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American Electric Power  
1051 E Cary Street, Suite 1100  
Richmond, Virginia 23219  
AEP.com

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November 30, 2022

By Hand

PUBLIC VERSION

Hon. Bernard J. Logan, Clerk  
State Corporation Commission  
Document Control Center  
1300 East Main Street  
Richmond, Virginia 23219

Noelle J. Coates  
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**Re: Petition of Appalachian Power Company  
for approval to continue a rate adjustment clause,  
the EE-RAC, and for approval of a new energy  
efficiency program pursuant to §§ 56-585.1 A 5 c  
and 56-596.2 of the Code of Virginia  
Case No. PUR-2021-00236**

Dear Mr. Logan:

Enclosed for filing in the above-captioned case are an original and one copy of the public version of Appalachian Power Company's update on program costs, revenues, participation and other relevant information pursuant to Ordering Paragraph 5 of the Commission's July 15, 2022 Final Order in this case.

An original and 15 copies of the confidential version are also being filed under separate cover.

Sincerely,

Noelle J. Coates

Enclosure

cc: Raymond L. Doggett, Jr., Esq.  
C. Austin Skeens, Esq.  
C. Meade Browder, Jr., Esq.  
John E. Farmer, Jr., Esq.  
R. Scott Herbert, Esq.  
Timothy E. Biller, Esq.  
Service List

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## Introduction

On November 30, 2020, Appalachian Power Company ("APCo" or "Company") filed for approval of five new energy efficiency (EE) programs, one new EE pilot program, and to continue two previously approved programs (Case No. PUR-2020-00251). In July of 2021, the Company received Commission approval to implement these programs subject to provisions set forth in the Final Order in this Case. These programs include:

- Residential Home Energy Report Program
- Residential Efficient Products Program
- Residential Energy Efficiency Kit Program
- Residential Home Performance Program
- Business Energy Solutions Program

The Company was also granted extensions of two existing programs:

- Residential Bring Your Own Thermostat (BYOT) Program
- Small Business Direct Install (SBDI) Program.

Additionally, the Company received approval for the Volt Var Optimization Pilot Program for a period of three years.

Other existing programs in the Company's portfolio, as approved in Case No. PUR-2019-00122, include the Residential Low Income Single Family Program, the Residential Low Income Multifamily Program, and the ENERGY STAR® Manufactured Homes Program. However, as outlined in the rebuttal testimony of Company witness Nichols and Staff witness Mangalam, the Company elected to end the ENERGY STAR® Manufactured Homes Program effective December 31, 2022 due to heavy free ridership in the program.

On November 30, 2021, Appalachian Power filed for approval of one new energy efficiency pilot program, the Commercial and Industrial (C&I) Custom Pilot Program (Case No. PUR-2021-00236). In July 2022, the Commission approved the C&I Custom Pilot Program, subject to certain provisions set forth in the Final Order in the Case, for a three-year period beginning January 2023.

### **Program Expenditures**

For the period September 2021 through August 2022, the actual expenditures were \$15,660,858. For details, see Company Confidential Schedule 46A, attached.

### **Over/Under-Recovery Position**

The Company had an over recovery position of \$5,197,595 as of August 2021. RAC revenues were \$13,986,808 million for the period, resulting in an under recovery balance of \$2,235,163 as of August 2022.

### **Program Portfolio kWh Savings**

As in previous years, the Company contracted with ADM Associates ("ADM") to evaluate the EE/DR programs. The purpose of the evaluation report is to verify the kilowatt-hour ("kWh") savings that the Companies' EE/DR programs produced. A summary of the verified kWh savings of the Company's EE/DR programs for Program Year 2021, as provided by ADM, are presented in Company Schedule 1.

### **Fixed vs. Variable Costs**

To see a list of contract fixed versus variable cost, please see Confidential Schedule 3 attached to this report.

### **Programs Status**

The five new programs, and two extended programs were successfully launched at the beginning of 2022, and are currently experiencing success. The estimated completion date of the first two circuits of the VVO Pilot Program is late 2022.

### **Energy Star Manufactured Homes**

The Company elected to proactively close the Energy Star Manufactured Homes Program effective May 1, 2022 due to heavy free ridership. Since there is a lag between the customer purchase and set up of the home, installation of the heat pump, and submission of the incentive application, and to be fair to customers already going through this process, the Company left the program open for customers to submit the application and process their incentive until December 31, 2022. There will be minimal closing costs in the first quarter of 2023.

There are 14 total contracts in place for the energy efficiency portfolio in Virginia. The below chart lists the contract for each program, the implementation contractor, and the contract timeframe.

Program	Implementation Contractor	Contract Timeframe
Bring Your Own Thermostat Program (BYOT)*	Oracle	2022-2026
Efficient Products Program*	CLEAResult	2022-2026
Energy Efficiency Kits Program*	EFI	2022-2026
ENERGY STAR® Manufactured Homes (ESMH)	SBRA	2021-2022
Home Energy Report (HER)*	Oracle	2022-2026
Home Performance Program*	TRC	2022-2026
Low Income Multifamily Program	CHP	2021-2025
Low Income Weatherization Program	CHP	2021-2025
Business Energy Solutions*	TRC	2022-2026
Small Business Direct Install*	TRC	2022-2026
EM&V	ADM	2022-2024
Marketing	CRA	2022
BYOT and ESMH Invoicing*	EFI	2021-2026
Marketing Newsletter	Questline	2022

\* Indicates a new contract

## Misc.

### Quality Control

In early December, 2021, the Company was notified of a potential quality control issue related to the Small Business Direct Install (SBDI) program. The Company worked with that SBDI implementation contractor to assess and remedy the situation. Any reimbursement from the implementation contractor will be credited back to the SBDI program and will be shown as a credit to the program in the 2023 EE/DR filing.

### Accounting Methodology

There have been no methodology changes since the last EE-RAC update (Case No. PUR-2021-00236).

### EM&V

Although the period between EE-RAC filings is extended to two years, the annual EM&V reports will not be impacted. The annual EM&V report will still be filed on or before May 1, 2023.

### Rates

The extended period between EE-RAC filings will not impact rates, and the current EE-RAC and True Up Factor will remain the same until the next full EE-RAC filing.

## Opt-Out Customers

As of September 1, 2022 there are 16 accounts that have chosen to opt-out of the energy efficiency program.

Appalachian Power Company  
Virginia-based DSM Programs Life-to-Date Activity Through 06/30/2021  
Portfolio Overview

Case No. PUE-2014-00026  
Filed: March 31, 2014  
Order: November 26, 2014  
Dollars in Millions

Program	Segment	Type	Result	Program Costs Requested	Costs Cap Approved	Program Costs Approved	Costs to Date	Start Date	End Date	Currently in	Participation <sup>6</sup>	Energy Savings (Gross kWh) <sup>8</sup>	Demand Savings (Gross kW) <sup>9</sup>
Low Income Weatherization	Residential	Energy Efficiency	Approved <sup>1</sup>	\$6.4M (\$3.2M+\$3.2M)	\$6.4M (\$3.2M+\$3.2M)	\$6.4M (\$3.2M+\$3.2M)	\$5.97M	Jan. 2015	Dec. 2020	Base	1,365 Homes	8,974,142	1,605
Peak Reduction	Residential	Demand Response	Approved <sup>2</sup>	\$7.8M (\$3.9M+\$3.9M)	\$7.8M (\$3.9M+\$3.9M)	\$7.8M (\$3.9M+\$3.9M)	\$5.97M	Jan. 2015	Dec. 2020	Base	7,874	408,862	6,990

<sup>1</sup> Program extension of three years approved in Case No. PUR-2017-00094, with additional cost cap approval of \$3,207,454  
<sup>2</sup> Program extension of three years approved in Case No. PUR-2017-00094, with additional cost cap approval of \$3,899,890  
<sup>3</sup> Participation, realized gross energy, and realized gross demand savings through 12/31/2020

Case No. PUE-2014-00039  
Filed: October 24, 2014  
Order: June 24, 2015  
Dollars in Millions

Program	Segment	Type	Result	Program Costs Requested	Costs Cap Approved <sup>3</sup>	Program Costs Approved <sup>4</sup>	Costs to Date	Start Date	End Date	Currently in	Participation <sup>6</sup>	Energy Savings (Gross kWh) <sup>8</sup>	Demand Savings (Gross kW) <sup>9</sup>
Home Performance	Residential	Energy Efficiency	Approved	\$5.19M	\$8.49M	\$4.61M	\$4.1M	Jan. 2016	Dec. 2018	EE-RAC	13,249 Customers	9,055,867	882
Appliance Recycling	Residential	Energy Efficiency	Approved	\$2.68M	\$4.36M	\$2.68M	\$0.7M	Jan. 2016	Dec. 2018	EE-RAC	3,394 Appliances	3,204,197	377
Manufactured Housing ENERGY STAR <sup>®</sup>	Residential	Energy Efficiency	Approved	\$1.33M	\$2.72M	\$1.33M	\$0.4M	Jan. 2016	Dec. 2018	EE-RAC	217 Homes	1,521,788	66
Efficient Products	Residential	Energy Efficiency	Approved	\$2.95M	\$3.91M	\$2.64M	\$2.7M	Jan. 2016	Dec. 2018	EE-RAC	733,579 Bulbs 2,934 Appliances	22,752,272	2,588
C&I Prescriptive	Non-Residential	Energy Efficiency	Approved	\$4.15M	\$8.08M	\$3.16M	\$4.4M	Jan. 2016	Dec. 2018	EE-RAC	736 Projects	69,091,086	10,534
C&I Custom	Non-Residential	Energy Efficiency	Denied	\$2.57M									

<sup>3</sup> Costs Cap includes direct program cost as well as projections for lost revenue and equity margins  
<sup>4</sup> Represents direct program costs exclusive of net lost revenue or equity margins  
<sup>6</sup> Participation, realized gross energy, and realized gross demand savings through 12/31/2020

Case No. PUR-2017-00126  
Filed: September 29, 2017  
Order: May 16, 2018  
Dollars in Millions

Program	Segment	Type	Result	Program Costs Requested <sup>5</sup>	Costs Cap Approved	Program Costs Approved	Costs to Date	Start Date	End Date	Currently in	Participation <sup>6</sup>	Energy Savings (Gross kWh) <sup>a</sup>	Demand Savings (Gross kW) <sup>a</sup>
eScore	Residential	Energy Efficiency	Approved	\$3.69M	\$5.63M	\$3.69M	\$3.46M	Jan. 2019	Dec-21	EE-RAC	3,035 Homes	2,459,215	368
Multifamily Direct Install	Residential	Energy Efficiency	Denied	\$3.02M									
Bring Your Own Thermostat	Residential	Demand Response	Approved	\$2.73M	\$3.02M	\$2.73M	\$2.51M	Jan. 2019	Dec-21	EE-RAC	4031 Thermostats	227,322	9,441
Efficient Products	Residential	Energy Efficiency	Withdrawn <sup>b</sup>										
Appliances Recycling	Residential	Energy Efficiency	Approved <sup>7</sup>	\$1.52M	\$0.65M	\$0.51M	\$1.14M	Jan. 2019	Dec. 2019	EE-RAC	1,586 Appliances	1,552,935	183
C&I Lighting	Non-Residential	Energy Efficiency	Approved	\$4.13M	\$12.67M	\$4.13M	\$4.0M	Jan. 2019	Dec-21	EE-RAC	463 Projects	45,963,105	7,455
C&I Standard	Non-Residential	Energy Efficiency	Approved	\$4.17M	\$10.77M	\$4.17M	\$1.49M	Jan. 2019	Dec-21	EE-RAC	81 Projects	2,113,874	304
Small Business Direct Install	Non-Residential	Energy Efficiency	Approved	\$2.39M	\$6.59M	\$2.39M	\$1.70M	Jan. 2019	Dec-21	EE-RAC	1,055 Projects	7,231,015	827

<sup>5</sup> Represents direct program costs exclusive of net lost revenue or equity margins

<sup>6</sup> The Company withdrew its request to extend this program beyond 12/31/2019

<sup>7</sup> Approved extension of 1 year

<sup>a</sup> Participation, realized gross energy, and realized gross demand savings through 12/31/2021

Case No. PUR-2019-00122  
Filed: September 30, 2019  
Order: May 21, 2020  
Dollars in Millions

Program	Segment	Type	Result	Program Costs Requested <sup>5</sup>	Costs Cap Approved <sup>6</sup>	Program Costs Approved <sup>5</sup>	Costs to Date	Start Date	End Date	Currently in	Participation <sup>6</sup>	Energy Savings (Gross kWh) <sup>a</sup>	Demand Savings (Gross kW) <sup>a</sup>
Low Income Single Family <sup>10,11</sup>	Residential	Energy Efficiency	Approved	\$16.6M	\$16.6M	\$16.6M	\$3.82M	Jan. 2021	Active	EE-RAC	165	477,853	95.09
Low Income Multi-Family <sup>10, 11</sup>	Residential	Energy Efficiency	Approved	\$20.5M	\$20.5M	\$20.5M	\$7.78M	Jan. 2021	Active	EE-RAC	546	982,294	228.65
Manufactured Housing ENERGY STAR®	Residential	Energy Efficiency	Approved	\$2.4M	\$2.4M	\$2.4M	\$0.44M	Jan. 2021	Active	EE-RAC	145	7940	-4.79

<sup>5</sup> Represents direct program costs exclusive of net lost revenue or equity margins

<sup>6</sup> Participation, realized gross energy, and realized gross demand savings through 12/31/2021

<sup>10</sup> Case No. PUR-2019-00122 Final Order. The LIME and LISE programs satisfy the requirements of Code § 56-596.2.1, and the Company is permitted to apply the first three years of these programs towards meeting the \$25 million goal established therein.

<sup>11</sup> Section § 56-596.2 states that "at least 15 percent of such proposed costs of energy efficiency programs shall be allocated to programs designed to benefit low-income, elderly, or disabled individuals or veterans." Since July 1, 2018, the Company has proposed \$43.3M in low income programs, which is approximately 31 percent of the \$140M goal.

Case No. PUR-2020-00251

Filed November 30, 2020  
Order July 29, 2021  
Dollars in Millions

Program	Segment	Type	Result	Program Costs Requested <sup>5</sup>	Costs Cap Approved <sup>5</sup>	Program Costs Approved <sup>5</sup>	Costs to Date	Start Date	End Date	Currently in	Participation <sup>6</sup>	Energy Savings (Gross kWh) <sup>5</sup>	Demand Savings (Gross kW) <sup>5</sup>
Home Energy Reports	Residential	Energy Efficiency	Approved	\$4.3M	\$4.3M	\$4.3M	\$0.69M	Jan. 2022	Active	EE-RAC	0	0	0
Efficient Products	Residential	Energy Efficiency	Approved	\$8.3M	\$8.3M	\$8.3M	\$1.95M	Jan. 2022	Active	EE-RAC	0	0	0
Energy Efficiency Kits	Residential	Energy Efficiency	Approved	\$1.4M	\$1.4M	\$1.4M	\$0.18M	Jan. 2022	Active	EE-RAC	0	0	0
Home Performance	Residential	Energy Efficiency	Approved	\$11.8M	\$11.8M	\$11.8M	\$0.71M	Jan. 2022	Active	EE-RAC	0	0	0
Business Energy Solutions	Non-Residential	Energy Efficiency	Approved	\$18.9M	\$18.9M	\$18.9M	\$0.98M	Jan. 2022	Active	EE-RAC	0	0	0
Bring Your Own SMART Thermostat	Residential	Demand Response	Approved	\$5.3M	\$5.3M	\$5.3M	\$0.36M	Jan. 2022	Active	EE-RAC	0	0	0
Small Business Direct Install	Non-Residential	Energy Efficiency	Approved	\$5.6M	\$5.6M	\$5.6M	\$0.53M	Jan. 2022	Active	EE-RAC	0	0	0
Volt Var Optimization Pilot	Multiple	Energy Efficiency	Approved	\$4.0M	\$4.0M	\$4.0M	\$0.009	Jan. 2022	Active	EE-RAC	0	0	0

<sup>5</sup> Represents direct program costs exclusive of net lost revenue or equity margins  
<sup>6</sup> Participation, realized gross energy, and realized gross demand savings through 12/31/2021



PUR-2021-00236  
Confidential Schedule 3  
November 30, 2022 Report

22114086

REDACTED IN ITS ENTIRETY

PUR-2021-00236  
Confidential Schedule 46A  
November 30, 2022 Report

22114088

REDACTED IN ITS ENTIRETY

Appalachian Power Company  
Energy Efficiency True-Up Factor  
From January 1, 2018 - August 31, 2023

(1) Line No.	(2) Description	(3) Launch - Aug 31, 2021 (actual)	(4) Sept 1, 2021 - Aug 31, 2022 (actual)	(5) Sept 1, 2022 - Aug 31, 2023 (projected)	(6) Total
1	C&I Prescriptive	4,384,855	-	-	4,384,855
2	Appliance Recycling	1,050,826	-	-	1,050,826
3	Home Performance	4,095,526	650,386	1,643,609	6,389,521
4	Efficient Products	2,748,545	1,784,075	979,587	5,512,207
5	Manufactured Housing ENERGY STAR®	499,151	269,731	81,000	849,882
6	eScore	2,816,620	-	-	2,816,620
7	Bring Your Own Thermostat	1,686,816	618,394	-	2,305,210
8	C&I Standard	1,194,063	-	-	1,194,063
9	C&I Lighting	3,291,306	-	-	3,291,306
10	Small Business Direct Install	1,402,657	-	-	1,402,657
11	Low Income Multi-family	2,466,063	4,746,488	3,939,804	11,152,155
12	Low Income Single-family	878,178	2,639,518	3,969,395	7,487,091
13	#REF!	-	168,541	276,866	445,408
14	#REF!	-	638,261	883,621	1,521,881
15	Bring Your Own Thermostat	-	330,582	1,183,086	1,513,668
16	Small Business Direct Install	-	487,931	1,204,260	1,692,191
17	Business Energy Solutions	-	898,513	4,173,983	5,070,496
18	C&I Custom Program	-	-	1,375,556	1,375,556
19	#REF!	-	9,672	198,140	207,811
20	#REF!	41,170	15,313	25,000	81,482
21	<b>Total Direct Costs</b>	<b>\$ 28,555,776</b>	<b>\$ 13,255,403</b>	<b>\$ 19,933,707</b>	<b>\$ 59,744,886</b>
22	Margin on Direct Costs at	<i>varies</i>	<i>9.20%</i>	<i>9.20%</i>	
23	C&I Prescriptive	415,223	-	-	415,223
24	Appliance Recycling	98,922	-	-	98,922
25	Home Performance	387,712	59,836	151,212	598,760
26	Efficient Products	260,228	164,135	90,122	514,485
27	Manufactured Housing ENERGY STAR®	45,904	24,815	7,452	78,171
28	eScore	247,339	33,959	-	281,298
29	Bring Your Own Thermostat	147,941	56,892	-	204,833
30	C&I Standard	105,802	16,097	-	121,899
31	C&I Lighting	289,408	38,040	-	325,448
32	Small Business Direct Install	119,553	15,303	-	134,856
33	Low Income Multi-family	138,662	436,677	362,444	937,782
34	Low Income Single-family	61,225	242,836	365,184	669,245
31	Energy Efficiency Kits	-	15,506	25,472	40,978
32	Home Energy Reports	-	58,720	81,293	140,013
33	Bring Your Own Thermostat	-	30,414	108,844	139,257
34	Small Business Direct Install	-	44,890	110,792	155,682
35	Business Energy Solutions	-	82,479	384,006	466,486
36	C&I Custom Program	-	-	126,551	126,551
37	VoltVar Voltage Control	-	-	-	-
38	Portfolio Design Costs	3,325	3,067	2,300	8,692
39	<b>Total Margin</b>	<b>\$ 2,321,244</b>	<b>\$ 1,321,665</b>	<b>\$ 1,815,672</b>	<b>\$ 5,458,582</b>
40	EE-RAC Revenue Requirement				
41	C&I Prescriptive	4,800,078	-	-	4,800,078
42	Appliance Recycling	1,149,748	-	-	1,149,748
43	Home Performance	4,483,238	710,221	1,794,821	6,988,281
44	Efficient Products	3,008,773	1,948,209	1,069,709	6,026,692
45	Manufactured Housing ENERGY STAR®	545,055	294,546	88,452	928,053
46	eScore	3,083,959	33,959	-	3,097,918
47	Bring Your Own Thermostat	1,834,757	675,287	-	2,510,044
48	C&I Standard	1,299,865	16,097	-	1,315,962
49	C&I Lighting	3,580,714	38,040	-	3,816,754
50	Small Business Direct Install	1,522,210	15,303	-	1,537,513
51	Low Income Multi-family	2,604,725	5,183,165	4,302,048	12,089,938
52	Low Income Single-family	939,403	2,882,353	4,334,580	8,156,336
49	Energy Efficiency Kits	-	184,047	302,338	486,385
50	Home Energy Reports	-	698,981	964,914	1,661,894
51	Bring Your Own Thermostat	-	360,995	1,291,930	1,652,925
52	Small Business Direct Install	-	532,821	1,315,052	1,847,873
53	Business Energy Solutions	-	-	4,557,989	5,536,981
54	C&I Custom Program	-	-	1,502,107	1,502,107
55	VoltVar Voltage Control	-	9,672	198,140	207,811
56	Portfolio Design Costs	44,494	18,380	27,300	90,174
57	<b>Total Actual Costs</b>	<b>\$ 28,877,020</b>	<b>\$ 13,598,076</b>	<b>\$ 21,749,379</b>	<b>\$ 63,701,361</b>
58	<b>Revenue Collected/Projected</b>	<b>\$ 33,916,915</b>	<b>\$ 13,968,808</b>	<b>\$ 13,404,775</b>	<b>\$ 61,308,497</b>
59	EDIT Adjustment	\$ (157,700)	\$ -	\$ -	\$ (157,700)
60	<b>(Over)/Under Recovery</b>	<b>\$ (5,197,595)</b>	<b>\$ (388,732)</b>	<b>\$ 8,344,604</b>	<b>\$ 2,235,163</b>

CERTIFICATE OF SERVICE


I hereby certify that a true copy of the foregoing was served by hand or electronic mail on this 30<sup>th</sup> day of November 2022 to:

Raymond L. Doggett, Jr., Esq.  
C. Austin Skeens, Esq.  
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A handwritten signature in black ink, appearing to read 'Cale A. Jaffe', is written over a horizontal line.