

**Docket No. E-34, Sub 54
 Appalachian State University
 d/b/a New River Light and Power Company
 Current and Proposed Rate Design
 For Twelve Months Ended December 31, 2021**

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Oct 30 2023

Line	Description	Billing Determinants	Current Rates	Current Rate Revenues	Proposed Rates	Proposed Revenue	Increase (Decrease)	Percent Increase
1	Residential Service:	PS Sch 3-1(b) Cust Growth						
2	Basic Facilities Charge	7,340	\$ 12.58	\$ 1,108,097	\$ 14.50	\$ 1,277,218	\$ 169,121	15.26%
3	Energy Charge:							
4	NRLP Distribution Charge - All kWh	64,315,439	\$ 0.090044	\$ 5,791,219	\$ 0.032548	\$ 2,093,339	\$ (3,697,880)	17.94%
5	Wholesale Power Supply Charge - All kWh				\$ 0.073646	\$ 4,736,575	\$ 4,736,575	
6	PPA Energy - All kWh		\$ 0.022313	\$ 1,435,070	\$ 0.012376	\$ 795,968	\$ (639,103)	-44.53%
7	Total Energy - All kWh		\$ 0.112357	\$ 7,226,290	\$ 0.118570	\$ 7,625,882	\$ 399,592	5.53%
8	Total Residential Service			\$ 8,334,386		\$ 8,903,100	\$ 568,713	6.82%
9								
10	Commercial General Service:	PS Sch 3-1(b) Cust Growth						
11	Basic Facilities Charge	1,480	\$ 17.42	\$ 309,344	\$ 17.50	\$ 310,765	\$ 1,421	0.46%
12	Energy Charge:							
13	NRLP Distribution Charge - All kWh	23,499,170	\$ 0.086683	\$ 2,036,979	\$ 0.033071	\$ 777,141	\$ (1,259,838)	29.45%
14	Wholesale Power Supply Charge - All kWh				\$ 0.079142	\$ 1,859,771	\$ 1,859,771	
15	PPA Energy - All kWh		\$ 0.022313	\$ 524,337	\$ 0.012376	\$ 290,826	\$ (233,511)	-44.53%
16	Total Energy - All kWh		\$ 0.108996	\$ 2,561,316	\$ 0.124589	\$ 2,927,738	\$ 366,423	14.31%
17	Total Commercial General Service			\$ 2,870,660		\$ 3,238,503	\$ 367,843	12.81%
18								
19	Commercial Demand Service:	PS Sch 3-1(b) Cust Growth						
20	Basic Facilities Charge	279	\$ 23.22	\$ 77,764	\$ 30.00	\$ 100,470	\$ 22,706	29.20%
21	Demand Charge:							
22	NRLP Distribution Charge - All kW	213,173	\$ 8.27	\$ 1,762,944	\$ 2.27	\$ 483,904	\$ (1,279,040)	0.00%
23	Wholesale Power Supply Charge - All kW				\$ 6.00	\$ 1,279,040	\$ 1,279,040	
24	Energy Charge:							
25	NRLP Distribution Charge - All kWh	74,161,349	\$ 0.054222	\$ 4,021,177	\$ 0.020228	\$ 1,500,136	\$ (2,521,041)	47.57%
26	Wholesale Power Supply Charge - All kWh				\$ 0.059790	\$ 4,434,107	\$ 4,434,107	
27	PPA Energy - All kWh		\$ 0.022313	\$ 1,654,762	\$ 0.012376	\$ 917,821	\$ (736,941)	-44.53%
28	Total Energy - All kWh		\$ 0.076535	\$ 5,675,939	\$ 0.092394	\$ 6,852,064	\$ 1,176,125	20.72%
29	Total Commercial Demand Service			\$ 7,516,646		\$ 8,715,477	\$ 1,198,831	15.95%
30								
31	ASU Campus Service:							
32	Distribution Facilities Charge:							
33	All kW at ASU Substation (plus on-site generation)	92,441	\$ 10.63	\$ 982,643	\$ 16.97	\$ 1,568,716	\$ 586,073	59.64%
34	Power Demand Charge:							
35	All kW at ASU Substation	92,441	\$ 8.75	\$ 808,855	\$ 7.87	\$ 727,507	\$ (81,348)	-10.06%
36	Energy Charge:							
37	All kWh at ASU Substation	44,774,302						
38	Base Energy Charge - All kWh		\$ 0.040950	\$ 1,833,508	\$ 0.040121	\$ 1,796,390	\$ (37,118)	-2.02%
39	PPA Energy - All kWh		\$ 0.022313	\$ 999,049	\$ 0.012376	\$ 554,127	\$ (444,922)	-44.53%
40	Total Energy Charge - All kWh		\$ 0.063263	\$ 2,832,557	\$ 0.052497	\$ 2,350,517	\$ (482,040)	
41	Total ASU Campus Service			\$ 4,624,055		\$ 4,646,740	\$ 22,685	0.49%
42								
43	Lighting Service:							
44	<i>Schedule OL Base Charge</i>							
45	[Base Charge includes COS Allocation plus Individual Light Investment]							
46	High Pressure Sodium:							
47	150 Watt HPS Cobra Head	142	\$ 8.90	\$ 15,166	\$ 13.34	\$ 22,726	\$ 7,561	49.85%
48	250 Watt HPS Cobra Head	408	\$ 12.93	\$ 63,305	\$ 18.05	\$ 88,396	\$ 25,091	39.63%
49	250 Watt HPS Shoebox	7	\$ 12.93	\$ 1,086	\$ 20.35	\$ 1,709	\$ 623	57.37%
50	Mercury Vapor:							
51	175 Watt MV	196	\$ 9.26	\$ 21,780	\$ 12.36	\$ 29,080	\$ 7,300	33.52%
52	400 Watt MV TV	4	\$ 16.97	\$ 815	\$ 23.70	\$ 1,138	\$ 323	39.68%
53	Metal Halide:							
54	250 Watt MH Cobra Head	258	\$ 15.33	\$ 47,462	\$ 18.74	\$ 58,030	\$ 10,568	22.27%
55	250 Watt MH Decashield	3	\$ 15.33	\$ 552	\$ 18.46	\$ 664	\$ 113	20.39%
56	400 Watt MH Cobra Head	364	\$ 19.54	\$ 85,351	\$ 26.06	\$ 113,811	\$ 28,460	33.34%
57	400 Watt MH Flood TV	-	\$ 19.54	\$ -	\$ 26.39	\$ -	\$ -	0.00%
58	400 Watt MH Shoebox	5	\$ 19.54	\$ 1,172	\$ 28.29	\$ 1,698	\$ 525	44.79%
59	Energy Charge Only (Town of Boone Owned Lighting):							
60	Sodium Vapor:							
61	150 Watt Sodium Vapor TOB	79	\$ 4.39	\$ 4,162	\$ 6.32	\$ 5,993	\$ 1,831	44.00%
62	250 Watt Sodium Vapor TOB	216	\$ 7.31	\$ 18,948	\$ 10.54	\$ 27,309	\$ 8,362	44.13%
63	400 Watt Sodium Vapor TOB	163	\$ 11.68	\$ 22,846	\$ 16.86	\$ 32,974	\$ 10,128	44.33%
64	750 Watt Sodium Vapor TOB	1	\$ 21.92	\$ 263	\$ 31.61	\$ 379	\$ 116	44.20%
65	Mercury Vapor:							
66	175 Watt MV TOB	163	\$ 5.12	\$ 10,015	\$ 7.38	\$ 14,426	\$ 4,411	44.05%
67	400 Watt MV TV TOB	6	\$ 11.68	\$ 841	\$ 16.86	\$ 1,214	\$ 373	44.33%
68	Metal Halide:							
69	250 Watt Metal Halide - TOB	1	\$ 7.31	\$ 88	\$ 10.54	\$ 126	\$ 39	44.13%
70	400 Watt Metal Halide - TOB	1	\$ 11.68	\$ 140	\$ 16.86	\$ 202	\$ 62	44.33%

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Current and Proposed Rate Design
For Twelve Months Ended December 31, 2021

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Line	Description	Billing Determinants	Current Rates	Current Rate Revenues	Proposed Rates	Proposed Revenue	Increase (Decrease)	Percent Increase
71	<u>Schedule LEDL Base Charge</u>							
72	[Base Charge includes COS Allocation plus Individual Light Investment]							
73	50 Watt Yard Light (No Longer Available)	4	\$ 4.07	\$ 195	\$ 4.48	\$ 215	20	10.01%
74	96 Watt LED TV Bronze	4	\$ 6.85	\$ 329	\$ 9.99	\$ 480	151	45.80%
75	101 Watt LED Bronze Cobra Head	4	\$ 6.85	\$ 329	\$ 12.38	\$ 594	266	80.74%
76	110 Watt LED (No Longer Available)	7	\$ 6.85	\$ 576	\$ 7.75	\$ 651	75	13.07%
77	119 Area Light LED Shoebox (No Longer Available)	98	\$ 9.98	\$ 11,736	\$ 10.96	\$ 12,883	1,147	9.77%
78	160 Watt Cobra Head LED	12	\$ 11.06	\$ 1,593	\$ 11.63	\$ 1,675	83	5.20%
79	Energy Charge Only (Town of Boone Owned Lighting):							
80	20 Watt LED TOB	1	\$ 0.44	\$ 5	\$ 0.84	\$ 10	5	91.56%
81	27 Watt LED TOB	17	\$ 0.63	\$ 129	\$ 1.14	\$ 232	104	80.62%
82	40 Watt LED TOB	25	\$ 0.94	\$ 282	\$ 1.69	\$ 506	224	79.34%
83	50 Watt LED TOB	3	\$ 1.13	\$ 41	\$ 2.11	\$ 76	35	86.48%
84	TOB 80 Watt LED	33	\$ 1.82	\$ 721	\$ 3.37	\$ 1,335	614	85.25%
85	92 Watt LED TOB	17	\$ 2.14	\$ 437	\$ 3.88	\$ 791	354	81.18%
86	100 Watt LED TOB	81	\$ 2.33	\$ 2,265	\$ 4.21	\$ 4,096	1,832	80.88%
87	106 Watt LED TOB	54	\$ 2.45	\$ 1,588	\$ 4.47	\$ 2,895	1,307	82.34%
88	TOB 110 Watt LED	20	\$ 2.51	\$ 602	\$ 4.64	\$ 1,113	510	84.70%
89	120 Watt LED TOB	17	\$ 2.77	\$ 565	\$ 5.06	\$ 1,032	467	82.57%
90	TOB 136 Watt LED	2	\$ 3.14	\$ 75	\$ 5.73	\$ 138	62	82.54%
91	150 Watt LED TOB	173	\$ 3.46	\$ 7,183	\$ 6.32	\$ 13,124	5,941	82.71%
92	TOB 180 Watt LED	24	\$ 4.15	\$ 1,195	\$ 7.59	\$ 2,185	990	82.79%
93	<u>Schedule OL PPA Charge</u>							
94								
95	High Pressure Sodium:							
96	150 Watt HPS Cobra Head		\$ 1.22	\$ 2,079	\$ 0.68	\$ 1,159	(920)	-44.26%
97	250 Watt HPS Cobra Head		\$ 2.04	\$ 9,988	\$ 1.13	\$ 5,532	(4,455)	-44.61%
98	250 Watt HPS Shoebox		\$ 2.04	\$ 171	\$ 1.13	\$ 95	(76)	-44.61%
99	Mercury Vapor:							
100	175 Watt MV		\$ 1.43	\$ 3,363	\$ 0.79	\$ 1,858	(1,505)	-44.76%
101	400 Watt MV TV		\$ 3.26	\$ 156	\$ 1.81	\$ 87	(70)	-44.48%
102	Metal Halide:							
103	250 Watt MH Cobra Head		\$ 2.04	\$ 6,316	\$ 1.13	\$ 3,498	(2,817)	-44.61%
104	250 Watt MH Decashield		\$ 2.04	\$ 73	\$ 1.13	\$ 41	(33)	-44.61%
105	400 Watt MH Cobra Head		\$ 3.26	\$ 14,240	\$ 1.81	\$ 7,906	(6,334)	-44.48%
106	400 Watt MH Flood TV		\$ 3.26	\$ -	\$ 1.81	\$ -	-	0.00%
107	400 Watt MH Shoebox		\$ 3.26	\$ 196	\$ 1.81	\$ 109	(87)	-44.48%
108	Energy Charge Only (Town of Boone Owned Lighting):							
109	Sodium Vapor:							
110	150 Watt Sodium Vapor TOB		\$ 1.22	\$ 1,157	\$ 0.68	\$ 645	(512)	-44.26%
111	250 Watt Sodium Vapor TOB		\$ 2.04	\$ 5,288	\$ 1.13	\$ 2,929	(2,359)	-44.61%
112	400 Watt Sodium Vapor TOB		\$ 3.26	\$ 6,377	\$ 1.81	\$ 3,540	(2,836)	-44.48%
113	750 Watt Sodium Vapor TOB		\$ 6.11	\$ 73	\$ 3.39	\$ 41	(33)	-44.52%
114	Mercury Vapor:							
115	175 Watt MV TOB		\$ 1.43	\$ 2,797	\$ 0.79	\$ 1,545	(1,252)	-44.76%
116	400 Watt MV TV TOB		\$ 3.26	\$ 235	\$ 1.81	\$ 130	(104)	-44.48%
117	Metal Halide:							
118	250 Watt Metal Halide - TOB		\$ 2.04	\$ 24	\$ 1.13	\$ 14	(11)	-44.61%
119	400 Watt Metal Halide - TOB		\$ 3.26	\$ 39	\$ 1.81	\$ 22	(17)	-44.48%
120	<u>Schedule LEDL PPA Charge</u>							
121								
122	50 Watt Yard Light (No Longer Available)		\$ 0.41	\$ 20	\$ 0.23	\$ 11	(9)	-43.90%
123	96 Watt LED TV Bronze		\$ 0.78	\$ 37	\$ 0.43	\$ 21	(17)	-44.87%
124	101 Watt LED Bronze Cobra Head		\$ 0.82	\$ 39	\$ 0.46	\$ 22	(17)	-43.90%
125	110 Watt LED (No Longer Available)		\$ 0.90	\$ 76	\$ 0.50	\$ 42	(34)	-44.44%
126	119 Area Light LED Shoebox (No Longer Available)		\$ 0.97	\$ 1,141	\$ 0.54	\$ 635	(506)	-44.33%
127	160 Watt Cobra Head LED		\$ 1.32	\$ 190	\$ 0.73	\$ 105	(85)	-44.70%
128	Energy Charge Only (Town of Boone Owned Lighting):							
129	20 Watt LED TOB		\$ 0.16	\$ 2	\$ 0.09	\$ 1	(1)	-43.75%
130	27 Watt LED TOB		\$ 0.22	\$ 45	\$ 0.12	\$ 24	(20)	-45.45%
131	40 Watt LED TOB		\$ 0.33	\$ 99	\$ 0.18	\$ 54	(45)	-45.45%
132	50 Watt LED TOB		\$ 0.41	\$ 15	\$ 0.23	\$ 8	(6)	-43.90%
133	TOB 80 Watt LED		\$ 0.65	\$ 257	\$ 0.36	\$ 143	(115)	-44.62%
134	92 Watt LED TOB		\$ 0.75	\$ 153	\$ 0.42	\$ 86	(67)	-44.00%
135	100 Watt LED TOB		\$ 0.81	\$ 787	\$ 0.45	\$ 437	(350)	-44.44%
136	106 Watt LED TOB		\$ 0.86	\$ 557	\$ 0.48	\$ 311	(246)	-44.19%
137	TOB 110 Watt LED		\$ 0.90	\$ 216	\$ 0.50	\$ 120	(96)	-44.44%
138	120 Watt LED TOB		\$ 0.98	\$ 200	\$ 0.54	\$ 110	(90)	-44.90%
139	TOB 136 Watt LED		\$ 1.11	\$ 27	\$ 0.61	\$ 15	(12)	-45.05%
140	150 Watt LED TOB		\$ 1.22	\$ 2,533	\$ 0.68	\$ 1,412	(1,121)	-44.26%
141	TOB 180 Watt LED		\$ 1.47	\$ 423	\$ 0.81	\$ 233	(190)	-44.90%

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 Current and Proposed Rate Design
 For Twelve Months Ended December 31, 2021**

Line	Description	Billing Determinants	Current Rates	Current Rate Revenues	Proposed Rates	Proposed Revenue	Increase (Decrease)	Percent Increase
212	Base Rate Revenues:							
213	Residential Service			\$ 6,899,316		\$ 8,107,132	\$ 1,207,816	17.51%
214	Commercial General Service			\$ 2,346,323		\$ 2,947,677	\$ 601,354	25.63%
215	Commercial Demand Service			\$ 5,861,884		\$ 7,797,657	\$ 1,935,772	33.02%
216	ASU Campus Service			\$ 3,625,006		\$ 4,092,613	\$ 467,608	12.90%
217	Lighting Service (Excluding Investment Charges)			\$ 231,057		\$ 306,968	\$ 75,911	32.85%
218	Total Base Rate Revenues			\$ 18,963,586		\$ 23,252,046	\$ 4,288,461	22.61%
219								
220	PPAC Revenue Reduction:							
221	Residential Service			\$ 1,435,070		\$ 795,968	\$ (639,103)	-44.53%
222	Commercial General Service			\$ 524,337		\$ 290,826	\$ (233,511)	-44.53%
223	Commercial Demand Service			\$ 1,654,762		\$ 917,821	\$ (736,941)	-44.53%
224	ASU Campus Service			\$ 999,049		\$ 554,127	\$ (444,922)	-44.53%
225	Lighting Service			\$ 59,389		\$ 32,941	\$ (26,448)	-44.53%
226	Total PPAC Revenue Reduction			\$ 4,672,608		\$ 2,591,682	\$ (2,080,926)	-44.53%
227								
228	Net Revenue Increase:							
229	Residential Service			\$ 8,334,386		\$ 8,903,100	\$ 568,713	6.82%
230	Commercial General Service			\$ 2,870,660		\$ 3,238,503	\$ 367,843	12.81%
231	Commercial Demand Service			\$ 7,516,646		\$ 8,715,477	\$ 1,198,831	15.95%
232	ASU Campus Service			\$ 4,624,055		\$ 4,646,740	\$ 22,685	0.49%
233	Lighting Service			\$ 290,446		\$ 339,908	\$ 49,462	17.03%
234	Total Net Revenue Increase			\$ 23,636,193		\$ 25,843,728	\$ 2,207,535	9.34%

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Summary of Proposed Rate Impacts
For Twelve Months Ended December 31, 2021

Description	% Base Rate Increase	% Increase with PPA Reduction	Rate of Return	Rate of Return Index
Residential Service	17.51%	6.82%	7.800%	1.27
Commercial General Service	25.63%	12.81%	7.120%	1.15
Commercial Demand Service	33.02%	15.95%	3.401%	0.55
ASU Campus Service	12.90%	0.49%	7.800%	1.27
Lighting Service	<u>32.85%</u>	<u>17.03%</u>	<u>3.40%</u>	<u>0.55</u>
Total System	22.61%	9.34%	6.165%	1.00