3, page 5, line 1.

Moreover, APCo's coal inventory amounts for the earnings test periods, and particularly the amounts proposed for 2017 and 2019, are grossly excessive in comparison with a calculated allowance for each of those years based on 35 days of coal inventory at adjusted average burn levels, i.e., similar to the method for determining the rate base allowance for APCo's coal inventory previously approved by the Commission in Case No. PUE-2011-00037.

As shown on Exhibit LA-3, Schedule OAG-3, pages 2 through 5, I have calculated an allowance for coal inventory based on a 35 days allowance at the adjusted average daily burn level for each of those years. I have also used the 35-day maximum burn for each year that APCo provided in response to OAG 12-268 to compute comparable level of coal inventory for each year. Exhibit LA-3, Schedule OAG-3, pages 2 through 5, also show the level of coal inventory allowance at 35-days of adjusted average daily burn.

Q. PLEASE EXPLAIN THOSE CALCULATIONS.

A. As shown on Exhibit LA-3, Schedule OAG-3, page 2, for 2017, APCo burned 8,308,652 tons of coal which equates to an average daily burn of 22,763 tons of coal per day. A 35-day allowance at average daily would be 796,720 tons. The maximum monthly burn was 950,944 tons in July. At the July 2017 maximum

monthly burn rate a 35-day allowance would be 1,073,646 tons. For the maximum 35-day actual burn experienced by the Company was 1,090,468 tons. Each of these is priced out at the same $52.92 cost per ton that APCo used, as shown on Schedule OAG-3, page 2 of 5. APCo's response to OAG 12-268 shows the maximum 35-day coal burn during 2017, of 1,090,468 tons.

The average daily burn excluding the low month of November 2017 was 23,799 tons. A 35-day coal inventory based on the adjusted average daily burn level at 23,799 tons is 832,978 tons, and equates to a total coal inventory of $44.078 million. For my recommended adjustment I have used that quantity, which I priced out at the same $52.92 cost per ton that APCo used, to derive an allowed inventory at 35-days of average daily coal burn of $44.078 million.

This adjustment is intended to put a maximum level on the amount of coal inventory that is included in rate base for earnings test purposes. This is needed to avoid having ratepayers pay for an a return on levels of inventory that are excessive by limiting the coal inventory that is included in rate base to a reasonable level of tons, based on maintaining an average coal inventory during the year of a 35-day supply at the adjusted average daily burn level.

The adjustment to 2017 coal inventory, as shown on Exhibit LA-3, Schedule OAG-3, page 2, column C, is $57.768 million in total and, as shown in column E, a $27.307 million reduction on a Virginia retail jurisdictional basis.

1 Q. **DOES THE LIMITATION ON EARNINGS TEST PERIOD COAL**
2 **INVENTORY RESULT IN A DISALLOWANCE OF RECOVERY FOR**
3 **THE ACTUAL COST OF COAL THAT IS BURNED TO GENERATE**
4 **ELECTRICITY?**
5 A. No. The Company has and would continue to recover the cost of the coal that is
6 actually consumed in generating electricity; however, the adjustment limits the
7 return on coal inventory that is sitting at the plant in the coal piles that was
8 unburned on average during the year where the coal inventory levels actually
9 maintained by the Company have been determined to be excessive. In other
10 words, the rate base allowance for coal inventory must have some reasonable
11 maximum limit or else it may become a "blank check" invitation to the Company
12 to build up excessive levels upon which it would earn a return for shareholders.
13 Q. **PLEASE EXPLAIN THE ADJUSTMENT FOR THE AVERAGE COAL**
14 **INVENTORY ALLOWANCE FOR 2018.**
15 A. As shown on Exhibit LA-3, Schedule OAG-3, page 3, for 2018, the Company
16 burned 7,615,988 tons of coal, and the average daily burn rate was 20,866 tons. A
17 35-day allowance at average monthly burn would be 730,300 tons, which I priced
18 out at the corresponding adjusted 13-month average of $51.38 per ton. As shown
19 on Exhibit LA-3, Schedule OAG-3, page 3, for 2018, the maximum monthly burn
20 was 1,007,058 tons in August. A 35-day allowance at maximum monthly burn is
21 therefore 1,137,001 tons, which I priced out at the same $51.38 cost per ton that
22 APCo used. Upon receiving APCo's response to OAG 12-268, I added a
23 calculation showing the maximum 35-day coal burn during 2018, of 1,138,675

tons, which I priced out at the same $51.38 cost per ton that APCo used to derive an allowed inventory at 35-days of maximum coal burn of $58.502 million. This is the equivalent to approximately 54.6 days of coal inventory at the average daily burn rate of 20,866 experienced by APCo in 2018. Excluding the relatively low burn levels in the months of May, October, and November 2018, produces an adjusted average daily burn of 22,715 tons. A 35-day inventory at an adjusted average daily burn level of 22,715 tons per day is 830,033 tons, which, when price out at $51.38 per ton equates to an inventory of $42.645 million.

The adjustment to 2018 coal inventory, as shown on Exhibit LA-3, Schedule OAG-3, page 3, column C, is $17.932 million in total and, as shown in column E, an $8.521 million reduction on a Virginia retail jurisdictional basis.

Q. PLEASE EXPLAIN THE ADJUSTMENT FOR THE AVERAGE COAL INVENTORY ALLOWANCE FOR 2019.

A. As shown on Exhibit LA-3, Schedule OAG-3, page 4, for 2019, the Company consumed 7,132,956 tons of coal which equates to an average daily burn rate was 19,542 tons. A 35-day allowance at average monthly burn is therefore 683,982 tons, which I priced out at the corresponding adjusted 13-month average of $51.69 per ton. As shown on Exhibit LA-3, Schedule OAG-3, page 4, for 2019, the maximum monthly burn was 1,031,902 tons in January. A 35-day allowance at maximum monthly burn is therefore 1,165,051 tons, which I priced out at the same $52.69 cost per ton that APCo used. Upon receiving APCo's response to OAG 12-268, I added a calculation showing the maximum 35-day coal burn during 2019, of 1,181,555 tons, which I priced out at the same $52.69 cost per ton

that APCo used, to derive an allowed inventory at 35-days of maximum coal burn of $62.253 million. Excluding the low coal burn that occurred in the months of September through December of 2019 produced an adjusted average daily burn of 23,354 tons, and 35-day average coal inventory of 817,384 tons, which I priced out at $52.69 per ton for a total coal inventory balance of $43.066 million for 2019.

The adjustment to 2019 coal inventory, as shown on Exhibit LA-3, Schedule OAG-3, page 4, column C, is $47.771 million in total and, as shown in column E, is a $21.897 million reduction on a Virginia retail jurisdictional basis.

Q. WHY ARE YOUR EARNINGS TEST ADJUSTMENTS TO COAL INVENTORY IN RATE BASE NECESSARY?

A. It starts with the basic premise that the Commission has found that a 35-day burn rate using average monthly burn rates (adjusted to exclude months with lower consumption) should be used to derive the reasonable amount of inventory levels that should be included in rate base for prospective ratemaking. Despite this finding, in *every* earnings test year since, the Company has allowed its coal inventory to grow well beyond the levels indicated by that 35-day burn rate. In years 2017 and 2019, the Company's actual coal inventories, which the Company proposes be used for the earnings test, have grossly exceeded not only the levels based on the equivalent of 35 days of average burn, but have also grossly exceeded levels based on 35-days of maximum coal burn during those years. The Company continually fails to manage its coal inventory to a level that the Commission has stated is reasonable in the 2011 biennial review.

It is clear that there is a problem. As was recognized in 2014, "[w]hen [inventory] levels that are multiples of those previously deemed and prospectively declared reasonable by the Commission are allowed, the clear precedent from this ruling is that there is no standard of reasonableness applied in such matters, sending precisely the wrong signal to the utility and penalizing customers."[32] This warning has proven again true with respect to APCo's 2017-2019 earnings test period. The below chart shows in clear terms how the Company has acted in light of an unenforced standard of reasonableness for coal inventory levels:

	APCo Proposed Coal Inventory			Coal Inventory at 35-Day Adjusted Average Daily Burn Level				
Year	In Tons	Total Cost	VA Juris Rate Base	In Tons	Total Cost	VA Juris Rate Base	APCo Excess Dollars	APCo Excess Percent
2017	1,924,652	$ 101,845,990	$ 48,142,770	832,978	$ 44,078,354	$ 20,835,912	$ 27,306,858	131%
2018	1,179,066	$ 60,577,177	$ 28,785,356	830,033	$ 42,644,826	$ 20,264,174	$ 8,521,181	42%
2019	1,724,075	$ 90,837,282	$ 41,637,539	817,384	$ 43,065,955	$ 19,740,357	$ 21,897,182	111%

	APCo Proposed Coal Inventory			Coal Inventory at 35-Day Maximum Daily Burn Level				
Year	In Tons	Total Cost	VA Juris Rate Base	In Tons	Total Cost	VA Juris Rate Base	APCo Excess Dollars	APCo Excess Percent
2017	1,924,652	$ 101,845,990	$ 48,142,770	1,090,468	$ 57,703,821	$ 27,276,693	$ 20,866,077	76%
2018	1,179,066	$ 60,577,177	$ 28,785,356	1,138,675	$ 58,502,002	$ 27,799,264	$ 986,092	4%
2019	1,724,075	$ 90,837,282	$ 41,637,539	1,181,675	$ 62,259,546	$ 28,538,219	$ 13,099,320	46%

Unless the Company is provided a regulatory signal that it should manage its coal inventory level to what the Commission has previously determined to be a reasonable amount, the Company has no incentive to actually do so. In fact, the Company has a financial incentive to ignore the Commission's prior finding with respect to reasonable coal inventory levels and to exceed the 35-day average burn-based amount, as the Company earns a greater profit from maintaining increased coal inventory levels. The above chart bears this out.

Moreover, as a snapshot in time, in December of 2019, the very last month of the earnings test, the Company had coal inventory levels of 2,723,075 tons.

[32] *Id.* at 51.

This is more than three times the level of a coal inventory of 817,384 tons that is based upon an adjusted average 35-day burn rate in 2019, and is more than double a coal inventory of 1,181,675 tons base on APCo's maximum 35-day burn in 2019. This problem of APCo having excessive coal inventory in rate base will continue until a correcting signal is sent.

Q. ARE YOU ALSO RECOMMENDING AN ADJUSTMENT TO COAL INVENTORY FOR PROSPECTIVE RATEMAKING PURPOSES?

A. Yes. As shown on Exhibit LA-3, Schedule OAG-3, page 5, I calculated coal inventory amounts for prospective ratemaking based on 35 days of adjusted average daily coal burn. As shown on Schedule OAG-3, page 5, to project the monthly coal burn for each month in 2021 for prospective ratemaking, I compared APCo's actual coal burn in each month, January through May of 2019, with APCo's actual coal burn in each month, January through May of 2020, and used the higher monthly amounts for the 2021 projection. Similarly, I compared APCo's actual cost burn in each month, June through December 2019 with APCo's actual coal burn in each month, June through December 2018, and used the higher monthly amounts for the 2021 projection. As shown in column K, I derived a projected coal burn for 2021 for prospective ratemaking of 8,210,467 tons, indicating an average daily coal burn of approximately 22,494 tons.

A 35-day allowance at average daily burn is therefore 787,305 tons, which I priced out at the same $52.69 cost per ton that APCo used. This produced a recommended coal inventory allowance for prospective ratemaking of $41,481,529, or $19,014,096 on a Virginia jurisdictional basis. This adjustment

1 reduces APCo's proposed coal inventory for prospective ratemaking on a Virginia
2 jurisdictional basis by $6,328,491. As noted above, the Commission has
3 previously found that calculating a coal inventory allowance using APCo's 35-
4 day average coal burn as adjusted to address months in which an unusually low
5 coal burn had occurred is a reasonable method for prospective ratemaking.

6 Using a coal inventory allowance for prospective ratemaking that is based
7 upon an inventory quantity, in tons, that is derived from 35 days of average burn
8 because that has historically been a reasonable way to determine the allowance
9 and is the method that has been used by the Commission in prior APCo rate cases
10 for prospective ratemaking, as discussed in the Commission's Order in APCo's
11 previous biennial reviews, Case Nos. PUE-2011-00037 and PUE-2014-00026. As
12 the Commission has noted, "it is reasonable for coal inventory included in rate
13 base to reflect average burn rates . . . and a thirty-five-day supply of coal" in
14 setting rates.[33] Moreover, the Commission has found that such a policy has not be
15 shown to "expose the Company or its customers to risks of plant curtailments or
16 shut downs due to a lack of coal, and we expect that the Company shall continue
17 to meet its public service obligations in this regard."[34] Since APCo has not had a
18 base rate review since Case No. PUE-2014-00026, the procedure of using 35 days
19 of average coal burn to establish the level of coal inventory allowance that is used
20 for ratemaking has continued from APCo's last case. That method of determining
21 an allowance for ratemaking is reasonable and should continue to be used in the

[33] APCo 2011 Biennial Review Final Order at 28.
[34] *Id.* at 29.

current APCo case for determining the reasonable level of coal inventory for prospective ratemaking.

OAG-4, Impaired Non-Period Retired Plant - Clinch River, Glen Lyn and Kanawha River Coal-Fired Plants- 2019 Earnings Test

Q. PLEASE EXPLAIN YOUR ADJUSTMENT ON EXHIBIT LA-3, SCHEDULE OAG-4.

A. As discussed above in Section IV of my testimony, the Company's proposal to recognize the Virginia jurisdictional share of the retired coal-fired generation assets as an impairment expense in December 2019 is unreasonable, not in the best interest of customers, and contrary to the law. Therefore, I have reversed the portion of the Company's impairment expense adjustment that relates to the net original cost of the retired Clinch River, Glen Lyn, and Kanawha River coal-fired plants. As shown on Exhibit LA-3, Schedule OAG-4, my adjustment reduces depreciation expense by $65.839 million on a total Company basis and by $62.588 million on a Virginia jurisdictional basis.

OAG-5, Impaired Non-Period Retired Plant - ARO Assets - 2019 Earnings Test

Q. PLEASE EXPLAIN YOUR ADJUSTMENT ON EXHIBIT LA-3, SCHEDULE OAG-5.

A. As discussed above in Section IV of my testimony, the Company's proposal to recognize the Virginia jurisdictional share of the retired coal-fired generation assets as an impairment expense in December 2019 is unreasonable, not in the best interest of customers, and contrary to the law. Therefore, I have reversed the

portion of the Company's impairment expense adjustment that relates to the jurisdictional shares of ARO asset balances related to the retired Clinch River, Glen Lyn, and Kanawha River coal-fired plants. As shown on Exhibit LA-3, Schedule OAG-5, my adjustment reduces depreciation expense by $18.323 million on a total Company basis and by $17.418 million on a Virginia jurisdictional basis.

<u>OAG-6, Impaired Non-Period Retired Plant - Sporn Plant Sales Costs in Excess of ARO Liabilities - 2019 Earnings Test</u>

Q. PLEASE EXPLAIN YOUR ADJUSTMENT ON EXHIBIT LA-3, SCHEDULE OAG-6.

A. As discussed above in Section IV of my testimony, the Company's proposal to recognize the Virginia jurisdictional share of the retired coal-fired generation assets as an impairment expense in December 2019 is unreasonable, not in the best interest of customers, and contrary to the law. Therefore, I have reversed the portion of the Company's impairment expense adjustment that relates to the jurisdictional shares of Sporn Plant sales costs in excess of ARO liabilities. As shown on Exhibit LA-3, Schedule OAG-6, my adjustment reduces depreciation expense by $6.221 million on a total Company basis and by $5.914 million on a Virginia jurisdictional basis.

It should be noted that in the Company's supplemental response to Staff 1-011, Supplemental Attachment 1, the journal entry related to this portion of the Company's December 2019 impairment expense adjustment included two entries to Account 108: a debit in the amount of $4.445 million for cost of removal and a

1 credit in the amount of $10.677 million. The net amount of these two entries is
2 the $6.221 million noted above that APCo recorded to depreciation expense.

3 **OAG-7, Impaired Non-Period Retired Plant - Materials & Supplies - 2019 Earnings**
4 **Test**

5 **Q. PLEASE EXPLAIN YOUR ADJUSTMENT ON EXHIBIT LA-3,**
6 **SCHEDULE OAG-7.**

7 A. As discussed above in Section IV of my testimony, the Company's proposal to
8 recognize the Virginia jurisdictional share of the retired coal-fired generation
9 assets as an impairment expense in December 2019 is unreasonable, not in the
10 best interest of customers, and contrary to the law. Therefore, I have reversed the
11 portion of the Company's impairment expense adjustment that relates to
12 jurisdictional shares of materials and supplies balances related to the retired
13 Clinch River, Glen Lyn, and Kanawha River coal-fired plants. As shown on
14 Exhibit LA-3, Schedule OAG-7, my adjustment reduces O&M expense by $2.484
15 million on a total Company basis and by $2.362 million on a Virginia
16 jurisdictional basis.

17 **OAG-8, Non-Period Retired Coal-Fired Plants - Clinch River, Glen Lyn and**
18 **Kanawha River in 2017, 2018 and 2019 Earnings Test Rate Base**

19 **Q. PLEASE EXPLAIN YOUR ADJUSTMENT ON EXHIBIT LA-3,**
20 **SCHEDULE OAG-8.**

21 A. As discussed above in Section IV of my testimony, the remaining book values of
22 the Clinch River, Glen Lyn, and Kanawha River coal-fired generation assets

which APCo recorded as an impairment expense in December 2019 relate to generating units that APCo retired in the 2015-2016 time frame. The Company retired these generation assets prior to the 2017-2019 earnings test period, and the related costs should have been removed from rate base at the time they were retired. Therefore, using data provided in APCo's response to OAG 14-304, I have removed these asset costs, net of ADIT impacts, from the 2017, 2018, and 2019 earnings test rate base. As shown on Exhibit LA-3, Schedule OAG-8, my adjustment reduces Virginia jurisdictional rate base in the 2017, 2018, and 2019 earning test periods by $52.402 million, $52.275 million and $49.171 million, respectively.

In addition, my adjustment reduces the Virginia jurisdictional related 2017, 2018, and 2019 earnings test ADIT by $11.043 million, $6.593 million and $6.242 million, respectively.

The net impact of my adjustments reduces Virginia jurisdictional 2017, 2018 and 2019 earnings test rate base by $41.359 million, $45.682 million and $42.929 million, respectively.

<u>OAG-9, Non-Period Retired Coal-Fired Plants - Sporn Plant in 2017, 2018, and 2019 Earnings Test Rate Base</u>

Q. PLEASE EXPLAIN YOUR ADJUSTMENT ON EXHIBIT LA-3, SCHEDULE OAG-9.

A. As discussed above in Section IV of my testimony, the remaining book values of the Sporn Plant sales costs in excess of ARO liabilities were recorded by APCo as an impairment expense in December 2019. The Company retired the Sporn Plant

prior to the 2017-2019 earnings test period, and the costs do not belong in the current 2017-2019 triennial earning review. Using data provided in APCo's response to OAG 14-311, I have removed these Sporn Plant costs, net of ADIT impacts, from the 2017, 2018, and 2019 earnings test rate base. As shown on Exhibit LA-3, Schedule OAG-9, my adjustment reduces Virginia jurisdictional rate base in the 2017, 2018, and 2019 earning test periods by $4.100 million, $4.023 million and $4.156 million, respectively.

In addition, my adjustment reduces the Virginia jurisdictional related 2017, 2018, and 2019 earnings test ADIT by $864,029, $507,439 and $527,669, respectively.

The net impact of my adjustments reduces Virginia jurisdictional 2017, 2018, and 2019 earnings test rate base by $3.236 million, $3.516 million, and $3.629 million, respectively.

<u>OAG-10, Non-Period Retired Coal-Fired Plants - Materials & Supplies Related ADIT in 2017, 2018 and 2019 Earnings Test Rate Base</u>

Q. PLEASE EXPLAIN YOUR ADJUSTMENT ON EXHIBIT LA-3, SCHEDULE OAG-10.

A. As discussed above in Section IV of my testimony, the remaining book values of the Clinch River, Glen Lyn, and Kanawha River coal-fired generation assets were recorded by APCo as an impairment expense in December 2019. Those plants were retired in the 2015-2016 time frame. In addition, as discussed above with respect to Exhibit LA-3, Schedule OAG-7, a portion of APCo's impairment expense adjustment in December 2019 was related to the Virginia jurisdictional

shares of materials and supplies balances related to the closure of the Clinch River, Glen Lyn and Kanawha River coal generating plants. At the time these coal-fired plants were retired, APCo recorded the remaining materials and supplies balances as a regulatory asset in Account 1823378.[35]

According to the Company's responses to OAG 14-305, OAG 14-306 and OAG 14-307, this regulatory asset was not included in rate base during the 2017, 2018 and 2019 earnings test periods. However, the ADIT related to this regulatory asset was included in rate base in each earnings test period. Therefore, I have removed these ADIT amounts from 2017, 2018 and 2019 earnings test rate base.

As shown on Exhibit LA-3, Schedule OAG-10, my adjustment decreases Virginia jurisdictional ADIT in the 2017, 2018 and 2019 earnings test periods by $826,571, $495,943 and $495,343, respectively. Because this ADIT was an offset to rate base, the removal of that ADIT results in earnings test rate base in each year being increased by these amounts.

<u>OAG-11, Amortization Expense For APCo's Claimed Regulatory Asset Related to APCo's Claimed Triennial Earnings Below the Bottom of the Earnings Band</u>

Q. PLEASE EXPLAIN YOUR ADJUSTMENT ON EXHIBIT LA-3, SCHEDULE OAG-11.

A. As discussed on page 10 of the Direct Testimony of Company witness Allen, APCo deferred as a regulatory asset, $23,563,512 on its books in December 2019 in order to increase the Company's earned return in this proceeding to 8.72

[35] See the response to Staff 1-011, Attachment 1.

1 percent over the triennial period, which he claims was done in accordance with
2 the provisions of Subsection A 8. As previously discussed, the 8.72 percent ROE
3 is 70 basis points below the Company's authorized return of 9.42 percent and thus
4 represents the bottom of APCo's authorized earnings band. The Company is
5 proposing to amortize the $23,563,512 regulatory asset over three years, which
6 would increase depreciation and amortization expense by $7,854,504 for
7 prospective ratemaking.

8 As shown on Exhibit LA-3, Schedule OAG-11, I have made an adjustment
9 to remove the $7,854,504 from depreciation and amortization expense for
10 prospective ratemaking. Without the Company's December 2019 impairment
11 write-off for the Non-Period Retirements, the Company's earnings are not below
12 the bottom of the earnings band for the 2017-2019 triennial review period.
13 Consequently, the Company's claimed regulatory asset for such under-earnings
14 has been removed for prospective ratemaking.

15 **<u>OAG-12, Wholesale Renewable Energy Credits</u>**

16 **Q. PLEASE EXPLAIN THE AJUSTMENT SHOWN ON EXHIBIT LA-3,**
17 **SCHEDULE OAG-12.**

18 A. According to APCo's response to Staff 3-109, the Company records expenses
19 related to the requirements of wholesale marketing relationships in Account
20 5570007 - Wholesale RECs, including the purchase costs associated with
21 renewable energy credits ("RECs") as well as related administrative fees and
22 alternative compliance relationships.

In addition, in its response to OAG 12-259, the Company stated that the wholesale REC expense recorded in Account 5570007 was included in the earnings test for the triennial period. However, wholesale REC costs are incurred in relation to off-system sales and should therefore have been included in the calculation of off-system sales margins that are shared with customers through APCo's Fuel Factor. Therefore, the Company conceded that the wholesale REC expense should have been removed from the 2017-2019 earnings test period.

I have removed the wholesale REC expense from each of the 2017, 2018, and 2019 earnings test years as well as from the expense amounts being used for prospective ratemaking.

As shown on Exhibit LA-3, Schedule OAG-12, my adjustment reduces Virginia jurisdictional O&M expense by $92,278, $59,622 and $225,604 for earnings test years 2017, 2018 and 2019, respectively.

My adjustment also reduces APCo's Virginia jurisdictional O&M expense by $225,604 for prospective ratemaking.[36]

<u>OAG-13, Interest Synchronization</u>

Q. PLEASE DESCRIBE THE INTEREST SYNCHRONIZATION ADJUSTMENT SHOWN ON EXHIBIT LA-3, SCHEDULE OAG-13.

A. The Company is proposing that interest expenses to be used as a deduction in the calculation of the test year pro forma adjusted income taxes be based on the interest expenses that are implicit in its proposed overall rate of return. These pro

[36] The response to OAG 12-259(f) states that the Virginia jurisdictional 2019 earnings test amount of $225,604 is reflected in the Company's prospective revenue requirement.

forma interest expenses (referred to as the so-called "synchronized" interest expenses) are determined by multiplying the weighted cost of debt component of the overall rate of return times the rate base used in this case.

Q. HAVE YOU DETERMINED THE SYNCHRONIZED INTEREST EXPENSES IN A SIMILAR MANNER?

A. Yes. Details of my synchronized interest expense adjustment, calculated in the same manner, are shown on Exhibit LA-3, Schedule OAG-13, pages 2 through 5, for the 2017, 2018, and 2019 earnings test periods, and for prospective ratemaking, respectively.

Q. WHY IS YOUR RECOMMENDED SYNCHRONIZED INTEREST AMOUNT DIFFERENT FROM APCO'S PROPOSED SYNCHRONIZED INTEREST AMOUNT?

A. This disparity is due to the differences in the rate base levels used. Differences in the weighted cost of debt rates can also contribute to differences in the amount of synchronized interest; however, in the current case, I have used the same weighted cost of debt that was used by APCo. Consequently, in the current case, the differences in rate base result in different synchronized interest expense amounts.

Q. PLEASE EXPLAIN THE ADJUSTMENT FOR INTEREST SYNCHRONIZATION.

A. As described above, this adjustment increases income tax expense for the 2017, 2018, and 2019 earnings test periods and for prospective ratemaking by the amounts shown on Exhibit LA-3, Schedule OAG-13. My recommended adjusted

rate base for each of these periods is lower than APCo's, which results in lower synchronized interest expense and a higher income tax expense. A summary of the increases to income tax expense for the 2017, 2018, and 2019 earnings test periods and for prospective ratemaking is shown on Exhibit LA-3, Schedule OAG-13, page 1.

<u>OAG-14, Amos Plant Depreciation Expense</u>

Q. PLEASE EXPLAIN THE ADJUSTMENT SHOWN ON EXHIBIT LA-3, SCHEDULE OAG-14.

A. This adjustment is addressed in Consumer Counsel witness Norwood's testimony. Mr. Norwood's adjustment decreases depreciation expense related to Amos Plant Units 1, 2 and 3. His adjustment is based on disallowing the Company's proposed but unjustified shortening of the Amos Plant's service life from 2040 to 2032, which was reflected in the Company's 2018 depreciation study.

As shown on Exhibit LA-3, Schedule OAG-14, reflecting the impact of Mr. Norwood's recommendations decreases depreciation expense for the 2018 and 2019 earnings test years on a Virginia jurisdictional basis by $7,908,231 and $7,952,405, respectively.

In addition, as also shown on Exhibit LA-3, Schedule OAG-14, Mr. Norwood's adjustment decreases Virginia jurisdictional depreciation expense by $27,667,853 for prospective ratemaking.

1 Q. **IS THERE A RELATED ADJUSTMENT TO ACCUMULATED**
2 **DEPRECIATION?**
3 A. Yes. Since APCo's rate base for the earnings test periods is based on an average,
4 the impact of Mr. Norwood's adjustments to depreciation expense decreases
5 accumulated depreciation by the average of the beginning of year and cumulative
6 end of year accumulated depreciation activity.
7 As shown on Exhibit LA-3, Schedule OAG-14, reflecting the impact of
8 Mr. Norwood's recommendations decreases accumulated depreciation for the
9 2018 and 2019 earnings test years on a Virginia jurisdictional basis by $3,954,116
10 and $11,884,434, respectively.
11 In addition, as also shown on Exhibit LA-3, Schedule OAG-14, Mr.
12 Norwood's adjustment for Amos plant depreciation expense decreases Virginia
13 jurisdictional accumulated depreciation by a year-end amount of $43,528,489 for
14 prospective ratemaking.
15 Q. **DOES MR. NORWOOD'S RECOMMENDATION TO DECREASE**
16 **DEPRECIATION EXPENSE RELATED TO AMOS PLANT UNITS 1-3**
17 **ALSO IMPACT ACCUMULATED DEFERRED INCOME TAXES?**
18 A. Yes. In its response to Staff 2-089, the Company provides support for its
19 depreciation expense adjustments, which includes normalized and flow-through
20 amounts for the 2017-2019 earnings test period as well as for prospective
21 ratemaking. As discussed in the response to Staff 2-089, APCo's depreciation
22 expense adjustments use the current depreciation expense adjustment multiplied
23 by the federal income tax rate and a normalization factor. Therefore, Mr.

Norwood's depreciation expense adjustments are multiplied by the federal income tax rate and the result is then multiplied by the normalization factor for generation that was provided in APCo's response to Staff 2-089.

Mr. Norwood's depreciation expense adjustments impacts Virginia jurisdictional ADIT for earning test years 2018 and 2019 by $1,352,916 and $1,365,833, respectively, and by $4,751,980 for prospective ratemaking. From these amounts, I calculated the average of the beginning of year and end of year ADIT activity for earnings test years 2018 and 2019. As shown on Exhibit LA-3, Schedule OAG-14, Virginia jurisdictional ADIT for earnings test years 2018 and 2019 is decreased by $676,458 and $2,035,832, respectively.

In addition, as also shown on Exhibit LA-3, Schedule OAG-14, Virginia jurisdictional ADIT is decreased by a year-end amount of $7,470,728 for prospective ratemaking.

<u>OAG-15, OVEC Demand Charges</u>

Q. PLEASE EXPLAIN THE AJUSTMENT SHOWN ON EXHIBIT LA-3, SCHEDULE OAG-15.

A. This adjustment is addressed in Consumer Counsel witness Norwood's testimony. Mr. Norwood's recommendation addresses the demand charges that APCo seeks to pass onto its Virginia jurisdictional customers from its affiliate, OVEC. Mr. Norwood's analysis shows that this affiliate contract does not meet the lower of cost or market standard for demand charges.

As shown on Exhibit LA-3, Schedule OAG-15, reflecting the impact of Mr. Norwood's recommendations decreases APCo's purchased power expense

for 2017, 2018, and 2019 on a Virginia jurisdictional basis by $11,985,119, $3,677,469 and $15,139,634, respectively.

In addition, as also shown on Exhibit LA-3, Schedule OAG-15, Mr. Norwood's adjustment decreases Virginia jurisdictional purchased power expense by $15,139,634 for prospective ratemaking.

<u>OAG-16, AMI Meters and Related Communications Equipment</u>

Q. PLEASE EXPLAIN THE AJUSTMENT SHOWN ON EXHIBIT LA-3, SCHEDULE OAG-16.

A. This adjustment is addressed in Consumer Counsel witness Norwood's testimony. Mr. Norwood's adjustment (1) removes AMI meters and related communications equipment from Virginia jurisdictional rate base, and (2) decreases depreciation expense to reflect the removal of AMI meters and communications equipment, and, as shown on Exhibit LA-3, Schedule OAG-16, includes related impacts to (3) accumulated depreciation, (4) property tax expense and (5) ADIT. Mr. Norwood's analysis shows that the APCo's AMI investments do not meet the Commission standards for approval of AMI projects that were used by the Commission to disallow AMI costs in Dominion's 2018 and 2019 Grid Transformation Orders.

Exhibit LA-3, Schedule OAG-16, page 1, reflects the impact of Mr. Norwood's recommendations to remove AMI meters and communications equipment from the 2017-2019 triennial earnings review period and for prospective ratemaking. Section I shows the impacts related to Mr. Norwood's recommendation to remove AMI meters and Section II presents similar impacts

for Mr. Norwood's recommendation to remove the related communications equipment on each of the following items:

Rate Base

- Virginia Jurisdictional to Remove AMI Meters
- Virginia Jurisdictional Adjustment to Accumulated Depreciation
- Net Adjustment to Virginia Jurisdictional Plant for AMI Meters

Net Operating Income

- Virginia Jurisdictional Adjustment to Depreciation Expense
- Virginia Jurisdictional Adjustment to Property Tax Expense

Q. HAVE YOU INCLUDED DETAIL SHOWING THE IMPACT OF MR. NORWOOD'S ADJUSTMENT ON AVERAGE PLANT IN SERVICE FOR EACH YEAR, 2017-2019, IN THE TRIENNIAL EARNINGS REVIEW PERIOD?

A. Yes. Detail showing the impact of Mr. Norwood's adjustment on average plant in service for AMI meters for each year, 2017-2019, in the triennial earnings review period is presented on Exhibit LA-3, Schedule OAG-16, page 2. In addition, detail showing the impact of Mr. Norwood's adjustment on average plant in service for AMI communications equipment is presented on Exhibit LA-3, Schedule OAG-16, page 3.

1 Q. **DOES MR. NORWOOD'S ADJUSTMENT FOR DISALLOWING AMI**
2 **METERS AND COMMUNICATIONS EQUIPMENT HAVE AN IMPACT**
3 **ON DEPRECIATION EXPENSE AND ACCUMULATED**
4 **DEPRECIATION?**
5 A. Yes. As shown on Exhibit LA-3, Schedule OAG-16, pages 2 and 3, information
6 provided in APCo's response to OAG 15-312 was used to ascertain the related
7 impacts on depreciation and accumulated depreciation for AMI meters and
8 communications equipment.
9 Q. **DOES MR. NORWOOD'S ADJUSTMENT FOR DISALLOWING AMI**
10 **METERS AND COMMUNICATIONS EQUIPMENT COST HAVE AN**
11 **IMPACT ON ADIT?**
12 A. Yes. Information from APCo's response to OAG 15-312 was used to ascertain
13 the related impacts on ADIT, as shown on ExhibitLA-3, Schedule OAG-16, page
14 4.
15 Q. **DOES MR. NORWOOD'S RECOMMENDED ADJUSTMENT TO**
16 **REMOVE AMI METERS AND COMMUNICATIONS EQUIPMENT**
17 **FROM RATE BASE ALSO HAVE AN IMPACT ON PROPERTY TAX**
18 **EXPENSE?**
19 A. Yes. Amounts for property tax expense impacts from APCo's response to OAG
20 15-312 have been reflected on Exhibit LA-3, Schedule OAG-16, page 1, lines 5
21 and 10.

1 **OAG-17, Prepaid Pension and OPEB Benefit Related ADIT**

2 **Q. PLEASE EXPLAIN THE AJUSTMENT SHOWN ON EXHIBIT LA-3,**
3 **SCHEDULE OAG-17.**

4 A. The adjustments shown on Exhibit LA-3, Schedule OAG-17, correct the
5 Accumulated Deferred Income Tax (ADIT) amounts for each of the earnings test
6 years and for prospective ratemaking associated with APCo's inclusion of
7 amounts for a net pension asset and other post-employment benefit (OPEB) costs
8 in rate base. The way that APCo derived the Virginia jurisdictional ADIT
9 amounts for rate base that are directly related to the Company's Virginia
10 jurisdictional pension and OPEB rate base amounts has resulted in a mismatch
11 wherein the Company has understated the related Virginia jurisdictional ADIT
12 amounts for the 2017-2019 earnings test and overstated the related Virginia
13 jurisdictional ADIT for prospective ratemaking. The adjustments shown on
14 Exhibit LA-3, Schedule OAG-17 correct for this by directly applying the
15 applicable federal income tax rate in each earnings test year, 2017, 2018, and
16 2019, and also for prospective ratemaking. The tax rates are applied to the
17 Company's proposed Virginia jurisdictional amounts for the pension asset and
18 OPEB to directly calculate the associated amount of Virginia jurisdictional ADIT.
19 The differences between that directly calculated ADIT and the Virginia
20 jurisdictional ADIT amounts used by APCo are adjustments to increase the
21 Virginia jurisdictional ADIT that is reflected in rate base for earnings test and to
22 decrease the Virginia jurisdictional ADIT that is reflected in rate base for
23 prospective ratemaking purposes.

These corrections, as shown on Exhibit LA-3, Schedule OAG-17, result in the following adjustments to increase Virginia jurisdictional ADIT (and decrease rate base) for each earnings test year and to decrease Virginia jurisdictional ADIT (and increase rate base) for prospective ratemaking as follows:

2017: increase Virginia jurisdictional ADIT by $11.312 million.

2018: increase Virginia jurisdictional ADIT by $3.645 million.

2019: increase Virginia jurisdictional ADIT by $9.904 million.

Prospective ratemaking: decrease Virginia jurisdictional ADIT by $13.281 million.

VIII. CONCLUSION

Q. PLEASE SUMMARIZE YOUR OVERALL FININGS CONCERNING APCO'S 2017-2019 EARNINGS TEST AND PROSPECTIVE JURISDICTIONAL REVENUE REQUIREMENT.

A. My primary findings and recommendations are as follows:

- During the combined 2017-2019 triennial review period, as shown on Exhibit LA-1, Schedule A, I calculate that APCo had an ROE of approximately 11.12 percent, after recommended adjustments.
- During the combined 2017-2019 triennial review period, after recommended adjustments, APCo had earnings that exceeded 10.12 percent, the top of end of its Commission-authorized earnings band.
- Ratemaking analysis presented on Exhibit LA-2 shows that at the ROE of 8.75 percent recommended by Consumer Counsel witness Woolridge and

with the adjustments recommended by Consumer Counsel witness Scott Norwood and myself, the Company's has a revenue excess of at least $22.7 million for the rate year ending December 31, 2021.

Q. DOES THIS COMPLETE YOUR PREFILED DIRECT TESTIMONY?

A. Yes, it does.

Appendix RCS-1
QUALIFICATIONS OF RALPH C. SMITH

Accomplishments

Mr. Smith's professional credentials include being a Certified Financial Planner™ professional, a Certified Rate of Return Analyst, a licensed Certified Public Accountant and attorney. He functions as project manager on consulting projects involving utility regulation, regulatory policy and ratemaking and utility management. His involvement in public utility regulation has included project management and in-depth analyses of numerous issues involving telephone, electric, gas, and water and sewer utilities.

Mr. Smith has performed work in the field of utility regulation on behalf of industry, public service commission staffs, state attorney generals, municipalities, and consumer groups concerning regulatory matters before regulatory agencies in Alabama, Alaska, Arizona, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Hawaii, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, New Jersey, New Mexico, New York, Nevada, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, Puerto Rico, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, Washington DC, West Virginia, Canada, Federal Energy Regulatory Commission and various state and federal courts of law. He has presented expert testimony in regulatory hearings on behalf of utility commission staffs and intervenors on several occasions.

Presented training seminars covering public utility accounting, income taxes, tax reform, ratemaking, affiliated transaction auditing, rate case management, and regulatory policy. Seminars were presented to commission staffs and consumer interest groups, as well as Michigan State University's Camp NARUC.

Previous Positions

With Larkin, Chapski and Co., the predecessor firm to Larkin & Associates, was involved primarily in utility regulatory consulting, and also in tax planning and tax research for businesses and individuals, tax return preparation and review, and independent audit, review and preparation of financial statements.

Installed computerized accounting system for a realty management firm.

Education

Bachelor of Science in Administration in Accounting, with distinction, University of Michigan, Dearborn, 1979.

Master of Science in Taxation, Walsh College, Michigan, 1981. Master's thesis dealt with investment tax credit and property tax on various assets.

Juris Doctor, cum laude, Wayne State University Law School, Detroit, Michigan, 1986. Recipient of American Jurisprudence Award for academic excellence.

Continuing education required to maintain CPA license and CFP® certificate.

Passed all parts of CPA examination in first sitting, 1979. Received CPA certificate in 1981 and Certified Financial Planning certificate in 1983. Admitted to Michigan and Federal bars in 1986.

EX. LA-1

Appalachian Power Company
Case No. PUR-2020-00015
Exhibit LA-1
2017, 2018, and 2019 Earnings Test Analysis Schedules
Accompanying the Direct Testimony of Ralph Smith

APPALACHIAN POWER COMPANY
RATE OF RETURN STATEMENT - EARNINGS TEST - PER OAG
COMBINED 2017-2019 EARNINGS TEST RESULTS
GENERATION AND DISTRIBUTION
FOR THE TRIENNIAL PERIOD ENDED 12/31/2019
USING THIRTEEN-MONTH AVERAGE RATE BASE AND COMMON EQUITY

Line No	Description	(Col.1) Combined Virginia Juris. Cost of Service After Adjustments Per Company	(Col.2) Combined Virginia Juris. Cost of Service After Adjustments Per OAG	(Col.3) Combined Virginia Juris. Cost of Service Differences Col.2 - Col.1
1	OPERATING REVENUE	$ 3,252,862,147	$ 3,252,862,147	$ -
2	OPERATING REVENUE DEDUCTIONS			
3	Operating & Maintenance Expense	1,970,014,761	1,936,473,404	(33,541,357)
4	Depreciation & Amortization	633,489,317	530,790,109	(102,699,208)
5	Federal Income Taxes	27,928,950	54,478,634	26,549,684
6	State Income Taxes	3,631,441	9,051,108	5,419,667
7	Taxes Other Than Income taxes	111,028,045	110,780,463	(247,582)
8	Gain/Loss on Disposition of Property	25,295,232	25,295,232	0
		0		
9	TOTAL OPERATING REVENUE DEDUCTIONS	$ 2,771,387,746	$ 2,666,868,950	$ (104,518,796)
10	OPERATING INCOME	$ 481,474,401	$ 585,993,197	$ 104,518,796
11	PLUS: AFUDC	0	0	0
12	LESS: Charitable Donations	489,221	489,221	0
13	Interest Expense On Customer Deposits	1,876,929	1,876,929	0
14	Other Interest Expense/Income	0	0	0
15	ADJUSTED OPERATING INCOME	$ 479,108,251	$ 583,627,047	$ 104,518,796
17	PLUS: Other Income/(Expenses)	0	0	0
18	LESS: Interest Expense-Booked	180,607,710	180,607,710	0
19	Preferred Dividends	0	0	0
20	JDC Capital Expenses	0	0	0
21	INCOME AVAILABLE FOR COMMON EQUITY	$ 298,500,541	$ 403,019,337	$ 104,518,796
22	Allowance for Working Capital	426,293,018	368,567,797	(57,725,221)
23	PLUS: Net Utility Plant	9,379,862,721	9,155,845,171	(224,017,550)
24	LESS: Other Rate Base Deductions	(2,632,469,214)	(2,623,974,917)	8,494,297
25	TOTAL AVERAGE RATE BASE	$ 7,173,686,525	$ 6,900,438,051	$ (273,248,474)
26	Total Average Capital (1)	$ 7,173,686,525	$ 6,900,438,051	(273,248,474)
27	Average Common Equity Capital (1)	$ 3,623,698,693	$ 3,623,698,693	0
28	Rate of Return on Rate Base	6.68%	8.46%	
29	Rate of Return on Common Equity	8.24%	11.12%	
30	Bottom of Return on Common Equity Range	8.72%	8.72%	
31	Top of Range for Rate of Return on Common Equity	10.12%	10.12%	
32	Required Income Available for Common Equity	315,986,526	-	(315,986,526)
33	Required Increase in Income Available for Common Equity	17,485,985	-	(17,485,985)
34	Gross-up Factor	0.61138	0.61138	
35	Required Increase in Revenue Requirement per Company	28,600,846	-	(28,600,846)

Notes and Source:
Col.1: Schedule A, page 3
Col.2: Schedule A, page 2

(1) End-of-Test Period Capital Structure

APPALACHIAN POWER COMPANY
RATE OF RETURN STATEMENT - EARNINGS TEST - PER OAG
COMBINED 2017-2019 EARNINGS TEST RESULTS
GENERATION AND DISTRIBUTION
FOR THE TRIENNIAL PERIOD ENDED 12/31/2019
USING THIRTEEN-MONTH AVERAGE RATE BASE AND COMMON EQUITY

Line No	Description	(Col.1) 2017 Virginia Juris. Cost of Service After Adjustments Schedule 2017-1	(Col.2) 2018 Virginia Juris. Cost of Service After Adjustments Schedule 2018-1	(Col.2) 2019 Virginia Juris. Cost of Service After Adjustments Schedule 2019-1	(Col.4) Combined Virginia Juris. Cost of Service After Adjustments Col.1 + Col.2 + Col.3
1	OPERATING REVENUE	$ 1,114,079,873	$ 1,095,374,266	$ 1,043,408,008	$ 3,252,862,147
2	OPERATING REVENUE DEDUCTIONS				
3	Operating & Maintenance Expense	618,616,401	661,967,722	655,889,281	1,936,473,404
4	Depreciation & Amortization	174,790,381	175,036,289	180,963,439	530,790,109
5	Federal Income Taxes	77,811,171	21,931,990	(45,264,527)	54,478,634
6	State Income Taxes	1,020,559	4,080,532	3,950,016	9,051,108
7	Taxes Other Than Income taxes	33,835,299	35,984,711	40,960,453	110,780,463
8	Gain/Loss on Disposition of Property	7,853,421	8,769,579	8,672,232	25,295,232
9	TOTAL OPERATING REVENUE DEDUCTIONS	$ 913,927,232	$ 907,770,823	$ 845,170,894	$ 2,666,868,950
10	OPERATING INCOME	$ 200,152,641	$ 187,603,443	$ 198,237,114	$ 585,993,197
11	PLUS: AFUDC	0	0	0	0
12	LESS: Charitable Donations	46,873	195,010	247,338	489,221
13	Interest Expense On Customer Deposits	291,879	563,739	1,021,311	1,876,929
14	Other Interest Expense/Income	0	0	0	0
15	ADJUSTED OPERATING INCOME	$ 199,813,889	$ 186,844,694	$ 196,968,465	$ 583,627,047
16	PLUS: Other Income/(Expenses)	0	0	0	0
17	LESS: Interest Expense-Booked	58,339,085	59,294,955	62,973,670	180,607,710
18	Preferred Dividends	0	0	0	0
19	JDC Capital Expenses	0	0	0	0
20	INCOME AVAILABLE FOR COMMON EQUITY	$ 141,474,804	$ 127,549,739	$ 133,994,795	$ 403,019,337
21	Allowance for Working Capital	91,887,078	137,308,276	139,372,443	368,567,797
22	PLUS: Net Utility Plant	3,002,878,186	3,053,917,278	3,099,049,708	9,155,845,171
23	LESS: Other Rate Base Deductions	(863,305,768)	(892,939,671)	(867,729,478)	(2,623,974,917)
24	TOTAL AVERAGE RATE BASE	$ 2,231,459,496	$ 2,298,285,882	$ 2,370,692,673	$ 6,900,438,051
25	Total Average Capital (1)	$ 2,231,459,496	$ 2,298,285,882	$ 2,370,692,673	$ 6,900,438,051
26	Average Common Equity Capital (1)	$ 1,168,735,307	$ 1,204,023,263	$ 1,250,940,123	$ 3,623,698,693
27	Rate of Return on Rate Base	8.95%	8.13%	8.31%	8.46%
28	Rate of Return on Common Equity	12.10%	10.59%	10.71%	11.12%
29	Bottom of Range for Rate of Return on Common Equity				8.72%
30	Top of Range for Rate of Return on Common Equity				10.12%
31	Required Income Available for Common Equity				-
32	Required Increase in Income Available for Common Equity				-
33	Gross-up Factor				0.61138
34	Required Increase in Revenue Requirement per Company				-

Notes and Source:
Exhibit LA-1, Schedules 2017-1, 2018-1 and 2019-1

(1) End-of-Test Period Capital Structure

APPALACHIAN POWER COMPANY
RATE OF RETURN STATEMENT - EARNINGS TEST - PER COMPANY
COMBINED 2017-2019 EARNINGS TEST RESULTS
GENERATION AND DISTRIBUTION
FOR THE TRIENNIAL PERIOD ENDED 12/31/2019
USING THIRTEEN-MONTH AVERAGE RATE BASE AND COMMON EQUITY

Line No	Description	(Col.1) 2017 Virginia Juris. Cost of Service After Adjustments Col. 3 of Sch. 11 of 2017	(Col.2) 2018 Virginia Juris. Cost of Service After Adjustments Col. 3 of Sch. 11 of 2018	(Col.3) 2019 Virginia Juris. Cost of Service After Adjustments Col. 3 of Sch. 11 of 2019	(Col.4) Combined Virginia Juris. Cost of Service After Adjustments Col.1 + Col.2 + Col.3
1	OPERATING REVENUE	$ 1,114,079,873	$ 1,095,374,266	$ 1,043,408,008	$ 3,252,862,147
2	OPERATING REVENUE DEDUCTIONS				
3	Operating & Maintenance Expense	630,693,798	665,704,813	673,616,150	1,970,014,761
4	Depreciation & Amortization	174,916,906	183,736,262	274,836,149	633,489,317
5	Federal Income Taxes	74,910,541	19,040,752	(66,022,343)	27,928,950
6	State Income Taxes	404,278	3,551,418	(324,255)	3,631,441
7	Taxes Other Than Income taxes	33,835,299	36,028,850	41,163,896	111,028,045
8	Gain/Loss on Disposition of Property	7,853,421	8,769,579	8,672,232	25,295,232
9	TOTAL OPERATING REVENUE DEDUCTIONS	$ 922,614,243	$ 916,831,674	$ 931,941,829	$ 2,771,387,746
10	OPERATING INCOME	$ 191,465,630	$ 178,542,592	$ 111,466,179	$ 481,474,401
11	PLUS: AFUDC	0	0	0	0
12	LESS: Charitable Donations	46,873	195,010	247,338	489,221
13	Interest Expense On Customer Deposits	291,879	563,739	1,021,311	1,876,929
14	Other Interest Expense/Income	0	0	0	0
15	ADJUSTED OPERATING INCOME	$ 191,126,878	$ 177,783,843	$ 110,197,530	$ 479,108,251
16	PLUS: Other Income/(Expenses)	0	0	0	0
17	LESS: Interest Expense-Booked	58,339,085	59,294,955	62,973,670	180,607,710
18	Preferred Dividends	0	0	0	0
19	JDC Capital Expenses	0	0	0	0
20	INCOME AVAILABLE FOR COMMON EQUITY	$ 132,787,793	$ 118,488,888	$ 47,223,860	$ 298,500,541
21	Allowance for Working Capital	119,193,936	145,829,457	161,269,625	426,293,018
22	PLUS: Net Utility Plant	3,062,286,121	3,123,593,020	3,193,983,580	9,379,862,721
23	LESS: Other Rate Base Deductions	(865,088,606)	(898,537,207)	(868,843,401)	(2,632,469,214)
24	TOTAL AVERAGE RATE BASE	$ 2,316,391,451	$ 2,370,885,270	$ 2,486,409,804	$ 7,173,686,525
25	Total Average Capital (1)	$ 2,316,391,451	$ 2,370,885,270	$ 2,486,409,804	$ 7,173,686,525
26	Average Common Equity Capital (1)	$ 1,168,735,307	$ 1,204,023,263	$ 1,250,940,123	$ 3,623,698,693
27	Rate of Return on Rate Base	8.25%	7.50%	4.43%	6.68%
28	Rate of Return on Common Equity	11.36%	9.84%	3.78%	8.24%
29	Bottom of Range for Rate of Return on Common Equity				8.72%
30	Top of Range for Rate of Return on Common Equity				
31	Required Income Available for Common Equity				315,986,526
32	Required Increase in Income Available for Common Equity				17,485,985
33	Gross-up Factor				0.61138
34	Required Increase in Revenue Requirement per Company				28,600,846

Notes and Source:
Exhibit LA-1, Schedules 2017-1, 2018-1 and 2019-1
APCo filing, Schedule 11, Column C

APPALACHIAN POWER COMPANY
RATE OF RETURN STATEMENT - EARNINGS TEST
Test Year Ended December 31, 2017
GENERATION AND DISTRIBUTION
FOR THE TEST YEAR ENDED 12/31/2017
USING THIRTEEN MONTH AVERAGE RATE BASE AND COMMON EQUITY

Line No.	Description	(Col.1) Virginia Cost of Service Excluding Rate Adjustment Clauses (A)	(Col.2) Regulatory Accounting Adjustments (B)	(Col.3) Virginia Juris. Cost of Service After Adjustments (1)+(2) (C)	AG Adjustment (D)	AG Adjusted (E)
1	OPERATING REVENUE	$ 1,116,207,419	$ (2,127,546)	$ 1,114,079,873	0	1,114,079,873
2	OPERATING REVENUE DEDUCTIONS					
3	Operating & Maintenance Expense	642,245,771	(11,551,973)	630,693,798	(12,077,397)	618,616,401
4	Depreciation & Amortization	168,064,932	6,851,974	174,916,906	(126,525)	174,790,381
5	Federal Income Taxes	75,411,112	(500,571)	74,910,541	2,900,630	77,811,171
6	State Income Taxes	(129,568)	533,846	404,278	616,281	1,020,559
7	Taxes Other Than Income taxes	33,820,525	14,774	33,835,299	0	33,835,299
8	Other	7,853,421	0	7,853,421	0	7,853,421
9	TOTAL OPERATING REVENUE DEDUCTIONS	$ 927,266,193	$ (4,651,950)	$ 922,614,243	$ (8,687,011)	$ 913,927,232
10	OPERATING INCOME	$ 188,941,226	$ 2,524,404	$ 191,465,630	$ 8,687,011	$ 200,152,641
11	PLUS: AFUDC	0	0	0	0	0
12	LESS: Charitable Donations	99,295	(52,422)	46,873	0	46,873
13	Interest Expense On Customer Deposits	291,879	0	291,879	0	291,879
14	Other Interest Expense/Income	0	0	0	0	0
15	ADJUSTED OPERATING INCOME	$ 188,550,052	$ 2,576,826	$ 191,126,878	$ 8,687,011	$ 199,813,889
16	PLUS: Other Income/(Expenses)	0	0	0	0	0
17	LESS: Interest Expense-Booked	63,386,507	(5,047,422)	58,339,085	0	58,339,085
18	Preferred Dividends	0	0	0	0	0
19	JDC Capital Expenses	0	0	0	0	0
20	INCOME AVAILABLE FOR COMMON EQUITY	$ 125,163,545	$ 7,624,248	$ 132,787,793	$ 8,687,011	$ 141,474,804
21	Working Capital	212,213,116	(93,019,180)	119,193,936	(27,306,858)	91,887,078
22	PLUS: Net Utility Plant	3,169,437,609	(107,151,488)	3,062,286,121	(59,407,935)	3,002,878,186
23	LESS: Other Rate Base Deductions	(864,848,072)	(240,534)	(865,088,606)	1,782,838	(863,305,768)
24	TOTAL AVERAGE RATE BASE	$ 2,516,802,653	$ (200,411,202)	$ 2,316,391,451	$ (84,931,955)	$ 2,231,459,496
25	Total Average Capital	$ 2,516,802,653		$ 2,316,391,451		$ 2,231,459,496
26	Average Common Equity Capital	$ 1,269,852,779		$ 1,168,735,307		$ 1,168,735,307
27	% Rate of Return Earned on Avg. Rate Base	7.49%		8.25%		8.95%
28	% Rate of Return Earned on Avg. Common Equity	9.86%		11.36%		12.10%

Notes:
Cols. A, B and C: Company filing Exhibit No:_ Witness:AWA Schedule 11 for year 2017

Appalachian Power Company
Capital Structure and Cost Rates

Exhibit LA-1
Schedule 2017-2
Case No. PUR-2020-00015

Test Year Ended December 31, 2017
(Thousands of Dollars)

Line No.	Description	Amount	Percent	Cost Rate	Weighted Cost
		(A)	(B)	(C)	(D)
	I. Cost of Capital for Earnings Test Per Company				
1	Short-Term Debt	$ 136,215	1.81%	1.370%	0.025%
2	Long-Term Debt	$ 3,597,779	47.74%	5.224%	2.494%
3	Preferred and Preference Stock	$ -	0.00%	0.000%	0.000%
4	Common Equity	$ 3,802,580	50.46%	9.420%	4.753%
5	Accumulated Deferred Investment Tax Credits	$ -	0.00%	0.000%	0.000%
6	Cost-free Capital	$ -	0.00%	0.000%	0.000%
7	Total	$ 7,536,574	100.00%		7.272%
8	Weighted Cost of Debt				2.519%
	II. Cost of Capital Per AG				
9	Short-Term Debt	$ 136,215	1.81%	1.370%	0.025%
10	Long-Term Debt	$ 3,597,779	47.74%	5.224%	2.494%
11	Preferred and Preference Stock	$ -	0.00%	0.000%	0.000%
12	Common Equity	$ 3,802,580	50.46%	9.420%	4.753%
13	Accumulated Deferred Investment Tax Credits	$ -	0.00%	0.000%	0.000%
14	Cost-free Capital	$ -	0.00%	0.000%	0.000%
15	Total	$ 7,536,574	100.00%		7.272%
16	Weighted Cost of Debt				2.519%

Notes and Source

Lines 1-8: Company filing Exhibit No_, Witness: RVH: Schedule 3, page 2 of 4, 2017.

Line No.	Description	OAG Adjustments (A)	Coal Inventory OAG-3	APCo Retired Coal-Generating Facilities - Clinch River, Glen Lyn and Kanawha River OAG-8	APCo Retired Coal-Generating Facilities - Sporn Plant OAG-9	APCo Retired Coal-Generating Facilities - Materials & Supplies OAG-10	Wholesale Renewable Energy Credits OAG-12	Interest Synchronization OAG-13	Amos Plant Depreciation Rate Adjustment OAG-14	OVEC Demand Charges OAG-15
1	**OPERATING REVENUE**	$ -								
2	**OPERATING REVENUE DEDUCTIONS**									
3	Operating & Maintenance Expense	$ (12,077,397)					$ (92,278)			$ (11,985,119)
4	Depreciation & Amortization	$ (126,525)							$ -	
5	Federal Income Taxes	$ 2,900,630					$ 18,661	$ 432,654	$ -	$ 2,423,728
6	State Income Taxes	$ 616,281					$ 88,863	$ 79,178	$ -	$ 443,557
7	Taxes Other Than Income taxes	$ -								
8	Gain/Loss on Disposition of Property	$ -								
9	**TOTAL OPERATING REVENUE DEDUCTIONS**	$ (8,687,011)	$ -	$ -	$ -	$ -	$ 15,246	$ 511,832	$ -	$ (9,117,834)
10	**OPERATING INCOME**	$ 8,687,011	$ -	$ -	$ -	$ -	$ (15,246)	$ (511,832)	$ -	$ 9,117,834
11	PLUS: AFUDC	$ -								
12	LESS: Charitable Donations	$ -								
13	Interest Expense On Customer Deposits	$ -								
14	Interest On Tax Deficiencies	$ -								
15	Other Interest Expense/Income	$ -								
16	**ADJUSTED OPERATING INCOME**	$ 8,687,011	$ -	$ -	$ -	$ -	$ (15,246)	$ (511,832)	$ -	$ 9,117,834
17	PLUS: Other Income/(Expenses)	$ -								
18	LESS: Interest Expense-Booked	$ -								
19	Preferred Dividends	$ -								
20	JDC Capital Expenses	$ -								
21	**INCOME AVAILABLE FOR COMMON EQUITY**	$ 8,687,011	$ -	$ -	$ -	$ -	$ (15,246)	$ (511,832)	$ -	$ 9,117,834
22	Working Capital	$ (27,306,858)	$ (27,306,858)							
23	PLUS: Net Utility Plant	$ (59,407,935)		$ (52,401,819)	$ (4,100,138)				$ -	
24	LESS: Other Rate Base Deductions	$ 1,782,838		$ 11,042,725	$ 864,029	$ 826,571			$ -	
25	**TOTAL AVERAGE RATE BASE**	$ (84,931,955)	$ (27,306,858)	$ (41,359,094)	$ (3,236,109)	$ 826,571	$ -	$ -	$ -	$ -
26	Total Average Capital	$ (84,931,955)								
27	Average Common Equity Capital	$ (39,552,433)								

Notes and Source:

Source: See detail for OAG adjustments shown on the respective schedules in Exhibit LA-3

Line 6: State Income Tax Rate^ 3.70%

Line 7: Federal Income Tax Rate^ 21.00%

^See Exhibit LA-2, Schedule A-1

Line No.	Description	OAG Adjustments (A)	AMI Meters and Communications Equipment OAG-16	Prepaid Pension and OPEB Benefit Related ADIT OAG-17
1	**OPERATING REVENUE**	$ -		
2	**OPERATING REVENUE DEDUCTIONS**			
3	Operating & Maintenance Expense	$ (12,077,397)		
4	Depreciation & Amortization	$ (126,525)	$ (126,525)	
5	Federal Income Taxes	$ 2,900,630	$ 25,587	
6	State Income Taxes	$ 616,281	$ 4,683	
7	Taxes Other Than Income taxes	$ -	$ -	
8	Gain/Loss on Disposition of Property	$ -		
9	**TOTAL OPERATING REVENUE DEDUCTIONS**	$ (8,687,011)	$ (96,256)	$ -
10	**OPERATING INCOME**	$ 8,687,011	$ 96,256	$ -
11	PLUS: AFUDC	$ -		
12	LESS: Charitable Donations	$ -		
13	Interest Expense On Customer Deposits	$ -		
14	Interest On Tax Deficiencies	$ -		
15	Other Interest Expense/Income	$ -		
16	**ADJUSTED OPERATING INCOME**	$ 8,687,011	$ 96,256	$ -
17	PLUS: Other Income/(Expenses)	$ -		
18	LESS: Interest Expense-Booked	$ -		
19	Preferred Dividends	$ -		
20	JDC Capital Expenses	$ -		
21	**INCOME AVAILABLE FOR COMMON EQUITY**	$ 8,687,011	$ 96,256	$ -
22	Working Capital	$ (27,306,858)		
23	PLUS: Net Utility Plant	$ (59,407,935)	$ (2,905,978)	
24	LESS: Other Rate Base Deductions	$ 1,782,838	$ 361,703	$ (11,312,189)
25	**TOTAL AVERAGE RATE BASE**	$ (84,931,955)	$ (2,544,275)	$ (11,312,189)
26	Total Average Capital	$ (84,931,955)		
27	Average Common Equity Capital	$ (39,552,433)		

Notes and Source:

Source: See detail for OAG adjustments shown on the respective schedules in Exhibit LA-3

Line 6: State Income Tax Rate^	3.70%
Line 7: Federal Income Tax Rate^	21.00%

^See Exhibit LA-2, Schedule A-1

APPALACHIAN POWER COMPANY
RATE OF RETURN STATEMENT - EARNINGS TEST
Test Year Ended December 31, 2018
GENERATION AND DISTRIBUTION
FOR THE TEST YEAR ENDED 12/31/2018
USING THIRTEEN MONTH AVERAGE RATE BASE AND COMMON EQUITY

Line No.	Description	(Col.1) Virginia Cost of Service Excluding Rate Adjustment Clauses (A)	(Col.2) Regulatory Accounting Adjustments (B)	(Col.3) Virginia Juris. Cost of Service After Adjustments (1)+(2) (C)	AG Adjustment (D)	AG Adjusted (E)
1	OPERATING REVENUE	$ 1,075,252,577	$ 20,121,689	$ 1,095,374,266	0	1,095,374,266
2	OPERATING REVENUE DEDUCTIONS					
3	Operating & Maintenance Expense	689,841,669	(24,136,856)	665,704,813	(3,737,091)	661,967,722
4	Depreciation & Amortization	176,791,075	6,945,187	183,736,262	(8,699,973)	175,036,289
5	Federal Income Taxes	10,242,589	8,798,163	19,040,752	2,891,238	21,931,990
6	State Income Taxes	1,699,535	1,851,883	3,551,418	529,114	4,080,532
7	Taxes Other Than Income taxes	35,888,818	140,032	36,028,850	(44,139)	35,984,711
8	Other	8,769,579	0	8,769,579	0	8,769,579
9	TOTAL OPERATING REVENUE DEDUCTIONS	$ 923,233,265	$ (6,401,591)	$ 916,831,674	$ (9,060,851)	$ 907,770,823
10	OPERATING INCOME	$ 152,019,312	$ 26,523,280	$ 178,542,592	$ 9,060,851	$ 187,603,443
11	PLUS: AFUDC	0	0	0	0	0
12	LESS: Charitable Donations	263,889	(68,879)	195,010	0	195,010
13	Interest Expense On Customer Deposits	563,739	0	563,739	0	563,739
14	Other Interest Expense/Income	0	0	0	0	0
15	ADJUSTED OPERATING INCOME	$ 151,191,684	$ 26,592,159	$ 177,783,843	$ 9,060,851	$ 186,844,694
16	PLUS: Other Income/(Expenses)	0	0	0	0	0
17	LESS: Interest Expense-Booked	64,564,770	(5,269,815)	59,294,955	0	59,294,955
18	Preferred Dividends	0	0	0	0	0
19	JDC Capital Expenses	0	0	0	0	0
20	INCOME AVAILABLE FOR COMMON EQUITY	$ 86,626,914	$ 31,861,974	$ 118,488,888	$ 9,060,851	$ 127,549,739
21	Working Capital	244,486,926	(98,657,469)	145,829,457	(8,521,181)	137,308,276
22	PLUS: Net Utility Plant	3,237,820,791	(114,227,771)	3,123,593,020	(69,675,742)	3,053,917,278
23	LESS: Other Rate Base Deductions	(900,711,016)	2,173,809	(898,537,207)	5,597,536	(892,939,671)
24	TOTAL AVERAGE RATE BASE	$ 2,581,596,701	$ (210,711,431)	$ 2,370,885,270	$ (72,599,388)	$ 2,298,285,882
25	Total Average Capital	$ 2,581,596,701		$ 2,370,885,270		$ 2,298,285,882
26	Average Common Equity Capital	$ 1,311,030,323		$ 1,204,023,263		$ 1,204,023,263
27	% Rate of Return Earned on Avg. Rate Base	5.86%		7.50%		8.13%
28	% Rate of Return Earned on Avg. Common Equity	6.61%		9.84%		10.59%

Notes:
Cols. A, B and C: Company filing Exhibit No:_ Witness:AWA Schedule 11 for year 2018

Appalachian Power Company
Capital Structure and Cost Rates

Exhibit LA-1
Schedule 2018-2
Case No. PUR-2020-00015

Test Year Ended December 31, 2018
(Thousands of Dollars)

Line No.	Description		Amount	Percent	Cost Rate	Weighted Cost
			(A)	(B)	(D)	(E)
	I. Cost of Capital for Earnings Test Per Company					
1	Short-Term Debt	$	175,264	2.223%	2.296%	0.051%
2	Long-Term Debt	$	3,705,500	46.994%	5.213%	2.450%
3	Preferred and Preference Stock	$	-	0.000%	0.000%	0.000%
4	Common Equity	$	4,004,352	50.78%	9.420%	4.784%
5	Accumulated Deferred Investment Tax Credits	$	-	0.000%	0.000%	0.000%
6	Cost-free Capital	$	-	0.000%	0.000%	0.000%
7	Total	$	7,885,115	100.000%		7.285%
8	Weighted Cost of Debt					2.501%
	II. Cost of Capital Per AG					
9	Short-Term Debt	$	175,264	2.223%	2.296%	0.051%.
10	Long-Term Debt	$	3,705,500	46.994%	5.213%	2.450%
11	Preferred and Preference Stock	$	-	0.000%	0.000%	0.000%
12	Common Equity	$	4,004,352	50.784%	9.42%	4.784%
13	Accumulated Deferred Investment Tax Credits	$	-	0.00%	0.00%	0.000%
14	Cost-free Capital	$	-	0.00%	0.00%	0.000%
15	Total	$	7,885,115	100.000%		7.285%
16	Weighted Cost of Debt					2.501%

Notes and Source

Lines 1-8: Company filing Exhibit No_, Witness: RVH: Schedule 3, page 2 of 4, 2018

Appalachian Power Company
Consumer Counsel Adjustments

Earnings Test Year Ended December 31, 2018

Exhibit LA-1
Schedule 2018-3
Case No. PUR-2020-00015
Page 1 of 2

Line No.	Description	OAG Adjustments (A)	Coal Inventory OAG-3	APCo Retired Coal-Generating Facilities - Clinch River, Glen Lyn and Kanawha River OAG-8	APCo Retired Coal-Generating Facilities - Sporn Plant OAG-9	APCo Retired Coal-Generating Facilities - Materials & Supplies OAG-10	Wholesale Renewable Energy Credits OAG-12	Interest Synchronization OAG-13
1	**OPERATING REVENUE**	$ -						
2	**OPERATING REVENUE DEDUCTIONS**							
3	Operating & Maintenance Expense	$ (3,737,091)					$ (59,622)	
4	Depreciation & Amortization	$ (8,699,973)						
5	Federal Income Taxes	$ 2,891,238					$ 12,057	$ 367,188
6	State Income Taxes	$ 529,114					$ 2,207	$ 67,198
7	Taxes Other Than Income taxes	$ (44,139)						
8	Gain/Loss on Disposition of Property	$ -						
9	**TOTAL OPERATING REVENUE DEDUCTIONS**	$ (9,060,851)	$ -	$ -	$ -	$ -	$ (45,358)	$ 434,385
10	**OPERATING INCOME**	$ 9,060,851	$ -	$ -	$ -	$ -	$ 45,358	$ (434,385)
11	PLUS: AFUDC	$ -						
12	LESS: Charitable Donations	$ -						
13	Interest Expense On Customer Deposits	$ -						
14	Interest On Tax Deficiencies	$ -						
15	Other Interest Expense/Income	$ -						
16	**ADJUSTED OPERATING INCOME**	$ 9,060,851	$ -	$ -	$ -	$ -	$ 45,358	$ (434,385)
17	PLUS: Other Income/(Expenses)	$ -						
18	LESS: Interest Expense-Booked	$ -						
19	Preferred Dividends	$ -						
20	JDC Capital Expenses	$ -						
21	**INCOME AVAILABLE FOR COMMON EQUITY**	$ 9,060,851	$ -	$ -	$ -	$ -	$ 45,358	$ (434,385)
22	Working Capital	$ (8,521,181)	$ (8,521,181)					
23	PLUS: Net Utility Plant	$ (69,675,742)		$ (52,275,238)	$ (4,023,278)			
24	LESS: Other Rate Base Deductions	$ 5,597,536		$ 6,593,256	$ 507,439	$ 495,943		
25	**TOTAL AVERAGE RATE BASE**	$ (72,599,388)	$ (8,521,181)	$ (45,681,982)	$ (3,515,839)	$ 495,943	$ -	$ -
26	Total Average Capital	$ (72,599,388)						
27	Average Common Equity Capital	$ (33,809,211)						

Notes and Source:

Source: See detail for OAG adjustments shown on the respective schedules in Exhibit LA-3
Line 6: State Income Tax Rate^ 3.70%
Line 7: Federal Income Tax Rate^ 21.00%
^See Exhibit LA-2, Schedule A-1

Line No.	Description	OAG Adjustments	Amos Plant Depreciation Rate Adjustment	OVEC Demand Charges	AMI Meters and Communications Equipment	Prepaid Pension and OPEB Benefit Related ADIT
		(A)	OAG-14	OAG-15	OAG-16	OAG-17
1	**OPERATING REVENUE**	$ -				
2	**OPERATING REVENUE DEDUCTIONS**					
3	Operating & Maintenance Expense	$ (3,737,091)		$ (3,677,469)		
4	Depreciation & Amortization	$ (8,699,973)	$ (7,908,231)		$ (791,742)	
5	Federal Income Taxes	$ 2,891,238	$ 1,599,267	$ 743,688	$ 169,039	$ -
6	State Income Taxes	$ 529,114	$ 292,676	$ 136,099	$ 30,935	$ -
7	Taxes Other Than Income taxes	$ (44,139)			$ (44,139)	
8	Gain/Loss on Disposition of Property	$ -				
9	**TOTAL OPERATING REVENUE DEDUCTIONS**	$ (9,060,851)	$ (6,016,289)	$ (2,797,682)	$ (635,907)	$ -
10	**OPERATING INCOME**	$ 9,060,851	$ 6,016,289	$ 2,797,682	$ 635,907	$ -
11	PLUS: AFUDC	$ -				
12	LESS: Charitable Donations	$ -				
13	Interest Expense On Customer Deposits	$ -				
14	Interest On Tax Deficiencies	$ -				
15	Other Interest Expense/Income	$ -				
16	**ADJUSTED OPERATING INCOME**	$ 9,060,851	$ 6,016,289	$ 2,797,682	$ 635,907	$ -
17	PLUS: Other Income/(Expenses)	$ -				
18	LESS: Interest Expense-Booked	$ -				
19	Preferred Dividends	$ -				
20	JDC Capital Expenses	$ -				
21	**INCOME AVAILABLE FOR COMMON EQUITY**	$ 9,060,851	$ 6,016,289	$ 2,797,682	$ 635,907	$ -
22	Working Capital	$ (8,521,181)				
23	PLUS: Net Utility Plant	$ (69,675,742)	$ 3,954,116		$ (17,331,342)	
24	LESS: Other Rate Base Deductions	$ 5,597,536	$ 676,458		$ 969,725	$ (3,645,284)
25	**TOTAL AVERAGE RATE BASE**	$ (72,599,388)	$ 4,630,573	$ -	$ (16,361,618)	$ (3,645,284)
26	Total Average Capital	$ (72,599,388)				
27	Average Common Equity Capital	$ (33,809,211)				

Notes and Source:

Source: See detail for OAG adjustments shown on the respective schedules in Exhibit LA-3

Line 6: State Income Tax Rate^ 3.70%

Line 7: Federal Income Tax Rate^ 21.00%

^See Exhibit LA-2, Schedule A-1

APPALACHIAN POWER COMPANY
RATE OF RETURN STATEMENT - EARNINGS TEST
Test Year Ended December 31, 2019
GENERATION AND DISTRIBUTION
FOR THE TEST YEAR ENDED 12/31/2019
USING THIRTEEN MONTH AVERAGE RATE BASE AND COMMON EQUITY

Line No.	Description	(Col.1) Virginia Cost of Service Excluding Rate Adjustment Clauses (A)	(Col.2) Regulatory Accounting Adjustments (B)	(Col.3) Virginia Juris. Cost of Service After Adjustments (1)+(2) (C)	AG Adjustment (D)	AG Adjusted (E)
1	**OPERATING REVENUE**	$ 1,029,443,191	$ 13,964,817	$ 1,043,408,008	0	1,043,408,008
2	**OPERATING REVENUE DEDUCTIONS**					
3	Operating & Maintenance Expense	692,118,084	(18,501,934)	673,616,150	(17,726,869)	655,889,281
4	Depreciation & Amortization	271,352,411	3,483,738	274,836,149	(93,872,710)	180,963,439
5	Federal Income Taxes	(73,386,100)	7,363,757	(66,022,343)	20,757,816	(45,264,527)
6	State Income Taxes	(1,779,790)	1,455,535	(324,255)	4,274,271	3,950,016
7	Taxes Other Than Income taxes	41,065,910	97,986	41,163,896	(203,443)	40,960,453
8	Other	8,672,232	0	8,672,232	0	8,672,232
9	**TOTAL OPERATING REVENUE DEDUCTIONS**	$ 938,042,747	$ (6,100,918)	$ 931,941,829	$ (86,770,935)	$ 845,170,894
10	**OPERATING INCOME**	$ 91,400,444	$ 20,065,735	$ 111,466,179	$ 86,770,935	$ 198,237,114
11	PLUS: AFUDC	0	0	0	0	0
12	LESS: Charitable Donations	1,768,185	(1,520,847)	247,338	0	247,338
13	Interest Expense On Customer Deposits	1,021,311	0	1,021,311	0	1,021,311
14	Other Interest Expense/Income	0	0	0	0	0
15	**ADJUSTED OPERATING INCOME**	$ 88,610,948	$ 21,586,582	$ 110,197,530	$ 86,770,935	$ 196,968,465
16	PLUS: Other Income/(Expenses)	0	0	0	0	0
17	LESS: Interest Expense-Booked	69,140,328	(6,166,658)	62,973,670	0	62,973,670
18	Preferred Dividends	0	0	0	0	0
19	JDC Capital Expenses	0	0	0	0	0
20	**INCOME AVAILABLE FOR COMMON EQUITY**	$ 19,470,620	$ 27,753,240	$ 47,223,860	$ 86,770,935	$ 133,994,795
21	Working Capital	259,369,949	(98,100,324)	161,269,625	(21,897,182)	139,372,443
22	PLUS: Net Utility Plant	3,342,575,409	(148,591,829)	3,193,983,580	(94,933,872)	3,099,049,708
23	LESS: Other Rate Base Deductions	(872,055,308)	3,211,907	(868,843,401)	1,113,923	(867,729,478)
24	**TOTAL AVERAGE RATE BASE**	$ 2,729,890,050	$ (243,480,246)	$ 2,486,409,804	$ (115,717,131)	$ 2,370,692,673
25	Total Average Capital	$ 2,729,890,050		$ 2,486,409,804		$ 2,370,692,673
26	Average Common Equity Capital	$ 1,373,437,713		$ 1,250,940,123		$ 1,250,940,123
27	% Rate of Return Earned on Avg. Rate Base	3.25%		4.43%		8.31%
28	% Rate of Return Earned on Avg. Common Equity	1.42%		3.78%		10.71%

Notes:
Cols. A, B and C: Company filing Exhibit No:_ Witness:AWA Schedule 11 for year 2019

Appalachian Power Company
Capital Structure and Cost Rates

Exhibit LA-1
Schedule 2019-2
Case No. PUR-2020-00015

Test Year Ended December 31, 2019
(Thousands of Dollars)

Line No.	Description		Amount (A)	Percent (B)	Cost Rate (D)	Weighted Cost (E)
	I. Cost of Capital for Earnings Test Per Company					
1	Short-Term Debt	$	86,058	1.038%	2.122%	0.022%
2	Long-Term Debt	$	4,033,001	48.651%	5.161%	2.511%
3	Preferred and Preference Stock	$	-	0.000%	0.000%	0.000%
4	Common Equity	$	4,170,634	50.31%	9.420%	4.739%
5	Accumulated Deferred Investment Tax Credits	$	-	0.000%	0.000%	0.000%
6	Cost-free Capital	$	-	0.000%	0.000%	0.000%
7	Total	$	8,289,692	100.000%		7.272%
8	Weighted Cost of Debt					2.533%
	II. Cost of Capital Per AG					
9	Short-Term Debt	$	86,058	1.038%	2.122%	0.022%
10	Long-Term Debt	$	4,033,001	48.651%	5.161%	2.511%
11	Preferred and Preference Stock	$	-	0.000%	0.000%	0.000%
12	Common Equity	$	4,170,634	50.311%	9.42%	4.739%
13	Accumulated Deferred Investment Tax Credits	$	-	0.00%	0.00%	0.000%
14	Cost-free Capital	$	-	0.00%	0.00%	0.000%
15	Total	$	8,289,692	100.000%		7.272%
16	Weighted Cost of Debt					2.533%

Notes and Source

Lines 1-8: Company filing Exhibit No_, Witness: RVH: Schedule 3, page 2 of 4, 2019

Appalachian Power Company
Consumer Counsel Adjustments

Earnings Test Year Ended December 31, 2019

Exhibit LA-1
Schedule 2019-3
Case No. PUR-2020-00015
Page 1 of 2

Line No.	Description	OAG Adjustments (A)	Coal Inventory OAG-3	Impaired Retirement Units - Clinch River, Glen Lyn and Kanawha River - 2019 Earning Test OAG-4	Impaired Retirement Units - ARO Assets - 2019 Earning Test OAG-5	Impaired Retirement Units - Sporn Plant - 2019 Earning Test OAG-6	Impaired Retirement Units - Materials & Supplies - 2019 Earning Test OAG-7	APCo Retired Coal-Generating Facilities - Clinch River, Glen Lyn and Kanawha River OAG-8	APCo Retired Coal-Generating Facilities - Sporn Plant OAG-9
1	**OPERATING REVENUE**	$ -							
2	**OPERATING REVENUE DEDUCTIONS**								
3	Operating & Maintenance Expense	$ (17,726,869)					$ (2,361,631)		
4	Depreciation & Amortization	$ (93,872,710)		$ (62,587,803)	$ (17,418,223)	$ (5,914,279)			
5	Federal Income Taxes	$ 20,757,816		$ 12,657,013	$ 3,522,454	$ 1,196,034	$ 477,588		
6	State Income Taxes	$ 4,274,271		$ 2,316,312	$ 644,631	$ 218,882	$ 87,402		
7	Taxes Other Than Income taxes	$ (203,443)							
8	Gain/Loss on Disposition of Property	$ -							
9	**TOTAL OPERATING REVENUE DEDUCTIONS**	$ (86,770,935)	$ -	$ (47,614,478)	$ (13,251,137)	$ (4,499,364)	$ (1,796,642)	$ -	$ -
10	**OPERATING INCOME**	$ 86,770,935	$ -	$ 47,614,478	$ 13,251,137	$ 4,499,364	$ 1,796,642	$ -	$ -
11	PLUS: AFUDC	$ -							
12	LESS: Charitable Donations	$ -							
13	Interest Expense On Customer Deposits	$ -							
14	Interest On Tax Deficiencies	$ -							
15	Other Interest Expense/Income	$ -							
16	**ADJUSTED OPERATING INCOME**	$ 86,770,935	$ -	$ 47,614,478	$ 13,251,137	$ 4,499,364	$ 1,796,642	$ -	$ -
17	PLUS: Other Income/(Expenses)	$ -							
18	LESS: Interest Expense-Booked	$ -							
19	Preferred Dividends	$ -							
20	JDC Capitnl Expenses	$ -							
21	**INCOME AVAILABLE FOR COMMON EQUITY**	$ 86,770,935	$ -	$ 47,614,478	$ 13,251,137	$ 4,499,364	$ 1,796,642	$ -	$ -
22	Working Capital	$ (21,897,182)	$ (21,897,182)						
23	PLUS: Net Utility Plant	$ (94,933,872)						$ (49,170,843)	$ (4,156,491)
24	LESS: Other Rate Base Deductions	$ 1,113,923						$ 6,242,267	$ 527,669
25	**TOTAL AVERAGE RATE BASE**	$ (115,717,131)	$ (21,897,182)	$ -	$ -	$ -	$ -	$ (42,928,576)	$ (3,628,822)
26	Total Average Capital	$ (115,717,131)							
27	Average Common Equity Capital	$ (53,888,952)							

Notes and Source:

Source: See detail for OAG adjustments shown on the respective schedules in Exhibit LA-3

Line 6: State Income Tax Rate^ 3.70%

Line 7: Federal Income Tax Rate^ 21.00%

^See Exhibit LA-2, Schedule A-1

Appalachian Power Company
Consumer Counsel Adjustments

Earnings Test Year Ended December 31, 2019

Line No.	Description	OAG Adjustments (A)	APCo Retired Coal-Generating Facilities - Materials & Supplies OAG-10	Wholesale Renewable Energy Credits OAG-12	Interest Synchronization OAG-13	Amos Plant Depreciation Rate Adjustment OAG-14	OVEC Demand Charges OAG-15	AMI Meters and Communications Equipment OAG-16	Prepaid Pension and OPEB Benefit Related ADIT OAG-17
1	**OPERATING REVENUE**	$ -							
2	**OPERATING REVENUE DEDUCTIONS**								
3	Operating & Maintenance Expense	$ (17,726,869)		$ (225,604)			$ (15,139,634)		
4	Depreciation & Amortization	$ (93,872,710)				$ (7,952,405)			
5	Federal Income Taxes	$ 20,757,816		$ 45,623	$ 746,168	$ 1,608,200	$ 3,061,660	$ (2,556,924)	$ -
6	State Income Taxes	$ 4,274,271		$ 8,349	$ 136,553	$ 294,311	$ 560,303	$ 7,529	$ -
7	Taxes Other Than Income taxes	$ (203,443)						$ (203,443)	
8	Gain/Loss on Disposition of Property	$ -							
9	**TOTAL OPERATING REVENUE DEDUCTIONS**	$ (86,770,935)	$ -	$ (171,631)	$ 882,722	$ (6,049,895)	$ (11,517,672)	$ (2,752,838)	$ -
10	**OPERATING INCOME**	$ 86,770,935	$ -	$ 171,631	$ (882,722)	$ 6,049,895	$ 11,517,672	$ 2,752,838	$ -
11	PLUS: AFUDC	$ -							
12	LESS: Charitable Donations	$ -							
13	Interest Expense On Customer Deposits	$ -							
14	Interest On Tax Deficiencies	$ -							
15	Other Interest Expense/Income	$ -							
16	**ADJUSTED OPERATING INCOME**	$ 86,770,935	$ -	$ 171,631	$ (882,722)	$ 6,049,895	$ 11,517,672	$ 2,752,838	$ -
17	PLUS: Other Income/(Expenses)	$ -							
18	LESS: Interest Expense-Booked	$ -							
19	Preferred Dividends	$ -							
20	JDC Capital Expenses	$ -							
21	**INCOME AVAILABLE FOR COMMON EQUITY**	$ 86,770,935	$ -	$ 171,631	$ (882,722)	$ 6,049,895	$ 11,517,672	$ 2,752,838	$ -
22	Working Capital	$ (21,897,182)							
23	PLUS: Net Utility Plant	$ (94,933,872)				$ 11,884,434		$ (53,490,972)	
24	LESS: Other Rate Base Deductions	$ 1,113,923	$ 495,943			$ 2,035,832		$ 1,731,872	$ (9,919,659)
25	**TOTAL AVERAGE RATE BASE**	$ (115,717,131)	$ 495,943	$ -	$ -	$ 13,920,266	$ -	$ (51,759,101)	$ (9,919,659)
26	Total Average Capital	$ (115,717,131)							
27	Average Common Equity Capital	$ (53,888,952)							

Notes and Source:

Source: See detail for OAG adjustments shown on the respective schedules in Exhibit LA-3

Line 6: State Income Tax Rate^ 3.70%

Line 7: Federal Income Tax Rate^ 21.00%

^See Exhibit LA-2, Schedule A-1

WORKPAPER ADDED 7/29/2020
TO VERIFIFY/CALCULATE
AMOUNTS MENTIONED IN SUMMARY
RELATED TO EXCESS EARNINGS

WORKPAPER CALCULATION OF EARNINGS ABOVE TOP END OF THE EARNINGS BAND

		EARNINGS		REVENUE IMPACT
				0.61138
Adjusted earned return on common equity	$	403,019,337		
Required return on common equity				
top of range	$	366,718,308		
excess	$	36,301,030		59,375,560
in millions of dollars	$	36.3	$	59.4
bottom of range	$	315,986,526		
excess	$	87,032,811		142,354,691
in millions of dollars	$	87.0	$	142.4