

Appalachian Power Company  
Formula Rate Template - Capacity Rate  
12 Months Ending 12/31/2018 (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	\$403.34685	5,492	\$2,215,261.57

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 12/31/2018 (actuals) for 2019

1. Capacity Daily Rates

$$\begin{aligned} \$/\text{MW} &= \frac{\text{Annual Production Fixed Cost}}{(\text{APCo 5 CP Demand}/365) \text{ (Note A)}} \\ &= \frac{808,570,474}{5,492.2 / 365} = \$403.34685 \end{aligned}$$

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	81,906,440
2. Total Transmission Investment	FF1, P.207, L.58, Col.g	3,316,166,220
3. Percent (GSU to Total Trans. Investment)	L.1 / L.2	2.47%
4. Transmission Depreciation Expense	FF1, P.336, L.7, Col.b	52,714,082
5. GSU Related Depreciation Expense	L.3 x L.4	1,301,992
6. Station Equipment Acct. 353 Investment	Note B	1,547,598,625
7. Percent (GSU to Acct. 353)	L.1 / L.6	5.29%
8. Transmission O&M (Accts 562 & 570)	FF1,P.321, L. 93, Col.b, and L.107, Col.b	4,459,477
9. GSU & Associated Investment O&M	L.7 x L.8	236,017

Note A: Workpapers -- WP-16

Note B: Workpapers -- WP-17

ANNUAL PRODUCTION FIXED COST  
 12 Months Ending 12/31/2018 (actuals) for 2019

	Reference (1)	PRODUCTION Amount (2)
1. Return on Rate Base	P.5, L.18, Col.(2)	\$232,312,057
2. Operation & Maintenance Expense	P.14, L.15, Col.(2)	\$256,754,182
3. Depreciation Expense	P.16, L.9, Col.(2) Note A	\$210,122,649
4. Taxes Other Than Income Taxes	P.17, L.6, Col.(3)	\$68,672,353
5. Income Tax	P.18, L.5, Col.(2)	\$50,056,242
6. Sales for Resale	Note B	\$9,347,010
7. Sales for Resale (Energy Credit)	Note C	\$0
8. Annual Production Fixed Cost	Sum (L.1 : L.5) - (L.6 +L.7)	\$808,570,474

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

	Reference	Amount (1)	Demand (2)	Energy (3)
1.	ELECTRIC PLANT			
2.	Gross Plant in Service	P.6, L.4, Col.(2)-(4) 6,680,350,152	6,613,743,964	66,606,188
3.	Less: Accumulated Depreciation	P.6, L.11, Col.(2)-(4) 2,540,165,408	2,513,019,188	27,146,219
4.	Net Plant in Service	L.2 - L.3 4,140,184,744	4,100,724,776	39,459,968
5.	Less: Accumulated Deferred Taxes	P.6, L.12, Col.(2)-(4) 1,145,519,425	1,120,664,233	24,855,193
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 2,995,093,734	2,980,488,958	14,604,776
WORKING CAPITAL				
8.	Materials & Supplies			
9.	Fuel	P.9, L.2, Col.(2)-(4) 61,269,170	0	61,269,170
10.	Nonfuel	P.9, L.8, Col.(2)-(4) 72,448,059	72,448,059	0
11.	Total M & S	L.9 + L.10 133,717,229	72,448,059	61,269,170
12.	Prepayments Nonlabor (Note B)	6,993,736	6,924,006	69,731
13.	Prepayments Labor (Note B)	0	0	0
14.	Prepayments Total (Note B)	L.12 + L.13 6,993,736	6,924,006	69,731
15.	Cash Working Capital	P.8, L.7, Col.(1)-(3) 37,181,381	25,427,193	11,754,188
16.	Total Rate Base	L.7 + L.11 + L.14 + L.15 3,172,986,080	3,085,288,216	87,697,864
17.	Weighted Cost of Capital	P.11, L.4, Col.(4) 7.53%	7.53%	7.53%
18.	Return on Rate Base	L.16 x L.17 238,915,418	232,312,057	6,603,361

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 (1)		Amount (2)	Demand (3)	Energy (4)
1. GROSS PLANT IN SERVICE (Note A)						
2. Plant in Service (Note C)						
3. Allocated General & Intangible Plant	L. 14	14,114,381,925	L.16	6,453,913,155	6,453,913,155	0
			P.7, Col(3), L.25	226,436,996	159,830,809	66,606,188
4. Total	L.2 + L.3 Note A	14,114,381,925		6,680,350,152	6,613,743,964	66,606,188
					99%	1%
5.			Col.(2), L.4	6,680,350,152	6,613,743,964	66,606,188
6.			Col.(1), L.4	14,114,381,925	14,114,381,925	14,114,381,925
7.		100.00%	L.5/L.6	47.33%	46.86%	0.47%
8. ACCUMULATED PROVISION FOR DEPRECIATION (Note A)						
9. Plant in Service (Note D)	L.18	4,684,288,146	L.20	2,447,878,060	2,447,878,060	0
10. Allocated General Plant		178,811,759	Note B	92,287,348	65,141,128	27,146,219
11. Total	L.9 + L.10			2,540,165,408	2,513,019,188	27,146,219
12. ACCUMULATED DEFERRED TAXES (Note A)	Note E	2,346,175,954	P.6a, L. 52	1,145,519,425	1,120,664,233	24,855,193

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	PRODUCTION		
	Reference	Amount (1)		Amount (2)	Demand (3)	Energy (4)
13 GROSS PLANT IN SERVICE						
14 Plant in Service (Note C)	WP6a, Ln. 11	14,114,381,925	WP6a, Ln. 2	6,372,006,715	6,372,006,715	0
15 Plant in Service (Note C) (GSU)	P.3, L.1, Col.(2)			81,906,440	81,906,440	0
16 Plant in Service (Note C)	Ln. 14 + L.15			6,453,913,155	6,453,913,155	0
17 Accumulated Provision for Depreciation						
18 Accumulated Prov. Depreciation (Note D)	WP6b, Ln. 7	4,684,288,146	WP6b, Ln. 7	(2,426,536,832)	(2,426,536,832)	0
19 Accumulated Prov. Dep. (GSU)	WP16			(21,341,229)	(21,341,229)	0
20 Total Accumulated Depreciation (Note D)	Ln. 18+ L.19			(2,447,878,060)	(2,447,878,060)	0

Account	Description	Year End Balance	Exclusions	100% Production (Energy Related)	100% Production (Demand Related)	Labor
1	190 Excluded Items	121,234,239	121,234,239			
2	190 100% Production (Energy)	7,564,026		7,564,026		
3	190 100% Production (Demand)	52,953,209			52,953,209	
4	190 Labor Related	2,015,662				2,015,662
5	190 Total	183,767,136	121,234,239	7,564,026	52,953,209	2,015,662
6	Production Allocation		0.00%	100.00%	100.00%	100.00%
7	(Gross Plant or Wages/Salaries)		-	7,564,026	52,953,209	2,015,662
8	Demand Related			-	52,953,209	1,422,757
9	Energy Related			7,564,026	-	592,905
10	Allocation Basis			Direct	Direct	B-7, Note B
11	281 Excluded Items		-			
12	281 100% Production (Energy)			-		
13	281 100% Production (Demand)	(267,868,298)			(267,868,298)	
14	281 Labor Related	-				-
15	281 Total	(267,868,298)	-	-	(267,868,298)	-
16	Production Allocation		0.00%	100.00%	100.00%	100.00%
17	(Gross Plant or Wages/Salaries)		-	-	(267,868,298)	-
18	Demand Related			-	(267,868,298)	-
19	Energy Related			-	-	-
20	Allocation Basis			Direct	Direct	B-7, Note B
21	282 Excluded Items	(1,282,989,404)	(1,282,989,404)			
22	282 100% Production (Energy)	2,098		2,098		
23	282 100% Production (Demand)	(730,492,281)			(730,492,281)	
24	282 Labor Related	39,564				39,564
25	282 Total	(2,013,440,023)	(1,282,989,404)	2,098	(730,492,281)	39,564
26	Production Allocation		0.00%	100.00%	100.00%	100.00%
27	(Gross Plant or Wages/Salaries)		-	2,098	(730,492,281)	39,564
28	Demand Related			-	(730,492,281)	27,926
29	Energy Related			2,098	-	11,638
30	Allocation Basis			Direct	Direct	B-7, Note B
31	283 Excluded Items	(38,884,390)	(38,884,390)			
32	283 100% Production (Energy)	(26,811,399)		(26,811,399)		
33	283 100% Production (Demand)	(160,832,427)			(160,832,427)	
34	283 Labor Related	(21,126,922)				(21,126,922)
35	283 Total	(247,655,138)	(38,884,390)	(26,811,399)	(160,832,427)	(21,126,922)
36	283 Production Allocation		0.00%	100.00%	100.00%	100.00%
37	(Gross Plant or Wages/Salaries)		-	(26,811,399)	(160,832,427)	(21,126,922)
38	Demand Related			-	(160,832,427)	(14,912,461)
39	Energy Related			(26,811,399)	0	(6,214,460)
40	Allocation Basis			Direct	B-6, L. 7	B-7, Note B
41	255 Excluded Items	(16,974)	(16,974)			
42	255 100% Production (Energy)	-		-		
43	255 100% Production (Demand)	(962,657)			(962,657)	
44	255 Labor Related	-				-
45	255 Total	(979,631)	(16,974)	-	(962,657)	-
46	255 Production Allocation		0.00%	100.00%	100.00%	100.00%
47	(Gross Plant or Wages/Salaries)		-	-	(962,657)	-
					Direct	
48	Summary Production Related ADIT	Total	Demand	Energy		
49	P Plant (Energy Related)	(19,245,275)	-	(19,245,275)		
50	P Plant (Demand Related)	(1,107,202,454)	(1,107,202,454)	0		
51	Labor Related	(19,071,696)	(13,461,778)	(5,609,918)		
52	Total	(1,145,519,425)	(1,120,664,233)	(24,855,193)		

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	15,224,417	Note B	7,857,543	5,546,255	2,311,287	P.207, L.86, Col.(g)
4. General Offices	0		0	0	0	
5. Total Land	15,224,417		7,857,543	5,546,255	2,311,287	P.207, L.86, Col.(g)
6.						
7. Structures	126,098,356	Note B	65,081,194	45,937,634	19,143,560	P.207, L.87, Col.(g)
8. General Offices	0		0	0	0	
9. Total Structures	126,098,356		65,081,194	45,937,634	19,143,560	P.207, L.87, Col.(g)
10.						
11. Office Equipment	8,965,595	Note B	4,627,274	3,266,166	1,361,107	P.207, L.88, Col.(g)
12. General Offices	0		0	0	0	
13. Total Office Equipment	8,965,595		4,627,274	3,266,166	1,361,107	P.207, L.88, Col.(g)
14. Transportation Equipment	8,674	Note B	4,477	3,160	1,317	P.207, L.89, Col.(g)
15. Stores Equipment	1,859,247	Note B	959,584	677,324	282,261	P.207, L.90, Col.(g)
16. Tools, Shop & Garage Equipment	35,090,949	Note B	18,110,949	12,783,633	5,327,315	P.207, L.91, L. 93, Col.(g)
17. Lab Equipment	3,014,131	Note B	1,555,637	1,098,048	457,589	P.207, L.92, Col.(g)
18. Communication Equipment	58,810,303	Note B	30,352,852	21,424,595	8,928,257	P.207, L.94, Col.(g)
19. Miscellaneous Equip & Other	7,135,642	Note B	3,682,809	2,599,515	1,083,294	P.207, L.95, Col.(g)
20. Subtotal General Plant	256,207,312		132,232,317	93,336,330	38,895,987	P.207, L.96, Col.(g)
21. PERCENT		Note C	51.61%	36.43%	15.18%	
22. Other Tangible Property	0	Note D	0	0	0	P.207, L. 97, Col.(g)
23. TOTAL GENERAL PLANT	256,207,312		132,232,317	93,336,330	38,895,987	
24. INTANGIBLE PLANT	182,526,693	Note B	94,204,679	66,494,479	27,710,200	P.205, L.5, Col.(g)
25. TOTAL GENERAL AND INTANGIBLE	438,734,005		226,436,996	159,830,809	66,606,188	L.23 + L.24
26. PERCENT		Note E	51.61%	36.43%	15.18%	

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).	165,601,260
b. Production wages and salaries in electric operation and maintenance expense, FF1, P.354, Col.(b), L.20. (see WP-9a)	85,469,217
c. Ratio (b / a)	51.611%

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 12/31/2018 (actuals) for 2019

	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)	817,102,049	222,030,371	595,071,678
2. Less Fuel Handling / Sale of Fly Ash	P.14, L.1 thru L. 3 Col.(1)-(3)	(21,245,218)	0	(21,245,218)
3. Less Purchased Power	P.14, L.11 Col.(1)-(3)	(546,598,414)	(53,100,621)	(493,497,793)
4. Other Production O&M	Sum (L.1 thru L.3)	249,258,417	168,929,750	80,328,667
5. Allocated A&G	P.10, L.17 Col.(3)-(5)	48,192,627	34,487,793	13,704,833
6. Total O&M for Cash Working Capital Calculation	L.4 + L.5	297,451,044	203,417,544	94,033,500
7. O&M Cash Requirements	=45 / 360 x L.6	37,181,381	25,427,193	11,754,188

	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	61,269,170		61,269,170	0	61,269,170
3. Non-Fuel						
4. Production	Note D	72,448,059	100% Col. 1	72,448,059	72,448,059	0
5. Transmission		12,132,495	0	0	0	0
6. Distribution		15,137,420	0	0	0	0
7. General		0	Note B	0	0	0
8. Total	L.4 + L.5 + L.6 + L.7	99,717,974		72,448,059	72,448,059	0
9. Account 158 Allowances	Note D	22,718,139		22,718,139	0	22,718,139

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 12/31/2018 (actuals) for 2019

	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	40,186,636				P.323, L.181, Col.(b)
4.	Outside Services	923	Workpapers 10-a	13,542,216				P.323, L.184, Col.(b)
5.	Employee Pensions & Benefits	926	Workpapers 10-a	5,403,813	Note F			P.323, L.187, Col.(b)
6.	Office Supplies	921	Workpapers 10-a	5,765,303				P.323, L.182, Col.(b)
7.	Injuries & Damages	925	Workpapers 10-a	11,924,616				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	(134,581)				P.323, L.190, Col.(b)
10.	Total		Ls. 3 thru 9	76,688,003	Note A	39,579,793	27,937,441	11,642,352
11.	MISCELLANEOUS GENERAL EXPENSES	930	Workpapers 10-a	5,156,200	Note A & D	2,661,190	1,878,404	782,786 P.323, L.192, Col.(b) [Note A]
12.	ADM. EXPENSE TRANSFER - CR.	922	Workpapers 10-a	(4,852,438)	Note B	(2,504,414)	(1,767,743)	(736,670) P.323, L.183, Col.(b)
13.	PROPERTY INSURANCE	924	Workpapers 10-a	3,492,688	Note E	1,653,092	1,636,610	16,482 P.323, L.185, Col.(b)
14.	REGULATORY COMM. EXPENSES	928	Workpapers 10-a	5,156,866	Note C	4,081	4,081	0 P.323, L.189, Col.(b)
15.	RENTS	931	Workpapers 10-a	1,255,664	Note B	648,066	457,438	190,628 P.323, L.193, Col.(b)
16.	MAINTENANCE OF GENERAL PLANT	935	Workpapers 10-a	11,917,545	Note B	6,150,818	4,341,562	1,809,256 P.323, L.196, Col.(b)
17.	TOTAL A & G EXPENSE		L.10 thru 16	98,814,527		48,192,627	34,487,793	13,704,833

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 12/31/2018 (actuals) for 2019

		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	4,095,395,854	50.50%	Note D	4.72%	2.38%
2.	Preferred Stock	Note B	0	0.00%	Note E	0.00%	0.00%
3.	Common Stock	Note C	4,014,658,934	49.50%	Note F	10.40%	5.15%
4.	Total	Ln. 1+L.2+L.3	8,110,054,788	100.00%			7.53%

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 12/31/2018 (actuals) for 2019

	Reference	Debt Balance (1)	Interest & Cost Booked (2)
<u>12 Months Ending 12/31/2018 (actuals) for 2019</u>			
1. Bonds (Acc 221)	FF1, 112.18.c.	274,760,610	
2. Less: Reacquired Bonds (Acc 222)	FF1, 112.19.c.	0	
3. Advances from Assoc Companies (Acc 223)	FF1, 112.20.c.	0	
4. Other Long Term Debt (Acc 224)	FF1, 112.21.c.	<u>3,820,635,244</u>	
5. Total Long Term Debt Balance		4,095,395,854	
<u>Costs and Expenses (actual)</u>			
6. Interest Expense (Acc 427)	FF1, 117.62.c.	Note A	185,758,245
7. Amortization Debt Discount and Expense (Acc 428)	FF1, 117.63.c.		3,440,689
8. Amortization Loss on Reacquired Debt (Acc 428.1)	FF1, 117.64.c.		3,936,995
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			193,135,928
13. Less: Total Hedge (Gain) / Loss	P. 12a, L. 11, Col. (6)		(1,128,834)
14. Plus: Allowed Hedge Recovery	P. 12a, L. 15, Col. (6)		(1,128,834)
15. Total LTD Cost Amount	L. 12 - L. 13 + L. 14		193,135,928
16. Embedded Cost of Long Term Debt = L.15, Col.(2) / L.5, Col.(1)			4.72%

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

Ln. 6	Interest Expense (Acc 427)	185,758,245
Ln. 11	Interest on LTD Assoc Companies (portion Acc 430)	<u>0</u>
	FF1, pg. 257, Ln. 33 Col(i)	185,758,245

## LONG TERM DEBT

Limit on Hedging (Gain)/Loss on Interest Rate Derivatives of LTD  
12 Months Ending 12/31/2018 (actuals) for 2019

Appendix 2  
Page 12a

	(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 I	-		-	0	Jan-05	Jul-14
2. Senior Unsecured Notes - Series K			-	0	Jun-05	May-15
3. Senior Unsecured Notes - Series L	-		-	-	Sep-05	Sep-15
4. Senior Unsecured Notes - Series H	37,120		37,120	531,356	May-03	May-33
5. Senior Unsecured Notes - Series N	(194,199)		(194,199)	(3,349,923)	Apr-06	Apr-36
6. Senior Unsecured Notes - Series Q	159,678		159,678	3,067,005	Mar-08	Apr-38
7. Senior Unsecured Notes - Series S	-		-		May-10	May-15
8. Senior Unsecured Notes - Series T	(1,131,434)		(1,131,434)	(2,514,294)	Mar-11	Mar-21
9.			-			
10. Total Hedge Amortization	(1,128,834)	-	(1,128,834)			

Limit on Hedging (G)/L on Interest Rate Derivatives of LTD

11. Hedge (Gain) / Loss prior to Application of Recovery Limit						(1,128,834)
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)		8,110,054,788	
13. 5 basis point Limit on (G)/L Recovery						0.0005
14. Amount of (G)/L Recovery Limit			L. 12 * L. 13			(4,055,027)
15. Hedge (Gain) / Loss Recovery (Lesser of Line 11 or Line 14)						(1,128,834)
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 12/31/2018 (actuals) for 2019

		(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 12/31/2018 (actuals) for 2019

Appendix 2  
Page 13b  
(1)  
Balances

	(1) Source	(2) Balances
1. Total Proprietary Capital	WP-12a, L.1, Col. a	4,006,253,056
<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	(3,463,213)
4. Accumulated Comprehensive Other Income (Acc 219)	WP-12a, L.1, Col. F	(4,942,665)
5. Total Balance of Common Equity	L.1-L.2-L.3-L.4	4,014,658,934

ANNUAL FIXED COSTS  
 PRODUCTION O & M EXPENSE  
 EXCLUDING FUEL USED IN ELECTRIC GENERATION  
 12 Months Ending 12/31/2018 (actuals) for 2019

	Account No.	Total Company (1)	(Demand) Fixed (2)	(Energy) Variable (3)	FERC Form 1 Reference
1. Coal Handling	501.xx	22,584,919		22,584,919	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	(1,339,701)		(1,339,701)	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	7,230,293	7,230,293		P.321, L.78, Col.(b)
7. System Control of Load Dispatching	Note C	17,685,324	17,685,324		P.321, L.77, L. 88, L. 92, P. 322, L. 121, Col.(b)
8. Other Steam Expenses	Note A	224,342,801	144,014,134	80,328,667	
9. Combustion Turbine	Note A	0		0	
10. Nuclear Power Expense-Other	Note A	0			
11. Purchased Power	555	546,598,414	53,100,621	493,497,793	P.321, L.76, Col.(b)
12. Total Production Expense Excluding Fuel Used In Electric Generation	Sum L.1-L. 11	817,102,049	222,030,371	595,071,678	
13. A & G Expense P.10, L.17		48,192,627	34,487,793	13,704,833	
14. Generator Step Up related O&M	Note B	236,017	236,017	0	
15. Total O & M		865,530,693	256,754,182	608,776,511	

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.

*Reconciliation of System Control of Load Dispatching*

System Control and Load Dispatching	2,115,640
Scheduling, System Control	7,509,381
Reliability, Planning and Standards Dev.	1,855,896
Market Facilitation, Monitoring and Compliance	6,204,406
Ln. 7, Pg. 14	<u>17,685,324</u>

NOTE E: Amounts included in Line 8.

CLASSIFICATION OF FIXED AND VARIABLE  
PRODUCTION EXPENSES

Appendix 2

Page 15

1 of 2

Line No.	Description	FERC Account No.	Energy Related	Demand Related
1	<b>POWER PRODUCTION EXPENSES</b>			
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 POWER PRODUCTION EXPENSES	FERC Account No.	Energy Related	Demand Related
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 12/31/2018 (actuals) for 2019

	Depreciation Expense (1)	Demand (2)	Energy (3)
PRODUCTION PLANT			
<i>Depreciation and Amortization Expense</i>			
1. Steam	177,802,566	177,802,566	0
2. Nuclear	0	0	0
3. Hydro Conventional	3,444,451	3,444,451	0
4. Hydro Pump Storage	2,780,989	2,780,989	0
5. Int. Comb.	0	0	0
6. Other Production	13,428,455	13,428,455	0
7. Generator Step Up Related Depreciation (Note A)	1,301,992	1,301,992	0
8. Production Related General & Intangible Plant (Note B)	16,099,990	11,364,196	4,735,794
9. Total Production	214,858,443	210,122,649	4,735,794

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	5,651,443
c	Intangible Plant	WP 6d	25,543,163
d	Total General & Intangible Plant	Ln. b+ Ln. c	<u>31,194,606</u>
e	Production Demand Labor Allocator	Pg. 7, Ln. 26	36.43%
f	Production Demand Related General & Intangible	Ln. d x Ln. e	<u>11,364,196</u>
g	Production Energy Labor Allocator Pg. 7, Ln. 28	Pg. 7, Ln. 26	15.18%
h	Production Energy Related General & Intangible	Ln. d x Ln. g	<u>4,735,794</u>
i	Total Production Related General & Intangible Plant	Ln. f + Ln. h	16,099,990

PRODUCTION RELATED  
TAXES OTHER THAN INCOME TAXES  
12 Months Ending 12/31/2018 (actuals) for 2019

		SYSTEM			PRODUCTION
		REFERENCE	AMOUNT	%	Amount
			(1)	(2)	(3)
PRODUCTION RELATED TAXES OTHER THAN INCOME					
1	Labor Related	Note A	9,042,366	Note B	4,666,897
2	Property Related	Note A	74,324,513	Note C	35,177,861
3	Other	Note A	16,445,895	Note C	7,783,857
4	Production	Note A	21,043,738		21,043,738
5	Gross Receipts / Distribution Related	Note A	13,797,134	Note D	0
6	TOTAL TAXES OTHER THAN INCOME TAXES	Sum L.1 : L.5	134,653,646		68,672,353

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)	165,601,260	100.00%
(2) Production W & S	85,469,217	51.61%

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 12/31/2018 (actuals) for 2019

	Reference	Amount (1)	Demand (2)	Energy (3)
1. Return on Rate Base	P.5, L.18	238,915,418	232,312,057	6,603,361
2. Effective Income Tax Rate	P.19, L.2	21.55%	21.55%	21.55%
3. Income Tax Calculated	L.1 x L.2	51,479,067	50,056,242	1,422,825
4. ITC Adjustment	P.19, L.13	0	0	0
5. Income Tax	L.3 + L.4	51,479,067	50,056,242	1,422,825

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 12/31/2018 (actuals) for 2019

Appendix 2  
Page 19

Line No.	Source (1)	Rates & Amounts (2)
1.	$T=1 - \{[(1 - \text{SIT}) * (1 - \text{FIT})] / (1 - \text{SIT} * \text{FIT} * P)\} =$	23.96%
2.	$\text{EIT}=(T/(1-T)) * (1-(\text{WCLTD}/\text{WACC})) =$	21.55%
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.	$\text{GRCF}=1 / (1 - T)$	1.3151
5.	Federal Income Tax Rate	FIT 21.00%
6.	State Income Tax Rate (Composite)	SIT 3.75%
7.	Percent of FIT deductible for state purposes	P Note A 0.00%
8.	Weighted Cost of Long Term Debt	WCLTD 2.38%
9.	Weighted Average Cost of Capital	WACC 7.53%
10.	Amortized Investment Tax Credit (enter negative)	FF1, P.114, L.19, Col.c 0.00%
11.	Gross Plant Allocation Factor	L.19 47.33%
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 14,114,381,925
16.	Production Plant Gross	P.6, L.5, Col.2 6,680,350,152
17.	Demand Related Production Plant	P.6, L.5, Col.3 6,613,743,964
18.	Energy Related Production Plant	P.6, L.5, Col.4 66,606,188
19.	Production Plant Gross Plant Allocator	L.16 / L.15 47.33%
20.	Production Plant - Demand Related	L.17 / L.16 99.00%
21.	Production Plant - Energy Related	L.18 / L.16 1.00%

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%