Commonwealth of Virginia

State Corporation Commission

Report to the Governor and Members of the Virginia General Assembly

Assessing the Rates and Terms and Conditions of Incumbent Electric Utilities in the Commonwealth Pursuant to the Seventh Enactment Clause of Chapter 933 (SB 1416) of the 2007 Acts of Assembly

November 1, 2017

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STATE CORPORATION COMMISSION

November 1, 2017

TO: The Honorable Terrence R. McAuliffe
Governor, Commonwealth of Virginia

Members of the Virginia General Assembly

The State Corporation Commission, in consultation with the Office of the Attorney General, hereby submits its report assessing the rates and terms and conditions of incumbent electric utilities in the Commonwealth as required by Chapter 933 of the 2007 Acts of Assembly.

Respectfully submitted,

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GLOSSARY OF TERMS

A&N..............................A&N Electric Cooperative
A/C Program ....REC air conditioner cycling switch DSM program
AEP ....American Electric Power
APCo.............................Appalachian Power Company
BARC............................BARC Electric Cooperative
Biennial Review............review of a utility's rates, terms, and conditions for two successive 12-month periods
CBEC ....Craig-Botetourt Electric Cooperative
CEC ....Community Electric Cooperative
CPCN............................certificate of public convenience and necessity
CVEC............................Central Virginia Electric Cooperative
Chapter 933 ....Chapter 933 of the 2007 Acts of Assembly
Clause, the.....................Seventh Enactment Clause of Chapter 933
Commission ....State Corporation Commission
Consumer Counsel ....Division of Consumer Counsel, Office of the Attorney General
DEV ....Virginia Electric and Power Company d/b/a Dominion Energy Virginia
DR-RAC........................demand response RAC
DSM ....demand-side management
E&R ....environmental and reliability
E&R Surcharge ....surcharge for the recovery of incremental environmental and transmission and distribution system reliability costs
E-RAC...........................environmental rate adjustment clause
EEI ....Edison Electric Institute
earnings band ....earnings either 70 basis points above or below the fair combined return
FERC.............................Federal Energy Regulatory Commission
fair combined return......fair rate of return on common equity
G-RAC ....generation rate adjustment clause
Going-in Settlement ......comprehensive settlement of parties in the Going-in Review case
IOU...............................investor-owned electric utility
IRP ....integrated resource plan
KU.................................Kentucky Utilities, Inc.
kWh...............................kilowatt-hour
LG&E............................Louisville Gas & Electric
MEC..............................Mecklenburg Electric Cooperative
MW ....megawatt
NNEC............................Northern Neck Electric Cooperative
NOVEC.........................Northern Virginia Electric Cooperative
ODEC............................Old Dominion Electric Cooperative
PGEC ....Prince George Electric Cooperative
PJM ....PJM Interconnection, LLC
RAC ....rate adjustment clause
REC ....Rappahannock Electric Cooperative
ROE...............................return on common equity
RPS................................renewable energy portfolio standard
Regulation Act ....Virginia Electric Utility Regulation Act
SCC ....State Corporation Commission
SEC ....Southside Electric Cooperative
SUP ....Strategic Underground Program
SVEC ....Shenandoah Valley Electric Cooperative
Staff...............................Commission Staff
T-RAC...........................transmission rate adjustment clause

EXECUTIVE SUMMARY

On April 4, 2007, the General Assembly of Virginia enacted House Bill 3068 and Senate Bill 1416, which became Chapters 888 and 933 of the 2007 Acts of Assembly (collectively, "Chapter 933"). The Seventh Enactment Clause of Chapter 933, among other things, directs the State Corporation Commission ("Commission"), in consultation with the Office of Attorney General, to conduct a five-year assessment of "the rates and terms and conditions of incumbent electric utilities in the Commonwealth" including analysis of "the amount, reliability and type of generation facilities needed to serve Virginia native load compared to that available to serve such load." The following report describes the various provisions of Chapter 933 that potentially could influence Virginia's electric utility rates and service reliability and relates those provisions to numerous Commission proceedings and decisions involving Dominion Energy Virginia ("DEV")[1], Appalachian Power Company ("APCo"), and the electric cooperatives.

Since Chapter 933 became effective on July 1, 2007, DEV, APCo, and the electric cooperatives have requested numerous rate changes or have undergone extensive rate reviews. During this period, DEV has been authorized net revenue increases totaling approximately $1.62 billion[2] on an annual basis and currently has pending requests that would produce additional increases of approximately $59.5 million. It should be noted that many of the cost drivers that contributed to this increase may have existed in the absence of Chapter 933, and the level of increases that otherwise would have occurred cannot be determined. Certain increases likely would have occurred under other regulatory paradigms. For example, the $1.62 billion

[1] In May 2017, Virginia Electric and Power Company changed its "doing business as" name from "Dominion Virginia Power" to "Dominion Energy Virginia."

[2] As shown in Appendix 1, from July 2007 to July 2017 the monthly bill for a DEV customer using 1,000 kWh has increased from $90.59 to $117.20. This increase reflects the level of ongoing increases that currently are reflected in rates and excludes temporary base rate credits and certain increases or decreases that may have been in effect during a portion of this ten-year review period. For example, the current fuel factor and transmission-related charges were at times higher or lower during the review period than at the current time.

increase includes fuel-related increases of $396.0 million, much of which would have occurred with the previously scheduled expiration of capped rates on December 31, 2008. The combined effect of the approved increases for DEV has been to increase the monthly bill for a residential customer using 1,000 kilowatt-hours ("kWh") by $25.15, or approximately 27.8%, since July 1, 2007. The $25.15 increase comprises a fuel cost increase of $1.51, transmission cost related increases totaling $8.69, new generation rate riders totaling $13.65, a new distribution underground related rider totaling $0.59, and demand-side management ("DSM") rate adjustments totaling $0.72. Appendix 2 to this report details the incremental changes in rates occurring since July 1, 2007, currently reflected in DEV's monthly bill for residential customers using 1,000 kWh, as well as the associated statutory provision through which each increment was authorized.

Since July 1, 2007, APCo has been authorized net revenue increases totaling approximately $690.4 million[3] on an annual basis and currently has pending requests that would decrease revenues by approximately $15.2 million. As with DEV, many of the cost drivers that contributed to this increase may have existed in the absence of Chapter 933, and the level of increases that otherwise would have occurred cannot be determined. Certain increases likely would have occurred under other regulatory paradigms. For example, the $690.4 million increase includes fuel-related increases of $151.1 million, much of which would have occurred with the previously scheduled expiration of capped rates on December 31, 2008. The combined effect of the approved increases for APCo has been to increase the monthly bill for a residential customer using 1,000 kWh by $48.64, or approximately 73%, since July 1, 2007. The $48.64 increase comprises a base rate increases of $22.99, a fuel cost increase of $9.89, transmission

[3] As shown in Appendix 1, from July 2007 to July 2017 the monthly bill for an APCo customer using 1,000 kWh has increased from $66.61 to $115.25.

cost related increases totaling $14.05, a new generation rate rider totaling $2.80, DSM rate adjustments totaling $0.75, and a decrease of $1.84 related a previous surcharge for environmental and reliability costs. Appendix 3 to this report details the incremental changes in rates occurring since July 1, 2007, currently reflected in APCo's monthly bill for residential customers using 1,000 kWh, and the associated statutory provision through which each increment was authorized.

Concerning the analysis of generation load, it is important to note that DEV, APCo, and the electric cooperatives are either directly, or indirectly through purchased power arrangements, members of PJM Interconnection, LLC ("PJM"), a regional transmission entity that, among other things, controls transmission facilities owned by DEV and APCo.[4] PJM analyzes, forecasts, and plans for the future electricity needs of the region to ensure that the bulk power grid is sufficient for delivering power from available generation resources to loads within the PJM region. PJM also imposes generating capacity obligations on its load serving members, including DEV, APCo, and the electric cooperatives and requires that those members make forward commitments for meeting those obligations. Consequently, the "amount and reliability" of generation needed to serve Virginia load is directly impacted by PJM planning activities and membership requirements.

In 2008 the Virginia General Assembly enacted legislation (codified as Chapter 24, Electric Utility Integrated Resource Planning, of Title 56 to the Code) directing Virginia's investor-owned electric utilities to file integrated resource plans ("IRPs") with the Commission beginning on September 1, 2009, detailing their forecasts of load obligations and their plans to meet forecasted obligations through supply side and demand side resources over the ensuing 15

[4] PJM's primary mission is to ensure the safety, reliability, and security of the bulk electric power system located in a 13-state area that encompasses portions of the United States' Midwest, Southeast and Northeast regions.

years to promote reasonable prices, reliable service, energy independence, and environmental responsibility.[5] A subsequent law passed in 2015[6] provides that utilities' IRPs evaluate "the effect of current and pending state and federal environmental regulations upon the continued operation of existing electric generation facilities or options for construction of new electric generation facilities" and "[t]he most cost-effective means of complying with current and pending state and federal environmental regulations." Each IRP is reviewed by the Commission in a public proceeding in which the Commission must ultimately determine whether the IRPs are "reasonable and in the public interest."[7]

DEV relies on its generating resources, purchased power contracts, DSM initiatives, and short-term capacity purchases for satisfying its load serving obligations. DEV's internal capacity (*i.e.*, its owned capacity, capacity acquired through long-term non-utility generation purchased power agreements and DSM reductions) has been sufficient for meeting its obligations since 2015. DEV has been building a substantial amount of new capacity in recent years. The Bear Garden and Virginia City Hybrid Energy Center generating facilities became operational in 2011 and 2012, respectively, and the Warren County facility, which became operational in 2015, essentially eliminated any existing capacity deficit at the time it became operational. Additionally, the Greensville County Power Station, with a summer capacity of 1,585 MW, is scheduled to become operational in late 2018. By constructing these facilities, DEV has reduced its internal capacity deficit and, in the near term, is able to meet its internal capacity requirements with few market purchases.

For more than 60 years APCo was a member of the American Electric Power ("AEP") system and relied on the AEP Interconnection Agreement with other AEP affiliates to satisfy its

[5] Code § 56-597 (definition of "Integrated Resource Plan").
[6] 2015 Va. Acts ch. 6.
[7] Code § 56-599 C.

load serving obligations. On January 1, 2014, the AEP Interconnection Agreement was terminated. As a result, APCo is now a stand-alone entity and participant within PJM.[8]

Like Dominion, as a participant in PJM, APCo relies on its generating resources, purchased power contracts, DSM initiatives and short-term energy purchases for satisfying its load serving obligations. APCo's internal capacity (owned capacity, capacity acquired through long-term non-utility generation purchased power agreements, and DSM reductions) is projected to be sufficient for meeting its capacity obligations through 2025. Because APCo is a winter-peaking utility, satisfying PJM capacity requirements, which are designed around a summer peak, can leave APCo unable to self-supply its entire energy need in the winter. This potential energy shortage can be satisfied through short-term purchases including purchases from the PJM market. There is ample available energy within PJM to satisfy these shortfalls, and the transmission system has had sufficient deliverability for these short-term purchases. As such, APCo's winter energy deficit has not posed, nor is it expected to pose, reliability concerns for Virginia.

Chapter 933 also requires that, for certain specified purposes, Virginia electric utilities be compared to "those in the peer group of such utilities that meet the criteria enumerated in subdivision A 2 of § 56-585.1 of the Code of Virginia." The peer group utilities for DEV and APCo currently include: Alabama Power, Duke Energy Carolinas (North Carolina and South Carolina), Entergy Mississippi, Florida Power & Light Company, Georgia Power, Gulf Power, Mississippi Power, Duke Energy Progress Inc. (North Carolina and South Carolina), Duke

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[8] APCo's participation in PJM's capacity market is through a method known as the Fixed Resource Requirement Alternative. Through this alternative, APCo submits a fixed resource requirement capacity plan and has opted out of PJM's Reliability Pricing Model capacity auction through the 2020/2021 delivery year.

Progress Energy Florida, Inc., South Carolina Electric & Gas, Tampa Electric Company, Kentucky Utilities, Inc. ("KU"), and Louisville Gas and Electric Company ("LG&E").[9]

In response to the directive to conduct peer group comparisons, this report compares typical bill information for the peer group with that of DEV and APCo. Using data from various EEI publications, the Commission Staff developed typical rate comparisons for residential, commercial, and industrial customers for both July 1, 2007, when Chapter 933 became effective, and January 1, 2017. For purposes of this evaluation, a ranking closer to 1 equates with a lower, more competitive customer rate. For example, a customer of a utility with a ranking of 2 would have a lower rate than a customer of a utility with a ranking of 10.

DEV's January 1, 2017 annualized residential rates[10] produce typical bills that rank DEV 11th out of the 20 companies[11] examined and are below the U.S. and South Atlantic averages and slightly above EEI's average for the East South Central region.[12] For residential customers using 1,000 kWh per month, DEV's bill rankings have declined five places (from a rank of 6 to a rank

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[9] In the Final Order in Dominion Energy Virginia's 2013 Biennial Review, the Commission found that KU and LG&E satisfied the requirements for inclusion in the peer group. Both KU and LG&E are a part of the Edison Electric Institute's ("EEI's") East South Central Region. Therefore, the averages for that region, as well as the data for both utilities, is now included in Appendices 4, 5, and 6. *Application of Virginia Electric and Power Company, For a 2013 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-2013-00020, 2013 S.C.C. Ann. Rept. 371, Final Order (Nov. 26, 2013). Appendices 4, 5, and 6 also include rates and ranking comparisons for Kentucky Utilities d/b/a Old Dominion Power Company located within Virginia (separately from Louisville Gas & Electric and from Kentucky Utilities located in Kentucky), Appalachian Power Company located in Virginia (separately from Appalachian Power Company located in West Virginia), and Dominion Virginia Power (separately from Dominion North Carolina Power located in North Carolina). These appendices refer to Dominion Virginia Power and Dominion North Carolina Power, as these were the names of the utilities at the time of the EEI report publication.

[10] These rates are based on a residential customer using 1,000 kWh per month.

[11] Many of the peer group companies serve in more than one state and have differing typical bills depending on the respective state. Consequently, the typical bill comparison may include multiple listings for certain peer group companies. For this year's report, three additional utilities were added to the appendices for comparison, Kentucky Utilities Inc., Kentucky Utilities d/b/a Old Dominion Power Company, and Louisville Gas and Electric Company. However, these three utilities did not provide complete data to EEI in July 2007; therefore not all of their rankings could be assessed for that time period.

[12] EEI's South Atlantic region includes Delaware, the District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia. EEI's East South Central region includes Alabama, Kentucky, Mississippi, and Tennessee.

of 11) since July 1, 2007, to about the middle of the peer group. In other words, DEV's rates have become less competitive over the past ten years. DEV's commercial rates still remain competitive despite a slight decline in ranking for the largest commercial customers since July 1, 2007. DEV's January 1, 2017 annualized commercial rates produce typical bills that range from 4^{th} to 8^{th} out of the 20 companies examined and remain below the U.S., South Atlantic, and East South Central regional averages. DEV's industrial rates still appear generally competitive with the rates of the peer group, despite some declines in rank. DEV's January 1, 2017 annualized industrial rates produce bills that range from 2^{nd} to 15^{th} out of the 20 companies examined and are below the U.S. average and, for the most part, are below the South Atlantic and East South Central regional averages.

Similarly, for residential customers using 1,000 kWh per month, APCo's bill rankings have declined significantly (from a rank of 2, to a rank of 14, out of 20 companies) since July 1, 2007. In other words, APCo's rates have become less competitive over the past ten years. APCo's January 1, 2017 annualized residential rates are below the U.S. and South Atlantic regional averages, but above the East South Central Region average. APCo's commercial rates have become less competitive and also show a significant decline in rankings since July 1, 2007. APCo's January 1, 2017 annualized commercial rates produced typical bills that range from 3^{rd} to 13^{th} out of the 20 companies examined; however they still are below the U.S., South Atlantic, and East South Central regional averages. APCo's January 1, 2017 industrial typical bills are ranked 6^{th} to 13^{th} out of the 20 companies examined, are below the U.S. and South Atlantic regional averages, and for the most part are near or below the East South Central region average. APCo's industrial bill rankings have declined overall since July 1, 2007.

It should be noted that publicly available reliability related information for the peer group is limited, and as such, any reliability differences could only be developed on a somewhat superficial level. A review of reliability related information for the peer group utilities did not show any discernible trends in reliability or any indication that DEV's or APCo's overall ability to serve native load was notably different from that of the peer group.

Separate financial reviews of DEV and APCo also were conducted by the Commission Staff; those results were included in the "Financial Reviews and Related Cases" section of the Commission's *Status Report: Implementation of the Virginia Electric Utility Regulation Act Pursuant to § 56-596 B of the Code of Virginia*, dated September 1, 2017. This report can be accessed through the Virginia Legislative Information System.

I. INTRODUCTION AND BACKGROUND

On April 4, 2007, the Virginia General Assembly ("General Assembly") enacted House Bill 3068 and Senate Bill 933, which became Chapters 888 and 933, respectively, of the 2007 Acts of Assembly (hereafter collectively, "Chapter 933").[13] The Seventh Enactment Clause of Chapter 933 ("the Clause") directs:

> That the State Corporation Commission, in consultation with the Office of Attorney General, shall submit a report to the Governor and General Assembly by November 1, 2012, and every five years thereafter, assessing the rates and terms and conditions of incumbent electric utilities in the Commonwealth. Such report shall include an analysis of, among other matters, the amount, reliability and type of generation facilities needed to serve Virginia native load compared to that available to serve such load, and provide a comparison of such utilities to those in the peer group of such utilities that meet the criteria enumerated in subdivision A 2 of § 56-585.1 of the Code of Virginia.

Chapter 933[14] principally established (i) a new mechanism for regulating the rates of investor-owned electric utilities ("IOU"),[15] (ii) a limited means by which electric utility consumers may purchase electric generation service from competing suppliers, and (iii) rate adjustment clauses ("RAC") through which certain utility costs—including costs associated with new generation facilities—could be recovered through rate riders separate and apart from base rates.[16]

[13] Chapters 888 (HB 3068) and 933 (SB 1416) are identical, amending and reenacting §§ 56-233.1, 56-234.2, 56-235.2, 56-235.6, 56-249.6, 56-576 through 56-581, 56-582, 56-584, 56-585, 56-587, 56-589, 56-590, and 56-594 of the Code of Virginia ("Code"); amending the Code by adding §§ 56-585.1, 56-585.2, and 56-585.3; and repealing §§ 56-581.1 and 56-583 of the Code relating to the regulation of electric utility service.

[14] Chapter 933 substantially rewrote existing Chapter 23 (§ 56-576 *et seq.*) of Title 56 of the Code, then titled the "Virginia Electric Utility Restructuring Act." Subsequent to Chapter 933's enactment, Chapter 23 was re-titled in the published Code as the "Virginia Electric Utility Regulation Act" ("Regulation Act"). The Regulation Act has been regularly amended by the General Assembly in recent years.

[15] With limited exception, Chapter 23 of Title 56 of the Code does not apply to one investor owned utility in Virginia, namely Kentucky Utilities. *See* Code § 56-580 G.

[16] The SCC is required by § 56-585.1 to consider petitions for RACs on a stand-alone basis, without regard to the other costs or revenues of the utility.

The new ratemaking mechanism referenced above (contained principally in §56-585.1 of the Code) requires the State Corporation Commission ("Commission" or "SCC") to review the IOUs' rates, terms, and conditions of service on a biennial basis ("Biennial Reviews").[17]

When the Commission conducts Biennial Reviews pursuant to the provisions of Code § 56-585.1, it determines fair rates of return on common equity ("fair combined return" or "ROE") for each utility's generation and distribution services, using any methodology it finds consistent with the public interest. The provisions of Code § 56-585.1 further direct that such rates of return may not be set lower than the average ROE reported to the Securities and Exchange Commission for the three most recent annual periods by a majority of a peer group of other vertically integrated IOUs in the southeastern United States.[18]

Significantly, § 56-585.1 of the Code requires specific Commission actions if the Commission determines that a utility has earned 70 basis points above or below the fair combined return ("earnings band") established by the Commission. The SCC is required to increase an IOU's rates to a level necessary to provide the opportunity to recover fully the costs of providing the utility's services and to earn such fair combined return, if it is determined in a Biennial Review that a utility's earnings on its generation and distribution services were below the earnings band, excluding provisions for new generation facilities.

[17] In 2015, the General Assembly passed a law that suspended Biennial Reviews for APCo and DEV by establishing a Transitional Rate Period that ends December 31, 2017, for APCo and December 31, 2019, for DEV. 2015 Va. Acts ch. 6.

[18] Section 56-585.1 also authorizes the Commission to increase or decrease the resulting combined fair rate of return based on the Commission's consideration of the utility's performance consistent with Commission precedent predating Chapter 933's enactment.

If the Commission determines in a Biennial Review that a utility's earnings return on its generation and distribution services exceeded the earnings band, excluding provisions for new generation facilities, the SCC is required to direct that 70% of such excess earnings be credited to customers' bills over a period of between 6 and 12 months.

Additionally, if the SCC determines that a utility's earnings exceed this earnings band for two consecutive Biennial Review periods, § 56-585.1 of the Code requires the Commission to order reductions to the utility's rates, provided that rates may not be reduced to levels below what would provide the utility with the opportunity to recover fully its costs and to earn a fair combined return on its generation and distribution services, excluding provisions for new generation facilities.

Section 56-585.1 of the Code also authorizes Virginia's IOUs to seek Commission approval of RACs to recover (i) costs for transmission services provided by their regional transmission organization (PJM Interconnection, LLC ("PJM")) under applicable rates, terms and conditions approved by the Federal Energy Regulatory Commission ("FERC") and costs of FERC-approved demand response programs; (ii) deferred environmental and reliability ("E&R") costs authorized under prior capped rates; (iii) costs of providing incentives for the utility to design and operate fair and effective peak-shaving and energy efficiency programs; (iv) costs of participation in a renewable energy portfolio standard ("RPS") program; and (v) costs of projects that the SCC finds to be necessary to comply with state or federal environmental laws or regulations applicable to generation facilities used to serve the utility's native load obligations.

IOUs also may propose RACs for utility vegetation management programs, undergrounding of certain electric distribution lines, and the purchase or construction of certain solar generation facilities.

Section 56-585.1 of the Code also allows IOUs to propose RACs for (i) a coal-fired generation facility that utilizes Virginia coal and is located in the coalfield region of the Commonwealth, (ii) one or more other generation facilities, and (iii) one or more major unit modifications of generation facilities, to meet the utility's projected native load obligations. Utilities may recover an enhanced ROE associated with new generation projects utilizing nuclear power or off-shore wind.[19]

Other provisions of Chapter 933 (i) establish a voluntary RPS program; (ii) require, with limited exception, that 75% of the margins from off-system sales be applied to reduce the utility's fuel expenses, with the remaining percentage being retained by the utility; (iii) require the use of certain ratemaking parameters when the Commission conducts its Biennial Reviews; and (iv) authorize distribution electric cooperatives, without SCC approval, to increase rates by not more than 5% over three years and to make certain other changes to their terms and conditions of service.[20]

During the Transitional Rate Period, though the Commission is not conducting Biennial Reviews, the IOUs may seek adjustments to fuel and RAC rates. These utilities also may request emergency rate relief as provided under § 56-245 of the Code. Further, during the Transitional Rate Period the Commission periodically conducts company-specific proceedings to determine the fair ROE to be applied to utility RACs approved by the Commission pursuant to Code §§ 56-585.1 A 5 and A 6.

[19] Currently, § 56-585.1 of the Code authorizes a 100 basis point enhanced ROE for new nuclear and off-shore wind projects, recoverable over a 12-25 year period in the case of a nuclear facility, and 5-15 years in the case of an off-shore wind facility.

[20] Subsequent Acts of Assembly have amended or supplemented these provisions, with the exception of those pertaining to off-system sales.

In 2008 the General Assembly enacted legislation (codified as Chapter 24, Electric Utility Integrated Resource Planning, Title 56 of the Code) directing Virginia's IOUs to file integrated resource plans ("IRPs") with the Commission beginning on September 1, 2009. These IRPs require Virginia IOUs to detail their forecasts of load obligations and their plans to meet forecasted obligations through supply side and demand side resources over the ensuing 15 years to promote reasonable prices, reliable service, energy independence, and environmental responsibility.[21] A subsequent law passed in 2015[22] also provides that utilities' IRPs evaluate "the effect of current and pending state and federal environmental regulations upon the continued operation of existing electric generation facilities or options for construction of new electric generation facilities" and "[t]he most cost-effective means of complying with current and pending state and federal environmental regulations." Each IRP is reviewed by the Commission in a public proceeding in which the Commission must ultimately determine whether the IRPs are "reasonable and in the public interest."[23] The Commission's analysis included herein is informed by its review of these IRP filings.

In accordance with the Clause, this report will provide: (i) an assessment of the rates, terms and conditions of Dominion Energy Virginia ("DEV"), Appalachian Power Company ("APCo"), and the electric cooperatives; (ii) discuss the amount and type of generation needed to serve Virginia load reliably; and (iii) provide a contrast of the rates and service reliability of the statutory peer group utilities with that of Virginia utilities.

[21] Code § 56-597 (definition of "Integrated Resource Plan").
[22] 2015 Va. Acts ch. 6.
[23] Code § 56-599 C.

II. RATE ASSESSMENT

Since Chapter 933 became effective on July 1, 2007, DEV, APCo and the electric cooperatives have initiated numerous rate changes or have undergone extensive rate reviews. The following section separately discusses those rate reviews and rate changes and identifies the provisions of Chapter 933 that may have influenced those requests.[24] Appendices 1-3 to this report present a comparison of the July 1, 2007 and July 1, 2017 monthly charges for residential customers using 1,000 kWh of electricity for the electric cooperatives, DEV, and APCo, respectively.[25]

A. Dominion Energy Virginia

Since July 1, 2007, DEV has been authorized net revenue increases totaling approximately $1.62 billion and has pending requests that would produce an additional increase of approximately $59.5 million. The combined effect of the approved increases has been to increase the monthly bill for a residential customer using 1,000 kWh by $25.15, or approximately 27.8%, since July 1, 2007.[26] Pending requests, if approved, would decrease the monthly bill for a residential customer using 1,000 kWh by $0.28.[27] Incremental changes occurring since January 1, 2007, that are currently reflected in DEV's monthly bill for residential customers using 1,000 kWh and the associated statutory provisions are detailed in Appendix 2 to this report. These revenue changes are associated with the establishment and revision of numerous RACs as well as fuel factor revisions. Specifically, the $25.15 increase is comprised of a fuel cost increase of $1.51, transmission cost related increases totaling $8.69, new

[24] While Chapter 933 fundamentally altered the form and process of many of the various rate changes, many of the underlying cost drivers for the increases would have existed under a traditional state regulatory paradigm.
[25] One thousand kWh is a commonly used reference point for a typical residential customer in Virginia.
[26] The DEV monthly bill for a residential customer using 1,000 kWh was $90.60 as of July 1, 2007.
[27] While DEV's pending requests are expected to increase revenues by $59.5 million, they result in a lower rate per kWh and a decrease in the monthly bill for a typical residential customer using 1,000 kWh due to a projected offsetting increase in DEV's residential kWh sales.

generation rate riders totaling $13.65, a new distribution underground related rider totaling $0.59, and demand-side management ("DSM") rate adjustments totaling $0.72.

DEV has not had any significant changes in its terms and conditions of service since July 1, 2007.

1. Rate Reviews

DEV has undergone four rate reviews pursuant to Chapter 933, a statutorily required review of rates starting in 2009 ("Initial Review") and three Biennial Reviews starting 2011.

a. Going-in Review

On March 31, 2009, DEV filed its Going-in Review application with the Commission in Case No. PUE-2009-00019. DEV requested to increase base rates by $250.2 million, an increase of 7.9%, based on a requested ROE of 13.5%.[28] Subsequently, all participants in the case, including DEV, the Commission Staff ("Staff"), and the Office of Attorney General's Division of Consumer Counsel ("Consumer Counsel"), entered into a comprehensive settlement ("Going-in Settlement") which, among other things, addressed the requested increase in base rates. On March 11, 2010, the Commission issued its Order Approving Stipulation and Addendum[29] that approved the Going-in Settlement. The Going-in Settlement provided that there would be no net increase in base rates prior to December 1, 2013, and that DEV's authorized fair combined return would be 11.9%. This 11.9% ROE included a performance-based adder of 60 basis points, or 0.6%. This ROE was agreed upon solely for the purposes of the Going-in Settlement and was not intended to establish or otherwise be a precedent for a particular "peer group" floor or performance adder pursuant to Code § 56-585.1 A 1 d.

[28] The requested ROE of 13.5% was based on a cost of equity of 12.5% and a request for the maximum performance adder of 1% provided for in Chapter 933.

[29] *Application of Virginia Electric and Power Company, for a 2009 statutory review of rates, terms and conditions for the provision of generation, distribution, and transmission services pursuant to § 56-585.1 A 5 of the Code of Virginia*, Case No. PUE-2009-00019, 2010 S.C.C. Ann. Rept. 301, Order Approving Stipulation and Addendum (Mar. 11, 2010).

The Going-in Settlement provided for a number of rate credits totaling $529 million, consisting of a base rate credit of $132 million, other credits totaling $268 million, and a refund of $129 million associated with financial transmission rights revenues. In addition to these rate credits, DEV agreed to waive recovery of $197 million of FERC-approved deferred transmission related costs, bringing the total value of the Going-in Settlement to $726 million.

b. 2011 Biennial Review

DEV submitted an application for its first Biennial Review on March 31, 2011, in Case No. PUE-2011-00027. DEV's application asserted that DEV earned within its authorized earnings band of 11.4-12.4% and claimed that, as such, no rate credits were required pursuant to Chapter 933. DEV requested that the Commission approve an ROE of 12.5%, which included a performance incentive of 1%.

On November 30, 2011, the Commission issued its Final Order[30] in the case, which found that DEV had earned an average ROE of 13.31% during the 2009 and 2010 Biennial Review test periods and noted that, pursuant to the settlement resulting from the Initial Review, the authorized ROE for this period was 11.9%. The 13.31% earnings level was more than 50 basis points above the fair combined return of 11.9% established in the settlement; consequently, the Commission required DEV to refund to its customers $78.3 million of the over-earnings pursuant to Code § 56-585.1 A 8 ii.[31]

[30] *Application of Virginia Electric and 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-2011-00027, 2011 S.C.C. Ann. Rept. 456, Final Order (Nov. 30, 2011); 2011 S.C.C. Ann. Rept. 468, Order Granting Reconsideration (Dec. 16, 2011).
[31] This represents 60% of earnings above the earnings band of 11.4% to12.4%. Consequently, DEV retained $123.5 million of earnings above the 11.9% fair combined return.

The Commission's Final Order also found that DEV's ongoing market cost of equity[32] was within a range of 9.4% to 10.4% and that the top of the range, 10.4%, was reasonable under the circumstances for determining DEV's fair rate of return. The Commission also examined the statutory floor below which the ROE cannot be set based on the returns of a statutory peer group and found that the majority of the peer group utilities had returns below 10.4%. The Commission noted that some of DEV's performance metrics were positive and some were negative and thus declined to approve a performance incentive. The Commission did, however, find that DEV had met the RPS goals pursuant to § 56-585.2 C of the Code and that DEV, therefore, was entitled by statute to an incentive return of 50 basis points in lieu of a performance incentive.[33] As such, the Commission noted that an ROE of 10.9% would be used as the fair combined return for purposes of DEV's next Biennial Review proceeding.[34]

c. 2013 Biennial Review

DEV submitted an application for its second Biennial Review on March 28, 2013, in Case No. PUE-2013-00020. DEV's application asserted that it earned an ROE of 10.11% which was below the authorized earnings band of 10.4% to 11.4% set in the 2011 Biennial Review. DEV further asserted that while its earnings test analysis supported a request for an increase in base rates pursuant to Code § 56-585.1 A 8 i and while its schedules and testimony showed that a revenue deficiency would occur in the rate year commencing January 1, 2014, DEV did not request an increase in its customers' base rates for generation and distribution services. DEV further requested that the Commission approve an ROE of 11.5%, the upper end of a range of

[32] The term "market cost of equity" refers to the actual cost of equity in capital markets for companies comparable in risk to DEV that are seeking to attract equity capital and which results in a fair and reasonable ROE.
[33] The Commission's Final Order noted that the RPS incentive return of 50 basis points equates to approximately $38.5 million of annual revenue requirement based on DVP's average 2010 rate base and capital structure.
[34] Subsequently, Dominion appealed to the Virginia Supreme Court concerning the Commission's determination that the 10.9% ROE would be applicable to the Company's entire 2011-2012 test period to be considered in DEV's 2013 Biennial Review proceeding. The Commission's determination in this regard was upheld by the Virginia Supreme Court. *Va. Elec. and Power Co. v. State Corp. Comm'n*, 284 Va. 726 (2012).

10.5% to 11.5%, for purposes of the next Biennial Review. DEV requested that the Commission authorize an ROE at the top of this range based on its performance during the 2011 and 2012 Biennial Review period, pursuant to § 56-585.1 A 2 c of the Code.

On November 26, 2013, the Commission issued its Final Order[35] in the case, finding that DEV had earned an average ROE of 10.25% during the 2011 and 2012 Biennial Review test periods.[36] The Commission also found that DEV's ongoing market cost of equity was 10.0%. The Commission examined the statutory floor below which the ROE cannot be set based on the returns of a statutory peer group and found that the majority of the peer group utilities had returns below 9.89%. Further, the Commission declined to issue either a positive or negative performance incentive adjustment to the ROE under § 56-585.1 A 2 c. As a result, the Commission noted that an ROE of 10.0% would be used as the fair combined rate of return for the purposes of DEV's next Biennial Review. Finally, the Commission found that a base rate increase was not necessary to provide DEV with the opportunity to recover fully its costs of providing services and to earn not less than a fair combined rate of return.[37]

d. 2015 Biennial Review

On March 31, 2015, DEV submitted an application for its third Biennial Review, in Case No. PUE-2015-00027. DEV's application asserted that the principal issue to be decided in the case was the determination of its earnings during the 2013 and 2014 Biennial Review test periods. DEV asserted that it earned within the authorized earnings band established in the 2013 Biennial Review. Further, DEV asserted that while a revenue deficiency would occur during the

[35] *Application of Virginia Electric and Power Company, For a 2013 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-2013-00020, 2013 S.C.C. Ann. Rept. 371, Final Order (Nov. 26, 2013).

[36] This ROE was below the statutory ROE band in that proceeding of 10.4% to 11.4%. Thus, the Commission did not require rate credits pursuant to Chapter 933.

[37] Specifically, the Commission found DEV required approximately $4.87 billion in annual revenues to recover its cost of service and earn a fair return and that the Company's current rates were designed to produce approximately $5.15 billion in annual revenues.

rate year commencing January 1, 2016, DEV was not requesting a base rate increase pursuant to § 56-585.1 A 8 of the Code and, also, no base rate adjustment was permitted pursuant to § 56-585.1:1 of the Code.[38]

On November 23, 2015, the Commission issued its Final Order[39] in the case, finding that DEV earned an average ROE of 10.89% during the 2013 and 2014 Biennial Review test periods, more than 70 basis points above the 10.0% ROE established in the 2013 Biennial Review. Consequently, the Commission required DEV to refund to its customers $19.7 million of the over-earnings[40] pursuant to § 56-585.1 A 8 ii of the Code.

e. Transitional Rate Period

Pursuant to § 56-585.1:1 of the Code, DEV is currently in a Transitional Rate Period that began on January 1, 2015, and concludes on December 31, 2019. During the Transitional Rate Period, DEV does not have Biennial Reviews. The next Biennial Review for DEV is anticipated to be filed on March 31, 2022, which will consist of the 2020 and 2021 test periods.

As noted previously, during the Transitional Rate Period the Commission periodically conducts company-specific proceedings to determine the fair ROE to be applied to certain of the IOU's RACs. Accordingly, pursuant to Code § 56-585.1:1, on March 31, 2017, DEV filed an application requesting that an ROE of 10.50% be applied to its RACs previously approved pursuant to Code § 56-585.1 A 5 and A 6.[41] This ROE would be applied prospectively as of the

[38] 2015 Va. Acts ch. 6 was codified as § 56-585.1:1 of the Code.

[39] *Application of Virginia Electric and Power Company, For a 2015 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-2015-00027, 2015 S.C.C. Ann. Rept. 299, Final Order (Nov. 23, 2015).

[40] This represented 70% of earnings above the earnings band of 9.3% to 10.7%. Consequently, DEV retained $112.4 million of earnings above the 10.0% fair ROE. The statutory earnings band used in the 2011 and 2013 Biennial Reviews was plus or minus 50 basis points; however, a change in law enlarged the band to plus or minus 70 basis points for use in the 2015 Biennial Review. 2013 Va. Acts ch. 2.

[41] *Application of Virginia Electric and 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-2017-00038, Doc. Con. Cen. No. 170430243, Order for Notice and Hearing (Apr. 21, 2017).

date of the Commission's final order in the case. The Commission held a hearing in this case on September 6, 2017; a final determination is expected on or before November 30, 2017.[42]

2. Dominion Energy Virginia Rate Adjustment Clauses

As noted earlier, Chapter 933 authorizes the establishment of a number of RACs. These clauses provide for the recovery of (i) costs associated with the construction and/or major unit modification of generating facilities (ii) the costs of transmission service as approved by FERC; (iii) the costs of energy efficiency and conservation programs; (iv) deferred E&R costs; (v) certain costs associated with complying with state or federal environmental laws or regulations; and (vi) costs of participating in the RPS program. Additionally, Chapter 212 of the 2014 Acts of Assembly authorized the establishment of a RAC pursuant to § 56-585.1 A 6 of the Code to recover the costs of new underground facilities to replace overhead distribution facilities of 69 kilovolts or less. DEV has proposed and received approval for a number of RACs. DEV's Riders S, R, W, B, BW, US-2, and GV, which represent monthly bill increases totaling $13.65 for a residential customer using 1,000 kWh, are associated with investments in generating facilities made in accordance with § 56-585.1 A 6 of the Code.[43] DEV's Rider U, which represents monthly bill increases totaling $0.59 for a residential customer using 1,000 kWh, is

[42] Historically, it was generally the practice of the Commission to apply to Code §§ 56-585.1 A 5 and A 6 RACs the ROE set in a company's most recent biennial review proceeding. To this ROE the Commission would add any additional basis points required by law to determine the enhanced ROE for a given rider. With the creation of Transitional Rate Periods for DEV and APCo, a gap occurred between the start of the Transitional Rate Period for each company and the first company-specific proceeding to determine the fair ROE to be applied to that company's RACs, during which time there was no proceeding to establish one general ROE for DEV or APCo. During this interim, the SCC decided that it has the authority to decide what ROE is applicable to a given RAC through the course of an individual RAC proceeding. *See, e.g., Application of Virginia Electric and Power Company, For revision of rate adjustment clause: Rider B, Biomass Conversions of the Altavista, Hopewell, and Southampton power stations for the rate year commencing April 1, 2016*, Case No. PUE-2015-00058, Doc. Con. Cen. No. 160250199, Final Order (Feb. 29, 2016) *and Application of Virginia Electric and Power Company, For approval and certification of the proposed Greensville County Power Station and related transmission facilities pursuant to §§ 56-580 D, 56-265.2, and 56-46.1 of the Code of Virginia, and for approval of a rate adjustment clause, designated Rider GV, pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUE-2015-00075, 2016 S.C.C. Ann. Rept. 264, Final Order (Mar. 29, 2016).

[43] It should be noted that Chapter 933 provides a utility with the right to recover all costs associated with facilities constructed in accordance with § 56-585.1 A 6 and, as such, essentially assures that the utility will earn the authorized return with any applicable incentive adder.

associated with costs of replacing existing overhead distribution facilities with new underground distribution facilities in accordance with § 56-585.1 A 6 of the Code. Rider T1 represents a monthly bill increase of $8.69 fora residential customer using 1,000 kWh, and is associated with FERC-approved transmission related costs pursuant to Code § 56-585.1 A 4. Riders C1A and C2A together represent a monthly bill increase of $0.72 for a residential customer using 1,000 kWh and are associated with costs related to peak-shaving and energy efficiency programs.

Since 2009, DEV has sought and received approval to construct, own, and operate one coal plant, four natural gas plants, and five utility-scale solar facilities and has sought approval to convert three coal plants to operate on biomass fuels. The costs associated with DEV's generation facilities are recovered through RACs, which are summarized in the following chart:

RAC	Project	Case No.	Status	ROE Approved	Customer Impact (Residential 1,000 kWh/month usage)
Rider S	Virginia City Hybrid Energy Center, coal facility in Wise County, VA	PUE-2016-00062	Final order approved recovery of $242,896,000	10.4% (9.4% plus 1% incentive)	$4.87
		PUR-2017-00073	Application filed 6/1/17; hearing scheduled for 12/6/17	N/A	N/A
Rider R	Bear Garden combined cycle facility, Buckingham, VA	PUE-2016-00061	Final order approved recovery of $72,058,000	10.4% (9.4% plus 1% incentive)	$1.45
		PUR-2017-00072	Application filed 6/1/17; hearing scheduled for 11/2917.	N/A	N/A
Rider W	Combined cycle power station in Warren County, VA	PUE-2016-00063	Final order approved recovery of $120,669,000	10.4% (9.4% plus 1% incentive)	$2.42
		PUR-2017-00074	Application filed 6/1/17; hearing scheduled for 11/8/17	N/A	N/A
Rider B	Conversions of AltaVista, Southampton, and Hopewell facilities to biomass	PUE-2016-00059	Final order approved recovery of $27,243,000	11.4% (9.4% plus 2% incentive)	$0.55
		PUR-2017-00070	Application filed 6/21/17; hearing scheduled for 1/23/18	N/A	N/A
Rider BW	Combined cycle power station in Brunswick County, VA	PUE-2016-00112	Final order approved recovery of $127,120,000; next application due 11/30/17	10.4% (9.4% plus 1% incentive)	$2.53
Rider GV	Combined cycle power station in Greensville County, VA	PUE-2016-00060	Final order approved recovery of $89,161,000	9.4%	$1.64
		PUR-2017-00071	Application filed 6/1/17; hearing scheduled for 1/10/18	N/A	N/A
Rider US-2	Scott solar facility in Powhatan County, VA; Whitehouse solar facility in Louisa County, VA; Woodland solar facility in Isle of Wight County, VA	PUE-2016-00113	Final order approved recovery of $32,223,538; next application due on or after 3/31/18	9.4%	$0.19

a. Rider S

Rider S is designed to recover costs associated with DEV's construction and operation of the Virginia City Hybrid Energy Center, a 585 MW coal-fired generating facility located in Wise County, Virginia. Rider S initially was approved in Case No. PUE-2007-00066 and subsequently modified through a series of cases with the last modification being approved in Case No. PUE-2016-00062.[44] The currently approved Rider S reflects an annual overall revenue requirement of $242.9 million based on an ROE of 10.4 %, which includes a 100 basis point incentive return pursuant to § 56-585.1 A 6 of the Code. The currently approved monthly Rider S charge for a residential customer using 1,000 kWh is $4.87.

A pending application seeks to increase the Rider S total annual revenue requirement to $245.0 million. This increase would be placed into effect on April 1, 2018, if approved.[45]

b. Rider R

Rider R is associated with DEV's construction of the Bear Garden Generating Station, a 580 MW natural gas fired generating facility located in Buckingham County, Virginia. Rider R initially was approved in Case No. PUE-2009-00017 and subsequently modified through a series of cases with the last modification being approved in Case No. PUE-2016-00061.[46] The currently approved Rider R reflects an overall revenue requirement of $72.1 million based on an

[44] *Application of Virginia Electric and Power Company, For a certificate of public convenience and necessity to construct and operate an electric generation facility in Wise County, Virginia, and for approval of a rate adjustment clause under §§ 56-585.1, 56-580 D, and 56-46.1 of the Code of Virginia*, Case No. PUE-2007-00066, 2008 S.C.C. Ann. Rept. 385, Final Order (Mar. 3, 2008); and *Application of Virginia Electric and Power Company, For revision of rate adjustment clause: Rider S, Virginia Center Hybrid Energy Center*, Case No. PUE-2016-00062, Doc. Con. Cen. No. 170230116, Final Order (Feb. 27, 2017).

[45] *Application of Virginia Electric and Power Company, For revision of rate adjustment clause: Rider S, Virginia City Hybrid Energy Center*, Case No. PUR-2017-00073, Doc. Con. Cen. No. 170630070, Order for Notice and Hearing (June 21, 2017).

[46] *Application of Virginia Electric and Power Company, For Approval of a Rate Adjustment Clause for Recovery of the Costs of the Bear Garden Generating Station and Bear Garden-Bremo 230 kV Transmission Interconnection Line*, Case No. PUE-2009-00017, 2009 S.C.C. Ann. Rept. 416, Order Approving Rate Adjustment Clause (Dec. 16, 2009); and *Application of Virginia Electric and Power Company, For revision of rate adjustment clause: Rider R, Bear Garden Generating Station*, Case No. PUE-2016-00061, Doc. Con. Cen. No. 170230101, Final Order (Feb. 27, 2017).

ROE of 10.4%, which includes a 100 basis point incentive return pursuant to § 56-585.1 A 6 of the Code. The currently approved monthly Rider R charge for a residential customer using 1,000 kWh is $1.45.

A pending application seeks to increase the Rider R total annual revenue requirement to $73.7 million. This increase would be placed into effect on April 1, 2018, if approved.[47]

c. Rider W

Rider W is associated with DEV's construction of the Warren County Power Station, a 1,329 MW natural gas-fired generating facility located in Warren County, Virginia. Rider W initially was approved in Case No. PUE-2011-00042 and subsequently modified through a series of cases with the last modification being approved in Case No. PUE-2016-00063.[48] The currently approved Rider W reflects an overall revenue requirement of $120.7 million based on an ROE of 10.4%, which includes a 100 basis point incentive return pursuant to § 56-585.1 A 6 of the Code. The currently approved monthly Rider W charge for a residential customer using 1,000 kWh is $2.42.

A pending application seeks to increase the Rider W total annual revenue requirement to $125.8 million. This increase would be placed into effect on April 1, 2018, if approved.[49]

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[47] *Application of Virginia Electric and Power Company, For revision of rate adjustment clause: Rider R, Bear Garden Generating Station*, Case No. PUR-2017-00072, Doc. Con. Cen. No. 170630069, Order for Notice and Hearing (June 21, 2017).

[48] *Application of Virginia Electric and Power Company, For approval and certification of the proposed Warren County Power Station electric generation and related transmission facilities under §§ 56-580 D, 56-265.2, and 56-46.1 of the Code of Virginia and for approval of a rate adjustment clause, designated as Rider W, under 56-585.1 A 6 of the Code of Virginia*, Case No. PUE-2011-00042, 2012 S.C.C. Ann. Rept. 263, Final Order (Feb. 2, 2012); and *Application of Virginia Electric and Power Company, For revision of rate adjustment clause: Rider W, Warren County Power Station*, Case No. PUE-2016-00063, Doc. Con. Cen. No. 170230099, Final Order (Feb. 27, 2017).

[49] *Application of Virginia Electric and Power Company, For revision of rate adjustment clause: Rider W, Warren County Power Station*, Case No. PUR-2017-00074, Doc. Con. Cen. No. 170630031, Order for Notice and Hearing (June 20, 2017).

d. Rider B

Rider B is associated with DEV's conversion of its coal-fired Altavista, Hopewell, and Southampton Power Stations into biomass facilities. Rider B initially was approved in Case No. PUE-2011-00073 and subsequently modified through a series of cases with the last modification being approved in Case No. PUE-2016-00059.[50] The currently approved Rider B reflects an overall revenue requirement of $27.2 million based on an ROE of 11.4%, which includes a 200 basis point incentive return pursuant to § 56-585.1 A 6 of the Code. The currently approved monthly Rider B charge for a residential customer using 1,000 kWh is $0.55.

A pending application seeks to increase the Rider B total annual revenue requirement to $42.2 million. This increase would be placed into effect on April 1, 2018, if approved.[51]

e. Rider BW

Rider BW is associated with DEV's construction of the Brunswick County Power Station, a 1,358 MW natural gas fired generating facility located in Brunswick County, Virginia. Rider BW initially was approved in Case No. PUE-2012-00128 and subsequently modified through a series of cases with the last modification being approved in Case No. PUE-2016-00112.[52] The currently approved Rider BW reflects an overall revenue requirement of $127.1

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[50] *Applications of Virginia Electric and Power Company, For approval and certification of the proposed biomass conversions of the Altavista, Hopewell, and Southampton Power Stations under §§ 56-580 D and 56-46.1 of the Code of Virginia and for approval of a rate adjustment clause, designated as Rider B, under § 56-585.1 A 6 of the Code of Virginia*, Case No. PUE-2011-00073, 2012 S.C.C. Ann. Rept. 279, Final Order (Mar. 16, 2012); and *Application of Virginia Electric and Power Company, For revision of rate adjustment clause: Rider B, Biomass Conversions of the Altavista, Hopewell, and Southampton power station for the rate year commencing April 1, 2017*, Case No. PUE-2016-00059, Doc. Con. Cen. No. 170230100, Final Order (Feb. 27, 2017).

[51] *Application of Virginia Electric and Power Company, For revision of rate adjustment clause: Rider B, Biomass Conversions of the Altavista, Hopewell, and Southampton Power Stations for the Rate Year Commencing April 1, 2018*, Case No. PUR-2017-00070, Doc. Con. Cen. No. 170630192, Order for Notice and Hearing (June 22, 2017).

[52] *Application of Virginia Electric and Power Company, For approval and certification of the proposed Brunswick County Power Station and related transmission facilities under §§ 56-580 D, 56-265.2, and 56-46.1 of the Code of Virginia and for approval of a rate adjustment clause, designated as Rider BW, pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUE-2012-00128, 2013 S.C.C. Ann. Rept. 302, Final Order (Aug. 2, 2013); and *Application of Virginia Electric and Power Company, For revision of rate adjustment clause: Rider BW, Brunswick County Power Station*, Case No. PUE-2016-00112, Doc. Con. Cen. No. 170340202, Final Order (June 30, 2017).

million based on an ROE of 10.4%, which includes a 100 basis point incentive return pursuant to § 56-585.1 A 6 of the Code. The currently approved monthly Rider BW charge for a residential customer using 1,000 kWh is $2.53.

A pending application seeks to increase the Rider BW total annual revenue requirement to $132.4 million. This increase would be placed into effect on September 1, 2018, if approved.[53]

f. Rider GV

On March 29, 2016, the Commission issued a Final Order in Case No. PUE-2015-00075[54] approving DEV's plans to construct a 1,558 MW gas-fired generating unit to be located in Greensville County, Virginia.[55] That same order established Rider GV for the purposes of recovering related costs. Rider GV subsequently was modified in Case No. PUE-2016-00060.[56] The currently approved Rider GV reflects an overall revenue requirement of $81.8 million based on an ROE of 9.4%. The currently approved Rider GV charge for a residential customer using 1,000 kWh is $1.64.

A pending application seeks to increase the Rider GV total annual revenue requirement to $104.0 million. The increase would be placed into effect on April 1, 2018, if approved.[57]

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[53] *Application of Virginia Electric and Power Company, For revision of rate adjustment clause: Rider BW, Brunswick County Power Station, for the Rate Year Commencing September 1, 2018*, Case No. PUR-2017-00128, Doc. Con. Cen. No. 171010131, Application (Oct. 3, 2017).

[54] *Application of Virginia Electric and Power Company, For approval and certification of the proposed Greensville County Power Station and related transmission facilities under §§ 56-580 D, 56-265.2, and 56-46.1 of the Code of Virginia and for approval of a rate adjustment clause, designated as Rider GV, pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUE-2015-00075, 2016 S.C.C. Ann. Rept. 264, Final Order (Mar. 29, 2016)

[55] The Greensville County Project is expected to begin commercial operational by December 2018.

[56] *Application of Virginia Electric and Power Company, For revision of rate adjustment clause: Rider GV, Greensville County Power Station*, Case No. PUE-2016-00060, Doc. Con. Cen. No. 170230117, Final Order (Feb. 27, 2017).

[57] *Application of Virginia Electric and Power Company, For revision of rate adjustment clause: Rider GV, Greensville County Power Station*, Case No. PUR-2017-00071, Doc. Con. Cen. No. 170630029, Order for Notice and Hearing (June 20, 2017).

g. **Rider US-2**

On June 30, 2016, the Commission issued a Final Order in Case No. PUE-2015-00104 approving DEV's plans to construct and operate three utility scale solar installations totaling 56 MW: the Scott Solar Facility; the Whitehouse Solar Facility; and the Woodland Solar Facility.[58] That same order established Rider US-2 for the purposes of recovering related costs based on a cost of service-based approach. Rider US-2 subsequently was modified in Case No. PUE-2016-00113.[59] The currently approved Rider US-2 reflects an overall revenue requirement of $9.6 million based on an ROE of 9.4%. The currently approved Rider US-2 charge for a residential customer using 1,000 kWh is $0.19.

A pending application seeks to increase the Rider US-2 total annual revenue requirement to $14.6 million. The increase would be placed into effect on September 1, 2018, if approved.[60]

h. Rider U

Code § 56-585.1 A 6 provides that a utility may seek recovery, through a RAC, of costs related to "one or more new underground facilities to replace one or more existing overhead distribution facilities of 69 kV or less located within the Commonwealth," including costs related to assessing the feasibility of potential sites to install new underground facilities.

On October 30, 2014, DEV filed an application in Case No. PUE-2014-00089 for approval of a RAC, designated as Rider U, to recover the costs of new underground facilities to replace overhead distribution facilities of 69 kilovolts or less. This program is referred to as the

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[58] *Application of Virginia Electric and Power Company, For approval and certification of the proposed 2016 Solar Projects pursuant to §§ 56-580 D and 56-46.1 of the Code of Virginia and for approval of a rate adjustment clause, designated as Rider US-2, pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUE-2015-00104, 2016 S.C.C. Ann. Rept. 295, Final Order (June 30, 2016).
[59] *Application of Virginia Electric and Power Company, For revision of rate adjustment clause: Rider US-2, Scott, Whitehouse, and Woodland Solar Power Stations, for the Rate Year Commencing September 1, 2017*, Case No. PUE-2016-00113, Doc. Con. Cen. No. 170640203, Final Order (June 30, 2017).
[60] *Application of Virginia Electric and Power Company, For revision of rate adjustment clause: Rider US-2, 2016 Scott, Whitehouse, and Woodland Solar Power Stations, for the Rate Year Commencing September 1, 2018*, Case No. PUR-2017-00127, Doc. Con. Cen. No. 171010118, Application (Oct. 3, 2017).

Strategic Underground Program ("SUP"). The Commission denied DEV's application but found that a more limited pilot-type program at a lower cost targeting tap lines with the worst reliability records could reasonably satisfy the statutory requirements attendant to Rider U.[61]

On December 1, 2015, DEV filed an application for approval of a revised Rider U in Case No. PUE-2015-00114. On August 22, 2016, the Commission approved Phase One of DEV's SUP as a pilot-type project, with several conditions as set forth in a Stipulation entered into between DEV and Consumer Counsel. These include: (i) a $140 million total investment, limited for cost recovery through Rider U to $122.5 million; (ii) a $21.3 million revenue requirement for the rate year September 1, 2016 through August 31, 2017; (iii) a $1.8 million credit against the $21.3 million revenue requirement; and (iv) a $1.8 million credit in each of the following two rate years commencing September 1, 2017, and September 1, 2018. The Commission also authorized an ROE of 9.6% for use in the Rider U calculation.

On December 1, 2016, DEV filed an application for approval of a revision to Rider U. Specifically, DEV requested an annual update for cost recovery associated with Phase One and approval to recover costs associated with Phase Two of the SUP. Phase Two, as proposed, consisted of 244 miles of overhead tap lines to be converted at a capital cost of $110 million.

In its Final Order issued September 1, 2017,[62] the Commission: (1) granted DEV's request for an annual update to cost recovery for Phase One; and (2) found that Phase Two was not cost beneficial as proposed.[63] The Commission found that a more targeted, limited-scale Phase Two was reasonable and prudent at a capital investment of $40 million. The currently

[61] *Application of Virginia Electric and Power Company, For approval of a rate adjustment clause: Rider U, new underground distribution facilities, for the rate year commencing September 1, 2015*, Case No. PUE-2014-00089, 2015 S.C.C. Ann. Rept. 239, Final Order (July 30, 2015).

[62] *Application of Virginia Electric and Power Company, For revision of a Rate Adjustment Clause: Rider U, new underground distribution facilities, for the rate year commencing September 1, 2017*, Case No. PUE-2016-00136, Doc. Con. Cen. No. 170910013, Final Order (Sept. 1, 2017); *modified by* Doc. Con. Cen. No. 170910239, Amending Order (Sept. 13, 2017).

[63] *See id.*, Final Order at 7-8.

approved Rider U reflects an overall revenue requirement of $22.3 million. This revenue requirement is based on an ROE of 9.4%. The currently approved Rider U charge for a residential customer using 1,000 kWh is $0.59.

i. Rider T/Rider T1

Rider T was established pursuant to Code § 56-585.1 A 4 to allow DEV to recover costs for transmission service, transmission facilities, and associated administrative and ancillary charges associated with DEV's participation in PJM.[64] The first Rider T, established in Case No. PUE-2009-00018, replaced the unbundled transmission component of previously approved base rates and effectively increased rates by $68 million.[65] Subsequent revisions resulted in increases to Rider T. Pursuant to Code § 56-585.1 A 3, as part of DEV's 2011 Biennial Review, the then effective Rider T rates were combined with base rates. Subsequently, DEV requested and the SCC approved a new RAC, Rider T1, to reflect projected changes in DEV's transmission-related costs going forward.

DEV's latest Rider T1 update application was filed on May 1, 2017. On July 17, 2017, the Commission approved DEV's requested revenue requirement of $134,891,545 to be recovered through Rider T1.[66] The currently approved Rider T1, combined with the transmission component of base rates, reflects an overall revenue requirement of $638.8 million, which is a total increase of approximately $489.4 million as compared to the unbundled

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[64] This Code section effectively requires that the transmission costs be based on the FERC-approved rates which provide for projected rate bases, deferred accounting, and the FERC-approved ROE. Such costs incurred by the utility are deemed reasonable and prudent.

[65] *Application of Virginia Electric and Power Company, For approval of a rate adjustment clause pursuant to § 56-585.5.1 A 4*, Case No. PUE-2009-00018, 2010 S.C.C. Ann. Rept. 301, Order Approving Stipulation and Addendum (Mar. 11, 2010).

[66] *Application of Virginia Electric and Power Company, For approval of a rate adjustment clause pursuant to § 56-585.5.1 A 4 of the Code of Virginia*, Case No. PUR-2017-00057, Doc. Con. Cen. No. 170720253, Final Order (July 17, 2017).

transmission component of base rates prior to Case No. PUE-2009-00018. This represents an increase of $8.69 in the monthly bill of a residential customer using 1,000 kWh.[67]

j. Riders C1 and C2 / Riders C1A and C2A

Pursuant to Code § 56-585.1 A 5, DEV's Riders C1 and C2 were established to recover the company's costs related to peak-shaving and energy efficiency programs as well as the costs of DEV's electric vehicle pilot program.[68] Since 2010, DEV has established a number of DSM programs for both residential and non-residential customers. Pursuant to Code § 56-585.1 A 3 of the Code, as part of DEV's 2011 Biennial Review, the then effective Riders C1 and C2 were combined with base rates. Subsequently, in the 2013 Biennial Review and in Case No. PUE-2014-00071,[69] the Commission directed DEV to decrease base rates since the programs associated with Rider C2 had been discontinued and had been fully recovered from customers. Rider C1, associated with DEV's A/C Cycling Program, is still collected through base rates at a rate of approximately $0.11 on the monthly bill of a residential customer using 1,000 kWh.

In 2012, subsequent to the combination of Riders C1 and C2 with base rates, DEV received approval for new Riders C1A and C2A, which were implemented to recover costs

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[67] As of July 1, 2007, transmission-related charges were $2.78, or 3.1%, of the total monthly bill for a DEV residential customer using 1,000 kWh. Currently, transmission-related charges represent $11.47, or 9.9% of the total monthly bill for that same residential customer.

[68] *See* Code § 56-585.1 A 5 c. Because the costs of energy efficiency programs are not recovered from certain large electricity demand customers, these RACs distinguish between those customer groups subject to the energy efficiency costs and those customers that are exempt. Specifically, costs of new energy efficiency programs are not chargeable to any customer that has a verifiable history of having used more than 10 megawatts ("MW") of demand from a single meter of delivery. Other large general service customers (those with a verifiable history of having used more than 500 kilowatts of demand from a single meter of delivery) also may be exempt from paying for new energy efficiency programs if such customers have notified their utility of non-participation and have, at their own expense, implemented energy efficiency programs that have produced or will produce measured and verified results consistent with industry standards and other regulatory criteria.

[69] *Application of Virginia Electric and Power Company, For approval to implement new demand-side management programs and for approval of two updated rate adjustment clauses pursuant to § 56-585.1 A 5 of the Code of Virginia*, Case No. PUE-2014-00071, 2015 S.C.C. Ann. Rept. 230, Order (Apr. 24, 2015).

associated with newly approved conservation and energy efficiency programs.[70] Riders C1A and C2A have since been modified in a series of cases with the last modification approved in Case No. PUE-2016-00111; therein, the Commission approved a revenue requirement of approximately $28.0 million for Riders C1A and C2A.[71] The combined effect of the currently approved peak-shaving and energy efficiency related rate changes represents an increase of $0.61 in the monthly bill of a residential customer using 1,000 kWh.

On October 3, 2017, DEV filed an application seeking to increase the Rider C1A and C2A total annual revenue requirement to $31.1 million. If approved by the Commission, the increase would be placed into effect on July 1, 2018.[72]

3. Fuel Factor

DEV's fuel factor has been modified several times since Chapter 933 became effective. These changes generally are driven by increases or decreases in DEV's generating fuel and purchased power costs. Collectively, fuel factor revisions have increased rates by approximately $396.0 million since July 1, 2007, representing an increase of $1.51 per month for a residential customer using 1,000 kWh.[73]

B. Appalachian Power Company

Since July 1, 2007, the SCC has authorized net revenue increases totaling approximately $690.4 million for APCo. The combined effect of these net increases has been to increase the

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[70] *Application of Virginia Electric and Power Company, For approval to implement new demand-side management programs and for approval of two updated rate adjustment clauses pursuant to § 56-585.1 A 5 of the Code of Virginia*, Case No. PUE-2011-00093, 2012 S.C.C. Ann. Rept. 298, Order (Apr. 30, 2012).

[71] *Application of Virginia Electric and Power Company, For approval to implement new, and to extend existing, demand-side management programs and for approval of two updated rate adjustment clauses pursuant to § 56-585.1 A 5 of the Code of Virginia*, Case No. PUE-2016-00111, Doc. Con. Cen. No. 170610052, Order (June 1, 2017).

[72] *Petition of Virginia Electric and Power Company, For approval to extend an existing demand-side management program and for approval of two updated rate adjustment clauses pursuant to § 56-585.1 A 5 of the Code of Virginia*, Case No. PUR-2017-00129, Doc. Con. Cen. No. 171040218, Order for Notice and Hearing (Oct. 25, 2017).

[73] As of July 1, 2007, fuel-related charges were $22.32, or 24.6%, of the total monthly bill for a DEV residential customer using 1,000 kWh. Currently, fuel-related charges represent $23.83, or 20.6%.

monthly bill for a residential customer using 1,000 kWh by $48.64, or approximately 73%, since July 1, 2007.[74] The $48.64 increase comprises a base rate increase of $22.99, a fuel cost increase of $9.89, transmission cost-related increases totaling $14.05, a new generation rate rider totaling $2.80, DSM rate adjustments totaling $0.75, and a decrease of $1.84 related to a previous surcharge for environmental and reliability costs. Currently, the Commission has pending requests from APCo that would produce a decrease of approximately $15.2 million. If approved, these requests would decrease the monthly bill for a residential customer using 1,000 kWh by $0.85. Appendix 3 to this report details the incremental changes occurring since January 1, 2007, that are currently reflected in APCo's monthly bill for residential customers using 1,000 kWh and the associated statutory provisions.

APCo has not had any significant changes in its terms and conditions of service since July 1, 2007.

1. Base Rate Increases and Rate Reviews

Since July 1, 2007, APCo has filed a general rate increase and has undergone three rate reviews pursuant to Chapter 933: a statutorily required review of rates starting in 2009 and two Biennial Reviews.

a. Base Rate Increase

Code § 56-582 authorized APCo, prior to the revisions of Chapter 933, to seek a one-time adjustment to its then-capped rates during the timeframe January 1, 2008, to July 1, 2009. Accordingly, on May 30, 2008, APCo filed an application for a general base rate increase of $207.9 million based on a requested ROE of 11.75%[75] Subsequently, APCo entered into a stipulation with the Staff and other parties to the proceeding which recommended a base rate

[74] As of July 1, 2007, the monthly bill for an APCo residential customer using 1,000 kWh was $66.61.
[75] Though APCo's base rate increase applied for in 2008 was not directly influenced by Chapter 933, it is discussed here because it took place after Chapter 933's effective date of July 1, 2007.

increase of $167.9 million based on an ROE of 10.2%. On November 17, 2008, the Commission issued a Final Order[76] adopting the proposed stipulation. This base rate change increased the monthly bill for a residential customer using 1,000 kWh by $13.12, or approximately 17%.

b. Going-in Review

On July 15, 2009, APCo filed its Going-in Review with the Commission in Case No. PUE-2009-00030. APCo requested to increase base rates by $154 million based on a requested ROE of 13.35%.[77] The Commission issued its Final Order on July 15, 2010, finding, among other things, that a market cost of equity within the range of 9.5 to 10.5% would result in a fair and reasonable ROE for APCo.[78] The Commission also examined the statutory floor below which the ROE cannot be set based on the returns of a statutory peer group; the Commission found that the majority of the peer group utilities had an average return of 10.53%. The Commission rejected APCo's request for a performance incentive. Accordingly, the Commission utilized the statutory floor as required by Chapter 933 to establish an authorized ROE of 10.53%. Based on this ROE and other ratemaking adjustments, the Commission approved an overall base rate increase of approximately $61.5 million for APCo. This base rate change increased the monthly bill for a residential customer using 1,000 kWh by $5.09, or approximately 4.9%.

c. 2011 Biennial Review

APCo submitted an application for its first Biennial Review on March 31, 2011, in Case No. PUE-2011-00037. APCo's filing sought to support a base rate increase of approximately

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[76] *Application of Appalachian Power Company, For an increase in electric rates*, Case No. PUE-2008-00046, 2008 S.C.C. Ann. Rept. 547, Final Order (Nov. 17, 2008).

[77] The requested ROE of 13.35% included a request for a performance incentive of 0.85% as provided for in Chapter 933.

[78] *Application of Appalachian Power Company, For a statutory 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-2009-00030, 2010 S.C.C. Ann. Rept. 321, Order (July 15, 2010).

$126.4 million. APCo subsequently amended its requested increase to $117 million based on an ROE of 11.65%, which included a 50 basis points RPS incentive in accordance with § 56-585.2 C of the Code. The Commission issued its Final Order on November 30, 2011, finding, among other things, that APCo's fair ROE for the test period under review was 10.53% and noting that APCo had earned more than 50 basis points below a fair combined rate of return during the test periods under review.[79] Accordingly, the Commission was required to order rate increases for APCo's customers in accordance with Chapter 933.

Additionally, the Commission found that a fair market cost of equity of 10.4% should be used in determining the end-of-test-period cost of capital to establish new rates in the 2011 Biennial Review. The Commission further found that APCo should be awarded the 50 basis point RPS incentive. Based on an ROE of 10.9% and other ratemaking adjustments, the Commission approved an overall base rate increase of approximately $55 million.[80] This base rate change increased the monthly bill for a residential customer using 1,000 kWh by $4.83.

d. 2014 Biennial Review

APCo submitted an application for its second Biennial Review on March 31, 2014, in Case No. PUE-2014-00026.[81] APCo's application asserted that it had earned within its authorized earnings band and that, as such, no rate credits were required pursuant to Chapter 933. APCo further requested that the Commission approve an ROE of 10.52%. On November 26, 2014, the Commission issued its Final Order in the case, finding that APCo had earned an

[79] *Application of Appalachian Power Company, For a 2011 biennial review of the rates, terms and conditions for the provisions of generation, distribution and transmission services pursuant to § 56-585.1 A of the Code of Virginia*, Case No. PUE-2011-00037, 2011 S.C.C. Ann. Rept. 477, Final Order (Nov. 30, 2011).
[80] The Commission's order noted that the statutorily required addition of 50 basis points for meeting the RPS goal accounted for approximately $7.75 million of the annual rate increase.
[81] Chapter 2 of 2013 Acts of the Assembly modified § 56-585.1 A 3 of the Code to delay the filing of APCo's next Biennial Review from 2013 to 2014. As such, no review of APCo's 2011 rates occurred.

average ROE of 11.86% during the 2012 and 2013 Biennial Review test years.[82] The 11.86% earnings level was more than 50 basis points above the fair combined return of 10.9% established in the 2011 Biennial Review; consequently, the Commission required APCo to refund to its customers $5.8 million of the overearnings pursuant to Code § 56-585.1 A 8 ii.[83]

The Commission also found that 9.7% represented APCo's ongoing market cost of equity.[84] The Commission examined the statutory floor below which the ROE cannot be set based on the returns of a statutory peer group and found that the majority of the peer group utilities had returns below 9.34%. Accordingly, the Commission found that an ROE of 9.7% would be used as the fair combined return for purposes of APCo's next Biennial Review.

e. Transitional Rate Period

As noted previously, APCo is currently in its Transitional Rate Period, which began on January 1, 2014, and concludes on December 31, 2017. During the Transitional Rate Period, APCo has no Biennial Reviews but, in accordance with Code § 56-585.1:1 C 1 , there has been one proceeding before the Commission to determine APCo's fair ROE, or profit margin, to be used as the general rate of return applicable to its RACs. On March 31, 2016, APCo filed an application concerning this ROE determination, requesting approval of an ROE of 10.43% to be used for its RACs allowed under Code §§ 56-585.1 A 5 and A 6. The Commission issued a final

[82] *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, 2014 S.C.C. Ann. Rept. 392, Final Order (Nov. 26, 2014).

[83] This represents 60% of earnings above the earnings band of 9.9-10.9%. Consequently, APCo retained $3.9 million of earnings above the 10.9% fair combined return.

[84] The market cost of equity is the actual cost of equity in capital markets for companies comparable in risk to APCo that are seeking to attract equity capital and which results in a fair combined return.

order in this case on October 6, 2016, finding that a fair ROE to be used prospectively for APCo's RACs was 9.4%.[85]

2. Rate Adjustment Clauses

Similar to DEV, APCo also has proposed and received approval for a number of RACs. APCo's generation RAC ("G-RAC") is associated with investments in generating facilities made in accordance with § 56-585.1 A 6 of the Code. APCo also implemented several riders for recovering E&R-related costs, a rider for recovering costs associated with APCo's voluntary compliance with the RPS goals, and riders for recovering costs associated with peak-shaving and energy efficiency programs.

a. Generation Rate Adjustment Clause

On January 3, 2012, the Commission issued a Final Order in Case No. PUE-2011-00036 approving APCo's proposed G-RAC to recover costs associated with the acquisition and operation of a 580 MW gas-fired generating unit located near Dresden, Ohio.[86] This RAC has been renewed periodically since initial approval. The currently approved G-RAC reflects an annual overall revenue requirement of $32.2 million.[87] This revenue requirement is based on an ROE of 10.7%, which includes a 100 basis point incentive return pursuant to § 56-585.1 A 6 of the Code. The currently approved monthly G-RAC charge for a residential customer using 1,000 kWh is $2.80.[88]

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[85] *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. PUE-2016-00038, 2016 S.C.C. Ann .Rept. 393, Final Order (Oct. 6, 2016).

[86] *Petition of Appalachian Power Company, For approval of a rate adjustment clause pursuant to § 56-585.1 A 6 of the Code of Virginia to recover the costs of the Dresden Generating Plant*, Case No. PUE-2011-00036, 2012 S.C.C. Ann. Rept. 254, Final Order (Jan. 3, 2012).

[87] *Petition of Appalachian Power Company, For the revision of a rate adjustment clause pursuant to § 56-585.1 A 6 of the Code of Virginia with respect to the Dresden Generating Plant*, Case No. PUE-2016-00024, 2016 S.C.C. Ann. Rept. 382, Final Order (Dec. 30, 2016).

[88] The G-RAC charge for a residential customer using 1,000 kWh will decrease to $2.42 on March 1, 2018.

b. Wind Generation Rate Adjustment Clause

On July 5, 2017, APCo filed an application seeking approval to recover costs associated with APCo's proposed acquisition of Beech Ridge II LLC and Hardin Wind Energy LLC, along with their associated wind generation resources that are under development, which total 225 MW.[89] APCo's application states that it plans to acquire these companies after the facilities' commercial operations dates in mid-2019. APCo proposes to implement a Wind G-RAC with a rate of zero for the time being and projects that, for the 12 months following acquisition and commercial operation of the facilities, the Wind G-RAC revenue requirement would be approximately $11.5 million. This case currently is pending before the Commission; a hearing is scheduled to be held on February 6, 2018.

c. Transmission Rate Adjustment Clause

APCo's transmission RAC ("T-RAC") was established in 2009, pursuant to Code § 56-585.1 A 4, to allow recovery of APCo's costs for transmission service, transmission facilities, and associated administrative and ancillary charges associated with APCo's participation in PJM.[90] This T-RAC replaced the unbundled transmission component of previously approved base rates. Since 2009 the T-RAC has been modified by the Commission. Currently, a revenue requirement of $213.4 million has been approved to allow APCo to recover its transmission related costs.[91] A portion of this revenue requirement is recovered through the T-RAC, and the balance is recovered through base rates. Since 2007 the T-RAC, together with the transmission

[89] *Petition of Appalachian Power Company, For a rate adjustment clause pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2017-00031, Doc. Con. Cen. No. 170730123, Order for Notice and Hearing (July 27, 2017).
[90] *Petition of Appalachian Power Company, For approval of a rate adjustment clause pursuant to § 56-585.1 A 4 of the Code of Virginia*, Case No. PUE-2009-00031, 2009 S.C.C. Ann. Rept. 450, Final Order (Oct. 6, 2009).
[91] *Application of Appalachian Power Company, For approval of a rate adjustment clause pursuant to § 56-585.1 A 4 of the Code of Virginia,* Case No. PUE-2015-00086, 2015 S.C.C. Ann. Rept. 370, Final Order (Nov. 4, 2015).

component of base rates, represents a total increase of $14.05 in the monthly bill of a residential customer using 1,000 kWh.[92]

d. Environmental and Reliability Surcharges

At the time Chapter 933 became effective on July 1, 2007, APCo was collecting a surcharge ("E&R Surcharge"), pursuant to Code § 56-582 B (vi), for the recovery of incremental costs, incurred on and after July 1, 2004, for transmission and distribution system reliability and for compliance with state or federal environmental laws or regulations. Chapter 933 effectively eliminated APCo's ability to collect E&R costs incurred beyond the end of capped rates (December 31, 2008). Since the E&R Surcharge was collected based on costs previously incurred, and since APCo was allowed a final true-up to ensure full collection of these costs, the E&R Surcharge was collected through January 31, 2013.[93] APCo's aggregate collection of incremental E&R costs totaled approximately $224.9 million.

Although Chapter 933 effectively ended the E&R Surcharge, it authorized the establishment of RACs for the collection of "[p]rojected and actual costs of projects that the Commission finds to be necessary to comply with state or federal environmental laws or regulations applicable to generation facilities used to serve the utility's native load obligations."[94] On March 31, 2011, APCo filed a petition requesting establishment of an environmental RAC ("E-RAC") to collect such costs, which petition was granted in part by the Commission.[95] The

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[92] As of July 1, 2007, transmission-related charges were $4.66, or 7%, of the total monthly bill for an APCo residential customer using 1,000 kWh. Currently, transmission-related charges represent $18.71, or 16.2%.

[93] *Application of Appalachian Power Company, For recovery of environmental and reliability costs*, Case No. PUE-22009-00039, 2011 S.C.C. Ann. Rept. 297, Order (Dec. 20, 2011). As of July 1, 2007, the E&R surcharge was $1.84 per month for a residential customer using 1,000 kWh.

[94] Code § 56-585.1 A 5 d, now found at § 56-585.1 A 5 e.

[95] *Petition of Appalachian Power Company, For approval of a rate adjustment clause, E-RAC, to recover costs incurred in complying with state and federal environmental laws and regulations, pursuant to Va. Code § 56-585.1 A 5 e*, Case No. PUE-2011-00035, 2011 S.C.C. Ann. Rept. 474, Order Approving Rate Adjustment Clause (Nov. 30, 2011), *rev'd in part, Appalachian Power Co. v. State Corp. Comm'n*, 284 Va. 695 (2012), *order on remand*, 2012 S.C.C. Ann Rept. 253, Order Granting Motion (Dec. 12, 2012).

E-RAC expired on January 23, 2015, and APCo's aggregate collection of E-RAC costs totaled approximately $73.3 million.[96]

e. Renewable Energy Portfolio Standard Program

Chapter 933 created what is now Code § 56-585.1 A 5 d,[97] which authorizes the establishment of RACs for costs related to a utility's voluntary participation in an RPS program pursuant to § 56-585.2 of the Code. On November 3, 2011, the Commission approved APCo's initial request for an RPS-RAC.[98] The amounts of costs recovered through the RPS-RAC have fluctuated, and the currently approved RPS-RAC reflects an annual overall revenue requirement of $0.9 million.[99] This RPS-RAC represents a monthly charge of $0.00 for all customer classes due to the immaterial nature of the revenue requirement.

A pending application seeks to increase the RPS-RAC total annual revenue requirement to $5.8 million. If approved, this increase would be placed into effect on April 1, 2018, and would increase rates by $0.65 for a residential customer using 1,000 kWh.[100]

f. Demand Response Rate Adjustment Clause

The demand response RAC ("DR-RAC") was established to recover the costs for APCo's approved peak shaving programs in accordance with § 56-585.1 A 5 b of the Code.[101] On June

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[96] There is no current E-RAC.
[97] Originally, this section was numbered § 56-585.1 A 5 c.
[98] *Petition of Appalachian Power Company, For approval of a rate adjustment clause, RPS-RAC, to recover the incremental costs of participation in the Virginia renewable energy portfolio standard program, pursuant to Va. Code §§ 56-585.1 A 5 d and 56-585.2 E*, Case No. PUE-2011-00034, 2011 S.C.C. Ann. Rept. 471, Order Approving Rate Adjustment Clause (Nov. 3, 2011).
[99] *Petition of Appalachian Power Company, For approval of a rate adjustment clause, RPS-RAC, to recover the incremental costs of participation in the Virginia renewable energy portfolio standard program pursuant to Va. Code §§ 56-585.1 A 5 d and 585.2 E*, Case No. PUE-2016-00042, Doc. Con. Cen. No. 170210015, Final Order (Feb. 1, 2017).
[100] *Petition of Appalachian Power Company, For approval of a rate adjustment clause, RPS-RAC, to recover the incremental costs of participation in the Virginia renewable energy portfolio standard program pursuant to Va. Code §§ 56-585.1 A 5 d and 56-585.2 E*, Case No. PUR-2017-00065, Doc. Con. Cen. No. 170630028, Order for Notice and Hearing (June 20, 2017).
[101] Chapter 933 included language in § 56-585.1 A 5 b relating to DSM, conservation, energy efficiency, and load management. This language was later revised, and § 56-585.1 A 5 b now refers only to peak shaving programs.

17, 2016, the Commission approved APCo's request for a DR-RAC.[102] The currently approved DR-RAC reflects an annual overall revenue requirement of $4.2 million. This DR-RAC represents a monthly charge of $0.37 for a residential customer using 1,000 kWh.

g. Energy Efficiency Rate Adjustment Clause

The EE-RAC was established to recover the costs for APCo's approved energy efficiency programs in accordance with § 56-585.1 A 5 c of the Code.[103] On June 24, 2015, the Commission approved APCo's initial request for an EE-RAC.[104] The currently approved EE-RAC reflects an annual overall revenue requirement of $4.7 million.[105] This EE-RAC represents a monthly charge of $0.38 for a residential customer using 1,000 kWh.[106]

A pending application seeks to increase the EE-RAC total annual revenue requirement to $6.9 million. If approved by the Commission, this increase would be placed into effect on July 1, 2018, and would increase rates by $0.20 for a residential customer using 1,000 kWh.[107]

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[102] *Petition of Appalachian Power Company, For approval to implement two demand response programs and for approval of a rate adjustment clause pursuant to § 56-585.1 A 5 of the Code of Virginia*, Case No. PUE-2015-00118, 2016 S.C.C. Ann. Rept. 309, Final Order (June 17, 2016).

[103] Chapter 933 included language in § 56-585.1 A 5 b relating to DSM, conservation, energy efficiency, and load management. Section 56-585.1 A 5 c was later added which refers to only energy efficiency programs.

[104] *Petition of Appalachian Power Company, For approval to implement a portfolio of energy efficiency programs and for approval of a rate adjustment clause pursuant to § 56-585.1 A 5 c of the Code of Virginia*, Case No. PUE-2014-00039, 2015 S.C.C. Ann. Rept. 215, Final Order (June 24, 2015).

[105] *Petition of Appalachian Power Company, For approval to continue a rate adjustment clause, the EE-RAC, pursuant to § 56-585.1 A 5 c of the Code of Virginia*, Case No. PUE-2016-00089, Doc. Con. Cen. No. 170530280, Final Order (May 11, 2017).

[106] Under § 56-585.1 A 5 c, costs of new energy efficiency programs are not chargeable to any customer that has a verifiable history of having used more than 10 MW of demand from a single meter of delivery. Other large general service customers (those with a verifiable history of having used more than 500 kilowatts of demand from a single meter of delivery) also may be exempt from paying for new energy efficiency programs if such customers have notified their utility of non-participation and have, at their own expense, implemented energy efficiency programs that have produced or will produce measured and verified results consistent with industry standards and other regulatory criteria.

[107] *Petition of Appalachian Power Company, For approval of a rate adjustment clause, the EE-RAC, pursuant to § 56-585.1 A 5 c of the Code of Virginia and for approval of new energy efficiency programs*, Case No. PUR-2017-00126, Doc. Con. Cen. No. 170930026, Petition (Sept. 29, 2017).

h. Vegetation Management Rate Adjustment Clause

On November 17, 2016, APCo filed an application in Case No. PUE-2016-00090 for approval of a RAC, designated as VM-RAC, to recover the costs of an expanded vegetation management program. APCo proposed to spend $110 million in capital costs along with $175 million of operating expenses in the first seven years of the expanded program with an associated revenue requirement for the first year of $13 million. The Commission denied APCo's application in its July 17, 2017 Final Order, noting, among other things, Consumer Counsel's concern that the VM-RAC represented an increase of 132% over APCo's historical spending for vegetation management while tree-related outage time was projected to decrease by only 16%.[108]

3. Fuel Factor

APCo's fuel factor has been modified several times since the enactment of Chapter 933. These changes are generally driven by increases or decreases in the cost of generating fuel, changes in the cost of power from the American Electric Power ("AEP") system, a general decline in off-system sales margins, and changes associated with the provision of Chapter 933. Collectively, these fuel factor revisions have resulted in a net increase in rates of approximately $151.1 million since July 1, 2007. These fuel-related increases represent an increase of $9.89 per month for a residential customer using 1,000 kWh.[109]

On September 15, 2017, APCo filed an application to revise its fuel factor. The proposed revision would decrease fuel factor revenues by $18.8 million. For a residential customer using 1,000 kWh, the revised fuel factor, if approved, would decrease rates by $1.32 per month. On

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[108] *Petition of Appalachian Power Company, For approval of a rate adjustment clause pursuant to § 56-585.1 A 5 f of the Code of Virginia*, Case No. PUE-2016-00090, Doc. Con. Cen. No. 170720242, Final Order (July 17, 2017).

[109] As of July 1, 2007, fuel-related charges were $13.12, or 19.7%, of the total monthly bill for an APCo residential customer using 1,000 kWh. Currently, fuel-related charges represent $23.01, or 20%, of the monthly bill for such a customer.

October 12, 2017, the Commission issued an order allowing the proposed decrease in rates to be put into effect on an interim basis for service rendered on and after November 1, 2017.[110]

C. Electric Cooperatives

Virginia's electric industry includes 13 member-owned electric cooperatives:

- A&N Electric Cooperative;
- BARC Electric Cooperative;
- Central Virginia Electric Cooperative;
- Community Electric Cooperative;
- Craig-Botetourt Electric Cooperative;
- Mecklenburg Electric Cooperative;
- Northern Neck Electric Cooperative;
- Northern Virginia Electric Cooperative;
- Powell Valley Electric Cooperative;
- Prince George Electric Cooperative;
- Rappahannock Electric Cooperative;
- Shenandoah Valley Electric Cooperative; and
- Southside Electric Cooperative.

Chapter 933 established significant new provisions for electric cooperatives. Among other things, these provisions, which are contained in Code § 56-585.3, authorize electric cooperatives to increase or decrease rates for distribution service at any time provided that the increase or decrease does not exceed a change in excess of 5% during any three-year period. This Code provision as currently written also allows electric cooperatives to adjust certain fees without Commission approval and to modify their rate designs to collect all customer-related costs through a fixed monthly charge rather than through volumetric charges. The electric cooperatives have implemented a number of rate changes since 2007 using traditional Commission processes and the provisions of Code § 56-585.3. The electric cooperatives also have passed on to customers the costs of purchased power through changes in the cooperatives' wholesale power cost adjustment clauses.

[110] *Application of Appalachian Power Company, To revise its fuel factor*, Case No. PUR-2017-00120, Doc. Con. Cen. No. 171030110, Order Establishing 2017-2018 Fuel Factor Proceeding (Oct. 12, 2017).

1. A&N Electric Cooperative

A&N Electric Cooperative ("A&N") has not made changes pursuant to the provisions of Chapter 933. However, A&N has had several major proceedings before the Commission related to its acquisition of the Virginia portion of the distribution service territory and related facilities of Delmarva Power & Light Company; the transfer of associated certificates; and transitional rates, terms, and conditions of service. In approving the acquisition and related matters, the Commission required that A&N file a base rate case to implement a cost-based rate for its combined system on or before January 1, 2012. A&N complied with this requirement by filing a base rate application on November 22, 2011, in Case No. PUE-2011-00096. On July 25, 2012, the Commission issued its Final Order in that proceeding which, among other things, approved a stipulation that resulted in a $503,514 reduction in A&N's base rates.[111]

On July 11, 2012, A&N filed an application for approval to amend its existing Electric Service Backed 100% by Renewable Energy Certificates Tariff, designated as Rider R, in Case No. PUE-2012-00090. On July 31, 2012, the Commission issued an Order Amending Tariff granting A&N's request.[112]

2. BARC Electric Cooperative

BARC Electric Cooperative ("BARC") administratively revised certain fees pursuant to § 56-585.3 A 3 of the Code. Specifically, on November 1, 2011, BARC increased its fees related to reconnection of service, collection of delinquent accounts, returned checks, trouble calls, and meter testing deposits. Additionally, BARC administratively increased its rates by 5% on January 1, 2012, in accordance with § 56-585.3 A 2 of the Code. On July 11, 2012, BARC filed

[111] *Application of A&N Electric Cooperative, For a revenue-neutral adjustment of its electric rates and consolidation of tariffs*, Case No. PUE-2011-00096, 2012 S.C.C. Ann. Rept. 312, Final Order (July 25, 2012).
[112] *Application of A&N Electric Cooperative, For amendment of Electric Service Backed 100% by Renewable Energy Certificates Tariff*, Case No. PUE-2012-00090, 2012 S.C.C. Ann. Rept. 496, Order Amending Tariff (July 31, 2012).

an application requesting Commission approval to implement a seasonal reconnection charge and to eliminate several rate schedules. The Commission approved this request, subject to certain revisions, on October 26, 2012.[113]

Additionally, on July 5, 2012, BARC filed an application for approval to amend its existing Electric Service Backed 100% by Renewable Energy Certificates Tariff, designated as Rider R, in Case No. PUE-2012-00079. On July 31, 2012, the Commission issued an Order Amending Tariff granting BARC's request.[114] On February 9, 2016, BARC administratively filed a new tariff entitled Community Solar Electric Service - Schedule PV.

3. Craig-Botetourt Electric Cooperative

Craig-Botetourt Electric Cooperative ("CBEC") sought Commission approval of a base rate change in Case No. PUE-2009-00065. By Final Order dated June 16, 2010, the Commission approved a revenue increase of $1,397,132 effective for service rendered on and after April 27, 2010.[115] On July 1, 2016, CBEC administratively increased its rates by 5% and rebalanced customer charges in accordance with Code § 56-585.3 A 4.

4. Community Electric Cooperative

On July 1, 2009, Community Electric Cooperative ("CEC") administratively increased its rates by 5% in accordance with § 56-585.3 A 2 of the Code. Additionally, CEC filed an application for a base rate increase on June 19, 2012, seeking an increase of approximately $1.18 million. In an order dated March 22, 2013, the Commission approved an increase of

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[113] *Application of BARC Electric Cooperative, For approval of a reconnection charge and the elimination of several rate schedules*, Case No. PUE-2012-00066, 2012 S.C.C. Ann. Rept. 472, Final Order (Oct. 26, 2012).

[114] *Application of BARC Electric Cooperative, For amendment of 100% Renewable Energy Attributes Electric Service Tariff*, Case No. PUE-2012-00079, 2012 S.C.C. Ann. Rept. 482, Order Amending Tariff (July 31, 2012).

[115] *Application of Craig-Botetourt Electric Cooperative, For a general increase in electric rates*, Case No. PUE-2009-00065, 2010 S.C.C. Ann. Rept. 360, Final Order (June 16, 2010).

approximately $979,157.[116] Additionally, CEC administratively revised its terms and conditions of service and modified certain fees pursuant to Code § 56-585.3 A 3, effective February 1, 2015. Specifically, CEC increased its fees related to service connection, temporary connection, meter reading, reconnection of service, collection of delinquent accounts, trouble calls, and meter testing deposits.

5. Central Virginia Electric Cooperative

Central Virginia Electric Cooperative ("CVEC") administratively revised certain of its fees pursuant to Code § 56-585.3 A 3. Specifically, on September 1, 2009, CVEC increased its fees related to reconnection of service, collection of delinquent accounts, and meter testing. Additionally, CVEC sought Commission approval of three base rate increases. By order dated March 30, 2009, in Case No. PUE-2009-00013, the Commission approved an increase of approximately $2.3 million effective April 2, 2009.[117] In Case No. PUE-2010-00095, the Commission approved a stipulation which provided for a base rate increase of approximately $2.9 million to be effective May 1, 2011.[118] In Case No. PUE-2012-00045, the Commission approved a stipulation which provided for a base rate increase of approximately $15.1 million to be effective December 1, 2012.[119] This requested increase was largely attributable to increased purchased power costs.

On July 27, 2012, CVEC filed an application for approval to amend its existing Electric Service Backed 100% by Renewable Energy Certificates Tariff, designated as Rider R, in Case

[116] *Application of Community Electric Cooperative, For a general increase in electric rates*, Case No. PUE-2012-00041, 2013 S.C.C. Ann. Rept. 265, Final Order (Mar. 22, 2013).
[117] *Application of Central Virginia Electric Cooperative, For a Streamlined Increase in Rates*, Case No. PUE-2009-00013, 2009 S.C.C. Ann. Rept. 401, Order (Mar. 30, 2009).
[118] *Application of Central Virginia Electric Cooperative, For general rate relief*, Case No. PUE-2010-00095, 2011 S.C.C. Ann. Rept. 356, Final Order (Sept. 7, 2011).
[119] *Application of Central Virginia Electric Cooperative, For a general increase in electric rates,* Case No. PUE-2012-00045, 2013 S.C.C. Ann. Rept. 267, Final Order (Feb. 22, 2013).

No. PUE-2012-00092, which the Commission approved on August 10, 2012.[120] On April 5, 2013, CVEC filed an application for approval for new proposed voluntary prepaid electric service tariffs in Case No. PUE-2013-00032. On January 14, 2014, the Commission granted CVEC's application subject to certain requirements.[121]

6. Mecklenburg Electric Cooperative

Mecklenburg Electric Cooperative ("MEC") received Commission approval for a base rate increase of $7.1 million by Final Order dated September 17, 2009, in Case No. PUE-2009-00006.[122] On July 10, 2012, MEC filed an application for approval to amend its existing Electric Service Backed 100% by Renewable Energy Certificates Tariff, designated as Rider GT, in Case No. PUE-2012-00087. On July 31, 2012, the Commission issued an Order Amending Tariff granting MEC's request.[123] Additionally, MEC administratively amended its terms and conditions effective February 18, 2016, and increased its rates by 5%, effective August 1, 2016, pursuant to § 56-585.3 of the Code.

7. Northern Neck Electric Cooperative

On August 15, 2008, Northern Neck Electric Cooperative ("NNEC") filed an application in Case No. PUE-2008-00076, requesting an increase of $2.22 million. NNEC also proposed a significant rate design change that would have increased the fixed monthly access charge for residential customers. On January 13, 2009, the Commission issued a Final Order which, among other things, approved an increase of $2 million and lowered NNEC's proposed residential

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[120] *Application of Central Virginia Electric Cooperative, For amendment of Electric Service Backed 100% by Renewable Energy Certificates Tariff*, Case No. PUE-2012-00092, 2012 S.C.C. Ann. Rept. 497, Order Amending Tariff (Aug. 10, 2012).

[121] *Application of Central Virginia Electric Cooperative, For approval of prepaid electric service tariff*, Case No. PUE-2013-00032, Doc. Con. Cen. No. 140120056, Order on Application (Jan. 14, 2014).

[122] *Application of Mecklenburg Electric Cooperative, For a general increase in electric rates*, Case No. PUE-2009-00066, 2009 S.C.C. Ann. Rept. 387, Final Order (Sept. 17, 2009).

[123] *Application of Mecklenburg Electric Cooperative, For amendment of Electric Service Backed 100% by Renewable Energy Certificates Tariff*, Case No. PUE-2012-00087, 2012 S.C.C. Ann. Rept. 493, Order Amending Tariff (July 31, 2012).

access charge of $22.23 per month to $16 per month.[124] Subsequently, NNEC exercised its authority pursuant to § 56-585.3 A 4 of the Code to increase administratively its monthly access fees in conjunction with a corresponding reduction in its delivery charges. This change increased the monthly access charge for residential customers from $16 to $22.23.

On July 27, 2012, NNEC filed an application for approval to amend its existing 100% Renewable Energy Attributes Electric Service Rider, designated as Rider RE-1, in Case No. PUE-2012-00093. On August 10, 2012, the Commission issued an Order Amending Tariff granting NNEC's request.[125] On March 2, 2015, NNEC filed an application for approval for new proposed voluntary prepaid electric service tariffs, which application was approved on October 23, 2015.[126]

Additionally, NNEC on two occasions has administratively increased its rates by 5% pursuant to § 56-585.3 A 2 of the Code, with effective dates of November 1, 2012, and April 1, 2016. Finally, NNEC is currently seeking a base rate increase of approximately $1.8 million; that case is currently pending before the Commission.[127]

8. Northern Virginia Electric Cooperative

Northern Virginia Electric Cooperative ("NOVEC") has not made changes to its rates, Schedule F fees or terms and conditions as permitted by Code § 56-585.3. Additionally, NOVEC proposed a base rate reduction of approximately $9.8 million in Case No. PUE-2010-00044. By Final Order dated July 27, 2011, the Commission approved a base rate reduction of

[124] *Application of Northern Neck Electric Cooperative*, For a general increase in electric rates, Case No. PUE-2008-00076, 2009 S.C.C. Ann. Rept. 336, Final Order (Jan. 13, 2009).

[125] *Application of Northern Neck Electric Cooperative, For amendment of 100% Renewable Energy Attributes Electric Service Rider Tariff*, Case No. PUE-2012-00093, 2012 S.C.C. Ann. Rept. 498, Order Amending Tariff (Aug. 10, 2012).

[126] *Application of Northern Neck Electric Cooperative, For approval of prepaid electric service tariff*, Case No. PUE-2015-00028, 2015 S.C.C. Ann. Rept. 311, Order on Application (Oct. 23, 2015).

[127] *Application of Northern Neck Electric Cooperative, For a general increase in electric rates*, Case No. PUR-2017-00101, Doc. Con. Cen. No. 170830320, Order for Notice and Hearing (Aug. 25, 2017).

$17.5 million and directed that NOVEC return certain over-collections of purchased power costs through a special cash-back process.[128]

On July 6, 2012, NOVEC filed an application for approval to amend its existing Electric Service Backed 100% by Renewable Energy Certificates Tariff, designated as Rider R, in Case No. PUE-2012-00081. On July 31, 2012, the Commission issued an Order Amending Tariff granting NOVEC's request.[129] Finally, on May 16, 2013, in Case No. PUE-2013-00055, NOVEC filed an application for approval of pole attachment rates and terms and conditions related to attachments by Comcast of California/Maryland/ Pennsylvania/Virginia/West Virginia, LLC. The Commission determined a just and reasonable annual pole attachment rate for Comcast's attachments to NOVEC's poles in accordance with § 56-466 1 F of the Code.[130]

9. Prince George Electric Cooperative

Through an order dated April 6, 2010, the Commission authorized Prince George Electric Cooperative ("PGEC") to increase base rates by $2.3 million.[131] On July 6, 2012, PGEC filed an application for approval to amend its existing Electric Service Backed 100% by Renewable Energy Certificates Tariff, designated as Rider R, in Case No. PUE-2012-00083. On July 31, 2012, the Commission issued an order granting PGEC's request.[132] Additionally, on July 8, 2015, PGEC filed an application for approval of a new proposed voluntary prepaid electric

[128] *Application of Northern Virginia Electric Cooperative, For general rate relief*, Case No. PUE-2010-00044, 2011 S.C.C. Ann. Rept. 329, Final Order (July 27, 2011).
[129] *Application of Northern Virginia Electric Cooperative, For amendment of Electric Service Backed 100% by Renewable Energy Certificates Tariff*, Case No. PUE-2012-00081, 2012 S.C.C. Ann. Rept. 484, Order Amending Tariff (July 31, 2012).
[130] *Application of Northern Virginia Electric Cooperative, For approval of pole attachment rates and terms and conditions under § 56-466.1 of the Code of Virginia*, Case No. PUE-2013-00055, 2014 S.C.C. Ann. Rept. 272, Final Order (October 24, 2014).
[131] *Application of Prince George Electric Cooperative, For a general increase in electric rates*, Case No. PUE-2009-00089, 2010 S.C.C. Ann. Rept. 377, Final Order (Apr. 6, 2010).
[132] *Application of Prince George Electric Cooperative, For amendment of Electric Service Backed 100% by Renewable Energy Certificates Tariff*, Case No. PUE-2012-00083, 2012 S.C.C. Ann. Rept. 486, Order Amending Tariff (July 31, 2012).

service tariff in Case No. PUE-2015-00078, which the Commission granted, subject to certain requirements, on February 29, 2016.[133]

PGEC also administratively revised certain of its fees pursuant to § 56-585.3 A 3. Specifically, in May 2015, PGEC revised its fees related to, in part, service activation, collection of delinquent accounts, reconnection of service, returned payment, and service calls for customer equipment problems. In October 2015, PGEC exercised its authority pursuant to Code § 56-585.3 A 4 to increase administratively its monthly access fees along with a corresponding reduction in its delivery charges, effective January 1, 2016. This change increased the monthly access charge for residential customers from $16 to $29.

10. Rappahannock Electric Cooperative

Rappahannock Electric Cooperative ("REC") has revised administratively its terms and conditions of service and has modified certain of its fees pursuant to Code § 56-585.3 A 3. Specifically, on October 1, 2009, REC increased fees related to temporary service, reconnection of service, collection of delinquent accounts, and meter testing deposits. Effective November 1, 2009, REC increased its distribution rates in accordance with § 56-585.3 A 2 of the Code.

There were also two proceedings before the Commission related to REC's acquisition of a portion of the Virginia distribution service territory and related facilities of the Potomac Edison Company; the transfer of associated certificates; and transitional rates, terms, and conditions of service. Specifically, on May 14, 2010, the Commission approved the joint petition of REC, Shenandoah Valley Electric Cooperative ("SVEC") and the Potomac Edison Company, for the transfer of the Potomac Edison Company's service territory to REC and SVEC, subject to certain

[133] *Application of Prince George Electric Cooperative, For approval of prepaid electric service tariff,* Case No. PUE-2015-00078, Doc. Con. Cen. No. 160250164, Order on Application (Feb. 29, 2016).

key requirements.[134] Additionally, on July 29, 2013, REC filed an application for approval of a plan for customers obtained through the acquisition of service territory from the Potomac Edison Company to migrate to REC's legacy rates and to revise rate schedules for electric service. On April 2, 2014, REC's migration plan, as proposed in the application and modified by a stipulation, was approved by the Commission.[135]

Additionally, on August 11, 2011, REC filed an application for approval for a new proposed voluntary prepaid electric service tariff; the Commission granted this application subject to certain requirements.[136] On February 17, 2016, REC filed an application requesting approval to modify incentives for members participating in its existing air conditioner cycling switch DSM program ("A/C Program") and to recover program costs through a rider, designated as Rider DR.[137] By Final Order dated October 21, 2016, the Commission granted REC's requests.[138] Finally, REC currently is seeking a base rate increase of approximately $22.1 million in Case No. PUR-2017-00044. These rates are currently pending, and the interim rates

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[134] *Joint Petition of Rappahannock Electric Cooperative, Shenandoah Valley Electric Cooperative, and The Potomac Edison Company d/b/a Allegheny Power, For approval of the purchase and sale of service territory and facilities, for the issuance of, and cancellation of, certificates of public convenience and necessity, and for approval of special, transitional, rate schedules*, Case No. PUE-2009-00101, 2010 S.C.C. Ann. Rept. 391, Order (May 10, 2010).

[135] *Application of Rappahannock Electric Cooperative, For approval of a plan to migrate transitioning customers to the Cooperative's legacy rates and to revise rate schedules for electric service*, Case No. PUE-2013-00052, 2014 S.C.C. Ann. Rept. 270, Order Accepting Stipulation (Apr. 2, 2014).

[136] *Application of Rappahannock Electric Cooperative, For approval of prepaid electric service tariffs,* Case No. PUE-2011-00091, 2012 S.C.C. Ann. Rept. 293, Order on Application (Dec. 18, 2012).

[137] REC's A/C Program originally was approved by the Commission on June 15, 2010, subject to certain requirements. *Application of Rappahannock Electric Cooperative, For approval of a demand-side management program including promotional allowances,* Case No. PUE-2010-00046, 2010 S.C.C. Ann. Rept. 513, Order Granting Approval (June 15, 2010).

[138] *Application of Rappahannock Electric Cooperative, For approval of a modified incentive for A/C switch demand-side management program; and for approval of a rate adjustment clause to recover the costs of the demand-side management program pursuant to § 56-585.3 A 5of the Code of Virginia,* Case No. PUE-2016-00019, 2016 S.C.C. Ann. Rept. 379, Final Order (Oct. 21, 2016).

will go into effect in early 2018. A hearing in this case currently is scheduled for October 31, 2017.[139]

11. Shenandoah Valley Electric Cooperative

On April 15, 2010, April 1, 2014, and March 2017, SVEC administratively revised its terms and conditions of service and eliminated certain fees pursuant to § 56-585.3 A 3 of the Code. In the 2014 filing, SVEC increased fees pertaining to temporary connection, service reconnection, collection of delinquent accounts, processing returned checks and service calls for problems with customer equipment. Fees were eliminated in the other two filings.

SVEC also had two proceedings before the Commission related to its acquisition of a portion of the Virginia distribution service territory and certain facilities of the Potomac Edison Company; the transfer of associated certificates; and transitional rates, terms, and conditions of service. Specifically, on May 14, 2010, the Commission approved the joint petition of REC, SVEC and the Potomac Edison Company, for the transfer of the Potomac Edison Company's service territory to REC and SVEC, subject to certain key requirements.[140] On February 3, 2014, in Case No. PUE-2013-00132, SVEC filed an application for approval of a plan to migrate customers obtained through the acquisition of service territory from the Potomac Edison Company to SVEC's legacy rates and to increase base rates. On January 26, 2015, the Commission approved the migration plan and a rate increase of approximately $17 million.[141]

[139] *Application of Rappahannock Electric Cooperative, For a general increase in rates*, Case No. PUR-2017-00044, Doc. Con. Cen. No. 170620313, Order for Notice and Hearing (June 16, 2017).

[140] *Joint Petition of Rappahannock Electric Cooperative, Shenandoah Valley Electric Cooperative, and The Potomac Edison Company d/b/a Allegheny Power, For approval of the purchase and sale of service territory and facilities, for the issuance of, and cancellation of, certificates of public convenience and necessity, and for approval of special, transitional, rate schedules*, Case No. PUE-2009-00101, 2010 S.C.C. Ann. Rept. 391, Order (May 10, 2010).

[141] *Application of Shenandoah Valley Electric Cooperative, For approval of a general increase in base rates and a plan to migrate transitioning customers to its modified legacy rates, and for approval of revisions to rate schedules for electric service,* Case No. PUE-2013-00132, 2015 S.C.C. Ann. Rept. 200, Order on Application (Jan. 26, 2015).

On July 5, 2012, SVEC filed an application for approval to amend its existing 100% Renewable Energy Attributes Electric Service Rider, designated as Rider R, in Case No. PUE-2012-00080. On July 31, 2012, the Commission issued an Order Amending Tariff granting SVEC's request.[142]

12. Southside Electric Cooperative

On October 5, 2011, the Commission granted Southside Electric Cooperative ("SEC") approval to establish a late payment fee of 1.5%.[143] On July 6, 2012, SEC filed an application for approval to amend its existing Electric Service Backed 100% by Renewable Energy Certificates Tariff, designated as Rider R, in Case No. PUE-2012-00082. The Commission approved the application on July 31, 2012.[144]

On November 4, 2013, SEC filed an application for, among other things, approval of an increase in base rates and a new proposed voluntary prepaid electric service tariff. On June 27, 2014, the Commission issued a Final Order adopting a stipulation that granted an increase of approximately $7.5 million in revenues and approved the prepaid electric service tariff, subject to certain requirements.[145]

Finally, SEC administratively revised certain of its fees pursuant to § 56-585.3 A 3 of the Code. Specifically, on January 1, 2016, SEC increased its fee related to the cooperative making

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142 *Application of Shenandoah Valley Electric Cooperative, For amendment of 100% Renewable Energy Attributes Electric Service Tariff*, Case No. PUE-2012-00080, 2012 S.C.C. Ann. Rept. 483, Order Amending Tariff (July 31, 2012).

143 *Application of Southside Electric Cooperative, For approval of revisions to its existing terms and conditions, including a request to be allowed to implement a late fee*, Case No. PUE-2011-00004, 2011 S.C.C. Ann. Rept. 424, Final Order (Oct. 5, 2011).

144 *Application of Southside Electric Cooperative, For amendment of Electric Service Backed 100% by Renewable Energy Certificates Tariff*, Case No. PUE-2012-00082, 2012 S.C.C. Ann. Rept. 485, Order Amending Tariff (July 31, 2012).

145 *Application of Southside Electric Cooperative, For a general increase in electric rates and for approval of Schedule PCA-1 and a voluntary Prepaid Electric Service tariff (Schedule A-P)*, Case No. PUE-2013-00079, 2014 S.C.C. Ann. Rept. 297, Final Order (June 27, 2014).

a special trip to a customer's premises for meter reading. SEC also has administratively revised its terms and conditions effective July 1, 2016, and October 1, 2017.

III. NEEDED GENERATION FACILITIES

The Clause specifically requires that this assessment report "include an analysis of, among other matters, the amount, reliability and type of generation facilities needed to serve Virginia native load compared to that available to serve such load." DEV, APCo, and the electric cooperatives are, either directly or indirectly through purchased power arrangements, members of PJM, a regional transmission entity whose primary mission is to ensure the safety, reliability and security of the bulk electric power system. In conjunction with this mission, PJM analyzes and forecasts the future electricity needs of the region and undertakes a planning process intended to ensure that the growth of the electric transmission system takes place efficiently and in an orderly fashion and that reliability is maintained. PJM's long-term transmission planning process seeks to identify future transmission reliability violations and the upgrades necessary to prevent such violations. This process is intended to assure that the bulk power grid is sufficient to deliver power from available generation resources to loads within the PJM region. Transmission owners within PJM, such as DEV and APCo, are obligated to construct these needed facilities, provided that they can obtain all necessary regulatory and environmental approvals, arrange financing, and acquire needed rights-of-way.

PJM also imposes generating capacity obligations on its load-serving members, such as DEV and APCo, and requires that those members make forward commitments for meeting those obligations. Those commitments reflect needed reserve margins, including consideration of the forced outage rates of generation used to meet those obligations. As such, the "amount and reliability" of generation needed to serve Virginia load is directly impacted by PJM.

Virginia's electric utilities supply their customers with power from the utilities' facilities, which are located both inside and outside of Virginia, and from energy purchases from other entities. Approximately 90% of the total supply of energy to Virginia's IOU customers is produced from facilities under the Commission's rate setting jurisdiction even though some of those facilities are located outside of Virginia's boundaries. Power from jurisdictional plants that may be located physically in another state is not considered "imported" in any relevant definition because, from legal and regulatory standpoints, Virginia consumers have the same claim on such power as they do on power from jurisdictional plants physically located in Virginia.

For example, DEV's Mount Storm generating station, while physically located in West Virginia, is dispatched as part of DEV's fleet; is part of DEV's rate base; and its costs are included in rates regulated by the Commission. The same is true of APCo's facilities, some of which are physically located in West Virginia and Ohio. Despite these facilities' locations, the Virginia jurisdictional share of these generation assets is included in APCo's Virginia rate base. These facilities also are dispatched as part of APCo's fleet and are subject to Commission regulation.

Virginia's IOUs also procure energy through purchases from other sources. For instance, DEV and APCo purchase energy from the PJM markets. Such purchases often are made because it is cheaper for DEV and APCo to purchase energy at certain times than to produce it at company-owned facilities. Under this scenario, the IOU's ratepayers benefit from these utilities paying lower prices for energy.

During its 2008 session, the General Assembly passed bills that became Chapters 476 and 903 of the 2008 Acts of Assembly. These duplicate enactments added to Title 56 of the Code, Chapter 24, Electric Utility Integrated Resource Planning (§ 56-597 *et seq.*). Chapter 24 originally directed Virginia's IOUs to file IRPs with the Commission biennially beginning on September 1, 2009. These IRPs must include details of the IOUs' forecasts of load obligations and their plans to meet forecasted obligations through supply side and demand side resources over the ensuing 15 years to promote reasonable prices, reliable service, energy independence, and environmental responsibility.[146] In reviewing prior IRPs, the Commission has emphasized that the IRP, as a planning document, does not control future resource-specific decisions by the Commission; does not preclude the Commission from approving or rejecting any individual supply side or demand side resource in the future; and does not create any presumption for or against a particular resource.[147] The Commission determines whether an IRP is reasonable and in the public interest on a utility-specific basis given current assumptions for possible future outcomes.

In 2015 the General Assembly enacted legislation that, *inter alia*, amended the IRP statutes.[148] Pursuant to these amendments, each IOU must file an IRP with the Commission by May 1 of each year. As part of the IRP, each utility must evaluate and report on the effect of current and pending environmental regulations on the continued operation of existing electric generation facilities, or options for construction of new generation facilities, and the most cost-effective means of complying with the environmental regulations. Each utility also must address options for maintaining and enhancing rate stability, energy independence, and economic development, including retention and expansion of energy-intensive industries and service reliability.[149]

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[146] Code § 56-597 (definition of "Integrated Resource Plan").
[147] *See, e.g., Commonwealth of Virginia, ex rel., State Corporation Commission, In re: Virginia Electric and Power Company's Integrated Resource Plan filing pursuant to Va. Code § 56-597 et seq.*, Case No. PUE-2009-00096, 2010 S.C.C. Ann. Rept. 385, Final Order (Aug. 6, 2010).
[148] 2015 Va Acts ch 6.
[149] Va. Code § 56-599.

These IRPs examine the costs associated with future resource alternatives and how those resource alternatives would be dispatched in conjunction with existing resources. This type of analysis seeks to identify the optimum type or mix of future resources to serve Virginia load in a least cost and reliable manner. Thus, IRPs effectively work in conjunction with the PJM processes to address "the amount, reliability and type of generation facilities needed to serve Virginia native load compared to that available to serve such load"[150] by examining each IOU's existing and projected portfolio of supply and demand side resources necessary to meet projected demand over a 15-year planning period.

Informed by DEV's and APCo's IRP filings, the following section briefly discusses the future needs of DEV, APCo, and the electric cooperatives and the respective plans for meeting those needs.

A. Dominion Energy Virginia

As a participant in PJM, DEV relies on its generating resources, purchased power contracts, DSM initiatives and short-term capacity purchases for satisfying its load serving obligations. DEV's internal capacity (owned capacity, capacity acquired through long-term non-utility generation purchased power agreements, and DSM reductions) has been sufficient for meeting its obligations since 2015. DEV has been building a substantial amount of new capacity in recent years. The Bear Garden generating facility and the Virginia City Hybrid Energy Center became operational in 2011 and 2012, respectively, and the Warren County facility, which became operational in 2015, essentially eliminated any existing capacity deficit at the time it became operational. Additionally, DEV's Greensville County power station, with a summer capacity of 1,585 MW, is scheduled to become operational in late 2018, and several large solar facilities are operational or under construction. By constructing these facilities, DEV has

150 7th Enactment Clause, Chapter 933, Virginia Acts of Assembly (2007).

reduced its internal capacity deficit and, in the near term, is able to meet its internal capacity requirements with few market purchases.

DEV expects that additional capacity will be required to meet future needs. This new capacity can be comprised of a variety of types of resources with differing characteristics such as dispatch costs, renewable attributes, and environmental emissions. Consequently, the choice of the type of generation to meet a given need is driven by assessments of what mix of future resource additions will best meet native load needs and satisfy environmental requirements and public policy objectives in a least-cost manner. As set forth in its 2017 IRP,[151] DEV is planning to add nearly 1,000 MW of additional solar generation between 2018 and 2022. Additionally, DEV states that it plans to invest in additional renewable technologies.

Once DEV decides to develop a particular generating addition, it first must file an application with the Commission, either in the form of a rate proceeding or a proceeding seeking a certificate of public convenience and necessity ("CPCN") to construct and operate the facility, asserting that the facility is in the public interest. The Commission then examines whether there is a need (the "amount") for the proposed facility and whether the facility is the optimal least cost alternative (the "type") for satisfying that need. This combination of IRP, CPCN, and rate proceedings helps to ensure that the right "amount and type" of generating facilities are in place to serve Virginia's native load reliably and economically.

B. Appalachian Power Company

For more than 60 years APCo was a member of the AEP system, and APCo relied on the AEP Interconnection Agreement with other AEP affiliates to satisfy its load serving obligations.

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[151] DEV's 2017 IRP is being considered in Case No. PUR-2017-00051. The Commission has not yet issued a final order in this case.

On January 1, 2014, the AEP Interconnection Agreement was terminated.[152] As a result, APCo is now a stand-alone entity and participant within PJM.[153]

Like Dominion, as a participant in PJM, APCo relies on its generating resources, purchased power contracts, DSM initiatives and short-term energy purchases for satisfying its load-serving obligations. APCo's internal capacity (owned capacity, capacity acquired through long-term non-utility generation purchased power agreements, and DSM reductions) is projected to be sufficient for meeting its capacity obligations through 2025. Additionally, because APCo is a winter-peaking utility, satisfying PJM capacity requirements, which are designed around a summer peak, can leave APCo unable to self-supply its entire energy need in the winter. This potential energy shortage can be satisfied through short-term purchases including purchases from the PJM market. There is ample available energy within PJM to satisfy these shortfalls, and to date the transmission system has had sufficient deliverability for these short-term purchases. As such, APCo's winter energy deficit has not posed, nor is it expected to pose, reliability concerns for Virginia.

In 2013, APCo purchased a two-thirds interest in the Amos base-load coal facility from its affiliate Ohio Power Company, giving APCo sole ownership of that facility. The need for this purchase was approved in Case No. PUE-2012-00141.[154] Additionally, in 2014 and 2015, APCo

[152] *Appalachian Power Co., Kentucky Power Co., Indiana Michigan Power Co., AEP Generation Resources Inc., and Ohio Power Co.,* 145 F.E.R.C. ¶ 61,267 (2013).

[153] APCo's participation in PJM's capacity market is through a method known as the Fixed Resource Requirement Alternative. Through this alternative, APCo submits a fixed resource requirement capacity plan and has opted out of PJM's Reliability Pricing Model capacity auction through the 2020/2021 delivery year.

[154] *Application of Appalachian Power Company, For approval of transactions to acquire interests in the Amos and Mitchell generation plants and to merge with Wheeling Power Company,* Case No. PUE-2012-00141, 2013 S.C.C. Ann. Rept. 341, Order (July 31, 2013).

retired seven smaller and older sub-critical coal-fired power plants, and in 2016, APCo completed the conversion of its Clinch River Plant Units 1 and 2 from coal to natural gas.[155]

Lastly, as set forth in its 2017 IRP,[156] APCo is planning to add approximately 1,400 MW of additional wind generation and 700 MW of solar generations over the next 15 years. APCo recently has sought Commission approval of a RAC to recover the costs associated with its proposed acquisition of two wind generation facilities in Case No. PUR-2017-00031. This case is currently pending. In considering whether the acquisition of these facilities is in the public interest, the Commission will examine whether there is a need (the "amount") for the proposed facilities and whether they are the optimal least cost alternative (the "type") for satisfying that need.

As previously noted, APCo expects that it will have sufficient capacity to meet its obligations through 2025 based on its existing resources. APCo plans to continue purchasing energy, as is needed and economical, from the PJM market.

C. Electric Cooperatives

The majority of the electric distribution cooperatives rely on Old Dominion Electric Cooperative ("ODEC") for satisfying their power supply needs. ODEC meets the needs of its members through a combination of its own generation and purchased power arrangements. ODEC is a member of PJM and is subject to meeting PJM's load serving obligations and also undertakes its own planning process for determining how best to meet its future needs. ODEC is regulated by FERC and is not subject to the Virginia IRP process.

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[155] *See Application of Appalachian Power Company, For certificates of public convenience and necessity to convert Units 1 and 2 of the Clinch River Plant to use natural gas rather than coal as fuel,* Case No. PUE-2013-00057, 2013 S.C.C. Ann. Rept. 415, Final Order (Dec. 20, 2013).

[156] APCo's 2017 IRP is being considered in Case No. PUR-2017-00045. The Commission has not yet issued a final order in this case.

Four cooperatives, CBEC, CVEC, NOVEC, and Powell Valley Electric Cooperative, are not members of ODEC and meet their internal needs through a combination of purchased power arrangements and owned generation. CBEC and CVEC rely almost entirely on purchased power arrangements.[157] CBEC purchases power from APCo and DEV. CVEC relies on longer term purchased power arrangements developed through a Request for Proposal process. Powell Valley Electric Cooperative purchases power from the Tennessee Valley Authority.[158] NOVEC has entered into a number of longer term purchased power arrangements and purchases some power from short-term markets and also operates a 49.9 MW biomass generating facility in Halifax County, Virginia.

[157] CVEC owns a small amount of generation.
[158] Powell Valley Electric Cooperative's rates are regulated by its federal wholesale power supplier.

IV. PEER GROUP COMPARISON

The Commission continues to monitor electricity rates in the Commonwealth, with a particular focus on changes in rates since the Regulation Act went into effect on July 1, 2007.[159]

Section 56-585.1 A 2 e requires that in setting the ROE for an electric IOU, "the Commission shall strive to maintain costs of retail electric energy that are cost competitive with costs of retail electric energy provided by the other peer group investor-owned electric utilities." Further, the Clause requires the Commission to report every five years on a comparison of Virginia incumbent electric utilities to those in their peer groups that meet the criteria of Code § 56-585.1 A 2. The peer group utilities for DEV and APCo currently meeting statutory requirements include: Alabama Power, Duke Energy Carolinas (includes North Carolina and South Carolina), Entergy Mississippi, Florida Power & Light Company, Georgia Power, Gulf Power, Mississippi Power, Duke Energy Progress Inc. (includes North Carolina and South Carolina), Duke Progress Energy Florida, Inc., South Carolina Electric & Gas, Tampa Electric Company, Kentucky Utilities, Inc. ("KU"), and Louisville Gas and Electric Company ("LG&E").[160]

[159] Separate financial reviews of DEV and APCo also were conducted by the Commission Staff; those results were included in the "Financial Reviews and Related Cases" section of the Commission's *Status Report: Implementation of the Virginia Electric Utility Regulation Act Pursuant to § 56-596 B of the Code of Virginia*, dated September 1, 2017. This report can be accessed through the Virginia Legislative Information System.

[160] In the Final Order in DEV's 2013 Biennial Review, the Commission found that KU and LG&E satisfied the requirements for inclusion in the peer group. Both KU and LG&E are a part of EEI's East South Central Region. Therefore, the averages for that region, as well as the data for both utilities is now included in Appendices 4, 5, and 6. *See Application of Virginia Electric and Power Company, For a 2013 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-2013-00020, 2013 S.C.C. Ann. Rept. 371, Final Order (Nov. 26, 2013). Appendices 4, 5, and 6 also include rates and ranking comparisons for Kentucky Utilities d/b/a Old Dominion Power Company located within Virginia (separately from Louisville Gas & Electric and from Kentucky Utilities located in Kentucky), APCo located in Virginia (separately from APCo located in West Virginia), and Dominion Virginia Power (separately from Dominion North Carolina Power located in North Carolina). These appendices refer to Dominion Virginia Power and Dominion North Carolina Power, as these were the names of the utilities at the time of the EEI report publication.

Pursuant to these directives, the Commission, through its Staff, developed several rate comparisons that utilize information from various Edison Electric Institute ("EEI") publications in an effort to assess the competitiveness of DEV's and APCo's rates as compared to those of the statutorily defined peer groups. In examining rate competitiveness, this analysis focused on the level of rates and did not attempt to focus on other potential measures of competitiveness such as electrical costs as a percent of income or as a percent of production costs. These comparisons are presented in Appendices 4, 5, and 6.

Typical bills for DEV, APCo, and their statutorily defined peer groups also were examined for differing customer groups and varying ranges of consumption.[161] This analysis focuses on typical bills for residential, commercial, and industrial customers and examines the competitiveness of DEV's rates and APCo's rates that were in effect on January 1, 2017,[162] and any change of such rates in effect on July 1, 2007. For purposes of this evaluation, a ranking closer to 1 equates with a lower, more competitive customer rate. For example, a customer of a utility with a ranking of 2 would have a lower rate than a customer of a utility with a ranking of 10.

It should be noted that the typical bill comparisons are based on the annualized rates[163] in effect on January 1, 2017, and as such, do not reflect any subsequent or pending rate changes. Any pending rate changes could increase or decrease the relative competitiveness of DEV's or APCO's rates, and potentially their ranking, if the rates of the peer group do not change on a comparable basis.

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[161] Typical bills are presented by on the usage and demand levels reported in the EEI reports.
[162] January 1, 2017, represents the latest information available from EEI.
[163] Annualized rates reflect a weighted average of summer and winter rates for those utilities that have such rates.

DEV's January 1, 2017 annualized residential rates[164] produce typical bills that rank DEV 11th out of the 20 companies[165] examined and are below the U.S. and South Atlantic averages and slightly above EEI's average for the East South Central region.[166] For residential customers using 1,000 kWh per month, DEV's bill rankings have declined five places (from a rank of 6 to a rank of 11) since July 1, 2007, to about the middle of the peer group. In other words, DEV's rates have become less competitive over the past ten years. DEV's commercial rates still remain competitive despite a slight decline in ranking for the largest commercial customers since July 1, 2007. DEV's January 1, 2017 annualized commercial rates produce typical bills that range from 4th to 8th out of the 20 companies examined and remain below the U.S., South Atlantic, and East South Central regional averages. DEV's industrial rates still appear generally competitive with the rates of the peer group, despite some declines in rank. DEV's January 1, 2017 annualized industrial rates produce bills that range from 2nd to 15th out of the 20 companies examined and are below the U.S. average and, for the most part, are below the South Atlantic and East South Central regional averages.

Similarly, for residential customers using 1,000 kWh per month, APCo's bill rankings have declined significantly (from a rank of 2, to a rank of 14, out of 20 companies) since July 1, 2007. In other words, APCo's rates have become less competitive over the past ten years. APCo's January 1, 2017 annualized residential rates are below the U.S. and South Atlantic regional averages, but above the East South Central Region average. APCo's commercial rates

[164] These rates are based on a residential customers using 1,000 kWh per month.

[165] Many of the peer group companies serve in more than one state and have differing typical bills depending on the respective state. Consequently, the typical bill comparison may include multiple listings for certain peer group companies. For this year's report, three additional utilities were added to the appendices for comparison, Kentucky Utilities Inc., Kentucky Utilities d/b/a Old Dominion Power Company, and LG&E. However, these three utilities did not provide complete data to EEI in July 2007; therefore not all of their rankings could be assessed for that time period.

[166] EEI's South Atlantic region includes Delaware, the District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia. EEI's East South Central region includes Alabama, Kentucky, Mississippi, and Tennessee.

have become less competitive and show a significant decline in rankings since July 1, 2007. APCo's January 1, 2017 annualized commercial rates produced typical bills that range from 3rd to 13th out of the 20 companies examined; however, they are still below the U.S., South Atlantic, and East South Central regional averages. APCo's January 1, 2017 industrial typical bills are ranked 6th to 13th out of the 20 companies examined, are below the U.S. and South Atlantic regional averages, and for the most part are near or below the East South Central region average. APCo's industrial bill rankings have declined overall since July 1, 2007.

Similar comparisons for the remaining peer group utilities may be drawn from the attached Appendices 4, 5, and 6. It should be noted that publicly available reliability related information for the peer group is limited, and as such, any reliability differences could only be developed on a somewhat superficial level. A review of reliability related information for the peer group utilities did not show any discernible trends in reliability or any indication that DEV's or APCo's overall ability to serve native load was notably different from that of the peer group.

In summary, APCO's and DEV's electricity rates appear to be fairly competitive with their peer utilities, although pending rate requests could impact the competitiveness of electricity rates in the future. Since July 1, 2007, both APCo's and DEV's rates have increased for a variety of reasons. Specifically, APCo's total bill for a residential customer using 1,000 kWh has increased from $66.61, as of July 1, 2007, to $115.25, as of October 1, 2017. APCo's bill increase over this period is attributable to base rate increases, fuel cost increases, RACs, and other rate changes pursuant to Code §§ 56-585.1 A 3 through A 6.

As of July 1, 2007, DEV's total bill for a residential customer using 1,000 kWh was $90.60. This amount has increased to $115.75 as of October 1, 2017. DEV's bill increase is attributable to RAC's and other rate changes approved pursuant to Code §§ 56-585.1 A 3 through A 6. Those increases were partially offset by reduced fuel costs.

Residential Consumer Electric Rates in Virginia
Expressed in $ per 1,000 kWh

UTILITIES	$ Jul-07	$ Jul-17	$ Change	% Change
IOU				
Appalachian Power Company	66.61	115.25	48.64	73.02
Dominion Energy Virginia	90.59	117.20	26.61	29.37
Old Dominion/Kentucky Utilities	67.57	103.82	36.25	53.65
Electric Cooperatives				
A&N	122.59	112.02	(10.57)	(8.62)
BARC	123.18	121.36	(1.82)	(1.48)
Central Virginia	83.04	130.22	47.18	56.82
Community	122.37	117.12	(5.26)	(4.29)
Craig Botetourt	114.90	150.94	36.04	31.37
Mecklenburg	121.71	126.77	5.06	4.15
Northern Neck	126.35	129.94	3.59	2.84
Northern Virginia	129.20	121.66	(7.54)	(5.84)
Prince George	118.62	120.48	1.86	1.56
Rappahannock	127.72	114.17	(13.56)	(10.61)
Shenandoah Valley	115.12	111.77	(3.35)	(2.91)
Southside	133.32	128.49	(4.83)	(3.62)

NOTES

1. Rates are exclusive of Local Utility, Consumption and, except for Rappahannock, Sales and Use taxes.
2. Dominion Energy Virginia's rates are annualized rates.

DOMINION ENERGY VIRGINIA
Residential Bill Increases Since
July 1, 2007

Bill as of 7/1/07			$	90.60
Increases Granted Per Code Section:				
56-585.1 A 4				
Base Rate Transmission (56-585.1 A 3)	$	6.92		
Rider T1 (Transmission)	$	1.77		
Total Transmission Rate Adjustment Clause			$	8.69
56-585.1 A 5				
Base Rate Energy Efficiency (56-585.1 A 3)	$	0.11		
Rider C1A & C2A (DSM)	$	0.61		
Total 56-585.1 A 5			$	0.72
56-585.1 A 6				
Rider R (Bear Garden)	$	1.45		
Rider S (Virginia City)	$	4.87		
Rider W (Warren County)	$	2.42		
Rider B (Biomass)	$	0.55		
Rider BW (Brunswick County)	$	2.53		
Rider GV (Greensville County)	$	1.64		
Rider US-2 (Solar)	$	0.19		
Rider U (Underground)	$	0.59		
Total 56-585.1 A 6			$	14.24
56-249.6 Fuel Factor			$	1.51
Bill as of 10/1/2017			**$**	**115.75**
Proposed Changes Per Code Section:				
56-585.1 A 5 (Riders C1A/C2A)			$	0.00
56-585.1 A 6 (Riders R, S, W, B, and GV)			$	(0.23)
56-585.1 A 6 (Riders BW and US-2)			$	(0.06)
Bill with Proposed Changes			**$**	**115.46**

APPENDIX 3

APPALCHIAN POWER COMPANY
Residential Bill Increases Since
July 1, 2007

Bill as of 7/1/07		$	66.61
Increases Granted Per Code Section:			
56-582 C (Base Rate Increase)		$	13.12
56-585.1 A (Going-In & Biennial Rate Reviews)		$	9.87
56-582 B (Reliability & Environmental Adj)		$	(1.84)
56-585.1 A 4			
Base Rate Transmission (56-585.1 A 3)	$ 7.42		
T-RAC (Transmission)	$ 6.63		
Total Transmission Rate Adjustment Clause		$	14.05
56-585.1 A 5			
DR-RAC (Demand Response)	$ 0.37		
EE-RAC (Energy Efficiency)	$ 0.38		
Total 56-585-1 A 5		$	0.75
56-585.1 A 6			
G-RAC (Dresden)		$	2.80
56-249.6 Fuel Factor		$	9.89
Bill as of 10/1/17		**$**	**115.25**
Pending and Proposed Changes Per Code Section:			
56-585.1 A 5			
EE-RAC (Energy Efficiency)		$	0.20
RPS-RAC (Renewable Portfolio Standard)		$	0.65
56-585.1 A 6			
G-RAC (Dresden)		$	(0.38)
56-249.6 Fuel Factor		$	(1.32)
Bill with Pending and Proposed Changes		**$**	**114.40**

PEER GROUP
Rate Comparison
Residential Customers

Monthly Usage of 500 kWh:	July 2007 $	January 2017 $	Change %	July 2007 Rank	January 2017 Rank	Rank Change
Alabama Power	$58.25	$74.53	27.95%	13	17	-4
Appalachian Power Company (Va)	$37.60	$61.35	63.16%	2	13	-11
Appalachian Power Company (WV)	$37.32	$67.50	80.87%	1	16	-15
Dominion North Carolina Power	$51.84	$58.69	13.21%	8	8	0
Dominion Virginia Power	$49.70	$60.28	21.29%	6	10	-4
DUKE Energy Carolinas (NC)	$45.78	$58.35	27.46%	4	5	-1
DUKE Energy Carolinas (SC)	$42.29	$60.15	42.23%	3	9	-6
Entergy Mississippi, Inc	$59.18	$58.22	-1.62%	14	4	10
FP&L Company	$54.45	$51.77	-4.92%	11	1	10
Georgia Power	$47.84	$60.90	27.30%	5	12	-7
Gulf Power	$56.07	$75.26	34.23%	12	18	-6
Mississippi Power	$70.04	$76.13	8.70%	17	19	-2
Duke Energy Progress, Inc. (NC)	$51.16	$58.57	14.48%	7	7	0
Duke Energy Progress, Inc. (SC)	$52.08	$61.96	18.97%	9	14	-5
Duke Progress Energy Florida, Inc.	$59.29	$62.32	5.11%	15	15	0
SCE&G	$54.30	$78.85	45.21%	10	20	-10
Tampa Electric Company	$61.64	$60.87	-1.25%	16	11	5
Kentucky Utilities (d/b/a ODP)		$57.10			3	
Louisville Gas & Electric		$58.53			6	
Kentucky Utilities (KY)		$55.24			2	
Average For East South Central	$51.06	$61.56	20.56%			
Average For South Atlantic	$54.35	$65.38	20.29%			
USA Average	$59.34	$71.46	20.42%			

PEER GROUP
Rate Comparison
Residential Customers

Monthly Usage of 750 kWh:	July 2007 $	January 2017 $	Change %	July 2007 Rank	January 2017 Rank	Rank Change
Alabama Power	$82.59	$104.34	26.33%	14	19	-5
Appalachian Power Company (Va)	$52.16	$87.82	68.37%	2	13	-11
Appalachian Power Company (WV)	$50.93	$94.21	84.98%	1	16	-15
Dominion North Carolina Power	$73.00	$82.11	12.48%	7	8	-1
Dominion Virginia Power	$71.04	$86.91	22.34%	6	12	-6
DUKE Energy Carolinas (NC)	$66.05	$81.17	22.89%	4	5	-1
DUKE Energy Carolinas (SC)	$60.35	$85.75	42.09%	3	10	-7
Entergy Mississippi, Inc	$78.57	$75.24	-4.24%	11	2	9
FP&L Company	$78.95	$73.60	-6.78%	12	1	11
Georgia Power	$68.60	$85.96	25.31%	5	11	-6
Gulf Power	$78.97	$103.34	30.86%	13	18	-5
Mississippi Power	$92.48	$100.36	8.52%	17	17	0
Duke Energy Progress, Inc. (NC)	$73.36	$81.63	11.27%	8	6	2
Duke Energy Progress, Inc. (SC)	$74.87	$88.24	17.86%	9	14	-5
Duke Progress Energy Florida, Inc.	$84.81	$88.98	4.92%	15	15	0
SCE&G	$77.70	$113.10	45.56%	10	20	-10
Tampa Electric Company	$88.10	$82.78	-6.04%	16	9	7
Kentucky Utilities (d/b/a ODP)		$79.64			4	
Louisville Gas & Electric		$81.91			7	
Kentucky Utilities (KY)		$77.21			3	
Average For East South Central	$70.51	$84.86	20.35%			
Average For South Atlantic	$78.09	$92.89	18.95%			
USA Average	$85.68	$102.94	20.14%			

PEER GROUP
Rate Comparison
Residential Customers

Monthly Usage of 1000 kWh:	July 2007 $	January 2017 $	Change %	July 2007 Rank	January 2017 Rank	Rank Change
Alabama Power	$104.94	$132.10	25.88%	14	19	-5
Appalachian Power Company (Va)	$66.72	$114.29	71.30%	2	14	-12
Appalachian Power Company (WV)	$64.55	$120.93	87.34%	1	16	-15
Dominion North Carolina Power	$94.17	$105.53	12.06%	7	9	-2
Dominion Virginia Power	$90.59	$111.76	23.37%	6	11	-5
DUKE Energy Carolinas (NC)	$86.33	$103.98	20.44%	4	5	-1
DUKE Energy Carolinas (SC)	$78.42	$111.34	41.98%	3	10	-7
Entergy Mississippi, Inc	$98.00	$92.28	-5.84%	10	1	9
FP&L Company	$103.46	$95.43	-7.76%	13	2	11
Georgia Power	$90.23	$112.36	24.53%	5	12	-7
Gulf Power	$101.87	$131.43	29.02%	12	18	-6
Mississippi Power	$114.76	$124.42	8.42%	17	17	0
Duke Energy Progress, Inc. (NC)	$95.56	$104.70	9.56%	8	7	1
Duke Energy Progress, Inc. (SC)	$96.33	$113.17	17.48%	9	13	-4
Duke Progress Energy Florida, Inc.	$110.34	$115.65	4.81%	15	15	0
SCE&G	$101.10	$147.53	45.92%	11	20	-9
Tampa Electric Company	$114.54	$104.68	-8.61%	16	6	10
Kentucky Utilities (d/b/a ODP)		$102.19			4	
Louisville Gas & Electric		$105.28			8	
Kentucky Utilities (KY)		$99.18			3	
Average For East South Central	$89.60	$107.87	20.39%			
Average For South Atlantic	$101.70	$120.34	18.33%			
USA Average	$111.68	$133.99	19.98%			

PEER GROUP
Rate Comparison
Commercial Customers

Usage of 375 kWh:	July 2007 $	January 2017 $	Change %	July 2007 Rank	January 2017 Rank	Rank Change
Alabama Power	$53.00	$88.13	66.28%	15	20	-5
Appalachian Power Company (Va)	$30.00	$46.00	53.33%	2	3	-1
Appalachian Power Company (WV)	$28.00	$45.00	60.71%	1	2	-1
Dominion North Carolina Power	$47.00	$55.95	19.04%	6	8	-2
Dominion Virginia Power	$45.00	$50.44	12.09%	4	4	0
DUKE Energy Carolinas (NC)	$49.00	$67.06	36.86%	9	16	-7
DUKE Energy Carolinas (SC)	$46.00	$59.20	28.70%	5	10	-5
Entergy Mississippi, Inc	$55.00	$58.00	5.45%	16	9	7
FP&L Company	$49.00	$44.00	-10.20%	10	1	9
Georgia Power	$58.00	$78.00	34.48%	17	18	-1
Gulf Power	$50.00	$65.00	30.00%	11	12	-1
Mississippi Power	$69.00	$78.00	13.04%	18	19	-1
Duke Energy Progress, Inc. (NC)	$50.00	$64.00	28.00%	12	11	1
Duke Energy Progress, Inc. (SC)	$48.00	$55.00	14.58%	7	6	1
Duke Progress Energy Florida, Inc.	$51.00	$53.00	3.92%	14	5	9
SCE&G	$50.00	$73.26	46.52%	13	17	-4
Tampa Electric Company	$48.00	$55.74	16.13%	8	7	1
Kentucky Utilities (d/b/a ODP)		$65.00			13	
Louisville Gas & Electric	$36.00	$66.00	83.33%	3	15	-12
Kentucky Utilities (KY)		$65.00			14	
Average For East South Central	$48.00	$65.00	35.42%			
Average For South Atlantic	$50.00	$59.00	18.00%			
USA Average	$55.00	$65.00	18.18%			

PEER GROUP
Rate Comparison
Commercial Customers

Demand of 40 kW and Usage of 10,000 kW	July 2007 $	January 2017 $	Change %	July 2007 Rank	January 2017 Rank	Rank Change
Alabama Power	$1,094.00	1,432.02	30.90%	18	20	-2
Appalachian Power Company (Va)	$619.00	1,042.00	68.34%	2	12	-10
Appalachian Power Company (WV)	$614.00	1,061.00	72.80%	1	16	-15
Dominion North Carolina Power	$780.00	834.38	6.97%	5	1	4
Dominion Virginia Power	$836.00	987.32	18.10%	7	8	-1
DUKE Energy Carolinas (NC)	$757.00	867.62	14.61%	4	3	1
DUKE Energy Carolinas (SC)	$733.00	887.64	21.10%	3	4	-1
Entergy Mississippi, Inc	$1,041.00	990.00	-4.90%	14	9	5
FP&L Company	$1,055.00	962.00	-8.82%	15	6	9
Georgia Power	$1,089.00	1,387.26	27.39%	17	19	-2
Gulf Power	$905.00	1,085.00	19.89%	10	17	-7
Mississippi Power	$1,009.00	1,029.00	1.98%	13	11	2
Duke Energy Progress, Inc. (NC)	$803.00	866.00	7.85%	6	2	4
Duke Energy Progress, Inc. (SC)	$839.00	960.00	14.42%	9	5	4
Duke Progress Energy Florida, Inc.	$971.00	1,053.00	8.44%	12	14	-2
SCE&G	$945.00	1,314.16	39.06%	11	18	-7
Tampa Electric Company	$1,065.00	1,019.94	-4.23%	16	10	6
Kentucky Utilities (d/b/a ODP)		967.00			7	
Louisville Gas & Electric	$838.00	1,054.00	25.78%	8	15	-7
Kentucky Utilities (KY)		1,042.00			13	
Average For East South Central	$929.00	1,116.00	20.13%			
Average For South Atlantic	$992.00	1,101.00	10.99%			
USA Average	$1,081.00	1,234.00	14.15%			

PEER GROUP
Rate Comparison
Commercial Customers

Demand of 40 kW and Usage of 14,000 kWh	July 2007 $	January 2017 $	Change %	July 2007 Rank	January 2017 Rank	Rank Change
Alabama Power	$1,378.00	1,818.57	31.97%	17	19	-2
Appalachian Power Company (Va)	$775.00	1,260.00	62.58%	1	10	-9
Appalachian Power Company (WV)	$786.00	1,331.00	69.34%	2	13	-11
Dominion North Carolina Power	$1,032.00	1,088.40	5.47%	9	3	6
Dominion Virginia Power	$999.00	1,181.12	18.23%	7	6	1
DUKE Energy Carolinas (NC)	$985.00	1,054.74	7.08%	6	2	4
DUKE Energy Carolinas (SC)	$951.00	1,106.97	16.40%	4	4	0
Entergy Mississippi, Inc	$1,354.00	1,257.00	-7.16%	15	9	6
FP&L Company	$1,355.00	1,166.00	-13.95%	16	5	11
Georgia Power	$1,263.00	1,547.51	22.53%	12	18	-6
Gulf Power	$1,164.00	1,392.00	19.59%	10	15	-5
Mississippi Power	$1,262.00	1,265.00	0.24%	11	11	0
Duke Energy Progress, Inc. (NC)	$982.00	1,054.00	7.33%	5	1	4
Duke Energy Progress, Inc. (SC)	$1,030.00	1,187.00	15.24%	8	7	1
Duke Progress Energy Florida, Inc.	$1,299.00	1,311.00	0.92%	13	12	1
SCE&G	$1,315.00	1,826.28	38.88%	14	20	-6
Tampa Electric Company	$1,488.00	1,229.01	-17.41%	18	8	10
Kentucky Utilities (d/b/a ODP)		1,341.00			14	
Louisville Gas & Electric	$947.00	1,464.00	54.59%	3	17	-14
Kentucky Utilities (KY)		1,448.00			16	
Average For East South Central	$1,160.00	1,443.00	24.40%			
Average For South Atlantic	$1,287.00	1,395.00	8.39%			
USA Average	$1,387.00	1,570.00	13.19%			

PEER GROUP
Rate Comparison
Commercial Customers

Demand of 500 kW and Usage of 150,000 kl	July 2007 $	January 2017 $	Change %	July 2007 Rank	January 2017 Rank	Rank Change
Alabama Power	$15,449.00	19,779.53	28.03%	18	20	-2
Appalachian Power Company (Va)	$8,967.00	14,534.00	62.08%	2	13	-11
Appalachian Power Company (WV)	$8,673.00	14,750.00	70.07%	1	14	-13
Dominion North Carolina Power	$11,465.00	12,179.94	6.24%	9	5	4
Dominion Virginia Power	$10,371.00	12,991.34	25.27%	5	8	-3
DUKE Energy Carolinas (NC)	$10,306.00	11,463.04	11.23%	4	3	1
DUKE Energy Carolinas (SC)	$9,852.00	12,381.90	25.68%	3	6	-3
Entergy Mississippi, Inc	$12,482.00	10,869.00	-12.92%	10	2	8
FP&L Company	$14,829.00	12,875.00	-13.18%	16	7	9
Georgia Power	$13,175.00	16,037.30	21.73%	12	17	-5
Gulf Power	$13,008.00	16,465.00	26.58%	11	18	-7
Mississippi Power	$13,570.00	14,043.00	3.49%	13	11	2
Duke Energy Progress, Inc. (NC)	$10,913.00	10,556.00	-3.27%	7	1	6
Duke Energy Progress, Inc. (SC)	$11,451.00	11,656.00	1.79%	8	4	4
Duke Progress Energy Florida, Inc.	$13,914.00	14,425.00	3.67%	15	12	3
SCE&G	$13,871.00	19,502.17	40.60%	14	19	-5
Tampa Electric Company	$14,907.00	13,663.84	-8.34%	17	10	7
Kentucky Utilities (d/b/a ODP)		15,335.00			15	
Louisville Gas & Electric	$10,421.00	15,670.00	50.37%	6	16	-10
Kentucky Utilities (KY)		13,408.00			9	
Average For East South Central	$11,908.00	14,941.00	25.47%			
Average For South Atlantic	$13,854.00	15,128.00	9.20%			
USA Average	$14,480.00	16,310.00	12.64%			

PEER GROUP
Rate Comparison
Commercial Customers

Demand of 500 kW and Usage of 180,000 kl	July 2007 $	January 2017 $	Change %	July 2007 Rank	January 2017 Rank	Rank Change
Alabama Power	$17,580.00	22,742.23	29.36%	18	20	-2
Appalachian Power Company (Va)	$9,707.00	15,871.00	63.50%	1	12	-11
Appalachian Power Company (WV)	$9,959.00	16,599.00	66.67%	2	15	-13
Dominion North Carolina Power	$13,016.00	13,967.00	7.31%	9	7	2
Dominion Virginia Power	$11,146.00	13,697.50	22.89%	3	6	-3
DUKE Energy Carolinas (NC)	$12,010.00	12,968.18	7.98%	6	3	3
DUKE Energy Carolinas (SC)	$11,380.00	13,613.96	19.63%	5	5	0
Entergy Mississippi, Inc	$14,480.00	12,404.00	-14.34%	10	2	8
FP&L Company	$16,986.00	14,599.00	-14.05%	16	9	7
Georgia Power	$14,486.00	17,239.13	19.01%	11	17	-6
Gulf Power	$14,680.00	18,206.00	24.02%	12	18	-6
Mississippi Power	$15,310.00	15,609.00	1.95%	14	11	3
Duke Energy Progress, Inc. (NC)	$12,257.00	11,767.00	-4.00%	7	1	6
Duke Energy Progress, Inc. (SC)	$12,884.00	13,068.00	1.43%	8	4	4
Duke Progress Energy Florida, Inc.	$16,346.00	16,335.00	-0.07%	15	13	2
SCE&G	$14,915.00	21,023.77	40.96%	13	19	-6
Tampa Electric Company	$17,136.00	15,231.84	-11.11%	17	10	7
Kentucky Utilities (d/b/a ODP)		16,505.00			14	
Louisville Gas & Electric	$11,243.00	16,832.00	49.71%	4	16	-12
Kentucky Utilities (KY)		14,297.00			8	
Average For East South Central	$13,516.00	16,691.00	23.49%			
Average For South Atlantic	$15,838.00	16,937.00	6.94%			
USA Average	$16,506.00	18,363.00	11.25%			

PEER GROUP
Rate Comparison
Industrial Customers

Demand of 75 kW and Usage of 15,000 kWh:	July 2007 $	January 2017 $	Change %	July 2007 Rank	January 2017 Rank	Rank Change
Alabama Power	$1,646.00	2,135.73	29.75%	15	19	-4
Appalachian Power Company (Va)	$945.00	1,623.00	71.75%	1	8	-7
Appalachian Power Company (WV)	$982.00	1,717.00	74.85%	2	12	-10
Dominion North Carolina Power	$1,153.00	1,241.00	7.63%	5	1	4
Dominion Virginia Power	$1,368.00	1,702.33	24.44%	9	10	-1
DUKE Energy Carolinas (NC)	$1,140.00	1,363.28	19.59%	4	2	2
DUKE Energy Carolinas (SC)	$1,112.00	1,493.87	34.34%	3	5	-2
Entergy Mississippi, Inc	$1,582.00	1,511.00	-4.49%	13	6	7
FP&L Company	$1,668.00	1,594.00	-4.44%	16	7	9
Georgia Power	$1,814.00	2,271.00	25.19%	18	20	-2
Gulf Power	$1,423.00	1,705.00	19.82%	11	11	0
Mississippi Power	$1,598.00	1,869.00	16.96%	14	15	-1
Duke Energy Progress, Inc. (NC)	$1,317.00	1,382.00	4.94%	7	3	4
Duke Energy Progress, Inc. (SC)	$1,354.00	1,466.00	8.27%	8	4	4
Duke Progress Energy Florida, Inc.	$1,505.00	1,723.00	14.49%	12	13	-1
SCE&G	$1,407.00	1,954.31	38.90%	10	16	-6
Tampa Electric Company	$1,715.00	1,686.55	-1.66%	17	9	8
Kentucky Utilities (d/b/a ODP)		1,754.70			14	
Louisville Gas & Electric	$1,280.00	2,009.17	56.97%	6	17	-11
Kentucky Utilities (KY)		2,070.31			18	
Average For East South Central	$1,444.00	1,860.00	28.81%			
Average For South Atlantic	$1,531.00	1,748.00	14.17%			
USA Average	$1,699.00	1,956.00	15.13%			

PEER GROUP
Rate Comparison
Industrial Customers

Demand of 75 kW and Usage of 30,000 kWh:	July 2007 $	January 2017 $	Change %	July 2007 Rank	January 2017 Rank	Rank Change
Alabama Power	$2,758.00	3,674.32	33.22%	16	20	-4
Appalachian Power Company (Va)	$1,534.00	2,519.00	64.21%	1	12	-11
Appalachian Power Company (WV)	$1,625.00	2,597.00	59.82%	2	14	-12
Dominion North Carolina Power	$2,098.00	2,185.00	4.15%	9	3	6
Dominion Virginia Power	$1,981.00	2,321.09	17.17%	6	5	1
DUKE Energy Carolinas (NC)	$1,943.00	2,217.55	14.13%	5	4	1
DUKE Energy Carolinas (SC)	$1,914.00	2,495.79	30.40%	4	10	-6
Entergy Mississippi, Inc	$2,712.00	2,455.00	-9.48%	14	8	6
FP&L Company	$2,792.00	2,356.00	-15.62%	17	7	10
Georgia Power	$2,473.00	2,867.67	15.96%	12	18	-6
Gulf Power	$2,394.00	2,856.00	19.30%	10	17	-7
Mississippi Power	$2,548.00	2,756.00	8.16%	13	16	-3
Duke Energy Progress, Inc. (NC)	$1,991.00	1,993.00	0.10%	7	1	6
Duke Energy Progress, Inc. (SC)	$2,093.00	2,184.00	4.35%	8	2	6
Duke Progress Energy Florida, Inc.	$2,733.00	2,688.00	-1.65%	15	15	0
SCE&G	$2,472.00	3,565.07	44.22%	11	19	-8
Tampa Electric Company	$2,830.00	2,470.55	-12.70%	18	9	9
Kentucky Utilities (d/b/a ODP)		2,340.90			6	
Louisville Gas & Electric	$1,636.00	2,585.58	58.04%	3	13	-10
Kentucky Utilities (KY)		2,501.99			11	
Average For East South Central	$2,302.00	2,824.00	22.68%			
Average For South Atlantic	$2,553.00	2,749.00	7.68%			
USA Average	$2,760.00	3,090.00	11.96%			

PEER GROUP
Rate Comparison
Industrial Customers

Demand of 75 kW and Usage of 50,000 kWh:	July 2007 $	January 2017 $	Change %	July 2007 Rank	January 2017 Rank	Rank Change
Alabama Power	$4,144.00	5,625.69	35.76%	15	20	-5
Appalachian Power Company (Va)	$2,027.00	3,411.00	68.28%	1	12	-11
Appalachian Power Company (WV)	$2,169.00	3,232.00	49.01%	3	9	-6
Dominion North Carolina Power	$3,110.00	3,033.08	-2.47%	9	4	5
Dominion Virginia Power	$2,513.00	2,815.41	12.03%	4	2	2
DUKE Energy Carolinas (NC)	$2,738.00	2,993.86	9.34%	6	3	3
DUKE Energy Carolinas (SC)	$2,548.00	3,081.41	20.93%	5	7	-2
Entergy Mississippi, Inc	$4,217.00	3,714.00	-11.93%	16	16	0
FP&L Company	$4,291.00	3,371.00	-21.44%	17	11	6
Georgia Power	$3,298.00	3,586.12	8.74%	11	14	-3
Gulf Power	$3,688.00	4,391.00	19.06%	12	18	-6
Mississippi Power	$3,815.00	3,652.00	-4.27%	13	15	-2
Duke Energy Progress, Inc. (NC)	$2,838.00	2,754.00	-2.96%	7	1	6
Duke Energy Progress, Inc. (SC)	$2,999.00	3,072.00	2.43%	8	5	3
Duke Progress Energy Florida, Inc.	$4,117.00	3,847.00	-6.56%	14	17	-3
SCE&G	$3,201.00	4,668.67	45.85%	10	19	-9
Tampa Electric Company	$4,316.00	3,515.89	-18.54%	18	13	5
Kentucky Utilities (d/b/a ODP)		3,122.50			8	
Louisville Gas & Electric	$2,111.00	3,354.11	58.89%	2	10	-8
Kentucky Utilities (KY)		3,077.56			6	
Average For East South Central	$3,409.00	4,040.00	18.51%			
Average For South Atlantic	$3,747.00	3,898.00	4.03%			
USA Average	$4,079.00	4,518.00	10.76%			

PEER GROUP
Rate Comparison
Industrial Customers

Demand of 1,000 kW and Usage of 200,000 kWh:	July 2007 $	January 2017 $	Change %	July 2007 Rank	January 2017 Rank	Rank Change
Alabama Power	$17,040.00	18,123.21	6.36%	8	4	4
Appalachian Power Company (Va)	$12,080.00	19,865.00	64.45%	2	6	-4
Appalachian Power Company (WV)	$11,816.00	20,162.00	70.63%	1	7	-6
Dominion North Carolina Power	$16,827.00	18,161.00	7.93%	7	5	2
Dominion Virginia Power	$18,032.00	23,501.37	30.33%	9	15	-6
DUKE Energy Carolinas (NC)	$14,138.00	17,372.02	22.87%	4	2	2
DUKE Energy Carolinas (SC)	$13,569.00	17,703.17	30.47%	3	3	0
Entergy Mississippi, Inc	$16,792.00	14,938.00	-11.04%	6	1	5
FP&L Company	$22,428.00	21,795.00	-2.82%	16	11	5
Georgia Power	$24,315.00	30,841.51	26.84%	18	20	-2
Gulf Power	$20,282.00	26,855.00	32.41%	12	18	-6
Mississippi Power	$20,366.00	21,635.00	6.23%	13	10	3
Duke Energy Progress, Inc. (NC)	$21,238.00	21,126.00	-0.53%	15	9	6
Duke Energy Progress, Inc. (SC)	$20,473.00	20,947.00	2.32%	14	8	6
Duke Progress Energy Florida, Inc.	$19,582.00	22,333.00	14.05%	10	13	-3
SCE&G	$19,638.00	26,880.70	36.88%	11	19	-8
Tampa Electric Company	$22,471.00	22,066.91	-1.80%	17	12	5
Kentucky Utilities (d/b/a ODP)		23,578.00			16	
Louisville Gas & Electric	$15,754.00	24,414.00	54.97%	5	17	-12
Kentucky Utilities (KY)		22,749.00			14	
Average For East South Central	$17,445.00	21,646.00	24.08%			
Average For South Atlantic	$19,365.00	23,078.00	19.17%			
USA Average	$21,543.00	24,837.00	15.29%			

PEER GROUP
Rate Comparison
Industrial Customers

Demand of 1,000 kW and Usage of 400,000 kWh:	July 2007 $	January 2017 $	Change %	July 2007 Rank	January 2017 Rank	Rank Change
Alabama Power	$27,526.00	29,476.36	7.09%	8	7	1
Appalachian Power Company (Va)	$18,905.00	30,959.00	63.76%	1	10	-9
Appalachian Power Company (WV)	$19,611.00	31,121.00	58.69%	2	12	-10
Dominion North Carolina Power	$27,553.00	29,086.46	5.57%	9	6	3
Dominion Virginia Power	$23,198.00	28,209.09	21.60%	4	3	1
DUKE Energy Carolinas (NC)	$24,195.00	27,826.73	15.01%	6	2	4
DUKE Energy Carolinas (SC)	$23,465.00	28,739.95	22.48%	5	5	0
Entergy Mississippi, Inc	$29,876.00	24,919.00	-16.59%	11	1	10
FP&L Company	$36,809.00	30,961.00	-15.89%	17	11	6
Georgia Power	$33,422.00	39,339.79	17.71%	15	20	-5
Gulf Power	$31,431.00	38,465.00	22.38%	13	19	-6
Mississippi Power	$32,072.00	32,232.00	0.50%	14	15	-1
Duke Energy Progress, Inc. (NC)	$30,726.00	30,104.00	-2.02%	12	9	3
Duke Energy Progress, Inc. (SC)	$29,721.00	29,833.00	0.38%	10	8	2
Duke Progress Energy Florida, Inc.	$35,797.00	35,066.00	-2.04%	16	17	-1
SCE&G	$26,566.00	38,054.00	43.24%	7	18	-11
Tampa Electric Company	$37,244.00	32,520.25	-12.68%	18	16	2
Kentucky Utilities (d/b/a ODP)		31,376.00			13	
Louisville Gas & Electric	$20,500.00	31,663.00	54.45%	3	14	-11
Kentucky Utilities (KY)		28,475.00			4	
Average For East South Central	$26,473.00	30,165.00	13.95%			
Average For South Atlantic	$31,333.00	35,158.00	12.21%			
USA Average	$34,242.00	37,688.00	10.06%			

PEER GROUP
Rate Comparison
Industrial Customers

Demand of 1,000 kW and Usage of 650,000 kWh:	July 2007 $	January 2017 $	Change %	July 2007 Rank	January 2017 Rank	Rank Change
Alabama Power	$39,160.00	42,156.70	7.65%	9	14	-5
Appalachian Power Company (Va)	$24,996.00	40,107.00	60.45%	1	9	-8
Appalachian Power Company (WV)	$25,197.00	39,287.00	55.92%	2	7	-5
Dominion North Carolina Power	$38,946.00	37,139.84	-4.64%	8	4	4
Dominion Virginia Power	$29,656.00	34,093.74	14.96%	4	2	2
DUKE Energy Carolinas (NC)	$35,566.00	38,183.75	7.36%	7	5	2
DUKE Energy Carolinas (SC)	$33,147.00	38,895.32	17.34%	5	6	-1
Entergy Mississippi, Inc	$42,782.00	32,931.00	-23.03%	12	1	11
FP&L Company	$53,718.00	42,017.00	-21.78%	17	13	4
Georgia Power	$44,083.00	48,765.30	10.62%	13	18	-5
Gulf Power	$45,368.00	52,978.00	16.77%	15	20	-5
Mississippi Power	$45,315.00	43,007.00	-5.09%	14	15	-1
Duke Energy Progress, Inc. (NC)	$41,331.00	39,847.00	-3.59%	11	8	3
Duke Energy Progress, Inc. (SC)	$40,703.00	40,747.00	0.11%	10	11	-1
Duke Progress Energy Florida, Inc.	$52,713.00	47,954.00	-9.03%	16	17	-1
SCE&G	$35,226.00	50,444.00	43.20%	6	19	-13
Tampa Electric Company	$55,711.00	45,586.91	-18.17%	18	16	2
Kentucky Utilities (d/b/a ODP)		41,124.00			12	
Louisville Gas & Electric	$26,433.00	40,724.00	54.06%	3	10	-7
Kentucky Utilities (KY)		35,633.00			3	
Average For East South Central	$36,856.00	40,320.00	9.40%			
Average For South Atlantic	$45,106.00	48,773.00	8.13%			
USA Average	$49,130.00	52,955.00	7.79%			

PEER GROUP
Rate Comparison
Industrial Customers

Demand of 50,000 kW and Usage of 15,000,000 kWh:	July 2007 $	January 2017 $	Change %	July 2007 Rank	January 2017 Rank	Rank Change
Alabama Power	$1,096,080.00	1,173,306.42	7.05%	8	6	2
Appalachian Power Company (Va)	$696,139.00	1,267,520.00	82.08%	1	13	-12
Appalachian Power Company (WV)	$701,199.00	1,174,476.00	67.50%	2	7	-5
Dominion North Carolina Power	$1,146,269.00	1,287,964.67	12.36%	10	15	-5
Dominion Virginia Power	$1,013,942.00	1,272,789.35	25.53%	6	14	-8
DUKE Energy Carolinas (NC)	$862,988.00	1,030,105.16	19.36%	5	3	2
DUKE Energy Carolinas (SC)	$801,751.00	1,034,906.17	29.08%	3	4	-1
Entergy Mississippi, Inc	$1,075,416.00	941,255.00	-12.48%	7	2	5
FP&L Company	$1,216,104.00	789,127.00	-35.11%	12	1	11
Georgia Power	$1,228,754.00	1,448,319.20	17.87%	14	18	-4
Gulf Power	$1,285,055.00	1,619,787.00	26.05%	16	20	-4
Mississippi Power	$1,224,279.00	1,248,338.00	1.97%	13	11	2
Duke Energy Progress, Inc. (NC)	$1,259,600.00	1,186,638.00	-5.79%	15	10	5
Duke Energy Progress, Inc. (SC)	$1,149,025.00	1,177,511.00	2.48%	11	8	3
Duke Progress Energy Florida, Inc.	$1,377,733.00	1,427,623.00	3.62%	17	17	0
SCE&G	$1,096,300.00	1,549,550.00	41.34%	9	19	-10
Tampa Electric Company	$1,480,056.00	1,363,008.42	-7.91%	18	16	2
Kentucky Utilities (d/b/a ODP)		1,167,365.00			5	
Louisville Gas & Electric	$845,581.00	1,255,599.00	48.49%	4	12	-8
Kentucky Utilities (KY)		1,183,110.00			9	
Average For East South Central	$995,348.00	1,150,679.00	15.61%			
Average For South Atlantic	$1,194,536.00	1,355,019.00	13.43%			
USA Average	$1,305,418.00	1,447,943.00	10.92%			

PEER GROUP
Rate Comparison
Industrial Customers

Demand of 50,000 kW and Usage of 25,000,000 kWh:	July 2007 $	January 2017 $	Change %	July 2007 Rank	January 2017 Rank	Rank Change
Alabama Power	$1,553,774.00	1,675,396.23	7.83%	8	14	-6
Appalachian Power Company (Va)	$936,782.00	1,559,920.00	66.52%	2	9	-7
Appalachian Power Company (WV)	$933,799.00	1,540,116.00	64.93%	1	7	-6
Dominion North Carolina Power	$1,602,003.00	1,610,099.67	0.51%	10	11	-1
Dominion Virginia Power	$1,272,262.00	1,503,285.35	18.16%	5	6	-1
DUKE Energy Carolinas (NC)	$1,340,713.00	1,444,386.04	7.73%	6	4	2
DUKE Energy Carolinas (SC)	$1,242,936.00	1,443,974.90	16.17%	4	3	1
Entergy Mississippi, Inc	$1,584,464.00	1,177,642.00	-25.68%	9	2	7
FP&L Company	$1,868,045.00	1,155,401.00	-38.15%	16	1	15
Georgia Power	$1,662,124.00	1,848,071.36	11.19%	12	16	-4
Gulf Power	$1,842,501.00	2,200,310.00	19.42%	15	20	-5
Mississippi Power	$1,788,838.00	1,744,324.00	-2.49%	14	15	-1
Duke Energy Progress, Inc. (NC)	$1,734,000.00	1,635,538.00	-5.68%	13	13	0
Duke Energy Progress, Inc. (SC)	$1,611,425.00	1,621,811.00	0.64%	11	12	-1
Duke Progress Energy Florida, Inc.	$2,058,918.00	1,946,817.00	-5.44%	17	18	-1
SCE&G	$1,442,700.00	2,045,150.00	41.76%	7	19	-12
Tampa Electric Company	$2,218,723.00	1,885,675.07	-15.01%	18	17	1
Kentucky Utilities (d/b/a ODP)		1,557,265.00			8	
Louisville Gas & Electric	$1,083,666.00	1,605,539.00	48.16%	3	10	-7
Kentucky Utilities (KY)		1,461,614.00			5	
Average For East South Central	$1,389,359.00	1,526,487.00	9.87%			
Average For South Atlantic	$1,747,675.00	1,892,884.00	8.31%			
USA Average	$1,885,249.00	2,036,463.00	8.02%			

PEER GROUP
Rate Comparison
Industrial Customers

Demand of 50,000 kW and Usage of 32,500,000 kWh:	July 2007 $	January 2017 $	Change %	July 2007 Rank	January 2017 Rank	Rank Change
Alabama Power	$1,897,045.00	2,051,963.59	8.17%	8	15	-7
Appalachian Power Company (Va)	$1,117,264.00	1,779,220.00	59.25%	2	7	-5
Appalachian Power Company (WV)	$1,078,126.00	1,814,346.00	68.29%	1	8	-7
Dominion North Carolina Power	$1,943,803.00	1,851,700.92	-4.74%	10	10	0
Dominion Virginia Power	$1,466,002.00	1,676,157.35	14.34%	4	4	0
DUKE Energy Carolinas (NC)	$1,674,698.00	1,755,096.71	4.80%	6	6	0
DUKE Energy Carolinas (SC)	$1,482,015.00	1,749,492.28	18.05%	5	5	0
Entergy Mississippi, Inc	$1,966,250.00	1,354,931.00	-31.09%	11	1	10
FP&L Company	$2,357,002.00	1,430,107.00	-39.33%	16	2	14
Georgia Power	$1,971,914.00	2,124,363.22	7.73%	12	16	-4
Gulf Power	$2,072,465.00	2,412,551.00	16.41%	14	19	-5
Mississippi Power	$2,171,316.00	2,036,157.00	-6.22%	15	14	1
Duke Energy Progress, Inc. (NC)	$2,027,025.00	1,898,483.00	-6.34%	13	12	1
Duke Energy Progress, Inc. (SC)	$1,929,308.00	1,944,444.00	0.78%	9	13	-4
Duke Progress Energy Florida, Inc.	$2,628,573.00	2,389,984.00	-9.08%	17	18	-1
SCE&G	$1,702,500.00	2,416,850.00	41.96%	7	20	-13
Tampa Electric Company	$2,772,723.00	2,277,675.06	-17.85%	18	17	1
Kentucky Utilities (d/b/a ODP)		1,849,690.00			9	
Louisville Gas & Electric	$1,262,230.00	1,867,994.00	47.99%	3	11	-8
Kentucky Utilities (KY)		1,670,493.00			3	
Average For East South Central	$1,679,017.00	1,798,324.00	7.11%			
Average For South Atlantic	$2,145,019.00	2,285,199.00	6.54%			
USA Average	$2,302,376.00	2,467,094.00	7.15%			