

Appalachian Power Company
Formula Rate Template - Capacity Rate
12 Months Ending 12/31/2016 (actuals)

	RATE \$/MW/Day (1)	CAPACITY MW (2)	Amount \$ (1) x (2) (3)
Capacity Daily Charge:			
1. Reference	P.2		Col (1) x (2)
2. Amount	\$435.85554	5,222	\$2,276,168.40

Note A: Rate will be applied to peak obligation demands at or adjusted to generation level (including losses).

DETERMINATION OF RATES APPLICABLE TO
APCO CAPACITY REQUIREMENTS
12 Months Ending 12/31/2017 (actuals) for 2018

Appendix 2
Page 2

1. Capacity Daily Rates

$$\begin{aligned} \$/\text{MW} &= \frac{\text{Annual Production Fixed Cost}}{(\text{APCo 5 CP Demand}/365) \text{ (Note A)}} \\ &= \frac{\frac{830,801,467}{5,222.3}}{/365} = \$435.85554 \end{aligned}$$

Where: Annual Production Fixed Cost, P.4, L. 8

Note A: Average of demand at time of PJM five highest daily peaks.
Workpapers -- WP1

	Reference (1)	PRODUCTION Amount (2)
1. GSU & Associated Investment	Note A	70,365,479
2. Total Transmission Investment	FF1, P.207, L.58, Col.g	3,018,312,132
3. Percent (GSU to Total Trans. Investment)	L.1 / L.2	2.33%
4. Transmission Depreciation Expense	FF1, P.336, L.7, Col.b	48,271,292
5. GSU Related Depreciation Expense	L.3 x L.4	1,125,342
6. Station Equipment Acct. 353 Investment	Note B	1,366,357,856
7. Percent (GSU to Acct. 353)	L.1 / L.6	5.15%
8. Transmission O&M (Accts 562 & 570)	FF1,P.321, L. 93, Col.b, and L.107, Col.b	4,404,324
9. GSU & Associated Investment O&M	L.7 x L.8	226,816

Note A: Workpapers -- WP-16

Note B: Workpapers -- WP-17

ANNUAL PRODUCTION FIXED COST
 12 Months Ending 12/31/2017 (actuals) for 2018

	Reference (1)	PRODUCTION Amount (2)
1. Return on Rate Base	P.5, L.18, Col.(2)	\$230,689,920
2. Operation & Maintenance Expense	P.14, L.15, Col.(2)	\$248,035,954
3. Depreciation Expense	P.16, L.9, Col.(2) Note A	\$203,053,070
4. Taxes Other Than Income Taxes	P.17, L.6, Col.(3)	\$67,284,210
5. Income Tax	P.18, L.5, Col.(2)	\$93,077,837
6. Sales for Resale	Note B	\$11,339,523
7. Sales for Resale (Energy Credit)	Note C	\$0
8. Annual Production Fixed Cost	Sum (L.1 : L.5) - (L.6 +L.7)	\$830,801,467

Note A: See page 20 for depreciation rates by plant account.

Note B: Capacity related revenues associated with sales as reported in Account 447 (includes pool capacity demand). See Workpaper 15d.

Note C: Workpaper 15d

RETURN ON PRODUCTION-RELATED INVESTMENT
12 Months Ending 12/31/2017 (actuals) for 2018

	Reference	Amount (1)	Demand (2)	Energy (3)
1. ELECTRIC PLANT				
2. Gross Plant in Service	P.6, L.4, Col.(2)-(4)	6,589,817,784	6,526,668,954	63,148,830
3. Less: Accumulated Depreciation	P.6, L.11, Col.(2)-(4)	2,414,625,987	2,388,370,177	26,255,810
4. Net Plant in Service	L.2 - L.3	4,175,191,797	4,138,298,777	36,893,019
5. Less: Accumulated Deferred Taxes	P.6, L.12, Col.(2)-(4)	1,212,039,979	1,167,489,614	44,550,365
6. Plant Held for Future Use (Note A)	FF1, P.214	428,415	428,415	0
7. Subtotal - Electric Plant	L.4 - L.5 + L.6	2,963,580,232	2,971,237,578	(7,657,346)
WORKING CAPITAL				
8. Materials & Supplies				
9. Fuel	P.9, L.2, Col.(2)-(4)	89,311,842	0	89,311,842
10. Nonfuel	P.9, L.8, Col.(2)-(4)	73,640,404	73,640,404	0
11. Total M & S	L.9 + L.10	162,952,246	73,640,404	89,311,842
12. Prepayments Nonlabor (Note B)		4,416,881	4,374,555	42,326
13. Prepayments Labor (Note B)		0	0	0
14. Prepayments Total (Note B)	L.12 + L. 13	4,416,881	4,374,555	42,326
15. Cash Working Capital	P.8, L.7, Col.(1)-(3)	36,065,535	24,442,237	11,623,298
16. Total Rate Base	L.7 + L.11 + L.14 + L.15	3,167,014,894	3,073,694,774	93,320,120
17. Weighted Cost of Capital	P.11, L.4, Col.(4)	7.51%	7.51%	7.51%
18. Return on Rate Base	L.16 x L.17	237,693,872	230,689,920	7,003,952

Note A: Workpapers -- WP-19

Note B: Workpapers -- WP-5c Prepayments include amounts booked to Account 165. Nonlabor related prepayments allocated to the production function based on gross plant on P.6, L.7. Labor related prepayments allocated to production function based on wages and salaries on P.7, Note B.

	System		Reference	PRODUCTION		
	Reference	Amount		Amount	Demand	Energy
		(1)		(2)	(3)	(4)
1. GROSS PLANT IN SERVICE (Note A)						
2. Plant in Service (Note C)	L. 14	13,471,764,684	L.16	6,381,588,532	6,381,588,532	0
3. Allocated General & Intangible Plant			P.7, Col(3), L.25	208,229,252	145,080,422	63,148,830
4. Total	L.2 + L.3 Note A	13,471,764,684		6,589,817,784	6,526,668,954	63,148,830
5.			Col.(2), L.4	6,589,817,784	6,526,668,954	63,148,830
6.			Col.(1), L.4	13,471,764,684	13,471,764,684	13,471,764,684
7.		100.00%	L.5/L.6	48.92%	48.45%	0.47%
8. ACCUMULATED PROVISION FOR DEPRECIATION (Note A)						
9. Plant in Service (Note D)	L.18	4,454,466,654	L.20	2,328,049,122	2,328,049,122	0
10. Allocated General Plant		158,246,147	Note B	86,576,866	60,321,055	26,255,810
11. Total	L.9 + L.10			2,414,625,987	2,388,370,177	26,255,810
12. ACCUMULATED DEFERRED TAXES (Note A)	Note E	2,400,028,590	P.6a, L. 52	1,212,039,979	1,167,489,614	44,550,365

Note A: Excludes ARO amounts.

Note B: (% From P.7, Col.(3), L.28)

Note C: Includes Generator Step-Up Transformers and Other Generation related investments previously included in the transmission accounts

Note D: Includes Accumulated Depreciation associated with the Generator Step-Up Transformers and Other Generation investments.

Note E: WP--8a, WP--8ai

GSU DETAILS [Lns. 2 and 9 above]

	System Reference	Amount	Reference	PRODUCTION Amount	Demand	Energy
		(1)		(2)	(3)	(4)
13 GROSS PLANT IN SERVICE						
14 Plant in Service (Note C)	WP6a, Ln. 11	13,471,764,684	WP6a, Ln. 2	6,311,223,053	6,311,223,053	0
15 Plant in Service (Note C) (GSU)	P.3, L.1, Col.(2)			70,365,479	70,365,479	0
16 Plant in Service (Note C)	Ln. 14 + L.15			6,381,588,532	6,381,588,532	0
17 Accumulated Provision for Depreciation						
18 Accumulated Prov. Depreciation (Note D)	WP6b, Ln. 7	4,454,466,654	WP6b, Ln. 7	(2,306,812,902)	(2,306,812,902)	0
19 Accumulated Prov. Dep. (GSU)	WP16			(21,236,220)	(21,236,220)	0
20 Total Accumulated Depreciation (Note D)	Ln. 18+ L.19			(2,328,049,122)	(2,328,049,122)	0

Account	Description	Year End Balance	Exclusions	100% Production (Energy Related)	100% Production (Demand Related)	Labor
1	190 Excluded Items	195,972,147	195,972,147			
2	190 100% Production (Energy)	3,987,248		3,987,248		
3	190 100% Production (Demand)	93,711,270			93,711,270	
4	190 Labor Related	5,683,453				5,683,453
5	190 Total	299,354,118	195,972,147	3,987,248	93,711,270	5,683,453
6	Production Allocation		0.00%	100.00%	100.00%	100.00%
7	(Gross Plant or Wages/Salaries)		-	3,987,248	93,711,270	5,683,453
8	Demand Related			-	93,711,270	3,959,855
9	Energy Related			3,987,248	-	1,723,597
10				Direct	Direct	B-7, Note B
11	281 Excluded Items		-			
12	281 100% Production (Energy)			-		
13	281 100% Production (Demand)	(289,979,891)			(289,979,891)	
14	281 Labor Related	-				-
15	281 Total	(289,979,891)	-	-	(289,979,891)	-
16	Production Allocation		0.00%	100.00%	100.00%	100.00%
17	(Gross Plant or Wages/Salaries)		-	-	(289,979,891)	-
18	Demand Related			-	(289,979,891)	-
19	Energy Related			-	-	-
20	Allocation Basis			Direct	Direct	B-7, Note B
21	282 Excluded Items	(1,230,650,182)	(1,230,650,182)			
22	282 100% Production (Energy)	3,497		3,497		
23	282 100% Production (Demand)	(751,670,754)			(751,670,754)	
24	282 Labor Related	(60,588)				(60,588)
25	282 Total	(1,982,378,027)	(1,230,650,182)	3,497	(751,670,754)	(60,588)
26	Production Allocation		0.00%	100.00%	100.00%	100.00%
27	(Gross Plant or Wages/Salaries)		-	3,497	(751,670,754)	(60,588)
28	Demand Related			-	(751,670,754)	(42,214)
29	Energy Related			3,497	-	(18,374)
30	Allocation Basis			Direct	Direct	B-7, Note B
31	283 Excluded Items	(153,278,594)	(153,278,594)			
32	283 100% Production (Energy)	(41,062,517)		(41,062,517)		
33	283 100% Production (Demand)	(201,550,049)			(201,550,049)	
34	283 Labor Related	(30,283,050)				(30,283,050)
35	283 Total	(426,174,211)	(153,278,594)	(41,062,517)	(201,550,049)	(30,283,050)
36	Production Allocation		0.00%	100.00%	100.00%	100.00%
37	(Gross Plant or Wages/Salaries)		-	(41,062,517)	(201,550,049)	(30,283,050)
38	Demand Related			-	(201,550,049)	(21,099,234)
39	Energy Related			(41,062,517)	0	(9,183,816)
40	Allocation Basis			Direct	B-6, L. 7	B-7, Note B
41	255 Excluded Items	(31,981)	(31,981)			
42	255 100% Production (Energy)	-		-		
43	255 100% Production (Demand)	(818,598)			(818,598)	
44	255 Labor Related	-				-
45	255 Total	(850,579)	(31,981)	-	(818,598)	-
46	Production Allocation		0.00%	100.00%	100.00%	100.00%
47	(Gross Plant or Wages/Salaries)		-	-	(818,598)	-
					Direct	
48	Summary Production Related ADIT					
49	P Plant (Energy Related)	(37,071,772)	-	(37,071,772)		
50	P Plant (Demand Related)	(1,150,308,022)	(1,150,308,022)	0		
51	Labor Related	(24,660,186)	(17,181,592)	(7,478,593)		
52	Total	(1,212,039,979)	(1,167,489,614)	(44,550,365)		

Source: Functionalized balances for Accounts 190, 281, 282, 283 and 255 from WP-8a and 8ai.

General Plant Accounts 101 and 106

	Total System (Note A) (1)	Allocation Factor (2)	Related to Production (1) x (2) (3)	Demand (4)	Energy (5)	FERC Form 1 Reference
1. GENERAL PLANT						
2.						
3. Land	15,156,552	Note B	8,292,188	5,777,450	2,514,738	P.207, L.86, Col.(g)
4. General Offices	0		0	0	0	
5. Total Land	15,156,552		8,292,188	5,777,450	2,514,738	P.207, L.86, Col.(g)
6.						
7. Structures	120,820,404	Note B	66,101,147	46,054,924	20,046,223	P.207, L.87, Col.(g)
8. General Offices	0		0	0	0	
9. Total Structures	120,820,404		66,101,147	46,054,924	20,046,223	P.207, L.87, Col.(g)
10.						
11. Office Equipment	8,897,328	Note B	4,867,751	3,391,528	1,476,223	P.207, L.88, Col.(g)
12. General Offices	0		0	0	0	
13. Total Office Equipment	8,897,328		4,867,751	3,391,528	1,476,223	P.207, L.88, Col.(g)
14. Transportation Equipment	8,674	Note B	4,746	3,306	1,439	P.207, L.89, Col.(g)
15. Stores Equipment	1,764,272	Note B	965,238	672,514	292,724	P.207, L.90, Col.(g)
16. Tools, Shop & Garage Equipment	32,170,664	Note B	17,600,651	12,262,974	5,337,677	P.207, L.91, L. 93, Col.(g)
17. Lab Equipment	2,830,764	Note B	1,548,718	1,079,045	469,673	P.207, L.92, Col.(g)
18. Communication Equipment	43,098,607	Note B	23,579,356	16,428,542	7,150,815	P.207, L.94, Col.(g)
19. Miscellaneous Equip & Other	6,893,105	Note B	3,771,235	2,627,548	1,143,687	P.207, L.95, Col.(g)
20. Subtotal General Plant	231,640,370		126,731,030	88,297,831	38,433,199	P.207, L.96, Col.(g)
21. PERCENT		Note C	54.71%	38.12%	16.59%	
22. Other Tangible Property	0	Note D	0	0	0	P.207, L. 97, Col.(g)
23. TOTAL GENERAL PLANT	231,640,370		126,731,030	88,297,831	38,433,199	
24. INTANGIBLE PLANT	148,963,347	Note B	81,498,222	56,782,591	24,715,631	P.205, L.5, Col.(g)
25. TOTAL GENERAL AND INTANGIBLE	380,603,717		208,229,252	145,080,422	63,148,830	L.23 + L.24
26. PERCENT		Note E	54.71%	38.12%	16.59%	

NOTE A: See Workpaper 6c.

NOTE B: Allocation factors based on wages and salaries in electric operations and maintenance expenses excluding administrative and general expenses:

a. Total wages and salaries in electric operation and maintenance expenses excluding administrative and general expense, FF1, P.354, Col.(b), Ln.28 - L.27 (see workpaper 9a).	151,952,042
b. Production wages and salaries in electric operation and maintenance expense, FF1, P.354, Col.(b), L.20. (see WP-9a)	83,133,345
c. Ratio (b / a)	54.710%

NOTE C: L.20, Col.(3) / L.20, Col.(1)

NOTE D: Directly assigned to Production

NOTE E: L.25, Col.(3) / L.25, Col.(1)

PRODUCTION-RELATED CASH REQUIREMENT
 12 Months Ending 12/31/2017 (actuals) for 2018

	Reference	Amount (1)	PRODUCTION Demand (2)	Energy (3)
1. Total Production Expense Excluding Fuel Used In Electric Generation	P.14, L.12 Col.(1)-(3)	644,897,486	209,349,008	435,548,478
2. Less Fuel Handling / Sale of Fly Ash	P.14, L.1 thru L. 3 Col.(1)-(3)	(19,819,880)	0	(19,819,880)
3. Less Purchased Power	P.14, L.11 Col.(1)-(3)	(390,297,370)	(52,271,241)	(338,026,129)
4. Other Production O&M	Sum (L.1 thru L.3)	234,780,236	157,077,767	77,702,469
5. Allocated A&G	P.10, L.17 Col.(3)-(5)	53,744,044	38,460,130	15,283,915
6. Total O&M for Cash Working Capital Calculation	L.4 + L.5	288,524,280	195,537,897	92,986,384
7. O&M Cash Requirements	=45 / 360 x L.6	36,065,535	24,442,237	11,623,298

PRODUCTION-RELATED MATERIALS & SUPPLIES
 12 Months Ending 12/31/2017 (actuals) for 2018

	SYSTEM		PRODUCTION			
	Reference	Amount (1)	Reference	Amount (2)	Demand (3)	Energy (4)
1. Material & Supplies (Note A)						
2. Fuel (Note C)	FF1, P.110, L. 45,46 Workpapers WP-5b	89,311,842		89,311,842	0	89,311,842
3. Non-Fuel						
4. Production	Note D	73,640,404	100% Col. 1	73,640,404	73,640,404	0
5. Transmission		12,338,980	0	0	0	0
6. Distribution		13,124,045	0	0	0	0
7. General		0	Note B	0	0	0
8. Total	L.4 + L.5 + L.6 + L.7	99,103,429		73,640,404	73,640,404	0
9. Account 158 Allowances	Note D	22,933,021		22,933,021	0	22,933,021

Note A: Year end balance.

Note B: Column (1) times % from P.7, Col.(3), L.26.

Note C: Workpapers WP-5b

Note D: Workpapers WP-5a

PRODUCTION-RELATED
ADMINISTRATIVE & GENERAL EXPENSE ALLOCATION
12 Months Ending 12/31/2017 (actuals) for 2018

	Account	System		Allocation Factor % (2)	Production			FERC Form 1 Reference
		Reference	Amount (1)		Amount (3)	Demand (4)	Energy (5)	
1.	ADMINISTRATIVE & GENERAL EXPENSE							
2.	RELATED TO WAGES AND SALARIES							
3.	A&G Salaries	920	Workpapers 10-a	38,217,872				P.323, L.181, Col.(b)
4.	Outside Services	923	Workpapers 10-a	8,375,381				P.323, L.184, Col.(b)
5.	Employee Pensions & Benefits	926	Workpapers 10-a	16,805,941	Note F			P.323, L.187, Col.(b)
6.	Office Supplies	921	Workpapers 10-a	4,998,973				P.323, L.182, Col.(b)
7.	Injuries & Damages	925	Workpapers 10-a	8,520,415				P.323, L.186, Col.(b)
8.	Franchise Requirements	927	Workpapers 10-a	0				P.323, L.188, Col.(b)
9.	Duplicate Charges - Cr.	929	Workpapers 10-a	(157,997)				P.323, L.190, Col.(b)
10.	Total		Ls. 3 thru 9	76,760,585	Note A	41,995,910	29,259,983	12,735,927
11.	MISCELLANEOUS GENERAL EXPENSES	930	Workpapers 10-a	6,964,716	Note A & D	3,810,414	2,654,845	1,155,568 P.323, L.192, Col.(b) [Note A]
12.	ADM. EXPENSE TRANSFER - CR.	922	Workpapers 10-a	(3,591,368)	Note B	(1,964,846)	(1,368,976)	(595,871) P.323, L.183, Col.(b)
13.	PROPERTY INSURANCE	924	Workpapers 10-a	3,324,657	Note E	1,626,282	1,610,697	15,584 P.323, L.185, Col.(b)
14.	REGULATORY COMM. EXPENSES	928	Workpapers 10-a	4,268,045	Note C	1,771,414	1,771,414	0 P.323, L.189, Col.(b)
15.	RENTS	931	Workpapers 10-a	1,368,447	Note B	748,681	521,631	227,049 P.323, L.193, Col.(b)
16.	MAINTENANCE OF GENERAL PLANT	935	Workpapers 10-a	10,521,229	Note B	5,756,191	4,010,535	1,745,656 P.323, L.196, Col.(b)
17.	TOTAL A & G EXPENSE		L.10 thru 16	99,616,311		53,744,044	38,460,130	15,283,915

Note A: % from Note B, P.7

Note B: General Plant % from P.7, Col.(3), L.26

Note C: Workpapers WP -- 11 Excluding all items not related to wholesale service and also excludes FERC assessment of annual charges.

Note D: Excludes general advertising and company dues and memberships.

Note E: % Plant from P.6, L.7.

Note F: PBOP expense is fixed at \$6,222,780. This amount cannot be changed absent a Section 205/206 filing with the Commission.

COMPOSITE COST OF CAPITAL
 12 Months Ending 12/31/2017 (actuals) for 2018

		Reference	Total Company Capitalization \$ (1)	Weighted Cost Ratios % (2)	Reference	Cost of Capital % (3)	Weighted Cost of Capital (2 x 3) (4)
1.	Long Term Debt	Note A	4,014,993,005	51.33%	Note D	4.76%	2.44%
2.	Preferred Stock	Note B	0	0.00%	Note E	0.00%	0.00%
3.	Common Stock	Note C	3,806,651,283	48.67%	Note F	10.40%	5.06%
4.	Total	Ln. 1+L.2+L.3	7,821,644,288	100.00%			7.51%

Note A: P.12, L.5, Col.(1)

Note B: P.13a, L.4, Col.(2)

Note C: P.13b, L.5,Col.(2)

Note D: P.12, L.16 Col. (2)

Note E: P.13a, L.5,Col.(2)

Note F: Return on equity cannot be changed absent a Section 205/206 filing with the Commission.

LONG TERM DEBT
12 Months Ending 12/31/2017 (actuals) for 2018

	Reference	Debt Balance (1)	Interest & Cost Booked (2)
<u>12 Months Ending 12/31/2011 (Actual)</u>			
1. Bonds (Acc 221)	FF1, 112.18.c.	298,676,142	
2. Less: Reacquired Bonds (Acc 222)	FF1, 112.19.c.	(104,375,000)	
3. Advances from Assoc Companies (Acc 223)	FF1, 112.20.c.	0	
4. Other Long Term Debt (Acc 224)	FF1, 112.21.c.	<u>3,820,691,863</u>	
5. Total Long Term Debt Balance		4,014,993,005	
<u>Costs and Expenses (actual)</u>			
6. Interest Expense (Acc 427)	FF1, 117.62.c.	Note A	183,897,634
7. Amortization Debt Discount and Expense (Acc 428)	FF1, 117.63.c.		3,251,998
8. Amortization Loss on Reacquired Debt (Acc 428.1)	FF1, 117.64.c.		3,996,264
9. Less: Amortiz Premium on Reacquired Debt (Acc 429)	FF1, 117.65.c.		0
10. Less: Amortiz Gain on Reacquired Debt (Acc 429.1)	FF1, 117.66.c.		0
11. Interest on LTD Assoc Companies (portion Acc 430)	Workpapers --13, L.7	Note A	<u>0</u>
12. Sub-total Costs and Expense			191,145,896
13. Less: Total Hedge (Gain) / Loss	P. 12a, L. 11, Col. (6)		(1,128,890)
14. Plus: Allowed Hedge Recovery	P. 12a, L. 15, Col. (6)		(1,128,890)
15. Total LTD Cost Amount	L. 12 - L. 13 + L. 14		191,145,896
16. Embedded Cost of Long Term Debt = L.15, Col.(2) / L.5, Col.(1)			4.76%

Note A: Reconciliation of Interest Expense to FF1, pg. 257, Ln. 33 Col(i)

Ln. 6	Interest Expense (Acc 427)	183,897,634
Ln. 11	Interest on LTD Assoc Companies (portion Acc 430)	0
	FF1, pg. 257, Ln. 33 Col(i)	<u>183,897,634</u>

LONG TERM DEBT
Limit on Hedging (Gain)/Loss on Interest Rate Derivatives of LTD
12 Months Ending 12/31/2017 (actuals) for 2018

	(1)	(2)	(3)	(4)	(5)	(6)
HEDGE AMT BY ISSUANCE FERC Form 1, p. 256-257 (i)	Total Hedge (Gain) / Loss	Excludable Amounts (Note A)	Net Includable Hedge Amount Subject to Limit	Unamortized Balance	Amortization Period Beginning Ending	
1. Senior Unsecured Notes - Series H	37,068		37,068	568,476	May-03	May-33
2. Senior Unsecured Notes - Series N	(194,198)		(194,198)	(3,544,122)	Apr-06	Apr-36
3. Senior Unsecured Notes - Series Q	159,672	-	159,672	3,226,683	Mar-08	Apr-38
4. Senior Unsecured Notes - Series S	-	-	-	(0)	May-10	May-15
5. Senior Unsecured Notes - Series T	(1,131,432)		(1,131,432)	(3,645,728)	Mar-11	Mar-21
6.		-				
7.		-				
8.						
9.			-			
10. Total Hedge Amortization	(1,128,890)	-	(1,128,890)			

<u>Limit on Hedging (G)/L on Interest Rate Derivatives of LTD</u>						
11. Hedge (Gain) / Loss prior to Application of Recovery Limit						(1,128,890)
Enter a hedge Gain as a negative value and a hedge Loss as a positive value						
12. Total Capitalization			Page 11, L.4, col.(1)		7,821,644,288	
13. 5 basis point Limit on (G)/L Recovery						0.0005
14. Amount of (G)/L Recovery Limit			L. 12 * L. 13			(3,910,822)
15. Hedge (Gain) / Loss Recovery (Lesser of Line 11 or Line 14)						(1,128,890)
To be subtracted or added to actual Interest Expenses on Page 12, Line 14						

Note A: Annual amortization of net gains or net loss on interest rate derivative hedges on long term debt shall not cause the composite after-tax weighted average cost of capital to increase/decrease by more than 5 basis points. Hedge gains/losses shall be amortized over the life of the related debt issuance. The unamortized balance of the g/l shall remain in Acc 219 Other Comprehensive Income and shall not flow through the rate calculation. Hedge-related ADIT shall not flow through rate base. Amounts related to the ineffective portion of pre-issuance hedges, cash settlements of fair value hedges issued on Long Term Debt, post-issuance cash flow hedges, and cash flow hedges of variable rate debt issuances are not recoverable in this calculation and are to be recorded above.

PREFERRED STOCK
 12 Months Ending 12/31/2017 (actuals) for 2018

		(1) Source	(2) Balances
1.	Preferred Stock Dividends	FF1, P.118, L.29	0
2.	Preferred Stock Outstanding	Note A & B FF1, P.251, L. 9 (f)	0
3.	Plus: Premium on Preferred Stock	Note A FF1, P. 112, L.6	0
4.	Total Preferred Stock	L.2 + L.3	0
5.	Average Cost Rate	L.1 / L.4	0.00%

Note A: Workpaper -- WP-12b.

Note B: Preferred stock outstanding excludes pledged and Reacquired (Treasury) preferred stock.

B-13b
COMMON EQUITY
12 Months Ending 12/31/2017 (actuals) for 2018

Appendix 2
Page 13b
(2)
Balances

	(1) Source	(2) Balances
1. Total Proprietary Capital	WP-12a, L.1, Col. a	3,804,481,345
<u>Less:</u>		
2. Preferred Stock (Acc 204, pfd portion of Acc 207-213)	WP-12a, L.1, Col.b+c+d	0
3. Unappropriated Undistributed Subsidiary Earnings (Acc 216.1)	WP-12a, L.1, Col.e	(3,524,449)
4. Accumulated Comprehensive Other Income (Acc 219)	WP-12a, L.1, Col. F	1,354,511
5. Total Balance of Common Equity	L.1-L.2-L.3-L.4	3,806,651,283

ANNUAL FIXED COSTS
PRODUCTION O & M EXPENSE
EXCLUDING FUEL USED IN ELECTRIC GENERATION
12 Months Ending 12/31/2017 (actuals) for 2018

	Account No.	Total Company (1)	(Demand) Fixed (2)	(Energy) Variable (3)	FERC Form 1 Reference
1. Coal Handling	501.xx	20,847,101		20,847,101	P.320, L.5, Col.(b) [Note D]
2. Lignite Handling	501.xx	0		0	P.320, L.5, Col.(b) [Note D]
3. Sale of Fly Ash (Revenue & Expense)	501.xx	(1,027,221)		(1,027,221)	P.320, L.5, Col.(b) [Note D]
4. Rents	507	0			Note E
5. Hydro O & M Expenses	535-545	0			Note E
6. Other Production Expenses	557	6,832,240	6,832,240		P.321, L.78, Col.(b)
7. System Control of Load Dispatching	Note C	16,208,795	16,208,795		P.321, L.77, L. 88, L. 92, P. 322, L. 121, Col.(b)
8. Other Steam Expenses	Note A	211,739,201	134,036,732	77,702,469	
9. Combustion Turbine	Note A	0		0	
10. Nuclear Power Expense-Other	Note A	0			
11. Purchased Power	555	390,297,370	52,271,241	338,026,129	P.321, L.76, Col.(b)
12. Total Production Expense Excluding Fuel Used In Electric Generation	Sum L.1-L. 11	644,897,486	209,349,008	435,548,478	
13. A & G Expense P.10, L.17		53,744,044	38,460,130	15,283,915	
14. Generator Step Up related O&M	Note B	226,816	226,816	0	
15. Total O & M		698,868,347	248,035,954	450,832,393	

NOTE A: Amounts recorded in O&M Expense Accounts classified into Fixed and Variable Components in accordance with P.15 and WP-14

NOTE B: FF1, P.321, L.93 & L.107 (ACCTS. 562 & 570) times GSU Investment to Account 353 ratio (See P.3, L.9)

NOTE C: Pursuant to FERC Order 668, expenses were booked in Account 556 are now being recorded in the following accounts: 561.4, 561.8 and 575.7

NOTE D: Subaccount details of FF1 Accounts from Company's books and records.

<i>Reconciliation of System Control of Load Dispatching</i>	
System Control and Load Dispatching	2,149,639
Scheduling, System Control	5,974,378
Reliability, Planning and Standards Dev.	1,887,434
Market Facilitation, Monitoring and Compliance	6,197,344
Ln. 7, Pg. 14	<u>16,208,795</u>

NOTE E: Amounts included in Line 8.

CLASSIFICATION OF FIXED AND VARIABLE
PRODUCTION EXPENSES

Line		FERC Account	Energy	Demand
No.	Description	No.	Related	Related
1	POWER PRODUCTION EXPENSES			
2	Steam Power Generation			
3	Operation supervision and engineering	500	-	XX
4	Fuel	501	XX	-
5	Steam expenses	502	-	XX
6	Steam from other sources	503	XX	-
7	Steam transferred-Cr.	504	XX	-
8	Electric expenses	505	-	XX
9	Miscellaneous steam power expenses	506	-	XX
10	Rents	507	-	XX
11	Allowances	509	XX	-
12	Maintenance supervision and engineering	510	XX	-
13	Maintenance of structures	511	-	XX
14	Maintenance of boiler plant	512	XX	-
15	Maintenance of electric plant	513	XX	-
16	Maintenance of miscellaneous steam plant	514	-	XX
17	Total steam power generation expenses			
18	Nuclear Power			
19	Operation supervision and engineering	517		XX
20	Coolants and Water	519		XX
21	Steam Expenses	520		XX
22	Steam from other sources	521		XX
23	Less: ; Steam Transferred	522		XX
24	Electric Expenses	523		XX
25	Miscellaneous Nuclear Power Expense	524		XX
26	Rents	525		XX
27	Maintenance supervision and engineering	528	XX	
28	Maintenance of structures	529		XX
29	Maintenance of Reactor Plant Equip	530	XX	
30	Maintenance of electric plant	531	XX	
31	Maintenance of Misc Nuclear Plant	532	XX	
32	Total power production expenses Nuclear			
33	Hydraulic Power Generation			
34	Operation supervision and engineering	535	-	XX
35	Water for power	536	-	XX
36	Hydraulic expenses	537	-	XX
37	Electric expenses	538	-	XX
38	Misc. hydraulic power generation expenses	539	-	XX
39	Rents	540	-	XX
40	Maintenance supervision and engineering	541	-	XX
41	Maintenance of structures	542	-	XX
42	Maintenance of reservoirs, dams and waterways	543	-	XX
43	Maintenance of electric plant	544	XX	-
44	Maintenance of miscellaneous hydraulic plant	545	-	XX
45	Total hydraulic power generation expenses			
46	Other Power Generation			
47	Operation supervision and engineering	546	-	XX
48	Fuel	547	XX	-
49	Generation expenses	548	-	XX
50	Miscellaneous other power generation expenses	549	-	XX
51	Rents	550	-	XX
52	Maintenance supervision and engineering	551	-	XX
53	Maintenance of structures	552	-	XX
54	Maintenance of generation and electric plant	553	-	XX
55	Maintenance of misc. other power generation plant	554	-	XX

CLASSIFICATION OF FIXED AND VARIABLE
 PRODUCTION EXPENSES

Line No.	Description	FERC Account No.	Energy Related	Demand Related
	POWER PRODUCTION EXPENSES			
56	Total other power generation expenses			
57	Other Power Supply Expenses			
58	Purchased power	555	xx	xx
59	System control and load dispatching	556	-	xx
60	Other expenses	557	-	xx
61	Station equipment operation expense (Note A)	562	-	xx
62	Station equipment maintenance expense (Note A)	570	-	xx

Note A: Restricted to expenses related to Generator Step-up Transformers and Other Generator related expenses.
 See Note D, Page 6

PRODUCTION-RELATED DEPRECIATION EXPENSE
12 Months Ending 12/31/2017 (actuals) for 2018

	Depreciation Expense (1)	Demand (2)	Energy (3)
PRODUCTION PLANT			
<i>Depreciation and Amortization Expense</i>			
1.	171,777,084	171,777,084	0
2.	0	0	0
3.	3,325,910	3,325,910	0
4.	2,669,537	2,669,537	0
5.	0	0	0
6.	15,155,453	15,155,453	0
7.	1,125,342	1,125,342	0
8.	12,917,042	8,999,744	3,917,298
9.	206,970,368	203,053,070	3,917,298

Note: Lines 1 through 6 will be Depreciation Expense reported on P.336 of the FF1 excluding the amortization of acquisition adjustments - Workpapers WP -- 6d.

Line 8 will be total General & Intangible Plant (from P.336 of the FF1, adjusted for amortization adjustments) times ratio of Production Related General Plant to total General Plant computed on P.7, L.26, Col.(3)
Depreciation expense excludes amounts associated with ARO.

Note A: Line 7, see P.3, L.5

Note B:

a	Production Related General & Intangible Plant		
b	General Plant	WP 6d	4,760,969
c	Intangible Plant	WP 6d	18,848,943
d	Total General & Intangible Plant	Ln. b+ Ln. c	<u>23,609,912</u>
e	Production Demand Labor Allocator	Pg. 7, Ln. 26	38.12%
f	Production Demand Related General & Intangible	Ln. d x Ln. e	<u>8,999,744</u>
g	Production Energy Labor Allocator Pg. 7, Ln. 28	Pg. 7, Ln. 26	16.59%
h	Production Energy Related General & Intangible	Ln. d x Ln. g	<u>3,917,298</u>
i	Total Production Related General & Intangible Plant	Ln. f + Ln. h	12,917,042

PRODUCTION RELATED
TAXES OTHER THAN INCOME TAXES
12 Months Ending 12/31/2017 (actuals) for 2018

		SYSTEM			PRODUCTION
		REFERENCE	AMOUNT	%	Amount
			(1)	(2)	(3)
PRODUCTION RELATED TAXES OTHER THAN INCOME					
1	Labor Related	Note A	8,089,672	Note B	4,425,880
2	Property Related	Note A	69,700,826	Note C	34,094,698
3	Other	Note A	15,149,378	Note C	7,410,435
4	Production	Note A	21,353,197		21,353,197
5	Gross Receipts / Distribution Related	Note A	11,512,016	Note D	0
6	TOTAL TAXES OTHER THAN INCOME TAXES	Sum L.1 : L.5	125,805,089		67,284,210

Note A: Workpapers -- WP8c.

Note B: Total (Col. (1), L.1) allocated on the basis of wages & salaries in Electric O & M Expenses (excl. A & G), P.354, Col.(b) and Services shown on Worksheets WP-9a and WP-9b.

	Amount	%
(1) Total W & S (excl. A & G)	151,952,042	100.00%
(2) Production W & S	83,133,345	54.71%

Note C: Allocated on the basis of Gross Plant Investment from Page 6, Ln.7

Note D: Not allocated to wholesale

PRODUCTION-RELATED INCOME TAX
 12 Months Ending 12/31/2017 (actuals) for 2018

	Reference	Amount (1)	Demand (2)	Energy (3)
1. Return on Rate Base	P.5, L.18	237,693,872	230,689,920	7,003,952
2. Effective Income Tax Rate	P.19, L.2	40.35%	40.35%	40.35%
3. Income Tax Calculated	L.1 x L.2	95,903,763	93,077,837	2,825,926
4. ITC Adjustment	P.19, L.13	0	0	0
5. Income Tax	L.3 + L.4	95,903,763	93,077,837	2,825,926

Note A: Classification based on Production Plant classification of P.19, L.20 and L.21.

COMPUTATION OF EFFECTIVE INCOME TAX RATE
12 Months Ending 12/31/2017 (actuals) for 2018

Appendix 2
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Line No.	Source (1)	Rates & Amounts (2)
1.	$T=1 - \{[(1 - \text{SIT}) * (1 - \text{FIT})] / (1 - \text{SIT} * \text{FIT} * P)\} =$	37.43%
2.	$\text{EIT}=(T/(1-T)) * (1-(\text{WCLTD}/\text{WACC})) =$	40.35%
3.	where WCLTD from pg. 11, L.1, Col.(4) and WACC from p. 11, L.4, Col.(4) and FIT, SIT & P as shown below.	
4.	$\text{GRCF}=1 / (1 - T)$	1.5983
5.	Federal Income Tax Rate	FIT 35.00%
6.	State Income Tax Rate (Composite)	SIT 3.74%
7.	Percent of FIT deductible for state purposes	P Note A 0.00%
8.	Weighted Cost of Long Term Debt	WCLTD 2.44%
9.	Weighted Average Cost of Capital	WACC 7.51%
10.	Amortized Investment Tax Credit (enter negative)	FF1, P.114, L.19, Col.c 0.00%
11.	Gross Plant Allocation Factor	L.19 48.92%
12.	Production Plant Related ITC Amortization	L. 10 X L. 11 0.00%
13.	ITC Adjustment	L.12 x L.4 0.00%
14.	<u>Gross Plant Allocator</u>	Total
15.	Gross Plant	P.6, L.4, Col.1 13,471,764,684
16.	Production Plant Gross	P.6, L.5, Col.2 6,589,817,784
17.	Demand Related Production Plant	P.6, L.5, Col.3 6,526,668,954
18.	Energy Related Production Plant	P.6, L.5, Col.4 63,148,830
19.	Production Plant Gross Plant Allocator	L.16 / L.15 48.92%
20.	Production Plant - Demand Related	L.17 / L.16 99.04%
21.	Production Plant - Energy Related	L.18 / L.16 0.96%

Note A: Percent deductible for state purposes provided from Company's books and records.

Appalachian Power Company
 Formula Rate Template - Capacity Rate
 DEPRECIATION RATES
 12 Months Ending 12/31/2015 (actuals)

Note: APCo will not change the depreciation or amortization rates shown on this page of the template absent a Section 205 or Section 206 filing.

STEAM PRODUCTION PLANT

Mountaineer Plant

311.0	Structures and Improvements	2.44%
312.0	Boiler Plant Equipment	2.75%
312.0	Boiler Plant Equipment - SCR Catalyst	6.99%
314.0	Turbogenerator Units	2.28%
315.0	Accessory Electric Equipment	1.80%
316.0	Misc. Power Plant Equipment	2.21%

Kanawha River Plant

311.0	Structures and Improvements	Retired
312.0	Boiler Plant Equipment	Retired
314.0	Turbogenerator Units	Retired
315.0	Accessory Electric Equipment	Retired
316.0	Misc. Power Plant Equipment	Retired

Amos Plant - Units 1 & 2

311.0	Structures and Improvements	2.03%
312.0	Boiler Plant Equipment	3.29%
312.0	Boiler Plant Equipment - SCR Catalyst	6.01%
314.0	Turbogenerator Units	3.32%
315.0	Accessory Electric Equipment	2.79%
316.0	Misc. Power Plant Equipment	3.10%

Amos Plant - Unit 3

311.0	Structures and Improvements	2.54%
312.0	Boiler Plant Equipment	3.56%
312.0	Boiler Plant Equipment - SCR Catalyst	7.63%
314.0	Turbogenerator Units	3.12%
315.0	Accessory Electric Equipment	2.17%
316.0	Misc. Power Plant Equipment	2.68%

Appalachian Power Company
Formula Rate Template - Capacity Rate
DEPRECIATION RATES
12 Months Ending 12/31/2015 (actuals)

Sporn Plant

311.0	Structures and Improvements	Retired
312.0	Boiler Plant Equipment	Retired
314.0	Turbogenerator Units	Retired
315.0	Accessory Electric Equipment	Retired
316.0	Misc. Power Plant Equipment	Retired

Clinch River Plant

311.0	Structures and Improvements	3.86%
312.0	Boiler Plant Equipment	4.73%
314.0	Turbogenerator Units	3.68%
315.0	Accessory Electric Equipment	4.37%
316.0	Misc. Power Plant Equipment	7.11%

Glen Lyn Plant #5

311.0	Structures and Improvements	Retired
312.0	Boiler Plant Equipment	Retired
314.0	Turbogenerator Units	Retired
315.0	Accessory Electric Equipment	Retired
316.0	Misc. Power Plant Equipment	Retired

Glen Lyn Plant #6
and Common

311.0	Structures and Improvements	Retired
312.0	Boiler Plant Equipment	Retired
314.0	Turbogenerator Units	Retired
315.0	Accessory Electric Equipment	Retired
316.0	Misc. Power Plant Equipment	Retired

Putnam Coal Terminal

311.0	Structures and Improvements	Retired
312.0	Boiler Plant Equipment	Retired
315.0	Accessory Electric Equipment	Retired
316.0	Misc. Power Plant Equipment	Retired

Appalachian Power Company
Formula Rate Template - Capacity Rate
DEPRECIATION RATES
12 Months Ending 12/31/2015 (actuals)

Central Plant Maintenance

316.0 Misc. Power Plant Equipment 2.51%

Central Machine Shop

316.0 Misc. Power Plant Equipment 2.70%

Little Broad Run

311.0 Structures and Improvements 3.34%

312.0 Boiler Plant Equipment 3.24%

315.0 Accessory Electric Equipment 3.41%

HYDRAULIC PRODUCTION PLANT

Claytor 331.0 Structures and Improvements 1.65%
332.0 Reservoirs, Dams, Waterways 1.10%
333.0 Waterwheels, Generators, Turbines 1.08%
334.0 Accessory Plant Equipment 2.16%
335.0 Misc Power Plant Equip 2.61%
336.0 Roads, Railroads, Bridges 0.71%

Byllesby 331.0 Structures and Improvements 5.54%
332.0 Reservoirs, Dams, Waterways 6.82%
333.0 Waterwheels, Generators, Turbines 5.93%
334.0 Accessory Plant Equipment 4.14%
335.0 Misc Power Plant Equip 6.73%

Buck 331.0 Structures and Improvements 4.49%
332.0 Reservoirs, Dams, Waterways 4.94%
333.0 Waterwheels, Generators, Turbines 4.10%
334.0 Accessory Plant Equipment 4.60%
335.0 Misc Power Plant Equip 5.84%
336.0 Roads, Railroads, Bridges 4.72%

Appalachian Power Company
Formula Rate Template - Capacity Rate
DEPRECIATION RATES
12 Months Ending 12/31/2015 (actuals)

Niagara	331.0	Structures and Improvements	2.58%
	332.0	Reservoirs, Dams, Waterways	5.09%
	333.0	Waterwheels, Generators, Turbines	4.00%
	334.0	Accessory Plant Equipment	4.89%
	335.0	Misc Power Plant Equip	4.83%
Reusens	331.0	Structures and Improvements	5.66%
	332.0	Reservoirs, Dams, Waterways	5.77%
	333.0	Waterwheels, Generators, Turbines	6.04%
	334.0	Accessory Plant Equipment	5.04%
	335.0	Misc Power Plant Equip	6.61%
Leesville	331.0	Structures and Improvements	1.04%
	332.0	Reservoirs, Dams, Waterways	1.66%
	333.0	Waterwheels, Generators, Turbines	1.33%
	334.0	Accessory Plant Equipment	2.09%
	335.0	Misc Power Plant Equip	2.12%
	336.0	Roads, Railroads, Bridges	0.93%
London	331.0	Structures and Improvements	2.61%
	332.0	Reservoirs, Dams, Waterways	2.40%
	333.0	Waterwheels, Generators, Turbines	2.72%
	334.0	Accessory Plant Equipment	2.59%
	335.0	Misc Power Plant Equip	2.80%
	336.0	Roads, Railroads, Bridges	1.68%
Marmet	331.0	Structures and Improvements	2.08%
	332.0	Reservoirs, Dams, Waterways	2.73%
	333.0	Waterwheels, Generators, Turbines	2.84%
	334.0	Accessory Plant Equipment	2.62%
	335.0	Misc Power Plant Equip	2.73%
	336.0	Roads, Railroads, Bridges	1.71%

Appalachian Power Company
Formula Rate Template - Capacity Rate
DEPRECIATION RATES
12 Months Ending 12/31/2015 (actuals)

Winfield	331.0	Structures and Improvements	2.32%
	332.0	Reservoirs, Dams, Waterways	2.14%
	333.0	Waterwheels, Generators, Turbines	2.46%
	334.0	Accessory Plant Equipment	2.40%
	335.0	Misc Power Plant Equip	2.26%
	336.0	Roads, Railroads, Bridges	2.44%

Smith Mount:	331.0	Structures and Improvements	1.31%
	332.0	Reservoirs, Dams, Waterways	1.22%
	333.0	Waterwheels, Generators, Turbines	2.24%
	334.0	Accessory Plant Equipment	2.45%
	335.0	Misc Power Plant Equip	2.67%
	336.0	Roads, Railroads, Bridges	1.09%

OTHER PRODUCTION PLANT

Ceredo	341.0	Structures and Improvements	1.33%
	344.0	Generators	1.44%
	345.0	Accessory Electrical Equip.	1.35%
	346.0	Misc Power Plant Equipment	2.84%

Dresden	341.0	Structures and Improvements	2.87%
	342.0	Fuel Holders, Producers, and Accessories	2.88%
	344.0	Generators	2.87%
	345.0	Accessory Electrical Equip.	2.89%
	346.0	Misc Power Plant Equipment	3.49%

Appalachian Power Company
Formula Rate Template - Capacity Rate
DEPRECIATION RATES
12 Months Ending 12/31/2015 (actuals)

GENERAL PLANT

390.0	Structures and Improvements	1.51%
391.0	Office Furniture and Fixtures	2.89%
392.0	Transportation Equipment	1.82%
393.0	Stores Equipment	1.76%
394.0	Tools, Shop & Garage Equip.	2.36%
395.0	Laboratory Equipment	2.65%
396.0	Power Operated Equipment	1.91%
397.0	Communications Equipment	4.06%
398.0	Misc Equipment	2.62%

INTANGIBLE PLANT

301.0	Organization	0.00%
302.0	Franchises & Consents	End of Life
303.0	Misc Intangible Plant	20.00%