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**Application of Appalachian Power Company  
For approval of a 100% renewable energy rider  
pursuant to § 56-577 A 5 of the Code of Virginia  
Case No. PUR-2017-00179**

Dear Mr. Logan:

Pursuant to the provisions of Ordering paragraph 3 on Page 8 of the Commission's January 7, 2019 Final Order in Case No. PUR-2017-00179, enclosed is the public version of Appalachian Power Company's Annual Report on the progress of its 100% renewable energy rider, the confidential version of which was provided to Commission staff on April 30, 2021.

Sincerely,

Noelle J. Coates

Enclosure

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## **Summary**

This report will cover the status of the Company's 100% renewable energy rider offered by Appalachian Power Company (the "Company") pursuant to § 56-577.A.5 of the Code of Virginia, and approved by the State Corporation Commission of Virginia (the "Commission"): Rider Wind, Water, Sunlight ("Rider WWS").

### **Rider WWS**

Rider WWS provides participating customers with 100% of their energy and capacity from resources that generate "renewable energy," as defined by Section 56-576. These "wind, water and solar" resources in the WWS Portfolio include the Beech Ridge, Grand Ridge, Fowler Ridge, Bluff Point and Camp Grove wind facilities, and the Summersville, Buck, Byllesby, Claytor, Leesville, London, Marmet, Niagara, and Winfield hydro facilities. As the Company adds renewable resources (including solar) to its overall generation mix, these resources will become part of the WWS Portfolio.

A portfolio with different types of resources improves the likelihood that some renewable energy is generated at any given hour of the year, including at the time of system peaks. Similarly, a portfolio of resources in varied geographic areas improves the availability of renewable energy at any given hour of the year by reducing the likelihood that weather or climate phenomena will adversely affect all resources at the same time.

The Company designed Rider WWS, in part, to respond to the interests expressed by some of its larger customers in purchasing 100% renewable energy at a small premium to standard service from Appalachian, without switching service providers or entering into long-term or onerous contracts. With its relatively small premium over standard service, Rider WWS also appeals to companies looking for potential sites to locate or expand operations. Having this option available from the incumbent electric utility is a much needed tool to enhance development efforts in the Company's economically depressed service territory in Southwest Virginia.

## **Program Implementation Update**

### **Program Design**

A revised Rider WWS was submitted to Commission Staff in accordance with ordering paragraph (2) in Case No. PUR-2017-00179. On February 19, 2019 the Commission Staff accepted the Company's revised Rider WWS filing. Since that time the Company has incorporated the Rider into the Company's tariff and the billing system. Additionally, the

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Company has provided customers the ability to sign up for Rider WWS via its online website. This website serves as a tool to educate customers about both the attributes and renewable resources that make Rider WWS a unique offering. The online website information can be found at the following location: <https://www.appalachianpower.com/account/bills/programs/green-pricing/va/>.

### Customer Participation

Interest in the program remains steady across the commercial, industrial, and residential customer groups from across the Company's entire Virginia service territory. The Company saw a slight drop-off in residential customer subscriptions during 2020 coupled with an addition of four customers in the SGS class. The economic fallout from the COVID-19 pandemic likely played a role in residential customers making a value decision to unsubscribe as the year progressed due to the premium paid. At the end of 2020, Rider WWS had a total participation of 201 customers that used 65,462,359 kWh of energy over the calendar year. Table 1 shows the total number of customers and kilowatt-hours (kWh), by tariff class, subscribed to Rider WWS for the 2020 year.

Table 1: 2020 Customer Count and Kilowatt Hours by Month

2020	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
<b>RES</b>												
Customers	196	207	216	216	216	213	210	200	198	190	182	183
kWh	279,079	274,861	247,380	193,957	177,888	188,134	230,564	233,522	196,251	145,453	148,099	244,435
<b>SGS</b>												
Customers	10	7	12	11	11	13	11	12	13	13	13	14
kWh	8,203	4,852	8,214	5,026	5,248	7,402	8,275	9,081	7,897	6,950	6,830	9,293
<b>GS</b>												
Customers	3	2	3	3	3	3	3	3	3	3	3	3
kWh	146,714	82,889	152,957	115,147	108,691	137,630	189,113	198,415	211,718	177,408	162,622	178,114
<b>LPS</b>												
Customers	1	1	1	1	1	1	1	1	1	1	1	1
kWh	5,515,200	5,198,400	5,047,200	3,117,600	3,870,227	5,479,200	6,292,800	4,305,600	4,368,000	4,968,000	6,600,000	6,192,000

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**REC Allocation**

The Company allocates the total megawatt hours (MWh) subscribed in Rider WWS (65,176 for calendar year 2020) amongst its Renewable Generating Facilities based on each MWh the facility produces monthly. Table 2 below shows each MWh of Rider WWS that have been allocated to each facility and whether or not the facility is producing Tier 1 or Tier 2 Renewable Energy Credits (RECs).

**Table 2. Appalachian Power Company – Virginia WWS MWh Allocation by Renewable Generating Facility**

2020	Tier	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Claytor	2	800	977	788	598	820	1,231	1,901	1,200	797	725	773	905
Lcosville	2	161	238	135	191	243	415	413	260	195	259	374	396
Marmet	1	206	161	191	85	85	269	493	292	189	182	181	179
London	1	255	142	178	110	108	184	383	185	139	151	178	223
Byllesby	1	-	-	-	-	-	-	-	-	-	-	-	-
Winfield	1	252	150	191	112	111	292	788	427	299	265	310	380
Niagara	1	28	30	31	14	6	33	76	44	8	-	-	15
Buck	1	-	-	-	-	-	-	-	-	-	-	-	-
Summersville <sup>1</sup>		392	424	455	77	381	539	37	318	406	188	417	415
Beech Ridge	1	883	735	748	534	577	577	752	515	492	634	870	830
Camp Grove	1	517	520	494	352	288	505	671	324	437	560	743	606
Fowler Ridge	1	672	575	621	402	365	486	569	261	443	636	709	703
Grand Ridge	1	685	667	683	413	302	513	638	278	535	715	954	665
Bluff Point	1	1,098	943	941	544	584	768	1	643	845	983	1,409	1,308
<b>Total<sup>2</sup></b>		<b>5,949</b>	<b>5,562</b>	<b>5,456</b>	<b>3,432</b>	<b>3,870</b>	<b>5,812</b>	<b>6,722</b>	<b>4,747</b>	<b>4,785</b>	<b>5,298</b>	<b>6,918</b>	<b>6,625</b>

<sup>1</sup> Summersville REC allocation is Ohio non-solar.

<sup>2</sup> Totals may not tie due to rounding.

Once the MWhs are properly allocated to each facility, the current WWS Renewable Premium (\$0.00425/kWh) is applied to each MWh for each Renewable Generating Facility to calculate the dollars that each Renewable Generating Facility has accrued for REC purchasing purposes. Table 3 shows the breakdown of the REC purchasing bank for each facility for calendar year 2020.

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**Table 3. Appalachian Power Company – Virginia WWS Cost Allocation by Renewable Generating Facility**

2020	Tier	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Claytor	2	\$3,400	\$4,152	\$3,349	\$2,542	\$3,485	\$5,232	\$8,079	\$5,100	\$3,387	\$3,081	\$3,285	\$3,846
Leesville	2	\$684	\$1,012	\$574	\$812	\$1,033	\$1,764	\$1,755	\$1,105	\$829	\$1,101	\$1,590	\$1,683
Marmet	1	\$876	\$684	\$812	\$361	\$361	\$1,143	\$2,095	\$1,241	\$803	\$774	\$769	\$761
London	1	\$1,084	\$604	\$757	\$468	\$459	\$782	\$1,628	\$786	\$591	\$642	\$757	\$948
Byllesby	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Winfield	1	\$1,071	\$638	\$812	\$476	\$472	\$1,241	\$3,349	\$1,815	\$1,271	\$1,126	\$1,318	\$1,615
Niagara	1	\$119	\$128	\$132	\$60	\$26	\$140	\$323	\$187	\$34	\$0	\$0	\$64
Buck	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Summersville	1	\$1,666	\$1,802	\$1,934	\$327	\$1,619	\$2,291	\$157	\$1,352	\$1,726	\$799	\$1,772	\$1,764
Beech Ridge	1	\$3,753	\$3,124	\$3,179	\$2,270	\$2,452	\$2,452	\$3,196	\$2,189	\$2,091	\$2,695	\$3,698	\$3,528
Camp Grove	1	\$2,197	\$2,210	\$2,100	\$1,496	\$1,224	\$2,146	\$2,852	\$1,377	\$1,857	\$2,380	\$3,158	\$2,576
Fowler Ridge	1	\$2,856	\$2,444	\$2,639	\$1,709	\$1,551	\$2,066	\$2,418	\$1,109	\$1,883	\$2,703	\$3,013	\$2,988
Grand Ridge	1	\$2,911	\$2,835	\$2,903	\$1,755	\$1,284	\$2,180	\$2,712	\$1,182	\$2,274	\$3,039	\$4,055	\$2,826
Bluff Point	1	\$4,667	\$4,008	\$3,999	\$2,312	\$2,482	\$3,264	\$4	\$2,733	\$3,591	\$4,178	\$5,988	\$5,559
<b>Total<sup>2</sup></b>		\$25,283	\$23,639	\$23,188	\$14,586	\$16,448	\$24,701	\$28,569	\$20,175	\$20,336	\$22,517	\$29,402	\$28,156

<sup>1</sup> Summersville REC allocation is Ohio non-solar.

<sup>2</sup> Totals may not tie due to rounding.

### REC Purchases

During the course of 2020, the Company executed sell/buy transactions for Virginia RECs that were not related to Rider WWS. The sell transactions consisted of 127,300 MWhs, of Tier 1 RECs, related to the Company's Renewable Portfolio Standard (RPS) that totaled <BEGIN CONFIDENTIALS [REDACTED] END CONFIDENTIAL>. The Company then purchased 362,206 MWh, of Tier 2 RECs, at a cost of <BEGIN CONFIDENTIAL \$ [REDACTED] [REDACTED] END CONFIDENTIAL>. These transactions are summarized in Table 4 below.

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**Table 4. Appalachian Power Company – Wholesale REC Transactions**

2020	Contracted MWh	Contracted Dollars*
<b>Tier 1 Sell Transactions</b>	127,300	██████████
Tier 1 Sales Revenue		██████
<b>Tier 2 Buy Transactions</b>	362,206	██████████
Tier 2 Replacement Cost		██████
<b>Net Lost Margin</b>		██████

\*The information contained in this column and the associated footnotes are confidential.

The Company created RECs related to the allocation shown in Table 3 that were generated in 2020 during the month of April 2021. APCo’s renewable generation facilities generated a total of 1,207,712 MWhs during the calendar year of 2020. The summary of the Renewable Generating Facility REC allocation is shown in Table 5 below.

**Table 5. Appalachian Power Company – Rider WWS RECs Created by Renewable Generating Facility**

2020	Hydro MWh	Wind MWh
Claytor	264,825	
Leesville	80,049	
Marmet	6,399	
London	8,141	
Winfield	8,662	
Niagara	943	
Summersville	16452	
Buck-Byllesby	13,643	
Camp Grove		101,287
Fowler Ridge		120,319
Bluff Point		167,576
Grand Ridge		103,181
Beech Ridge		131,758
<b>Total</b>	399,114	624,121

The deposited RECs generated from Rider WWS are generally classified as Tier I, or Class I, for wind facilities and Tier II, or Class II, for hydro facilities.

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**Allocation of Rider WWS Charges/Credits**

A summary of the charges that Rider WWS customers were billed in 2020 is shown in Table 6 below. The Company has identified the balancing charge-related base generation, fuel, and Generation Rate Adjustment Clause (G-RAC) portions of Rider WWS customer bills paid during the months that they were enrolled in the program. Table 6 shows these charges in a combined Residential, Commercial, and Industrial format.

Table 6. Appalachian Power Company – Rider WWS Balancing Charges and WWS Premium by Class

2020 in 000's	Base Generation	Fuel Factor	G-RAC	WWS Premium	Total
<b>Residential</b>	172	65	8	12	258
<b>Commercial</b>	117	58	4	11	190
<b>Industrial</b>	2,431	1,705	116	320	4,572
<b>Total</b>	2,721	1,828	128	343	5,019

**Status of Solar Development**

The Company expects to begin receiving solar energy from the 10MW Depot solar facility (Rustburg, VA) in 2021, although the facility is not yet fully constructed. Further, the Company expects to seek approval to purchase a 5MW solar project currently under development that was pursuant to an RFP for solar facilities issued in Q1 2020. In addition, the Company is evaluating solar and wind facility ownership proposals pursuant to its RFP issued in Q1 of 2021. Consistent with its requirement under Enactment Clause 21 of the Grid Transformation and Security Act the solar portion of the RFP requires that any prospective facility locate within the Commonwealth. The Company expects to seek Commission approval for one or more facilities as a result of the RFP with expected in-service dates by December 15, 2024. At a later date in 2021, the Company will issue a Solar and Wind Resource RFP via one or more long-term PPAs as well as an RFP for RECs only.