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Petition of Appalachian Power Company for approval
of a voluntary energy Curtailment Service Rider

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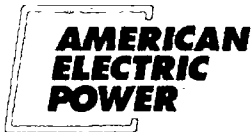
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BOUNDLESS ENERGY

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December 15, 2021

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The Honorable Bernard J. Logan, Clerk
State Corporation Commission
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**Petition of Appalachian Power Company
for approval of a voluntary Curtailment Service Rider
pursuant to § 56-40 of the Code of Virginia
Case No. PUR-2021-00 *293***

Dear Mr. Logan:

Enclosed for filing in the above-referenced case please find Appalachian Power Company's Petition for approval of a voluntary energy Curtailment Service Rider.

Sincerely,

Noelle J. Coates

cc: William H. Chambliss, Esq.
C. Meade Browder, Jr., Esq.

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

PETITION OF

APPALACHIAN POWER COMPANY

Case No. PUR-2021-00293

for approval pursuant to Va. Code § 56-40
to implement the voluntary
Curtailment Service Rider

PETITION

With this Petition, Appalachian Power Company (“Appalachian” or the “Company”) seeks, pursuant to Section 56-40 of the Code of Virginia, the approval of the State Corporation Commission to implement a voluntary schedule for its customers, the energy Curtailment Service Rider (“Rider CS”). In support of this Petition, Appalachian states as follows.

1. Appalachian is a Virginia public service corporation serving approximately 540,000 customers in Virginia with its main office in Charleston, West Virginia and offices at Three James Center, 1051 East Cary Street, Suite 1100, Richmond, Virginia 23219. The names and addresses of the Company’s legal counsel are listed at the foot of this Petition.

2. This petition is supported by the testimony of *William K. Castle*, Director of Regulatory Services-VA/TN for Appalachian. Mr. Castle discusses the reasons for the Company’s request for the voluntary Rider CS, and explains how Rider CS will benefit customers and will not result in an increase in rates for any customer.

3. As Appalachian is a winter-peaking utility that plans its capacity around its summer peak, the Company is structurally exposed to market energy in the winter months for a significant portion of its load. The Company proposes Rider CS at this time, given the rising market prices of natural gas, limited coal inventory availability, and increasing RTO market

energy prices. These factors can increase customer bills during normal weather and load conditions, but the bill impacts would be even more significant during extreme weather events.

4. Rider CS is designed address this possibility and provide benefits to both participants that can curtail energy usage, and to non-participating customers by reducing costs during times of high energy market prices.

5. Rider CS will be available to standard service LPS customers. During periods of high market energy prices, the Company will notify enrolled customers of the option to curtail their energy usage. If customers with a curtailable usage greater than one megawatt choose to reduce their energy usage below their average on-peak demand during the event, they will receive a credit. Customers will not be penalized if they choose not to curtail.

6. The amount of the credit will vary depending upon market conditions, as it will be based on the PJM day-ahead market energy price for the hours of the event. Mr. Castle explains the calculation of the credit in more detail and provides an example in his testimony.

7. The Company and its customers will benefit from the participation of customers in Rider CS because the Company will be able to avoid the purchase of energy to serve the curtailed load. The result will be a net reduction in fuel and purchased power costs, relative to what they would have been. All customers will benefit from the reduced pass-through energy supply costs, as the credits for voluntary reductions are less than the energy cost in the day-ahead market that is avoided by the curtailment. Thus, there will be no subsidization of participating customers by non-customers.


8. Section 56-40 of the Virginia Code allows the Commission, in its discretion, to permit Appalachian to put into effect any proposed rate revision without notice if the "proposed revision effects no increases." If the Commission allows the Company to implement proposed

Rider CS as soon as possible, the Company will be able to realize its resultant benefits during the upcoming months of winter.

WHEREFORE Appalachian Power Company respectfully requests that the State Corporation Commission approve the voluntary Rider CS and grant such other relief as it deems just and proper.

Respectfully submitted,

APPALACHIAN POWER COMPANY

By: 
Counsel

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Counsel for Appalachian Power Company

Dated: December 15, 2021

APCo Exhibit No. _____
Witness: WKC

21123001

**DIRECT TESTIMONY OF
WILLIAM K. CASTLE
FOR APPALACHIAN POWER COMPANY
IN VIRGINIA S.C.C. CASE NO. PUR-2021-00_____**

SUMMARY OF DIRECT TESTIMONY OF WILLIAM K. CASTLE

In my direct testimony, I:

1. Discuss the reason for the Company's request for a voluntary energy Curtailment Service Rider (Rider CS); and
2. Sponsor the updated tariff sheet for Rider CS.

**DIRECT TESTIMONY OF
WILLIAM K. CASTLE
FOR APPALACHIAN POWER COMPANY
IN VIRGINIA S.C.C. CASE NO. PUR-2021-00 ____**

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

2 A. My name is William K. Castle. I am the Director of Regulatory Services-VA/TN for
3 Appalachian Power Company (APCo or the Company), and my business address is 1051
4 East Cary St., Suite 1100, Richmond, Virginia 23219.

5 **Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND
6 BUSINESS EXPERIENCE.**

7 A. I earned a Bachelor of Science degree in Mechanical Engineering from Tulane University
8 in 1988, and a Masters of Business Administration degree from the University of Texas –
9 Austin in 1998. I hold the Chartered Financial Analyst (CFA) designation. I served in
10 the U.S. Navy from 1988-1996. I have worked in the utility industry since 1998,
11 beginning with the Columbia Energy Group, Herndon, Virginia, where I held positions in
12 financial planning and corporate finance. Subsequent to the acquisition of Columbia
13 Energy Group by Merrillville, Indiana-based NiSource in 2000, I performed financial
14 planning and analysis functions. In 2004, I was employed by American Electric Power
15 Service Corporation (AEPSC) in the Resource Planning group. In 2014, I accepted my
16 current position.

17 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY AS A WITNESS
18 BEFORE ANY REGULATORY COMMISSION?**

19 A. Yes. I have presented testimony on behalf of APCo before the Virginia State
20 Corporation Commission in several proceedings, most recently in Case No. PUR-2020-
21 00015. I have also presented testimony for Indiana Michigan Power Company, Public

21123041

1 Service Company of Oklahoma, Ohio Power Company, Columbus Southern Power
2 Company, and Southwestern Electric Power Company. I have testified in the states of
3 Ohio, Oklahoma, Indiana, West Virginia, Arkansas, and Virginia.

4 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

5 A. The purpose of my testimony is to discuss the reasons for the Company's request for a
6 voluntary Energy Curtailment Service Rider (Rider CS). I explain how Rider CS will
7 only benefit customers and will not result in an increase in rates for any customer.

8 **Q. ARE YOU SPONSORING ANY EXHIBITS?**

9 A. Yes. I am sponsoring:

- 10 APCo Exhibit No. __ (WKC) Schedule 1 Proposed tariff sheets
11 APCo Exhibit No. __ (WKC) Schedule 2 Example Calculations

12 **Q. HOW DOES THE VOLUNTARY CURTAILMENT SERVICE RIDER WORK?**

13 A. During periods of high market energy prices, at the Company's discretion, enrolled
14 customers will be notified of the option to curtail their energy usage, avoiding the
15 purchase of energy to serve that load. Standard service LPS customers with a curtailable
16 usage greater than one megawatt who reduce their energy usage below their average on-
17 peak demand during events will be paid for their curtailment at a price less than the
18 market cost of avoided energy. APCo Exhibit No. __ (WKC) Schedule 1 consists of the
19 proposed changes to the Company's tariff, including the proposed Rider CS. The result
20 will be a net reduction in fuel and purchased power costs, relative to what they would
21 have been, absent the curtailment. Payments to customers will be recovered in the fuel
22 factor.

1 **Q. WHAT IS THE AMOUNT OF THE CREDIT?**

2 A. It will vary depending upon market conditions. Participating customers will be made
3 aware of the credit rate and the event hours the day prior. The credit rate will be based on
4 the PJM day-ahead market energy price for the hours of the event. The curtailment price
5 will be the simple average day-ahead LMP for the event hours, divided by two. The
6 curtailment price will not be less than \$100 MWh. The event credit amount will be the
7 product of (1) the customer's Curtailed Demand, (2) the number of Voluntary
8 Curtailment Event Hours, and (3) the quoted Voluntary Curtailment Price. Two
9 numerical examples are included as APCo Exhibit No. __ (WKC) Schedule 2. Note,
10 with participation, Rider CS is designed to save customers money whether APCo has
11 sufficient generation to meet its load or not. The program is designed so that customer
12 participation in the program will reduce total purchased power costs below what they
13 would have been otherwise absent the program.

14 **Q. IF AN ENROLLED CUSTOMER FAILS TO REDUCE THEIR LOAD WHEN
15 CALLED UPON, ARE THERE ANY PENALTIES?**

16 A. No. The program is strictly voluntary and participation in any particular event is not
17 required. If an enrolled customer does not curtail during an event, it simply does not
18 receive a credit.

19 **Q. WHY IS THE COMPANY MAKING THIS REQUEST AT THIS TIME?**

20 A. Currently, the U.S. generally is experiencing rising market prices of natural gas, limited
21 coal inventory availability, and increasing RTO market energy prices. All of these
22 factors could impact customer bills during normal weather and load conditions.

23 Customer bill impacts can be exacerbated and amplified during extreme weather events

1 that result in increased and prolonged energy usage, as well as high energy market prices
2 due to fuel supply availability and unplanned generator outages.

3 As APCo is a winter-peaking utility that plans its capacity around its summer
4 peak, the Company is structurally exposed to market energy in the winter months for a
5 significant portion of its load. The AEP Pool, once a source of low-cost energy during
6 the winter, was dissolved at the end of 2013. Until recently, low natural gas prices have
7 resulted in relatively low and stable PJM market energy prices. This has, in large part,
8 benefitted customers, although extreme weather events, such as the polar vortex events in
9 2014 and 2015, caused large spikes in market energy costs that the Company eventually
10 recovered from customers.

11 The intent of voluntary Rider CS is to provide benefits to both participants that
12 can curtail energy usage and to non-participating customers by reducing costs during
13 times of high energy market prices. The Rider compensates participating customers that
14 voluntarily reduce their usage during an event, giving the customer the ability to manage
15 their cost of electricity. And all customers benefit from reduced pass-through energy
16 supply costs, as the credits for voluntary reductions are less than the energy cost in the
17 day-ahead market.

18 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

19 **A. Yes.**

APPALACHIAN POWER COMPANY

VA. S.C.C. TARIFF NO. 26
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Table 1: Non-Curtailment Example 1

A	B	C	D	E	F
	Participating Customer Curtailment (MW)	Load (MW)	Generation (MW)	Net (MW)	Market Settlement (\$1,000 DA LMP)
Long	0	1,000	1,200	200	\$200,000
Short	0	1,000	800	(200)	(\$200,000)
Neutral	0	1,000	1,000	0	\$0

Table 2: Curtailment Event Example 1

A	B	C	D	E	F	G	H	I
	Participating Customer Curtailment (MW)	Load (MW)	Generation (MW)	Net (MW)	Market Settlement (\$1,000 DA LMP)	Participating Customer Curtailment Credit	Net Cost	Benefit to All Customers
Long	100	900	1,200	300	\$300,000	(\$50,000)	\$250,000	\$50,000
Short	100	900	800	(100)	(\$100,000)	(\$50,000)	(\$150,000)	\$50,000
Neutral	100	900	1,000	100	\$100,000	(\$50,000)	\$50,000	\$50,000

Table 3: Non-Curtailment Example 2

A	B	C	D	E	F
	Participating Customer Curtailment (MW)	Load (MW)	Generation (MW)	Net (MW)	Market Settlement (\$250 DA LMP)
Long	0	1,000	1,200	200	\$50,000
Short	0	1,000	800	(200)	(\$50,000)
Neutral	0	1,000	1,000	0	\$0

Table 4: Curtailment Event Example 2

A	B	C	D	E	F	G	H	I
	Participating Customer Curtailment (MW)	Load (MW)	Generation (MW)	Net (MW)	Market Settlement (\$250 DA LMP)	Participating Customer Curtailment Credit	Net Cost	Benefit to All Customers
Long	100	900	1,200	300	\$75,000	(\$12,500)	\$62,500	\$12,500
Short	100	900	800	(100)	(\$25,000)	(\$12,500)	(\$37,500)	\$12,500
Neutral	100	900	1,000	100	\$25,000	(\$12,500)	\$12,500	\$12,500

CERTIFICATE OF SERVICE

I hereby certify that on this 15th day of December 2021 a true copy of the foregoing
Petition of Appalachian Power Company was delivered by electronic mail to the following:

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