

Columbia Gas of Pennsylvania, Inc.
2021 General Rate Case
Docket No. R-2021-3024296
Standard Filing Requirements
Exhibits 5-12
Volume 3 of 10

EXHIBIT 5

COLUMBIA GAS OF PENNSYLVANIA, INC.
STATEMENT OF ANNUAL DEPRECIATION EXPENSE AT PRESENT RATES
TWELVE MONTHS ENDED NOVEMBER 30, 2020

	\$
Annual Depreciation Accruals related to Gas Plant in Service at November 30, 2020	78,954,668
Plus: 5 Year Amortization of Negative Net Salvage at November 30, 2020	<u>4,439,780</u>
Total	<u>83,394,448</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.

TABLE 1. ESTIMATED SURVIVOR CURVES, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO GAS PLANT AT NOVEMBER 30, 2020

Acct No.	DEPRECIABLE GROUP (1)	SURVIVOR CURVE (2)	ORIGINAL COST	BOOK RESERVE (4)	FUTURE BOOK ACCRUAL (5)	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE (8)=(5)/(6)
			AS OF NOVEMBER 30, 2020 (3)			AMOUNT (6)	RATE (7)=(6)/(3)	
DEPRECIABLE PLANT								
UNDERGROUND STORAGE PLANT								
350.2	RIGHTS OF WAY	SQUARE *	1,932.08	1,931	1	0	-	-
351	COMPRESSOR STATION STRUCTURES	65-R2.5 *	3,250,036.96	2,046,982	1,203,055	264,059	8.12	4.6
WELLS								
352	CONSTRUCTION	SQUARE *	738,941.36	738,926	15	3	-	5.0
352	EQUIPMENT	50-S2.5 *	168,031.87	168,032	0	0	-	-
	TOTAL ACCOUNT 352		906,973.23	906,958	15	3		
352.1	STORAGE LEASEHOLDS AND RIGHTS	SQUARE *	206,940.78	206,932	9	2	-	4.5
353	LINES	50-S1.5 *	389,345.13	388,491	854	199	0.05	4.3
354	COMPRESSOR STATION EQUIPMENT	55-R2.5 *	948,176.70	783,946	164,231	36,345	3.83	4.5
355	MEASURING AND REGULATING EQUIPMENT	37-R1.5 *	104,476.92	104,477	0	0	-	-
	TOTAL UNDERGROUND STORAGE PLANT		5,807,881.80	4,439,717	1,368,165	300,608	5.18	
DISTRIBUTION PLANT								
LAND AND LAND RIGHTS								
374.4	LAND RIGHTS	70-R2.5	3,448,402	803,165	2,645,237	57,691	1.67	45.9
374.5	RIGHTS OF WAY	80-S4	3,233,171	1,756,977	1,476,194	35,018	1.08	42.2
	TOTAL ACCOUNT 374		6,681,573	2,560,142	4,121,431	92,709	1.39	
STRUCTURES AND IMPROVEMENTS								
375.34	MEASURING AND REGULATING	60-R1	5,532,311.36	1,352,223	4,180,088	121,243	2.19	34.5
375.6	INDUSTRIAL MEASURING AND REGULATING	55-R1	86,228	74,799	11,429	544	0.63	21.0
375.7	OTHER DISTRIBUTION SYSTEMS							
	DISTRIBUTION SYSTEM STRUCTURES	90-R1.5 *	14,807,424.57	2,857,433	11,949,991	431,577	2.91	27.7
	OTHER BUILDINGS	35-R2	2,914,621.35	974,135	1,940,486	85,643	2.94	22.7
	TOTAL ACCOUNT 375.70		17,722,045.92	3,831,568	13,890,477	517,220	2.92	26.9
375.8	COMMUNICATION	45-R3	16,515.17	7,896	8,619	364	2.20	23.7
	TOTAL ACCOUNT 375		23,357,100.32	5,266,486	18,090,613	639,371	2.74	

COLUMBIA GAS OF PENNSYLVANIA, INC.

TABLE 1. ESTIMATED SURVIVOR CURVES, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO GAS PLANT AT NOVEMBER 30, 2020

Acct No.	DEPRECIABLE GROUP (1)	SURVIVOR CURVE (2)	ORIGINAL COST	BOOK	FUTURE	CALCULATED ANNUAL ACCRUAL		COMPOSITE
			AS OF NOVEMBER 30, 2020 (3)	RESERVE (4)	BOOK ACCRUAL (5)	AMOUNT (6)	RATE (7)=(6)/(3)	REMAINING LIFE (8)=(5)/(6)
376	MAINS							
	CAST IRON	71-R1 *	198,560.29	160,052	38,508	8,343	4.20	4.6
	BARE STEEL	71-R1 *	64,049,383.25	46,340,617	17,708,766	1,909,671	2.98	9.3
	OTHER	71-R1	1,928,357,530.84	242,174,302	1,686,183,229	41,557,002	2.16	40.6
	TOTAL ACCOUNT 376		1,992,605,474.38	288,674,971	1,703,930,503	43,475,016	2.18	
378	MEASURING AND REGULATING STATION EQUIPMENT - GENERAL	45-O1	112,862,439.95	17,480,520	95,381,920	4,434,229	3.93	21.5
379.1	MEASURING AND REGULATING STATION EQUIPMENT - CITY GATE	35-S2	135,966.90	27,311	108,656	11,636	8.56	9.3
380	SERVICES							
	BARE STEEL	50-R0.5 *	826,513.32	628,310	198,203	28,221	3.41	7.0
	OTHER	50-R0.5	629,633,742.93	127,334,407	502,299,336	18,933,806	3.01	26.5
	TOTAL ACCOUNT 380		630,460,256.25	127,962,717	502,497,539	18,962,027	3.01	
381	METERS	44-S1	40,743,003.61	17,078,832	23,664,172	982,342	2.41	24.1
381	METERS - AMR	15-S2.5	24,645,195.47	15,534,889	9,110,306	1,501,943	6.09	6.1
382	METER INSTALLATIONS	55-R3	41,270,604.91	14,413,488	26,857,117	774,804	1.88	34.7
383	HOUSE REGULATORS AND INSTALLATIONS	45-S2	18,139,751.01	7,565,856	10,573,895	364,463	2.01	29.0
385	INDUSTRIAL MEASURING AND REGULATING STATION EQUIPMENT - OTHER THAN METERS	30-R0.5	6,998,445.32	2,084,988	4,913,457	386,167	5.52	12.7
	OTHER EQUIPMENT							
387	GENERAL	32-R0.5	136,698.14	72,195	64,503	6,172	4.52	10.5
387.4	COMMUNICATION EQUIPMENT	25-R2	11,329,312.50	2,247,776	9,081,536	565,688	4.99	16.1
387.5	GPS EQUIPMENT	10-S3	2,201,371.95	1,313,395	887,977	238,060	10.81	3.7
	TOTAL ACCOUNT 387		13,667,382.59	3,633,366	10,034,016	809,920	5.93	
	TOTAL DISTRIBUTION PLANT		2,911,567,193.98	502,283,566	2,409,283,625	72,434,627	2.49	
GENERAL PLANT								
390.1	STRUCTURES AND IMPROVEMENTS - COMMUNICATION	45-R2	49,821.42	49,821	0	0	-	-
	OFFICE FURNITURE AND EQUIPMENT							
391.1	FURNITURE	20-SQ	2,308,323.16	1,074,322	1,234,001	86,230	3.74	14.3
391.11	EQUIPMENT	15-SQ	91,303.67	41,394	49,910	5,835	6.39	8.6
391.12	INFORMATION SYSTEMS	5-SQ	3,270,693.60	2,297,010	973,684	686,165	20.98	1.4
	TOTAL ACCOUNT 391		5,670,320.43	3,412,726	2,257,595	778,230	13.72	

COLUMBIA GAS OF PENNSYLVANIA, INC.

TABLE 1. ESTIMATED SURVIVOR CURVES, ORIGINAL COST, BOOK RESERVE AND
CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO GAS PLANT AT NOVEMBER 30, 2020

Acct No.	DEPRECIABLE GROUP (1)	SURVIVOR CURVE (2)	ORIGINAL COST	BOOK	FUTURE	CALCULATED		COMPOSITE
			AS OF NOVEMBER 30, 2020 (3)	RESERVE (4)	BOOK ACCRUAL (5)	ANNUAL ACCRUAL AMOUNT (6)	RATE (7)=(6)/(3)	REMAINING LIFE (8)=(5)/(6)
392	TRANSPORTATION EQUIPMENT - TRAILERS	15-SQ	25,617	26,344	(727)	0	-	-
394	TOOLS, SHOP AND GARAGE EQUIPMENT	25-SQ	17,148,550	7,008,818	10,139,732	607,391	3.54	16.7
394.12	CNG FACILITIES	12-S1.5	2,414,785	2,411,138	3,647	3,397	0.14	1.1
	TOTAL ACCOUNT 394		19,563,334	9,419,956	10,143,379	610,788	3.12	
395	LABORATORY EQUIPMENT	20-SQ	266,039	69,334	196,705	13,881	5.22	14.2
396	POWER OPERATED EQUIPMENT	13-L2	948,698	927,581	21,117	5,387	0.57	3.9
397.5	COMMUNICATION EQUIPMENT - TELEMETERING	19-R2.5	787,916	786,130	1,786	150	0.02	11.9
398	MISCELLANEOUS EQUIPMENT	15-SQ	953,270	420,527	532,743	58,008	6.09	9.2
	TOTAL GENERAL PLANT		28,265,016	15,112,419	13,152,598	1,466,444	5.19	
	SUBTOTAL DEPRECIABLE PLANT		2,945,640,092	521,835,702	2,423,804,388	74,201,679	2.52	
AMORTIZABLE PLANT								
303	MISCELLANEOUS INTANGIBLE PLANT		32,541,328	16,663,271	15,878,057	4,137,597	**	
303.6	MISCELLANEOUS INTANGIBLE PLANT - CLOUD		1,719,212	313,594	1,405,618	313,594	**	
362.1	ENVIRONMENTAL REMEDIATION			(211,300)				
375.71	STRUCTURES AND IMPROVEMENTS - LEASED		5,819,325	2,261,363	3,557,962	301,798	**	
	SUBTOTAL AMORTIZABLE PLANT		40,079,864	19,026,928	20,841,637	4,752,989		
	NONDEPRECIABLE PLANT		3,533,241	234,693				
	TOTAL GAS PLANT		2,989,253,197	541,097,323	2,444,646,025	78,954,668		

* Indicates the use of an interim survivor curve and retirement date.

** Accrual rate based on individual asset amortization.

COLUMBIA GAS OF PENNSYLVANIA, INC.

TABLE 2. SUMMARY OF COST OF REMOVAL AND GROSS SALVAGE
AND AMORTIZATION OF EXPERIENCED NET SALVAGE

<u>Year</u>	<u>Cost of Removal</u> \$	<u>Gross Salvage</u> \$	<u>Net Salvage</u> \$
2015	4,164,784	156,362	(4,008,422)
2016	4,171,396	271,675	(3,899,721)
2017	3,900,213	35,806	(3,864,407)
2018	5,232,727	204,219	(5,028,508)
2019	<u>5,398,454</u>	<u>607</u>	<u>(5,397,848)</u>
Total	22,867,574	668,668	(22,198,906)

Five Year Amortization of Negative Net Salvage **(4,439,780)**

EXHIBIT 6

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
E. GAS UTILITIES

35. Submit a schedule showing Gross Receipts Tax Base used in computing Pennsylvania Gross Receipts Tax Adjustment.

Response:

Effective January 1, 2000, the Utility Gross Receipts Tax is not imposed on sales of natural gas. Consequently, there were no amounts computed or included for gross receipts taxes.

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

50. Provide a schedule of federal and Pennsylvania taxes, other than income taxes, calculated on the basis of test year per books, pro forma at present rates, and pro forma at proposed rates, to include the following categories:
- a. social security
 - b. unemployment.
 - c. capital stock.
 - d. public utility realty.
 - e. P.U.C. assessment.
 - f. other property.
 - g. any other appropriate categories.

Response:

Refer to Exhibit No. 6, Schedule 2, Pages 2 through 4. Please note Pennsylvania has eliminated the capital stock tax for all taxpayers effective for years beginning on or after January 1, 2016. Consequently, there were no amounts included for capital stock taxes. P.U.C assessment and fees are included in Exhibit No. 4, Schedule No. 1, Pages 2, Line 19.

Columbia Gas Pennsylvania, Inc.
Statement of Projected Taxes Other Than Income Taxes at Present Rates
Twelve Months Ended November 30, 2020

Line No.	Description	Per Books	Adjustments	Normalized
		Twelve Months Ended Nov. 30, 2020		Twelve Months Ended Nov. 30, 2020
		\$	\$	\$
1	FICA	2,611,162	232,939	2,844,101
2	FUTA & SUTA	101,559	0	101,559
3	Property Tax	500,865	22,957	523,822
4	Capital Stock	0	0	0
5	License and Franchise	0	0	0
6	Sales and Use	148,271	0	148,271
7	Other	625	0	625
8	Total Taxes Other Than Income Taxes	<u>3,362,482</u>	<u>255,896</u>	<u>3,618,378</u>

Columbia Gas Pennsylvania, Inc.
Taxes Other Than Income Taxes
To Annualized Increase In FICA Tax
Twelve Months Ended November 30, 2020

<u>Line No.</u>	<u>Description</u>	<u>Amount</u> \$	<u>Reference</u>
	<u>HTY Experience Ratio Calculation</u>		
1	Labor charged to O&M per Books	36,644,452	Exh 4, Sch 1, Pg 2, Ln 1+2
2	Total FICA charged per Books	<u>2,611,162</u>	Exh 6, Sch 2, Pg 2
3	FICA Experience Factor	7.1257%	Ln 2 / Ln 1
	<u>HTY FICA Adjustment</u>		
4	O&M Payroll Adjustment	1,628,705	Exh 4, Sch 1, Pg 2, Ln 1
5	O&M Incentive Compensation Adjustment	<u>1,640,296</u>	Exh 4, Sch 1, Pg 2, Ln 2
6	Total O&M Payroll & Incentive Adjustment	3,269,001	Ln 4 + Ln 5
7	Annualized Payroll Tax FICA Adjustment	<u><u>232,939</u></u>	Ln 6 x Ln 3

Columbia Gas Pennsylvania, Inc.
 Taxes Other Than Income Taxes
 To Annualized Increase In Property Tax
 Twelve Months Ended November 30, 2020

<u>Line No.</u>	<u>Description</u>	<u>Annualized Nov. 30, 2020</u> \$
1	2020 PURTA Tax on property as of 12/31/2019	195,515
2	Locally Assessed PA Property Tax - Latest Paid	72,631
3	WV Tax Year as of 12/31/2019 Assessed Value on Stored Gas	12,051,585
4	2019 WV Tax Year Effective Tax Rate	<u>0.02121516</u>
5	Annualized WV Property Tax on Stored Gas	<u>255,676</u>
6	Total Property Tax Expense - Annualized	Line 1 + Line 2 + Line 5 523,822
7	Property Tax Expense - Per Books	<u>500,865</u>
8	Total Property Tax Adjustment	Line 6 - Line 7 <u><u>22,957</u></u>

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

48. Provide a copy of the latest capital stock tax report and the latest capital stock tax settlement.

Response:

Pennsylvania has eliminated the capital stock tax for all taxpayers effective for years beginning on or after January 1, 2016. Consequently, there were no amounts included for capital stock taxes.

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

49. Submit details of calculations for Taxes, Other than Income where a company is assessed taxes for doing business in another state, or on its property located in another state.

Response:

Columbia Gas of Pennsylvania, Inc. maintains several contracts for the storage of gas in states outside Pennsylvania. The current amounts presented on Exhibit No. 6, Schedule No. 2, Page No. 4, Line No. 5 include property tax for gas storage maintained in West Virginia as follows:

<u>Type of Tax</u>	<u>For the 12 Months Ended</u> <u>11/30/2020</u>
WV Property – Storage	255,676

EXHIBIT 7

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 II. RATE OF RETURN
A. ALL UTILITIES

8. State amount of debt interest utilized for income tax calculations, and details of debt interest computations, under each of the following rate case bases:
- a. Actual test year
 - b. Annualized test year-end
 - c. Proposed test year-end

Response: See Exhibit No. 2, Schedule No. 3, Page No. 4 for detail of the debt interest computation for the actual test year (HTY) and Exhibit No. 102, Schedule No. 3, Page No. 4 for detail of the debt interest computation for the annualized test year (FPFTY) and proposed test year at proposed rates.

a.	Actual test year	\$40,323,744
b.	Annualized test year-end	\$51,589,133
c.	Proposed test year-end	\$51,589,133

9. State amount of debt interest utilized for income tax calculations which has been allocated from the debt interest of an affiliate, and details of the allocation, under each of the following rate case bases:
- a. Actual test year
 - b. Annualized test year-end
 - c. Proposed test year-end

Response: The Company is reflecting a Columbia Gas of Pennsylvania, Inc. capital structure in its claim. No interest has been allocated from an affiliate.

26. Provide the following income tax data:

- a. Consolidated income tax adjustment, if applicable.
- b. Interest for tax purposes (basis.)

Response: The income tax data for the twelve months historic test year presented on the following schedules:

- a. The Company does not have a consolidated income tax adjustment.
- b. The Interest included in the tax computation is presented on Exhibit No. 7, Page No. 14, Line No. 6.

**NiSource Inc. and Subsidiaries
Columbia Gas of Pennsylvania
Section 1301.1(b) Differential**

Line No.	Description	Ref	(1) 2017	(2) 2018	(3) 2019	(4) Total	(5) Average
1	Columbia Gas of Pennsylvania Taxable Income		(83,590,252)	92,747,604	50,382,751	59,540,103	19,846,701
2	Consolidated Income Companies Taxable Income		17,669,133	333,405,094	458,227,591	809,301,818	269,767,273
3	Taxable Income Percentage to Columbia Gas of Pennsylvania	IF L1 > 0, L1 / L2, 0	0%	28%	11%	7%	7%
4	Consolidated Loss Companies Taxable Loss		596,836,667	144,812,588	99,924,063	841,573,318	280,524,439
5	Columbia Gas of Pennsylvania Allocation of Loss for 2012 to 2019	L3 * L4					20,638,103
6	Tax Rate						21%
7	Section 1301.1(b) Differential	L5 * L6					4,334,002
8	50% for reliability or infrastructure related capital investment	L7 * 50%					2,167,001
9	50% for general corporate purposes	L7 * 50%					2,167,001

NISource Inc and Subsidiaries
 Calculation of Consolidated Tax Savings for Columbia Gas of Pennsylvania
 Modified Effective Tax Rate Method Based on Three Year Average

Line No	Company	2012 Taxable Income 1/	2013 Taxable Income 1/	2014 Taxable Income 1/	2012-2014 Taxable Income
		(1)	(2)	(3)	(4)
	Regulated				
	Positive Regulated Companies				
1	Columbia Gas of Kentucky, Inc.	4,693,457	502,062	144,816	5,340,335
2	Kokomo Gas and Fuel Company	-	-	-	-
3	Northern Indiana Public Service Company	210,808,733	80,743,430	86,682,322	378,234,485
4	NISource Corporate Services Company	(3,839,295)	12,140,384	3,157,437	11,458,526
5	Central Kentucky Transmission Company	48,440	48,493	46,860	143,793
6	Subtotal: Positive Regulated Companies	211,711,335	93,434,369	90,031,435	395,177,139
	Loss Regulated Companies				
9	Columbia Gas of Ohio, Inc.	(3,779,440)	(48,856,838)	(26,148,630)	(78,784,908)
10	Northern Indiana Fuel and Light Company, Inc.	-	-	-	-
11	Columbia Gas of Maryland, Inc.	(1,502,899)	(5,843,279)	(4,980,590)	(12,326,768)
12	Columbia Gas of Virginia, Inc.	142,030	(17,631,341)	(26,663,345)	(44,152,656)
13	Bay State Gas Company	(20,010,181)	5,099,512	(15,278,640)	(30,189,309)
14	Columbia Gas of Pennsylvania, Inc.	(39,340,808)	(6,012,965)	1,851,749	(43,502,024)
15					
16	Subtotal: Loss Regulated Companies	(64,491,298)	(73,244,911)	(71,219,456)	(208,955,665)
17					
18	Total Regulated Companies	147,220,037	20,189,458	18,811,979	186,221,474

NISource Inc and Subsidiaries
 Calculation of Consolidated Tax Savings for Columbia Gas of Pennsylvania
 Modified Effective Tax Rate Method Based on Three Year Average

Line No	Company	2012 Taxable Income 1/	2013 Taxable Income 1/	2014 Taxable Income 1/	2012-2014 Taxable Income
	Non Regulated				
	Non Regulated Profitable Taxable Income Companies				
34	Columbia Insurance Corporation	4,891,106	7,989,406	3,123,616	16,004,128
35	Northern Indiana Trading Company	94,343	-	-	94,343
36	NIPSCO Accounts Receivables Corporation	6,391,608	3,911,553	3,437,640	13,740,801
37	Columbia Gas of Ohio Receivables Corp.	942,530	1,058,770	1,592,736	3,594,036
38	Columbia Gas of Pennsylvania Receivables Corp	392,550	530,969	860,111	1,783,630
39	Subtotal: Positive Unregulated Companies	12,712,137	13,490,698	9,014,103	35,216,938
	Unregulated Loss Companies of Three Year Period				
41	Eliminations (Inter-Company profit on Columbia Transmission)	(14,819,951)	19,640,967	(2,730,203)	2,090,813
43	EnergyUSA Inc. (MA)	-	-	-	-
44	Indianapolis Water Company	-	-	-	-
45	EnergyUSA Inc. (IN)	(775,856)	(688,801)	(585,654)	(2,050,311)
46	Lake Erie Land Company	(3,899,189)	(6,741,686)	(17,616,892)	(28,257,767)
47	NISource Energy Technologies, Inc.	(1,222,276)	(772,472)	(730,343)	(2,725,091)
48	NISource Capital Markets, Inc.	(2,455,687)	(2,986,342)	(3,455,004)	(8,897,033)
49	IWC Resources Corp.	(2,245,444)	(776,859)	(89,748)	(3,112,051)
50	NISource Finance Corp.	(5,683,810)	180,315	(7,058,074)	(12,561,569)
51	NISource Development Company, Inc.	(3,129,213)	(2,272,418)	(2,376,070)	(7,777,701)
52	Primary Energy, Inc.	-	(1,136,938)	(1,727,397)	(2,864,335)
53	EnergyUSA-TPC Corp.	(21,470,907)	(3,199,372)	(547,250)	(25,217,529)
54	NISource Inc.	(27,850,847)	(29,327,888)	(52,697,869)	(109,876,604)
55	NISource Corporate Group	-	(8,397,810)	-	(8,397,810)
56	NGD Holding Company	-	(8,603,910)	-	(8,603,910)
57	Subtotal: Loss Unregulated Companies	(83,553,180)	(45,083,214)	(89,614,504)	(218,250,898)

NISource Inc and Subsidiaries
 Calculation of Consolidated Tax Savings for Columbia Gas of Pennsylvania
 Modified Effective Tax Rate Method Based on Three Year Average

Line No	Company	2012 Taxable Income 1/	2013 Taxable Income 1/	2014 Taxable Income 1/	2012-2014 Taxable Income
70	NISource Inc. Interest on Columbia Stock Purchase Allocated Under SEC Or	(188,619,685)	(194,483,810)	(177,344,944)	(560,448,439)
71	Subtotal: Interest on Columbia Stock Purchase	(188,619,685)	(194,483,810)	(177,344,944)	(560,448,439)
	Other Companies Sold or In Process of Being Sold or Inactive				
74	NDC Douglas Properties, Inc.	1,761,838	(539,820)	(407,489)	814,529 2/
75	Columbia Energy Services Corporation	-	-	-	- 3/
76	Service Protection Group LLC	-	-	-	- 4/
77	NISource Retail Services, Inc.	-	31,231,228	1,780,747	33,011,975 3/
78	Crossroads Pipeline Company	3,010,003	1,869,638	748,087	5,627,728 4/
79	Columbia Gulf Transmission Company	47,341,084	14,512,128	43,234,658	105,087,870 4/
80	Columbia Hardy Corp.	1,804,936	2,567,494	2,226,517	6,598,947 4/
81	Columbia Energy Group	230,871,449	(162,060,316)	(6,692,837)	62,118,296 4/
82	CNS Microwave, Inc.	848,775	951,189	946,658	2,746,622 4/
83	Columbia Remainder Corporation	(177,273)	(445,433)	(275,876)	(898,582) 4/
84					
85	Subtotal: Unregulated Companies Sold or In Process of Being Sold/o	285,460,812	(111,913,892)	41,560,465	215,107,385
86					
87	Total Consolidated Taxable Income	173,220,121	(317,800,760)	(197,572,901)	(342,153,540)
88					
89	1/ Separate Return amount includes non-deductible Charitable Contributions as a result of Consolidated Net Operating Loss				
90	2/ Company in process of being sold. An investment in real estate for benefit of low income housing credits				
91	3/ Company sold in 2013				
92	4/ Company no longer part of the consolidated group pursuant to a spin off in 2015.				
93					
94	Consolidated Income Companies Taxable Income	514,042,882	182,977,538	149,833,954	
95	Consolidated Loss Companies Taxable Loss	(340,822,761)	(500,778,298)	(347,406,855)	
96					
97		173,220,121	(317,800,760)	(197,572,901)	
98		-	-	-	
99					
100					
101					

NISource Inc and Subsidiaries
 Calculation of Consolidated Tax Savings for Columbia Gas of Pennsylvania
 Modified Effective Tax Rate Method Based on Three Year Average

Line No	Company	2014 Taxable Income 1/	2015 Taxable Income 1/	2016 Taxable Income 1/	2014-2016 Taxable Income
		(1)	(2)	(3)	(4)
	Regulated				
	Positive Regulated Companies				
1	Kokomo Gas and Fuel Company	-	-	-	-
2	Northern Indiana Public Service Company	86,682,322	(27,042,518)	(18,374,119)	41,265,685
3	NISource Corporate Services Company	3,157,437	2,956,022	21,087,381	27,200,840
4	Central Kentucky Transmission Company	46,860	33,631	68,729	139,220
5	Subtotal: Positive Regulated Companies	89,886,619	(24,052,865)	2,771,991	68,605,745
7	Loss Regulated Companies				
8	Columbia Gas of Ohio, Inc.	(26,148,630)	9,965,210	(66,018,630)	(82,202,050)
9	Northern Indiana Fuel and Light Company, Inc.	-	-	-	-
10	Columbia Gas of Kentucky, Inc.	144,816	(111,117)	(12,033,547)	(11,999,848)
11	Columbia Gas of Maryland, Inc.	(4,980,590)	(2,630,044)	(4,701,007)	(12,311,641)
12	Columbia Gas of Virginia, Inc.	(26,663,345)	1,262,838	(13,877,899)	(39,278,406)
13	Bay State Gas Company	(15,278,640)	(3,107,284)	(42,158,281)	(60,544,205)
14	Columbia Gas of Pennsylvania, Inc.	1,851,749	12,882,108	(24,798,164)	(10,064,307)
15					
16	Subtotal: Loss Regulated Companies	(71,074,640)	18,261,711	(163,587,528)	(216,400,457)
17					
18	Total Regulated Companies	18,811,979	(5,791,154)	(160,815,537)	(147,794,712)

NISource Inc and Subsidiaries
 Calculation of Consolidated Tax Savings for Columbia Gas of Pennsylvania
 Modified Effective Tax Rate Method Based on Three Year Average

Line No	Company	2014 Taxable Income 1/	2015 Taxable Income 1/	2016 Taxable Income 1/	2014-2016 Taxable Income
	Non Regulated				
	Non Regulated Profitable Taxable Income Companies				
34	NISource Insurance Corporation	3,123,616	8,073,063	9,537,830	20,734,509
35	Northern Indiana Trading Company	-	-	-	-
36	NIPSCO Accounts Receivables Corporation	3,437,640	3,033,138	2,106,266	8,577,044
37	Columbia Gas of Ohio Receivables Corp.	1,592,736	381,098	1,193,763	3,167,597
38	Columbia Gas of Pennsylvania Receivables Corp	860,111	758,446	715,432	2,333,989
39	Subtotal: Positive Unregulated Companies	9,014,103	12,245,745	13,553,291	34,813,139
40					
41	Unregulated Loss Companies of Three Year Period				
42	Eliminations (Inter-Company profit on Columbia Transmission)	(2,730,203)	8,160,489	-	5,430,286
43	EnergyUSA Inc. (MA)	-	-	-	-
44	Indianapolis Water Company	-	-	-	-
45	EnergyUSA Inc. (IN)	(585,654)	(265,008)	(428,542)	(1,279,204)
46	Lake Erie Land Company	(17,616,892)	720,077	(386,767)	(17,283,582)
47	NISource Energy Technologies, Inc.	(730,343)	(596,913)	225,256	(1,102,000)
48	NISource Capital Markets, Inc.	(3,455,004)	(3,680,847)	(4,578,810)	(11,714,661)
49	IWC Resources Corp.	(89,748)	(92,022)	(90,552)	(272,322)
50	NISource Finance Corp.	(7,058,074)	9,604,457	(10,250,156)	(7,703,773)
51	NISource Development Company, Inc.	(2,376,070)	(2,268,585)	(2,387,190)	(7,031,845)
52	Primary Energy, Inc.	(1,727,397)	(1,368,627)	(2,348,188)	(5,444,212)
53	EnergyUSA-TPC Corp.	(547,250)	(476,070)	60,842	(962,478)
54	NISource Inc.	(52,697,869)	(355,245,137)	(143,375,407)	(551,318,413)
55	NISource Corporate Group	-	-	-	-
56	NGD Holding Company	-	-	-	-
57	Subtotal: Loss Unregulated Companies	(89,614,504)	(345,508,186)	(163,559,514)	(598,682,204)

NISource Inc and Subsidiaries
 Calculation of Consolidated Tax Savings for Columbia Gas of Pennsylvania
 Modified Effective Tax Rate Method Based on Three Year Average

Line No	Company	2014 Taxable Income 1/	2015 Taxable Income 1/	2016 Taxable Income 1/	2014-2016 Taxable Income
70	NISource Inc. Interest on Columbia Stock Purchase Allocated Under SEC Ord	(177,344,944)	-	(23,440,522)	(200,785,466)
71	Subtotal: Interest on Columbia Stock Purchase	(177,344,944)	-	(23,440,522)	(200,785,466)
72					
73	Other Companies Sold or In Process of Being Sold or Inactive				
74	NDC Douglas Properties, Inc.	(407,489)	3,385,008	(85,085)	2,892,434 2/
75	Columbia Energy Services Corporation	-	-	-	- 3/
76	Service Protection Group LLC	-	-	-	- 4/
77	NISource Retail Services, Inc.	1,780,747	133,982	306,579	2,221,308 3/
78	Crossroads Pipeline Company	748,087	-	-	748,087 4/
79	Columbia Gulf Transmission Company	43,234,658	-	-	43,234,658 4/
80	Columbia Hardy Corp.	2,226,517	-	-	2,226,517 4/
81	Columbia Energy Group	(6,692,837)	(148,957,604)	-	(155,650,441) 4/
82	CNS Microwave, Inc.	946,658	-	-	946,658 4/
83	Columbia Remainder Corporation	(275,876)	-	-	(275,876) 4/
84					
85	Subtotal: Unregulated Companies Sold or In Process of Being Sold/o	41,560,465	(145,438,614)	221,494	(103,656,655)
86					
87	Total Consolidated Taxable Income	(197,572,901)	(484,492,209)	(334,040,788)	(1,016,105,898)
88					
89	1/ Separate Return amount includes non-deductible Charitable Contributions as a result of Consolidated Net Operating Loss				
90	2/ Company in process of being sold. An investment in real estate for benefit of low income housing credits				
91	3/ Company sold in 2013				
92	4/ Company no longer part of the consolidated group pursuant to a spin off in 2015.				
93					
94	Consolidated Income Companies Taxable Income	149,833,954	61,349,567	35,292,078	
95	Consolidated Loss Companies Taxable Loss	(347,406,855)	(545,841,776)	(369,332,866)	
96					
97		(197,572,901)	(484,492,209)	(334,040,788)	
98		-	-	-	
99					
100					
101					

NISource Inc and Subsidiaries
 Calculation of Consolidated Tax Savings for Columbia Gas of Pennsylvania
 Modified Effective Tax Rate Method Based on Three Year Average

Line No	Company	2017 Taxable Income 1/	2018 Taxable Income 1/	2019 Taxable Income 1/	2017-2019 Taxable Income
		(1)	(2)	(3)	(4)
	Regulated				
	Positive Regulated Companies				
1	Kokomo Gas and Fuel Company	-	-	-	-
2	NISource Corporate Services Company	2,917,572	23,736,899	15,708,968	42,363,039
3	Columbia Gas of Kentucky, Inc.	(6,459,750)	25,016,097	5,835,716	24,392,063
4	Columbia Gas of Virginia, Inc.	(27,739,123)	65,358,338	14,544,718	52,163,933
5	Central Kentucky Transmission Company	62,736	81,953	80,746	225,435
6	Columbia Gas of Ohio, Inc.	(145,349,100)	107,552,351	92,205,430	54,408,681
7	Columbia Gas of Maryland, Inc.	(8,295,270)	8,359,652	6,682,702	6,747,084
8	Columbia Gas of Pennsylvania, Inc.	(83,590,252)	92,747,604	50,382,751	59,540,103
9	Subtotal: Positive Regulated Companies	(268,453,187)	322,852,894	185,440,631	239,840,338
10					
11	Loss Regulated Companies				
12	Northern Indiana Fuel and Light Company, Inc.	-	-	-	-
13	Northern Indiana Public Service Company	(243,734,998)	(363,671,957)	37,309,285	(570,097,670)
14					
15					
16	Subtotal: Loss Regulated Companies	(243,734,998)	(363,671,957)	37,309,285	(570,097,670)
17					
18	Total Regulated Companies	(512,188,185)	(40,819,063)	222,749,916	(330,257,332)
19					
20					
21					
22					
23					
24					
25	NISource Inc and Subsidiaries				
26	Calculation of Consolidated Tax Savings for Columbia Gas of Pennsylvania				
27	Modified Effective Tax Rate Method Based on Three Year Average				
28					
29					
30	Company	2017 Taxable Income 1/	2018 Taxable Income 1/	2019 Taxable Income 1/	2017-2019 Taxable Income
31					
32	Non Regulated				
33	Non Regulated Profitable Taxable Income Companies				
34	NISource Insurance Corporation	12,644,457	7,640,365	13,294,677	33,579,499
35	Northern Indiana Trading Company	-	-	-	-
36	NISource Energy Technologies, Inc.	(837,781)	2,385,438	(37,953)	1,509,704
37	Columbia Gas of Pennsylvania Receivables Corp	522,787	526,397	398,873	1,448,057
38	Subtotal: Positive Unregulated Companies	12,329,463	10,552,200	13,655,597	36,537,260
39					
40	Unregulated Loss Companies of Three Year Period				
41	Eliminations (Inter-Company profit on Columbia Transmission)	-	-	-	-
42	EnergyUSA Inc. (MA)	-	-	-	-
43	Indianapolis Water Company	-	-	-	-
44	EnergyUSA Inc. (IN)	(310,721)	-	-	(310,721)
45	Lake Erie Land Company	(14,287,137)	(257,611)	(2,995,266)	(17,540,014)
46	NISource Capital Markets, Inc.	(3,140,940)	-	-	(3,140,940)
47	IWC Resources Corp.	-	-	-	-
48	NISource Finance Corp.	(20,041,432)	-	-	(20,041,432)
49	NISource Development Company, Inc.	(3,662,575)	(5,225,967)	5,027,205	(3,861,337)
50	Primary Energy, Inc.	-	-	-	-
51	EnergyUSA-TPC Corp.	(385,918)	-	-	(385,918)
52	NISource Inc.	(282,736,668)	(138,670,447)	(95,197,459)	(516,604,574)
53	NIPSCO Accounts Receivables Corporation	865,531	(312,040)	(1,106,602)	(553,111)
54	Columbia Gas of Ohio Receivables Corp.	441,539	(346,523)	(586,783)	(491,767)
55	NISource Corporate Group	-	-	-	-
56	NGD Holding Company	-	-	-	-
57	Subtotal: Loss Unregulated Companies	(323,258,321)	(144,812,588)	(94,858,905)	(562,929,814)
58					
59					
60					
61					
62					
63	NISource Inc and Subsidiaries				
64	Calculation of Consolidated Tax Savings for Columbia Gas of Pennsylvania				
65	Modified Effective Tax Rate Method Based on Three Year Average				
66					
67	Company	2017 Taxable Income 1/	2018 Taxable Income 1/	2019 Taxable Income 1/	2017-2019 Taxable Income
68					
69					
70	NISource Inc. Interest on Columbia Stock Purchase Allocated Under SEC Or	-	-	-	-
71	Subtotal: Interest on Columbia Stock Purchase	-	-	-	-
72					
73	Other Companies Sold or In Process of Being Sold or Inactive				
74	NDC Douglas Properties, Inc.	856	-	-	856 2/
75	Columbia Energy Services Corporation	-	-	-	- 3/
76	Service Protection Group LLC	-	-	-	- 4/
77	NISource Retail Services, Inc.	213,655	-	-	213,655 3/
78	Crossroads Pipeline Company	-	-	-	- 4/
79	Columbia Gulf Transmission Company	-	-	-	- 4/
80	Columbia Hardy Corp.	-	-	-	- 4/
81	Columbia Energy Group	-	-	-	- 4/
82	CNS Microwave, Inc.	-	-	-	- 4/
83	Columbia Remainder Corporation	-	-	-	- 4/
84	Bay State Gas Company	(57,116,311)	(848,882,706)	216,756,920	(689,242,097)
85	Subtotal: Unregulated Companies Sold or In Process of Being Sold/o	(56,901,800)	(848,882,706)	216,756,920	(689,027,586)
86					
87	Total Consolidated Taxable Income	(880,018,843)	(1,023,962,157)	358,303,528	(1,545,677,472)
88					
89	1/ Separate Return amount includes non-deductible Charitable Contributions as a result of Consolidated Net Operating Loss				
90	2/ Company in process of being sold. An investment in real estate for benefit of low income housing credits				
91	3/ Company sold in 2013				
92	4/ Company no longer part of the consolidated group pursuant to a spin off in 2015.				
93					
94	Consolidated Income Companies Taxable Income	17,669,133	333,405,094	458,227,591	
95	Consolidated Loss Companies Taxable Loss	(897,687,976)	(1,357,367,251)	(99,924,063)	
96					
97		(880,018,843)	(1,023,962,157)	358,303,528	
98					
99	Adjustment for Excluded Regulated Utility Losses	300,851,309	1,212,554,663	0	
100					
101	Adjusted Consolidated Loss Companies Taxable Loss	(596,836,667)	(144,812,588)	(99,924,063)	

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

51. Submit a schedule showing for the last five years the income tax refunds, plus interest (net of taxes), received from the federal government due to prior years' claims.

Response: See Exhibit No. 7, Page No. 6.

52. Provide detailed computations showing the deferred income taxes derived by using accelerated tax depreciation applicable to post-1969 utility property increases productive capacity and ADR rates on property. (Separate between state and federal; also, rate used).
- a. State whether tax depreciation is based on all rate base items claimed as of the end of the test year, and whether it is the annual tax depreciation at the end of the test year.
 - b. Reconcile any difference between the deferred tax balance, as shown as a reduction to measures of value (rate base), and the deferred tax balance as shown on the balance sheet.

Response: See Exhibit No. 7, Page 7, showing the computation of deferred income taxes. See also Attachments 1 and 2, reports showing by vintage the estimated tax depreciation used for the 2019 and 2020 accrual for the twelve months ended November 30, 2020. Additional detailed reports are too voluminous to attach.

- a. Tax depreciation is based on all rate base items claimed at the end of the test year. Federal tax depreciation (including Bonus for years prior to 2018) of \$67,794,608 is the annual tax depreciation at the end of the test year.
- b. See Exhibit No. 7, Page 7.

COLUMBIA GAS OF PENNSYLVANIA, INC.
IRS REFUNDS RECEIVED IN PAST FIVE YEARS
PRIOR YEARS' CLAIMS

Tax Year Ending	Year Settled	Tax	Interest	Total
12/31/15				
12/31/16				
12/31/17				
12/31/18				
12/31/19				
		<u>-</u>	<u>-</u>	<u>-</u>
		<u>-</u>	<u>-</u>	<u>-</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.

Tax & Book Depreciation Expense

Exhibit No. 7
 Witness: J. Harding
 Page 7 of 47

	2019			Fiscal Year Ending 11/2019			
	Basis	Composite Depr Rate	Tax Depr	Book Depr	Difference	Tax Rate	Deferred Taxes
Class Life ADR (Pre-1971)	87,546,919	0.000000004	0	1,437,630	(1,437,630)		N/A
Book Depr. On Basis Diff				22,411,690	(22,411,690)		N/A
ADR	84,327,594	0.000003964	334	N/A	334	0.21	70
ACRS	72,836,942	0.000047349	3,449	N/A	3,449	0.21	724
MACRS	798,488,581	0.066739993	53,291,123	N/A	53,291,123	0.21	11,191,136
Other-MAPCO	-	-	-	N/A	-	0.21	-
Book Depr. Normalized	-	-	-	43,213,457	(43,213,457)	0.21	(9,074,826)
Total	1,043,200,037		53,294,906	67,062,777	10,081,449	0.21	2,117,104
		Allocation	0.0833				
		Tax Depreciation	4,441,242				
				Less: 11 mos.	(9,241,328)		(1,940,679)
					840,121	0.21	176,425
	2020			Fiscal Year Ending 11/2020			
	Basis	Composite Depr Rate	Tax Depr	Book Depr	Difference	Tax Rate	Deferred Taxes
Class Life ADR (Pre-1971)	87,181,317	0.000000001	0	1,582,649	(1,582,649)		N/A
Book Depr. On Basis Diff				20,354,794	(20,354,794)		N/A
ADR	84,327,594	0.000003964	334	N/A	334	0.21	70
ACRS	70,549,960	0.000048884	3,449	N/A	3,449	0.21	724
MACRS	1,036,094,084	0.066701452	69,108,980	N/A	69,108,980	0.21	14,512,886
Other-MAPCO	-	-	-	N/A	-	0.21	-
Book Depr. Normalized	-	-	-	52,836,944	(52,836,944)	0.21	(11,095,758)
Total	1,278,152,955		69,112,763	74,774,387	16,275,819	0.21	3,417,922
		Allocation	0.9167				
		Tax Depreciation	63,353,366				
				Less: 1 mo.	(1,356,318)		(284,827)
					14,919,500	0.21	3,133,095
				Pro Forma Adjustments	(19,172,379)	0.21	(4,026,200)
Total Test Year Tax Depreciation			67,794,608	Total Test Year	(3,412,758)	0.21	(716,679)

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

53. Submit a schedule showing a breakdown of the deferred income taxes by state and federal per books, pro-forma existing rates, and under proposed rates.

Response:

See Exhibit No. 7, Page 9.

COLUMBIA GAS OF PENNSYLVANIA, INC.

CALCULATION OF DEFERRED TAX BALANCES

Sub Account	Book Balances 11/30/20	Pro-Forma Adjustments Existing Rates	Pro-Forma Balance 11/30/20	Pro-Forma Adjustments Proposed Rates	Pro-Forma Balance 11/30/20
<u>Account 190 - Deferred Income Taxes</u>					
19005000	Tax Inventory Adj - Fed	6,130,528	-	6,130,528	6,130,528
19006000	Tax Inventory Adj - St	3,240,062	-	3,240,062	3,240,062
19005000	Capitalized Inventory - Fed	960,030	-	960,030	960,030
19006000	Capitalized Inventory - St	507,388	-	507,388	507,388
19005000	Customer Advances - Fed	726,546	-	726,546	726,546
19006000	Customer Advances - St	383,989	-	383,989	383,989
19005000	Federal Net Operating Loss	34,637,164	-	34,637,164	34,637,164
19005000	Deficient Deferred Taxes 190- NOL, Inventory & Customer Advances	27,899,349	-	27,899,349	27,899,349
	Subtotal Rate Base	74,485,056	-	74,485,056	74,485,056
19005400	SFAS 109 Offset - Fed	40,118,863	(40,118,863)	-	-
19006400	SFAS 109 Offset - St	12,430,595	(12,430,595)	-	-
19006000	Pennsylvania Net Operating Loss	10,501,100	(10,501,100)	-	-
	All Other Deferred 190 Income Taxes	(18,308,655)	18,308,655	-	-
	Subtotal Non Rate Base	44,741,903	(44,741,903)	-	-
	Total Account 190	119,226,959	(44,741,903)	74,485,056	74,485,056
<u>Account 255 - Deferred Investment Tax Credits</u>					
	Investment Tax Credits (1962-1969)	-	-	-	-
	Job Development Tax Credits (1971-1988)	(1,267,615)	1,267,615	-	-
	Total Account 255 (Non Rate Base)	(1,267,615)	1,267,615	-	-
<u>Account 282 - Deferred Income Taxes-Depreciation</u>					
Various	Excess Accelerated Tax Depreciation - Fed	(470,427,289)	-	(470,427,289)	(470,427,289)
	Subtotal Rate Base	(470,427,289)	-	(470,427,289)	(470,427,289)
28205000	SFAS 109 Offset - Fed	56,650,439	(56,650,439)	-	-
28206000	SFAS 109 Offset - St	(112,701,936)	112,701,936	-	-
28205000	Non-Utility Book Gain on Sale Property - Fed	-	-	-	-
	Subtotal Non Rate Base	(56,051,497)	56,051,497	-	-
	Total Account 282	(526,478,786)	56,051,497	(470,427,289)	(470,427,289)
28305000	Pennsylvania Net Operating Loss: Federal Offset	(2,205,231)	2,205,231	-	-
	All Other Deferred 283 Income Taxes	(4,849,878)	4,849,878	-	-
	Subtotal Non Rate Base	(7,055,109)	7,055,109	-	-
	Total Account 283	(7,055,109)	7,055,109	-	-
	Total Accumulated Deferred Taxes	(415,574,551)	19,632,318	(395,942,233)	(395,942,233)

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

54. Submit a schedule showing a breakdown of accumulated investment tax credits (3 percent, 4 percent, 7 percent, 10 percent and 11 percent), together with details of methods used to write-off the unamortized balances.

Response: See Exhibit No. 7, Page 11.

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCUMULATED UNAMORTIZED INVESTMENT TAX CREDIT
AS OF NOVEMBER 30, 2020

<u>Line No.</u>	<u>Vintage Year</u>	<u>J.D.C. 4%</u>	<u>1/</u>	<u>J.D.C. 10%</u>	<u>1/</u>	<u>J.D.C. 8%</u>	<u>1/</u>	<u>Amortizable Credit</u>	<u>Amortization</u>
	(1)	(2)		(3)		(4)		(5)	
	\$	\$		\$		\$		\$	
1	1971	0		0		0		0	-
2	1973	6,714		0		0		6,714	4,249
3	1974	34,797		0		0		34,797	5,292
4	1978	1		14,283		0		14,284	24,480
5	1979	0		0		0		0	17,434
6	1980	0		370,009		0		370,009	34,968
7	1981	0		152,583		0		152,583	42,588
8	1982	0		242,622		0		242,622	43,452
9	1983	0		26,288		159,940		186,228	33,348
10	1984	0		596		121,332		121,928	34,020
11	1985	0		0		101,075		101,075	39,132
12	1986	0		37,375		0		37,375	8,148
13	Total	<u>41,512</u>		<u>843,756</u>		<u>382,347</u>		<u>1,267,615</u>	<u>287,111</u>

1/ The Job Development Credit balances are amortized to income over the weighted average book service life of the property which generated the credit. The average life is computed separately for each vintage year.

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

55. Submit a schedule showing the adjustments for taxable net income per books (including below-the-line items) and pro forma under existing rates together with an explanation of any difference between the adjustments. Indicate charitable donations and contributions in the tax calculation for rate making purpose.

Response:

See Exhibit No. 7, Pages 13 & 14.

COLUMBIA GAS OF PENNSYLVANIA, INC.

**RECONCILIATION OF TAXABLE NET INCOME PER BOOKS
AND TAXABLE NET INCOME PRO FORMA TEST YEAR BASE RATES
TWELVE MONTHS ENDED NOVEMBER 30, 2020**

Line No.	Description	Per Books (1)	Pro Forma Reference (2)	Adjustments @ Present Rates (3)	Pro Forma Test Year @ Present Rates (4)	Adjustments @ Proposed Rates	Pro Forma Test Year @ Proposed Rates
		\$		\$	\$		
1	Operating Revenues	552,327,378	(1)	95,621,718	647,949,096	(13,571,808)	634,377,288
2	Net Gas Purchased for Resale	(132,603,556)	(1)	(24,321,016)	(156,924,572)	0	(156,924,572)
3	Operation and Maintenance Expense	(183,197,647)	(2)	(7,137,218)	(190,334,865)	175,284	(190,159,581)
4	Depreciation & Amortization Expense	(78,439,117)	(3)	(4,955,331)	(83,394,448)	0	(83,394,448)
5	Taxes Other Than Income Taxes	(3,362,482)	(4)	(255,896)	(3,618,378)	0	(3,618,378)
6	Net Operating Income Before Income Taxes	154,724,576		58,952,257	213,676,833	(13,396,524)	200,280,309
7	Investment in Subsidiary Income	0		0	0	0	0
8	Non-Utility Income - Net	0	(5)	0	0	0	0
9	Interest Charges	0	(5)	0	0	0	0
10	Net Income Before Income Taxes	154,724,576		58,952,257	213,676,833	(13,396,524)	200,280,309
11	Less: Investment in Subsidiary Income	0		0	0	0	0
12	Net Income Before Income Taxes	154,724,576		58,952,257	213,676,833	(13,396,524)	200,280,309
13	Statutory Adjustments (Page 14, Line 31)	(50,466,421)		(38,413,265)	(88,879,686)	0	(88,879,686)
14	Deductible State Income Tax	(2,364,188)		(3,533,598)	(5,897,786)	802,987	(5,094,799)
15	Taxable Income	101,893,967		17,005,394	118,899,361	(12,593,537)	106,305,824
16	Federal Income Tax	21,397,733		3,571,133	24,968,866	(2,644,643)	22,324,223
17	Federal Net Operating Loss Carryforward	(636,026)		636,026	0	0	0
18	Prior Year Adjustments	0	(9)	0	0	0	0
19	Job Development Credit Allowance	0		0	0	0	0
20	Federal Income Tax	20,761,707		4,207,159	24,968,866	(2,644,643)	22,324,223
21	Deferred Federal Income Tax - Net	12,369,730		(479,343)	11,890,387	0	11,890,387
22	Other Direct Federal Deferred Adjustments	(9,115,288)	(9)	9,115,288	0	0	0
23	Amortization of Tax Refund	0		0	0	0	0
24	Federal Net Operating Loss Carryforward	636,026		(636,026)	0	0	0
25	Flow Back of Excess Deferred Income Taxes	(3,461,677)	(10)	0	(3,461,677)	0	(3,461,677)
26	Effect of CNIT Deferred Tax	(73,559)	(11)	51,812	(21,747)	0	(21,747)
27	Total Federal Income Tax	21,116,939		12,258,890	33,375,829	(2,644,643)	30,731,186
28	Deferral of Current Job Development Credit	0		0	0	0	0
29	Amortization of Investment Tax Credits	(287,111)		0	(287,111)	0	(287,111)
30	Net Federal Income Tax Expense	20,829,828		12,258,890	33,088,718	(2,644,643)	30,444,075
31	State Income Tax Expense	2,467,747		3,533,596	6,001,343	(802,987)	5,198,356
32	Total Income Tax Expense	23,297,575		15,792,486	39,090,061	(3,447,630)	35,642,431
33	NET INCOME	<u>131,427,001</u>		<u>43,159,771</u>	<u>174,586,772</u>	<u>(9,948,894)</u>	<u>164,637,878</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.

**RECONCILIATION OF TAXABLE NET INCOME PER BOOKS
AND TAXABLE NET INCOME PRO FORMA TEST YEAR BASE RATES
TWELVE MONTHS ENDED NOVEMBER 30, 2020**

Line No.	Description	Per	Pro Forma Adjustments		Pro Forma
		Books	Reference	Amount	at Test Year
		(1)	(2)	(3)	Base Rates
		\$		\$	(4=1+3)
					\$
1	<u>Flow Through Adjustments</u>				
2	Book/Tax Depreciation, Net	5,488,141		-	5,488,141
3	Book Depreciation- Net Salvage Amts	5,652,740		-	5,652,740
4	Property Removal Costs - ADR Property	(573,180)		-	(573,180)
5	Loss on Retirement - ACRS/MACRS Removal Costs	(3,015,384)		-	(3,015,384)
6	Interest on Debt	-	(7)	(40,323,744)	(40,323,744)
7	Political Action Expenses (Sec. 162E)	136,351	(6)	(136,351)	-
8	Employee Business Expense Disallowance	380,467		-	380,467
9	Employee Stock Purchase Plan	41,808		-	41,808
10	NCS Allocation- Perm Taxes	19,010		-	19,010
11	Parking	71,335		-	71,335
12	AFUDC Equity	(377,053)	(6)	377,053	-
13	Penalties	612,819	(8)	(612,819)	-
14	Total Flow Through Adjustments	8,437,054		(40,695,861)	(32,258,807)
15	<u>Deferred Adjustments</u>				
16	Excess Tax Depreciation Over Book	3,412,758		-	3,412,758
17	Repairs on Gas Pipeline	(57,832,390)		-	(57,832,390)
18	Bonus Depreciation	-		-	-
19	Sec 263A Mixed Service Costs	(1,322,359)		-	(1,322,359)
20	Avoided Cost Interest	(23,702)		-	(23,702)
21	Loss on Retirement - ACRS/MACRS Property Basis	(3,126,896)		-	(3,126,896)
22	Builder Incentives Capitalized	(13,441)		-	(13,441)
23	Stored Gas Losses	1,579		-	1,579
24	Contributions In Aid of Construction	3,320,199		-	3,320,199
25	Tax Inventory Adj	(488,495)		-	(488,495)
26	Capitalized Inventory	(166,676)		-	(166,676)
27	Customer Advances	(381,456)		-	(381,456)
28	Deferred Compensation	(3,008,448)		3,008,448	-
29	Off System Sales	3,291,108		(3,291,108)	-
30	Customer Assistance Plan (Cap)	646,276		(646,276)	-
31	Uncollectible	5,616,258		(5,616,258)	-
32	Rate Reserve	(10,403,910)		10,403,910	-
33	Accrued Interest Income	16,784		(16,784)	-
34	Other	1,559,336		(1,559,336)	-
35	Total Deferred Adjustments	(58,903,475)		2,282,596	(56,620,879)
36	Total Statutory Adjustments	(50,466,421)		(38,413,265)	(88,879,686)

() Denotes Credit

COLUMBIA GAS OF PENNSYLVANIA, INC

DESCRIPTION OF PRO FORMA ADJUSTMENTS
AS REFERENCED ON PAGES 13 AND 14, HEREIN

- (1) See Exhibit No. 3.
- (2) See Exhibit No. 4.
- (3) See Exhibit No. 5.
- (4) This adjustment represents the annualized payroll tax adjustment for FICA and property tax related to stored gas. See Exhibit No. 6, Schedule 2, Page 2, Lines 1 and 3.
- (5) This adjustment has been eliminated because it is a non-operating income item and, therefore, not applicable for rate purposes. See adjustment (7) for interest expense imputed for tax calculation purposes.
- (6) This statutory adjustment has been eliminated as inappropriate for recovery from the Pennsylvania ratepayer.
- (7) Interest has been included as a deduction in calculating tax expense to reflect the imputed level of interest based on the Company's debt/capitalization ratio and embedded cost of debt included in rate of return claim. See Exhibit No. 7, page 1, for details.

COLUMBIA GAS OF PENNSYLVANIA, INC

DESCRIPTION OF PRO FORMA ADJUSTMENTS
AS REFERENCED ON PAGES 13 AND 14, HEREIN

- (8) Adjusted as inappropriate to the rate proceeding.
- (9) To recognize flow back of excess deferred income taxes related to accelerated depreciation using the “average rate assumption” method for the test year.
- (10) Adjustment reflects the pro forma level of deferred state income taxes.

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

56. Submit detailed calculations supporting taxable income before state and federal income taxes where the income tax is subject to allocation due to operations in another state, or due to operation of other taxable utility or non-utility business, or by operating divisions or areas.

Response:

Columbia Gas of Pennsylvania has a proprietary interest in gas stored underground in other states. The Company also makes off-system gas sales that in some instances are allocated for tax purposes to states other than Pennsylvania.

The ownership of the stored gas and the off-system gas sales noted above have created certain tax liabilities in the state jurisdictions where the gas is located or the sale allocated. This, in turn, has created a decrease in taxable income apportioned to the Commonwealth of Pennsylvania for state income tax calculations. The overall impact on the company's state income tax effective rate is not material compared to the 9.99% Pennsylvania rate that is included in base rates.

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

57. Submit detailed calculations showing the derivation of deferred income taxes for amortization of repair allowance if such policy is followed.

Response: Not applicable. The company has not elected the ADR repair allowance for federal income tax purposes.

58. Furnish a breakdown of major items comprising prepaid and deferred income tax charges and other deferred income tax credits and reserves by accounting areas.

Response: Please refer to Exhibit No. 7, Pages 13, 14, 19 and 20 for a complete breakdown of the income tax calculation including deferred tax charges and credits.

59. Provide details of the Federal Surtax Credit allocated to the Pennsylvania jurisdictional area, if applicable.

Response: Not applicable.

COLUMBIA GAS OF PENNSYLVANIA, INC.

**CALCULATION OF FEDERAL AND STATE INCOME TAXES
 PRO FORMA AT TEST YEAR BASE RATES AND PROPOSED BASE RATES
TWELVE MONTHS ENDED NOVEMBER 30, 2020**

Line No.	Description	Pro Forma	Pro Forma
		At Test Year Base Rates	At Proposed Base Rates
		(1)	(2)
		\$	\$
1	Operating Income Before Income Taxes (Exhibit No. 2, Sch 3, Pg 3)	213,676,833	200,280,309
2	Pennsylvania Corporate Net Income Tax Deductible (P20, L8)	<u>(5,897,786)</u>	<u>(5,094,799)</u>
3	<u>Statutory Adjustments</u>		
4	<u>Flow-Through Adjustments</u>		
5	Book/ Tax Depreciation, Net	5,488,141	5,488,141
6	Book Depreciation- Net Salvage Amts	5,652,740	5,652,740
7	Property Removal Costs - ADR	(573,180)	(573,180)
8	Loss on Retirement - ACRS/MACRS Removal Costs	(3,015,384)	(3,015,384)
9	Interest on Debt (1)	(40,323,744)	(40,323,744)
10	Employee Business Expense Disallowance	380,467	380,467
11	AFUDC Equity	0	0
12	Employee Stock Purchase Plan	41,808	41,808
13	NCS Allocation- Perm Taxes	19,010	19,010
14	Parking	<u>71,335</u>	<u>71,335</u>
15	Total Flow Through Adjustments	(32,258,807)	(32,258,807)
16	<u>Deferred Adjustments</u>		
17	Excess Tax Depreciation Over Book	3,412,758	3,412,758
18	Repairs on Gas Pipeline	(57,832,390)	(57,832,390)
19	Bonus Depreciation	0	0
20	Sec 263A Mixed Service Costs	(1,322,359)	(1,322,359)
21	Loss On Retirement - ACRS/MACRS Property Basis	(3,126,896)	(3,126,896)
22	Avoided Cost Interest	(23,702)	(23,702)
23	Builder Incentives Capitalized	(13,441)	(13,441)
24	Stored Gas Losses	1,579	1,579
25	Contributions In Aid of Construction	3,320,199	3,320,199
26	Tax Inventory Adj	(488,495)	(488,495)
27	Capitalized Inventory	(166,676)	(166,676)
28	Customer Advances	<u>(381,456)</u>	<u>(381,456)</u>
29	Total Deferred Adjustments	(56,620,879)	(56,620,879)
30	Taxable Income (Lines 1,2,15,29)	118,899,361	106,305,824
31	Federal Income Tax Payable @ 21%	24,968,866	22,324,223
32	Deferred Income Taxes (Line 29 @ 21%)	11,890,385	11,890,385
33	Amortization of Tax Refund	0	0
34	Flow Back Of Excess Deferred Taxes	(3,461,677)	(3,461,677)
35	Effect of CNIT Deferred Tax on FIT (P20, Lines 9-12 @21%)	<u>(21,747)</u>	<u>(21,747)</u>
36	Net Federal Income Tax Expense (Lines 31-35)	33,375,827	30,731,184
37	State Income Tax Expense (P20, L13)	<u>6,001,345</u>	<u>5,198,358</u>
38	Total Income Tax Expense	<u>39,377,172</u>	<u>35,929,542</u>

(1) Interest expense for rate purposes has been calculated as follows: 1.930% weighted cost of short-term and long-term debt x original cost rate base of \$2,089,313,166 = \$40,323,744

COLUMBIA GAS OF PENNSYLVANIA, INC.

**CALCULATION OF FEDERAL AND STATE INCOME TAXES
 PRO FORMA AT TEST YEAR BASE RATES AND PROPOSED BASE RATES
TWELVE MONTHS ENDED NOVEMBER 30, 2020**

Line No.	Description	Pro Forma At Test Year Base Rates	Pro Forma At Proposed Base Rates
		(1)	(2)
		\$	\$
1	<u>Calculation of Pennsylvania Corporate Net Income Tax</u>		
2	Operating Income Before Income Taxes (Page 19, Line 1)	213,676,833	200,280,309
3	Statutory Adjustments (Page 19, Lines 15 & 29)	(88,879,686)	(88,879,686)
4	Pennsylvania Bonus Depreciation Adj	<u>(26,402,313)</u>	<u>(26,402,313)</u>
5	CNIT Taxable Income	98,394,834	84,998,310
6	Net Operating Loss Deduction	39,357,934	33,999,324
7	PA Taxable Income	59,036,900	50,998,986
8	CNIT Payable at Base Rate of 9.99%	5,897,786	5,094,799
9	Deferred Tax On Net Operating Loss Deduction (amounts from above @ 9.99%)	0	0
10	Deferred Tax on Inventory Adj (\$6,4094,233 @ 9.99%)	48,801	48,801
11	Deferred Tax on Capitalized Inventory (\$157,677 @ 9.99%)	16,651	16,651
12	Deferred Tax on Customer Advances (\$784,275 @ 9.99%)	<u>38,107</u>	<u>38,107</u>
13	Pennsylvania Corporate Income Tax Expense	<u>6,001,345</u>	<u>5,198,358</u>

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

60. Explain the reason for the use of cost of removal of any retired plant figures in the income tax calculations.

Response:

For retired plant which was originally installed prior to 1971, the cost of removal has been used to make a reducing adjustment to the reserve for depreciation for tax reporting purposes under the mass asset accounting provisions of the Internal Revenue Code. For plant installed after vintage year 1970, cost of removal has been deducted as a current expense as required under the Asset Depreciation Range and the Accelerated Cost Recovery System (ACRS) regulations, including the modified ACRS prescribed by the Tax Reform Act of 1986. The income tax effect of the deductible removal costs has been flowed through for book purposes in accordance with the final opinion and order in Case No. R-832493.

61. Submit the corresponding data applicable to Pennsylvania Corporate Income Tax deferment.
- a. Show the amounts of straight line tax depreciation and accelerated tax depreciation, the difference between which gave rise to the normalizing tax charged back to the test year operating statement.
 - b. Show normalization for both Federal and State Income Taxes.
 - c. Show tax rates used to calculate tax deferment amount.

Response:

See Exhibit No. 7, Page 7. This response to Regulation 53.53 III A. 52 details the deferred federal income tax and tax rate used to calculate the normalization of accelerated depreciation. State accelerated depreciation is not normalized.

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

62. Provide the accelerated tax depreciation and the book depreciation used to calculate test year deferrals in amounts segregated as follows: For:
- a. Property installed prior to 1970.
 - b. Property installed subsequent to 1969 (indicate increasing capacity additions and non increasing capacity additions).

Response:

- a. No tax deferrals have been booked, or included in the filing, for property installed prior to 1970.
 - b. See Exhibit No.7, Page 7. This response to Regulation 53.53 III A,52 details the tax and book depreciation on property installed subsequent to 1969.
63. State whether all tax savings due to accelerated depreciation on property installed prior to 1970 have been passed through to income. (If not, explain).

Response:

All tax savings due to accelerated depreciation on property installed prior to 1970 have been passed through to income.

64. Show any income tax loss/gain carryovers from previous year that may effect test year income taxes or future year income taxes. Show loss/gain carryovers by years of origin and amounts remaining by years at the end of the test year.

Response:

The Company incurred a tax loss for federal purposes in tax years 2008, 2010, 2011, 2012, 2013, 2016 and 2017. Some of the loss for federal purposes offset income from prior years and some has been carried forward. For state income purposes losses were incurred in tax years 2008, 2010 and 2011, see Exhibit No.7, Page 23.

		ORIGINAL NOL INCURRED IN:												FTY	FPFTY	
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Original NOL Amount (Enter as positive amt)		144,975,996		3,663,502	69,764,304											
Year Utilized (Enter amt used each year as negative)																
	2009		(3,282,934)													
	2010			-												
	2011				-											
	2012					(3,000,000)										
	2013						(8,917,559)									
	2014							(17,621,904)								
	2015								(20,264,264)							
	2016									(13,096,855)						
	2017										(8,070,124)					
	2018											(26,495,177)				
	2019												(12,265,535)			
	2020													(273,352)		
	2021														(26,366,062)	
	2022															(46,795,696)
Cumulative NOL used:		-	(3,282,934)	(3,282,934)	(3,282,934)	(6,282,934)	(15,200,493)	(32,822,397)	(53,086,661)	(66,183,516)	(74,253,640)	(100,748,817)	(113,014,352)	(113,287,704)	(139,653,766)	(186,449,462)
NOL Carryforward		144,975,996	141,693,062	145,356,564	215,120,868	212,120,868	203,203,309	185,581,405	165,317,141	152,220,286	144,150,162	117,654,985	105,389,450	105,116,098	78,750,036	31,954,340

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

65. State whether the company eliminates any tax savings by the payment of actual interest on construction work in progress not in rate base claim. If response is affirmative:
- a. Set forth amount of construction claimed in the tax savings reduction. Explain the basis for this amount.
 - b. Explain the manner in which the debt portion of this construction is determined for purposes of the deferral calculation.
 - c. State the interest rate used to calculate interest on this construction debt portion, and the manner in which it is derived.
 - d. Provide details of calculation to determine tax savings reduction. State whether state taxes are increased to reflect the construction interest elimination.

Response:

The Company does not eliminate tax savings by payment of actual interest on CWIP. The Company capitalizes interest under section 263A of the Internal Revenue Code for tax purposes. This may result in more or less interest capitalized compared to the books. Deferred income taxes are recorded.

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

66. Provide a detailed analysis of Taxes Accrued per books as of the test year date. Also supply the basis for the accrual and the amount of taxes accrued monthly.

Response:

Refer to Exhibit No.7, Pages 26 through 28.

COLUMBIA GAS OF PENNSYLVANIA, INC.
ACCRUED TAXES AND BASIS FOR ACCRUALS
AS OF NOVEMBER 30, 2020

<u>Taxes Accrued Balance</u>	<u>Amount</u> \$	<u>Basis for Accrued Tax</u>
Federal Income Tax	13,069,241	Tax is based on the taxable net income generated from Company operations as defined by and reported to the Internal Revenue Service. The tax rate at the end of the historic test year is 21%. The monthly accrual is based on the taxable income or loss achieved from that month's operations.
Social Security Taxes (FICA)	70,482	Social Security tax for 2019 is based on the first \$132,900 of taxable wages paid to an employee at a rate of 6.20% (for 2020, \$137,700 wage base, and rate of 6.20%). The wage base for the 1.45% Medicare tax was applied to total taxable wages.
Federal Unemployment Insurance (FUTA)	(14,701)	Tax is based on the first \$7,000 of wages paid to an employee at a rate of 6.0%. A credit is allowed for state unemployment taxes paid for the first 5.4%, thus making the effective federal rate .8%. Taxes are accrued monthly based on taxable wages paid.
Pennsylvania Corporate Net Income Tax	(1,044,436)	Tax is based on the taxable net income as defined by the Federal Income Tax Code before the deduction for Pennsylvania State Income Taxes. To this taxable income, adjustments are made as provided by the Commonwealth of Pennsylvania Tax Code. The tax rate is 9.99% of taxable income. The monthly accrual is based on the taxable income or loss achieved from that month's operations.
Pennsylvania PURTA (Public Utility Realty Tax Act), local property tax and WV stored gas property tax	318,578	PURTA is based on the market value of public utility land, buildings, and other structures. One-twelfth (1/12) of the total amount of estimated annual PURTA plus local property tax is amortized to the property tax expense. WV stored gas property tax is based on the assessed value per the property tax return. One-twelfth (1/12) of the total amount of estimated WV stored gas property tax is expensed per month.

COLUMBIA GAS OF PENNSYLVANIA, INC.
ACCRUED TAXES AND BASIS FOR ACCRUALS
AS OF NOVEMBER 30, 2020

<u>Taxes Accrued Balance</u>	<u>Amount</u>	<u>Basis for Accrued Tax</u>
	\$	
Federal Corporate Net Income Tax Prior Years' Adjustment Non-Current	-	Federal tax accrual for prior year returns due to adjustments to the return as filed. Amounts are settled with IRS during federal income tax audits.
Pennsylvania Corporate Net Income Tax Prior Years' Adjustment Non-Current	-	State tax accrual for prior year returns due to adjustments to the return as filed. Amounts are settled with the state after the federal return is settled.
Pennsylvania Unemployment Compensation Tax (SUTA)	-	Tax is based on the first \$10,000 of wages paid to an employee in a calendar year. Taxes are accrued at various rates depending upon experience. The monthly accrual is based on payroll data for the period.
Pennsylvania Sales and Use tax	1,213,720	Tax is based on the value of a product or service sold at retail for users as defined by the State. The current tax rate is 6% of the sales price. Monthly accrual is based on the analysis of the Company's actual purchases. Quarterly accrual for current sales tax audit.
License and Franchise and Other Local Taxes	-	The Company pays miscellaneous local taxes such as franchise and license fees as assessed by local governments. The accrual is made for these taxes when the taxes are paid.
TOTAL ACCRUED TAXES	<u><u>13,612,884</u></u>	

COLUMBIA GAS OF PENNSYLVANIA, INC.
 MONTHLY TAX ACCRUALS
 TWELVE MONTHS ENDED NOVEMBER 30, 2020

Line No.	Month	Federal Taxes				Pennsylvania State and Other Taxes							
		Income Tax		Social Security FICA (3) \$	Unemployment FUTA (4) \$	Corporate Net Income		Property (7) \$	Capital Stock Tax (8) \$	Unemployment SUTA (9) \$	Sales and Use (10) \$	License & Franchise (11) \$	All Other (12) \$
		Current (1) \$	Prior Years (2) \$			Current (5) \$	Prior Years (6) \$						
1	December-2019	9,129,836	-	244,829	137	1,778,517	-	44,875	-	1,145	33,476	-	0
2	January-2020	4,781,433	-	252,633	17,507	1,439,336	-	35,586	-	109,234	0	-	-
3	February	6,483,262	-	276,321	450	1,995,962	-	35,586	-	(30,814)	-	-	-
4	March	2,084,670	-	167,033	203	580,187	-	39,086	-	1,196	43,065	-	-
5	April	70,469	-	237,535	92	(65,466)	-	36,752	-	532	-	-	-
6	May	(1,302,554)	-	134,500	47	(498,367)	-	36,752	-	202	-	-	-
7	June	(2,280,351)	-	208,135	52	(817,659)	-	36,752	-	258	35,865	-	-
8	July	(2,426,581)	-	231,875	14	(864,538)	-	36,752	-	67	-	-	-
9	August	(2,416,227)	-	193,712	49	(861,220)	-	36,752	-	142	-	-	-
10	September	(2,902,401)	-	218,075	74	(908,235)	-	36,752	-	257	35,865	-	-
11	October	(1,173,213)	-	248,190	66	0	-	36,752	-	356	-	-	-
12	November	2,180,164	-	198,324	74	40,962	-	88,466	-	218	-	-	625
13	TOTAL	<u>12,228,507</u>	<u>0</u>	<u>2,611,162</u>	<u>18,766</u>	<u>1,819,479</u>	<u>0</u>	<u>500,865</u>	<u>0</u>	<u>82,793</u>	<u>148,271</u>	<u>0</u>	<u>625</u>

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

67. For the test year as recorded on test year operating statement:
- a. Supply the amount of federal income taxes actually paid.
 - b. Supply the amount of the federal income tax normalizing charge to tax expense due to excess of accelerated tax depreciation over book depreciation.
 - c. Supply the normalizing tax charge to federal income taxes for the 10% Job Development Credit during test year.
 - d. Provide the amount of the credit of federal income taxes due to the amortization or normalizing yearly debit to the reserve for the 10% Job Development Credit.
 - e. Provide the amount of the credit to federal income taxes for the normalizing of any 3% Investment Tax Credit Reserve that may remain on the utility books.

Response:

- a. The amount of Federal Income Taxes paid during the test year was \$0.
- b. Federal Income Tax expense for the normalization of the excess of accelerated tax depreciation over book depreciation is (\$716,679). See Exhibit No. 7, Page 7.
- c. None.
- d. For the twelve months ended November 30, 2020 the amount of the credit to federal income taxes due to the yearly amortization debit to the reserve for the Job Development Credit (JDC) is \$287,111. (Note: This amortization includes portions of JDC accrued at 4%, 10%, and 8%) on Exhibit No. 7, Page 11.
- e. None.

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

68. Provide the debit and credit in the test year to the Deferred Taxes due to Accelerated Depreciation for federal income tax, and provide the debit and credit for the Job Development Credits (whatever account) for test year.

Response:

DATA FOR 12-MONTH PERIOD ENDED NOVEMBER 30, 2020

Accounting entries per Books for:

a. Accelerated Depreciation Deferred

Dr. 28205000 Deferred Federal Income Tax	\$716,679
Cr. 41111000 Accumulated Deferred Income Taxes	\$716,679

b. Amortization of Job Development Credits

Dr. 25500000 Deferred Investment Tax Credit	\$ 287,111
Cr. 41141000 Deferred Federal Income Tax	\$ 287,111

69. Reconcile all data given in answers to questions on income taxes charged on the test year operating statement with regard to income taxes paid, income taxes charged because of normalization and credits due to yearly write-offs of past years' income tax deferrals, and from normalization of investment tax and development credits. (Both state and federal income taxes.)

Response: Refer to the following schedules which detail the requirements of these items:

<u>Schedule No.</u>	<u>Description</u>
Exhibit No. 7, Pages 19 and 20	Calculation of Income Taxes
Exhibit No. 7, Pages 13 and 14	Reconciliation of Taxable Net Income Per Books and Pro Forma
Exhibit No. 7, Page 29 (question 67a)	Income Taxes Paid

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

70. With respect to determination of income taxes, federal and state:
- a. Show income tax results of the annualizing and normalizing adjustments to the test year record before any rate increase.
 - b. Show income taxes for the annualized and normalized test year.
 - c. Show income tax effect of the rate increase requested.
 - d. Show income taxes for the normalized and annualized test year after application of the full rate increase.

[It is imperative that continuity exists between the income tax calculations as recorded for the test year and the final income tax calculation under proposed rates. If the company has more than one accounting area, then additional separate worksheets must be provided in addition to those for total company.]

Response: See Exhibit No. 2, Page 3 and Exhibit No. 7, Pages 19 and 20, for the income tax results of the various annualization and adjustments made to the historic test year twelve months ended November 30, 2020.

71. In adjusting the test year to an annualized year under present rates, explain any changes that may be due to book or tax depreciation change and to debits and credits to income tax expense due to accelerated depreciation, deferred taxes, job development credits, tax refunds or other items. (The above refers only to the adjustments going from recorded test year to annualized test year).

Response: Refer to Exhibit No. 7, Pages 13, 14, 19 and 20, for explanation of the adjustments to the twelve months ended November 30, 2020.

COLUMBIA GAS OF PENNSYLVANIA, INC

53.53 II. RATE OF RETURN

A. ALL UTILITIES

10. Under Section 1552 of the Internal Revenue Code and Regulations 1.1552-1 thereunder, if applicable, Parent Company, in filing a consolidated income tax return for the group, must choose one of four options by which it must allocate total income tax liability of the group to the participating members to determine each member's tax liability to the federal government. (If this interrogatory is not applicable, so state.)
 - a. State what option has been chosen by the group.
 - b. Provide, in summary form, the amount of tax liability that has been allocated to each of the participating members in the consolidated income tax return.
 - c. Provide a schedule, in summary form, of contributions, which were determined on the basis of separate tax return calculations, made by each of the participating members to the tax liability indicated in the consolidated group tax return. Provide total amounts of actual payments to the tax depository for the tax year, as computed on the basis of separate returns of members.
 - d. Provide annual income tax return for group, and if income tax return shows net operating loss; provide details of amount of net operating loss allocated to the income tax returns of each of the members of the consolidated group.

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 II. RATE OF RETURN
A. ALL UTILITIES

Response:

- a. For Earnings and Profits purposes under Section 1552, the company has not made an election. Under the law, if no election is made the tax liability shall be apportioned among the members of the group in accordance with the ratio which that portion of the consolidated taxable income attributable to each member of the group having taxable income bears to the consolidated taxable income. The company would only use this allocation for earnings and profits purposes.
- b. The amended and restated intercompany income tax allocation agreement approved by state regulatory commissions dictate the terms of the allocation of tax liability which is in effect beginning with the Historic Test Year. Under the agreement each company is allocated tax based on a standalone return tax liability. Attached is the companies' tax sharing agreement (Exhibit No. 7, pages 34 - 46) which was revised effective March 27, 2020, as approved by the Commission in Docket No. G-2020-3019409. In 2016, Act 40 was passed which eliminated the consolidated tax savings adjustment. Please see schedule for the participating members updated for requirements under Section 1301.1 in Exhibit No. 7, Pages 2 - 4.
- c. In 2016, Act 40 was passed which eliminated the consolidated tax savings adjustment. Please see schedule for the participating members updated for requirements under Section 1301.1 in Exhibit No. 7, Pages 2 - 4 discussed in b, above.
- d. The income tax return(s) for 2017, 2018 and 2019 were provided with response to SDR-GASRR-055.

March 27, 2020

NISOURCE INC., AND SUBSIDIARY COMPANIES

AMENDED AND RESTATED

INTERCOMPANY INCOME TAX ALLOCATION AGREEMENT

WHEREAS, NiSource Inc., a corporation organized under the laws of the State of Delaware (“NiSource”) and a holding company under the Public Utility Holding Company Act of 2005 (“Act”), together with its subsidiary companies, direct and indirect, listed as parties hereto in Exhibit A, comprise the members of the NiSource consolidated group which will join annually in the filing of a consolidated U.S. federal income tax return, and it is now the intention of NiSource and its subsidiaries, direct and indirect, to enter into an agreement for the allocation of current U.S. federal income taxes; and

WHEREAS, certain members of the Consolidated Group (as defined below) will join annually in the filing of certain consolidated state income tax returns (to the extent permitted or required under applicable state income tax laws), and it is now the intention of the Consolidated Group to enter into an agreement for the allocation of current state income taxes; and

WHEREAS, the members of the Consolidated Group as of September 30, 2002 entered into that Intercompany Income Tax Allocation Agreement dated September 30, 2002, for the allocation of U.S. federal income taxes (the “2002 Agreement”); and

WHEREAS, NiSource entered into that Separation and Distribution Agreement with Columbia Pipeline Group, Inc., dated as of June 30, 2015; and

WHEREAS, the members of the Consolidated Group as of April 7, 2016 entered into that Amended and Restated Intercompany Income Tax Allocation Agreement dated April 7, 2016, for the allocation of U.S. federal income taxes and the members of the Consolidated Group as of August 17, 2016 ratified the First Amendment to Amended and Restated Intercompany Income Tax Allocation Agreement dated August 17, 2016 (together the “2016 Agreement”); and

WHEREAS, the Parties desire to amend and restate the 2016 Agreement as set forth herein in order to amend certain provisions therein, including, but not limited to, adopting certain

obligations with respect to the allocation of income taxes among the Members; and

NOW THEREFORE, each member of the Consolidated Group does hereby covenant and agree with one another that the current consolidated income tax liabilities of the Consolidated Group shall be allocated as follows:

ARTICLE I.

Definitions and Interpretation

Section 1.1 Definitions. For all purposes of this Agreement, except as otherwise expressly provided, the following terms shall have the following respective meanings:

“Code” means the Internal Revenue Code of 1986, as amended.

“Consolidated Group” means NiSource and all of its subsidiaries which, from time to time, may be included in any (i) U.S. federal income tax return filed by NiSource in accordance with Sections 1501 and 1502 of the Code or (ii) Other Return.

“Consolidated Return” means, with reference to any Taxable Period, any consolidated U.S. federal income tax return or Other Return filed by NiSource whether before or after the date hereof, which includes one or more Members of the Consolidated Group in a consolidated, combined, composite or unitary group of which NiSource is a common parent.

“Consolidated Return Year” means any Taxable Period for which NiSource files a Consolidated Return or Other Return that includes one or more Members of the Consolidated Group in a consolidated, combined, composite or unitary group of which NiSource is a common parent.

“Consolidated Tax Liability” means, with reference to any Taxable Period, the consolidated, combined, composite or unitary U.S. federal income tax liability or liability relating to Other Taxes, as the case may be (including any interest, additions to tax and penalties), of the Consolidated Group for such Taxable Period.

“Designated Official” means the Vice President, Corporate Tax of NiSource Corporate Services Company or such other official assigned the responsibilities of Vice President, Corporate Tax of NiSource Corporate Services Company.

“Includible Corporation” has the meaning attributed to that term in Section 1504(b) of the Code.

“Member” means, for any Taxable Period, any entity that is treated as a corporation for federal tax purposes (or any predecessor or successor in interest to such corporation under Section 381 of the Code which was or is, as the case may be, an Includible Corporation) which at any time during such Taxable Period is an Includible Corporation that is included in the

Consolidated Group, including NiSource. Provided, however, that Northern Indiana Public Service Company LLC will also be treated as a Member for purposes of this agreement.

“Other Return” means any consolidated, combined, composite or unitary tax return of Other Taxes filed by NiSource or another Member of the Consolidated Group, whether before or after the date hereof, which includes the operations, income or assets of one or more Members of the Consolidated Group.

“Other Taxes” means any taxes (including any interest and penalties) payable by NiSource or another Member of the Consolidated Group to any taxing authority of any state, municipal or other political subdivision, including all agencies and instrumentalities of such taxing authority, other than those taxes subject to Section 2.1.

“Person” means any individual, partnership, firm, corporation, limited liability company, joint stock company, unincorporated association, joint venture, trust or other entity or enterprise, or any government or political subdivision or agency, department or instrumentality thereof.

“Regulations” means the Treasury Regulations promulgated under the Code.

“Standalone” means, with reference to any Member’s tax items or attributes, such tax items or attributes shall be taken into consideration as though such Member were not a Member of the Consolidated Group.

“Standalone Return Tax Liability” means, in the case of each Member of the Consolidated Group for any Taxable Period of the Consolidated Group, the U.S. federal income tax liability of such Member for such Taxable Period computed on a Standalone basis as though such Member were not a Member of the Consolidated Group, except that in making such computation for any such Taxable Period, such liability shall be determined: (1) to the extent the corporate alternative minimum tax is applicable in a Taxable Period, then on the assumption that the "exemption amount" previously specified in Section 55(d)(2) of the Code which is applicable to such Member for such Taxable Period is zero, and (2) on the further assumption that any tax credit or tax deduction will only be taken into account to the extent allowed on a consolidated basis.

“Taxable Period” shall mean any (i) period of 12 consecutive months or (ii) period of less than 12 consecutive months, for which a Consolidated Return is or will be filed by the Consolidated Group.

Section 1.2 Reference, Etc. The words “*hereof*”, “*herein*” and “*hereafter*” and words of similar import when used in this Agreement shall refer to this Agreement as a whole and not to any particular provision of this Agreement. All terms defined herein in the singular shall have the same meanings in the plural and *vice versa*. All References herein to any Person includes such Person’s successors and assigns. All references herein to Articles and Sections shall, unless the context requires a different construction, be deemed to be references to the Articles and Sections of this Agreement. In this Agreement, unless a clear contrary intention appears the word “*including*” (and with correlative meaning “*include*”) means “including but not limited to”.

ARTICLE II.

Preparation and Filing of Tax Returns; Allocation of Taxes

Section 2.1 Federal Returns.

(a) A Consolidated Return shall be prepared and filed by NiSource for each Taxable Period in respect of which this Agreement is in effect and for which the Consolidated Group is required or permitted to file a consolidated U.S. federal income tax return. NiSource and all its Members shall execute and file such consents, elections and other documents that may be required or appropriate for the proper filing of such returns.

(b) The U.S. federal Consolidated Tax Liability of the Consolidated Group for each Taxable Period of the Consolidated Group shall be borne by the Members in an amount equal to each Member's Standalone Return Tax Liability. If any Member's Standalone Return Tax Liability does not result in a positive tax liability, the amount of such Standalone Return Tax Liability will be treated as zero. The general effect of the foregoing is that each Member will pay its Standalone Return Tax Liability.

(c) The amounts determined for each Member under Section 2.1(b) shall be used in determining the amounts to be paid (as provided in Sections 3.2(a) and 3.4 of this Agreement) by each Member to NiSource with respect to each Member's share of the Consolidated Group's U.S. federal Consolidated Tax Liability.

(d) In the case of any Member whose Standalone Return Tax Liability for such Taxable Period is greater than zero, such Member shall make a payment of its Standalone Return Tax Liability for such Taxable Period to NiSource, pursuant to Section 3.2(a) hereof.

(e) To the extent the Consolidated Group is subject to a limitation on interest deductions under Section 163(j) and corresponding regulations, the tax liability associated with the Consolidated Group's section 163(j) limitation will be allocated among the Members consistent with the principles of Section 2.1(b), and payments associated with such liability shall be required under the principles of Sections 2.1(c) and (d). Similar allocation and payment principles shall be applied to any interest deduction carryforwards that are permitted under Section 163(j) and corresponding regulations.

(f) For purposes of calculating a Member's Standalone net operating loss ("NOL") for any Taxable Period under this Agreement, such NOL shall be determined by taking such Member's NOL determined on a Standalone basis as of the beginning of the Taxable Period (determined by computing NOLs by reference to only such Member's items of income, gain, deduction and loss). To the extent any NOL of the Consolidated Group may be carried back or carried forward, a Member shall be allocated for use by such Member the percentage of such carryback or carryforward, as the case may be, in the amount calculated by dividing such Member's Standalone NOL by the NOL of the Consolidated Group as of the beginning of the Taxable Period. Notwithstanding the language in Section 4.2 herein, each Member's Standalone

NOL as of the relevant effective date of this Agreement shall be equal to the amount allocated to such Member under the 2002 Agreement or 2016 Agreement, as applicable, immediately prior to the time such prior Agreement was superseded.

(g) To the extent of a tax refund, NOL carryback or other adjustment that subsequently reduces a Member's tax liability as calculated under Section 2.1(b), NiSource shall credit such amount to future payments due from the affected Member. To the extent of audits and other upward adjustments in a Member's tax liability as calculated under Section 2.1(b), such Member is required to make a corresponding payment (as provided in Section 3.4 of this Agreement) to NiSource taking into account such adjustments. Any tax carryforward shall be carried forward for use by the respective Member in calculating its Standalone Return Tax Liability in the subsequent year, and no payment shall be made to NiSource by such Member until such carryforward is fully utilized.

Section 2.2 Other Taxes.

(a) Wherever appropriate, Other Taxes shall be shared among the applicable Members of the Consolidated Group in a manner that is consistent with the method set forth in Section 2.1 hereof, and amounts due to NiSource, with respect to Other Taxes, shall be determined in a manner consistent with Section 2.1. NiSource will prepare and file (or cause to be prepared and filed) all returns of Other Taxes which are required to be filed with respect to the operations of NiSource, the Consolidated Group and its Members (as Members of the Consolidated Group). In the event any taxing authority permits, but does not require, that a consolidated, combined, composite or unitary return be filed for Other Taxes, which return includes both NiSource and a Member, NiSource may elect to file such return and shall have the right to require any Member to be included in such return. NiSource will notify each of its Members included in each Other Return.

(b) Each Member of the Consolidated Group that is included on a return other than pursuant to an Other Return with any other Member of the Consolidated Group shall be solely responsible and obligated to pay the tax liability with respect to such return from its own funds. Such returns shall be prepared and filed by NiSource or the Member included on such Other Return, as determined by NiSource.

(c) If any Member of the Consolidated Group is required to file a consolidated, combined, composite or unitary return for Other Taxes with another Member of the Consolidated Group, but not with NiSource, then NiSource shall be required to prepare and file such tax returns and shall apportion among and, collect and remit from, the applicable Members such Other Taxes in a manner consistent with Section 2.1. If the right to file a consolidated, combined, composite, or unitary return for such Other Taxes is optional, then NiSource shall

decide which of the Members should, to the extent permitted by law, join in filing each such return.

Section 2.3 Member Tax Information. The Members of the Consolidated Group shall submit or make available the tax information requested by the Designated Official of NiSource in the manner and by the date requested, in order to enable the Designated Official to fulfill its rights and obligations pursuant to Article 2 hereof.

ARTICLE III.

Responsibility for Tax; Intercompany Payments

Section 3.1 Responsibility. NiSource will be solely responsible for, and will indemnify and hold each Member of the Consolidated Group harmless, to the extent such Member has complied with its rights and obligations hereunder (including its payment obligations under this Article III), with respect to the payment of: (a) the Consolidated Tax Liability for each Taxable Period for which, as determined under Section 2.1 hereof, NiSource did file, elected to file or was required to file a Consolidated Return for U.S. federal income taxes; and (b) any and all Other Taxes for each Taxable Period for which, as determined under Section 2.2 hereof, NiSource did file, elected to file or was required to file any Other Return. No Member shall at any time be required pursuant to this Agreement to remit, as part of any payment that such Member makes pursuant to this Agreement, any amount of penalty or interest that the Consolidated Group may incur for any Taxable Period by reason of NiSource's failure to properly calculate or timely pay any Consolidated Tax Liability of the Consolidated Group for such Taxable Period or to file timely the Consolidated Group's Consolidated Return for any such Taxable Period.

Section 3.2 Federal Tax Payments. (a) With respect to each Consolidated Return Year, the Designated Official of NiSource shall estimate each Member's share of quarterly estimated U.S. federal tax payments to be made for each Consolidated Return Year. In making this determination, NiSource shall elect a reasonable method for determining estimated tax and each Member shall follow that method. At the direction of the Designated Official, such Members will pay to NiSource such estimates not later than the 15th day of the 4th, 6th, 9th, and 12th months of such Consolidated Return Year, or at such intervals as directed by the Designated Official. The difference between (1) a Member's estimated tax payments used for computation of the quarterly estimated payments and (2) such Member's actual tax liability for any Consolidated Return Year as determined under Section 2.1 hereof, shall be paid to NiSource within sixty (60) days after the filing of the U.S. federal Consolidated Return, or applied as a credit against such Member's next estimated tax payment due under this Section 3.2(a), as the case may be.

(b) NiSource shall have sole authority, to the exclusion of all other Members of the Consolidated Group, to agree to any adjustment proposed by the Internal Revenue Service

or any other taxing authority with respect to any U.S. federal Consolidated Return, including interest or penalties, attributable to any Member of the Consolidated Group during any Consolidated Return Year in which such Member was a Member of the Consolidated Group notwithstanding that such adjustment may increase the amounts payable by Members of the Consolidated Group under this Agreement. In the event of any adjustment to the U.S. federal Consolidated Tax Liability attributable to any Member of the Consolidated Group by reason of an amended return, claim for refund or audit by the Internal Revenue Service or any other taxing authority, the liability of all other Members of the Consolidated Group hereunder shall be redetermined to give effect to such adjustment as if such adjustment had been made as a part of the original computation of such liability, and payment by a Member to NiSource (or credit against such Member's next estimated tax payment due under Section 3.2(a), as the case may be) shall be promptly made (or applied as a credit, as the case may be) after any payments are made to the Internal Revenue Service or any other taxing authority, refund is received or final determination of the matter is made in the case of contested proceedings. In such event, any payments between the parties shall bear interest at the then prevailing rate or rates on deficiencies assessed by the Internal Revenue Service or any other relevant taxing authority, during the period from the due date of such Consolidated Return (determined without regard to extensions of time for the filing thereof) for the Consolidated Return Year to which the adjustments were made to the date of payment.

Section 3.3 Other Tax Payments. Wherever appropriate, payments by a Member with respect to Other Taxes and required estimates thereof shall be calculated and made by such Member in a manner consistent with the method set forth in Section 3.2. The principles set forth in Section 3.2 governing the determination and adjustment of payments as well as the method of payment by such Member with respect to U.S. federal income taxes shall be equally applicable in determining and adjusting the amount of and due date of payments to be made by such Member with respect to Other Taxes and estimates thereof. Wherever appropriate, each Member shall pay, directly to the appropriate taxing authority, all taxes for which such Member is liable and for which no other Member has joint and several liability.

Section 3.4 Payment Mechanics. (a) Any payments to be made by a Member of the Consolidated Group pursuant to this Agreement shall be made by such Member to NiSource by either promptly crediting as an offset against amounts owed to such Member by NiSource or to the extent no amounts are owed to such Member by NiSource, by cash payments to NiSource.

(b) Tax payments by NiSource with respect to any Consolidated Tax Liability shall be paid by NiSource and shall be debited to the Member of the Consolidated Group for their respective shares of such Consolidated Tax Liability as determined pursuant to Articles II and III hereof. Tax refunds received by NiSource with respect to any Consolidated Tax Liability shall be credited by NiSource against the future tax liability of the Member entitled to such tax refund, as determined pursuant to Article II.

(c) NiSource shall be responsible for maintaining the books and records reflecting the intercompany accounts reflecting the amounts owned, collected and paid with respect to taxes pursuant to this Agreement.

(d) NiSource may delegate to other Members of the Consolidated Group responsibilities for the collection and disbursement of funds as required under this Agreement as well as responsibilities for maintaining books and records as required under this Agreement.

Section 3.5 Departing Members. In the event that any Member of the Consolidated Group at any time leaves the Consolidated Group and, under any applicable statutory provision or regulation, NiSource shall, to the extent required or permitted by applicable statutory provision or regulation, file the appropriate tax returns with respect to such departing Member or the Consolidated Group, as the case may be, and shall calculate the applicable Consolidated Tax Liability of the Members included in such return in the manner as set forth in this Agreement, in each case as reasonably determined by NiSource. If, under applicable statutory provision or regulation, such departing Member is deemed to take with it all or a portion of any of the tax attributes of the Consolidated Group (including but not limited to NOLs, alternative minimum tax credit carry forwards under Section 53, and other applicable credit carry forwards), then the departing Member shall make a payment to NiSource if such tax attributes of the departing Member differ from the attributes previously allocated to such Member under this Agreement. Such settlement shall consist of payment (1) on a dollar for dollar basis for all differences in credits, and, (2) in the case of NOL differences (or other differences related to other deductions), in a dollar amount computed by reference to the amount of NOL (or other deduction) multiplied by the applicable tax rate relating to such NOL (or other deduction). The settlement payment shall be paid to NiSource within sixty days after the Member leaves the Consolidated Group. The settlement amounts shall be allocated among the remaining Members of the Consolidated Group in proportion to the relative attributes possessed by each Member.

Section 3.6 Administration. The provisions of this Agreement shall be administered by the Designated Official of NiSource. The interpretations of this Agreement by the Designated Official of NiSource shall be conclusive.

Section 3.7 Refunds. For the avoidance of doubt, NiSource will be entitled to receive any and all federal income tax refunds and will be the owner thereof and not the Members that may have generated losses or other tax attributes giving rise to the refund. NiSource will then treat refunds received according to Article II and Sections 3.2, 3.3, and 3.4(b) of this Agreement.

ARTICLE IV.

Miscellaneous Provisions

Section 4.1 Effect. The provisions hereof shall fix the rights and obligations of the parties as to the matters covered hereby whether or not such are followed for U.S. federal income tax or other purposes by the Consolidated Group, including the computation of earnings and profits for U.S. federal income tax purposes.

Section 4.2 Effective Date. This Agreement shall be effective with respect to all Taxable Periods ending on or after July 1, 2020 for the portion of such Taxable Period beginning on such date, in which any subsidiary of NiSource is a Member of the Consolidated Group for any portion of such Taxable Period, and thereafter the 2002 Agreement and 2016 Agreement shall be deemed to have been superseded and replaced in their entirety by this Agreement. It is the intent of the parties hereto that any payments previously made or received by the Members under the 2002 Agreement or 2016 Agreement shall not be taken into account under this Agreement including for purposes of determining each Member's obligations under this Agreement, and that the rights and obligations of the parties under the 2002 Agreement and 2016 Agreement shall survive only with respect to Taxable Periods or portions thereof ending prior to July 1, 2020, except as otherwise noted in this Agreement. In the event that a party to this Agreement ceases to be a Member of the Consolidated Group, the rights and obligations of such party and each other party to this Agreement shall survive, but only with respect to Taxable Periods including or ending before the date such party ceases to be a Member of the Consolidated Group.

Section 4.3 State Public Utility Commission Requirements. Section 4.3 State Public Utility Commission Requirements. This Agreement shall only be effective once filed with the Massachusetts Department of Public Utilities and the Indiana Utility Regulatory Commission under Indiana Code 8-1-2-49(2) and Indiana Utility Regulatory Commission General Administrative Order 2016-5, and approved by the Virginia State Corporation Commission under Virginia Code Sections 56-76, et seq., and approved by the Pennsylvania Public Utility Commission under 66 Pennsylvania Consolidated Statutes § 2102. Pursuant to Indiana Utility Regulatory Commission General Administrative Order 2016-5, this agreement shall terminate 5 years from the effective date in Section 4.2.

Section 4.4 Notices. Any and all notices, requests or other communications hereunder shall be given in writing (a) if to NiSource to Attention: Vice President, Tax, Facsimile Number 614-460-8415 and (b) if to any other person, at such other address as shall be furnished by such person by like notice to the other parties.

Section 4.5 Expenses. Each party hereto shall pay its own expenses incident to this Agreement and the transactions contemplated hereby, including all legal and accounting fees and disbursements.

Section 4.6 Benefit and Burden. This Agreement shall inure to the benefit of, and shall be binding upon, the parties hereto and their respective successors.

Section 4.7 Amendments and Waiver. No amendment, modification, change or cancellation of this Agreement shall be valid unless the same is in writing and signed by the parties hereto. No waiver of any provision of this Agreement shall be valid unless in writing and signed by the person against whom that waiver is sought to be enforced. The failure of any party at any time to insist upon strict performance of any condition, promise, agreement or understanding set forth herein shall not be construed as a waiver or relinquishment of the right to insist upon strict performance of the same or any other condition, promise, agreement or understanding at the future time.

Section 4.8 Assignments. Neither this Agreement nor any right, interest or obligation hereunder may be assigned by any party hereto and any attempt to do so shall be null and void.

Section 4.9 Tax Reporting. Notwithstanding the terms of this Agreement, earnings and profits of the Consolidated Group shall be allocated to the Members pursuant to the methods under Sections 1.1552-1(a)(2) and 1.1502-33(d)(3) of the Treasury Regulations, and stock basis shall be determined pursuant to Section 1.1502-32 of the Treasury Regulations.

Section 4.10 Severability. The invalidity or unenforceability of any particular provision of this Agreement shall not affect the other provisions hereof, and this Agreement shall be construed in all respects as if such invalid or unenforceable provision were omitted.

Section 4.11 Entire Agreement. **THIS AGREEMENT SETS FORTH ALL OF THE PROMISES, AGREEMENTS, CONDITIONS, UNDERSTANDINGS, WARRANTIES AND REPRESENTATIONS AMONG THE PARTIES WITH RESPECT TO THE TRANSACTIONS CONTEMPLATED HEREBY, AND SUPERSEDES ALL PRIOR AGREEMENTS, ARRANGEMENTS AND UNDERSTANDINGS BETWEEN THE PARTIES HERETO, WHETHER WRITTEN, ORAL OR OTHERWISE, THERE ARE NO PROMISES, AGREEMENTS, CONDITIONS, UNDERSTANDINGS, WARRANTIES OR REPRESENTATIONS, ORAL OR WRITTEN, EXPRESS OR IMPLIED, AMONG THE PARTIES EXCEPT AS SET FORTH HEREIN.**

Section 4.12 Applicable Law. **THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF INDIANA.**

Section 4.13 Counterparts. This Agreement may be executed in one or more counterparts, each of which shall constitute an original and together which shall constitute one instrument. The parties hereto specifically recognize that from time to time other corporations may become Members of the Consolidated Group and thereby agree that such new Members may become Members to this Agreement by executing a copy of this Agreement and it will be effective as if all the Members had re-signed.

Section 4.14 Attorneys' Fees. If any Member or former member hereto commences an action against another party to enforce any of the terms, covenants, conditions or provisions of this Agreement, or because of a default by a party under this Agreement, the prevailing party in any such action shall be entitled to recover its costs, expenses and losses, including attorneys' fees, incurred in connection with the prosecution or defense of such action from the losing party.

Section 4.15 No Third Party Rights. Nothing in this Agreement shall be deemed to create any right in any creditor or other person or entity not a party hereto and this Agreement shall not be construed in any respect to be a contract in whole or in part of the benefit of any third party.

Section 4.16 Further Documents. The parties agree to execute any and all documents, and to perform any and all other acts, reasonably necessary to accomplish the purposes of this Agreement.

Section 4.17 Headings and Captions. The headings and captions contained in this Agreement are inserted and included solely for convenience and shall not be considered or given any effect in construing the provisions hereof if any question of intent should arise.

EXECUTED as of the date and year first above written.

By: Donald E. Brown
Printed Name: Donald E. Brown
Title: Executive Vice President
NiSource Inc.

By: Sandra Brummitt
Printed Name: Sandra Brummitt
Title: Vice President and Chief Tax Officer
[List of companies attached as Exhibit A to
Agreement]

By: Joseph W. Mulpas
Printed Name: Joseph W. Mulpas
Title: Vice President and Chief Accounting Officer
NiSource Insurance Corporation, Inc.

Exhibit A

NiSource Inc. - Subsidiaries

As of March 27, 2020

1. NiSource Gas Distribution Group, Inc.
2. NiSource Corporate Group, LLC
3. Northern Indiana Public Service Company LLC
4. NIPSCO Accounts Receivable Corporation
5. NiSource Corporate Services Company
6. NiSource Energy Technologies, Inc.
7. Columbia Gas of Ohio, Inc.
8. Columbia Gas of Ohio Receivables Corporation
9. Bay State Gas Company dba Columbia Gas of Massachusetts
10. Columbia Gas of Kentucky, Inc.
11. Central Kentucky Transmission Company
12. Columbia Gas of Maryland, Inc.
13. Columbia Gas of Pennsylvania. Inc.
14. Columbia Gas of Pennsylvania Receivables Corporation
15. Columbia Gas of Virginia, Inc.
16. NiSource Development Company, Inc.
17. Lake Erie Land Company
18. NiSource Retail Services, Inc.
19. EnergyUSA-TPC Corp.
20. NiSource Insurance Corporation, Inc.
21. NiSource Strategic Sourcing Inc.

PowerTax
Depreciation Summary Report 7
NISource

Tax Year: 2019
Tax Book: Federal
Columbia Gas of Pennsylvania
Grouped By: Total Tax Classes

Vintage	Beginning Asset Balance	Additions/Retirements	Depreciable Base	Beginning Reserve	Depreciation	Capitalized Depreciation	Gain/(Loss)	Salvage	Cost of Removal	Ending Asset Balance	Ending Reserve
V1953	\$12,993,254.21	(\$2,699.40)	\$12,993,254.21	\$12,993,254.21	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$12,990,554.81	\$12,990,554.81
V1954	\$2,054,844.74	(\$6,562.39)	\$2,054,844.74	\$2,054,844.74	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,048,282.35	\$2,048,282.35
V1955	\$4,729,153.01	(\$8,879.44)	\$4,729,153.01	\$4,729,153.01	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,720,273.57	\$4,720,273.57
V1956	\$2,950,168.99	(\$7,751.85)	\$2,950,168.99	\$2,950,168.99	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,942,417.14	\$2,942,417.14
V1957	\$3,804,095.16	(\$15,861.63)	\$3,804,095.16	\$3,804,095.16	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,788,233.53	\$3,788,233.53
V1958	\$4,398,657.14	(\$4,690.12)	\$4,398,657.14	\$4,398,657.14	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,393,967.02	\$4,393,967.02
V1959	\$3,992,678.90	(\$3,179.80)	\$3,992,678.90	\$3,992,678.90	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,989,499.10	\$3,989,499.10
V1960	\$4,191,174.80	(\$39,948.10)	\$4,191,174.80	\$4,191,174.80	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,151,226.70	\$4,151,226.70
V1961	\$4,590,202.80	(\$30,454.47)	(\$17.50)	\$4,590,202.80	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,559,748.33	\$4,559,748.33
V1962	\$4,198,630.28	(\$10,074.36)	\$0.00	\$4,198,630.28	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,188,555.92	\$4,188,555.92
V1963	\$4,988,213.06	(\$8,585.95)	\$0.00	\$4,988,213.06	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,979,627.11	\$4,979,627.11
V1964	\$5,221,133.60	(\$12,482.83)	\$0.00	\$5,221,133.60	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,208,650.77	\$5,208,650.77
V1965	\$4,391,780.50	(\$18,992.91)	\$0.00	\$4,391,780.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,372,787.59	\$4,372,787.59
V1966	\$5,934,231.57	(\$56,913.27)	\$0.00	\$5,934,231.57	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,877,318.30	\$5,877,318.30
V1967	\$5,957,204.06	(\$19,308.32)	\$0.00	\$5,957,204.06	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,937,895.74	\$5,937,895.74
V1968	\$5,487,995.46	(\$18,154.80)	\$0.00	\$5,487,995.46	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,469,840.66	\$5,469,840.66
V1969	\$4,213,695.22	(\$47,980.60)	\$0.12	\$4,213,695.10	\$0.12	\$0.00	\$0.00	\$0.00	\$0.00	\$4,165,714.62	\$4,165,714.62
V1970	\$3,449,805.79	(\$53,081.68)	\$0.38	\$3,449,805.41	\$0.25	\$0.00	\$0.00	\$0.00	\$0.00	\$3,396,724.11	\$3,396,723.98
V1971	\$9,434,564.80	(\$53,915.07)	\$44,735.72	\$9,447,223.64	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$9,434,564.80	\$9,447,223.64
V1972	\$5,775,199.74	(\$83,806.69)	(\$11,546.27)	\$5,790,010.32	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,775,199.74	\$5,790,010.32
V1973	\$4,866,019.98	(\$81,929.80)	\$13,423.00	\$4,866,019.98	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,866,019.98	\$4,866,019.98
V1974	\$6,670,943.99	(\$65,651.97)	\$0.00	\$6,670,943.99	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$6,670,943.99	\$6,670,943.99
V1975	\$6,249,648.70	(\$88,614.40)	\$6,007.66	\$6,248,509.72	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$6,249,648.70	\$6,248,509.72
V1976	\$5,570,313.67	(\$210,935.48)	\$91,085.06	\$5,497,197.27	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,570,313.67	\$5,497,197.27
V1977	\$9,828,321.03	(\$378,710.42)	\$54,037.80	\$9,775,016.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$9,828,321.03	\$9,775,016.50
V1978	\$10,299,560.20	(\$314,526.83)	\$148,528.65	\$10,151,031.55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$10,299,560.20	\$10,151,031.55
V1979	\$13,288,569.13	(\$417,043.48)	\$80,393.06	\$13,324,841.03	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$13,288,569.13	\$13,324,841.03
V1980	\$12,344,452.59	(\$185,767.64)	(\$49,447.43)	\$12,427,191.31	\$334.31	\$0.00	\$0.00	\$0.00	\$0.00	\$12,344,452.59	\$12,427,525.62
V1981	\$12,911,649.54	(\$478,103.39)	\$12,433,546.15	\$12,886,119.34	\$767.64	\$0.00	\$0.00	\$0.00	\$0.00	\$12,433,546.15	\$12,408,783.59

PowerTax
Depreciation Summary Report 7
NISource

Tax Year: 2019
Tax Book: Federal
Columbia Gas of Pennsylvania
Grouped By: Total Tax Classes

Vintage	Beginning Asset Balance	Additions/Retirements	Depreciable Base	Beginning Reserve	Depreciation	Capitalized Depreciation	Gain/(Loss)	Salvage	Cost of Removal	Ending Asset Balance	Ending Reserve
V1982	\$11,921,478.53	(\$597,234.28)	\$11,324,244.25	\$11,897,874.13	\$660.18	\$0.00	\$0.00	\$0.00	\$0.00	\$11,324,244.25	\$11,301,300.03
V1983	\$10,309,128.54	(\$287,089.15)	\$10,022,039.39	\$10,294,872.94	\$377.27	\$0.00	\$0.00	\$0.00	\$0.00	\$10,022,039.39	\$10,008,161.06
V1984	\$12,120,571.16	(\$324,164.05)	\$11,796,407.11	\$12,104,176.56	\$422.12	\$0.00	\$0.00	\$0.00	\$0.00	\$11,796,407.11	\$11,780,434.63
V1985	\$12,109,153.40	(\$276,361.55)	\$11,832,791.85	\$12,070,408.60	\$977.81	\$0.00	\$0.00	\$0.00	\$0.00	\$11,832,791.85	\$11,795,024.86
V1986	\$13,464,961.04	(\$324,030.02)	\$13,140,931.02	\$13,454,991.44	\$243.72	\$0.00	\$0.00	\$0.00	\$0.00	\$13,140,931.02	\$13,131,205.14
V1987	\$237,569.09	\$0.00	\$237,569.09	\$224,130.86	\$849.56	\$0.00	\$0.00	\$0.00	\$0.00	\$237,569.09	\$224,980.42
V1987 Q1	\$2,657,485.69	(\$55,587.38)	\$13,552.54	\$2,657,485.69	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,601,898.31	\$2,601,898.31
V1987 Q2	\$3,330,315.00	(\$56,940.62)	\$0.00	\$3,330,315.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,273,374.38	\$3,273,374.38
V1987 Q3	\$3,712,886.78	(\$61,986.22)	\$0.00	\$3,712,886.78	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,650,900.56	\$3,650,900.56
V1987 Q4	\$4,620,932.89	(\$75,702.26)	\$3,354.70	\$4,620,932.89	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,545,230.63	\$4,545,230.63
V1988	(\$404,843.01)	\$0.00	(\$404,843.01)	(\$418,213.96)	\$991.97	\$0.00	\$0.00	\$0.00	\$0.00	(\$404,843.01)	(\$417,221.99)
V1988 Q1	\$2,651,758.65	(\$50,608.42)	\$0.00	\$2,651,758.65	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,601,150.23	\$2,601,150.23
V1988 Q2	\$2,827,524.22	(\$81,190.97)	\$0.00	\$2,827,524.22	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,746,333.25	\$2,746,333.25
V1988 Q3	\$866,383.64	(\$74,338.61)	\$0.00	\$866,383.64	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$792,045.03	\$792,045.03
V1988 Q4	\$720,815.51	(\$61,090.72)	\$0.00	\$720,815.51	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$659,724.79	\$659,724.79
V1989	(\$309,354.51)	\$0.00	(\$309,354.51)	(\$354,961.10)	\$2,130.87	\$0.00	\$0.00	\$0.00	\$0.00	(\$309,354.51)	(\$352,830.23)
V1989 Q1	\$1,695,262.39	(\$48,306.41)	\$0.00	\$1,695,262.39	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,646,955.98	\$1,646,955.98
V1989 Q2	\$1,500,063.52	(\$56,228.58)	\$0.00	\$1,500,063.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,443,834.94	\$1,443,834.94
V1989 Q3	\$1,719,209.64	(\$95,227.31)	\$13,618.89	\$1,719,209.64	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,623,982.33	\$1,623,982.33
V1989 Q4	\$1,144,591.23	(\$64,696.43)	\$0.00	\$1,144,591.23	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,079,894.80	\$1,079,894.80
V1990	\$5,215,681.34	(\$238,018.22)	(\$345,467.06)	\$5,189,066.54	\$626.06	\$0.00	\$0.00	\$0.00	\$0.00	\$4,977,663.12	\$4,951,674.38
V1991	(\$308,260.90)	\$0.00	(\$308,260.90)	(\$335,474.94)	\$606.27	\$0.00	\$0.00	\$0.00	\$0.00	(\$308,260.90)	(\$334,868.67)
V1991 Q1	\$1,579,943.77	(\$69,658.16)	\$0.00	\$1,579,943.77	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,510,285.61	\$1,510,285.61
V1991 Q2	\$1,110,799.48	(\$52,066.11)	\$0.00	\$1,110,799.48	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,058,733.37	\$1,058,733.37
V1991 Q3	\$564,209.41	(\$30,520.92)	\$0.00	\$564,209.41	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$533,688.49	\$533,688.49
V1991 Q4	\$2,183,601.19	(\$101,956.49)	\$11,138.00	\$2,183,601.19	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,081,644.70	\$2,081,644.70
V1992	(\$328,999.17)	\$0.00	(\$328,999.17)	(\$374,175.41)	\$1,861.11	\$0.00	\$0.00	\$0.00	\$0.00	(\$328,999.17)	(\$372,314.30)
V1992 Q1	\$1,136,800.71	(\$43,593.48)	\$0.00	\$1,136,800.71	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,093,207.23	\$1,093,207.23
V1992 Q2	\$1,762,068.73	(\$72,647.99)	\$0.00	\$1,762,068.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,689,420.74	\$1,689,420.74

PowerTax
Depreciation Summary Report 7
NISource

Tax Year: 2019
Tax Book: Federal
Columbia Gas of Pennsylvania
Grouped By: Total Tax Classes

Vintage	Beginning Asset Balance	Additions/Retirements	Depreciable Base	Beginning Reserve	Depreciation	Capitalized Depreciation	Gain/(Loss)	Salvage	Cost of Removal	Ending Asset Balance	Ending Reserve
V1992 Q3	\$1,396,333.58	(\$68,460.81)	\$0.00	\$1,396,333.58	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,327,872.77	\$1,327,872.77
V1992 Q4	\$1,527,194.05	(\$78,991.27)	\$0.00	\$1,527,194.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,448,202.78	\$1,448,202.78
V1993	(\$404,066.58)	\$0.00	(\$404,066.58)	(\$443,644.50)	\$916.47	\$0.00	\$0.00	\$0.00	\$0.00	(\$404,066.58)	(\$442,728.03)
V1993 Q1	\$1,208,824.11	(\$53,110.31)	\$0.00	\$1,208,824.11	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,155,713.80	\$1,155,713.80
V1993 Q2	\$1,604,367.39	(\$67,276.34)	\$0.00	\$1,604,367.39	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,537,091.05	\$1,537,091.05
V1993 Q3	\$1,643,042.78	\$17,706.62	\$0.00	\$1,643,042.78	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,660,749.40	\$1,660,749.40
V1993 Q4	\$1,539,516.90	(\$70,810.51)	\$1,507.00	\$1,539,516.90	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,468,706.39	\$1,468,706.39
V1994	(\$303,206.34)	\$0.00	(\$352,192.93)	(\$435,845.35)	\$4,257.22	\$0.00	\$0.00	\$0.00	\$0.00	(\$303,206.34)	(\$431,588.13)
V1994 Q1	\$2,398,246.09	(\$217,105.08)	\$0.00	\$2,398,246.09	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,181,141.01	\$2,181,141.01
V1994 Q2	\$1,808,371.22	(\$298,138.01)	\$0.00	\$1,808,371.22	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,510,233.21	\$1,510,233.21
V1994 Q3	\$1,602,112.50	(\$73,472.09)	\$0.00	\$1,602,112.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,528,640.41	\$1,528,640.41
V1994 Q4	\$2,584,119.03	(\$562,771.96)	\$0.00	\$2,584,119.03	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,021,347.07	\$2,021,347.07
V1995	(\$237,457.13)	\$0.00	(\$237,457.13)	(\$461,039.82)	\$4,617.51	\$0.00	\$0.00	\$0.00	\$0.00	(\$237,457.13)	(\$456,422.30)
V1995 Q1	\$115.24	(\$16.22)	\$0.00	\$115.24	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$99.02	\$99.02
V1995 Q2	\$2,000,773.37	(\$163,341.94)	\$0.00	\$2,000,773.37	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,837,431.43	\$1,837,431.43
V1995 Q3	\$1,305,750.45	(\$109,458.36)	\$0.00	\$1,305,750.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,196,292.09	\$1,196,292.09
V1995 Q4	\$3,744,264.18	(\$299,873.22)	\$0.00	\$3,744,264.18	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,444,390.96	\$3,444,390.96
V1996	\$8,067,882.07	(\$109,102.34)	(\$453,099.46)	\$7,996,785.08	\$3,843.35	\$0.00	\$0.00	\$0.00	\$0.00	\$7,958,779.73	\$7,891,526.09
V1997	(\$227,386.05)	\$0.00	(\$260,091.06)	(\$545,323.31)	\$7,312.43	\$0.00	\$0.00	\$0.00	\$0.00	(\$227,386.05)	(\$538,010.88)
V1997 Q1	\$1,153,493.43	(\$62,642.57)	\$0.00	\$1,153,493.43	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,090,850.86	\$1,090,850.86
V1997 Q2	\$1,506,190.50	(\$85,304.90)	\$0.00	\$1,506,190.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,420,885.60	\$1,420,885.60
V1997 Q3	\$2,250,711.04	(\$115,224.36)	\$0.00	\$2,250,711.04	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,135,486.68	\$2,135,486.68
V1997 Q4	\$4,625,799.64	(\$207,072.42)	\$0.00	\$4,625,799.64	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,418,727.22	\$4,418,727.22
V1998	(\$325,231.84)	\$0.00	(\$325,231.84)	(\$417,179.55)	\$6,941.88	\$0.00	\$0.00	\$0.00	\$0.00	(\$325,231.84)	(\$410,237.67)
V1998 Q1	\$3,199,281.12	(\$154,713.14)	\$0.00	\$3,199,281.12	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,044,567.98	\$3,044,567.98
V1998 Q2	\$2,597,742.37	(\$129,856.27)	\$0.00	\$2,597,742.37	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,467,886.10	\$2,467,886.10
V1998 Q3	\$1,277,510.63	(\$47,541.45)	\$0.00	\$1,277,510.63	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,229,969.18	\$1,229,969.18
V1998 Q4	\$1,510,951.76	(\$132,253.94)	\$0.00	\$1,510,951.76	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,378,697.82	\$1,378,697.82
V1999	\$8,813,330.70	(\$891,223.67)	(\$263,172.08)	\$8,519,287.89	\$183,492.30	\$0.00	(\$8,029.83)	\$0.00	\$0.00	\$7,922,107.03	\$7,819,586.35

PowerTax
Depreciation Summary Report 7
NISource

Tax Year: 2019
Tax Book: Federal
Columbia Gas of Pennsylvania
Grouped By: Total Tax Classes

Vintage	Beginning Asset Balance	Additions/Retirements	Depreciable Base	Beginning Reserve	Depreciation	Capitalized Depreciation	Gain/(Loss)	Salvage	Cost of Removal	Ending Asset Balance	Ending Reserve
V2000	(\$658,705.40)	\$0.00	(\$641,798.79)	(\$598,203.84)	(\$28,707.22)	\$0.00	\$0.00	\$0.00	\$0.00	(\$658,705.40)	(\$626,911.06)
V2000 Q1	\$1,397,100.07	(\$59,345.97)	\$67,914.84	\$1,329,001.72	\$56,411.83	\$0.00	(\$1,572.19)	\$0.00	\$0.00	\$1,337,754.10	\$1,327,639.76
V2000 Q2	\$1,330,062.24	(\$67,050.07)	\$80,254.70	\$1,248,531.36	\$56,432.23	\$0.00	(\$2,600.64)	\$0.00	\$0.00	\$1,263,012.17	\$1,240,514.15
V2000 Q3	\$2,882,139.22	(\$145,348.72)	\$265,820.61	\$2,626,764.50	\$126,970.24	\$0.00	(\$7,394.44)	\$0.00	\$0.00	\$2,736,790.50	\$2,615,780.48
V2000 Q4	\$2,819,126.92	(\$137,606.77)	\$239,623.60	\$2,573,827.89	\$128,141.12	\$0.00	(\$8,315.87)	\$0.00	\$0.00	\$2,681,520.15	\$2,572,678.12
V2001	\$9,045,607.80	(\$377,467.67)	\$1,077,814.05	\$8,025,658.27	\$386,502.11	\$0.00	(\$33,520.55)	\$0.00	\$0.00	\$8,668,140.13	\$8,068,213.27
V2001 30% Bonu:	(\$254,150.25)	(\$7,583.87)	(\$477,117.88)	(\$250,162.73)	(\$16,720.66)	\$0.00	(\$498.08)	\$0.00	\$0.00	(\$261,734.12)	(\$273,969.18)
V2002	\$3,470,595.66	(\$28,776.03)	\$2,784,824.62	\$1,729,484.52	\$85,941.97	\$0.00	(\$3,953.80)	\$0.00	\$0.00	\$3,441,819.63	\$1,790,604.27
V2002 30% Bonu:	\$4,298,820.11	(\$125,649.52)	\$369,933.22	\$3,659,243.68	\$190,652.39	\$0.00	(\$16,817.68)	\$0.00	\$0.00	\$4,173,170.59	\$3,741,064.23
COR	\$35.00	\$0.00	\$35.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,398,453.83	\$35.00	\$0.00
V2003	\$561,419.36	(\$8,068.95)	\$193,910.79	\$420,906.71	\$25,034.62	\$0.00	(\$1,440.00)	\$0.00	\$0.00	\$553,350.41	\$439,312.38
V2003 30% Bonu:	(\$654,886.05)	(\$65,554.57)	(\$113,011.77)	(\$548,454.93)	(\$25,113.48)	\$0.00	(\$11,698.97)	\$0.00	\$0.00	(\$720,440.62)	(\$627,424.02)
V2003 50% Bonu:	\$2,411,212.24	(\$92,414.17)	\$339,286.92	\$1,927,113.11	\$105,514.15	\$0.00	(\$16,492.38)	\$0.00	\$0.00	\$2,318,798.07	\$1,956,705.47
V2004	\$711,058.35	(\$16,096.75)	(\$6,282.56)	\$703,221.00	\$30,810.76	\$0.00	(\$1,270.48)	\$0.00	\$0.00	\$694,961.60	\$719,205.49
V2004 30%	\$1,054,824.41	(\$30,725.82)	\$255,048.40	\$796,006.17	\$46,372.90	\$0.00	(\$6,854.22)	\$0.00	\$0.00	\$1,024,098.59	\$818,507.46
V2004 50% Bonu:	\$5,784,369.55	(\$227,482.05)	\$1,176,375.02	\$4,374,085.55	\$251,545.97	\$0.00	(\$48,731.99)	\$0.00	\$0.00	\$5,556,887.50	\$4,446,881.46
V2005	\$7,423,677.19	(\$831,611.84)	\$3,528,291.56	\$6,357,669.96	\$383,007.91	\$0.00	(\$109,968.46)	\$0.00	\$0.00	\$6,592,065.35	\$6,019,034.48
V2005 50% Bonu:	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
V2006	\$10,081,082.48	(\$868,186.40)	\$9,594,414.44	\$8,539,434.42	\$571,744.65	\$0.00	(\$102,528.48)	\$0.00	\$0.00	\$9,212,896.08	\$8,345,521.16
V2007	\$18,822,034.46	(\$1,599,971.68)	\$17,988,667.99	\$15,654,437.51	\$1,124,598.71	\$0.00	(\$283,426.98)	\$0.00	\$0.00	\$17,222,062.78	\$15,462,491.53
V2008	(\$8,177,398.18)	(\$80,166.70)	(\$8,344,224.62)	(\$5,303,957.63)	(\$645,640.54)	\$0.00	(\$18,934.98)	\$0.00	\$0.00	(\$8,257,564.88)	(\$6,010,829.89)
V2008 50%	\$27,740,575.64	(\$317,513.79)	\$27,558,615.37	\$20,889,000.95	\$1,674,229.29	\$0.00	(\$74,995.18)	\$0.00	\$0.00	\$27,423,061.85	\$22,320,711.61
V2009	\$3,368,033.22	(\$125,061.60)	\$3,148,102.63	\$2,113,856.58	\$162,671.36	\$0.00	(\$85,833.38)	\$0.00	\$0.00	\$3,242,971.62	\$2,237,299.72
V2009 50%	\$13,112,361.48	(\$501,258.26)	\$12,861,732.36	\$9,142,179.81	\$785,345.56	\$0.00	(\$147,994.00)	\$0.00	\$0.00	\$12,611,103.22	\$9,574,261.11
V2010	\$521,920.36	(\$2,606.48)	\$650,069.25	\$859,526.56	\$28,276.73	\$0.00	(\$923.47)	\$0.00	\$0.00	\$519,313.88	\$886,120.27
V2010 100%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
V2010 50%	\$7,626,153.73	(\$160,453.46)	\$7,545,927.00	\$4,699,083.49	\$445,587.03	\$0.00	(\$56,847.85)	\$0.00	\$0.00	\$7,465,700.27	\$5,041,064.91
V2011	\$4,352,875.89	\$0.00	\$4,362,755.75	\$2,343,703.75	\$221,167.54	\$0.00	\$0.00	\$0.00	\$0.00	\$4,352,875.89	\$2,564,871.29
V2011 100%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

PowerTax
Depreciation Summary Report 7
NISource

Tax Year: 2019
Tax Book: Federal
Columbia Gas of Pennsylvania
Grouped By: Total Tax Classes

Vintage	Beginning Asset Balance	Additions/Retirements	Depreciable Base	Beginning Reserve	Depreciation	Capitalized Depreciation	Gain/(Loss)	Salvage	Cost of Removal	Ending Asset Balance	Ending Reserve
V2011 50%	\$502,700.64	(\$5,552.98)	\$499,924.15	\$363,886.69	\$11,036.41	\$0.00	(\$1,677.56)	\$0.00	\$0.00	\$497,147.66	\$371,047.68
V2012	\$67,090.09	(\$2,037.10)	\$55,145.56	(\$2,379.45)	\$609.40	\$0.00	(\$1,182.13)	\$0.00	\$0.00	\$65,052.99	(\$2,625.03)
V2012 50%	\$44,129,380.34	(\$468,215.92)	\$43,887,707.22	\$17,678,957.19	\$1,973,301.78	\$0.00	(\$271,705.70)	\$0.00	\$0.00	\$43,661,164.42	\$19,455,748.75
V2013	\$1,652,633.63	(\$22,344.28)	\$1,441,354.62	\$236,591.52	\$42,868.75	\$0.00	(\$18,867.41)	\$0.00	\$0.00	\$1,630,289.35	\$275,983.40
V2013 50%	\$54,459,075.48	(\$801,038.60)	\$54,055,841.75	\$19,405,265.38	\$2,627,365.12	\$0.00	(\$217,405.32)	\$0.00	\$0.00	\$53,658,036.88	\$21,448,997.23
V2014	\$1,815,362.33	(\$79,987.92)	\$1,668,545.49	\$644,114.77	\$44,397.81	\$0.00	(\$5,459.58)	\$0.00	\$0.00	\$1,735,374.41	\$613,984.24
V2014 50%	\$71,897,075.23	(\$1,229,493.74)	\$71,237,966.18	\$24,480,026.24	\$3,595,294.06	\$0.00	(\$298,533.67)	\$0.00	\$0.00	\$70,667,581.48	\$27,144,360.21
V2015	\$1,003,154.00	(\$48,336.45)	\$907,447.49	\$90,995.00	\$25,612.23	\$0.00	(\$43,428.31)	\$0.00	\$0.00	\$954,817.55	\$111,699.09
V2015 50%	\$60,866,804.01	(\$340,709.23)	\$58,765,586.45	\$17,220,157.68	\$3,830,726.12	\$0.00	(\$193,713.71)	\$14,941.00	\$0.00	\$60,526,094.78	\$20,918,829.27
V2016	\$667,987.04	(\$0.33)	\$639,228.12	\$43,916.80	\$17,753.61	\$0.00	(\$0.26)	\$0.00	\$0.00	\$667,986.71	\$61,670.34
V2016 50%	\$80,168,937.72	(\$410,603.83)	\$79,644,423.59	\$14,939,929.99	\$5,074,717.02	\$0.00	(\$304,309.80)	\$0.00	\$0.00	\$79,758,333.89	\$19,908,352.98
V2017	\$421,815.70	(\$119.34)	\$410,342.71	\$17,901.40	\$11,654.54	\$0.00	(\$102.27)	\$0.00	\$0.00	\$421,696.36	\$29,538.87
V2017 100%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
V2017 50%	\$77,451,304.33	(\$3,213,824.77)	\$75,703,250.41	\$9,758,590.97	\$5,886,006.00	\$0.00	\$2,754,006.81)	\$0.00	\$0.00	\$74,237,479.56	\$15,184,779.00
V2018	\$186,560,293.78	(\$1,324,786.44)	\$185,833,403.28	\$7,228,832.52	\$13,882,503.60	\$0.00	(\$1,227,288.78)	\$0.00	\$0.00	\$185,235,507.34	\$21,013,838.44
V2019	\$0.00	\$256,800,565.09	\$256,800,565.09	\$0.00	\$9,878,105.18	\$0.00	(\$703,235.69)	\$0.00	\$0.00	\$256,800,565.09	\$9,878,105.18
Total Tax Classes:	\$1,043,200,036.65	\$233,073,607.02	\$1,022,387,406.07	\$546,284,868.45	\$53,294,959.22	\$0.00	\$7,091,560.90)	\$14,941.00	\$5,398,453.83	\$1,278,154,545.44	\$584,137,037.53
Company:	\$1,043,200,036.65	\$233,073,607.02	\$1,022,387,406.07	\$546,284,868.45	\$53,294,959.22	\$0.00	\$7,091,560.90)	\$14,941.00	\$5,398,453.83	\$1,278,154,545.44	\$584,137,037.53
Tax Year:	\$1,043,200,036.65	\$233,073,607.02	\$1,022,387,406.07	\$546,284,868.45	\$53,294,959.22	\$0.00	\$7,091,560.90)	\$14,941.00	\$5,398,453.83	\$1,278,154,545.44	\$584,137,037.53

PowerTax
Depreciation Summary Report 7
NISource

Tax Year: 2020
Tax Book: Federal
Columbia Gas of Pennsylvania
Grouped By: Total Tax Classes

Vintage	Beginning Asset Balance	Additions/Retirements	Depreciable Base	Beginning Reserve	Depreciation	Capitalized Depreciation	Gain/(Loss)	Salvage	Cost of Removal	Ending Asset Balance	Ending Reserve
V1953	\$12,990,554.81	\$0.00	\$12,990,554.81	\$12,990,554.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$12,990,554.81	\$12,990,554.81
V1954	\$2,048,282.35	\$0.00	\$2,048,282.35	\$2,048,282.35	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,048,282.35	\$2,048,282.35
V1955	\$4,720,273.57	\$0.00	\$4,720,273.57	\$4,720,273.57	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,720,273.57	\$4,720,273.57
V1956	\$2,942,417.14	\$0.00	\$2,942,417.14	\$2,942,417.14	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,942,417.14	\$2,942,417.14
V1957	\$3,788,233.53	\$0.00	\$3,788,233.53	\$3,788,233.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,788,233.53	\$3,788,233.53
V1958	\$4,393,967.02	\$0.00	\$4,393,967.02	\$4,393,967.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,393,967.02	\$4,393,967.02
V1959	\$3,989,499.10	\$0.00	\$3,989,499.10	\$3,989,499.10	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,989,499.10	\$3,989,499.10
V1960	\$4,151,226.70	\$0.00	\$4,151,226.70	\$4,151,226.70	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,151,226.70	\$4,151,226.70
V1961	\$4,559,748.33	\$0.00	(\$17.50)	\$4,559,748.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,559,748.33	\$4,559,748.33
V1962	\$4,188,555.92	\$0.00	\$0.00	\$4,188,555.92	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,188,555.92	\$4,188,555.92
V1963	\$4,979,627.11	\$0.00	\$0.00	\$4,979,627.11	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,979,627.11	\$4,979,627.11
V1964	\$5,208,650.77	\$0.00	\$0.00	\$5,208,650.77	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,208,650.77	\$5,208,650.77
V1965	\$4,372,787.59	\$0.00	\$0.00	\$4,372,787.59	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,372,787.59	\$4,372,787.59
V1966	\$5,877,318.30	\$0.00	\$0.00	\$5,877,318.30	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,877,318.30	\$5,877,318.30
V1967	\$5,937,895.74	\$0.00	\$0.00	\$5,937,895.74	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,937,895.74	\$5,937,895.74
V1968	\$5,469,840.66	\$0.00	\$0.00	\$5,469,840.66	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,469,840.66	\$5,469,840.66
V1969	\$4,165,714.62	\$0.00	\$0.00	\$4,165,714.62	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,165,714.62	\$4,165,714.62
V1970	\$3,396,724.11	\$0.00	\$0.13	\$3,396,723.98	\$0.13	\$0.00	\$0.00	\$0.00	\$0.00	\$3,396,724.11	\$3,396,724.11
V1971	\$9,434,564.80	\$0.00	\$44,735.72	\$9,447,223.64	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$9,434,564.80	\$9,447,223.64
V1972	\$5,775,199.74	\$0.00	(\$11,546.27)	\$5,790,010.32	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,775,199.74	\$5,790,010.32
V1973	\$4,866,019.98	\$0.00	\$13,423.00	\$4,866,019.98	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,866,019.98	\$4,866,019.98
V1974	\$6,670,943.99	\$0.00	\$0.00	\$6,670,943.99	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$6,670,943.99	\$6,670,943.99
V1975	\$6,249,648.70	\$0.00	\$6,007.66	\$6,248,509.72	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$6,249,648.70	\$6,248,509.72
V1976	\$5,570,313.67	\$0.00	\$91,085.06	\$5,497,197.27	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,570,313.67	\$5,497,197.27
V1977	\$9,828,321.03	\$0.00	\$54,037.80	\$9,775,016.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$9,828,321.03	\$9,775,016.50
V1978	\$10,299,560.20	\$0.00	\$148,528.65	\$10,151,031.55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$10,299,560.20	\$10,151,031.55
V1979	\$13,288,569.13	\$0.00	\$80,393.06	\$13,324,841.03	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$13,288,569.13	\$13,324,841.03
V1980	\$12,344,452.59	\$0.00	(\$49,447.43)	\$12,427,525.62	\$334.31	\$0.00	\$0.00	\$0.00	\$0.00	\$12,344,452.59	\$12,427,859.93
V1981	\$12,433,546.15	\$0.00	\$12,433,546.15	\$12,408,783.59	\$767.64	\$0.00	\$0.00	\$0.00	\$0.00	\$12,433,546.15	\$12,409,551.23

PowerTax
Depreciation Summary Report 7
NISource

Tax Year: 2020
Tax Book: Federal
Columbia Gas of Pennsylvania
Grouped By: Total Tax Classes

Vintage	Beginning Asset Balance	Additions/Retirements	Depreciable Base	Beginning Reserve	Depreciation	Capitalized Depreciation	Gain/(Loss)	Salvage	Cost of Removal	Ending Asset Balance	Ending Reserve
V1982	\$11,324,244.25	\$0.00	\$11,324,244.25	\$11,301,300.03	\$660.18	\$0.00	\$0.00	\$0.00	\$0.00	\$11,324,244.25	\$11,301,960.21
V1983	\$10,022,039.39	\$0.00	\$10,022,039.39	\$10,008,161.06	\$377.27	\$0.00	\$0.00	\$0.00	\$0.00	\$10,022,039.39	\$10,008,538.33
V1984	\$11,796,407.11	\$0.00	\$11,796,407.11	\$11,780,434.63	\$422.12	\$0.00	\$0.00	\$0.00	\$0.00	\$11,796,407.11	\$11,780,856.75
V1985	\$11,832,791.85	\$0.00	\$11,832,791.85	\$11,795,024.86	\$977.81	\$0.00	\$0.00	\$0.00	\$0.00	\$11,832,791.85	\$11,796,002.67
V1986	\$13,140,931.02	\$0.00	\$13,140,931.02	\$13,131,205.14	\$243.72	\$0.00	\$0.00	\$0.00	\$0.00	\$13,140,931.02	\$13,131,448.86
V1987	\$237,569.09	\$0.00	\$237,569.09	\$224,980.42	\$316.73	\$0.00	\$0.00	\$0.00	\$0.00	\$237,569.09	\$225,297.15
V1987 Q1	\$2,601,898.31	\$0.00	\$8,844.08	\$2,601,898.31	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,601,898.31	\$2,601,898.31
V1987 Q2	\$3,273,374.38	\$0.00	\$0.00	\$3,273,374.38	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,273,374.38	\$3,273,374.38
V1987 Q3	\$3,650,900.56	\$0.00	\$0.00	\$3,650,900.56	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,650,900.56	\$3,650,900.56
V1987 Q4	\$4,545,230.63	\$0.00	\$2,999.39	\$4,545,230.63	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,545,230.63	\$4,545,230.63
V1988	(\$404,843.01)	\$0.00	(\$404,843.01)	(\$417,221.99)	\$504.36	\$0.00	\$0.00	\$0.00	\$0.00	(\$404,843.01)	(\$416,717.63)
V1988 Q1	\$2,601,150.23	\$0.00	\$0.00	\$2,601,150.23	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,601,150.23	\$2,601,150.23
V1988 Q2	\$2,746,333.25	\$0.00	\$0.00	\$2,746,333.25	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,746,333.25	\$2,746,333.25
V1988 Q3	\$792,045.03	\$0.00	\$0.00	\$792,045.03	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$792,045.03	\$792,045.03
V1988 Q4	\$659,724.79	\$0.00	\$0.00	\$659,724.79	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$659,724.79	\$659,724.79
V1989	(\$309,354.51)	\$0.00	(\$309,354.51)	(\$352,830.23)	\$2,040.04	\$0.00	\$0.00	\$0.00	\$0.00	(\$309,354.51)	(\$350,790.19)
V1989 Q1	\$1,646,955.98	\$0.00	\$0.00	\$1,646,955.98	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,646,955.98	\$1,646,955.98
V1989 Q2	\$1,443,834.94	\$0.00	\$0.00	\$1,443,834.94	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,443,834.94	\$1,443,834.94
V1989 Q3	\$1,623,982.33	\$0.00	\$13,618.89	\$1,623,982.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,623,982.33	\$1,623,982.33
V1989 Q4	\$1,079,894.80	\$0.00	\$0.00	\$1,079,894.80	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,079,894.80	\$1,079,894.80
V1990	\$4,977,663.12	\$0.00	(\$345,467.06)	\$4,951,674.38	\$626.06	\$0.00	\$0.00	\$0.00	\$0.00	\$4,977,663.12	\$4,952,300.44
V1991	(\$308,260.90)	\$0.00	(\$308,260.90)	(\$334,868.67)	\$606.28	\$0.00	\$0.00	\$0.00	\$0.00	(\$308,260.90)	(\$334,262.39)
V1991 Q1	\$1,510,285.61	\$0.00	\$0.00	\$1,510,285.61	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,510,285.61	\$1,510,285.61
V1991 Q2	\$1,058,733.37	\$0.00	\$0.00	\$1,058,733.37	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,058,733.37	\$1,058,733.37
V1991 Q3	\$533,688.49	\$0.00	\$0.00	\$533,688.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$533,688.49	\$533,688.49
V1991 Q4	\$2,081,644.70	\$0.00	\$11,138.00	\$2,081,644.70	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,081,644.70	\$2,081,644.70
V1992	(\$328,999.17)	\$0.00	(\$328,999.17)	(\$372,314.30)	\$1,861.23	\$0.00	\$0.00	\$0.00	\$0.00	(\$328,999.17)	(\$370,453.07)
V1992 Q1	\$1,093,207.23	\$0.00	\$0.00	\$1,093,207.23	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,093,207.23	\$1,093,207.23
V1992 Q2	\$1,689,420.74	\$0.00	\$0.00	\$1,689,420.74	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,689,420.74	\$1,689,420.74

PowerTax
Depreciation Summary Report 7
NISource

Tax Year: 2020
Tax Book: Federal
Columbia Gas of Pennsylvania
Grouped By: Total Tax Classes

Vintage	Beginning Asset Balance	Additions/Retirements	Depreciable Base	Beginning Reserve	Depreciation	Capitalized Depreciation	Gain/(Loss)	Salvage	Cost of Removal	Ending Asset Balance	Ending Reserve
V1992 Q3	\$1,327,872.77	\$0.00	\$0.00	\$1,327,872.77	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,327,872.77	\$1,327,872.77
V1992 Q4	\$1,448,202.78	\$0.00	\$0.00	\$1,448,202.78	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,448,202.78	\$1,448,202.78
V1993	(\$404,066.58)	\$0.00	(\$404,066.58)	(\$442,728.03)	\$916.49	\$0.00	\$0.00	\$0.00	\$0.00	(\$404,066.58)	(\$441,811.54)
V1993 Q1	\$1,155,713.80	\$0.00	\$0.00	\$1,155,713.80	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,155,713.80	\$1,155,713.80
V1993 Q2	\$1,537,091.05	\$0.00	\$0.00	\$1,537,091.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,537,091.05	\$1,537,091.05
V1993 Q3	\$1,660,749.40	\$0.00	\$0.00	\$1,660,749.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,660,749.40	\$1,660,749.40
V1993 Q4	\$1,468,706.39	\$0.00	\$1,507.00	\$1,468,706.39	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,468,706.39	\$1,468,706.39
V1994	(\$303,206.34)	\$0.00	(\$354,218.73)	(\$431,588.13)	\$4,256.99	\$0.00	\$0.00	\$0.00	\$0.00	(\$303,206.34)	(\$427,331.14)
V1994 Q1	\$2,181,141.01	\$0.00	\$0.00	\$2,181,141.01	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,181,141.01	\$2,181,141.01
V1994 Q2	\$1,510,233.21	\$0.00	\$0.00	\$1,510,233.21	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,510,233.21	\$1,510,233.21
V1994 Q3	\$1,528,640.41	\$0.00	\$0.00	\$1,528,640.41	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,528,640.41	\$1,528,640.41
V1994 Q4	\$2,021,347.07	\$0.00	\$0.00	\$2,021,347.07	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,021,347.07	\$2,021,347.07
V1995	(\$237,457.13)	\$0.00	(\$237,457.13)	(\$456,422.30)	\$4,617.51	\$0.00	\$0.00	\$0.00	\$0.00	(\$237,457.13)	(\$451,804.78)
V1995 Q1	\$99.02	\$0.00	\$0.00	\$99.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$99.02	\$99.02
V1995 Q2	\$1,837,431.43	\$0.00	\$0.00	\$1,837,431.43	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,837,431.43	\$1,837,431.43
V1995 Q3	\$1,196,292.09	\$0.00	\$0.00	\$1,196,292.09	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,196,292.09	\$1,196,292.09
V1995 Q4	\$3,444,390.96	\$0.00	\$0.00	\$3,444,390.96	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,444,390.96	\$3,444,390.96
V1996	\$7,958,779.73	\$0.00	(\$456,705.32)	\$7,891,526.09	\$3,843.40	\$0.00	\$0.00	\$0.00	\$0.00	\$7,958,779.73	\$7,895,369.49
V1997	(\$227,386.05)	\$0.00	(\$261,634.68)	(\$538,010.88)	\$7,312.15	\$0.00	\$0.00	\$0.00	\$0.00	(\$227,386.05)	(\$530,698.73)
V1997 Q1	\$1,090,850.86	\$0.00	\$0.00	\$1,090,850.86	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,090,850.86	\$1,090,850.86
V1997 Q2	\$1,420,885.60	\$0.00	\$0.00	\$1,420,885.60	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,420,885.60	\$1,420,885.60
V1997 Q3	\$2,135,486.68	\$0.00	\$0.00	\$2,135,486.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,135,486.68	\$2,135,486.68
V1997 Q4	\$4,418,727.22	\$0.00	\$0.00	\$4,418,727.22	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,418,727.22	\$4,418,727.22
V1998	(\$325,231.84)	\$0.00	(\$325,231.84)	(\$410,237.67)	\$6,943.68	\$0.00	\$0.00	\$0.00	\$0.00	(\$325,231.84)	(\$403,293.99)
V1998 Q1	\$3,044,567.98	\$0.00	\$0.00	\$3,044,567.98	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,044,567.98	\$3,044,567.98
V1998 Q2	\$2,467,886.10	\$0.00	\$0.00	\$2,467,886.10	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,467,886.10	\$2,467,886.10
V1998 Q3	\$1,229,969.18	\$0.00	\$0.00	\$1,229,969.18	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,229,969.18	\$1,229,969.18
V1998 Q4	\$1,378,697.82	\$0.00	\$0.00	\$1,378,697.82	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,378,697.82	\$1,378,697.82
V1999	\$7,922,107.03	\$0.00	(\$458,894.39)	\$7,819,586.35	\$4,578.03	\$0.00	\$0.00	\$0.00	\$0.00	\$7,922,107.03	\$7,824,164.38

PowerTax
Depreciation Summary Report 7
NISource

Tax Year: 2020
Tax Book: Federal
Columbia Gas of Pennsylvania
Grouped By: Total Tax Classes

Vintage	Beginning Asset Balance	Additions/Retirements	Depreciable Base	Beginning Reserve	Depreciation	Capitalized Depreciation	Gain/(Loss)	Salvage	Cost of Removal	Ending Asset Balance	Ending Reserve
V2000	(\$658,705.40)	\$0.00	(\$640,883.04)	(\$626,911.06)	(\$14,814.43)	\$0.00	\$0.00	\$0.00	\$0.00	(\$658,705.40)	(\$641,725.49)
V2000 Q1	\$1,337,754.10	\$0.00	\$11,417.72	\$1,327,639.76	\$6,675.89	\$0.00	\$0.00	\$0.00	\$0.00	\$1,337,754.10	\$1,334,315.65
V2000 Q2	\$1,263,012.17	\$0.00	\$23,311.17	\$1,240,514.15	\$20,352.87	\$0.00	\$0.00	\$0.00	\$0.00	\$1,263,012.17	\$1,260,867.02
V2000 Q3	\$2,736,790.50	\$0.00	\$137,657.37	\$2,615,780.48	\$77,092.82	\$0.00	\$0.00	\$0.00	\$0.00	\$2,736,790.50	\$2,692,873.30
V2000 Q4	\$2,681,520.15	\$0.00	\$108,842.03	\$2,572,678.12	\$108,842.03	\$0.00	\$0.00	\$0.00	\$0.00	\$2,681,520.15	\$2,681,520.15
V2001	\$8,668,140.13	\$0.00	\$682,721.09	\$8,068,213.27	\$378,122.77	\$0.00	\$0.00	\$0.00	\$0.00	\$8,668,140.13	\$8,446,336.04
V2001 30% Bonu:	(\$261,734.12)	\$0.00	(\$484,329.79)	(\$273,969.18)	(\$16,840.14)	\$0.00	\$0.00	\$0.00	\$0.00	(\$261,734.12)	(\$290,809.32)
V2002	\$3,441,819.63	\$0.00	\$2,739,529.20	\$1,790,604.27	\$85,303.23	\$0.00	\$0.00	\$0.00	\$0.00	\$3,441,819.63	\$1,875,907.50
V2002 30% Bonu:	\$4,173,170.59	\$0.00	\$158,537.46	\$3,741,064.23	\$187,840.37	\$0.00	\$0.00	\$0.00	\$0.00	\$4,173,170.59	\$3,928,904.60
COR	\$35.00	\$0.00	\$35.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,395,713.83	\$35.00	\$0.00
V2003	\$553,350.41	\$0.00	\$171,535.95	\$439,312.38	\$24,855.11	\$0.00	\$0.00	\$0.00	\$0.00	\$553,350.41	\$464,167.49
V2003 30% Bonu:	(\$720,440.62)	\$0.00	(\$93,016.60)	(\$627,424.02)	(\$26,576.70)	\$0.00	\$0.00	\$0.00	\$0.00	(\$720,440.62)	(\$654,000.72)
V2003 50% Bonu:	\$2,318,798.07	\$0.00	\$218,990.57	\$1,956,705.47	\$103,457.96	\$0.00	\$0.00	\$0.00	\$0.00	\$2,318,798.07	\$2,060,163.43
V2004	\$694,961.60	\$0.00	(\$37,110.13)	\$719,205.49	\$30,681.85	\$0.00	\$0.00	\$0.00	\$0.00	\$694,961.60	\$749,887.34
V2004 30%	\$1,024,098.59	\$0.00	\$205,591.13	\$818,507.46	\$45,686.45	\$0.00	\$0.00	\$0.00	\$0.00	\$1,024,098.59	\$864,193.91
V2004 50% Bonu:	\$5,556,887.50	\$0.00	\$890,656.41	\$4,446,881.46	\$246,664.21	\$0.00	\$0.00	\$0.00	\$0.00	\$5,556,887.50	\$4,693,545.67
V2005	\$6,592,065.35	\$0.00	\$3,006,071.98	\$6,019,034.48	\$210,229.27	\$0.00	\$0.00	\$0.00	\$0.00	\$6,592,065.35	\$6,229,263.75
V2005 50% Bonu:	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
V2006	\$9,212,896.08	\$0.00	\$9,151,903.13	\$8,345,521.16	\$546,104.77	\$0.00	\$0.00	\$0.00	\$0.00	\$9,212,896.08	\$8,891,625.93
V2007	\$17,222,062.78	\$0.00	\$17,186,484.87	\$15,462,491.53	\$1,077,404.11	\$0.00	\$0.00	\$0.00	\$0.00	\$17,222,062.78	\$16,539,895.64
V2008	(\$8,257,564.88)	\$0.00	(\$8,392,456.11)	(\$6,010,829.89)	(\$691,281.90)	\$0.00	\$0.00	\$0.00	\$0.00	(\$8,257,564.88)	(\$6,702,111.79)
V2008 50%	\$27,423,061.85	\$0.00	\$27,399,858.48	\$22,320,711.61	\$1,664,822.23	\$0.00	\$0.00	\$0.00	\$0.00	\$27,423,061.85	\$23,985,533.84
V2009	\$3,242,971.62	\$0.00	\$3,084,078.44	\$2,237,299.72	\$154,092.89	\$0.00	\$0.00	\$0.00	\$0.00	\$3,242,971.62	\$2,391,392.61
V2009 50%	\$12,611,103.22	\$0.00	\$12,611,103.22	\$9,574,261.11	\$770,565.22	\$0.00	\$0.00	\$0.00	\$0.00	\$12,611,103.22	\$10,344,826.33
V2010	\$519,313.88	\$0.00	\$663,365.49	\$886,120.27	\$22,689.09	\$0.00	\$0.00	\$0.00	\$0.00	\$519,313.88	\$908,809.36
V2010 100%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
V2010 50%	\$7,465,700.27	\$0.00	\$7,465,700.27	\$5,041,064.91	\$440,849.64	\$0.00	\$0.00	\$0.00	\$0.00	\$7,465,700.27	\$5,481,914.55
V2011	\$4,352,875.89	\$0.00	\$4,364,059.97	\$2,564,871.29	\$214,478.62	\$0.00	\$0.00	\$0.00	\$0.00	\$4,352,875.89	\$2,779,349.91
V2011 100%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

PowerTax
Depreciation Summary Report 7
NISource

Tax Year: 2020
Tax Book: Federal
Columbia Gas of Pennsylvania
Grouped By: Total Tax Classes

Vintage	Beginning Asset Balance	Additions/Retirements	Depreciable Base	Beginning Reserve	Depreciation	Capitalized Depreciation	Gain/(Loss)	Salvage	Cost of Removal	Ending Asset Balance	Ending Reserve
V2011 50%	\$497,147.66	\$0.00	\$497,147.66	\$371,047.68	\$10,964.03	\$0.00	\$0.00	\$0.00	\$0.00	\$497,147.66	\$382,011.71
V2012	\$65,052.99	\$0.00	\$52,444.78	(\$2,625.03)	\$602.70	\$0.00	\$0.00	\$0.00	\$0.00	\$65,052.99	(\$2,022.33)
V2012 50%	\$43,661,164.42	\$0.00	\$43,653,567.21	\$19,455,748.75	\$1,936,641.59	\$0.00	\$0.00	\$0.00	\$0.00	\$43,661,164.42	\$21,392,390.34
V2013	\$1,630,289.35	\$0.00	\$1,395,367.23	\$275,983.40	\$42,556.66	\$0.00	\$0.00	\$0.00	\$0.00	\$1,630,289.35	\$318,540.06
V2013 50%	\$53,658,036.88	\$0.00	\$53,655,186.43	\$21,448,997.23	\$2,419,433.63	\$0.00	\$0.00	\$0.00	\$0.00	\$53,658,036.88	\$23,868,430.86
V2014	\$1,735,374.41	\$0.00	\$1,605,242.32	\$613,984.24	\$43,105.70	\$0.00	\$0.00	\$0.00	\$0.00	\$1,735,374.41	\$657,089.94
V2014 50%	\$70,667,581.48	\$0.00	\$70,663,383.64	\$27,144,360.21	\$3,267,490.46	\$0.00	\$0.00	\$0.00	\$0.00	\$70,667,581.48	\$30,411,850.67
V2015	\$954,817.55	\$0.00	\$865,373.14	\$111,699.09	\$25,002.16	\$0.00	\$0.00	\$0.00	\$0.00	\$954,817.55	\$136,701.25
V2015 50%	\$60,526,094.78	\$0.00	\$58,363,043.17	\$20,918,829.27	\$3,314,845.34	\$0.00	\$0.00	\$0.00	\$0.00	\$60,526,094.78	\$24,233,674.61
V2016	\$667,986.71	\$0.00	\$627,536.22	\$61,670.34	\$17,748.87	\$0.00	\$0.00	\$0.00	\$0.00	\$667,986.71	\$79,419.21
V2016 50%	\$79,758,333.89	\$0.00	\$79,400,094.91	\$19,908,352.98	\$4,576,245.29	\$0.00	\$0.00	\$0.00	\$0.00	\$79,758,333.89	\$24,484,598.27
V2017	\$421,696.36	\$0.00	\$402,873.73	\$29,538.87	\$11,593.76	\$0.00	\$0.00	\$0.00	\$0.00	\$421,696.36	\$41,132.63
V2017 100%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
V2017 50%	\$74,235,888.69	\$0.00	\$74,042,402.68	\$15,225,468.92	\$4,923,111.05	\$0.00	\$0.00	\$0.00	\$0.00	\$74,235,888.69	\$20,148,579.97
V2018	\$185,235,507.34	\$0.00	\$185,058,606.26	\$21,013,838.44	\$12,834,088.19	\$0.00	\$0.00	\$0.00	\$0.00	\$185,235,507.34	\$33,847,926.63
V2019	\$256,800,565.09	\$0.00	\$256,669,645.25	\$9,878,105.18	\$19,231,537.31	\$0.00	\$0.00	\$0.00	\$0.00	\$256,800,565.09	\$29,109,642.49
V2020	\$0.00	\$243,820,619.00	\$243,820,619.00	\$0.00	\$10,748,291.58	\$0.00	\$0.00	\$0.00	\$0.00	\$243,820,619.00	\$10,748,291.58
Total Tax Classes:	\$1,278,152,954.57	\$243,820,619.00	\$1,257,438,345.91	\$584,177,727.45	\$69,112,762.68	\$0.00	\$0.00	\$0.00	\$5,395,713.83	\$1,521,973,573.57	\$653,290,490.14
Company:	\$1,278,152,954.57	\$243,820,619.00	\$1,257,438,345.91	\$584,177,727.45	\$69,112,762.68	\$0.00	\$0.00	\$0.00	\$5,395,713.83	\$1,521,973,573.57	\$653,290,490.14
Tax Year:	\$1,278,152,954.57	\$243,820,619.00	\$1,257,438,345.91	\$584,177,727.45	\$69,112,762.68	\$0.00	\$0.00	\$0.00	\$5,395,713.83	\$1,521,973,573.57	\$653,290,490.14

EXHIBIT 8

COLUMBIA GAS OF PENNSYLVANIA, INC
53.52 C 3

3. A summary, by detailed plant accounts, of the book value of the property of the utility at the date of the balance sheet required by paragraph (2).

As of November 30, 2020										
Line No.	Account No.	Description	Gas Plant In Service Account <u>101-1000</u> (1) \$	Contribution In Aid of Construction Account <u>101-2000</u> (2) \$	Contribution In Aid of Affiliated Companies Account <u>101-3000</u> (3) \$	Non-Taxable Relocation Reimbursements Account <u>101-4000</u> (4) \$	Customer Advances for Construction (Deposits) Account <u>101-4005</u> (6) \$	Completed Construction Not Classified Account <u>106</u> (7) \$	Construction Work In Progress Account <u>107</u> (8) \$	Total Gas Plant In Service (9)=(1 thru 8) \$
Intangible Plant										
1	301.00	Organization Costs	100,099	0	0	0	0	0	0	100,099
2	302.10	Franchises/Consent, Perpetual	26,216	0	0	0	0	0	0	26,216
3	303.00	Intangible Plant, General	4,809,062	0	0	0	0	0	0	4,809,062
4	303.30	Intangible Plant, Miscellaneous Software	27,732,265	0	0	0	0	0	0	27,732,265
5	303.99	Intangible Plant, Miscellaneous Cloud	1,719,212	0	0	0	0	0	0	1,719,212
6		Total Intangible Plant	<u>34,386,855</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>34,386,855</u>
Underground Storage Plant										
7	350.10	Land	23,882	0	0	0	0	0	0	23,882
8	350.20	Rights of Way	1,932	0	0	0	0	0	0	1,932
9	351.20	Compressor Station Structures	3,220,858	0	0	0	0	29,179	0	3,250,037
10	352.01	Wells Construction	738,941	0	0	0	0	0	0	738,941
11	352.02	Wells Equipment	168,032	0	0	0	0	0	0	168,032
12	352.10	Storage Leasehold and Rights	139,442	0	0	0	0	0	0	139,442
13	352.12	Other Leases	67,498	0	0	0	0	0	0	67,498
14	353.00	Lines	389,345	0	0	0	0	0	0	389,345
15	354.00	Compressor Station Equipment	948,177	0	0	0	0	0	0	948,177
16	355.00	Measuring & Regulating Equipment	104,477	0	0	0	0	0	0	104,477
17		Total Underground Storage Plant	<u>5,802,585</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>29,179</u>	<u>0</u>	<u>5,831,763</u>
Distribution Plant										
18	374.10	Land, City Gate/Main Line Industrial	21,944	0	0	0	0	0	0	21,944
19	374.20	Land, Other Distribution System	3,361,100	0	0	0	0	0	0	3,361,100
20	374.30	Land Rights, City Gate/Main Line	95,361	0	0	0	0	0	0	95,361
21	374.40	Land Rights, City Other Distribution System	3,319,337	(11,729)	0	(106,236)	0	151,656	0	3,353,028
22	374.41	Land Rights, City Other Distribution System, Loc	13	0	0	0	0	0	0	13
23	374.50	Rights of Way	3,257,482	(19,163)	0	(5,147)	0	0	0	3,233,171
24	375.20	Structures, City Gate Measurement & Regulating	7,026	0	0	0	0	0	0	7,026
25	375.31	Structures, General Meas & Reg Local Gas	4,012	0	0	0	0	0	0	4,012
26	375.40	Structures, Regulating	5,534,853	(82,237)	0	(40,624)	0	109,280	0	5,521,273
27	375.60	Structures, Distribution Industrial M&R	86,228	0	0	0	0	0	0	86,228
28	375.70	Structures, Other Distribution System	17,705,741	0	0	0	0	16,305	0	17,722,046
29	375.71	Structures, Other Distribution System, Leased	5,819,325	0	0	0	0	0	0	5,819,325
30	375.80	Structures, Communication	16,515	0	0	0	0	0	0	16,515
31	376.00	Mains	1,800,169,678	(8,654,232)	(8,637)	(4,128,568)	(19,760)	117,396,097	0	1,904,754,579
32	376.08	Mains - CSL Replacements	23,515,481	0	0	0	0	0	0	23,515,481
33	376.30	Mains - Bare Steel	64,129,547	0	0	0	0	0	0	64,129,547
34	376.80	Mains - Cast Iron	205,867	0	0	0	0	0	0	205,867
35	378.10	Measuring & Regulating Equipment General	1,608,065	(162,340)	0	(1,068)	0	0	0	1,444,656
36	378.20	Measuring & Regulating Equipment Regulating	88,194,095	(133,773)	0	(180,688)	0	23,099,646	0	110,979,281
37	378.30	Measuring & Regulating Equipment Local Gas	628,467	(190,096)	0	0	0	133	0	438,503
38	379.10	Measuring & Regulating Equipment City Gate	136,417	0	0	0	0	0	0	136,417
39	379.11	Measuring & Regulating Equipment Exchange Gas	9,244	(9,694)	0	0	0	0	0	(450)
40	380.00	Services	631,359,334	(1,108,064)	0	(17,664)	0	226,650	0	630,460,256

1/ See Exhibit 8, Schedule 2

COLUMBIA GAS OF PENNSYLVANIA, INC
53.52 C 3

3. A summary, by detailed plant accounts, of the book value of the property of the utility at the date of the balance sheet required by paragraph (2).

As of November 30, 2020										
Line No.	Account No.	Description	Gas Plant In Service Account 101-1000	Contribution In Aid of Construction Account 101-2000	Contribution In Aid of Construction Companies Account 101-3000	Non-Taxable Relocation Reimbursements Account 101-4000	Customer Advances for Construction (Deposits) Account 101-4005	Completed Construction Not Classified Account 106	Construction Work In Progress Account 107	Total Gas Plant In Service (9)=(1 thru 8)
			(1)	(2)	(3)	(4)	(6)	(7)	(8)	1/
			\$	\$	\$	\$	\$	\$	\$	\$
1	381.00	Meters	40,738,332	0	0	0	0	4,671	0	40,743,004
2	381.10	Auto Meter Reading Devices	24,646,224	0	0	0	0	(1,029)	0	24,645,195
3	382.00	Meter Installations	41,323,564	(52,412)	0	(547)	0	0	0	41,270,605
4	383.00	House Regulators	14,694,139	(38,809)	0	(368)	0	0	0	14,654,963
5	384.00	House Regulators Installations	3,492,526	(6,880)	0	(858)	0	0	0	3,484,788
6	385.00	Industrial M&R Equipment. Station Equipment	5,860,916	(137,663)	0	(15,248)	0	252,470	0	5,960,476
7	385.10	Industrial M&R Equipment. Large Volume	1,084,433	(26,526)	0	(19,937)	0	0	0	1,037,970
8	387.10	Other Equipment	19,450	0	0	0	0	0	0	19,450
9	387.20	Other Equipment, Odorization	117,248	0	0	0	0	0	0	117,248
10	387.42	Other Equipment, Radio	119,609	0	0	0	0	0	0	119,609
11	387.44	Other Equipment, Other Communications	623,932	0	0	0	0	0	0	623,932
12	387.45	Other Equipment, Telemetering	9,494,805	0	0	0	0	831,530	0	10,326,335
13	387.46	Other Equipment, Customer Information Service	259,436	0	0	0	0	0	0	259,436
14	387.50	GPS Pipe Locators	2,201,372	0	0	0	0	0	0	2,201,372
15		Total Distribution Plant	2,793,861,120	(10,633,618)	(8,637)	(4,516,953)	(19,760)	142,087,410	0	2,920,769,562
General Plant										
16	390.10	Structures, Communications	52,901	(3,080)	0	0	0	0	0	49,821
17	391.10	Office Furniture & Equipment, Unspecified	2,305,316	0	0	0	0	0	0	2,305,316
18	391.11	Office Furniture & Equipment, Data handling Equip	91,304	0	0	0	0	0	0	91,304
19	391.12	Office Furniture & Equipment, Information Systems	3,270,694	0	0	0	0	0	0	3,270,694
20	391.20	Office Furniture & Equipment, Air Condition Equip	3,007	0	0	0	0	0	0	3,007
21	392.20	Transportation Equipment, Trailers > \$1,000	14,787	0	0	0	0	0	0	14,787
22	392.21	Transportation Equipment, Trailers \$1,000 or <	10,830	0	0	0	0	0	0	10,830
23	393.00	Stores Equipment	0	0	0	0	0	0	0	0
24	394.10	Tools, Garage & Service Equipment	60,884	0	0	0	0	0	0	60,884
25	394.11	Tools, CNG Equipment, Stationary	2,235,476	0	0	0	0	0	0	2,235,476
26	394.12	Tools, CNG Equipment, Portable	179,308	0	0	0	0	0	0	179,308
27	394.20	Tools, Shop Equipment	35,454	0	0	0	0	0	0	35,454
28	394.30	Tools and Other	16,984,779	0	0	0	0	56,585	0	17,041,365
29	394.31	Tools, High Pressure Stopping	10,847	0	0	0	0	0	0	10,847
30	395.00	Laboratory Equipment Gas	266,039	0	0	0	0	0	0	266,039
31	396.00	Power Operated Equipment	948,698	0	0	0	0	0	0	948,698
32	397.00	Communication Equipment	0	0	0	0	0	0	0	0
33	397.10	Communication Equipment, Telephone	0	0	0	0	0	0	0	0
34	397.20	Communication Equipment, Radio	0	0	0	0	0	0	0	0
35	397.40	Communication Equipment, Other	0	0	0	0	0	0	0	0
36	397.50	Communication Equipment, Telemetering	787,916	0	0	0	0	0	0	787,916
37	398.00	Miscellaneous Equipment	953,270	0	0	0	0	0	0	953,270
38		Total General Plant	28,211,510	(3,080)	0	0	0	56,585	0	28,265,016
39		Total Gas Plant in Service	2,862,262,070	(10,636,697)	(8,637)	(4,516,953)	(19,760)	142,173,174	0	2,989,253,197

1/ See Exhibit 8, Schedule 2

COLUMBIA GAS OF PENNSYLVANIA, INC.
53.52 C 3

ACCOUNT 107 CONSTRUCTION WORK IN PROGRESS

Line No.	Account No.	Description	As of November 30, 2020		
			Construction Work In Progress Account 107 Per Books \$	Construction Work In Progress Account 107 Not In Rate Base \$	Construction Work In Progress Account 107 In Rate Base \$
1		Intangible Plant			
2	301.00	Organization Costs	0	0	0
3	302.10	Franchises/Consent, Perpetual	0	0	0
4	303.00	Intangible Plant, General	273,098	273,098	0
5	303.30	Intangible Plant, Miscellaneous Software	3,711,525	3,711,525	0
6	303.99	Intangible Plant, Miscellaneous Cloud	926,324	926,324	0
7		Total Intangible Plant	4,910,947	4,910,947	0
8		Underground Storage Plant			
9	350.10	Land	0	0	0
10	350.20	Rights of Way	0	0	0
11	351.20	Compressor Station Structures	361,344	361,344	0
12	352.01	Wells Construction	0	0	0
13	352.02	Wells Equipment	0	0	0
14	352.10	Storage Leasehold and Rights	0	0	0
15	352.12	Other Leases	0	0	0
16	353.00	Lines	0	0	0
17	354.00	Compressor Station Equipment	0	0	0
18	355.00	Measuring & Regulating Equipment	0	0	0
19		Total Underground Storage Plant	361,344	361,344	0
20		Distribution Plant			
21	374.10	Land, City Gate/Main Line Industrial	0	0	0
22	374.20	Land, Other Distribution System	0	0	0
23	374.30	Land Rights, City Gate/Main Line	0	0	0
24	374.40	Land Rights, City Other Distribution System	746,268	746,268	0
25	374.41	Land Rights, City Other Distribution System, Loc	0	0	0
26	374.50	Rights of Way	0	0	0
27	375.20	Structures, City Gate Measurement & Regulating	0	0	0
28	375.31	Structures, General Meas & Reg Local Gas	0	0	0
29	375.40	Structures, Regulating	436,981	436,981	0
30	375.60	Structures, Distribution Industrial M&R	0	0	0
31	375.70	Structures, Other Distribution System	873,194	873,194	0
32	375.71	Structures, Other Distribution System, Leased	0	0	0
33	375.80	Structures, Communication	0	0	0
34	376.00	Mains	29,870,850	29,870,850	0
35	376.08	Mains - CSL Replacements	0	0	0
36	376.25	BS & CI Replaced Total	937	937	0
37	378.10	Measuring & Regulating Equipment General	0	0	0
38	378.20	Measuring & Regulating Equipment Regulating	6,561,851	6,561,851	0

COLUMBIA GAS OF PENNSYLVANIA, INC
53.52 C 3
ACCOUNT 107 CONSTRUCTION WORK IN PROGRESS

Line No.	Account No.	Description	As of November 30, 2020		
			Construction Work In Progress Account 107 Per Books \$	Construction Work In Progress Account 107 Not In Rate Base \$	Construction Work In Progress Account 107 In Rate Base \$
1	378.30	Measuring & Regulating Equipment Local Gas	0	0	0
2	379.10	Measuring & Regulating Equipment City Gate	0	0	0
3	379.11	Measuring & Regulating Equipment Exchange Gas	0	0	0
4	380.00	Services	1,396,281	1,396,281	0
5	380.12	CSL Replacement	0	0	0
6	380.13	Customer Service	0	0	0
7	381.00	Meters	39,665	39,665	0
8	381.10	Auto Meter Reading Devices	29,228	29,228	0
9	382.00	Meter Installations	145,064	145,064	0
10	383.00	House Regulators	58,755	58,755	0
11	384.00	House Regulators Installations	0	0	0
12	385.00	Industrial M&R Equipment. Station Equipment	460,693	460,693	0
13	385.10	Industrial M&R Equipment. Large Volume	9,696	9,696	0
14	387.10	Other Equipment	0	0	0
15	387.20	Other Equipment, Odorization	0	0	0
16	387.42	Other Equipment, Radio	0	0	0
17	387.44	Other Equipment, Other Communications	0	0	0
18	387.45	Other Equipment, Telephone	978,165	978,165	0
19	387.46	Other Equipment, Customer Information Service	0	0	0
20	398.00	Miscellaneous Equipment	0	0	0
21		Total Distribution Plant	41,607,629	41,607,629	0
22		General Plant			
23	389.20	Land Rights	0	0	0
24	390.10	Structures, Communications	0	0	0
25	391.10	Office Furniture & Equipment, Unspecified	0	0	0
26	391.11	Office Furniture & Equipment, Data handling Equip	0	0	0
27	391.12	Office Furniture & Equipment, Information Systems	0	0	0
28	391.20	Office Furniture & Equipment, Air Condition Equip	0	0	0
29	392.20	Transportation Equipment, Trailers > \$1,000	0	0	0
30	392.21	Transportation Equipment, Trailers \$1,000 or <	0	0	0
31	393.00	Stores Equipment	0	0	0
32	394.10	Tools, Garage & Service Equipment	0	0	0
33	394.11	Tools, CNG Equipment, Stationary	0	0	0
34	394.12	Tools, CNG Equipment, Portable	0	0	0
35	394.20	Tools, Shop Equipment	0	0	0
36	394.30	Tools, Tools and Other	5,212	5,212	0
37	394.31	Tools, High Pressure Stopping	0	0	0
38	395.00	Laboratory Equipment Gas	0	0	0
39	396.00	Power Operated Equipment	0	0	0
40	397.00	Communication Equipment	0	0	0
41	397.10	Communication Equipment, Telephone	0	0	0
42	397.20	Communication Equipment, Radio	0	0	0
43	397.40	Communication Equipment, Other	0	0	0
44	397.50	Communication Equipment, Telemetering	0	0	0
45	398.00	Miscellaneous Equipment	3,300	3,300	0
46		Total General Plant	8,512	8,512	0
47		Total Plant	46,888,433	46,888,433	0

Columbia Gas of Pennsylvania, Inc.
Depreciation Reserve at November 30, 2020

<u>Line No.</u>	<u>Description</u>	<u>Amount</u> \$
1	Amortizable Plant	(19,026,928)
2	Underground Storage Plant	(4,439,717)
3	Distribution Plant	(502,283,566)
4	General Plant	(15,112,419)
5	Non Depreciable Plant	<u>(234,693)</u>
6	Total (Exhibit 5)	<u>(541,097,323)</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.
53.53 III BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

15. Supply an Exhibit supporting the claim for working capital requirement based on a lead-lag method.
- a. Pro forma expenses and revenues are to be used in lieu of book data for computing lead-lag days.
 - b. Respondent must either include sales for resale and related expenses in revenues and in expenses or exclude from revenues and expenses. Explain

Response:

Columbia Gas of Pennsylvania, Inc. ("Columbia") is not making a claim for cash working capital. Columbia does not offer wholesale service.

16. Provide detailed calculations showing the derivation of the tax liability offset to gross cash working capital requirements.

Response:

Columbia is not making a claim for cash working capital.

COLUMBIA GAS OF PENNSYLVANIA, INC
PLANT MATERIALS AND SUPPLIES
AVERAGE OF THIRTEEN MONTHLY BALANCES ENDED
NOVEMBER 30, 2020

<u>Line</u> <u>No.</u>	<u>Month</u>	<u>Amount</u> \$
1	Nov-19	1,158,708
2	Dec-19	1,161,069
3	Jan-20	1,148,861
4	Feb-20	1,171,767
5	Mar-20	1,154,641
6	Apr-20	1,156,554
7	May-20	1,168,265
8	Jun-20	1,166,207
9	Jul-20	1,167,863
10	Aug-20	1,182,007
11	Sep-20	1,158,249
12	Oct-20	1,168,450
13	Nov-20	<u>1,176,376</u>
14	Total	15,139,018
15	13 Month Average Balance	<u><u>1,164,540</u></u>

COLUMBIA GAS OF PENNSYLVANIA, INC
PREPAYMENTS
AVERAGE OF THIRTEEN MONTHLY BALANCES ENDED
NOVEMBER 30, 2020

Accounts							
Line No.	Month	Prepaid Leases <u>16500000</u> (1) \$	Corp. Ins. <u>16521000</u> (2) \$	Prepaid Ins. I/C <u>16520000</u> (3) \$	PUC,OCA, OSBA Fees <u>16503600</u> (4) \$	Prepaid Permits <u>16503700</u> (5)	Total (6) \$
1	Nov-19	(69,369)	1,651,113	966,000	1,052,931	7,949	3,608,624.70
2	Dec-19	1,088,133	1,807,491	784,785	902,512	11,089	4,594,009.80
3	Jan-20	6,682	1,531,254	653,758	752,093	18,603	2,962,390.41
4	Feb-20	(4,320)	1,506,630	1,152,584	601,675	19,993	3,276,561.19
5	Mar-20	(16,699)	1,205,232	958,572	451,256	19,993	2,618,353.85
6	Apr-20	(43,334)	907,423	764,559	300,837	20,073	1,949,558.89
7	May-20	(22,820)	609,614	570,547	150,419	20,521	1,328,279.94
8	Jun-20	(58,412)	431,304	394,951	0	27,001	794,843.91
9	Jul-20	(118,687)	1,971,858	330,417	(19,110)	33,723	2,198,200.43
10	Aug-20	(173,058)	4,186,879	1,511,337	0	39,208	5,564,365.65
11	Sep-20	26,307	3,719,080	1,322,257	0	54,088	5,121,732.18
12	Oct-20	(79,179)	3,251,281	1,133,178	1,319,841	71,267	5,696,386.75
13	Nov-20	<u>(175,699)</u>	<u>3,021,453</u>	<u>1,350,411</u>	<u>1,171,795</u>	<u>94,402</u>	5,462,362.43
14	Total	359,545	25,800,612	11,893,356	6,684,249	437,908	45,175,670
15	13 Month Average Balance						<u><u>3,475,052</u></u>

COLUMBIA GAS OF PENNSYLVANIA, INC
GAS STORED UNDERGROUND
AVERAGE OF TWELVE MONTHLY BALANCES ENDED
NOVEMBER 30, 2020

Line No.	Month	Injections DTH (A)	ACOG \$ (B)	Injection Activity \$ (C = A * B)	Monthly WACOG \$ (D)	Withdrawals DTH (E)	Withdrawal Activity \$ (F = D * E)	Ending Cumulative Balance \$ (G)	Ending Cumulative Balance DTH (H)	Monthly Average Rate \$ (I = G / H)
1										
2	11/30/2019 Balance							59,220,987	26,339,957	
3	Dec-19	(37,991)	2.14620	(81,536)	2.2485	4,919,231	(11,060,892)	48,078,559	21,382,735	2.2485
4	Jan-20	37,339	2.0900	78,039	2.2482	5,877,658	(13,214,150)	34,942,448	15,542,416	2.2482
5	Feb-20	(6,533)	1.7508	(11,438)	2.2484	5,537,552	(12,450,631)	22,480,379	9,998,331	2.2484
6	Mar-20	(45,823)	1.7281	(79,187)	2.2508	2,865,494	(6,449,654)	15,951,538	7,087,014	2.2508
7	Apr-20	2,323,973	1.4971	3,479,220	2.0647	64,760	(133,711)	19,297,047	9,346,227	2.0647
8	May-20	2,011,748	1.5803	3,179,165	1.9789	87,712	(173,573)	22,302,639	11,270,263	1.9789
9	Jun-20	1,919,059	1.3756	2,639,858	1.8911	4,074	(7,704)	24,934,793	13,185,248	1.8911
10	Jul-20	4,161,949	1.4818	6,167,176	1.7929	24,998	(44,818)	31,057,151	17,322,199	1.7929
11	Aug-20	4,564,431	1.5731	7,180,306	1.7471	4,136	(7,226)	38,230,231	21,882,494	1.7471
12	Sep-20	3,016,310	1.4736	4,444,917	1.7139	31,916	(54,700)	42,620,448	24,866,889	1.7139
13	Oct-20	1,885,764	1.5369	2,898,231	1.7015	155,610	(264,770)	45,253,909	26,597,043	1.7015
14	Nov-20	27,127	2.0934	56,788	1.7019	1,823,415	(3,103,270)	42,207,427	24,800,755	1.7019
15	Twelve Month Average ((Lns. 3 thru 14)/12)							32,279,714		

COLUMBIA GAS OF PENNSYLVANIA, INC
DEFERRED INCOME TAXES
BALANCE ENDED
NOVEMBER 30, 2020

Line No.	Acct		Pro Forma Balance 11/30/20 (\$)	Reference
1		<u>Account 190 - Deferred Income Taxes</u>		
2	19001000	LIFO Inventory Adj - Federal	6,130,528	
3	19002000	LIFO Inventory Adj - State	3,240,062	
4	19001000	Capitalized Inventory - Fed	960,030	
5	19002000	Capitalized Inventory - St	507,388	
6	19005000	Cust. Advances - Fed	726,546	
7	19006000	Cust. Advances - St	383,989	
8	19005000	Federal Net Operating Loss	34,637,164	
9	19005000	Deficient Deferred Taxes 190- NOL, Inventory & Customer Advances	<u>27,899,349</u>	
10		Total Account 190	<u><u>74,485,056</u></u>	
11		<u>Account 282 - Deferred Income Taxes-Depreciation</u>		
12	Various	Excess Accelerated Tax Depreciation - Fed	<u>(470,427,289)</u>	
13		Total Account 282	<u><u>(470,427,289)</u></u>	
14		<u>Account 283 - Deferred Income Taxes - Other</u>		
15	28305000	Legal Liability-Lease on G.O. Bldg. - Fed	0	
16	28306000	Legal Liability-Lease on G.O. Bldg. - St	<u>0</u>	
17		Total Account 283	<u><u>0</u></u>	
18		Total Accumulated Deferred Taxes	<u><u>(395,942,233)</u></u>	Exhibit 7, Pg. 8 & 9

COLUMBIA GAS OF PENNSYLVANIA, INC
CUSTOMER DEPOSITS
AVERAGE OF THIRTEEN MONTHLY BALANCES ENDED
NOVEMBER 30, 2020

Line No.	Month	Acct-23500300 Other <u>Deposits</u> (1) \$	Acct-23500000 Security <u>Deposits</u> (2) \$	Total Account <u>235</u> (3) \$
1	Nov-19	(140,000)	(3,266,498)	(3,406,498)
2	Dec-19	(140,000)	(3,382,509)	(3,522,509)
3	Jan-20	(140,000)	(3,350,127)	(3,490,127)
4	Feb-20	(140,000)	(3,430,109)	(3,570,109)
5	Mar-20	(140,000)	(3,360,556)	(3,500,556)
6	Apr-20	(140,000)	(3,366,188)	(3,506,188)
7	May-20	(140,000)	(3,380,089)	(3,520,089)
8	Jun-20	(140,000)	(3,217,092)	(3,357,092)
9	Jul-20	(140,000)	(3,215,770)	(3,355,770)
10	Aug-20	(140,000)	(3,202,439)	(3,342,439)
11	Sep-20	(140,000)	(3,219,566)	(3,359,566)
12	Oct-20	(140,000)	(3,330,654)	(3,470,654)
13	Nov-20	<u>(140,000)</u>	<u>(3,360,935)</u>	<u>(3,500,935)</u>
14	Total	(1,820,000)	(43,082,533)	(44,902,533)
15	13 Month Average Balance	<u><u>(140,000)</u></u>	<u><u>(3,314,041)</u></u>	<u><u>(3,454,041)</u></u>

COLUMBIA GAS OF PENNSYLVANIA, INC
CUSTOMER ADVANCES
NOVEMBER 30, 2020

<u>Line</u> <u>No.</u>	<u>Month</u>	Customer Advances - Deposit Account <u>25200000</u> (1) \$	Customer Advances - Deposit (Post 12/31/99) Account <u>18600400</u> (2) \$	Net <u>252</u> (3=1+2)
1	Nov-20	(3,843,732)	3,846,766	<u>3,034</u>

COLUMBIA GAS OF PENNSYLVANIA, INC
53.52 C

If a public utility files a tariff, revision or supplement which it is calculated will increase the bills of a customer or a group of customers by an amount, when projected to an annual basis, exceeding 3% of the operating revenues of the utility - subsection (b)(4) divided by the operating revenues of the utility for a 12-month period as defined in subsection (b)(2) - or which it is calculated will increase the bills of 5% or more of the number of customers served by the utility – subsection (b)(3) divided by subsection (a)(2) - it shall submit to the Commission with the tariff, revision, or supplement, in addition to the statements required by subsections (a) and (b), all of the following information:

1. A statement showing the utility's calculation of the rate of return earned in the 12-month period referred to in subsection (b)(2), and the anticipated rate of return to be earned when the tariff, revision, or supplement becomes effective. The rate base used in this calculation shall be supported by summaries of original cost for the rate of return calculation.

Response:

See response to 53.53 I.A.2 at Exhibit No. 8, Page 2.

COLUMBIA GAS OF PENNSYLVANIA, INC.
53.53 I. VALUATION
A. ALL UTILITIES

2. Provide a schedule showing the measures of value and rates of return at the original cost and trended original cost measures of value at the spot, three-year and five-year average price levels. All claims made on this exhibit should be cross-referenced to appropriate exhibits. Provide a schedule similar to the ones listed above, reflecting respondent's final claim in its previous rate case.

Response:

A schedule showing rates of return for Columbia Gas of Pennsylvania, Inc. at November 30, 2020 per books, pro forma at present rates and pro forma at proposed rates is found at Exhibit No. 2, Schedule No. 3, Page 3.

See the attached Exhibit No. 8, Page 3, for Columbia's adjusted rate base at November 30, 2020, and Exhibit No. 8, Page 4, for Columbia's rate base using a fully projected future test year ending December 31, 2021 from the last base rate case R-2020-3018835, which was a fully litigated case.

Columbia Gas of Pennsylvania, Inc.
Statement of Rate Base at Present Rates
November 30, 2020

Line No.	Acct. No.	Description	Per Books (1) \$	Adjustments (2) \$	Pro Forma (3) \$	Reference (4)
1		Property Plant and Equipment				
2	101	Gas Plant in Service- excluding leases	2,847,080,023	0	2,847,080,023	Exh 8, Schedule 1
3	106	Completed Construction Not Classified	142,173,174	0	142,173,174	Exh 8, Schedule 1
4	101	Gas Plant in Service -Leases	32,872,797	(32,872,797)	0	
5	107	Construction Work in Progress	46,888,433	(46,888,433)	0	Exh 8, Schedule 2
6	117/191	Gas Stored Underground - Non-Current	3,794,693	0	3,794,693	
7	108-111	Depreciation Reserve	(544,680,568)	3,583,245	(541,097,323)	Exh 8, Schedule 3
8	117	Accum. Provision Gas Lost - Underground Storage	(163,467)	0	(163,467)	Exh 1, Schedule 1
9		Net Plant in Service	<u>2,527,965,086</u>	<u>(76,177,985)</u>	<u>2,451,787,100</u>	
10		Working Capital				
11	154-163-186	Materials and Supplies	1,176,376	(11,836)	1,164,540	Exh 8, Schedule 5
12	165	Prepayments	5,462,362	(1,987,310)	3,475,052	Exh 8, Schedule 6
13	164	Gas Storage Underground	42,207,427	(9,927,713)	32,279,714	Exh 8, Schedule 7
14		Cash Allowance	0	0	0	Exh 8, Schedule 4
15		Total Working Capital	<u>48,846,165</u>	<u>(11,926,859)</u>	<u>36,919,306</u>	
16		Deferred Income Taxes				
17	190	Income Taxes	74,485,056	0	74,485,056	Exh 8, Schedule 8
18	282	Depreciation	(470,427,289)	0	(470,427,289)	Exh 8, Schedule 8
19	283	Other	0	0	0	Exh 8, Schedule 8
20		Total Deferred Income Taxes	<u>(395,942,233)</u>	<u>0</u>	<u>(395,942,233)</u>	
21						
22	235	Customer Deposits	(3,500,935)	46,894	(3,454,041)	Exh 8, Schedule 9
23		Customer Advances for Construction				
24	252/186	Cash Deposits	<u>3,034</u>	<u>0</u>	<u>3,034</u>	Exh 8, Schedule 10
25		Total Rate Base	<u>2,177,371,117</u>	<u>(88,057,950)</u>	<u>2,089,313,166</u>	

Columbia Gas of Pennsylvania, Inc.
Statement of Rate Base at Present Rates
Forecasted December 2021 per Case No. R2020-3018835

<u>Line No.</u>	<u>Acct. No.</u>	<u>Description</u>	<u>Amount</u> (1) \$	1/
1		Property Plant and Equipment		
2	101, 106	Gas Plant in Service	3,340,875,576	
3	101	Gas Plant in Service -Intangible Plant, Misc. Clouds	10,171,467	
4	101	Gas Plant in Service -Leases	0	
5	107	Construction Work in Progress - In Service	0	
6	117/191	Gas Stored Underground - Non-Current	3,794,693	
7	108-111	Depreciation Reserve	(569,380,629)	
8	111	Depreciation Reserve- Intangible Plant, Misc. Clouds	(5,132,410)	
9	117	Accum. Provision Gas Lost - Underground Storage	(163,467)	
10		Net Plant in Service	<u>2,780,165,230</u>	
11		Working Capital		
12	154-163-186	Materials and Supplies	1,168,261	
13	165	Prepayments	2,996,561	
14	164/242	Gas Storage Underground	33,812,288	
15		Cash Allowance	0	
16		Total Working Capital	<u>37,977,110</u>	
17		Deferred Income Taxes		
18	190	Income Taxes	70,832,454	
19	282	Depreciation	(484,295,647)	
20	283	Other	0	
21		Total Deferred Income Taxes	<u>(413,463,193)</u>	
22		Customer Deposits		
23	235	13 Month Average	(3,262,194)	
24		Customer Advances for Construction		
25	252	Cash Deposits	<u>10,066</u>	
26		Total Rate Base	<u><u>2,401,427,019</u></u>	

Note:

1/ Rate base for the Fully Projected Future Test Year from the company's last rate case at R-2020-3018835. See Exhibit No. 108, Page 3 of 11, Column 5 of that case. Case was a fully litigated case.

COLUMBIA GAS OF PENNSYLVANIA, INC
53.52 (c)

If a public utility files a tariff, revision or supplement which it is calculated will increase the bills of a customer or a group of customers by an amount, when projected to an annual basis, exceeding 3% of the operating revenues of the utility - subsection (b)(4) divided by the operating revenues of the utility for a 12-month period as defined in subsection (b)(2) - or which it is calculated will increase the bills of 5% or more of the number of customers served by the utility – subsection (b)(3) divided by subsection (a)(2) - it shall submit to the Commission with the tariff, revision or supplement, in addition to the statements required by subsections (a) and (b), all of the following information:

4. A statement showing the amount of the depreciation reserve, at the date of the balance sheet required by paragraph (2), applicable to the property, summarized as required by paragraph (3).

Response:

Please see Exhibit No. 8, Schedule No. 3.

COLUMBIA GAS OF PENNSYLVANIA, INC.

53.53 I. VALUATION

A. ALL UTILITIES

8. Provide a description of the trending methodology which was utilized. Identify all indexes which were used (include all back up workpapers) and the reasons particular indexes were chosen. If indexes were spliced, indicate which years were utilized in any splices. If indexes were composited, show all supporting calculations. Include any analysis made to "test" the applicability of any indexes.
 - a. Supply a comprehensive statement of any changes made in the selection of trend factors or in the methodology used in the current rate filing compared to the most recent previous rate filing.

Response:

See Pa. B. Doc. No. 81-1842 filed November 27, 1981, changing the Commission's Regulations with respect to the filing of trended original cost measures of value. (Refer to Pennsylvania Bulletin Vol. 11, No. 48, Saturday November 28, 1981, pp. 41 57 - 41 58).

9. Provide an exhibit indicating the spot trended original cost at test year end by vintage by account and include applicable depreciation reserves. Include totals by account for all other trended measures of value.

Response:

See Pa. B. Doc. No. 81-1842 filed November 27, 1981, changing the Commission's Regulations with respect to the filing of trended original cost measures of value. (Refer to Pennsylvania Bulletin Vol. 11, No. 48, Saturday November 28, 1981, pp. 41 57 - 41 58).

COLUMBIA GAS OF PENNSYLVANIA, INC.
53.53 I. VALUATION
A. ALL UTILITIES

10. Supply an exhibit indicating the percentages of undepreciated original cost which were trended with the following indexes:
- a. Boeckh
 - b. Handy-Whitman
 - c. Indexes developed from supplier's prices
 - d. Indexes developed from company records and company price histories
 - e. Construction equipment
 - f. Government statistical releases.

Response: See Pa. B. Doc. No. 81-1842 filed November 27, 1981, changing the Commission's Regulations with respect to the filing of trended original cost measures of value. (Refer to Pennsylvania Bulletin Vol. 11, No. 48, Saturday November 28, 1981, pp. 41 57 - 41 58).

11. Provide a table, showing the cumulative *trended depreciated original cost* (at the spot price level) by year of installation for utility plant in service at the end of the test year (depreciable plant only) as claimed in the measures of value, in the following form:
- a. Year Installed
 - b. Trended original cost (at the spot price level) - the total surviving cost associated with each installation year from all plant accounts.
 - c. Trended calculated depreciation reserve - the calculated depreciation reserve associated with each installation year from all plant accounts.
 - d. Depreciated trended original cost - (Column B minus Column C)
 - e. Total - cumulation year by year of the figures from Column D
 - f. Column E divided by the total of the figures in Column D.

Response: See Pa. B. Doc. No. 81-1842 filed November 27, 1981, changing the Commission's Regulations with respect to the filing of trended original cost measures of value. (Refer to Pennsylvania Bulletin Vol. 11, No. 48, Saturday November 28, 1981, pp. 41 57 - 41 58).

COLUMBIA GAS OF PENNSYLVANIA, INC.

53.53 I. VALUATION

A. ALL UTILITIES

12. If a claim is made for construction work in progress, include, in the form of an exhibit, the summary page from all work orders, amount expended at the end of the test year and anticipated in-service dates. Indicate if any of the construction work in progress will result in insurance recoveries, reimbursements, or retirements of existing facilities. Describe in exact detail the necessity of each project claimed if not detailed on the summary page from the work order. Include final completion dates and estimated total amounts to be spent on each project.

Response: CPA is not making a claim for construction work in progress as of November 30, 2020. Please see Exhibit No.8, Schedule No.2.

13. If a claim is made for non-revenue producing construction work in progress, include in the form of an exhibit, the summary page from all work orders, amount expended at the end of the test year and anticipated in-service dates. Indicate if any of the construction work in progress will result in insurance recoveries, reimbursements, or retirements of existing facilities. Describe in exact detail the necessity of each project claimed if not detailed on the summary page from the work order. Include final completion date and estimated total amounts to be spent on each project.

Response: CPA is not making a claim for non-revenue producing construction work in progress for the Historic Test Year.

COLUMBIA GAS OF PENNSYLVANIA, INC.

53.53 I. VALUATION

A. ALL UTILITIES

14. If a claim is made for plant held for future use, supply the following:
- a. A brief description of the plant or land site and its costs.
 - b. Expected date of use for each item claimed.
 - c. Explanation as to why it is necessary to acquire each item in advance of its date of use.
 - d. Date when each item was acquired.
 - e. Date when each item was placed in plant held for future use.

Response: CPA is not making a claim for plant held for future use for the Historic Test Year.

15. If materials and supplies comprise part of cash working capital claim, attach an exhibit showing the actual book balances for materials and supplies by month for thirteen months prior to the end of the test year. Explain any abrupt changes in monthly balances. (Explain method of determining claim if other than that described above)

Response: There are no expected abrupt changes in monthly balances for the Historic Test Year.

16. If fuel stocks comprise part of the cash working capital claim, provide an exhibit showing the actual book balances (quantity and price) for the fuel inventories by type of fuel for the thirteen months prior to the end of the test year by location, station, etc. (Explain the method of determining claim if other than that described above.)

Response: CPA is not making a claim for fuel stock for the Historic Test Year.

COLUMBIA GAS OF PENNSYLVANIA, INC.

53.53 I. VALUATION

A. ALL UTILITIES

18. Explain in detail by statement or exhibit the appropriateness of claiming any additional items, not previously mentioned, in the measure of value.

Response: See Exhibit No.8, Schedule No.8, for deferred taxes, Exhibit No.8, Schedule No.9, for customer deposits, and Exhibit No.8, Schedule No. 10 for customer advances for construction.

COLUMBIA GAS OF PENNSYLVANIA, INC.

53.53 II. RATE OF RETURN

A. ALL UTILITIES

21. Provide Original Cost, Trended Original Cost and Fair Value rate base claims.

Response:

The rate base claim at original cost as of November 30, 2020 is found above under Regulation 53.53 I.A.2 at Exhibit No. 8, Page 2.

COLUMBIA GAS OF PENNSYLVANIA, INC.
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

14. Provide schedules and data in support of the following working capital items:
- a. Prepayments - List and Identify all items
 - b. Federal Excise Tax accrued and prepaid
 - c. Federal Income Tax accrued or prepaid
 - d. Pa. State Income Tax accrued or prepaid
 - e. Pa. Gross Receipts Tax accrued or prepaid
 - f. Pa. Capital Stock Tax accrued or prepaid
 - g. Pa. Pub Utility realty Tax accrued or prepaid
 - h. State sales tax accrued or prepaid
 - i. Payroll taxes accrued or prepaid
 - j. Any adjustment related to the above items for ratemaking purposes.

Response:

See Exhibit No.8, Schedule No.4, for cash working capital (lead/lag), Exhibit No.8, Schedule No.6, for prepayments working capital, and Exhibit No.8, Schedule No.7, for Gas Stored Underground working capital.

EXHIBIT 9

COLUMBIA GAS OF PENNSYLVANIA, INC.

53.53 I. VALUATION

A. ALL UTILITIES

3. Provide a description of the depreciation methods utilized in calculating annual depreciation amounts and depreciation reserves, together with a discussion of factors which were considered in arriving at estimates of service life and dispersion by account. Provide dates of all field inspections and facilities visited.

Response:

The depreciation methods utilized in calculating annual and accrued depreciation are discussed in Exhibit No. 109 in the section titled, "Calculation of Annual and Accrued Depreciation" beginning on page IV-2. The factors considered in arriving at estimates of service life and dispersion by account, begin in the section on page III-2 through page III-8.

Field trips and facilities visited over the years for Columbia Gas of Pennsylvania are presented in Exhibit No. 109, in the section "Field Trips", beginning on page III-2.

4. Set forth, in exhibit form, charts depicting the original and estimated survivor curves and a tabular presentation of the original life table plotted on the chart for each account, where the retirement rate method of analysis is utilized.
 - a. If any utility plant was excluded from the measures of value because it was deemed not to be "used and useful" in the public service; supply a detailed description of each item of property.
 - b. Provide the surviving original cost at test year end by vintage by account and include applicable depreciation reserves and annuities.
 - (i) These calculations should be provided for plant in service as well as other categories of plant, including, but not limited to, contributions in aid of construction, customers' advances for construction, and anticipated retirements associated with any construction work in progress claims (if applicable).

Response:

The charts depicting the original and estimated survivor curves, and a tabular presentation of the original life table plotted on the chart for each account where the retirement rate method of analysis is utilized, is presented in Exhibit No. 109 in the section beginning on page VI-2.

- a. There were no assets deemed not to be "used or useful" in the depreciation study.
- b. The detailed calculations which set forth the surviving original cost as of November 30, 2020, by vintage by account and including applicable depreciation reserves and accruals begin on page II-8.



2020 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION
ACCRUALS RELATED TO GAS PLANT
AS OF NOVEMBER 30, 2020

Prepared by:



*Excellence Delivered **As Promised***

COLUMBIA GAS OF PENNSYLVANIA, INC.
Pittsburgh, Pennsylvania

2020 DEPRECIATION STUDY
CALCULATED ANNUAL DEPRECIATION ACCRUALS
RELATED TO GAS PLANT
AS OF NOVEMBER 30, 2020

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC
Camp Hill, Pennsylvania



*Excellence Delivered **As Promised***

March 25, 2021

Columbia Gas of Pennsylvania, Inc.
121 Champion Way, Suite 100
Canonsburg, PA 15317

Ladies and Gentlemen:

Pursuant to your request, we have determined the annual depreciation accruals applicable to gas plant as of November 30, 2020. Summaries of the original cost, annual accruals and the book depreciation reserve are presented in Tables 1 and 2, beginning on page I-3 of the attached report.

A description of the methods and procedures upon which the study was based is set forth in a companion report, "2021 Depreciation Study - Calculated Annual Depreciation Accruals Related to Gas Plant as of November 30, 2021".

Respectfully submitted,

GANNETT FLEMING VALUATION
AND RATE CONSULTANTS, LLC

A handwritten signature in black ink that reads "John J. Spanos".

JOHN J. SPANOS
President

JJS:mle

068131.000

Gannett Fleming Valuation and Rate Consultants, LLC

207 Senate Avenue • Camp Hill, PA 17011-2316

t: 717.763.7211 • f: 717.763.4590

www.gfvrc.com

TABLE OF CONTENTS

PART I. RESULTS OF STUDY	I-1
Description of Summary Tabulations.....	I-2
Detailed Tabulations of Depreciation Calculations	I-2
 Table 1 Summary of Estimated Survivor Curve, Original Cost, Book Reserve and Calculated Annual Depreciation Accruals Related to Gas Plant as of November 30, 2020	 I-3
 Table 2 Amortization of Experienced Net Salvage.....	 I-6
 PART II. DETAILED DEPRECIATION CALCULATIONS	 II-1
Cumulative Depreciated Original Cost	II-2
Utility Plant in Service	II-7
 PART III. EXPERIENCED NET SALVAGE	 III-1

PART I. RESULTS OF STUDY

**COLUMBIA GAS OF PENNSYLVANIA, INC.
DEPRECIATION STUDY**

PART I. RESULTS OF STUDY

DESCRIPTION OF SUMMARY TABULATIONS

The results of the depreciation study are summarized in Table 1, which sets forth the calculated annual depreciation related to Gas Plant in Service as of November 30, 2020. Table 2 presents the experienced gross salvage and cost of removal associated with regular retirements during the five-year period, 2015-2019 and the annual amortization of net salvage.

DETAILED TABULATIONS OF DEPRECIATION CALCULATIONS

The supporting data for the depreciation calculations are presented in account sequence in the section beginning on II-7. The original cost, calculated accrued depreciation, allocated book reserve, future accruals, remaining life and annual accrual are shown for each vintage of each account or subaccount. The amounts of regular retirements, gross salvage and cost of removal are set forth by account for the years 2015 through 2019, beginning on beginning on III-2 through III-6.

COLUMBIA GAS OF PENNSYLVANIA, INC.

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO GAS PLANT AS OF NOVEMBER 30, 2020

	(1) DEPRECIABLE GROUP	(2) SURVIVOR CURVE	(3) ORIGINAL COST AS OF NOVEMBER 30, 2020	(4) BOOK RESERVE	(5) FUTURE BOOK ACCRUALS	(6) CALCULATED ANNUAL ACCRUAL AMOUNT		(7)=(6)/(3) RATE	(8)=(5)/(6) REMAINING LIFE
						AMOUNT	AMOUNT		
DEPRECIABLE PLANT									
UNDERGROUND STORAGE PLANT									
350.2	RIGHTS OF WAY	SQUARE	1,932.08	1,931	1	0	-	-	-
351.2	COMPRESSOR STATION STRUCTURES	65-R2.5	3,250,036.96	2,046,982	1,203,055	264,059	8.12	4.6	4.6
WELLS									
352.01	CONSTRUCTION	SQUARE	738,941.36	738,926	15	3	0.00	5.0	5.0
352.02	EQUIPMENT	50-S2.5	168,031.87	168,032	0	0	-	-	-
	TOTAL ACCOUNT 352		906,973.23	906,958	15	3	0.00	-	-
352.1	STORAGE LEASEHOLDS AND RIGHTS	SQUARE	206,940.78	206,932	9	2	0.00	4.5	4.5
353	LINES	50-S1.5	389,345.13	388,491	854	199	0.06	4.3	4.3
354	COMPRESSOR STATION EQUIPMENT	55-R2.5	948,176.70	783,946	164,231	36,345	3.83	4.5	4.5
355	MEASURING AND REGULATING EQUIPMENT	37-R1.5	104,476.92	104,477	0	0	-	-	-
	TOTAL UNDERGROUND STORAGE PLANT		5,807,881.80	4,439,717	1,368,165	300,608	5.18		
DISTRIBUTION PLANT									
LAND AND LAND RIGHTS									
374.4	LAND RIGHTS	70-R2.5	3,448,401.85	803,165	2,645,237	57,691	1.67	45.9	45.9
374.5	RIGHTS OF WAY	80-S4	3,233,171.42	1,756,977	1,476,194	35,018	1.08	42.2	42.2
	TOTAL ACCOUNT 374		6,681,573.27	2,560,142	4,121,431	92,709	1.39		
STRUCTURES AND IMPROVEMENTS									
375.34	MEASURING AND REGULATING	60-R1	5,532,311.36	1,352,223	4,180,088	121,243	2.19	34.5	34.5
375.6	INDUSTRIAL MEASURING AND REGULATING	55-R1	86,227.87	74,799	11,429	544	0.63	21.0	21.0
375.7	OTHER DISTRIBUTION SYSTEMS	90-R1.5	14,807,424.57	2,857,433	11,949,991	431,577	2.91	27.7	27.7
	DISTRIBUTION SYSTEM STRUCTURES	35-R2	2,914,621.35	974,135	1,940,486	85,643	2.94	22.7	22.7
	OTHER BUILDINGS	45-R3	17,722,045.92	3,831,568	13,890,477	517,220	2.92	26.9	26.9
	TOTAL ACCOUNT 375.70		16,515.17	7,896	8,619	364	2.20	23.7	23.7
375.8	COMMUNICATION		23,357,100.32	5,266,486	18,090,613	639,371	2.74		
	TOTAL ACCOUNT 375								
MAINS									
376	CAST IRON	71-R1	198,560.29	160,052	38,508	8,343	4.20	4.6	4.6
	BARE STEEL	71-R1	64,049,383.25	46,340,617	17,708,766	1,909,671	2.98	9.3	9.3
	OTHER	71-R1	1,928,357,530.84	242,174,302	1,686,183,229	41,557,002	2.16	40.6	40.6
	TOTAL ACCOUNT 376		1,992,605,474.38	288,674,971	1,703,930,503	43,475,016	2.18		

COLUMBIA GAS OF PENNSYLVANIA, INC.

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO GAS PLANT AS OF NOVEMBER 30, 2020

	(1) DEPRECIABLE GROUP	(2) SURVIVOR CURVE	(3) ORIGINAL COST AS OF NOVEMBER 30, 2020	(4) BOOK RESERVE	(5) FUTURE BOOK ACCRUALS	(6) CALCULATED ANNUAL ACCRUAL		(8)-(5)/(6) REMAINING LIFE
						AMOUNT	RATE (7)=(6)/(3)	
378	MEASURING AND REGULATING STATION EQUIPMENT - GENERAL	45-O1	112,862,439.95	17,480,520	95,381,920	4,434,229	3.93	21.5
379.1	MEASURING AND REGULATING STATION EQUIPMENT - CITY GATE	35-S2	135,966.90	27,311	108,656	11,636	8.56	9.3
380	SERVICES	50-R0.5 *	826,513.32	628,310	198,203	28,221	3.41	7.0
	BARE STEEL	50-R0.5	629,633,742.93	127,334,407	502,299,336	18,933,806	3.01	26.5
	OTHER							
	TOTAL ACCOUNT 380		630,460,256.25	127,962,717	502,497,539	18,962,027	3.01	
381	METERS	44-S1	40,743,003.61	17,078,832	23,664,172	982,342	2.41	24.1
381.1	METERS - AMR	15-S2.5	24,645,195.47	15,534,889	9,110,306	1,501,943	6.09	6.1
382	METER INSTALLATIONS	55-R3	41,270,604.91	14,413,488	26,857,117	774,804	1.88	34.7
383	HOUSE REGULATORS AND INSTALLATIONS	45-S2	18,139,751.01	7,565,856	10,573,895	364,463	2.01	29.0
385	INDUSTRIAL MEASURING AND REGULATING STATION EQUIPMENT - OTHER THAN METERS	30-R0.5	6,998,445.32	2,084,988	4,913,457	386,167	5.52	12.7
	OTHER EQUIPMENT							
387	GENERAL	32-R0.5	136,698.14	72,195	64,503	6,172	4.52	10.5
387.4	COMMUNICATION EQUIPMENT	25-R2	11,329,312.50	2,247,776	9,081,536	565,688	4.99	16.1
387.5	GPS EQUIPMENT	10-S3	2,201,371.95	1,313,395	887,977	238,060	10.81	3.7
	TOTAL ACCOUNT 387		13,667,382.59	3,633,366	10,034,016	809,920	5.93	
	TOTAL DISTRIBUTION PLANT		2,911,567,193.98	502,283,566	2,409,283,625	72,434,627	2.49	
	GENERAL PLANT							
390.1	STRUCTURES AND IMPROVEMENTS - COMMUNICATION	45-R2	49,821.42	49,821	0	0	-	-
	OFFICE FURNITURE AND EQUIPMENT							
391.1	FURNITURE	20-SQ	2,308,323.16	1,074,322	1,234,001	86,230	3.74	14.3
391.11	EQUIPMENT	15-SQ	91,303.67	41,394	49,910	5,835	6.39	8.6
391.12	INFORMATION SYSTEMS	5-SQ	3,270,693.60	2,297,010	973,684	686,165	20.98	1.4
	TOTAL ACCOUNT 391		5,670,320.43	3,412,726	2,257,595	778,230	13.72	
392	TRANSPORTATION EQUIPMENT - TRAILERS	15-SQ	25,616.89	26,344	(727)	0	-	-
	TOOLS, SHOP AND GARAGE EQUIPMENT							
394	EQUIPMENT	25-SQ	17,148,549.66	7,008,818	10,139,732	607,391	3.54	16.7
394.12	CNG FACILITIES	12-S1.5	2,414,784.54	2,411,138	3,647	3,397	0.14	1.1
	TOTAL ACCOUNT 394		19,563,334.20	9,419,956	10,143,379	610,788	3.12	

COLUMBIA GAS OF PENNSYLVANIA, INC.

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO GAS PLANT AS OF NOVEMBER 30, 2020

	(1) DEPRECIABLE GROUP	(2) SURVIVOR CURVE	(3) ORIGINAL COST AS OF NOVEMBER 30, 2020	(4) BOOK RESERVE	(5) FUTURE BOOK ACCRUALS	(6) CALCULATED ANNUAL ACCRUAL AMOUNT	(7)=(6)/(3) RATE	(8)=(5)/(6) COMPOSITE REMAINING LIFE
395	LABORATORY EQUIPMENT	20-SQ	266,039.42	69,334	196,705	13,881	5.22	14.2
396	POWER OPERATED EQUIPMENT	13-L2	948,698.04	927,581	21,117	5,387	0.57	3.9
397.5	COMMUNICATION EQUIPMENT - TELEMETERING	19-R2.5	787,915.68	786,130	1,786	150	0.02	11.9
398	MISCELLANEOUS EQUIPMENT	15-SQ	953,269.70	420,527	532,743	58,008	6.09	9.2
	TOTAL GENERAL PLANT		28,265,015.78	15,112,419	13,152,598	1,466,444	5.19	
	SUBTOTAL DEPRECIABLE PLANT		2,945,640,091.56	521,835,702	2,423,804,388	74,201,679	2.52	
	AMORTIZABLE PLANT							
303	MISCELLANEOUS INTANGIBLE PLANT							
303.6	MISCELLANEOUS INTANGIBLE PLANT - CLOUD		32,541,327.60	16,663,271	15,878,057	4,137,597	**	
362.1	ENVIRONMENTAL REMEDIATION		1,719,212.36	313,594	1,405,618	313,594	**	
375.71	STRUCTURES AND IMPROVEMENTS - LEASED		5,819,324.53	(211,300)	3,557,962	301,798	**	
	SUBTOTAL AMORTIZABLE PLANT		40,079,864.49	19,026,928	20,841,637	4,752,989		
	NONDEPRECIABLE PLANT		3,533,240.78	234,693				
	TOTAL GAS PLANT		2,989,253,196.83	541,097,323	2,444,646,025	78,954,668		

* Indicates the use of an interim survivor curve and retirement date.

** Accrual rate based on individual asset amortization.

COLUMBIA GAS OF PENNSYLVANIA, INC.

TABLE 2. AMORTIZATION OF EXPERIENCED NET SALVAGE

ACCOUNT (1)	2015		2016		2017		2018		2019		NET SALVAGE (12)	SALVAGE ACCRUAL (13)=(12)/5
	COST OF REMOVAL (2)	GROSS SALVAGE (3)	COST OF REMOVAL (4)	GROSS SALVAGE (5)	COST OF REMOVAL (6)	GROSS SALVAGE (7)	COST OF REMOVAL (8)	GROSS SALVAGE (9)	COST OF REMOVAL (10)	GROSS SALVAGE (11)		
351.20							21,434.00				(21,434.00)	(4,287)
353.00							633.71		220.40		(854.11)	(171)
362.10			27,770.30		56,417.81		101,148.90		84,433.04		(326,645.53)	(65,329)
374.20			192.38								(192.38)	(38)
374.40			17.13		38,240.05		3,646.96		4,027.90		(48,645.80)	(9,729)
374.50			14,909.72						13,446.58		(14,909.72)	(2,982)
375.34			26,961.80		36,137.31		35,116.51		518.68		(111,662.20)	(22,332)
375.60											(518.68)	(104)
375.70			22,140.00								(22,140.00)	(4,428)
376.00			978,776.00	20,828.00	1,258,205.78	1,297.00	1,441,406.34		1,562,758.41		(6,346,265.62)	(1,269,253)
378.00			104,647.11		247,333.58		370,922.18		197,320.30		(983,364.51)	(196,673)
379.10							76,321.00				(76,321.00)	(15,264)
380.00			2,926,513.18		2,142,798.48		3,052,049.09		3,345,786.25		(14,320,303.51)	(2,864,061)
381.00					675.71	215,365.51			675.26		304,580.41	60,916
382.00							10.01				(10.01)	(2)
385.00			27,745.87		113,814.22		124,886.37		187,266.09		(57,857.34)	(103,571)
387.40			1,060.39		459.97		5,150.01		2,001.41		(10,479.48)	(2,096)
392.00										606.50	40,094.68	8,019
394.00					2,431.14						2,183.22	437
396.00						52,454.60					285,499.23	57,100
397.50			29,402.56		257.12						(29,659.68)	(5,932)
TOTAL			4,164,784.07	156,361.71	3,900,212.71	35,805.89	5,232,727.08	204,218.83	5,398,454.32	606.50	(22,198,906.03)	(4,439,780)

**PART II. DETAILED DEPRECIATION
CALCULATIONS**

CUMULATIVE DEPRECIATED ORIGINAL COST

YEAR INST (1)	ORIGINAL COST (2)	ACCRUED DEPRECIATION (3)	DEPRECIATED ORIGINAL COST		CUMULATIVE AMOUNT (5)	PCT OF COL 4 TOTAL (6)
			AMOUNT (2) - (3) (4)			
1883	866	866				0.0
1884	2,319	2,319				0.0
1885	952	952				0.0
1886	9,401	9,401				0.0
1887	7,950	7,950				0.0
1888	7,418	7,418				0.0
1889	7,449	7,449				0.0
1890	5,619	5,619				0.0
1891	8,617	8,617				0.0
1892	2,295	2,295				0.0
1893	1,132	1,132				0.0
1894	3,312	3,313		1-		1- 0.0
1895	1,502	1,502				1- 0.0
1896	4,809	4,809				1- 0.0
1897	2,713	2,713				1- 0.0
1898	3,450	3,450				1- 0.0
1899	2,675	2,675				1- 0.0
1900	12,214	12,213		1		0.0
1901	474,229	379,597	94,632		94,632	0.0
1902	49,137	40,920	8,217		102,849	0.0
1903	44,493	38,725	5,768		108,617	0.0
1904	33,878	28,984	4,894		113,511	0.0
1905	42,931	36,936	5,995		119,506	0.0
1906	25,279	21,446	3,833		123,339	0.0
1907	63,873	51,456	12,417		135,756	0.0
1908	27,411	23,162	4,249		140,005	0.0
1909	24,342	20,716	3,626		143,631	0.0
1910	19,443	15,798	3,645		147,276	0.0
1911	22,822	18,508	4,314		151,590	0.0
1912	13,993	11,596	2,397		153,987	0.0
1913	30,050	24,811	5,239		159,226	0.0
1914	30,866	25,835	5,031		164,257	0.0
1915	28,878	24,956	3,922		168,179	0.0
1916	20,311	16,567	3,744		171,923	0.0
1917	23,513	19,159	4,354		176,277	0.0
1918	8,835	7,425	1,410		177,687	0.0
1919	13,280	10,850	2,430		180,117	0.0
1920	15,565	12,832	2,733		182,850	0.0
1921	35,323	28,651	6,672		189,522	0.0
1922	56,384	45,001	11,383		200,905	0.0
1923	36,470	30,051	6,419		207,324	0.0
1924	61,432	48,396	13,036		220,360	0.0
1925	91,323	72,891	18,432		238,792	0.0
1926	103,548	81,203	22,345		261,137	0.0
1927	76,097	60,277	15,820		276,957	0.0
1928	125,525	98,469	27,056		304,013	0.0

YEAR INST (1)	ORIGINAL COST (2)	ACCRUED DEPRECIATION (3)	DEPRECIATED ORIGINAL COST		PCT OF COL 4 TOTAL (6)
			AMOUNT (2) - (3) (4)	CUMULATIVE AMOUNT (5)	
1929	161,380	127,786	33,594	337,607	0.0
1930	148,456	115,094	33,362	370,969	0.0
1931	157,196	122,156	35,040	406,009	0.0
1932	29,375	23,098	6,277	412,286	0.0
1933	32,998	26,197	6,801	419,087	0.0
1934	38,976	30,946	8,030	427,117	0.0
1935	34,460	26,364	8,096	435,213	0.0
1936	45,905	36,007	9,898	445,111	0.0
1937	73,490	57,894	15,596	460,707	0.0
1938	68,027	55,415	12,612	473,319	0.0
1939	164,935	132,324	32,611	505,930	0.0
1940	151,315	118,601	32,714	538,644	0.0
1941	199,858	154,712	45,146	583,790	0.0
1942	112,090	88,436	23,654	607,444	0.0
1943	72,228	56,791	15,437	622,881	0.0
1944	32,932	26,892	6,040	628,921	0.0
1945	31,184	24,993	6,191	635,112	0.0
1946	101,844	79,738	22,106	657,218	0.0
1947	109,672	86,433	23,239	680,457	0.0
1948	286,230	221,851	64,379	744,836	0.0
1949	645,005	489,331	155,674	900,510	0.0
1950	1,175,703	887,250	288,453	1,188,963	0.0
1951	990,190	749,485	240,705	1,429,668	0.1
1952	2,128,039	1,565,254	562,785	1,992,453	0.1
1953	1,477,249	1,100,642	376,607	2,369,060	0.1
1954	1,878,525	1,394,185	484,340	2,853,400	0.1
1955	4,603,307	3,356,491	1,246,816	4,100,216	0.2
1956	2,878,981	2,078,323	800,658	4,900,874	0.2
1957	3,726,624	2,704,561	1,022,063	5,922,937	0.2
1958	4,467,414	3,242,076	1,225,338	7,148,275	0.3
1959	3,747,329	2,681,137	1,066,192	8,214,467	0.3
1960	3,930,413	2,811,652	1,118,761	9,333,228	0.4
1961	4,326,894	3,059,971	1,266,923	10,600,151	0.4
1962	4,007,335	2,811,998	1,195,337	11,795,488	0.5
1963	4,959,128	3,461,005	1,498,123	13,293,611	0.5
1964	5,087,929	3,552,870	1,535,059	14,828,670	0.6
1965	4,200,481	2,914,359	1,286,122	16,114,792	0.7
1966	5,620,011	3,882,936	1,737,075	17,851,867	0.7
1967	5,532,910	3,783,401	1,749,509	19,601,376	0.8
1968	4,888,635	3,233,863	1,654,772	21,256,148	0.9
1969	4,093,812	2,599,207	1,494,605	22,750,753	0.9
1970	4,123,814	2,942,973	1,180,841	23,931,594	1.0
1971	6,050,539	3,940,909	2,109,630	26,041,224	1.1
1972	3,449,204	2,056,008	1,393,196	27,434,420	1.1
1973	3,777,581	1,858,761	1,918,820	29,353,240	1.2
1974	3,266,975	1,367,617	1,899,358	31,252,598	1.3

YEAR INST (1)	ORIGINAL COST (2)	ACCRUED DEPRECIATION (3)	DEPRECIATED AMOUNT		ORIGINAL COST	PCT OF COL 4 TOTAL (6)
			(2)	(3)	CUMULATIVE AMOUNT (5)	
1975	3,235,790	1,360,830	1,874,960		33,127,558	1.4
1976	3,071,242	1,631,050	1,440,192		34,567,750	1.4
1977	6,842,373	3,593,323	3,249,050		37,816,800	1.6
1978	6,696,395	3,457,047	3,239,348		41,056,148	1.7
1979	8,364,347	4,311,818	4,052,529		45,108,677	1.9
1980	11,119,327	5,728,163	5,391,164		50,499,841	2.1
1981	13,005,486	6,676,472	6,329,014		56,828,855	2.3
1982	11,755,712	5,795,934	5,959,778		62,788,633	2.6
1983	10,183,143	4,948,687	5,234,456		68,023,089	2.8
1984	11,826,534	5,686,632	6,139,902		74,162,991	3.1
1985	12,023,389	5,775,145	6,248,244		80,411,235	3.3
1986	13,385,049	6,313,899	7,071,150		87,482,385	3.6
1987	14,202,164	6,703,387	7,498,777		94,981,162	3.9
1988	16,480,249	7,542,708	8,937,541		103,918,703	4.3
1989	15,565,633	7,075,105	8,490,528		112,409,231	4.6
1990	13,788,124	6,160,093	7,628,031		120,037,262	5.0
1991	13,546,959	5,928,693	7,618,266		127,655,528	5.3
1992	15,336,390	6,502,208	8,834,182		136,489,710	5.6
1993	16,272,882	6,755,886	9,516,996		146,006,706	6.0
1994	19,414,861	7,720,470	11,694,391		157,701,097	6.5
1995	19,561,458	8,257,017	11,304,441		169,005,538	7.0
1996	21,097,198	8,904,391	12,192,807		181,198,345	7.5
1997	22,359,945	8,699,355	13,660,590		194,858,935	8.0
1998	20,623,136	7,700,392	12,922,744		207,781,679	8.6
1999	19,453,816	6,973,274	12,480,542		220,262,221	9.1
2000	21,032,145	7,874,740	13,157,405		233,419,626	9.6
2001	21,452,872	7,363,880	14,088,992		247,508,618	10.2
2002	17,480,664	5,892,750	11,587,914		259,096,532	10.7
2003	21,070,104	6,705,326	14,364,778		273,461,310	11.3
2004	29,408,825	8,544,383	20,864,442		294,325,752	12.1
2005	34,760,123	9,120,006	25,640,117		319,965,869	13.2
2006	23,248,106	5,980,942	17,267,164		337,233,033	13.9
2007	55,893,310	13,172,361	42,720,949		379,953,982	15.7
2008	78,591,037	17,508,508	61,082,529		441,036,511	18.2
2009	53,563,386	11,242,968	42,320,418		483,356,929	19.9
2010	68,636,217	13,538,961	55,097,256		538,454,185	22.2
2011	124,847,205	26,828,075	98,019,130		636,473,315	26.3
2012	134,922,609	25,132,555	109,790,054		746,263,369	30.8
2013	165,215,169	24,022,533	141,192,636		887,456,005	36.6
2014	183,416,595	25,408,104	158,008,491	1,045,464,496		43.1
2015	187,011,710	22,084,280	164,927,430	1,210,391,926		49.9
2016	221,183,386	21,711,979	199,471,407	1,409,863,333		58.2
2017	272,607,027	22,140,341	250,466,686	1,660,330,019		68.5

YEAR INST (1)	ORIGINAL COST (2)	ACCRUED DEPRECIATION (3)	DEPRECIATED ORIGINAL COST		PCT OF COL 4 TOTAL (6)
			AMOUNT (2) - (3) (4)	CUMULATIVE AMOUNT (5)	
2018	232,152,538	14,016,549	218,135,989	1,878,466,008	77.5
2019	329,106,961	12,399,392	316,707,569	2,195,173,577	90.6
2020	232,057,995	3,427,184	228,630,811	2,423,804,388	100.0
SUBTOTAL	2,945,640,092	521,835,702	2,423,804,388		
AMORTIZABLE PLANT	40,079,864	19,026,928	21,052,936		
NONDEPRECIABLE PLANT	3,533,241	234,693	3,298,548		
TOTAL	2,989,253,197	541,097,323	2,448,155,872		

UTILITY PLANT IN SERVICE

INTERIM SURVIVOR CURVE.. SQUARE
PROBABLE RETIREMENT YEAR.. 6-2025
NET SALVAGE PERCENT.. 0

1972	1,896.43	1,733	1,895	1	4.58
1973	35.65	33	36		
	1,932.08	1,766	1,931	1	

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 0.0 0.00

INTERIM SURVIVOR CURVE.. IOWA 65-R2.5
 PROBABLE RETIREMENT YEAR.. 6-2025
 NET SALVAGE PERCENT.. 0

1970	124,246.77	113,340	105,349	18,898	4.41	4,285
1971	44,955.88	40,943	38,056	6,900	4.42	1,561
1972	14,771.99	13,431	12,484	2,288	4.43	516
1973	1,046.90	950	883	164	4.44	37
1996	107,318.16	90,405	84,031	23,287	4.57	5,096
1997	932.86	782	727	206	4.52	46
1998	7,804.72	6,491	6,033	1,772	4.54	390
2001	87,639.68	70,962	65,959	21,681	4.56	4,755
2003	212,167.85	168,143	156,287	55,881	4.56	12,255
2004	195,419.81	153,033	142,243	53,177	4.55	11,687
2008	670,893.34	490,624	456,030	214,863	4.56	47,119
2009	11,299.51	8,076	7,507	3,793	4.56	832
2012	59,116.96	38,361	35,656	23,461	4.55	5,156
2013	744,499.18	461,068	428,558	315,941	4.56	69,285
2014	847,869.30	495,664	460,716	387,153	4.56	84,902
2015	51,937.15	28,191	26,203	25,734	4.56	5,643
2016	9,550.22	4,699	4,368	5,182	4.56	1,136
2018	29,388.01	10,177	9,459	19,929	4.56	4,370
2019	29,178.67	6,921	6,433	22,746	4.56	4,988
	3,250,036.96	2,202,261	2,046,982	1,203,055		264,059

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 4.6 8.12

INTERIM SURVIVOR CURVE.. SQUARE
 PROBABLE RETIREMENT YEAR.. 6-2025
 NET SALVAGE PERCENT.. 0

1970	326,259.85	299,092	326,260			
1971	246,359.45	225,466	246,359			
1972	166,322.06	151,949	166,307	15	4.58	3
	738,941.36	676,507	738,926	15		3

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 5.0 0.00

INTERIM SURVIVOR CURVE.. IOWA 50-S2.5
PROBABLE RETIREMENT YEAR.. 6-2025
NET SALVAGE PERCENT.. 0

1970	62,707.48	57,316	62,707
1971	60,755.98	55,450	60,756
1972	42,286.87	38,543	42,287
1978	2,281.54	2,081	2,282
	168,031.87	153,390	168,032

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 0.0 0.00

INTERIM SURVIVOR CURVE.. SQUARE
PROBABLE RETIREMENT YEAR.. 6-2025
NET SALVAGE PERCENT.. 0

1970	206,940.78	189,709	206,932	9	4.58	2
	206,940.78	189,709	206,932	9		2

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 4.5 0.00

INTERIM SURVIVOR CURVE.. IOWA 50-S1.5
 PROBABLE RETIREMENT YEAR.. 6-2025
 NET SALVAGE PERCENT.. 0

1971	260,327.01	236,130	260,155	172	4.15	41
1972	56,823.89	51,465	56,701	123	4.17	29
1973	54,831.76	49,584	54,629	203	4.19	48
1984	13,885.22	12,388	13,648	237	4.40	54
1989	3,477.25	3,048	3,358	119	4.43	27
	389,345.13	352,615	388,491	854		199

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 4.3 0.05

INTERIM SURVIVOR CURVE.. IOWA 55-R2.5
 PROBABLE RETIREMENT YEAR.. 6-2025
 NET SALVAGE PERCENT.. 0

1950	5,342.87	4,981	5,272	71	3.67	19
1952	23,888.55	22,236	23,533	356	3.73	95
1957	363.93	337	357	7	3.89	2
1967	1,175.28	1,076	1,139	36	4.18	9
1969	2,168.00	1,979	2,094	74	4.22	18
1970	490,705.66	447,121	473,198	17,508	4.25	4,120
1971	21,258.89	19,340	20,468	791	4.27	185
1972	4,125.93	3,747	3,966	160	4.29	37
1979	1,860.35	1,680	1,778	82	4.45	18
1987	19,667.77	17,351	18,363	1,305	4.46	293
1991	11,137.86	9,665	10,229	909	4.48	203
1993	1,506.99	1,293	1,368	139	4.53	31
2013	280,679.09	173,825	183,963	96,716	4.56	21,210
2017	84,295.53	36,112	38,218	46,078	4.56	10,105
	948,176.70	740,743	783,946	164,231		36,345

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 4.5 3.83

INTERIM SURVIVOR CURVE.. IOWA 37-R1.5
PROBABLE RETIREMENT YEAR.. 6-2025
NET SALVAGE PERCENT.. 0

1970	56,228.75	50,674	56,229
1975	2,685.09	2,397	2,685
1981	13,738.52	12,455	13,739
1986	29,489.73	26,287	29,490
1987	2,334.83	2,075	2,334
	104,476.92	93,888	104,477

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 0.0 0.00

SURVIVOR CURVE.. IOWA 70-R2.5
 NET SALVAGE PERCENT.. 0

1920	1,634.55	1,464	1,375	260	7.29	36
1953	2.00	1	1	1	17.95	
1957	3,252.89	2,323	2,182	1,071	20.02	53
1961	830.30	566	532	298	22.27	13
1962	323.98	218	205	119	22.86	5
1963	5,711.86	3,798	3,567	2,145	23.46	91
1964	3,704.51	2,431	2,283	1,422	24.07	59
1965	1,144.03	741	696	448	24.69	18
1966	2,376.18	1,517	1,425	951	25.32	38
1967	11,428.60	7,190	6,753	4,676	25.96	180
1968	1,995.68	1,237	1,162	834	26.61	31
1969	12,205.21	7,450	6,997	5,208	27.27	191
1970	8,052.25	4,838	4,544	3,508	27.94	126
1971	20,679.96	12,225	11,482	9,198	28.62	321
1972	11,643.50	6,770	6,359	5,284	29.30	180
1973	5,483.64	3,134	2,944	2,540	29.99	85
1974	16,686.28	9,368	8,799	7,887	30.70	257
1975	25,272.60	13,933	13,086	12,187	31.41	388
1976	24,345.48	14,814	13,914	10,431	28.58	365
1977	54,513.13	32,664	30,679	23,834	29.04	821
1978	21,191.48	12,494	11,735	9,456	29.53	320
1979	36,560.99	21,198	19,910	16,651	30.01	555
1980	22,985.03	13,005	12,215	10,770	31.01	347
1981	39,985.17	22,224	20,873	19,112	31.50	607
1982	62,650.36	34,176	32,099	30,551	32.01	954
1983	40,223.76	21,524	20,216	20,008	32.51	615
1984	44,787.52	23,325	21,907	22,881	33.51	683
1985	66,040.22	33,681	31,634	34,406	34.03	1,011
1986	40,012.58	19,966	18,753	21,260	34.55	615
1987	63,884.90	31,169	29,275	34,610	35.08	987
1988	98,844.45	47,099	44,237	54,607	35.61	1,533
1989	131,102.83	60,543	56,863	74,240	36.61	2,028
1990	83,991.22	37,813	35,515	48,476	37.15	1,305
1991	49,174.56	21,553	20,243	28,932	37.70	767
1992	13,465.78	5,739	5,390	8,076	38.25	211
1993	43,321.43	17,814	16,731	26,590	39.25	677
1994	35,296.72	14,080	13,224	22,073	39.81	554
1995	19,271.18	7,444	6,992	12,279	40.38	304
1996	46,023.19	17,194	16,149	29,874	40.94	730
1997	37,722.81	13,603	12,776	24,947	41.52	601
1998	9,183.56	3,170	2,977	6,207	42.52	146
1999	6,027.94	2,001	1,879	4,149	43.10	96
2000	14,218.67	4,529	4,254	9,965	43.69	228

SURVIVOR CURVE.. IOWA 70-R2.5
 NET SALVAGE PERCENT.. 0

2001	13,623.43	4,152	3,900	9,723	44.28	220
2002	3,026.59	881	827	2,200	44.87	49
2003	43,663.62	12,090	11,355	32,309	45.48	710
2004	45,205.64	11,876	11,154	34,052	46.08	739
2005	25,590.76	6,313	5,929	19,662	47.08	418
2006	37,665.30	8,742	8,211	29,454	47.70	617
2007	66,976.43	14,561	13,676	53,300	48.31	1,103
2008	28,129.15	5,693	5,347	22,782	48.93	466
2009	154,820.42	28,982	27,221	127,599	49.56	2,575
2010	80,507.25	13,920	13,074	67,433	49.83	1,353
2011	76,852.69	12,089	11,354	65,499	50.46	1,298
2012	208,077.90	29,422	27,634	180,444	51.11	3,531
2013	199,508.04	24,998	23,479	176,029	51.76	3,401
2014	95,872.29	10,517	9,878	85,994	52.06	1,652
2015	135,848.29	12,661	11,892	123,956	52.72	2,351
2016	172,118.26	13,219	12,416	159,702	53.06	3,010
2017	340,390.50	20,594	19,342	321,048	53.08	6,048
2018	137,218.56	5,969	5,606	131,613	53.14	2,477
2019	194,684.74	5,081	4,773	189,912	52.93	3,588
2020	151,369.01	1,347	1,265	150,104	50.83	2,953
	3,448,401.85	855,133	803,165	2,645,237		57,691

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 45.9 1.67

SURVIVOR CURVE.. IOWA 80-S4
 NET SALVAGE PERCENT.. 0

1883	866.25	857	866			
1884	2,319.40	2,286	2,319			
1885	952.00	937	952			
1886	9,401.15	9,239	9,401			
1887	4,690.00	4,603	4,690			
1888	6,579.75	6,451	6,580			
1889	6,551.18	6,414	6,551			
1890	1,679.50	1,642	1,680			
1891	8,350.23	8,155	8,350			
1892	1,354.95	1,322	1,355			
1893	650.85	634	651			
1894	1,616.78	1,573	1,617			
1895	1,133.20	1,101	1,133			
1896	4,260.56	4,134	4,261			
1897	2,267.65	2,197	2,268			
1898	1,633.73	1,581	1,634			
1899	934.25	903	934			
1900	8,185.42	7,898	8,185			
1901	15,227.76	14,670	15,228			
1902	7,330.74	7,050	7,331			
1903	15,446.32	14,834	15,446			
1904	8,443.31	8,096	8,443			
1905	13,211.32	12,648	13,211			
1906	5,826.89	5,568	5,827			
1907	4,318.72	4,120	4,319			
1908	5,084.82	4,843	5,085			
1909	5,578.23	5,303	5,578			
1910	944.58	896	945			
1911	1,805.52	1,710	1,806			
1912	1,590.08	1,503	1,590			
1913	4,199.64	3,962	4,200			
1914	6,522.34	6,139	6,522			
1915	9,299.36	8,736	9,299			
1916	2,133.53	2,000	2,134			
1917	2,947.27	2,756	2,947			
1918	969.85	905	970			
1919	713.16	664	713			
1920	1,116.43	1,037	1,113	3	5.72	1
1921	2,386.50	2,210	2,372	14	5.92	2
1922	5,478.84	5,060	5,432	47	6.12	8
1923	5,748.64	5,294	5,683	66	6.32	10
1924	2,962.36	2,721	2,921	41	6.52	6
1925	8,085.67	7,404	7,948	138	6.74	20

SURVIVOR CURVE.. IOWA 80-S4
NET SALVAGE PERCENT.. 0

1926	3,690.49	3,369	3,617	73	6.97	10
1927	3,441.21	3,132	3,362	79	7.19	11
1928	3,616.30	3,280	3,521	95	7.43	13
1929	9,736.71	8,802	9,449	288	7.68	38
1930	3,705.73	3,338	3,583	123	7.93	16
1931	4,695.61	4,215	4,525	171	8.19	21
1932	2,031.20	1,816	1,950	81	8.47	10
1933	2,540.95	2,263	2,429	112	8.75	13
1934	4,020.82	3,566	3,828	193	9.04	21
1935	866.62	765	821	46	9.34	5
1936	4,994.63	4,392	4,715	280	9.66	29
1937	3,607.79	3,158	3,390	218	9.98	22
1938	1,245.49	1,085	1,165	80	10.32	8
1939	956.06	829	890	66	10.67	6
1940	13,850.45	11,941	12,819	1,031	11.03	93
1941	4,887.61	4,191	4,499	389	11.41	34
1942	8,169.68	6,965	7,477	693	11.80	59
1943	1,693.42	1,435	1,540	153	12.21	13
1944	978.40	824	885	93	12.63	7
1945	1,004.81	841	903	102	13.06	8
1946	344.00	286	307	37	13.52	3
1947	142.29	117	126	16	13.99	1
1948	3,080.71	2,523	2,708	373	14.48	26
1949	16,198.32	13,165	14,133	2,065	14.98	138
1950	20,911.66	16,860	18,099	2,813	15.50	181
1951	11,956.42	9,558	10,261	1,695	16.05	106
1952	8,038.39	6,369	6,837	1,201	16.61	72
1953	5,949.87	4,671	5,014	936	17.19	54
1954	21,585.01	16,785	18,019	3,566	17.79	200
1955	32,149.56	24,747	26,566	5,584	18.42	303
1956	51,558.51	39,275	42,162	9,397	19.06	493
1957	19,916.61	15,007	16,110	3,807	19.72	193
1958	63,499.25	47,299	50,776	12,723	20.41	623
1959	28,371.09	20,885	22,420	5,951	21.11	282
1960	26,305.63	19,124	20,530	5,776	21.84	264
1961	15,768.03	11,318	12,150	3,618	22.58	160
1962	18,087.78	12,808	13,750	4,338	23.35	186
1963	27,374.57	19,118	20,523	6,852	24.13	284
1964	40,027.79	27,554	29,580	10,448	24.93	419
1965	17,574.04	11,917	12,793	4,781	25.75	186
1966	18,597.25	12,416	13,329	5,268	26.59	198
1967	96,910.77	63,659	68,339	28,572	27.45	1,041
1968	82,637.79	53,384	57,309	25,329	28.32	894

SURVIVOR CURVE.. IOWA 80-S4
 NET SALVAGE PERCENT.. 0

1969	46,057.56	29,247	31,397	14,661	29.20	502
1970	45,097.36	28,129	30,197	14,900	30.10	495
1971	54,600.87	33,429	35,887	18,714	31.02	603
1972	80,822.88	48,554	52,123	28,700	31.94	899
1973	31,060.02	18,298	19,643	11,417	32.87	347
1974	42,716.26	24,658	26,471	16,245	33.82	480
1975	53,203.52	30,080	32,291	20,913	34.77	601
1976	46,796.87	26,815	28,786	18,011	33.10	544
1977	50,016.13	28,014	30,073	19,943	34.10	585
1978	27,600.77	15,103	16,213	11,388	35.10	324
1979	28,400.77	15,175	16,291	12,110	36.10	335
1980	24,054.08	12,542	13,464	10,590	37.10	285
1981	55,235.53	28,087	30,152	25,084	38.10	658
1982	47,534.94	23,558	25,290	22,245	39.10	569
1983	27,148.25	13,104	14,067	13,081	40.10	326
1984	30,306.87	14,238	15,285	15,022	41.10	365
1985	72,105.59	32,945	35,367	36,739	42.10	873
1986	17,533.91	7,785	8,357	9,177	43.10	213
1987	27,416.83	11,819	12,688	14,729	44.10	334
1988	11,339.22	4,742	5,091	6,248	45.10	139
1989	70,129.19	28,423	30,513	39,616	46.10	859
1990	44,760.66	17,564	18,855	25,906	47.10	550
1991	35,224.46	13,368	14,351	20,873	48.10	434
1992	54,141.31	19,848	21,307	32,834	49.10	669
1993	58,993.43	20,866	22,400	36,593	50.10	730
1994	184,531.84	62,888	67,511	117,021	51.10	2,290
1995	584,928.49	191,798	205,898	379,030	52.10	7,275
1996	126,940.88	39,986	42,926	84,015	53.10	1,582
1997	68,030.65	20,552	22,063	45,968	54.10	850
1998	40,132.45	11,606	12,459	27,673	55.10	502
2000	15,568.19	4,101	4,402	11,166	57.10	196
2001	39,714.12	9,948	10,679	29,035	58.10	500
2002	181,571.19	43,141	46,313	135,258	59.10	2,289
2003	1,938.28	436	468	1,470	60.10	24
	3,233,171.42	1,641,955	1,756,977	1,476,194		35,018

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 42.2 1.08

SURVIVOR CURVE.. IOWA 60-R1
 NET SALVAGE PERCENT.. 0

1913	430.94	400	425	6	4.30	1
1914	264.24	244	259	5	4.60	1
1925	211.96	184	195	17	7.95	2
1928	563.20	479	509	54	8.93	6
1929	4,189.96	3,543	3,762	428	9.27	46
1930	4,816.07	4,045	4,295	521	9.60	54
1931	1,147.03	957	1,016	131	9.95	13
1932	2,321.06	1,923	2,042	279	10.29	27
1933	2,564.07	2,109	2,239	325	10.64	31
1934	1,102.49	900	956	146	11.00	13
1935	97.20	79	84	13	11.35	1
1936	1,998.78	1,608	1,707	292	11.72	25
1938	618.55	490	520	99	12.46	8
1939	4,678.94	3,678	3,905	774	12.83	60
1940	554.29	432	459	95	13.21	7
1941	897.54	694	737	161	13.60	12
1942	116.21	89	94	22	13.99	2
1943	695.22	529	562	133	14.38	9
1945	639.53	478	508	132	15.18	9
1946	1,024.41	758	805	219	15.59	14
1947	2,770.44	2,032	2,157	613	16.00	38
1948	6,715.12	4,877	5,178	1,537	16.42	94
1949	1,156.73	832	883	274	16.84	16
1950	5,042.16	3,591	3,813	1,229	17.27	71
1951	7,765.78	5,475	5,813	1,953	17.70	110
1952	16,254.25	11,340	12,040	4,214	18.14	232
1953	22,977.37	15,862	16,841	6,136	18.58	330
1954	14,248.42	9,729	10,330	3,918	19.03	206
1955	12,140.88	8,199	8,705	3,436	19.48	176
1956	27,766.95	18,539	19,683	8,084	19.94	405
1957	29,374.58	19,382	20,579	8,796	20.41	431
1958	37,539.43	24,476	25,987	11,552	20.88	553
1959	24,741.65	15,938	16,922	7,820	21.35	366
1960	26,480.82	16,846	17,886	8,595	21.83	394
1961	38,520.33	24,191	25,684	12,836	22.32	575
1962	41,962.68	26,010	27,616	14,347	22.81	629
1963	26,476.42	16,190	17,189	9,287	23.31	398
1964	41,732.87	25,172	26,726	15,007	23.81	630
1965	27,828.79	16,549	17,571	10,258	24.32	422
1966	27,208.84	15,944	16,928	10,281	24.84	414
1967	18,571.27	10,722	11,384	7,187	25.36	283
1968	8,481.65	4,822	5,120	3,362	25.89	130
1969	17,416.71	9,748	10,350	7,067	26.42	267

SURVIVOR CURVE.. IOWA 60-R1
 NET SALVAGE PERCENT.. 0

1970	5,033.19	2,772	2,943	2,090	26.96	78
1971	20,648.66	11,185	11,875	8,774	27.50	319
1972	10,177.69	5,420	5,755	4,423	28.05	158
1973	12,609.98	6,597	7,004	5,606	28.61	196
1974	12,610.14	6,479	6,879	5,731	29.17	196
1975	16,872.99	8,510	9,035	7,838	29.74	264
1976	24,678.59	15,565	16,526	8,153	26.01	313
1977	22,573.98	14,016	14,881	7,693	26.51	290
1978	21,032.60	12,847	13,640	7,393	27.03	274
1979	33,072.13	19,860	21,086	11,986	27.55	435
1980	12,380.66	7,355	7,809	4,572	27.61	166
1981	27,705.54	16,163	17,161	10,545	28.15	375
1982	41,179.46	23,571	25,026	16,153	28.70	563
1983	15,103.94	8,534	9,061	6,043	28.81	210
1984	14,547.02	8,052	8,549	5,998	29.38	204
1985	12,792.93	6,932	7,360	5,433	29.94	181
1986	26,393.61	14,081	14,950	11,444	30.10	380
1987	3,272.42	1,706	1,811	1,461	30.69	48
1988	16,513.79	8,404	8,923	7,591	31.28	243
1989	14,462.96	7,224	7,670	6,793	31.48	216
1990	8,288.97	4,034	4,283	4,006	32.08	125
1991	35,776.94	17,051	18,104	17,673	32.31	547
1992	129.79	60	64	66	32.56	2
1993	21,326.29	9,648	10,244	11,082	33.19	334
1994	1,512.34	667	708	804	33.46	24
1995	13,604.01	5,843	6,204	7,400	33.76	219
1996	11,828.32	4,910	5,213	6,615	34.41	192
1997	16,887.61	6,802	7,222	9,666	34.72	278
1998	61,992.71	24,177	25,669	36,324	35.06	1,036
1999	2,550.99	961	1,020	1,531	35.40	43
2000	23,235.27	8,444	8,965	14,270	35.76	399
2001	26,878.06	9,445	10,028	16,850	35.83	470
2002	14,721.25	4,961	5,267	9,454	36.23	261
2003	62,637.02	20,294	21,547	41,090	36.34	1,131
2004	27,614.85	8,522	9,048	18,567	36.78	505
2005	48,475.82	14,276	15,157	33,319	36.94	902
2006	65,438.12	18,303	19,433	46,005	37.13	1,239
2007	109,457.61	28,930	30,716	78,742	37.35	2,108
2008	360,664.78	90,022	95,579	265,086	37.33	7,101
2009	100,851.22	23,488	24,938	75,913	37.60	2,019
2010	175,158.80	37,957	40,300	134,859	37.66	3,581
2011	199,439.56	40,008	42,478	156,962	37.53	4,182
2012	240,492.18	44,130	46,854	193,638	37.45	5,171

SURVIVOR CURVE.. IOWA 60-R1
 NET SALVAGE PERCENT.. 0

2013	228,047.63	37,719	40,048	188,000	37.43	5,023
2014	377,846.86	55,506	58,933	318,914	37.25	8,561
2015	895,417.15	114,972	122,070	773,347	36.78	21,026
2016	405,324.26	44,018	46,735	358,589	36.24	9,895
2017	368,189.21	32,327	34,323	333,866	35.49	9,407
2018	169,403.45	11,130	11,817	157,586	34.35	4,588
2019	397,029.41	16,636	17,663	379,366	32.37	11,720
2020	186,322.77	3,000	3,185	183,138	28.03	6,534
	5,532,311.36	1,273,599	1,352,223	4,180,088		121,243

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 34.5 2.19

SURVIVOR CURVE.. IOWA 55-R1
 NET SALVAGE PERCENT.. 0

1922	114.31	106	114			
1928	87.15	78	87			
1930	127.57	113	128			
1931	263.40	231	263			
1934	783.68	675	784			
1935	147.25	126	147			
1936	21.46	18	21			
1937	618.76	522	619			
1938	1,463.03	1,225	1,463			
1940	440.04	363	440			
1942	1,018.37	826	1,018			
1944	2,850.41	2,275	2,850			
1946	377.07	296	377			
1947	568.77	442	569			
1948	482.71	372	480	3	12.61	
1950	1,857.60	1,405	1,812	46	13.40	3
1951	3,131.90	2,346	3,026	106	13.80	8
1952	3,969.07	2,944	3,798	171	14.21	12
1953	4,259.74	3,127	4,034	226	14.62	15
1955	4,904.63	3,526	4,548	357	15.46	23
1956	2,507.83	1,783	2,300	208	15.89	13
1957	14,375.38	10,110	13,041	1,334	16.32	82
1958	1,667.93	1,160	1,496	172	16.76	10
1959	5,902.55	4,057	5,233	670	17.20	39
1960	1,345.00	913	1,178	167	17.65	9
1961	1,954.81	1,311	1,691	264	18.11	15
1963	3,416.99	2,234	2,882	535	19.04	28
1967	1,614.49	999	1,289	325	20.98	15
1970	2,450.11	1,448	1,868	582	22.49	26
1971	7,721.50	4,491	5,793	1,928	23.01	84
1972	1.00	1	1			
1980	3,885.67	2,434	3,140	746	24.10	31
1988	11,897.69	6,441	8,309	3,589	27.46	131
	86,227.87	58,398	74,799	11,429		544

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 21.0 0.63

GETTYSBURG GARAGE
 FULLY ACCRUED
 NET SALVAGE PERCENT.. 0

1934	778.19	778	778
1955	80.00	80	80
1957	860.20	860	860
1971	1,426.78	1,427	1,427
	3,145.17	3,145	3,145

WARREN SERVICE CENTER
 INTERIM SURVIVOR CURVE.. IOWA 90-R1.5
 PROBABLE RETIREMENT YEAR.. 6-2033
 NET SALVAGE PERCENT.. 0

1958	23,203.80	19,004	21,834	1,370	11.85	116
1959	530.28	433	497	33	11.87	3
1978	1,767.28	1,379	1,584	183	11.93	15
1985	19,951.17	14,840	17,050	2,902	12.20	238
1987	7,647.96	5,597	6,430	1,218	12.25	99
1995	8,147.09	5,508	6,328	1,819	12.18	149
1998	14,593.54	9,454	10,862	3,732	12.19	306
1999	5,204.23	3,310	3,803	1,401	12.25	114
2003	17,099.66	10,036	11,530	5,569	12.26	454
2007	4,558.44	2,385	2,740	1,818	12.23	149
2010	1,391.88	639	734	658	12.26	54
2012	15,971.90	6,507	7,476	8,496	12.24	694
2014	1,825.22	629	723	1,103	12.20	90
2015	221,738.88	68,096	78,235	143,504	12.22	11,743
2016	69,144.37	18,385	21,122	48,022	12.19	3,939
2019	16,304.76	1,720	1,976	14,329	12.01	1,193
	429,080.46	167,922	192,925	236,155		19,356

WASHINGTON SERVICE CENTER
 INTERIM SURVIVOR CURVE.. IOWA 90-R1.5
 PROBABLE RETIREMENT YEAR.. 6-2030
 NET SALVAGE PERCENT.. 0

1928	539.04	481	539			
1933	401.96	357	402			
1937	77.17	68	77			
1955	4,931.58	4,244	4,876	56	9.13	6
1957	17,943.97	15,383	17,674	270	9.15	30

WASHINGTON SERVICE CENTER
 INTERIM SURVIVOR CURVE.. IOWA 90-R1.5
 PROBABLE RETIREMENT YEAR.. 6-2030
 NET SALVAGE PERCENT.. 0

1958	1,091.86	934	1,073	19	9.17	2
1962	275.80	234	269	7	9.21	1
1963	17,141.83	14,501	16,661	481	9.22	52
1964	81,035.39	68,386	78,570	2,465	9.23	267
1965	2,232.00	1,879	2,159	73	9.24	8
1968	462.64	386	443	19	9.26	2
1969	861.74	717	824	38	9.27	4
1973	1,166.63	959	1,102	65	9.30	7
1976	1,998.47	1,651	1,897	102	9.34	11
1978	1,705.03	1,396	1,604	101	9.40	11
1982	1,111.41	892	1,025	87	9.43	9
1984	4,760.67	3,797	4,362	398	9.25	43
1985	911.17	720	827	84	9.43	9
1987	180,447.17	141,110	162,124	18,323	9.32	1,966
1995	194,747.16	142,068	163,225	31,522	9.43	3,343
1996	41,750.41	30,173	34,666	7,084	9.37	756
1997	51,204.74	36,570	42,016	9,189	9.37	981
1998	27,872.99	19,620	22,542	5,331	9.43	565
2005	152,784.63	94,925	109,061	43,723	9.40	4,651
2006	8,853.44	5,361	6,159	2,694	9.39	287
2008	7,810.00	4,442	5,104	2,706	9.42	287
2010	86,191.80	45,337	52,089	34,103	9.39	3,632
2011	15,761.85	7,881	9,055	6,707	9.42	712
2013	102,652.64	45,301	52,047	50,605	9.39	5,389
2015	29,890.28	10,946	12,576	17,314	9.38	1,846
2016	11,433.54	3,661	4,206	7,227	9.38	770
2017	165,917.86	44,383	50,993	114,925	9.36	12,278
2018	119,361.36	24,553	28,209	91,152	9.33	9,770
2019	344,054.27	45,587	52,376	291,678	9.28	31,431
2020	72,348.61	3,458	3,973	68,376	9.12	7,497
	1,751,731.11	822,361	944,806	806,925		86,623

BRADFORD OFFICE
 FULLY ACCRUED
 NET SALVAGE PERCENT.. 0

1958	20,999.60	21,000	21,000
1959	135.56	136	136
1960	720.61	721	721

BRADFORD OFFICE
 FULLY ACCRUED
 NET SALVAGE PERCENT.. 0

1964	300.54	301	301
1965	4,024.39	4,024	4,024
1993	27,303.35	27,303	27,303
1999	1,735.00	1,735	1,735
	55,219.05	55,220	55,219

BRADFORD OFFICE (NEW)
 INTERIM SURVIVOR CURVE.. IOWA 90-R1.5
 PROBABLE RETIREMENT YEAR.. 6-2069
 NET SALVAGE PERCENT.. 0

2019	1,853,669.43	69,142	79,685	1,773,984	36.60	48,470
	1,853,669.43	69,142	79,685	1,773,984		48,470

MONACA OPERATIONS CENTER
 INTERIM SURVIVOR CURVE.. IOWA 90-R1.5
 PROBABLE RETIREMENT YEAR.. 6-2069
 NET SALVAGE PERCENT.. 0

2019	7,165,109.54	267,259	308,013	6,857,097	36.60	187,352
	7,165,109.54	267,259	308,013	6,857,097		187,352

HANOVER SERVICE CENTER
 INTERIM SURVIVOR CURVE.. IOWA 90-R1.5
 PROBABLE RETIREMENT YEAR.. 6-2029
 NET SALVAGE PERCENT.. 0

1939	1,201.91	1,072	1,202			
1949	338.10	298	338			
1979	85,249.40	70,970	81,800	3,449	8.33	414
1983	5,480.40	4,470	5,152	328	8.45	39
1991	1,625.41	1,262	1,455	171	8.46	20
1992	3,087.69	2,386	2,750	338	8.35	40
1998	249,117.92	180,934	208,545	40,573	8.45	4,802
2000	1,971.28	1,397	1,610	361	8.40	43
2007	8,637.28	5,296	6,104	2,533	8.47	299
2009	8,908.99	5,126	5,908	3,001	8.42	356
2013	76,855.87	35,969	41,458	35,398	8.43	4,199

HANOVER SERVICE CENTER
 INTERIM SURVIVOR CURVE.. IOWA 90-R1.5
 PROBABLE RETIREMENT YEAR.. 6-2029
 NET SALVAGE PERCENT.. 0

2014	4,037.54	1,743	2,009	2,029	8.44	240
2015	4,344.34	1,699	1,958	2,386	8.43	283
2016	18,864.29	6,491	7,482	11,383	8.42	1,352
2017	23,434.00	6,765	7,797	15,637	8.42	1,857
2019	76,365.58	11,081	12,772	63,594	8.35	7,616
2020	9,024.62	476	549	8,476	8.22	1,031
	578,544.62	337,435	388,890	189,655		22,591

JEANNETTE SERVICE CENTER AND SHOP
 INTERIM SURVIVOR CURVE.. IOWA 90-R1.5
 PROBABLE RETIREMENT YEAR.. 6-2056
 NET SALVAGE PERCENT.. 0

1981	593,681.70	334,658	385,690	207,991	30.51	6,817
1986	14,531.65	7,652	8,819	5,713	30.94	185
1987	10,690.59	5,573	6,423	4,268	30.69	139
1988	10,177.82	5,213	6,008	4,170	30.87	135
1996	15,873.85	6,938	7,996	7,878	31.45	250
1997	7,912.22	3,372	3,886	4,026	31.53	128
1998	1,295.01	540	622	673	31.34	21
2000	2,043.39	805	928	1,116	31.40	36
2003	23,934.57	8,504	9,801	14,134	31.60	447
2006	122,192.82	38,222	44,051	78,142	31.67	2,467
2007	83,513.69	24,870	28,662	54,851	31.63	1,734
2009	23,195.60	6,170	7,111	16,085	31.50	511
2010	4,267.07	1,063	1,225	3,042	31.42	97
2013	784,265.50	150,108	172,998	611,267	31.34	19,504
2015	1,037,129.72	153,910	177,380	859,750	31.08	27,662
2016	79,468.00	9,934	11,449	68,019	30.92	2,200
2017	9,316.95	935	1,078	8,239	30.60	269
2018	86,622.59	6,427	7,407	79,216	30.16	2,627
2019	60,812.45	2,791	3,217	57,596	29.45	1,956
	2,970,925.19	767,685	884,750	2,086,175		67,185

OTHER BUILDINGS
 SURVIVOR CURVE.. IOWA 35-R2
 NET SALVAGE PERCENT.. 0

1919	142.68	143	143			
1931	4,005.57	4,006	4,006			
1948	244.11	244	244			
1950	56.50	56	57			
1951	94.17	94	94			
1953	2,600.92	2,601	2,601			
1954	2,263.57	2,264	2,264			
1955	7,045.40	7,045	7,045			
1956	294.53	293	295			
1961	5,869.31	5,623	5,869			
1966	2,114.98	1,940	2,115			
1969	1,259.56	1,124	1,260			
1971	106,649.53	93,394	106,650			
1972	9,337.50	8,097	9,338			
1975	5,803.33	4,878	5,651	152	5.58	27
1976	6,723.83	5,973	6,724			
1984	43,036.41	35,105	40,678	2,358	8.23	287
1985	3,259.62	2,621	3,037	223	8.63	26
1987	14,383.92	11,199	12,977	1,407	9.50	148
1988	14,889.44	11,390	13,198	1,691	9.96	170
1989	11,476.85	8,654	10,028	1,449	10.25	141
1990	32,260.00	23,843	27,628	4,632	10.74	431
1993	8,113.24	5,605	6,495	1,618	12.27	132
1994	15,147.02	10,244	11,870	3,277	12.64	259
1995	27,857.47	18,339	21,250	6,607	13.19	501
1996	2,392.16	1,530	1,773	619	13.75	45
1997	1,337.50	833	965	372	14.18	26
1998	56,879.39	34,298	39,743	17,136	14.76	1,161
1999	23,666.45	13,786	15,975	7,692	15.35	501
2000	187,147.80	105,458	122,200	64,948	15.82	4,105
2001	9,051.12	4,903	5,681	3,370	16.43	205
2003	12,533.29	6,243	7,234	5,299	17.55	302
2006	1,753.31	753	873	881	19.14	46
2007	26,323.12	10,666	12,359	13,964	19.70	709
2008	132,433.81	50,325	58,314	74,120	20.26	3,658
2009	76,246.04	26,983	31,267	44,979	20.84	2,158
2010	11,740.04	3,840	4,450	7,290	21.43	340
2011	8,340.00	2,505	2,903	5,437	21.93	248
2012	10,145.94	2,767	3,206	6,940	22.45	309
2013	565,538.18	137,991	159,897	405,641	22.98	17,652
2014	196,019.90	42,144	48,834	147,185	23.43	6,282
2015	154,103.38	28,463	32,982	121,122	23.91	5,066

OTHER BUILDINGS

SURVIVOR CURVE.. IOWA 35-R2

NET SALVAGE PERCENT.. 0

2016	416,198.18	64,136	74,318	341,880	24.24	14,104	
2017	90,145.26	10,998	12,744	77,401	24.59	3,148	
2018	75,032.14	6,670	7,729	67,303	24.76	2,718	
2019	423,219.69	23,065	26,727	396,493	24.56	16,144	
2020	109,445.19	2,112	2,447	106,998	23.29	4,594	
	2,914,621.35	845,244	974,135	1,940,486		85,643	
	17,722,045.92	3,335,413	3,831,568	13,890,477		517,220	
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						26.9	2.92

SURVIVOR CURVE.. IOWA 45-R3
NET SALVAGE PERCENT.. 0

2001	16,515.17	7,440	7,896	8,619	23.69	364
	16,515.17	7,440	7,896	8,619		364

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 23.7 2.20

INTERIM SURVIVOR CURVE.. IOWA 71-R1
 PROBABLE RETIREMENT YEAR.. 12-2025
 NET SALVAGE PERCENT.. 0

1901	19,237.46	18,159	15,752	3,485	3.97	878
1902	207.30	196	170	37	4.01	9
1903	401.87	379	329	73	4.05	18
1904	778.01	733	636	142	4.09	35
1905	397.36	374	324	73	4.12	18
1908	6.70	6	5	2	4.22	
1911	770.75	724	628	143	4.30	33
1912	62.67	59	51	12	4.33	3
1913	305.64	287	249	57	4.35	13
1914	111.28	104	90	21	4.38	5
1915	454.56	426	370	85	4.40	19
1917	1,022.70	957	830	193	4.44	43
1918	36.45	34	29	7	4.46	2
1919	36.74	34	29	8	4.48	2
1920	1,081.46	1,011	877	204	4.50	45
1921	16,652.38	15,562	13,500	3,152	4.51	699
1922	360.98	337	292	69	4.53	15
1923	491.76	459	398	94	4.55	21
1924	1,053.15	983	853	200	4.56	44
1925	1,397.01	1,303	1,130	267	4.58	58
1926	2,073.74	1,934	1,678	396	4.59	86
1927	254.63	237	206	49	4.61	11
1928	791.00	737	639	152	4.62	33
1929	10,400.01	9,683	8,400	2,000	4.63	432
1930	4,908.12	4,568	3,963	945	4.64	204
1931	9,746.10	9,065	7,864	1,882	4.66	404
1932	0.23					
1933	1,837.88	1,708	1,482	356	4.68	76
1934	541.26	503	436	105	4.69	22
1937	78.18	72	62	16	4.72	3
1938	3,094.74	2,868	2,488	607	4.73	128
1939	94,180.16	87,216	75,658	18,522	4.74	3,908
1940	3,407.53	3,154	2,736	672	4.75	141
1941	5,688.87	5,262	4,565	1,124	4.76	236
1942	171.85	159	138	34	4.77	7
1943	1,847.42	1,706	1,480	367	4.78	77
1944	2,481.50	2,291	1,987	494	4.78	103
1945	1,787.67	1,649	1,430	358	4.79	75
1946	1,171.37	1,080	937	234	4.80	49
1947	462.43	426	370	92	4.81	19
1948	8,398.74	7,729	6,705	1,694	4.82	351

INTERIM SURVIVOR CURVE.. IOWA 71-R1
 PROBABLE RETIREMENT YEAR.. 12-2025
 NET SALVAGE PERCENT.. 0

1949	15.21	14	12	3	4.82	1
1951	18.79	17	15	4	4.84	1
1982	336.63	299	259	78	4.87	16
	198,560.29	184,504	160,052	38,508		8,343

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 4.6 4.20

INTERIM SURVIVOR CURVE.. IOWA 71-R1
 PROBABLE RETIREMENT YEAR.. 12-2030
 NET SALVAGE PERCENT.. 0

1901	439,763.95	401,878	348,617	91,147	6.11	14,918
1902	39,185.34	35,742	31,005	8,180	6.23	1,313
1903	27,070.77	24,642	21,376	5,695	6.36	895
1904	22,429.81	20,379	17,678	4,752	6.48	733
1905	27,773.03	25,189	21,851	5,922	6.59	899
1906	17,862.26	16,172	14,029	3,833	6.70	572
1907	57,514.28	51,987	45,097	12,417	6.80	1,826
1908	19,555.26	17,647	15,308	4,247	6.90	616
1909	16,600.12	14,956	12,974	3,626	7.00	518
1910	16,596.06	14,930	12,951	3,645	7.09	514
1911	18,895.60	16,973	14,724	4,172	7.18	581
1912	10,743.25	9,635	8,358	2,385	7.27	328
1913	23,206.68	20,785	18,030	5,177	7.35	704
1914	22,320.65	19,963	17,317	5,004	7.43	673
1915	17,029.31	15,209	13,193	3,836	7.51	511
1916	16,552.56	14,765	12,808	3,745	7.58	494
1917	18,314.91	16,316	14,154	4,161	7.65	544
1918	6,150.98	5,473	4,748	1,403	7.72	182
1919	10,569.90	9,393	8,148	2,422	7.78	311
1920	9,843.73	8,736	7,578	2,266	7.85	289
1921	14,554.06	12,901	11,191	3,363	7.91	425
1922	47,057.02	41,661	36,140	10,917	7.97	1,370
1923	24,054.66	21,270	18,451	5,604	8.03	698
1924	51,886.97	45,829	39,755	12,132	8.08	1,501
1925	71,490.95	63,063	54,705	16,786	8.14	2,062
1926	87,729.16	77,298	67,054	20,675	8.19	2,524
1927	61,230.40	53,886	46,745	14,485	8.24	1,758
1928	106,931.99	93,993	81,536	25,396	8.29	3,063
1929	122,288.55	107,358	93,130	29,159	8.34	3,496
1930	128,625.21	112,799	97,850	30,775	8.38	3,672
1931	134,195.24	117,532	101,956	32,239	8.43	3,824
1932	22,964.97	20,090	17,427	5,538	8.47	654
1933	22,409.01	19,581	16,986	5,423	8.51	637
1934	28,815.44	25,148	21,815	7,000	8.55	819
1935	30,992.17	27,014	23,434	7,558	8.59	880
1936	34,386.93	29,935	25,968	8,419	8.63	976
1937	57,780.67	50,233	43,576	14,205	8.67	1,638
1938	39,240.91	34,074	29,558	9,683	8.70	1,113
1939	39,678.65	34,407	29,847	9,832	8.74	1,125
1940	113,047.16	97,904	84,929	28,118	8.77	3,206
1941	157,870.70	136,522	118,429	39,442	8.81	4,477
1942	74,518.34	64,354	55,825	18,693	8.84	2,115

INTERIM SURVIVOR CURVE.. IOWA 71-R1
 PROBABLE RETIREMENT YEAR.. 12-2030
 NET SALVAGE PERCENT.. 0

1943	52,554.06	45,324	39,317	13,237	8.87	1,492
1944	15,631.28	13,461	11,677	3,954	8.90	444
1945	15,724.40	13,522	11,730	3,994	8.93	447
1946	67,575.09	58,021	50,332	17,243	8.96	1,924
1947	55,375.53	47,471	41,180	14,196	8.99	1,579
1948	189,917.23	162,543	141,001	48,916	9.02	5,423
1949	525,954.82	449,392	389,834	136,121	9.05	15,041
1950	994,864.19	848,739	736,256	258,608	9.07	28,512
1951	777,955.55	662,507	574,706	203,250	9.10	22,335
1952	1,738,530.06	1,478,098	1,282,207	456,323	9.12	50,035
1953	1,248,183.08	1,059,158	918,789	329,394	9.15	35,999
1954	1,550,885.40	1,313,693	1,139,590	411,295	9.17	44,852
1955	3,945,417.32	3,335,180	2,893,172	1,052,245	9.20	114,374
1956	2,287,134.65	1,929,656	1,673,920	613,215	9.22	66,509
1957	3,076,994.35	2,590,983	2,247,602	829,392	9.24	89,761
1958	3,603,090.85	3,027,749	2,626,484	976,607	9.26	105,465
1959	2,837,361.41	2,378,702	2,063,455	773,906	9.29	83,305
1960	3,101,617.92	2,594,472	2,250,629	850,989	9.31	91,406
1961	3,343,316.31	2,790,231	2,420,444	922,872	9.33	98,914
1962	2,908,593.32	2,421,666	2,100,725	807,868	9.35	86,403
1963	3,795,598.59	3,153,042	2,735,172	1,060,427	9.36	113,293
1964	3,664,798.16	3,036,578	2,634,143	1,030,655	9.38	109,878
1965	2,939,601.64	2,429,228	2,107,285	832,317	9.40	88,544
1966	4,161,265.25	3,429,257	2,974,781	1,186,484	9.42	125,954
1967	3,951,020.44	3,246,633	2,816,360	1,134,660	9.44	120,197
1968	3,026,801.30	2,480,312	2,151,599	875,202	9.45	92,614
1969	2,181,621.50	1,782,232	1,546,034	635,588	9.47	67,116
1970	1,064,156.90	866,532	751,691	312,466	9.49	32,926
1971	2,554,118.63	2,073,255	1,798,489	755,630	9.50	79,540
1972	933,580.49	755,145	655,066	278,514	9.52	29,256
1973	616,273.43	496,803	430,962	185,311	9.53	19,445
1974	1,347.20	1,082	939	408	9.55	43
1975	814.03	651	565	249	9.56	26
1976	259.38	213	185	74	9.64	8
1977	2,084.99	1,711	1,484	601	9.49	63
1978	175,486.56	143,653	124,615	50,872	9.40	5,412
1979	18,317.33	14,870	12,899	5,418	9.60	564
1980	211,560.34	171,004	148,341	63,219	9.58	6,599
1981	60.06	48	42	18	9.60	2
1983	7,789.49	6,208	5,385	2,404	9.53	252
1984	207.92	164	142	66	9.67	7
1985	36.16	28	24	12	9.63	1

INTERIM SURVIVOR CURVE.. IOWA 71-R1
 PROBABLE RETIREMENT YEAR.. 12-2030
 NET SALVAGE PERCENT.. 0

1986	83.84	66	57	27	9.63	3
1988	0.10					
1989	911.06	698	605	306	9.57	32
1990	11,903.30	9,051	7,852	4,051	9.58	423
1992	45,851.46	34,269	29,727	16,124	9.60	1,680
1997	4,061.62	2,872	2,491	1,571	9.70	162
1998	670.88	468	406	265	9.74	27
2008	78.49	44	38	40	9.71	4
2011	32,618.28	16,065	13,937	18,681	9.70	1,926
	64,049,383.25	53,420,372	46,340,617	17,708,766		1,909,671

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 9.3 2.98

SURVIVOR CURVE.. IOWA 71-R1
 NET SALVAGE PERCENT.. 0

1952	122,353.82	75,222	65,253	57,101	27.35	2,088
1954	27,785.61	16,691	14,479	13,307	28.35	469
1955	103,552.68	61,461	53,316	50,237	28.86	1,741
1956	83,012.30	48,662	42,213	40,799	29.38	1,389
1957	88,985.99	51,511	44,684	44,302	29.90	1,482
1958	78,166.13	44,676	38,755	39,411	30.42	1,296
1959	86,823.11	48,963	42,474	44,349	30.96	1,432
1960	61,393.08	34,164	29,636	31,757	31.49	1,008
1961	20,695.71	11,359	9,854	10,842	32.03	338
1962	78,877.98	42,683	37,026	41,852	32.58	1,285
1963	103,000.48	54,938	47,657	55,343	33.13	1,670
1964	163,529.98	85,956	74,564	88,966	33.68	2,642
1965	73,273.10	37,937	32,909	40,364	34.24	1,179
1966	110,448.97	56,314	48,851	61,598	34.80	1,770
1967	60,050.12	30,135	26,141	33,909	35.37	959
1968	286,426.34	141,397	122,658	163,768	35.95	4,555
1969	620,695.43	301,341	261,405	359,290	36.53	9,835
1970	649,837.09	310,180	269,072	380,765	37.11	10,260
1971	1,345,375.26	630,994	547,369	798,006	37.70	21,167
1972	1,048,528.14	483,057	419,038	629,490	38.29	16,440
1973	2,261,846.07	1,022,920	887,353	1,374,493	38.89	35,343
1974	2,778,038.94	1,232,894	1,069,500	1,708,539	39.49	43,265
1975	2,646,735.25	1,151,886	999,228	1,647,507	40.10	41,085
1976	2,311,098.89	1,303,691	1,130,914	1,180,185	34.32	34,388
1977	4,627,348.97	2,571,418	2,230,630	2,396,719	34.71	69,050
1978	4,837,235.90	2,646,935	2,296,139	2,541,097	35.10	72,396
1979	5,917,181.58	3,185,811	2,763,598	3,153,584	35.51	88,808
1980	7,481,344.02	3,961,372	3,436,375	4,044,969	35.92	112,610
1981	8,279,716.94	4,307,937	3,737,010	4,542,707	36.34	125,006
1982	8,123,864.82	4,150,483	3,600,423	4,523,442	36.77	123,020
1983	6,885,851.53	3,452,566	2,995,000	3,890,852	37.21	104,565
1984	7,897,496.86	3,882,409	3,367,877	4,529,620	37.66	120,277
1985	7,280,914.41	3,507,216	3,042,408	4,238,506	38.11	111,218
1986	8,150,022.78	3,842,736	3,333,462	4,816,561	38.58	124,846
1987	8,043,415.94	3,709,623	3,217,990	4,825,426	39.04	123,602
1988	9,279,781.31	4,211,165	3,653,063	5,626,718	39.01	144,238
1989	8,329,094.52	3,689,789	3,200,785	5,128,310	39.50	129,831
1990	6,823,940.74	2,947,260	2,556,662	4,267,279	40.01	106,655
1991	6,835,491.12	2,875,691	2,494,578	4,340,913	40.51	107,157
1992	7,865,226.91	3,240,473	2,811,016	5,054,211	40.55	124,641
1993	8,316,602.49	3,329,136	2,887,929	5,428,673	41.08	132,149
1994	10,437,289.98	4,052,800	3,515,686	6,921,604	41.61	166,345
1995	10,185,330.97	3,857,185	3,345,996	6,839,335	41.70	164,013

SURVIVOR CURVE.. IOWA 71-R1
 NET SALVAGE PERCENT.. 0

1996	10,347,065.51	3,789,095	3,286,930	7,060,136	42.25	167,104
1997	12,898,464.49	4,590,564	3,982,181	8,916,283	42.38	210,389
1998	11,002,645.06	3,798,113	3,294,752	7,707,893	42.52	181,277
1999	9,582,463.24	3,181,378	2,759,753	6,822,710	43.10	158,300
2000	9,551,519.66	3,061,262	2,655,556	6,895,964	43.28	159,334
2001	11,241,092.63	3,470,125	3,010,232	8,230,861	43.48	189,302
2002	7,473,399.87	2,215,863	1,922,197	5,551,203	43.70	127,030
2003	10,887,037.56	3,090,830	2,681,205	8,205,833	43.93	186,793
2004	16,834,108.61	4,560,360	3,955,979	12,878,130	44.19	291,426
2005	23,055,099.51	5,971,271	5,179,904	17,875,196	44.11	405,241
2006	12,291,625.82	3,012,677	2,613,410	9,678,216	44.41	217,929
2007	36,911,968.75	8,567,268	7,431,855	29,480,114	44.39	664,116
2008	56,693,375.61	12,387,503	10,745,798	45,947,578	44.40	1,034,855
2009	34,584,193.31	7,069,009	6,132,159	28,452,034	44.45	640,091
2010	45,887,642.67	8,700,297	7,547,254	38,340,389	44.53	861,001
2011	83,948,707.94	14,707,814	12,758,600	71,190,108	44.34	1,605,550
2012	90,847,368.09	14,526,494	12,601,311	78,246,057	44.22	1,769,472
2013	119,804,690.49	17,323,758	15,027,856	104,776,834	43.87	2,388,348
2014	125,868,075.55	16,148,874	14,008,678	111,859,398	43.58	2,566,760
2015	123,984,325.82	13,836,651	12,002,892	111,981,434	43.13	2,596,370
2016	170,597,491.54	16,121,463	13,984,899	156,612,593	42.31	3,701,550
2017	193,052,624.97	14,710,610	12,761,026	180,291,599	41.43	4,351,716
2018	157,408,033.13	8,972,258	7,783,172	149,624,861	39.96	3,744,366
2019	232,070,542.92	8,424,161	7,307,715	224,762,828	37.64	5,971,382
2020	160,726,285.83	2,234,095	1,938,012	158,788,274	32.54	4,879,787
	1,928,357,530.84	279,172,830	242,174,302	1,686,183,229		41,557,002

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 40.6 2.16

SURVIVOR CURVE.. IOWA 45-01
 NET SALVAGE PERCENT.. 0

1894	756.79	757	757			
1912	38.19	38	38			
1914	87.37	87	87			
1920	86.01	86	86			
1928	88.16	88	88			
1929	428.62	429	429			
1930	205.41	205	205			
1931	188.76	188	185	4	0.29	4
1932	357.90	352	347	11	0.79	11
1933	427.81	416	410	18	1.29	14
1934	281.77	271	267	15	1.79	8
1935	187.38	178	176	11	2.29	5
1936	261.36	245	242	19	2.79	7
1938	483.00	442	436	47	3.79	12
1939	453.88	411	405	49	4.29	11
1940	995.02	889	877	118	4.79	25
1941	1,624.58	1,434	1,414	211	5.29	40
1942	409.66	357	352	58	5.79	10
1943	131.78	113	111	21	6.29	3
1944	1,145.13	972	959	186	6.79	27
1945	154.75	130	128	27	7.29	4
1946	265.58	220	217	49	7.79	6
1947	765.94	625	616	150	8.29	18
1948	318.16	256	252	66	8.79	8
1949	1,419.90	1,127	1,111	309	9.29	33
1950	11,285.11	8,830	8,708	2,577	9.79	263
1951	10,211.76	7,877	7,769	2,443	10.29	237
1952	47,539.40	36,140	35,643	11,896	10.79	1,103
1953	40,971.38	30,692	30,270	10,701	11.29	948
1954	23,449.39	17,306	17,068	6,381	11.79	541
1955	113,703.85	82,650	81,512	32,192	12.29	2,619
1956	49,619.33	35,517	35,028	14,591	12.79	1,141
1957	33,687.24	23,738	23,411	10,276	13.29	773
1958	37,529.62	26,029	25,671	11,859	13.79	860
1959	46,642.57	31,831	31,393	15,250	14.29	1,067
1960	71,241.68	47,827	47,169	24,073	14.79	1,628
1961	88,868.06	58,672	57,864	31,004	15.29	2,028
1962	82,895.96	53,809	53,068	29,828	15.79	1,889
1963	70,188.29	44,780	44,164	26,024	16.29	1,598
1964	65,166.60	40,852	40,290	24,877	16.79	1,482
1965	42,314.03	26,056	25,697	16,617	17.29	961
1966	48,399.76	29,266	28,863	19,537	17.79	1,098
1967	51,144.79	30,358	29,940	21,205	18.29	1,159

SURVIVOR CURVE.. IOWA 45-01
 NET SALVAGE PERCENT.. 0

1968	40,180.21	23,403	23,081	17,099	18.79	910
1969	62,508.28	35,713	35,221	27,287	19.29	1,415
1970	35,845.00	20,081	19,805	16,040	19.79	811
1971	144,226.47	79,196	78,106	66,120	20.29	3,259
1972	91,047.30	48,983	48,309	42,738	20.79	2,056
1973	86,174.45	45,404	44,779	41,395	21.29	1,944
1974	92,467.30	47,693	47,037	45,430	21.79	2,085
1975	60,956.82	30,763	30,340	30,617	22.29	1,374
1976	51,213.34	35,260	34,775	16,438	20.10	818
1977	69,853.90	47,312	46,661	23,193	20.69	1,121
1978	41,355.32	27,716	27,335	14,020	20.87	672
1979	41,775.89	27,685	27,304	14,472	21.08	687
1980	47,625.46	30,990	30,563	17,062	21.70	786
1981	100,440.06	64,533	63,645	36,795	21.93	1,678
1982	226,304.79	143,455	141,480	84,825	22.19	3,823
1983	97,735.81	61,075	60,234	37,502	22.46	1,670
1984	132,917.23	81,797	80,671	52,246	22.76	2,296
1985	210,451.33	127,449	125,695	84,756	23.06	3,675
1986	164,230.59	97,783	96,437	67,794	23.39	2,898
1987	169,938.48	99,380	98,012	71,926	23.73	3,031
1988	306,838.69	176,064	173,641	133,198	24.08	5,531
1989	216,684.51	122,535	120,848	95,837	24.14	3,970
1990	222,568.78	123,214	121,518	101,051	24.53	4,119
1991	196,994.89	107,205	105,729	91,266	24.64	3,704
1992	89,788.00	47,713	47,056	42,732	25.06	1,705
1993	147,977.76	77,082	76,021	71,957	25.22	2,853
1994	258,189.22	131,625	129,813	128,376	25.40	5,054
1995	110,264.47	54,934	54,178	56,086	25.60	2,191
1996	390,959.65	189,967	187,352	203,608	25.83	7,883
1997	105,566.83	49,933	49,246	56,321	26.09	2,159
1998	45,281.97	20,911	20,623	24,659	26.13	944
1999	519,882.63	232,699	229,496	290,387	26.43	10,987
2000	943,291.18	410,237	404,590	538,701	26.53	20,305
2001	228,840.48	96,410	95,083	133,757	26.67	5,015
2002	283,975.45	116,089	114,491	169,484	26.63	6,364
2003	376,982.29	148,380	146,338	230,644	26.83	8,596
2004	304,084.71	115,309	113,722	190,363	26.87	7,085
2005	141,207.33	51,597	50,887	90,320	26.78	3,373
2006	591,934.33	206,526	203,683	388,251	26.90	14,433
2007	480,033.23	160,379	158,172	321,861	26.74	12,037
2008	1,306,189.89	413,540	407,848	898,342	26.80	33,520
2009	474,229.85	142,411	140,451	333,779	26.60	12,548
2010	1,506,822.25	425,376	419,521	1,087,301	26.48	41,061

SURVIVOR CURVE.. IOWA 45-01
 NET SALVAGE PERCENT.. 0

2011	2,077,890.31	547,940	540,398	1,537,492	26.30	58,460
2012	744,546.73	182,339	179,829	564,718	25.95	21,762
2013	3,164,192.82	708,779	699,023	2,465,170	25.70	95,921
2014	10,703,052.46	2,170,579	2,140,703	8,562,349	25.23	339,372
2015	9,453,571.82	1,705,424	1,681,950	7,771,622	24.61	315,791
2016	9,020,277.79	1,406,261	1,386,905	7,633,373	23.91	319,254
2017	16,975,896.55	2,198,379	2,168,120	14,807,777	22.97	644,657
2018	17,048,236.01	1,709,938	1,686,402	15,361,834	21.68	708,572
2019	19,819,272.80	1,327,891	1,309,613	18,509,660	19.73	938,148
2020	11,693,244.51	328,580	324,057	11,369,188	15.83	718,205

112,862,439.95 17,724,463 17,480,520 95,381,920 4,434,229

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 21.5 3.93

SURVIVOR CURVE.. IOWA 35-S2
 NET SALVAGE PERCENT.. 0

1976	591.42	528	141	450	5.33	84
1983	32,512.26	27,249	7,254	25,258	7.23	3,493
1984	1,528.08	1,263	336	1,192	7.63	156
1987	6,793.84	5,403	1,438	5,356	8.60	623
1988	15,907.49	12,479	3,322	12,585	8.90	1,414
1989	30,556.87	23,614	6,287	24,270	9.24	2,627
1996	48,076.94	32,048	8,533	39,544	12.21	3,239
	135,966.90	102,584	27,311	108,656		11,636

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 9.3 8.56

INTERIM SURVIVOR CURVE.. IOWA 50-R0.5
 PROBABLE RETIREMENT YEAR.. 12-2030
 NET SALVAGE PERCENT.. 0

1887	3,259.90	3,260	3,260			
1888	837.89	838	838			
1889	897.79	898	898			
1890	3,939.45	3,939	3,939			
1891	266.58	267	267			
1892	940.37	940	940			
1893	481.29	481	481			
1894	938.71	939	939			
1895	368.90	369	369			
1896	548.36	548	548			
1897	445.21	445	445			
1898	1,815.93	1,816	1,816			
1899	1,741.16	1,741	1,741			
1900	4,028.48	4,028	4,028			
1902	2,389.69	2,390	2,390			
1903	1,574.22	1,574	1,574			
1904	2,226.74	2,227	2,227			
1905	1,549.69	1,550	1,550			
1906	1,590.13	1,590	1,590			
1907	2,040.46	2,040	2,040			
1908	2,763.81	2,764	2,764			
1909	2,163.61	2,164	2,164			
1910	1,901.97	1,902	1,902			
1911	1,350.00	1,350	1,350			
1912	1,558.56	1,559	1,559			
1913	1,856.28	1,856	1,856			
1914	1,542.99	1,543	1,543			
1915	2,072.49	2,072	2,072			
1916	1,565.67	1,566	1,566			
1917	1,048.10	1,048	1,048			
1918	844.89	845	845			
1919	1,329.23	1,329	1,329			
1920	1,515.60	1,516	1,516			
1921	1,100.49	1,094	959	141	0.30	141
1922	2,546.32	2,506	2,197	349	0.79	349
1923	4,509.15	4,395	3,853	656	1.27	517
1924	4,299.95	4,149	3,637	663	1.75	379
1925	7,534.86	7,199	6,311	1,224	2.23	549
1926	7,034.78	6,655	5,834	1,201	2.70	445
1927	6,744.78	6,317	5,538	1,207	3.17	381
1928	7,265.46	6,738	5,907	1,358	3.63	374
1929	8,829.40	8,109	7,109	1,720	4.08	422

INTERIM SURVIVOR CURVE.. IOWA 50-R0.5
 PROBABLE RETIREMENT YEAR.. 12-2030
 NET SALVAGE PERCENT.. 0

1930	4,923.68	4,478	3,925	999	4.53	221
1931	2,912.03	2,623	2,299	613	4.96	124
1932	1,700.13	1,519	1,332	368	5.32	69
1933	2,559.54	2,272	1,992	568	5.62	101
1934	2,516.92	2,221	1,947	570	5.87	97
1935	2,024.22	1,777	1,558	466	6.10	76
1936	3,795.68	3,317	2,908	888	6.29	141
1937	4,884.50	4,252	3,727	1,158	6.46	179
1938	8,738.07	7,579	6,644	2,094	6.61	317
1939	13,853.97	11,976	10,498	3,356	6.75	497
1940	10,768.72	9,279	8,134	2,635	6.88	383
1941	14,742.94	12,666	11,103	3,640	7.00	520
1942	15,789.22	13,526	11,857	3,932	7.11	553
1943	5,447.17	4,653	4,079	1,368	7.22	189
1944	4,768.63	4,064	3,563	1,206	7.31	165
1945	5,415.18	4,602	4,034	1,381	7.41	186
1946	14,101.04	11,957	10,482	3,619	7.49	483
1947	28,117.96	23,781	20,847	7,271	7.58	959
1948	36,775.27	31,036	27,207	9,568	7.65	1,251
1949	53,832.45	45,323	39,731	14,101	7.73	1,824
1950	70,513.90	59,234	51,926	18,588	7.80	2,383
1951	91,233.17	76,463	67,029	24,204	7.87	3,075
1952	96,781.40	80,921	70,937	25,844	7.94	3,255
1953	90,863.05	75,807	66,453	24,410	8.00	3,051
1954	136,195.14	113,344	99,359	36,836	8.07	4,565
	826,513.32	709,226	628,310	198,203		28,221

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 7.0 3.41

SURVIVOR CURVE.. IOWA 50-R0.5
 NET SALVAGE PERCENT.. 0

1955	242,984.82	171,547	151,975	91,010	14.70	6,191
1956	278,037.41	193,959	171,830	106,207	15.12	7,024
1957	267,620.65	184,444	163,401	104,220	15.54	6,707
1958	357,287.76	243,170	215,427	141,861	15.97	8,883
1959	456,091.12	306,493	271,525	184,566	16.40	11,254
1960	398,203.61	264,168	234,029	164,175	16.83	9,755
1961	575,730.71	376,873	333,875	241,856	17.27	14,004
1962	570,991.57	368,746	326,675	244,317	17.71	13,795
1963	664,515.21	423,296	375,002	289,513	18.15	15,951
1964	664,028.18	417,010	369,433	294,595	18.60	15,838
1965	664,186.21	410,998	364,107	300,079	19.06	15,744
1966	809,365.91	493,551	437,241	372,125	19.51	19,074
1967	922,839.77	554,073	490,858	431,982	19.98	21,621
1968	1,002,208.45	592,506	524,906	477,302	20.44	23,351
1969	732,518.95	426,180	377,557	354,962	20.91	16,976
1970	669,191.53	382,911	339,224	329,968	21.39	15,426
1971	594,466.87	334,447	296,290	298,177	21.87	13,634
1972	561,956.80	310,762	275,307	286,650	22.35	12,826
1973	428,770.31	232,908	206,335	222,435	22.84	9,739
1974	91,021.65	48,533	42,996	48,026	23.34	2,058
1975	143,680.05	75,202	66,622	77,058	23.83	3,234
1976	446,112.18	303,178	268,588	177,524	20.94	8,478
1977	1,788,924.29	1,196,075	1,059,614	729,310	21.52	33,890
1978	1,333,023.52	882,062	781,427	551,597	21.69	25,431
1979	1,694,223.20	1,101,584	975,903	718,320	22.28	32,241
1980	2,327,646.63	1,495,746	1,325,095	1,002,552	22.48	44,598
1981	2,682,270.85	1,691,708	1,498,699	1,183,572	23.08	51,281
1982	2,296,533.75	1,429,363	1,266,286	1,030,248	23.31	44,198
1983	2,190,063.12	1,343,823	1,190,505	999,558	23.56	42,426
1984	2,624,101.64	1,576,823	1,396,922	1,227,180	24.19	50,731
1985	3,130,571.18	1,851,733	1,640,467	1,490,104	24.46	60,920
1986	3,530,842.22	2,053,538	1,819,248	1,711,594	24.76	69,127
1987	4,201,207.15	2,400,570	2,126,687	2,074,520	25.06	82,782
1988	5,071,755.68	2,844,241	2,519,739	2,552,017	25.39	100,513
1989	4,849,531.18	2,666,272	2,362,074	2,487,457	25.73	96,675
1990	4,989,359.48	2,686,271	2,379,792	2,609,567	26.08	100,060
1991	4,723,910.63	2,487,611	2,203,797	2,520,114	26.45	95,278
1992	5,423,975.51	2,789,551	2,471,288	2,952,688	26.83	110,052
1993	5,737,250.18	2,878,378	2,549,981	3,187,269	27.23	117,050
1994	6,807,545.53	3,345,228	2,963,568	3,843,978	27.34	140,599
1995	6,074,619.79	2,902,453	2,571,309	3,503,311	27.78	126,109
1996	5,892,619.13	2,748,318	2,434,760	3,457,859	27.94	123,760
1997	6,225,926.02	2,813,496	2,492,502	3,733,424	28.40	131,459

SURVIVOR CURVE.. IOWA 50-R0.5
 NET SALVAGE PERCENT.. 0

1998	6,693,596.93	2,941,166	2,605,606	4,087,991	28.60	142,937
1999	7,131,712.09	3,039,536	2,692,752	4,438,960	28.83	153,970
2000	7,299,495.45	3,010,312	2,666,863	4,632,632	29.09	159,252
2001	7,036,636.46	2,800,581	2,481,060	4,555,576	29.37	155,110
2002	6,134,897.87	2,361,322	2,091,916	4,042,982	29.43	137,376
2003	5,815,219.28	2,146,979	1,902,028	3,913,191	29.75	131,536
2004	8,349,031.18	2,960,566	2,622,792	5,726,239	29.88	191,641
2005	8,847,621.12	3,001,113	2,658,713	6,188,908	30.04	206,022
2006	8,652,049.19	2,806,725	2,486,503	6,165,546	30.03	205,313
2007	12,228,472.99	3,756,587	3,327,994	8,900,479	30.25	294,231
2008	14,460,633.63	4,219,613	3,738,193	10,722,441	30.14	355,755
2009	13,305,188.52	3,645,622	3,229,690	10,075,499	30.25	333,074
2010	15,674,611.92	4,015,836	3,557,665	12,116,947	30.24	400,693
2011	23,009,499.15	5,480,863	4,855,546	18,153,953	30.11	602,921
2012	29,024,155.50	6,376,607	5,649,094	23,375,062	29.90	781,775
2013	34,732,297.86	6,953,406	6,160,085	28,572,213	29.62	964,626
2014	36,420,178.31	6,544,706	5,798,014	30,622,164	29.30	1,045,125
2015	41,368,900.50	6,519,739	5,775,896	35,593,004	28.95	1,229,465
2016	32,386,854.40	4,378,703	3,879,133	28,507,721	28.26	1,008,766
2017	51,623,631.17	5,714,736	5,062,736	46,560,895	27.45	1,696,207
2018	49,183,480.59	4,160,922	3,686,199	45,497,282	26.15	1,739,858
2019	61,180,888.85	3,389,421	3,002,718	58,178,171	24.16	2,408,037
2020	53,936,979.57	1,208,188	1,070,345	52,866,635	20.03	2,639,373
	629,633,742.93	143,733,048	127,334,407	502,299,336		18,933,806

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 26.5 3.01

SURVIVOR CURVE.. IOWA 44-S1
 NET SALVAGE PERCENT.. 0

1913	50.76	51	51			
1914	16.80	17	17			
1915	22.42	22	22			
1916	59.45	59	59			
1917	179.76	180	180			
1918	720.08	720	720			
1919	487.97	488	488			
1920	287.36	287	287			
1921	629.11	629	629			
1922	815.45	815	815			
1923	1,666.14	1,666	1,666			
1924	1,229.70	1,230	1,230			
1925	2,602.31	2,602	2,602			
1926	3,019.51	3,020	3,020			
1927	4,426.27	4,426	4,426			
1928	5,533.51	5,534	5,534			
1929	4,753.22	4,753	4,753			
1930	367.68	368	368			
1931	23.47	23	23			
1934	122.80	122	123			
1935	25.42	25	25			
1936	446.25	437	446			
1937	73.25	71	73			
1938	221.34	214	219	2	1.49	1
1939	405.31	389	399	6	1.76	3
1941	2,023.14	1,917	1,965	58	2.31	25
1942	2,400.62	2,259	2,315	86	2.59	33
1943	1,829.64	1,710	1,752	78	2.87	27
1944	113.98	106	109	5	3.15	2
1945	678.05	625	640	38	3.44	11
1946	4,096.95	3,750	3,843	254	3.73	68
1947	2,214.86	2,013	2,063	152	4.01	38
1948	15,259.78	13,765	14,106	1,154	4.31	268
1949	15,428.28	13,815	14,158	1,270	4.60	276
1950	28,650.43	25,460	26,091	2,559	4.90	522
1951	53,793.08	47,436	48,612	5,181	5.20	996
1952	34,451.07	30,145	30,892	3,559	5.50	647
1953	18,661.71	16,197	16,599	2,063	5.81	355
1954	53,145.64	45,754	46,888	6,258	6.12	1,023
1955	63,553.70	54,266	55,611	7,943	6.43	1,235
1956	29,529.30	24,999	25,619	3,910	6.75	579
1957	90,507.13	75,964	77,847	12,660	7.07	1,791
1958	164,103.72	136,543	139,928	24,176	7.39	3,271

SURVIVOR CURVE.. IOWA 44-S1
 NET SALVAGE PERCENT.. 0

1959	169,009.13	139,356	142,811	26,198	7.72	3,394
1960	168,860.26	137,967	141,388	27,472	8.05	3,413
1961	162,969.04	131,932	135,203	27,766	8.38	3,313
1962	217,293.72	174,230	178,550	38,744	8.72	4,443
1963	133,248.69	105,811	108,434	24,815	9.06	2,739
1964	206,507.11	162,343	166,368	40,139	9.41	4,266
1965	222,980.05	173,519	177,821	45,159	9.76	4,627
1966	217,678.79	167,663	171,820	45,859	10.11	4,536
1967	198,702.67	151,421	155,175	43,528	10.47	4,157
1968	166,022.41	125,121	128,223	37,799	10.84	3,487
1969	163,334.99	121,722	124,740	38,595	11.21	3,443
1970	134,914.56	99,408	101,873	33,042	11.58	2,853
1971	277,803.18	202,291	207,306	70,497	11.96	5,894
1972	235,340.57	169,285	173,482	61,859	12.35	5,009
1973	144,994.96	103,012	105,566	39,429	12.74	3,095
1974	183,323.34	128,576	131,764	51,559	13.14	3,924
1975	206,064.36	142,652	146,189	59,875	13.54	4,422
1976	90,684.65	70,888	72,645	18,040	12.40	1,455
1977	176,850.77	136,670	140,058	36,793	12.76	2,883
1978	169,114.82	129,119	132,320	36,795	13.14	2,800
1979	304,153.55	229,271	234,955	69,199	13.53	5,114
1980	577,407.86	429,418	440,064	137,344	13.93	9,860
1981	613,079.82	451,901	463,105	149,975	14.06	10,667
1982	411,394.57	298,714	306,120	105,275	14.49	7,265
1983	306,024.68	218,716	224,138	81,887	14.94	5,481
1984	407,257.90	287,728	294,861	112,397	15.13	7,429
1985	539,631.73	374,612	383,900	155,732	15.60	9,983
1986	568,810.60	389,578	399,237	169,574	15.83	10,712
1987	576,854.59	387,473	397,079	179,776	16.33	11,009
1988	661,390.67	437,378	448,222	213,169	16.60	12,842
1989	736,152.79	476,438	488,250	247,903	17.13	14,472
1990	452,517.36	287,665	294,797	157,720	17.43	9,049
1991	518,056.86	323,060	331,069	186,988	17.75	10,535
1992	761,782.36	463,240	474,725	287,057	18.31	15,678
1993	901,697.70	536,420	549,719	351,979	18.67	18,853
1994	363,042.66	211,000	216,231	146,812	19.04	7,711
1995	8,146.20	4,617	4,731	3,415	19.43	176
1996	1,723,976.60	951,290	974,875	749,102	19.83	37,776
1997	691,028.10	370,529	379,715	311,313	20.25	15,373
1998	1,001,358.79	520,807	533,719	467,640	20.69	22,602
1999	1,094,368.54	550,796	564,452	529,917	21.14	25,067
2000	7,897.06	3,837	3,932	3,965	21.60	184
2001	411,182.49	192,392	197,162	214,020	22.08	9,693

SURVIVOR CURVE.. IOWA 44-S1
 NET SALVAGE PERCENT.. 0

2002	1,132,841.23	509,099	521,721	611,120	22.57	27,077
2003	835,469.85	359,419	368,330	467,140	23.07	20,249
2004	1,047,933.60	430,072	440,735	607,199	23.58	25,751
2005	464,479.25	181,890	186,399	278,080	23.95	11,611
2006	501,512.06	185,810	190,417	311,095	24.49	12,703
2007	1,029,930.95	359,240	368,146	661,785	25.05	26,419
2008	1,062,961.59	347,163	355,770	707,192	25.60	27,625
2009	1,394,698.73	423,570	434,071	960,628	26.18	36,693
2010	1,102,073.24	308,801	316,457	785,616	26.76	29,358
2011	1,040,601.07	266,498	273,105	767,496	27.35	28,062
2012	1,335,730.95	309,222	316,889	1,018,842	27.95	36,452
2013	1,298,795.17	266,773	273,387	1,025,408	28.69	35,741
2014	1,123,285.63	201,854	206,859	916,427	29.30	31,277
2015	2,507,123.65	383,088	392,586	2,114,538	30.04	70,391
2016	1,258,508.24	157,817	161,729	1,096,779	30.80	35,610
2017	1,231,154.07	120,284	123,266	1,107,888	31.55	35,115
2018	1,081,495.13	75,272	77,138	1,004,357	32.31	31,085
2019	1,472,073.11	60,208	61,701	1,410,372	33.19	42,494
2020	1,930,798.12	25,487	26,119	1,904,679	34.15	55,774
	40,743,003.61	16,666,305	17,078,832	23,664,172		982,342

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 24.1 2.41

SURVIVOR CURVE.. IOWA 15-S2.5
 NET SALVAGE PERCENT.. 0

2000	296,427.01	274,165	288,603	7,824	1.66	4,713
2001	278,746.25	253,826	267,193	11,553	1.91	6,049
2003	514.10	453	477	37	2.35	16
2004	107,825.28	92,935	97,829	9,996	2.63	3,801
2005	169,036.06	142,024	149,503	19,533	2.93	6,667
2007	107,411.45	84,597	89,052	18,359	3.62	5,072
2008	485,486.24	366,494	385,794	99,692	4.03	24,737
2009	420,783.25	302,164	318,076	102,707	4.48	22,926
2010	824,868.47	557,611	586,975	237,893	4.99	47,674
2011	11,263,089.05	7,084,483	7,457,556	3,805,533	5.55	685,682
2012	8,735,379.14	5,035,946	5,301,142	3,434,237	6.18	555,702
2014	306,936.92	140,239	147,624	159,313	7.63	20,880
2015	372,440.91	145,438	153,097	219,344	8.45	25,958
2016	392,723.42	126,261	132,910	259,813	9.32	27,877
2017	189,201.48	47,376	49,871	139,330	10.23	13,620
2018	497,031.94	88,273	92,921	404,111	11.19	36,114
2019	124,689.93	13,005	13,690	111,000	12.17	9,121
2020	72,604.57	2,447	2,576	70,029	13.13	5,334
	24,645,195.47	14,757,737	15,534,889	9,110,306		1,501,943

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 6.1 6.09

SURVIVOR CURVE.. IOWA 55-R3
 NET SALVAGE PERCENT.. 0

1937	5,325.69	5,104	5,326			
1938	12,721.71	12,134	12,722			
1939	9,392.36	8,914	9,386	6	2.80	2
1940	8,251.67	7,794	8,207	45	3.05	15
1941	11,712.89	11,008	11,591	122	3.31	37
1942	8,759.99	8,191	8,625	135	3.57	38
1943	3,963.87	3,689	3,884	80	3.82	21
1944	3,997.40	3,701	3,897	100	4.08	25
1945	5,300.88	4,883	5,141	160	4.34	37
1946	12,830.81	11,758	12,380	451	4.60	98
1947	18,676.09	17,026	17,927	749	4.86	154
1948	23,712.95	21,506	22,644	1,069	5.12	209
1949	30,584.40	27,593	29,054	1,530	5.38	284
1950	35,528.38	31,879	33,567	1,961	5.65	347
1951	30,962.56	27,630	29,093	1,870	5.92	316
1952	32,228.26	28,595	30,109	2,119	6.20	342
1953	38,526.30	33,987	35,786	2,740	6.48	423
1954	36,169.40	31,711	33,390	2,779	6.78	410
1955	45,374.68	39,525	41,617	3,758	7.09	530
1956	47,867.16	41,427	43,620	4,247	7.40	574
1957	43,972.72	37,792	39,793	4,180	7.73	541
1958	55,025.92	46,952	49,438	5,588	8.07	692
1959	68,439.89	57,950	61,018	7,422	8.43	880
1960	49,854.41	41,878	44,095	5,759	8.80	654
1961	43,164.15	35,952	37,855	5,309	9.19	578
1962	61,702.89	50,944	53,641	8,062	9.59	841
1963	65,682.02	53,728	56,572	9,110	10.01	910
1964	117,746.10	95,374	100,423	17,323	10.45	1,658
1965	156,218.11	125,259	131,890	24,328	10.90	2,232
1966	144,702.96	114,789	120,866	23,837	11.37	2,096
1967	132,122.14	103,631	109,117	23,005	11.86	1,940
1968	171,134.21	132,644	139,666	31,468	12.37	2,544
1969	161,914.98	123,969	130,532	31,383	12.89	2,435
1970	148,287.12	112,078	118,011	30,276	13.43	2,254
1971	129,449.80	96,523	101,633	27,817	13.99	1,988
1972	81,383.27	59,839	63,007	18,376	14.56	1,262
1973	75,626.18	54,795	57,696	17,930	15.15	1,183
1974	12,888.92	9,196	9,683	3,206	15.76	203
1975	23,352.42	16,398	17,266	6,086	16.38	372
1976	42,645.63	31,635	33,310	9,336	15.46	604
1977	45,831.62	33,430	35,200	10,632	16.11	660
1978	47,529.29	34,069	35,873	11,656	16.76	695
1979	114,164.65	80,851	85,131	29,034	17.06	1,702

SURVIVOR CURVE.. IOWA 55-R3
 NET SALVAGE PERCENT.. 0

1980	252,850.94	175,782	185,087	67,764	17.72	3,824
1981	361,602.89	246,577	259,630	101,973	18.39	5,545
1982	289,206.03	193,305	203,538	85,668	19.06	4,495
1983	345,677.55	226,350	238,332	107,346	19.73	5,441
1984	425,307.83	272,580	287,010	138,298	20.40	6,779
1985	436,733.10	273,788	288,281	148,452	21.08	7,042
1986	514,496.40	316,981	333,761	180,735	21.45	8,426
1987	580,013.06	348,878	367,346	212,667	22.14	9,606
1988	659,702.54	387,047	407,536	252,167	22.83	11,045
1989	761,592.84	435,479	458,532	303,061	23.53	12,880
1990	778,173.18	433,131	456,060	322,113	24.23	13,294
1991	701,561.36	379,755	399,858	301,703	24.93	12,102
1992	766,175.21	402,778	424,100	342,075	25.64	13,341
1993	650,682.88	331,848	349,415	301,268	26.34	11,438
1994	753,694.33	372,325	392,035	361,659	27.06	13,365
1995	664,397.58	317,449	334,254	330,144	27.78	11,884
1996	757,189.44	349,443	367,941	389,248	28.49	13,663
1997	724,545.57	322,350	339,414	385,132	29.22	13,180
1998	621,744.85	266,231	280,324	341,421	29.94	11,404
1999	522,279.59	214,761	226,130	296,150	30.67	9,656
2000	1,149,971.91	453,089	477,074	672,898	31.40	21,430
2001	1,032,367.13	388,893	409,480	622,887	32.13	19,386
2002	1,005,237.51	360,981	380,090	625,148	32.87	19,019
2003	1,103,155.63	376,617	396,554	706,602	33.60	21,030
2004	1,073,469.03	345,442	363,729	709,740	34.60	20,513
2005	769,217.69	233,611	245,978	523,240	35.35	14,802
2006	212,731.97	60,714	63,928	148,804	36.09	4,123
2007	2,950,186.78	787,700	829,398	2,120,789	36.83	57,583
2008	1,423,635.80	353,489	372,201	1,051,435	37.58	27,979
2009	1,772,569.14	406,805	428,340	1,344,229	38.33	35,070
2010	1,434,885.61	301,900	317,882	1,117,004	39.09	28,575
2011	1,563,484.57	297,375	313,117	1,250,368	40.09	31,189
2012	1,664,759.30	284,507	299,568	1,365,191	40.84	33,428
2013	1,026,037.83	155,240	163,458	862,580	41.60	20,735
2014	1,231,165.01	161,898	170,468	1,060,697	42.37	25,034
2015	1,326,768.28	148,067	155,905	1,170,863	43.13	27,147
2016	1,384,621.43	126,554	133,253	1,251,368	43.89	28,511
2017	1,957,775.86	139,198	146,567	1,811,209	44.66	40,556

SURVIVOR CURVE.. IOWA 55-R3
NET SALVAGE PERCENT.. 0

2018	1,448,523.02	73,150	77,022	1,371,501	45.43	30,189
2019	1,086,825.13	32,496	34,216	1,052,609	45.98	22,893
2020	670,862.26	6,642	6,994	663,868	46.05	14,416
	41,270,604.91	13,688,937	14,413,488	26,857,117		774,804

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 34.7 1.88

SURVIVOR CURVE.. IOWA 45-S2
 NET SALVAGE PERCENT.. 0

1918	113.14	113	113			
1939	77.64	75	78			
1949	77.13	71	77			
1955	432.93	384	433			
1957	490.94	430	491			
1958	704.49	613	704			
1960	354.57	305	355			
1961	925.50	789	926			
1962	6,831.42	5,782	6,831			
1963	11,335.62	9,522	11,336			
1964	16,073.66	13,398	16,074			
1965	20,111.70	16,630	20,112			
1966	51,001.08	41,821	50,959	42	8.10	5
1967	39,700.39	32,272	39,324	376	8.42	45
1968	52,162.89	42,032	51,216	947	8.74	108
1969	47,765.97	38,138	46,471	1,295	9.07	143
1970	51,776.80	40,950	49,898	1,879	9.41	200
1971	43,735.55	34,250	41,734	2,002	9.76	205
1972	25,258.06	19,583	23,862	1,396	10.11	138
1973	22,289.80	17,099	20,835	1,455	10.48	139
1974	2,333.51	1,771	2,158	176	10.85	16
1975	27,510.38	20,639	25,149	2,361	11.24	210
1976	17,047.15	13,781	16,792	255	10.53	24
1977	3,855.07	3,080	3,753	102	10.93	9
1978	6,992.27	5,517	6,723	269	11.34	24
1979	54,792.35	42,891	52,263	2,529	11.49	220
1980	101,124.89	78,068	95,126	5,999	11.94	502
1981	145,408.26	110,612	134,781	10,627	12.40	857
1982	152,949.91	115,171	140,337	12,613	12.60	1,001
1983	138,559.23	102,645	125,074	13,485	13.09	1,030
1984	148,672.46	108,278	131,937	16,735	13.58	1,232
1985	167,095.52	120,142	146,394	20,702	13.84	1,496
1986	191,073.39	134,802	164,257	26,816	14.37	1,866
1987	232,044.13	161,294	196,538	35,506	14.66	2,422
1988	263,308.01	179,260	218,430	44,878	15.20	2,952
1989	240,215.67	159,984	194,942	45,274	15.75	2,875
1990	234,823.98	153,575	187,132	47,692	16.09	2,964
1991	212,067.27	135,363	164,941	47,126	16.67	2,827
1992	216,474.43	135,340	164,913	51,561	17.04	3,026
1993	172,990.14	105,282	128,287	44,703	17.63	2,536
1994	257,351.32	152,275	185,548	71,803	18.23	3,939
1995	229,237.75	131,674	160,446	68,792	18.83	3,653
1996	208,671.49	116,668	142,161	66,510	19.25	3,455

SURVIVOR CURVE.. IOWA 45-S2
 NET SALVAGE PERCENT.. 0

1997	282,008.35	152,538	185,868	96,140	19.87	4,838
1998	217,864.42	113,791	138,655	79,209	20.50	3,864
1999	159,090.11	80,070	97,566	61,524	21.14	2,910
2000	374,840.66	181,385	221,019	153,822	21.78	7,063
2001	299,066.48	138,797	169,125	129,941	22.42	5,796
2002	534,141.89	236,091	287,678	246,464	23.25	10,601
2003	681,870.40	287,408	350,208	331,662	23.90	13,877
2004	902,660.60	360,071	438,749	463,912	24.74	18,751
2005	720,439.71	272,110	331,568	388,872	25.40	15,310
2006	426,887.69	151,374	184,450	242,438	26.24	9,239
2007	857,172.16	284,067	346,137	511,035	27.07	18,878
2008	554,465.50	170,720	208,023	346,442	27.91	12,413
2009	786,318.70	223,550	272,397	513,922	28.74	17,882
2010	623,867.35	162,455	197,953	425,914	29.58	14,399
2011	698,079.54	165,026	201,085	496,995	30.42	16,338
2012	686,844.51	145,130	176,842	510,003	31.42	16,232
2013	507,746.93	94,542	115,200	392,547	32.42	12,108
2014	642,318.63	103,863	126,558	515,761	33.27	15,502
2015	543,533.27	74,192	90,404	453,129	34.27	13,222
2016	545,660.13	60,732	74,002	471,658	35.27	13,373
2017	688,738.63	59,300	72,257	616,482	36.27	16,997
2018	760,768.16	46,331	56,455	704,313	37.27	18,898
2019	949,616.27	33,901	41,309	908,307	38.27	23,734
2020	879,933.06	10,207	12,437	867,496	39.22	22,119
	18,139,751.01	6,210,020	7,565,856	10,573,895		364,463

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 29.0 2.01

SURVIVOR CURVE.. IOWA 30-R0.5
 NET SALVAGE PERCENT.. 0

1902	24.00	24	24			
1922	10.69	11	11			
1928	109.16	109	109			
1929	753.75	754	754			
1930	776.51	777	777			
1931	19.20	19	19			
1933	257.28	257	257			
1934	12.20	12	12			
1935	119.38	119	119			
1937	1,044.41	1,044	1,044			
1938	199.96	200	200			
1939	55.79	56	56			
1941	371.05	371	371			
1942	668.42	668	668			
1943	4,065.91	4,066	4,066			
1944	964.96	965	965			
1945	478.56	479	479			
1946	57.67	58	58			
1947	577.57	578	578			
1948	1,325.51	1,326	1,326			
1950	1,560.50	1,560	1,560			
1951	3,067.19	3,067	3,067			
1952	4,004.87	4,005	4,005			
1953	4,253.65	4,254	4,254			
1954	12,797.76	12,798	12,798			
1955	21,576.23	21,576	21,576			
1956	21,652.98	21,653	21,653			
1957	23,902.94	23,903	23,903			
1958	23,311.84	23,312	23,312			
1959	20,962.75	20,963	20,963			
1960	24,035.73	24,036	24,036			
1961	28,282.02	28,009	18,024	10,258	0.29	10,258
1962	11,871.24	11,563	7,441	4,430	0.78	4,430
1963	35,437.69	33,949	21,846	13,592	1.26	10,787
1964	23,277.93	21,935	14,115	9,163	1.73	5,297
1965	28,992.94	26,876	17,295	11,698	2.19	5,342
1966	26,851.34	24,488	15,758	11,093	2.64	4,202
1967	47,184.51	42,340	27,246	19,939	3.08	6,474
1968	50,121.10	44,257	28,480	21,641	3.51	6,166
1969	43,483.62	37,802	24,326	19,158	3.92	4,887
1970	42,083.29	36,009	23,172	18,911	4.33	4,367

SURVIVOR CURVE.. IOWA 30-R0.5
 NET SALVAGE PERCENT.. 0

1971	98,007.33	82,522	53,104	44,903	4.74	9,473
1972	65,989.62	54,684	35,190	30,800	5.14	5,992
1973	34,454.32	28,092	18,077	16,377	5.54	2,956
1974	21,979.85	17,635	11,348	10,632	5.93	1,793
1975	19,650.23	15,504	9,977	9,673	6.33	1,528
1976	737.80	646	416	322	6.35	51
1977	519.78	451	290	230	6.58	35
1978	10,078.47	8,635	5,557	4,521	7.09	638
1979	34,594.51	29,371	18,900	15,695	7.37	2,130
1980	55,316.54	46,505	29,926	25,391	7.66	3,315
1981	79,011.47	65,714	42,287	36,724	7.98	4,602
1982	102,644.84	83,994	54,051	48,594	8.53	5,697
1983	72,405.29	58,518	37,657	34,748	8.88	3,913
1984	29,539.93	23,558	15,160	14,380	9.25	1,555
1985	40,985.34	32,370	20,830	20,155	9.43	2,137
1986	75,931.55	59,060	38,006	37,926	9.83	3,858
1987	15,358.13	11,752	7,563	7,795	10.25	760
1988	48,473.11	36,612	23,560	24,913	10.50	2,373
1989	67,145.34	49,782	32,035	35,110	10.96	3,203
1990	50,000.08	36,500	23,488	26,512	11.25	2,357
1991	99,435.60	71,077	45,739	53,697	11.74	4,574
1992	79,932.27	56,104	36,103	43,829	12.07	3,631
1993	98,098.75	67,512	43,444	54,655	12.42	4,401
1994	133,830.32	90,148	58,011	75,819	12.80	5,923
1995	112,254.03	73,897	47,553	64,701	13.19	4,905
1996	115,220.03	74,271	47,794	67,426	13.46	5,009
1997	70,485.83	44,237	28,467	42,019	13.90	3,023
1998	82,658.07	50,587	32,553	50,105	14.21	3,526
1999	9,446.67	5,625	3,620	5,827	14.55	400
2000	138,278.79	79,897	51,414	86,865	14.92	5,822
2001	7,614.90	4,258	2,740	4,875	15.31	318
2002	190,082.39	102,911	66,224	123,858	15.60	7,940
2003	395,900.94	206,858	133,115	262,786	15.92	16,507
2004	3,314.74	1,665	1,071	2,244	16.26	138
2005	53,715.35	25,918	16,678	37,037	16.53	2,241
2006	142,551.36	65,759	42,317	100,234	16.83	5,956
2007	178,578.53	78,342	50,414	128,165	17.17	7,464
2008	220,217.62	91,611	58,952	161,266	17.43	9,252
2009	154,496.79	60,671	39,042	115,455	17.65	6,541
2010	219,317.66	80,884	52,050	167,268	17.83	9,381
2011	176,902.88	60,802	39,127	137,776	17.98	7,663

SURVIVOR CURVE.. IOWA 30-R0.5
 NET SALVAGE PERCENT.. 0

2012	186,848.91	59,455	38,260	148,589	18.04	8,237
2013	285,914.51	83,115	53,485	232,430	18.09	12,849
2014	162,765.42	42,612	27,421	135,344	18.09	7,482
2015	309,293.83	71,540	46,037	263,257	18.00	14,625
2016	529,148.69	105,195	67,694	461,455	17.80	25,924
2017	506,215.75	83,019	53,423	452,793	17.42	25,993
2018	505,919.87	63,847	41,086	464,834	16.74	27,768
2019	134,143.07	11,188	7,199	126,944	15.56	8,158
2020	262,434.12	9,028	5,810	256,624	12.87	19,940
	6,998,445.32	3,144,186	2,084,988	4,913,457		386,167

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 12.7 5.52

SURVIVOR CURVE.. IOWA 32-R0.5
 NET SALVAGE PERCENT.. 0

1941	38.38	38	38			
1942	67.31	67	67			
1950	90.19	90	90			
1955	4,288.05	4,288	4,288			
1957	14,374.70	14,244	12,626	1,749	0.29	1,749
1959	188.29	181	160	28	1.26	22
1962	7,626.48	6,995	6,201	1,425	2.65	538
1967	445.13	379	336	109	4.77	23
1972	7,910.24	6,239	5,531	2,379	6.76	352
1981	13,548.93	10,895	9,658	3,891	9.60	405
1985	14,556.64	11,136	9,871	4,686	10.88	431
1992	2,228.63	1,507	1,336	893	13.60	66
2010	68,488.09	24,183	21,436	47,052	19.08	2,466
2015	2,847.08	628	557	2,290	19.15	120
	136,698.14	80,870	72,195	64,503		6,172

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 10.5 4.52

SURVIVOR CURVE.. IOWA 25-R2
 NET SALVAGE PERCENT.. 0

1973	917.13	917	917			
1974	11,561.27	11,543	10,043	1,518	0.04	1,518
1975	3,189.09	3,156	2,746	443	0.26	443
1976	6,308.81	6,249	5,437	872	0.43	872
1980	1,144.78	1,101	958	187	1.60	117
1983	10,695.21	10,045	8,740	1,955	2.42	808
1984	4,730.23	4,410	3,837	893	2.64	338
1985	27,353.09	25,285	22,000	5,353	2.90	1,846
1986	61,596.14	56,391	49,065	12,531	3.18	3,941
1987	40,005.58	36,229	31,522	8,484	3.48	2,438
1989	3,425.59	3,035	2,641	785	4.04	194
1990	37,952.71	33,247	28,928	9,025	4.31	2,094
1991	31,594.95	27,232	23,694	7,901	4.71	1,677
1992	6,510.50	5,532	4,813	1,698	5.03	338
1993	1,718.09	1,437	1,250	468	5.37	87
1994	4,082.11	3,354	2,918	1,164	5.74	203
2000	47,842.64	33,992	29,576	18,267	8.32	2,196
2001	142,467.12	97,932	85,209	57,258	8.83	6,484
2003	2,326.24	1,487	1,294	1,032	9.83	105
2004	119,576.43	73,420	63,881	55,695	10.32	5,397
2005	232,207.90	136,027	118,355	113,853	10.90	10,445
2006	17,269.88	9,635	8,383	8,887	11.42	778
2007	9,937.59	5,253	4,571	5,367	11.96	449
2008	0.11					
2009	5,832.45	2,717	2,364	3,468	13.09	265
2010	123,486.39	53,507	46,555	76,931	13.62	5,648
2011	49,875.40	19,915	17,328	32,547	14.17	2,297
2012	146,646.41	53,321	46,394	100,252	14.73	6,806
2013	612,068.72	199,718	173,771	438,298	15.31	28,628
2014	1,929,453.06	555,875	483,656	1,445,797	15.86	91,160
2015	766,178.04	190,932	166,126	600,052	16.32	36,768
2016	1,037,408.94	215,781	187,747	849,662	16.82	50,515
2017	2,215,733.31	366,482	318,869	1,896,864	17.24	110,027
2018	2,174,130.56	263,287	229,081	1,945,050	17.54	110,892
2019	764,664.98	56,891	49,500	715,165	17.63	40,565
2020	679,421.05	17,937	15,607	663,814	16.87	39,349
	11,329,312.50	2,583,272	2,247,776	9,081,536		565,688

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 16.1 4.99

SURVIVOR CURVE.. IOWA 10-S3
 NET SALVAGE PERCENT.. 0

2014	1,942,103.70	1,254,987	1,205,745	736,359	3.51	209,789
2015	112,834.83	63,436	60,947	51,888	4.22	12,296
2016	33,669.32	15,734	15,117	18,552	5.03	3,688
2017	34,335.00	12,539	12,047	22,288	5.94	3,752
2018	78,429.10	20,337	19,539	58,890	6.90	8,535
	2,201,371.95	1,367,033	1,313,395	887,977		238,060

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 3.7 10.81

SURVIVOR CURVE.. IOWA 45-R2
NET SALVAGE PERCENT.. 0

1955	1,170.54	1,039	1,171
1958	192.08	167	192
1959	2,129.94	1,835	2,130
1971	17,971.09	13,786	17,971
1983	7,872.27	5,655	7,872
1984	3,449.87	2,437	3,450
1987	6,786.87	4,536	6,787
1988	9,428.54	6,174	9,429
1990	820.22	514	819
	49,821.42	36,143	49,821

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 0.0 0.00

SURVIVOR CURVE.. 20-SQUARE
 NET SALVAGE PERCENT.. 0

2000	17,555.72	17,556	17,556			
2001	173,263.30	168,209	173,263			
2002	94,356.55	86,886	94,357			
2003	96,741.60	84,245	96,742			
2004	31,580.89	25,923	31,581			
2005	522.52	403	492	31	4.58	7
2007	4,181.56	2,805	3,427	755	6.58	115
2010	7,734.00	4,028	4,921	2,813	9.58	294
2011	12,031.56	5,665	6,922	5,110	10.58	483
2012	1,550.11	652	797	753	11.58	65
2014	565,919.21	181,564	221,835	344,084	13.58	25,338
2015	1,175,148.72	318,266	388,858	786,291	14.58	53,929
2016	113,113.73	24,979	30,519	82,595	15.58	5,301
2017	14,623.69	2,498	3,052	11,572	16.58	698
	2,308,323.16	923,679	1,074,322	1,234,001		86,230

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 14.3 3.74

SURVIVOR CURVE.. 15-SQUARE
NET SALVAGE PERCENT.. 0

2011	24,427.00	15,335	16,076	8,351	5.58	1,497
2015	66,876.67	24,150	25,318	41,559	9.58	4,338
	91,303.67	39,485	41,394	49,910		5,835

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 8.6 6.39

SURVIVOR CURVE.. 5-SQUARE
 NET SALVAGE PERCENT.. 0

2016	1,495,726.59	1,321,220	1,220,079	275,648	0.58	275,648
2017	1,577,540.60	1,077,981	995,460	582,081	1.58	368,406
2018	173,736.13	83,972	77,544	96,192	2.58	37,284
2019	10,859.79	3,077	2,841	8,019	3.58	2,240
2020	12,830.49	1,176	1,086	11,744	4.54	2,587
	3,270,693.60	2,487,426	2,297,010	973,684		686,165

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 1.4 20.98

SURVIVOR CURVE.. 15-SQUARE
NET SALVAGE PERCENT.. 0

2011	3,781.00	2,374	3,781	
2012	14,849.79	8,332	14,850	
2013	2,789.00	1,379	2,789	
2015	4,197.10	1,516	4,924	727-
	25,616.89	13,601	26,344	727-

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 0.0 0.00

SURVIVOR CURVE.. 25-SQUARE
 NET SALVAGE PERCENT.. 0

1995	4,516.33	4,516	4,516			
1996	548,495.06	535,699	548,495			
1997	1,139,439.92	1,067,279	1,115,426	24,014	1.58	15,199
1998	383,704.26	344,056	359,577	24,127	2.58	9,352
1999	191,341.50	163,917	171,312	20,030	3.58	5,595
2000	296,716.81	242,320	253,252	43,465	4.58	9,490
2001	186,888.81	145,151	151,699	35,190	5.58	6,306
2002	303,527.92	223,600	233,687	69,841	6.58	10,614
2003	291,419.99	203,024	212,183	79,237	7.58	10,453
2004	366,999.55	240,998	251,870	115,130	8.58	13,418
2005	79,725.36	49,164	51,382	28,343	9.58	2,959
2006	167,413.05	96,542	100,897	66,516	10.58	6,287
2007	835,832.86	448,566	468,802	367,031	11.58	31,695
2008	1,181,797.10	586,963	613,442	568,355	12.58	45,179
2009	278,442.30	127,156	132,892	145,550	13.58	10,718
2010	777,173.73	323,825	338,434	438,740	14.58	30,092
2011	595,579.35	224,337	234,457	361,122	15.58	23,179
2012	870,830.41	293,182	306,408	564,422	16.58	34,042
2013	784,168.63	232,639	243,134	541,035	17.58	30,776
2014	894,641.85	229,628	239,987	654,655	18.58	35,234
2015	1,788,936.70	387,609	405,095	1,383,842	19.58	70,676
2016	971,312.23	171,602	179,343	791,969	20.58	38,482
2017	1,449,495.87	198,103	207,040	1,242,456	21.58	57,574
2018	1,163,102.32	112,437	117,510	1,045,592	22.58	46,306
2019	932,956.06	52,871	55,256	877,700	23.58	37,222
2020	664,091.69	12,173	12,722	651,370	24.54	26,543
	17,148,549.66	6,717,357	7,008,818	10,139,732		607,391

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 16.7 3.54

SURVIVOR CURVE.. IOWA 12-S1.5
 NET SALVAGE PERCENT.. 0

1989	99,674.00	99,674	99,674			
1990	2,097.64	2,098	2,098			
1991	24,694.44	24,694	24,694			
1993	82,680.49	82,680	82,680			
1994	117,928.20	117,928	117,928			
1995	1,302,755.56	1,302,756	1,302,756			
1996	587,355.23	587,355	587,355			
1998	98,401.65	97,280	98,388	14	0.26	14
1999	18,450.18	17,980	18,185	265	0.56	265
2001	80,747.15	76,508	77,380	3,367	1.08	3,118
	2,414,784.54	2,408,953	2,411,138	3,647		3,397

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 1.1 0.14

SURVIVOR CURVE.. 20-SQUARE
 NET SALVAGE PERCENT.. 0

2002	1,118.18	1,030	932	186	1.58	118
2011	19,084.33	8,985	8,133	10,951	10.58	1,035
2015	245,836.91	66,580	60,269	185,568	14.58	12,728
	266,039.42	76,595	69,334	196,705		13,881

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 14.2 5.22

SURVIVOR CURVE.. IOWA 13-L2
 NET SALVAGE PERCENT.. 0

1990	14,666.07	14,185	14,666			
1991	70,212.28	67,334	70,212			
1992	7,619.70	7,254	7,620			
1993	2,619.06	2,477	2,619			
1994	45,419.28	42,476	45,419			
1995	9,638.80	8,942	9,639			
1997	945.49	859	945			
1999	89,292.15	79,166	89,292			
2000	424,416.34	370,855	423,238	1,178	2.95	399
2001	23,340.60	20,078	22,914	427	3.16	135
2002	21,599.55	18,299	20,884	716	3.32	216
2003	209,492.31	174,046	198,630	10,862	3.55	3,060
2011	25,036.41	16,527	18,861	6,175	4.85	1,273
2014	4,400.00	2,315	2,642	1,758	5.78	304
	948,698.04	824,813	927,581	21,117		5,387

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 3.9 0.57

SURVIVOR CURVE.. IOWA 19-R2.5
 NET SALVAGE PERCENT.. 0

1995	11,741.33	10,773	11,741			
1996	125,441.49	113,939	125,441			
1997	33,444.00	29,996	33,444			
1998	6,337.07	5,597	6,337			
1999	96,304.72	83,535	96,305			
2000	239,707.61	203,584	239,708			
2001	117,197.05	97,168	117,197			
2002	106,166.48	85,836	106,166			
2015	51,575.93	16,117	49,791	1,785	11.92	150
	787,915.68	646,545	786,130	1,786		150

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 11.9 0.02

SURVIVOR CURVE.. 15-SQUARE
 NET SALVAGE PERCENT.. 0

2006	8,228.13	7,908	8,228			
2007	136.82	122	135	2	1.58	1
2008	2,264.03	1,874	2,075	189	2.58	73
2009	11,311.50	8,609	9,534	1,778	3.58	497
2010	25,988.40	18,047	19,986	6,002	4.58	1,310
2011	6,122.60	3,844	4,257	1,866	5.58	334
2012	129,294.07	72,548	80,345	48,949	6.58	7,439
2013	14,421.00	7,130	7,896	6,525	7.58	861
2014	98,828.36	42,277	46,821	52,007	8.58	6,061
2015	400,910.38	144,773	160,332	240,578	9.58	25,113
2016	234,767.97	69,125	76,553	158,215	10.58	14,954
2017	8,370.44	1,907	2,112	6,258	11.58	540
2018	12,626.00	2,034	2,253	10,373	12.58	825
	953,269.70	380,198	420,527	532,743		58,008

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 9.2 6.09

PART III. EXPERIENCED NET SALVAGE

ACCT	REGULAR RETIREMENTS	COST OF REMOVAL	GROSS SALVAGE	NET SALVAGE
2015 TRANSACTION YEAR				
303.00	460,731.19			
362.10		56,875.48		56,875.48-
374.40	15,753.17	2,713.76		2,713.76-
375.34	28,538.10	14,909.72		14,909.72-
375.70		22,140.00		22,140.00-
376.00	8,996,141.74	978,776.00	20,828.00	957,948.00-
378.00	306,255.48	104,647.11		104,647.11-
380.00	4,918,094.66	2,926,513.18		2,926,513.18-
381.00	370,041.70			
382.00	144,324.79			
383.00	13,105.34			
385.00	197,819.03	27,745.87		27,745.87-
387.40	26,673.61	1,060.39		1,060.39-
391.10	1,126,634.58			
391.11	25,378.00			
392.00	12,904.19		26,139.89	26,139.89
394.00	758,805.48			
395.00	21,557.31			
396.00			109,393.82	109,393.82
397.10	173,475.92			
397.24	2,339,888.73			
397.50	29,824.98	29,402.56		29,402.56-
398.00	218,487.36			
	20,184,435.36	4,164,784.07	156,361.71	4,008,422.36-

ACCT	REGULAR RETIREMENTS	COST OF REMOVAL	GROSS SALVAGE	NET SALVAGE
2016 TRANSACTION YEAR				
303.00	740,840.66			
362.10		27,770.30		27,770.30-
374.20	7.02	192.38		192.38-
374.40	281.87	17.13		17.13-
375.34	72,407.95	26,961.80		26,961.80-
375.70	9,328.45			
376.00	8,479,913.68	1,131,099.09	3,855.00	1,127,244.09-
378.00	1,212,757.48	63,141.34		63,141.34-
380.00	6,548,981.00	2,853,156.51		2,853,156.51-
381.00	724,309.02	675.71	215,365.51	214,689.80
382.00	154,260.25			
383.00	17,403.11			
385.00	85,292.41	64,142.79		64,142.79-
387.40	36,279.86	1,807.70		1,807.70-
391.10	260,945.93			
391.12	1,898,783.69			
393.00	2,299.92			
394.00	161,691.96	2,431.14		2,431.14-
395.00	13,945.83			
396.00	218,570.62		52,454.60	52,454.60
397.10	168,830.82			
397.50	14,631.27			
398.00	47,919.70			
	20,869,682.50	4,171,395.89	271,675.11	3,899,720.78-

ACCT	REGULAR RETIREMENTS	COST OF REMOVAL	GROSS SALVAGE	NET SALVAGE
2017 TRANSACTION YEAR				
303.00	2,263,869.67			
353.00	5,745.26			
355.00	18,533.09			
362.10		56,417.81		56,417.81-
374.40	11,936.44	38,240.05		38,240.05-
375.34	177,551.37	36,137.31		36,137.31-
376.00	12,225,336.78	1,258,205.78	1,297.00	1,256,908.78-
378.00	649,171.93	247,333.58		247,333.58-
379.10	889.56			
380.00	7,406,277.97	2,142,798.48		2,142,798.48-
381.00	394,736.32	4,899.87	34,508.89	29,609.02
382.00	124,360.72			
383.00	12,648.88			
385.00	357,612.63	113,814.22		113,814.22-
387.40	37,733.38	459.97		459.97-
391.10	475,324.47			
392.00	42,274.76			
393.00	939.35			
394.00	186,713.88	1,648.52		1,648.52-
395.00	8,811.95			
396.00	180,818.08			
397.50	43,079.36	257.12		257.12-
398.00	9,171.96			
	24,633,537.81	3,900,212.71	35,805.89	3,864,406.82-

ACCT	REGULAR RETIREMENTS	COST OF REMOVAL	GROSS SALVAGE	NET SALVAGE
2018 TRANSACTION YEAR				
302.10	272.50			
303.00	1,796,364.46			
351.20	9,061.96	21,434.00		21,434.00-
353.00	55.42	633.71		633.71-
362.10		101,148.90		101,148.90-
374.20	2.25			
374.40	2,661.60	3,646.96		3,646.96-
375.34	47,458.73	35,116.51		35,116.51-
375.70	3,994.37			
376.00	10,232,873.86	1,441,406.34		1,441,406.34-
378.00	846,387.37	370,922.18		370,922.18-
379.10	4,260.61	76,321.00		76,321.00-
380.00	9,754,235.29	3,052,049.09		3,052,049.09-
381.00	517,125.77		60,956.85	60,956.85
382.00	154,844.89	10.01		10.01-
383.00	7,723.55			
385.00	198,750.03	124,888.37		124,888.37-
387.40	79,635.11	5,150.01		5,150.01-
391.10	480,955.49			
391.12	299,109.66			
392.00	3,312.39		13,348.29	13,348.29
393.00	13,435.25			
394.00	432,858.80		6,262.88	6,262.88
395.00	4,710.24			
396.00	87,406.00		123,650.81	123,650.81
398.00	10,374.96			
	24,987,870.56	5,232,727.08	204,218.83	5,028,508.25-

ACCT	REGULAR RETIREMENTS	COST OF REMOVAL	GROSS SALVAGE	NET SALVAGE
2019 TRANSACTION YEAR				
303.00	132,678.23			
352.01	60,192.37			
352.02	647.80			
353.00	10,141.97	220.40		220.40-
354.00	774.99			
362.10		84,433.04		84,433.04-
374.40	1,463.92	4,027.90		4,027.90-
375.34	63,972.20	13,446.58		13,446.58-
375.60	1,441.97	518.68		518.68-
375.70	191,736.25			
376.00	24,112,905.61	1,562,758.41		1,562,758.41-
378.00	787,329.71	197,320.30		197,320.30-
380.00	10,932,664.80	3,345,786.25		3,345,786.25-
381.00	577,587.04	675.26		675.26-
382.00	102,336.91			
383.00	390,529.60			
385.00	261,484.70	187,266.09		187,266.09-
387.40	167,920.32	2,001.41		2,001.41-
391.10	80,599.29			
391.12	380,331.60			
392.00	30,525.57		606.50	606.50
394.00	566,669.51			
394.12	461,286.70-			
397.50	4,347.89			
398.00	11,186.58			
	38,408,182.13	5,398,454.32	606.50	5,397,847.82-
TOTAL	129,083,708.36	22,867,574.07	668,668.04	22,198,906.03-

COLUMBIA GAS OF PENNSYLVANIA. INC.
53.53 I. VALUATION
A. ALL UTILITIES

5. Provide a comparison of respondent's calculated depreciation reserve vs. book reserve by account at the end of the test year.

Response:

A comparison of the calculated depreciation reserve vs. book reserve by account as of November 30, 2020, is listed on Pages 2 through 4 of this response.

COLUMBIA GAS OF PENNSYLVANIA, INC.

COMPARISON OF CALCULATED ACCRUED DEPRECIATION
AND BOOK RESERVE AS OF NOVEMBER 30, 2020

<u>DEPRECIABLE GROUP</u>		<u>CALCULATED ACCRUED DEPRECIATION</u>	<u>BOOK RESERVE</u>
(1)		(2)	(3)
		\$	\$
DEPRECIABLE PLANT			
UNDERGROUND STORAGE PLANT			
350.2	RIGHTS OF WAY	1,766	1,931
351	COMPRESSOR STATION STRUCTURES	2,202,261	2,046,982
	WELLS		
352.01	CONSTRUCTION	676,507	738,926
352.02	EQUIPMENT	153,390	168,032
	<i>TOTAL ACCOUNT 352</i>	<u>829,897</u>	<u>906,958</u>
352.1	STORAGE LEASEHOLDS AND RIGHTS	189,709	206,932
353	LINES	352,615	388,491
354	COMPRESSOR STATION EQUIPMENT	740,743	783,946
355	MEASURING AND REGULATING EQUIPMENT	93,888	104,477
	TOTAL UNDERGROUND STORAGE PLANT	4,410,879	4,439,717
DISTRIBUTION PLANT			
	LAND AND LAND RIGHTS		
374.4	LAND RIGHTS	855,133	803,165
374.5	RIGHTS OF WAY	1,641,955	1,756,977
	<i>TOTAL ACCOUNT 374</i>	<u>2,497,088</u>	<u>2,560,142</u>
	STRUCTURES AND IMPROVEMENTS		
375.34	MEASURING AND REGULATING	1,273,599	1,352,223
375.6	INDUSTRIAL MEASURING AND REGULATING	58,398	74,799
375.7	OTHER DISTRIBUTION SYSTEMS		
	DISTRIBUTION SYSTEM STRUCTURES	2,490,169	2,857,433
	OTHER BUILDINGS	845,244	974,135
	<i>TOTAL ACCOUNT 375.70</i>	<u>3,335,413</u>	<u>3,831,568</u>
375.8	COMMUNICATION	7,440	7,896
	<i>TOTAL ACCOUNT 375</i>	<u>4,674,850</u>	<u>5,266,486</u>
376	MAINS		
	CAST IRON	184,504	160,052
	BARE STEEL	53,420,372	46,340,617
	OTHER	279,172,830	242,174,302
	<i>TOTAL ACCOUNT 376</i>	<u>332,777,706</u>	<u>288,674,971</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.

COMPARISON OF CALCULATED ACCRUED DEPRECIATION
AND BOOK RESERVE AS OF NOVEMBER 30, 2020

DEPRECIABLE GROUP		CALCULATED ACCRUED DEPRECIATION	BOOK RESERVE
(1)		(2)	(3)
		\$	\$
378	MEASURING AND REGULATING STATION EQUIPMENT - GENERAL	17,724,463	17,480,520
379.1	MEASURING AND REGULATING STATION EQUIPMENT - CITY GATE	102,584	27,311
380	SERVICES		
	BARE STEEL	709,226	628,310
	OTHER	143,733,048	127,334,407
	<i>TOTAL ACCOUNT 380</i>	144,442,274	127,962,717
381	METERS	16,666,305	17,078,832
381.1	METERS - AMR	14,757,737	15,534,889
382	METER INSTALLATIONS	13,688,937	14,413,488
383	HOUSE REGULATORS AND INSTALLATIONS	6,210,020	7,565,856
385	INDUSTRIAL MEASURING AND REGULATING STATION EQUIPMENT - OTHER THAN METERS	3,144,186	2,084,988
	OTHER EQUIPMENT		
387	GENERAL	80,870	72,195
387.4	COMMUNICATION EQUIPMENT	2,583,272	2,247,776
387.5	GPS EQUIPMENT	1,367,033	1,313,395
	<i>TOTAL ACCOUNT 387</i>	4,031,175	3,633,366
	TOTAL DISTRIBUTION PLANT	560,717,325	502,283,566
GENERAL PLANT			
390.1	STRUCTURES AND IMPROVEMENTS - COMMUNICATION	36,143	49,821
	OFFICE FURNITURE AND EQUIPMENT		
391.1	FURNITURE	923,679	1,074,322
391.11	EQUIPMENT	39,485	41,394
391.12	INFORMATION SYSTEMS	2,487,426	2,297,010
	<i>TOTAL ACCOUNT 391</i>	3,450,590	3,412,726
392	TRANSPORTATION EQUIPMENT - TRAILERS	13,601	26,344
	TOOLS, SHOP AND GARAGE EQUIPMENT		
394	EQUIPMENT	6,717,357	7,008,818
394.12	CNG FACILITIES	2,408,953	2,411,138
	<i>TOTAL ACCOUNT 394</i>	9,126,310	9,419,956
395	LABORATORY EQUIPMENT	76,595	69,334
396	POWER OPERATED EQUIPMENT	824,813	927,581

COLUMBIA GAS OF PENNSYLVANIA, INC.

COMPARISON OF CALCULATED ACCRUED DEPRECIATION
AND BOOK RESERVE AS OF NOVEMBER 30, 2020

<u>DEPRECIABLE GROUP</u>		<u>CALCULATED ACCRUED DEPRECIATION</u>	<u>BOOK RESERVE</u>
(1)		(2)	(3)
		\$	\$
397.5	COMMUNICATION EQUIPMENT - TELEMETERING	646,545	786,130
398	MISCELLANEOUS EQUIPMENT	380,198	420,527
TOTAL GENERAL PLANT		14,554,795	15,112,419
SUBTOTAL DEPRECIABLE PLANT		579,682,999	521,835,702
AMORTIZABLE PLANT			
303	MISCELLANEOUS INTANGIBLE PLANT	16,663,271	16,663,271
303.6	MISCELLANEOUS INTANGIBLE PLANT - CLOUD	313,594	313,594
362.1	ENVIRONMENTAL REMEDIATION	(211,300)	(211,300)
375.71	STRUCTURES AND IMPROVEMENTS - LEASED	2,261,363	2,261,363
SUBTOTAL AMORTIZABLE PLANT		19,026,928	19,026,928
NONDEPRECIABLE PLANT			
TOTAL GAS PLANT		598,944,620	541,097,323

COLUMBIA GAS OF PENNSYLVANIA. INC.
53.53 I. VALUATION
A. ALL UTILITIES

6. Supply a schedule by account and depreciation group showing the survivor curve and annual accrual rate estimated to be appropriate:
- a. For the purposes of this filing.
 - b. For the purposes of the most recent rate increase filing prior to the current proceedings.
 - (i) Supply a comprehensive statement of any changes made in method of depreciation and in the selection of average services lives and dispersion.

Response:

- a. Please refer to pages I-3 through I-5 of the Columbia's historic test year Depreciation Study in Exhibit No.9, Schedule No.1.
- b. Please refer to Exhibit No.9, Schedule No.3, Pages 2 through 4.
 - (i) The depreciation methods and procedures used in this filing are the same as those used in previous filings. Explanations of the depreciation methods and procedures are presented in Exhibit No. 109.

The estimated survivor curves used in this filing have not changed from those used in the most recent rate filing, R-2020-3018835.

COLUMBIA GAS OF PENNSYLVANIA, INC.

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO GAS PLANT AS OF NOVEMBER 30, 2019

DEPRECIABLE GROUP (1)		SURVIVOR CURVE (2)	ORIGINAL COST AS OF NOVEMBER 30, 2019 (3)	BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE (8)=(5)/(6)
						AMOUNT (6)	RATE (7)=(6)/(3)	
DEPRECIABLE PLANT								
UNDERGROUND STORAGE PLANT								
350.2	RIGHTS OF WAY	SQUARE *	1,932.08	1,931	1	0	-	-
351	COMPRESSOR STATION STRUCTURES	65-R2.5 *	3,220,858.29	1,787,340	1,433,518	258,896	8.04	5.5
WELLS								
352.01	CONSTRUCTION	SQUARE *	738,941.36	738,926	15	3	-	5.0
352.02	EQUIPMENT	50-S2.5 *	168,031.87	168,032	0	0	-	-
	<i>TOTAL ACCOUNT 352</i>		906,973.23	906,958	15	3		
352.1	STORAGE LEASEHOLDS AND RIGHTS	SQUARE *	206,940.78	206,932	9	2	-	4.5
353	LINES	50-S1.5 *	389,345.13	388,711	634	123	0.03	5.2
354	COMPRESSOR STATION EQUIPMENT	55-R2.5 *	948,272.21	759,861	188,411	34,177	3.60	5.5
355	MEASURING AND REGULATING EQUIPMENT	37-R1.5 *	104,476.92	104,477	0	0	-	-
	<i>TOTAL UNDERGROUND STORAGE PLANT</i>		5,778,798.64	4,156,210	1,622,588	293,201	5.07	
DISTRIBUTION PLANT								
LAND AND LAND RIGHTS								
374.4	LAND RIGHTS	70-R2.5	3,177,646.40	767,255	2,410,391	52,722	1.66	45.7
374.5	RIGHTS OF WAY	80-S4	3,233,161.36	1,721,412	1,511,749	35,102	1.09	43.1
	<i>TOTAL ACCOUNT 374</i>		6,410,807.76	2,488,667	3,922,140	87,824	1.37	
STRUCTURES AND IMPROVEMENTS								
375.34	MEASURING AND REGULATING	60-R1	5,195,494.58	1,341,810	3,853,685	111,828	2.15	34.5
375.6	INDUSTRIAL MEASURING AND REGULATING	55-R1	86,227.87	74,740	11,488	536	0.62	21.4
375.7	OTHER DISTRIBUTION SYSTEMS							
	DISTRIBUTION SYSTEM STRUCTURES	90-R1.5 *	7,303,629.43	2,267,012	5,036,616	220,918	3.02	22.8
	OTHER BUILDINGS	35-R2	2,613,474.49	937,179	1,676,295	74,174	2.84	22.6
	<i>TOTAL ACCOUNT 375.7</i>		9,917,103.92	3,204,191	6,712,911	295,092	2.98	22.7
375.8	COMMUNICATION	45-R3	16,515.17	7,523	8,992	367	2.22	24.5
	<i>TOTAL ACCOUNT 375</i>		15,215,341.54	4,628,264	10,587,076	407,823	2.68	
376	MAINS							
	CAST IRON	71-R1 *	257,119.69	204,253	52,867	9,706	3.77	5.4
	BARE STEEL	71-R1 *	64,855,156.02	46,019,762	18,835,394	1,860,455	2.87	10.1
	OTHER	71-R1	1,712,522.873.35	215,685,728	1,496,837,145	37,017,626	2.16	40.4
	<i>TOTAL ACCOUNT 376</i>		1,777,635,149.06	261,909,743	1,515,725,406	38,887,787	2.19	

COLUMBIA GAS OF PENNSYLVANIA, INC.

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO GAS PLANT AS OF NOVEMBER 30, 2019

	DEPRECIABLE GROUP (1)	SURVIVOR CURVE (2)	ORIGINAL COST	BOOK	FUTURE	CALCULATED		COMPOSITE
			AS OF NOVEMBER 30, 2019 (3)	RESERVE (4)	BOOK ACCUALS (5)	ANNUAL AMOUNT (6)	RATE (7)=(6)/(3)	REMAINING LIFE (8)=(5)/(6)
378	MEASURING AND REGULATING EQUIPMENT - GENERAL	45-O1	95,152,289.01	13,923,477	81,228,812	3,865,467	4.06	21.0
379.1	MEASURING AND REGULATING EQUIPMENT - CITY GATE	35-S2	135,966.90	23,396	112,571	11,564	8.51	9.7
380	SERVICES							
	BARE STEEL	50-R0.5 *	848,484.37	669,890	178,594	23,101	2.72	7.7
	OTHER	50-R0.5	579,939,518.91	124,429,518	455,510,001	17,258,270	2.98	26.4
	<i>TOTAL ACCOUNT 380</i>		580,788,003.28	125,099,408	455,688,595	17,281,371	2.98	
381	METERS	44-S1	39,176,296.30	16,692,236	22,484,060	939,195	2.40	23.9
381.1	METERS - AMR	15-S2.5	24,570,547.05	13,753,323	10,817,224	1,628,550	6.63	6.6
382	METER INSTALLATIONS	55-R3	40,589,166.28	13,740,052	26,849,114	764,801	1.88	35.1
383	HOUSE REGULATORS	45-S2	17,171,583.11	7,229,368	9,942,215	341,058	1.99	29.2
384	HOUSE REGULATOR INSTALLATIONS							
385	INDUSTRIAL MEASURING AND REGULATING EQUIPMENT - OTHER THAN METERS	30-R0.5	7,942,941.17	2,475,154	5,467,787	407,818	5.13	13.4
	OTHER EQUIPMENT							
387	GENERAL	32-R0.5	136,698.14	68,409	68,289	6,804	4.98	10.0
387.4	COMMUNICATION EQUIPMENT	25-R2	10,525,792.35	1,762,268	8,763,524	541,999	5.15	16.2
387.5	GPS EQUIPMENT	10-S3	2,201,371.95	1,035,802	1,165,570	262,246	11.91	4.4
	<i>TOTAL ACCOUNT 387</i>		12,863,862.44	2,866,479	9,997,383	811,049	6.30	
	<i>TOTAL DISTRIBUTION PLANT</i>		2,617,651,953.90	464,829,567	2,152,822,383	65,434,307	2.50	
	GENERAL PLANT							
390.1	STRUCTURES AND IMPROVEMENTS - COMMUNICATION	45-R2	49,821.42	49,821	0	0	-	-
	OFFICE FURNITURE AND EQUIPMENT							
391.1	FURNITURE	20-SQ	2,383,980.24	1,033,246	1,350,734	88,519	3.71	15.3
391.11	EQUIPMENT	15-SQ	91,303.67	35,307	55,997	5,863	6.42	9.6
391.12	INFORMATION SYSTEMS	5-SQ	4,498,634.50	2,724,157	1,774,478	932,686	20.73	1.9
	<i>TOTAL ACCOUNT 391</i>		6,973,918.41	3,792,710	3,181,209	1,027,068	14.73	
392	TRANSPORTATION EQUIPMENT - TRAILERS	15-SQ	25,616.89	26,344	(727)	0	-	-
	TOOLS, SHOP AND GARAGE EQUIPMENT							
394	EQUIPMENT	25-SQ	16,449,522.26	6,592,470	9,857,052	590,635	3.59	16.7
394.12	CNG FACILITIES	12-S1.5	2,414,784.54	2,414,378	407	310	0.01	1.3
	<i>TOTAL ACCOUNT 394</i>		18,864,306.80	9,006,848	9,857,459	590,945	3.13	

COLUMBIA GAS OF PENNSYLVANIA, INC.

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO GAS PLANT AS OF NOVEMBER 30, 2019

DEPRECIABLE GROUP (1)	SURVIVOR CURVE (2)	ORIGINAL COST	BOOK	FUTURE	CALCULATED ANNUAL ACCRUAL		COMPOSITE	
		AS OF NOVEMBER 30, 2019 (3)	RESERVE (4)	BOOK ACCRUALS (5)	AMOUNT (6)	RATE (7)=(6)/(3)	REMAINING LIFE (8)=(5)/(6)	
395	LABORATORY EQUIPMENT	20-SQ	269,029.81	58,966	210,064	14,206	5.28	14.8
396	POWER OPERATED EQUIPMENT	13-L2	948,698.04	937,267	11,431	2,411	0.25	4.7
397.5	COMMUNICATION EQUIPMENT - TELEMETERING	19-R2.5	792,132.68	784,415	7,718	613	0.08	12.6
398	MISCELLANEOUS EQUIPMENT	15-SQ	971,182.92	374,355	596,828	58,683	6.04	10.2
TOTAL GENERAL PLANT			28,894,706.97	15,030,726	13,863,982	1,693,926	5.86	
SUBTOTAL DEPRECIABLE PLANT			2,652,325,459.51	484,016,503	2,168,308,953	67,421,434	2.54	
AMORTIZABLE PLANT								
303	MISCELLANEOUS INTANGIBLE PLANT		29,383,486.22	13,551,909	15,831,577	3,557,804	**	
362.1	ENVIRONMENTAL REMEDIATION			(216,952)				
375.71	STRUCTURES AND IMPROVEMENTS - LEASED		5,487,916.76	1,917,220	3,570,697	491,410	**	
SUBTOTAL AMORTIZABLE PLANT			34,871,402.98	15,252,177	19,402,274	4,049,214		
NONDEPRECIABLE PLANT			649,240.82	209,923				
TOTAL GAS PLANT			2,687,846,103.31	499,478,603	2,187,711,227	71,470,648		

* Indicates the use of an interim survivor curve and retirement date.

** Accrual rate based on individual asset amortization.

Note: New additions in Account 303.6 (Miscellaneous Intangible Plant - Cloud) as of December 1, 2019 will utilize an annual accrual rate of 20.00% consistent with a 5-SQ Survivor Curve.

COLUMBIA GAS OF PENNSYLVANIA, INC.
53.53 I. VALUATION
A. ALL UTILITIES

7. Provide a table, showing the cumulative depreciated original cost by year of installation for utility plant in service at the end of the test year (depreciable plant only) as claimed in the measures of value, in the following form:
- a. Year installed
 - b. Original cost – the total surviving cost associated with each installation year from all plant accounts.
 - c. Calculated depreciation reserve – the calculated depreciation reserve associated with each installation year from all plant accounts.
 - d. Depreciated original cost – (Column B minus Column C).
 - e. Total – cumulation year by year of the figures from Column D.
 - f. Column E divided by the total of the figure in Column D.

Response:

Please reference pages II-3 through II-6 of Columbia's Depreciation Study for the historic test year included in Exhibit No.9, Schedule No.1.

COLUMBIA GAS OF PENNSYLVANIA, INC.

53.53 I. VALUATION

A. ALL UTILITIES

17. Regardless of whether a claim for net negative or positive salvage is made, attach an exhibit showing gross salvage, cost of removal, and net salvage for the test year and four previous years by account.

Response:

Please refer to pages III-2 through III-6 of Columbia's historic test year depreciation study is included in Exhibit No.9, Schedule No.1.

EXHIBIT 10

COLUMBIA GAS OF PENNSYLVANIA, INC.
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
E. GAS UTILITIES

12. Provide a schedule showing residential and commercial heating sales by unit (MCF) per month and degree days for the test year and three preceding twelve month periods.

Response:

See Exhibit No. 10, Schedule No. 1, Pages 2-3 for residential and commercial heating sales by Dth.

Columbia Gas of Pennsylvania, Inc
Degree Day Data and Residential Heating Sales
Billing Month

Line No.	Description	December (1)	January (2)	February (3)	March (4)	April (5)	May (6)	June (7)	July (8)	August (9)	September (10)	October (11)	November (12)	Total (13)
1	Degree Days (BPT=65)													
2	January 2022 to December 2022 (1)	836	1,079	1,035	869	548	268	90	9	2	17	141	428	5,322
3	December 2020 to November 2021 (1)	836	1,079	1,035	869	548	268	90	9	2	17	141	428	5,322
4	December 2019 to November 2020 (2)	904	941	874	746	511	426	102	5	-	23	171	375	5,078
5	December 2018 to November 2019 (3)	951	1,018	1,062	911	525	204	61	7	1	8	116	492	5,356
6	December 2017 to November 2018 (3)	856	1,313	946	787	748	259	28	5	1	15	133	566	5,657
7	December 2016 to November 2017 (3)	807	1,036	826	724	493	220	86	10	3	47	88	430	4,770
8	Residential Heating Sales - Dth													
9	January 2022 to December 2022 (1)	3,521,822	4,943,593	5,010,528	4,220,219	2,611,312	935,003	308,218	-	-	50,979	287,768	1,498,457	23,387,900
10	December 2020 to November 2021 (1)	3,350,794	4,839,121	4,894,253	4,111,902	2,532,297	904,620	367,379	-	-	37,832	258,580	1,456,064	22,752,841
11	December 2019 to November 2020 (2)	3,692,059	4,057,029	3,865,645	3,246,527	1,881,947	1,552,350	395,615	-	-	-	309,325	1,154,559	20,155,057
12	December 2018 to November 2019 (3)	4,234,179	4,693,111	5,245,534	4,390,123	2,370,896	691,672	195,757	-	-	-	209,150	1,708,398	23,738,820
13	December 2017 to November 2018 (3)	3,614,430	6,182,546	4,547,759	3,589,668	3,349,906	1,125,466	105,612	-	-	-	239,167	1,997,256	24,751,810
14	December 2016 to November 2017 (3)	3,319,693	4,663,210	3,776,609	3,186,454	2,118,628	661,748	236,484	-	-	42,972	113,705	1,398,470	19,517,973

(1) Rate test year and Future test year reflecting normal weather based upon the 20 Year (2001-2020) average.
(2) Historic test year.
(3) Actual heating sales, not weather normalized.

Columbia Gas of Pennsylvania, Inc
Degree Day Data and Commercial Heating Sales
Billing Month

Line No.	Description	December (1)	January (2)	February (3)	March (4)	April (5)	May (6)	June (7)	July (8)	August (9)	September (10)	October (11)	November (12)	Total (13)
1	Degree Days (BPT=65)													
2	January 2022 to December 2022 (1)	836	1,079	1,035	869	548	268	90	9	2	17	141	428	5,322
3	December 2020 to November 2021 (1)	836	1,079	1,035	869	548	268	90	9	2	17	141	428	5,322
4	December 2019 to November 2020 (2)	904	941	874	746	511	426	102	5	-	23	171	375	5,078
5	December 2018 to November 2019 (3)	951	1,018	1,062	911	525	204	61	7	1	8	116	492	5,356
6	December 2017 to November 2018 (3)	856	1,313	946	787	748	259	28	5	1	15	133	566	5,657
7	December 2016 to November 2017 (3)	807	1,036	826	724	493	220	86	10	3	47	88	430	4,770
8	Commercial Heating Sales - Dth													
9	January 2022 to December 2022 (1)	894,063	1,306,346	1,337,782	1,079,526	602,309	226,498	58,477	-	-	7,443	84,705	332,496	5,929,644
10	December 2020 to November 2021 (1)	880,787	1,313,019	1,346,752	1,086,818	600,481	232,898	60,125	-	-	8,605	84,345	333,244	5,947,075
11	December 2019 to November 2020 (2)	1,006,067	1,143,625	1,105,637	900,884	434,918	318,028	52,216	-	-	16,944	82,005	281,428	5,341,752
12	December 2018 to November 2019 (3)	1,027,074	1,181,998	1,391,551	1,114,162	569,672	134,301	31,903	-	-	10,615	58,047	400,697	5,920,021
13	December 2017 to November 2018 (3)	937,118	1,752,954	1,301,111	965,078	881,308	251,179	20,280	-	-	6,697	62,362	498,992	6,677,080
14	December 2016 to November 2017 (3)	868,859	1,332,477	1,073,179	886,091	559,159	140,650	47,042	-	-	16,681	40,107	353,174	5,317,420

(1) Rate test year and Future test year reflecting normal weather based upon the 20 Year (2001-2020) average.
(2) Historic test year.
(3) Actual heating sales, not weather normalized.

COLUMBIA GAS OF PENNSYLVANIA, INC.
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
E. GAS UTILITIES

19. Provide growth patterns of usage and customer numbers per rate class, using historical and projected data.

Response:

See Exhibit No. 10, Schedule 2, Pages 2-8.

Columbia Gas of Pennsylvania, Inc
Analysis of the Average Monthly Consumption
Twelve Months Ended November 30, 2016

Line No.	Period	Residential (1)						Commercial (1)					Industrial				
		Total Customers	Sales Volume	Trans Volume	Through-Put	Average	Total Customers	Sales Volume	Trans Volume	Through-Put	Average	Total Customers	Sales Volume	Trans Volume	Through-Put	Average	
			MDth	MDth	MDth	Dth/Cust		MDth	MDth	MDth	Dth/Cust		MDth	MDth	MDth	Dth/Cust	
1	Dec	2015	385616	2817	789	3607	9.35	37113	884	1463	2347	63	271	18	1557	1574	5,809
2	Jan	2016	387022	4292	1187	5479	14.16	37291	1374	2044	3419	92	272	29	1767	1795	6,600
3	Feb		387739	5050	1380	6429	16.58	37300	1660	2323	3983	107	273	31	1934	1965	7,199
4	Mar		388108	3716	1004	4719	12.16	37288	1211	1670	2881	77	271	18	1757	1775	6,550
5	Apr		386798	2423	654	3077	7.95	37216	757	1322	2080	56	270	11	1658	1668	6,180
6	May		385327	1273	342	1614	4.19	37145	425	874	1299	35	269	6	1676	1682	6,252
7	Jun		384212	711	193	904	2.35	37041	254	630	884	24	269	4	1584	1588	5,904
8	Jul		383324	442	118	561	1.46	36976	184	521	704	19	269	3	1728	1731	6,435
9	Aug		383128	381	102	482	1.26	36902	169	513	682	18	268	3	1625	1629	6,077
10	Sep		383096	395	105	499	1.30	36877	178	532	710	19	269	4	1553	1557	5,786
11	Oct		384127	544	142	687	1.79	36901	227	665	892	24	268	5	1598	1603	5,982
12	Nov	2016	386173	1486	387	1873	4.85	37001	480	1041	1521	41	268	8	1722	1731	6,458
13																	
14	Total or Average		385,389	23,530	6,402	29,933	77.41	37,088	7,803	13,597	21,400	575.71	270	141	20,157	20,298	75,232.10
15																	
16	Heating Season			17,362	4,747	22,108	57		5,609	8,541	14,150	380		104	8,736	8,840	32,616
17	(November-March)																
18	Non-Heating Season			6,169	1,656	7,824	20		2,195	5,056	7,251	196		37	11,421	11,458	42,616
19	(April-October)																
20	Daily Average = Total/365			64	18	82			21	37	59			0	55	56	

(1) Actual sales, not weather normalized.

Columbia Gas of Pennsylvania, Inc
 Analysis of the Average Monthly Consumption
 Twelve Months Ended November 30, 2017

Line No.	Period	Residential (1)						Commercial (1)						Industrial					
		Total Customers	Sales Volume	Trans Volume	Through-Put	Average	Total Customers	Sales Volume	Trans Volume	Through-Put	Average	Total Customers	Sales Volume	Trans Volume	Through-Put	Average			
			MDth	MDth	MDth	Dth/Cust		MDth	MDth	MDth	Dth/Cust		MDth	MDth	MDth	Dth/Cust			
1	Dec	2016	388829	3776	966	4742	12.19	37148	1169	1855	3024	81	268	23	1912	1936	7,224		
2	Jan	2017	390253	5132	1298	6430	16.48	37243	1667	2290	3957	106	268	20	2168	2188	8,163		
3	Feb		390777	4196	1046	5243	13.42	37262	1362	1978	3340	90	268	17	2171	2188	8,163		
4	Mar		391078	3605	891	4496	11.50	37266	1170	1739	2909	78	268	13	1950	1963	7,324		
5	Apr		390176	2546	625	3172	8.13	37197	840	1316	2155	58	268	8	1940	1948	7,268		
6	May		388794	1090	269	1360	3.50	37099	363	817	1180	32	268	6	1837	1843	6,877		
7	Jun		387557	670	166	836	2.16	37059	256	642	898	24	268	6	1736	1742	6,499		
8	Jul		386740	447	109	557	1.44	36957	193	526	719	19	268	6	1880	1885	7,035		
9	Aug		386176	403	99	502	1.30	36924	181	533	714	19	267	7	1868	1875	7,022		
10	Sep		386502	475	114	589	1.52	36904	207	582	788	21	268	8	1960	1968	7,343		
11	Oct		387584	536	127	663	1.71	36928	227	631	858	23	268	13	2113	2126	7,931		
12	Nov	2017	389898	1825	432	2257	5.79	37076	590	1182	1772	48	268	20	1853	1873	6,989		
13																			
14	Total or Average		388,697	24,702	6,143	30,845	79.13	37,089	8,224	14,090	22,313	600.48	268	146	23,387	23,533	87,837.29		
15																			
16	Heating Season			18,534	4,633	23,167	59		5,958	9,043	15,001	403		93	10,054	10,147	37,862		
17	(November-March)																		
18	Non-Heating Season			6,168	1,510	7,678	20		2,266	5,046	7,312	197		53	13,333	13,386	49,976		
19	(April-October)																		
20	Daily Average = Total/365			68	17	85			23	39	61			0	64	64			

(1) Actual sales, not weather normalized.

Columbia Gas of Pennsylvania, Inc
Analysis of the Average Monthly Consumption
Twelve Months Ended November 30, 2018

Line No.	Period	Residential (1)						Commercial (1)						Industrial					
		Total Customers	Sales Volume	Trans Volume	Through-Put	Average	Total Customers	Sales Volume	Trans Volume	Through-Put	Average	Total Customers	Sales Volume	Trans Volume	Through-Put	Average			
			MDth	MDth	MDth	Dth/Cust		MDth	MDth	MDth	Dth/Cust		MDth	MDth	MDth	Dth/Cust			
1	Dec	2017	392350	4057	948	5005	12.76	37226	1243	1937	3179	85	268	19	2068	2087	7,787		
2	Jan	2018	393759	6639	1540	8179	20.77	37318	2094	2845	4939	132	268	29	2370	2399	8,952		
3	Feb		394172	4953	1139	6092	15.46	37321	1596	2261	3857	103	268	21	2176	2197	8,198		
4	Mar		394418	3996	910	4906	12.44	37284	1251	1865	3116	84	269	18	2193	2212	8,221		
5	Apr		393550	3776	854	4630	11.76	37239	1175	1809	2985	80	266	18	2131	2148	8,077		
6	May		392010	1532	343	1875	4.78	37139	499	932	1432	39	266	8	1936	1944	7,308		
7	Jun		390689	533	111	644	1.65	37054	212	605	817	22	265	5	1851	1856	7,004		
8	Jul		389727	444	92	535	1.37	36993	183	541	724	20	266	5	1807	1812	6,813		
9	Aug		389242	404	82	486	1.25	36940	177	546	723	20	265	5	1871	1875	7,077		
10	Sep		389708	435	88	523	1.34	36940	192	567	759	21	266	5	1879	1883	7,080		
11	Oct		390942	654	132	786	2.01	36972	258	680	938	25	265	8	1922	1930	7,283		
12	Nov	2018	393551	2420	489	2908	7.39	37067	752	1393	2145	58	264	12	2068	2080	7,880		
13																			
14	Total or Average		392,010	29,843	6,728	36,570	92.98	37,124	9,631	15,982	25,613	688.33	266	152	24,272	24,424	91,679.62		
15																			
16	Heating Season			22,065	5,026	27,091	69		6,935	10,301	17,236	463		99	10,876	10,975	41,038		
17	(November-March)																		
18	Non-Heating Season			7,778	1,701	9,479	24		2,696	5,681	8,377	226		53	13,397	13,449	50,641		
19	(April-October)																		
20	Daily Average = Total/365			82	18	100			26	44	70			0	66	67			

(1) Actual sales, not weather normalized.

Columbia Gas of Pennsylvania, Inc
Analysis of the Average Monthly Consumption
Twelve Months Ended November 30, 2019

Line No.	Period	Residential (1)						Commercial (1)						Industrial					
		Total Customers	Sales Volume	Trans Volume	Through-Put	Average	Total Customers	Sales Volume	Trans Volume	Through-Put	Average	Total Customers	Sales Volume	Trans Volume	Through-Put	Average			
			MDth	MDth	MDth	Dth/Cust		MDth	MDth	MDth	Dth/Cust		MDth	MDth	MDth	Dth/Cust			
1	Dec	2018	395703	4682	933	5615	14.19	37202	1313	2207	3520	95	269	22	2215	2237	8,317		
2	Jan	2019	396660	5157	1018	6175	15.57	37231	1488	2360	3848	103	269	23	2191	2214	8,231		
3	Feb		397257	5658	1101	6759	17.02	37280	1665	2607	4272	115	269	25	2307	2332	8,671		
4	Mar		397564	4803	942	5745	14.45	37281	1387	2188	3575	96	268	22	2178	2200	8,208		
5	Apr		396747	2791	550	3341	8.42	37257	827	1478	2305	62	269	13	2072	2085	7,750		
6	May		395563	1115	221	1336	3.38	37153	348	832	1180	32	269	7	1911	1918	7,132		
7	Jun		394045	621	123	744	1.89	37057	218	635	853	23	268	6	1801	1806	6,740		
8	Jul		393293	460	92	552	1.40	37000	179	538	717	19	269	5	1735	1741	6,471		
9	Aug		392735	400	77	476	1.21	36988	169	543	712	19	269	4	1774	1778	6,608		
10	Sep		393051	437	84	521	1.33	36974	186	583	769	21	267	4	1824	1828	6,846		
11	Oct		394141	623	120	743	1.89	37002	238	694	932	25	268	6	1878	1884	7,028		
12	Nov	2019	396927	2121	409	2531	6.38	37111	624	1330	1954	53	266	9	2012	2021	7,598		
13																			
14	Total or Average		395,307	28,869	5,670	34,539	87.11	37,128	8,641	15,996	24,637	662.38	268	147	23,897	24,044	89,599.26		
15																			
16	Heating Season			22,421	4,404	26,825	68		6,477	10,692	17,170	461		102	10,903	11,005	41,025		
17	(November-March)																		
18	Non-Heating Season			6,448	1,266	7,714	20		2,164	5,304	7,467	201		45	12,994	13,039	48,575		
19	(April-October)																		
20	Daily Average = Total/365			79	16	95			24	44	67			0	65	66			

(1) Actual sales, not weather normalized.

Columbia Gas of Pennsylvania, Inc
Analysis of the Average Monthly Consumption
Twelve Months Ended November 30, 2020

Line No.	Period	Residential (1)					Commercial (1)					Industrial					
		Total Customers	Sales Volume	Trans Volume	Through-Put	Average	Total Customers	Sales Volume	Trans Volume	Through-Put	Average	Total Customers	Sales Volume	Trans Volume	Through-Put	Average	
			MDth	MDth	MDth	Dth/Cust		MDth	MDth	MDth	Dth/Cust		MDth	MDth	MDth	Dth/Cust	
1	Dec	2019	399076	4123	1249	5372	13.46	37259	1278	2132	3410	92	269	21	2044	2065	7,677
2	Jan	2020	399994	4497	1347	5845	14.61	37314	1431	2246	3677	99	269	23	2049	2072	7,702
3	Feb		400464	4257	1261	5518	13.78	37355	1356	2195	3551	95	269	22	2097	2119	7,879
4	Mar		400735	3639	1092	4731	11.80	37361	1155	1830	2986	80	268	17	1957	1974	7,365
5	Apr		400727	2271	696	2967	7.40	37292	662	1244	1906	51	268	11	1714	1725	6,436
6	May		400673	1944	593	2536	6.33	37260	543	1041	1584	43	268	12	1674	1685	6,289
7	Jun		400630	804	238	1042	2.60	37198	244	620	864	23	267	9	1522	1531	5,733
8	Jul		400444	441	122	563	1.41	37174	160	509	669	18	269	10	1407	1417	5,269
9	Aug		400410	381	105	486	1.21	37160	152	515	667	18	269	14	1554	1568	5,828
10	Sep		400686	431	118	549	1.37	37159	168	577	745	20	269	17	1563	1580	5,874
11	Oct		401227	709	213	922	2.30	37207	253	733	986	26	271	14	1726	1740	6,420
12	Nov	2020	402017	1547	460	2007	4.99	37286	480	1098	1578	42	271	15	1837	1852	6,834
13																	
14	Total or Average		400,590	25,044	7,493	32,537	81.27	37,252	7,882	14,740	22,622	606.69	269	184	21,144	21,328	79,304.72
15																	
16	Heating Season			18,064	5,409	23,473	59		5,700	9,502	15,202	407		98	9,984	10,082	37,456
17	(November-March)																
18	Non-Heating Season			6,980	2,085	9,065	23		2,183	5,238	7,420	199		86	11,160	11,246	41,849
19	(April-October)																
20	Daily Average = Total/365			69	21	89			22	40	62			1	58	58	

(1) Actual sales, not weather normalized.

Columbia Gas of Pennsylvania, Inc
 Analysis of the Average Monthly Consumption
 Twelve Months Ended November 30, 2021

Line No.	Period	Residential						Commercial						Industrial					
		Total Customers	Sales Volume	Trans Volume	Through-Put	Average	Total Customers	Sales Volume	Trans Volume	Through-Put	Average	Total Customers	Sales Volume	Trans Volume	Through-Put	Average			
			MDth	MDth	MDth	Dth/Cust		MDth	MDth	MDth	Dth/Cust		MDth	MDth	MDth	Dth/Cust			
1	Dec	2020	403004	3727	1057	4784	11.87	37357	1170	1901	3071	82	269	29	1835	1864	6,930		
2	Jan	2021	404200	5226	1466	6693	16.56	37442	1622	2473	4095	109	268	20	1874	1894	7,068		
3	Feb		404796	5239	1453	6692	16.53	37475	1614	2561	4176	111	268	21	1914	1935	7,218		
4	Mar		405151	4457	1242	5699	14.07	37473	1356	2134	3490	93	268	20	1893	1913	7,137		
5	Apr		404071	2888	821	3709	9.18	37405	851	1585	2436	65	268	15	1837	1852	6,912		
6	May		402632	1247	353	1599	3.97	37285	470	897	1367	37	268	12	1740	1752	6,538		
7	Jun		329915	660	182	843	2.55	37169	264	662	926	25	268	6	1688	1694	6,320		
8	Jul		399936	373	97	471	1.18	37063	171	541	712	19	269	7	1613	1620	6,022		
9	Aug		399355	333	86	419	1.05	37009	150	537	687	19	269	7	1666	1673	6,218		
10	Sep		399497	394	102	496	1.24	36953	171	569	740	20	269	7	1701	1708	6,351		
11	Oct		400541	602	172	774	1.93	36958	263	756	1018	28	271	14	1786	1800	6,641		
12	Nov	2021	402847	1797	506	2303	5.72	37053	541	1233	1775	48	271	25	1871	1896	6,995		
13																			
14	Total or Average		396,329	26,942	7,538	34,480	85.85	37,220	8,642	15,851	24,493	656.09	269	183	21,417	21,600	80,348.26		
15																			
16	Heating Season			20,446	5,724	26,170	65		6,303	10,303	16,606	444		115	9,386	9,501	35,348		
17	(November-March)																		
18	Non-Heating Season			6,497	1,814	8,311	21		2,339	5,548	7,887	212		68	12,030	12,099	45,000		
19	(April-October)																		
20	Daily Average = Total/365			74	21	94			24	43	67			1	59	59			

Columbia Gas of Pennsylvania, Inc
 Analysis of the Average Monthly Consumption
 Twelve Months Ended December 31, 2022

Line No.	Period	Residential					Commercial					Industrial					
		Total Customers	Sales Volume	Trans Volume	Through-Put	Average	Total Customers	Sales Volume	Trans Volume	Through-Put	Average	Total Customers	Sales Volume	Trans Volume	Through-Put	Average	
			MDth	MDth	MDth	Dth/Cust		MDth	MDth	MDth	Dth/Cust		MDth	MDth	MDth	Dth/Cust	
1	Jan	2022	406281	5298	1403	6700	16.49	37261	1612	2459	4072	109	268	22	2038	2060	7,688
2	Feb		406881	5329	1395	6723	16.52	37290	1605	2547	4153	111	268	22	2062	2084	7,776
3	Mar		407233	4537	1193	5730	14.07	37287	1347	2121	3468	93	268	21	2033	2054	7,664
4	Apr		406281	2932	786	3719	9.15	37249	848	1579	2427	65	268	16	1959	1975	7,369
5	May		404968	1257	335	1592	3.93	37158	468	894	1363	37	268	13	1859	1872	6,984
6	Jun		403474	638	166	804	1.99	37065	263	661	924	25	268	6	1750	1756	6,554
7	Jul		402517	343	84	427	1.06	36982	170	541	711	19	269	7	1668	1675	6,227
8	Aug		402060	307	75	382	0.95	36950	149	537	686	19	269	7	1720	1727	6,418
9	Sep		402321	381	93	474	1.18	36919	171	569	740	20	269	8	1765	1773	6,590
10	Oct		403485	604	162	766	1.90	36950	263	756	1019	28	271	15	1851	1866	6,886
11	Nov		405910	1816	480	2295	5.65	37069	543	1237	1779	48	271	26	1941	1967	7,259
12	Dec	2022	408259	3875	974	4850	11.88	37220	1183	1923	3106	83	269	32	1986	2018	7,503
13																	
14	Total or Average		404,973	27,316	7,146	34,462	84.78	37,117	8,622	15,825	24,447	657.26	269	195	22,633	22,827	84,919.07
15																	
16	Heating Season			20,854	5,445	26,299	65		6,290	10,288	16,577	445		123	10,061	10,184	37,890
17	(November-March)																
18	Non-Heating Season			6,462	1,701	8,163	20		2,332	5,537	7,870	212		72	12,572	12,644	47,029
19	(April-October)																
20	Daily Average = Total/365			75	20	94			24	43	67			1	62	63	

COLUMBIA GAS OF PENNSYLVANIA, INC.
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
E. GAS UTILITIES

22. Provide supporting data detailing curtailment adjustments, procedures and policies.

Response:

No curtailment adjustments have been made to the retail sales volumes for the twelve months ended November 30, 2020 (Historic Test Year), the twelve months ended November 30, 2021 (Future Test Year) or the twelve months ending December 31, 2022 (Fully Projected Future Test Year).

For Columbia's procedures and policies relating to curtailment, please see Tariff section Section 2.3 Gas Emergency Rules and Section 2.4 Emergency Curtailment for Tests or Repair. Please see Exhibit No. 14, Schedule No. 2, for a complete copy of Columbia's tariff.

COLUMBIA GAS OF PENNSYLVANIA, INC.
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
E. GAS UTILITIES

38. Identify company's policy with respect to replacing customers lost through attrition.

Response:

Columbia's policy for replacing customers lost through attrition and its policy for new business are essentially identical. Columbia's New Business field team is currently staffed with six Development Managers whose focus is on commercial and industrial projects, as well as residential new construction projects where main is needed. Columbia's New Business team collaborates with internal stakeholders to implement the process of connecting the customers to Columbia's system. Residential customers who wish to convert to natural gas from alternate fuel sources where main is already available are assisted by the New Business team located in Columbus, Ohio. In addition, Columbia uses the annual Dormant Account Survey process as a means of identifying customers who have left the system and targets them for reconnection.

Rules and regulations regarding applicant/new customers are detailed on Page Nos. 38 through 54 of Tariff Gas Pa. P.U.C. No.9 and are included as part of Exhibit 14, Schedule 2, Attachment 1. Page Nos. 38 through 54 of the current Tariff contain rules relevant to applicants and customers, including Application for Service, Customer's Installation, Testing and Inspection of Customer's Service, Credit, Point of Delivery of Gas to Customer, Extensions, Rights of Way, Introduction of Service, Company Equipment on Customer's Premises and Selection of Rate Schedule.

COLUMBIA GAS OF PENNSYLVANIA, INC.
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
E. GAS UTILITIES

39. Identify procedures developed to govern relationships between the respondent and potential customers; i.e., basically expansion, alternate energy requirements, availability of supply, availability of distribution facilities, ownership of metering and related facilities.

Response:

The relationship between Columbia Gas of Pennsylvania, Inc. and potential customers is described in its tariff currently on file with the Pennsylvania Public Utility Commission (Commission). Please reference Exhibit No. 14, Schedule No.2.

The availability of gas supply and/or capacity is evaluated for new loads being considered for addition to the distribution system. Key variables include the projected daily maximum and annual usage of the load being evaluated, the character of service being requested (sales service or general distribution service, firm service or interruptible service), the ability to accept such new loads within the constraints of existing distribution facilities and the existing contracts with the companies' interstate pipeline suppliers. Ownership of metering and related facilities is specifically addressed in Section 4 (Customer's Installations - refer to Page Nos. 40-41c) of the Company's tariff currently on file with the Commission.

COLUMBIA GAS OF PENNSYLVANIA, INC.

53.53 IV. RATE STRUCTURE

B. GAS UTILITIES

4. Provide an exhibit for each customer classification showing the following data for the test year and the four previous years.
 - a. The maximum coincident peak day demand.
 - b. The maximum coincident three-day peak day demand.
 - c. The average monthly consumption in MCF during the primary heating season (November - March).
 - d. The average monthly consumption in MCF during the non-heating season (April - October).
 - e. The average daily consumption in MCF for each twelve-month period.

Response:

Consistent with the fact that Columbia now bills in therms, the requested information is provided in Dth. Data by customer class is provided in the response to GAS-COS-010.

- a. See Page 2.
- b. See Page 2.
- c. See Exhibit No. 10, Schedule No.2.
- d. See Exhibit No. 10, Schedule No.2.
- e. See Exhibit No. 10, Schedule No.2.

COLUMBIA GAS OF PENNSYLVANIA, INC.

53.53 IV. RATE STRUCTURE

B. GAS UTILITIES

Maximum Coincident Peak Day Demand (Dth)

<u>Twelve Months</u> <u>Ending</u>	11/30/2020	11/30/2019	11/30/2018	11/30/2017	11/30/2016
	552,599	748,896	746,405	641,074	631,317

Maximum Coincident Three-Day Peak Day Demand (Dth)

<u>Twelve Months</u> <u>Ending</u>	11/30/2020	11/30/2019	11/30/2018	11/30/2017	11/30/2016
Day 1	532,968	748,896	687,330	551,205	596,348
Day 2	540,483	681,801	746,412	578,140	550,658
Day 3	474,223	622,606	734,759	607,435	631,317

COLUMBIA GAS OF PENNSYLVANIA, INC.
53.53 IV. RATE STRUCTURE
B. GAS UTILITIES

13. Submit the projected demands for all customer classes for both purchased and produced gas for the three years following the test year filing.

Response:

Please see Exhibit No. 10, Schedule No. 6, Pages 2-4.

Columbia Gas of Pennsylvania, Inc
 Analysis of the Average Monthly Consumption
 Twelve Months Ended December 31, 2023

Line No.	Period	Residential					Commercial					Industrial						
		Sales Customers	Trans Volume	Through- Put	Average		Total Customers	Sales Volume	Trans Volume	Through- Put	Average		Total Customers	Sales Volume	Trans Volume	Through- Put	Average	
		MDth	MDth	MDth	Dth/Cust		MDth	MDth	MDth	MDth	Dth/Cust		MDth	MDth	MDth	MDth	Dth/Cust	
1	Jan	2023	409,450	5,391	1,341	6,732	16.4	37,297	1,616	2,463	4,079	109.4	268	22	2,058	2,080	7,762	
2	Feb		410,036	5,427	1,334	6,761	16.5	37,322	1,607	2,550	4,157	111.4	268	22	2,082	2,104	7,852	
3	Mar		410,388	4,621	1,141	5,762	14.0	37,315	1,350	2,123	3,473	93.1	268	21	2,053	2,075	7,741	
4	Apr		409,436	2,982	751	3,733	9.1	37,273	848	1,578	2,426	65.1	268	16	1,979	1,995	7,444	
5	May		408,123	1,270	318	1,588	3.9	37,179	469	893	1,362	36.6	268	13	1,879	1,892	7,058	
6	Jun		406,629	634	155	788	1.9	37,084	263	659	923	24.9	268	6	1,770	1,776	6,628	
7	Jul		405,672	330	76	406	1.0	36,998	170	539	709	19.2	269	8	1,687	1,694	6,299	
8	Aug		405,215	294	67	361	0.9	36,964	149	535	685	18.5	269	7	1,739	1,747	6,493	
9	Sep		405,477	371	85	456	1.1	36,934	171	567	739	20.0	269	8	1,785	1,792	6,663	
10	Oct		406,641	602	151	753	1.9	36,966	263	754	1,017	27.5	271	15	1,871	1,886	6,959	
11	Nov		409,066	1,838	455	2,293	5.6	37,086	544	1,238	1,782	48.0	271	26	1,962	1,988	7,335	
12	Dec	2023	411,414	3,938	929	4,866	11.8	37,235	1,185	1,924	3,109	83.5	268	32	2,018	2,050	7,651	
13																		
14	Total or Average		408,129	27,697	6,803	34,500	84.22	37,138	8,636	15,824	24,460	657.16	269	197	22,883	23,079	85,884.25	
15																		
16	Heating Season			21,214	5,200	26,414	64		6,302	10,298	16,600	445		124	10,173	10,297	38,340	
17	(November-March)																	
18	Non-Heating Season			6,483	1,603	8,086	20		2,334	5,526	7,860	212		72	12,710	12,782	47,544	
19	(April-October)																	
20	Daily Average = Total/365			75.88	18.64	94.52			23.66	43.35	67.01			0.54	62.69	63.23		

Columbia Gas of Pennsylvania, Inc
Analysis of the Average Monthly Consumption
Twelve Months Ended December 31, 2024

Line No.	Period	Residential					Commercial					Industrial					
		Sales Customers	Trans Volume	Through-Put	Average	Total Customers	Sales Volume	Trans Volume	Through-Put	Average	Total Customers	Sales Volume	Trans Volume	Through-Put	Average		
		MDth	MDth	MDth	Dth/Cust	MDth	MDth	MDth	MDth	Dth/Cust	MDth	MDth	MDth	MDth	Dth/Cust		
1	Jan	2024	412,603	5,484	1,279	6,764	16.4	37,312	1,617	2,466	4,083	109.4	268	22	2,064	2,086	7,785
2	Feb		413,189	5,521	1,273	6,794	16.4	37,336	1,609	2,551	4,160	111.4	268	22	2,088	2,110	7,874
3	Mar		413,538	4,699	1,088	5,788	14.0	37,329	1,351	2,125	3,476	93.1	268	21	2,048	2,070	7,723
4	Apr		412,582	3,029	714	3,743	9.1	37,286	848	1,579	2,427	65.1	268	16	1,985	2,001	7,466
5	May		411,266	1,281	300	1,581	3.8	37,191	469	893	1,362	36.6	268	13	1,885	1,897	7,080
6	Jun		409,769	630	144	774	1.9	37,095	263	660	923	24.9	268	6	1,776	1,782	6,650
7	Jul		408,810	319	69	388	0.9	37,009	170	539	709	19.2	269	8	1,693	1,700	6,321
8	Aug		408,350	282	60	343	0.8	36,975	149	535	685	18.5	269	7	1,745	1,752	6,515
9	Sep		408,610	361	78	439	1.1	36,945	171	568	739	20.0	269	8	1,790	1,798	6,685
10	Oct		409,772	598	141	739	1.8	36,978	263	755	1,017	27.5	271	15	1,877	1,892	6,981
11	Nov		412,195	1,859	431	2,290	5.6	37,098	544	1,238	1,781	48.0	271	26	1,968	1,994	7,357
12	Dec	2024	414,543	3,999	884	4,883	11.8	37,247	1,185	1,924	3,109	83.5	268	32	2,024	2,056	7,673
13																	
14	Total or Average		411,269	28,062	6,462	34,525	83.64	37,150	8,640	15,832	24,472	657.25	269	197	22,943	23,140	86,110.28
15																	
16	Heating Season			21,563	4,956	26,518	64		6,306	10,304	16,609	445		125	10,192	10,317	38,413
17	(November-March)																
18	Non-Heating Season			6,500	1,507	8,006	19		2,335	5,528	7,863	212		73	12,751	12,823	47,698
19	(April-October)																
20	Daily Average = Total/365			76.88	17.71	94.59			23.67	43.37	67.05			0.54	62.86	63.40	

Columbia Gas of Pennsylvania, Inc
 Analysis of the Average Monthly Consumption
 Twelve Months Ended December 31, 2025

Line No.	Period	Residential					Commercial					Industrial						
		Sales		Trans	Through-	Average	Total Customers	Sales		Trans	Through-	Average	Total Customers	Sales		Trans	Through-	Average
		Customers	Volume	Volume	Put			Dth/Cust	Customers	Volume	Volume			Put	Dth/Cust	Customers	Volume	
1	Jan	2025	415,733	5,576	1,218	6,794	16.3	37,324	1,617	2,466	4,083	109.4	268	22	2,065	2,087	7,787	
2	Feb		416,318	5,613	1,212	6,825	16.4	37,348	1,609	2,552	4,160	111.4	268	22	2,085	2,108	7,864	
3	Mar		416,669	4,776	1,036	5,811	13.9	37,340	1,351	2,125	3,476	93.1	268	21	2,069	2,090	7,799	
4	Apr		415,716	3,073	678	3,751	9.0	37,297	849	1,579	2,428	65.1	268	17	1,999	2,016	7,521	
5	May		414,402	1,290	283	1,573	3.8	37,202	469	893	1,362	36.6	268	13	1,899	1,912	7,134	
6	Jun		412,906	625	134	759	1.8	37,106	263	660	923	24.9	268	6	1,777	1,783	6,652	
7	Jul		411,948	307	62	369	0.9	37,020	170	539	710	19.2	269	8	1,701	1,708	6,351	
8	Aug		411,489	270	54	324	0.8	36,986	149	536	685	18.5	269	7	1,751	1,758	6,536	
9	Sep		411,751	351	70	421	1.0	36,955	172	568	739	20.0	269	8	1,771	1,779	6,612	
10	Oct		412,915	592	130	723	1.8	36,987	263	755	1,018	27.5	271	15	1,848	1,862	6,872	
11	Nov		415,340	1,878	407	2,286	5.5	37,107	542	1,233	1,775	47.8	271	26	1,975	2,001	7,383	
12	Dec	2025	417,689	4,059	838	4,898	11.7	37,255	1,182	1,919	3,101	83.2	268	32	2,025	2,057	7,675	
13																		
14	Total or Average		414,406	28,410	6,124	34,534	83.03	37,161	8,636	15,824	24,460	656.75	269	197	22,963	23,160	86,187.04	
15																		
16	Heating Season			21,902	4,712	26,614	64		6,301	10,295	16,595	445		125	10,218	10,343	38,509	
17	(November-March)																	
18	Non-Heating Season			6,508	1,412	7,920	19		2,335	5,530	7,865	212		73	12,745	12,818	47,678	
19	(April-October)																	
20	Daily Average = Total/365			77.84	16.78	94.61			23.66	43.35	67.01			0.54	62.91	63.45		

COLUMBIA GAS OF PENNSYLVANIA, INC.
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
E. GAS UTILITIES

3. Submit a schedule showing a reconciliation of test year MCF sales and line losses. List all amounts of gas purchased, manufactured and transported.

Response:

See Page 2 attached. Note that the data is presented in DTH. Columbia Gas of PA converted from billing in MCFs to therms effective February 2012, as approved by the Commission at Docket No. R-2010-2215623.

COLUMBIA GAS OF PENNSYLVANIA, INC.
53.53 IV. RATE STRUCTURE
B. GAS UTILITIES

14. Supply an exhibit showing the gas deliveries to each customer class for the most recent 24 month period. The exhibit should identify the source of the gas, such as "purchased" (pipeline), "production" (includes purchases from local producers), "storage withdrawal", "propane/air", and "unaccounted for".

Response:

See Pages 2 and 3 attached. Note that the data is presented in DTH. Columbia Gas of PA converted from billing in MCFs to therms effective February 2012, as approved by the Commission at Docket No. R-2010-2215623.

Columbia Gas of Pennsylvania, Inc.
Twelve Months Ended November 30, 2020
Dth

Description	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Total
Requirements													
Residential	4,514,696	4,920,618	4,655,408	3,992,494	2,502,541	2,142,274	880,924	476,870	411,635	466,342	783,451	1,710,351	27,457,604
Commercial	1,317,122	1,475,471	1,369,351	1,155,799	652,753	541,755	242,404	159,296	151,211	168,137	264,333	473,645	7,971,276
Industrial	45,366	48,872	20,013	16,113	11,091	6,422	4,419	8,178	8,291	9,597	11,700	22,115	212,177
Public Authority	0	0	0	0	0	0	0	0	0	0	0	0	0
Unbilled Revenue - Dth	378,991	(759,018)	267,020	(1,099,023)	(250,992)	(845,085)	(387,958)	10,978	33,111	204,965	711,995	1,154,943	(580,073)
Other	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Retail	6,256,175	5,685,944	6,311,792	4,065,382	2,915,394	1,845,367	739,788	655,323	604,247	849,040	1,771,479	3,361,053	35,060,984
Other Company Use	11,626	10,951	9,402	8,915	7,430	7,310	6,130	4,743	4,428	4,843	5,819	8,077	89,674
Gas Left On For Reconnect/Gas Lost - Line Breaks	2,848	1,454	1,055	1,247	1,039	1,535	892	1,011	1,532	1,220	2,225	4,858	20,915
Gas Lost from Storage - Current	67	67	67	67	67	67	67	67	67	67	67	67	802.96
Non-Traditional Sales - Dth	731,965	522,377	348,498	125,000	0	600	8,000	4,000	11,700	2,600	0	15,000	1,769,740
Total Miscellaneous Deliveries	746,506	534,850	359,023	135,229	8,536	9,511	15,089	9,821	17,727	8,729	8,111	28,001	1,881,132
Unaccounted for - Losses in Black	(90,527)	740,386	(240,195)	(976,137)	(1,359,052)	(58,250)	(1,349,248)	(212,965)	666,072	70,622	(31,739)	120,521	(2,720,512)
Total Requirements	6,912,154	6,961,179	6,430,619	3,224,474	1,564,878	1,796,628	(594,371)	452,179	1,288,046	928,391	1,747,851	3,509,576	34,221,604
Supply													
Field Line Purchases	12	9,528	8,692	10,760	10,519	10,691	8,324	7,093	6,825	6,817	8,998	8,614	96,873
Transmission Line Purchases	2,169,962	1,271,166	886,009	499,986	3,867,975	3,079,174	1,626,491	3,810,378	4,931,281	3,342,811	2,663,564	729,494	28,878,292
City Gate Purchases	455,700	617,400	501,315	502,185	480,426	517,803	254,655	225,043	232,500	229,376	514,399	556,665	5,087,467
Other Purchased Gas Expenses	0	0	0	0	0	0	0	0	0	0	0	0	0
Exchange Activity	(670,743)	(777,234)	(496,414)	(699,774)	(547,896)	112,996	(568,856)	546,616	677,735	333,782	291,044	418,564	(1,380,179)
Total Purchases	1,954,932	1,120,860	899,601	313,157	3,811,025	3,720,664	1,320,614	4,589,130	5,848,341	3,912,786	3,478,005	1,713,337	32,682,453
Storage	4,957,155	5,840,252	5,530,952	2,911,250	(2,246,213)	(1,924,103)	(1,915,052)	(4,137,018)	(4,560,362)	(2,984,461)	(1,730,221)	1,796,172	1,538,350
Shrinkage	67	67	67	67	67	67	67	67	67	67	67	67	803
Gas Volumes Available - Steamed	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Supply	6,912,154	6,961,179	6,430,620	3,224,474	1,564,878	1,796,628	(594,371)	452,179	1,288,046	928,392	1,747,851	3,509,576	34,221,606

Columbia Gas of Pennsylvania, Inc.
Twelve Months Ended November 30, 2019
Dth

Description	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Total
Requirements													
Residential	4,682,180	5,156,881	5,658,225	4,802,598	2,790,918	1,115,425	621,356	459,985	399,797	437,014	623,252	2,121,309	28,868,941
Commercial	1,356,408	1,627,525	1,785,272	1,479,925	868,753	359,149	227,945	182,542	172,043	188,920	241,262	618,839	9,108,583
Industrial	20,343	27,861	24,440	24,210	18,522	15,448	13,398	5,168	4,478	4,341	6,194	27,068	191,470
Public Authority	0	0	0	0	0	0	0	0	0	0	0	0	0
Unbilled Revenue - Dth	46,034	1,130,009	(1,411,018)	(636,977)	(1,421,039)	(508,038)	(166,924)	11,899	27,115	15,027	782,914	1,906,054	(224,945)
Other	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Retail	6,104,966	7,942,275	6,056,919	5,669,755	2,257,154	981,985	695,776	659,594	603,433	645,301	1,653,622	4,673,270	37,944,050
Other Company Use	11,704	11,399	11,077	10,570	7,810	6,291	5,231	(998)	4,041	4,170	4,322	8,547	84,164
Gas Left On For Reconnect/Gas Lost - Line Breaks	2,072	2,131	1,135	1,513	586	585	4,914	(3,898)	446	1,205	477	2,642	13,810
Gas Lost from Storage - Current	68	67	67	67	67	67	67	67	67	67	67	67	805.51
Non-Traditional Sales - Dth	394,250	251,222	30,000	95,400	92,500	39,000	10,500	18,600	37,624	237,300	7,686	61,800	1,275,882
Total Miscellaneous Deliveries	408,094	264,820	42,279	107,550	100,963	45,943	20,713	13,771	42,178	242,742	12,552	73,055	1,374,661
Unaccounted for - Losses in Black	(238,407)	(461,332)	484,758	(331,727)	(141,018)	(91,148)	52,904	(284,356)	48,566	122,315	(171,729)	981,986	(29,189)
Total Requirements	6,274,653	7,745,763	6,583,956	5,445,579	2,217,100	936,780	769,392	389,008	694,177	1,010,359	1,494,444	5,728,312	39,289,522
Supply													
Field Line Purchases	10,234	9,060	11,000	9,601	8,700	10,468	10,302	6,401	8,677	12,935	9,213	21,317	127,908
Transmission Line Purchases	3,298,780	1,252,685	753,093	1,620,832	4,108,427	3,582,441	4,210,109	3,405,855	4,071,486	3,349,630	2,277,363	2,333,555	34,264,256
City Gate Purchases	629,565	681,819	521,225	563,685	315,750	312,685	233,187	236,685	236,685	413,510	341,261	795,750	5,281,807
Other Purchased Gas Expenses	0	0	0	0	0	0	0	0	0	0	0	0	0
Exchange Activity	(559,083)	(1,196,716)	(384,609)	(748,772)	296,129	1,114,346	559,520	1,006,734	528,270	599,389	221,897	(353,973)	1,083,132
Total Purchases	3,379,496	746,848	900,710	1,445,347	4,729,006	5,019,940	5,013,118	4,655,675	4,845,118	4,375,464	2,849,734	2,796,649	40,757,104
Storage	2,895,089	6,998,848	5,683,179	4,000,165	(2,511,973)	(4,083,227)	(4,243,793)	(4,266,733)	(4,151,007)	(3,365,173)	(1,355,357)	2,931,596	(1,468,386)
Shrinkage	68	67	67	67	67	67	67	67	67	67	67	67	806
Gas Volumes Available - Steamed	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Supply	6,274,652	7,745,763	6,583,956	5,445,579	2,217,100	936,780	769,392	389,009	694,178	1,010,359	1,494,444	5,728,312	39,289,523

COLUMBIA GAS OF PENNSYLVANIA, INC.

WEATHER NORMALIZATION ADJUSTMENT

Response: Residential and Commercial volumes have been normalized using the calculations provided in the following table.

Residential Normalization Routine											
			Normal =	2001	2020		20	year average			
		Customers	Actual	Dth/Cus	NTS	TS Actual	TS Normal	Normal	HDD	HDD	Normal
			Dth	Actual	NTS	TS Actual	TS Normal	Normal	Actual	Normal	Dth
2020	Jan	399,994	5,844,630	14.61	1.43	13.18	15.11	16.54	941	1079	6,617,860
2020	Feb	400,464	5,517,988	13.78	1.27	12.51	14.82	16.08	874	1035	6,440,926
2020	Mar	400,735	4,730,578	11.80	1.27	10.53	12.27	13.54	746	869	5,426,507
2020	Apr	400,727	2,966,737	7.40	1.27	6.14	6.58	7.85	511	548	3,144,760
2020	May	400,673	2,536,150	6.33	1.27	5.06	3.18	4.45	426	268	1,784,848
2020	Jun	400,630	1,042,307	2.60	1.32	1.28	1.13	2.45	102	90	981,961
2020	Jul	400,444	563,115	1.41	1.41	0.00	0.00	1.41	5	9	563,115
2020	Aug	400,410	485,877	1.21	1.21	0.00	0.00	1.21	0	2	485,877
2020	Sep	400,686	548,541	1.37	1.37	0.00	0.00	1.37	23	17	548,541
2020	Oct	401,227	921,924	2.30	1.29	1.00	0.83	2.12	171	141	851,313
2020	Nov	402,017	2,007,481	4.99	1.27	3.73	4.25	5.52	375	428	2,219,164
2019	Dec	399,076	5,371,917	13.46	1.41	12.05	11.15	12.55	904	836	5,010,091
			32,537,242	81.27	15.79	65.48	69.32	85.11	5078	5322	34,074,962
Commercial Normalization Routine											
			Normal =	2001	2020		20	year average			
		Customers	Actual	Dth/Cus	NTS	TS Actual	TS Normal	Normal	HDD	HDD	Normal
			Dth	Actual	NTS	TS Actual	TS Normal	Normal	Actual	Normal	Dth
2020	Jan	37,314	3,676,967	98.54	19.78	78.77	90.32	110.09	941	1079	4,107,984
2020	Feb	37,355	3,550,846	95.06	17.53	77.53	91.81	109.34	874	1035	4,084,312
2020	Mar	37,361	2,985,560	79.91	17.59	62.32	72.60	90.19	746	869	3,369,473
2020	Apr	37,292	1,905,750	51.10	17.53	33.57	36.00	53.53	511	548	1,996,401
2020	May	37,260	1,583,689	42.50	17.62	24.89	15.66	33.27	426	268	1,239,764
2020	Jun	37,198	864,234	23.23	18.27	4.96	4.38	22.65	102	90	842,514
2020	Jul	37,174	668,593	17.99	17.99	0.00	0.00	17.99	5	9	668,593
2020	Aug	37,160	666,910	17.95	17.95	0.00	0.00	17.95	0	2	666,910
2020	Sep	37,159	745,439	20.06	18.04	2.02	1.49	19.53	23	17	725,878
2020	Oct	37,207	985,847	26.50	17.90	8.60	7.09	24.99	171	141	929,740
2020	Nov	37,286	1,578,470	42.33	17.53	24.80	28.31	45.84	375	428	1,709,174
2019	Dec	37,259	3,409,828	91.52	19.46	72.05	66.63	86.10	904	836	3,207,887
			22,622,134	606.69	217.19	389.51	414.28	631.47	5078	5322	23,548,630

COLUMBIA GAS OF PENNSYLVANIA, INC.
VOLUMETRIC PORTION OF THE LOAD GROWTH ADJUSTMENT
TWELVE MONTHS ENDED NOVEMBER 30, 2020
53.62

Response:

Please see Exhibit 3, Schedule 5.

EXHIBIT 11

COLUMBIA GAS OF PENNSYLVANIA, INC.
53.53 IV. RATE STRUCTURE
B. GAS UTILITIES

1. Provide a Cost of Service Study showing the rate of return under the present and proposed tariffs for all customer classifications. The study should include a summary of the allocated measures of value, operating revenues, operating expenses and net return for each of the customer classifications at original cost and at the 5-year trended original cost.

Response: See Exhibit No. 111, Schedule Nos. 1 through 3

2. Provide a statement of testimony describing the complete methodology of the cost of service study.

Response: See Statement No. 11

3. Provide a complete description and back-up calculations for all allocation factors.

Response: See Statement No. 11 and related attachments.

9. Supply a cost analysis supporting minimum charges for all rate schedules.

Response: See Exhibit No. 111, Schedule No. 1, Pages 14 through 30.

10. Supply a cost analysis supporting demand charges for all tariffs, which contain demand charges.

Response: None of Columbia's tariff rate schedules contain a distribution cost demand charge.

COLUMBIA GAS OF PENNSYLVANIA, INC.
53.53 IV. RATE STRUCTURE
B. GAS UTILITIES

5. Submit a Bill Frequency Analysis for each rate. The analysis should include the rate schedule and block interval, the number of bills at each interval, the cumulative number of bills at each interval, the Mcf or therms at each interval, the cumulative Mcf or therms at each interval, the accumulation of Mcf or therms passing through each interval, and the revenue at each interval for both the present and the proposed rates. The Analysis should show only those revenues collected from the basic tariff.

Response: Refer to Exhibit No. 103, Schedule No.1 (Revenue @ Current Rates on a Forecast Adjusted Bills and Volume) and Exhibit No. 103, Schedule No. 7, (Revenue @ Proposed Rates Based on Forecast Adjusted Bills and Volume).

7. Supply a graph of present and proposed base rates on hyperbolic cross section paper.

Response: Refer to Exhibit No. 111, Schedule No.5.

12. Supply a tabulation of base rate bills for each rate schedule comparing the existing rates to proposed rates. The tabulation should show the dollar difference and the per cent increase or decrease.

Response: Refer to Exhibit No. 103, Schedule No.8 and Exhibit No. 111, Schedule 6.

COLUMBIA GAS OF PENNSYLVANIA, INC.
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
A. ALL UTILITIES

47. Submit a schedule showing rate of return on facilities allocated to serve wholesale customers.

Response:

Columbia Gas of Pennsylvania, Inc. does not offer service to wholesale customers; therefore, no facilities were allocated within the class cost of service studies presented in Exhibit No. 111.

EXHIBIT 12

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
E. GAS UTILITIES

5. Submit a schedule showing the sources of gas supply associated with annualized DTH sales.

Response:

The following schedule shows the sources of supply used to meet Columbia's sales during the twelve-month period ended November 30, 2020 (Historic Test Year).

	(MDth)
Interstate Pipeline Purchases	32,388
City Gate Purchases	577
Local Production	97
Storage	
Withdrawal	21,396
Injection	<u>(20,236)</u>
Net	1,160
All Sources	34,222

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
E. GAS UTILITIES

18. If the utility has a Fuel Adjustment Clause:
- a. State the base fuel cost per MCF chargeable against basic customers' rates during the test year. If there was any change in this basic fuel charge during the test year, give details and explanation thereof.
 - b. State the amount in which the fuel adjustment clause cost per MCF exceeds the fuel cost per MCF charged in base rates at the end of the test year.
 - c. If fuel cost deferment is used at the end of the test year, give:
 - (i) The amount of deferred fuel cost contained in the operating statement that was deferred from the 12-month operating period immediately preceding the test year.
 - (ii) The amount of deferred fuel cost that was removed from the test period and deferred to the period immediately following the test year.
 - d. State the amount of Fuel Adjustment Clause revenues credited to the test year operating account.
 - e. State the amount of fuel cost charged to the operating expense account in the test year which is the basis of Fuel Adjustment Clause billings to customers in that year. Provide summary details of this charge.
 - f. From the recorded test year operating account, remove the Fuel Adjustment Clause Revenues. Also remove from the test year recorded operating account the excess of fuel cost over base rate fuel charges, which is the basis for the Fuel Adjustment charges. Explain any differences between FAC Revenues and excess fuel costs. [The above is intended to limit the operating account to existing customers' base rate revenues and expense deductions relative thereto].

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
E. GAS UTILITIES

Response:

- a. Base Cost of Gas - Columbia Gas of Pennsylvania, Inc. files quarterly adjustments in compliance with 52 Pa. Code § 53.64 (i)(5)(iii), which permits gas utilities to update their gas cost recovery rate. During the test year, quarterly filings were made in October 2019, January 2020, April 2020, and October 2020.
- b. Columbia Gas of Pennsylvania, Inc. eliminated the fuel adjustment clause in its 1985 1307(f) proceeding.
- c. (i) During the twelve month period ended November 30, 2019, the revenues exceeded the cost of purchased gas collected in tariff rates by \$7,656,084.

(ii) During the twelve month period ended November 30, 2020, the revenues exceeded the cost of purchased gas collected in tariff rates by \$5,884,704.
- d. All purchased gas costs are included in Base Tariff Rates for the twelve months ending November 30, 2020.
- e. The purchased gas cost charged to the operating expense account during the twelve month period ended November 30, 2020 totaled \$132,972,564.
- f. Please refer to Exhibit No.3, Schedule 1 for the adjustment to operating revenue and expense, which is also summarized on Exhibit No.3, Page 10.

COLUMBIA GAS OF PENNSYLVANIA, INC.
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
E. GAS UTILITIES

23. Submit a schedule showing fuel cost in excess of base compared to fuel cost recovery for the period two months prior to test year and the test year.

Response:

Period	Excess of Fuel Costs
	\$
	1_/
Oct-19	(5,178,617)
Nov-19	(5,780,634)
Dec-19	2,591,809
Jan-20	4,996,214
Feb-20	4,719,884
Mar-20	5,519,141
Apr-20	3,351,709
May-20	2,733,339
Jun-20	(286,932)
Jul-20	(2,625,668)
Aug-20	(4,243,485)
Sep-20	(4,137,964)
Oct-20	(4,052,866)
Nov-20	(2,680,478)

1_/ Please refer to Exhibits No. 1-E, Schedule No. 4, Sheet 1a and 1b and Exhibit 1-A, Schedule 1, Sheet 5 of 6 of Columbia's January 1, 2021 quarterly PGC filing.

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
E. GAS UTILITIES

24. Supply a detailed analysis of Purchased Gas for the test year and the twelve month period prior to the test year.

Response: Please see Exhibit No. 12, Schedule 4, pages 2 and 3 of 53.

26. Submit detailed calculations for bulk gas transmission service costs under supply and/or interconnection agreements.

Response: Columbia has no bulk transmission service agreements.

30. Provide a schedule showing suppliers, Mcf purchased, cost (small purchases from independent suppliers may be grouped); emergency purchases, listing same information; curtailments during the year; gas put into and taken out of storage; line loss, and any other gas input or output not in the ordinary course of business.

Response: Please see Exhibit No. 12, Schedule 4, pages 4 through 52.
These pages are Exhibit 1-D from Columbia's 2020 1307(f) filing at Docket No. R-2020-3018993.

36. State the amount of gas, in Dth, obtained through various suppliers in past years.

Response: Please see Exhibit No. 12, Schedule No. 4 (30).

COLUMBIA GAS OF PENNSYLVANIA, INC.
PURCHASED GAS ANALYSIS
TWELVE MONTHS ENDED NOVEMBER 30, 2019

<u>Line No.</u>	<u>Account No.</u>	<u>Description</u>	<u>Volumes</u> (1) Dth	<u>Costs</u> (2) \$
1	801	<u>Natural Gas Field Line Purchases</u>	127,908	319,970
2	803	<u>Natural Gas Transmission line Purchases</u>		
3		Non-Appalachian Sources	35,247,220	83,677,021
4		Transportation- Affiliates	0	0
5		Transportation- Non-Affiliates	(557,332)	44,916,529
6		Storage - Affiliates	0	0
7		Storage - Non-Affiliates	(425,632)	18,589,560
8		Off System Sales - Purchases	0	9,360
9		Off System Sales - Transportation	0	0
10		Total Transmission line Purchases	<u>34,264,256</u>	<u>147,192,471</u>
11	804	<u>Natural Gas City Gate Purchases</u>	5,149,512	14,864,683
12	805	<u>Propane Purchases</u>	0	0
13	806	<u>Exchange Gas (Net)</u>	1,083,132	177,646
14	807	<u>Broker Fees</u>	0	0
15	808	<u>Storage Activity</u>		
16		Gas Withdrawn from Underground Storage	22,934,356	61,507,164
17		Gas Delivered to Underground Storage	(24,401,937)	(52,649,473)
18		Total Gas Stored (Net)	<u>(1,467,581)</u>	<u>8,857,691</u>
19	813	<u>Exchange Fees</u>		
20		Fees - Nonaffiliated	0	0
21		Fees - Affiliated	0	0
22		Total Exchange Fees	<u>0</u>	<u>0</u>
23		<u>Gas Lost From Storage</u>	0	0
24		TOTAL GAS PURCHASED	39,157,228	171,412,462

() In Acct. No. 803 negative volumes denotes transportation fuel.

() In Acct. No. 808 denotes injection volumes & credit.

COLUMBIA GAS OF PENNSYLVANIA, INC.
PURCHASED GAS ANALYSIS
TWELVE MONTHS ENDED NOVEMBER 30, 2020

<u>Line No.</u>	<u>Account No.</u>	<u>Description</u>	<u>Volumes</u> (1) Dth	<u>Costs</u> (2) \$
1	801	<u>Natural Gas Field Line Purchases</u>	96,873	185,158
2	803	<u>Natural Gas Transmission line Purchases</u>		
3		Non-Appalachian Sources	29,811,891	46,856,982
4		Transportation. Affiliates	0	0
5		Transportation. Non-Affiliates	(554,878)	42,673,787
6		Storage - Affiliates	0	0
7		Storage - Non-Affiliates	(378,721)	18,253,735
8		Off System Sales - Purchases	0	24,790
9		Off System Sales - Transportation	0	0
10		Total Transmission line Purchases	<u>28,878,292</u>	<u>107,809,294</u>
11	804	<u>Natural Gas City Gate Purchases</u>	5,227,262	8,903,774
12	805	<u>Propane Purchases</u>	0	0
13	806	<u>Exchange Gas (Net)</u>	(509,853)	(1,687,094)
14	807	<u>Broker Fees</u>	0	0
15	808	<u>Storage Activity</u>		
16		Gas Withdrawn from Underground Storage	21,396,506	46,963,438
17		Gas Delivered to Underground Storage	(19,857,353)	(29,951,456)
18		Total Gas Stored (Net)	<u>1,539,153</u>	<u>17,011,982</u>
19	813	<u>Exchange Fees</u>		
20		Fees - Nonaffiliated	0	0
21		Fees - Affiliated	0	0
22		Total Exchange Fees	<u>0</u>	<u>0</u>
23		<u>Gas Lost From Storage</u>	0	0
24		TOTAL GAS PURCHASED	35,231,726	132,223,113

() In Acct. No. 803 negative volumes denotes transportation fuel.

() In Acct. No. 808 denotes injection volumes & credit.

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF PURCHASED GAS COSTS
BY TYPE BY MONTH

LINE NO.	MONTH	CITY GATE PURCHASES (SCHEDULE 2)	NON-LOCAL PURCHASES (SCHEDULE 3)	LOCAL PURCHASES (SCHEDULE 4)	GAS STORED UNDERGROUND (SCHEDULE 5)	TRANSPORTATION & GATHERING (SCHEDULE 6)	TOTAL SCHEDULES (6=1+2+3+4+5)
		(1) \$	(2) \$	(3) \$	(4) \$	(5) \$	(6=1+2+3+4+5) \$
1	FEBRUARY, 2019	1,804,510	2,306,781	43,170	17,172,998	4,635,454	25,962,913
2	MARCH	1,577,873	4,605,796	38,788	12,514,817	4,638,047	23,375,320
3	APRIL	793,495	10,270,817	17,894	(4,779,481)	2,975,985	9,278,708
4	MAY	689,069	8,042,890	26,319	(7,970,952)	2,974,341	3,761,667
5	JUNE	525,243	9,199,905	24,217	(7,826,372)	3,020,482	4,943,475
6	JULY	477,842	7,582,138	15,232	(7,654,085)	3,014,731	3,435,857
7	AUGUST	449,483	7,882,949	17,566	(6,561,528)	3,018,763	4,807,234
8	SEPTEMBER	728,092	6,444,051	27,300	(4,922,949)	3,005,734	5,282,228
9	OCTOBER	499,936	3,804,698	18,039	(730,171)	4,513,553	8,106,054
10	NOVEMBER	1,099,534	4,307,145	21,062	8,118,498	4,253,859	17,800,097
11	DECEMBER	1,462,166	5,431,210	22,429	12,711,309	4,456,445	24,083,558
12	JANUARY, 2020	1,120,537	2,484,935	21,613	14,696,382	4,472,576	22,796,042
13	TOTAL	11,227,779	72,363,314	293,628	24,768,465	44,979,970	153,633,155

COLUMBIA GAS OF PENNSYLVANIA, INC.
 SUMMARY OF PURCHASED GAS COSTS
 BY TYPE BY MONTH

LINE NO.	MONTH	CITY GATE PURCHASES (SCHEDULE 2) COMMODITY (1) \$	NON-LOCAL PURCHASES (SCHEDULE 3) COMMODITY (2) \$	LOCAL PURCHASES (SCHEDULE 4) COMMODITY (3) \$	GAS STORED UNDERGROUND (SCHEDULE 5) DEMAND (4) \$	GAS STORED UNDERGROUND (SCHEDULE 5) COMMODITY (5) \$	TRANSPORTATION & GATHERING (SCHEDULE 6) DEMAND (6) \$	TRANSPORTATION & GATHERING (SCHEDULE 6) COMMODITY (7) \$	TOTAL DEMAND (8=4+6) \$	TOTAL COMMODITY (9=1+2+3+5+7) \$	TOTAL SCHEDULES (10=8+9) \$
1	FEBRUARY, 2019	1,804,510	2,306,781	43,170	1,487,543	15,685,456	4,520,742	114,712	6,008,284	19,954,628	25,962,913
2	MARCH	1,577,873	4,605,796	38,788	1,487,543	11,027,274	4,518,662	119,385	6,006,205	17,369,115	23,375,320
3	APRIL	793,495	10,270,817	17,894	1,487,543	(6,267,024)	2,892,997	82,988	4,380,540	4,898,169	9,278,708
4	MAY	689,069	8,042,890	26,319	1,487,543	(9,458,494)	2,900,433	73,908	4,387,975	(626,308)	3,761,667
5	JUNE	525,243	9,199,905	24,217	1,487,543	(9,313,915)	2,953,153	67,330	4,440,695	502,780	4,943,475
6	JULY	477,842	7,582,138	15,232	1,487,543	(9,141,627)	2,952,677	62,054	4,440,219	(1,004,362)	3,435,857
7	AUGUST	449,483	7,882,949	17,566	1,487,543	(8,049,070)	2,952,782	65,981	4,440,325	366,909	4,807,234
8	SEPTEMBER	728,092	6,444,051	27,300	1,487,543	(6,410,492)	2,955,320	50,414	4,442,863	839,365	5,282,228
9	OCTOBER	499,936	3,804,698	18,039	1,487,543	(2,217,714)	4,473,380	40,173	5,960,923	2,145,131	8,106,054
10	NOVEMBER	1,099,534	4,307,145	21,062	1,487,543	6,630,956	4,214,171	39,688	5,701,713	12,098,384	17,800,097
11	DECEMBER	1,462,166	5,431,210	22,429	1,487,663	11,223,646	4,345,994	110,451	5,833,656	18,249,902	24,083,558
12	JANUARY, 2020	1,120,537	2,484,935	21,613	1,487,603	13,208,779	4,302,263	170,313	5,789,866	17,006,177	22,796,042
13	TOTAL	11,227,779	72,363,314	293,628	17,850,691	6,917,774	43,982,574	997,395	61,833,265	91,799,890	153,633,155

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF PURCHASED GAS COSTS
BY TYPE BY MONTH

LINE NO.	MONTH	CITY GATE PURCHASES (SCHEDULE 2)	NON-LOCAL PURCHASES (SCHEDULE 3)	LOCAL PURCHASES (SCHEDULE 4)	GAS STORED UNDERGROUND (SCHEDULE 5)	TRANSPORTATION & GATHERING (SCHEDULE 6)	TOTAL
		(1) Dth	(2) Dth	(3) Dth	(4) Dth	(5) Dth	(6=1+2+3+4+5) Dth
1	FEBRUARY, 2019	521,225	861,923	11,000	5,585,130	(11,776)	6,967,502
2	MARCH	563,685	1,718,298	9,601	3,925,766	(24,265)	6,193,085
3	APRIL	315,750	4,237,313	8,700	(2,574,506)	(66,952)	1,920,305
4	MAY	312,685	3,523,810	10,468	(4,090,251)	(65,358)	(308,646)
5	JUNE	233,187	4,152,307	10,302	(4,252,687)	(66,358)	76,751
6	JULY	236,685	3,744,070	9,199	(4,276,132)	(65,774)	(351,952)
7	AUGUST	236,685	4,145,007	5,879	(4,160,003)	(64,947)	162,621
8	SEPTEMBER	413,510	3,408,573	12,935	(3,373,060)	(51,475)	410,483
9	OCTOBER	341,261	2,320,207	9,213	(1,361,338)	(37,478)	1,271,865
10	NOVEMBER	559,065	1,911,172	11,714	2,925,954	(28,989)	5,378,916
11	DECEMBER	692,385	2,724,395	9,615	4,908,692	(51,669)	8,283,418
12	JANUARY, 2020	617,400	1,369,660	9,528	5,769,655	(29,029)	7,737,214
13	TOTAL	5,043,523	34,116,733	118,154	(972,780)	(564,070)	37,741,560

EXHIBIT 1-D
SCHEDULE 2
SHEET 1 OF 3

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF HISTORIC COST OF
CITY GATE GAS PURCHASES

LINE NO.	MONTH	VOLUME (1) DTH	RATE (2) \$/DTH	TOTAL GAS COST (3=1x2) \$
1	FEBRUARY, 2019	521,225	3.4533	1,799,935
2	ADJUSTMENT	0	0.0000	4,575
3	MARCH	563,685	2.7867	1,570,808
4	ADJUSTMENT	0	0.0000	7,065
5	APRIL	315,750	2.4885	785,745
6	ADJUSTMENT	0	0.0000	7,750
7	MAY	312,685	2.1979	687,245
8	ADJUSTMENT	0	0.0000	1,824
9	JUNE	233,187	2.2444	523,366
10	ADJUSTMENT	0	0.0000	1,877
11	JULY	236,685	2.0187	477,800
12	ADJUSTMENT	0	0.0000	42
13	AUGUST	236,685	1.8988	449,429
14	ADJUSTMENT	0	0.0000	55
15	SEPTEMBER	413,510	1.7607	728,047
16	ADJUSTMENT	0	0.0000	45
17	OCTOBER	341,261	1.4648	499,881
18	ADJUSTMENT	0	0.0000	54
19	NOVEMBER	559,065	1.9666	1,099,467
20	ADJUSTMENT	0	0.0000	67
21	DECEMBER	692,385	2.1081	1,459,635
22	ADJUSTMENT	0	0.0000	2,531
23	JANUARY, 2020	617,400	1.7999	1,111,247
24	ADJUSTMENT	0	0.0000	9,290
25	TOTAL	<u>5,043,523</u>		<u>11,227,779</u>

EXHIBIT 1-D
 SCHEDULE 2
 SHEET 2 OF 3

COLUMBIA GAS OF PENNSYLVANIA, INC.
 DETAIL OF HISTORIC COST OF CITY GATE PURCHASES
 FROM MERCURIA

LINE NO.	MONTH	VOLUME (1) DTH	RATE (2) \$/DTH	TOTAL GAS COST (3=1x2) \$
1	FEBRUARY, 2019	521,225	3.4533	1,799,935
2	ADJUSTMENT	0	0.0000	4,575
3	MARCH	563,685	2.7867	1,570,808
4	ADJUSTMENT	0	0.0000	7,065
5	APRIL	315,750	2.4885	785,745
6	ADJUSTMENT	0	0.0000	7,750
7	MAY	0	0.0000	0
8	JUNE	0	0.0000	0
9	JULY	0	0.0000	0
10	AUGUST	0	0.0000	0
11	SEPTEMBER	0	0.0000	0
12	OCTOBER	0	0.0000	0
13	NOVEMBER	0	0.0000	0
14	DECEMBER	0	0.0000	0
15	JANUARY, 2020	0	0.0000	0
16	TOTAL	<u>1,400,660</u>		<u>4,175,878</u>

EXHIBIT 1-D
SCHEDULE 2
SHEET 3 OF 3

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF HISTORIC COST OF CITY GATE PURCHASES
FROM COLONIAL ENERGY INC

LINE NO.	MONTH	VOLUME	RATE	TOTAL GAS COST
		(1) DTH	(2) \$/DTH	(3=1x2) \$
1	FEBRUARY, 2019	0	0.0000	0
2	MARCH	0	0.0000	0
3	APRIL	0	0.0000	0
4	MAY	312,685	2.1979	687,245
5	ADJUSTMENT	0	0.0000	1,824
6	JUNE	233,187	2.2444	523,366
7	ADJUSTMENT	0	0.0000	1,877
8	JULY	236,685	2.0187	477,800
9	ADJUSTMENT	0	0.0000	42
10	AUGUST	236,685	1.8988	449,429
11	ADJUSTMENT	0	0.0000	55
12	SEPTEMBER	413,510	1.7607	728,047
13	ADJUSTMENT	0	0.0000	45
14	OCTOBER	341,261	1.4648	499,881
15	ADJUSTMENT	0	0.0000	54
16	NOVEMBER	559,065	1.9666	1,099,467
17	ADJUSTMENT	0	0.0000	67
18	DECEMBER	692,385	2.1081	1,459,635
19	ADJUSTMENT	0	0.0000	2,531
20	JANUARY, 2020	617,400	1.7999	1,111,247
21	ADJUSTMENT	0	0.0000	9,290
22	TOTAL	<u>3,642,863</u>		<u>7,051,902</u>

EXHIBIT 1-D
SCHEDULE 3
SHEET 1 OF 13

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF HISTORIC COST OF GAS PURCHASES
NON-LOCAL, SHORT & LONG TERM

LINE NO.	MONTH	VOLUME	TOTAL COMMODITY DOLLARS
		(1) Dth	(2) \$
1	FEBRUARY, 2019	861,923	2,306,781
2	MARCH	1,718,298	4,605,796
3	APRIL	4,237,313	10,270,817
4	MAY	3,523,810	8,042,890
5	JUNE	4,152,307	9,199,905
6	JULY	3,744,070	7,582,138
7	AUGUST	4,145,007	7,882,949
8	SEPTEMBER	3,408,573	6,444,051
9	OCTOBER	2,320,207	3,804,698
10	NOVEMBER	1,911,172	4,307,145
11	DECEMBER	2,724,395	5,431,210
12	JANUARY, 2020	<u>1,369,660</u>	<u>2,484,935</u>
13	TOTAL	<u><u>34,116,733</u></u>	<u><u>72,363,314</u></u>

EXHIBIT 1-D
SCHEDULE 3
SHEET 2 OF 13

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF HISTORIC COST OF GAS PURCHASES
NON-LOCAL, SHORT & LONG TERM
FEBRUARY 2019

LINE NO.	SUPPLIER	TOTAL COMMODITY DOLLARS	
		VOLUMES	
		(1)	(2)
		Dth	\$
1	<u>ESTIMATE</u>		
2	CITIGROUP ENERGY INC.	285,599	781,827
3	CONOCOPHILLIPS COMPANY	11,300	28,388
4	DIRECT ENERGY BUSINESS MARKETING, LLC	4,500	10,991
5	DTE ENERGY TRADING, INC.	212,800	595,840
6	EQT ENERGY, LLC.	4,500	12,375
7	GREYLOCK ENERGY, LLC	3,000	7,320
8	INTERSTATE GAS SUPPLY, INC.	10,000	27,000
9	J. ARON & COMPANY	5,400	13,527
10	MACQUARIE ENERGY LLC	32,100	86,092
11	MERCURIA ENERGY GAS TRADING LLC	104,155	286,114
12	NEXTERA ENERGY POWER MARKETING, LLC	30,000	75,975
13	SPIRE MARKETING INC. (LACLEDE ENERGY)	103,000	265,014
14	TWIN EAGLE RESOURCE MANAGEMENT, LLC	3,000	7,328
15	TOTAL ESTIMATE	<u>809,354</u>	<u>2,197,790</u>
16	<u>ADJUST TO ACTUAL</u>		
17	MERCURIA ENERGY GAS TRADING LLC	0	300
18	SPIRE MARKETING INC. (LACLEDE ENERGY)	0	30
19	GAS LOST DUE TO LINE HITS	(290)	(1,243)
20	ICE CHARGES	0	91
21	GAS SOLD TO SHIPPER (RADS 3.11)	(970)	(6,674)
22	GAS PURCHASED FROM SHIPPER (RADS 3.12)	53,551	123,280
23	OMO/OFO CHARGES (RADS 3.7, 3.8, 4.11)	0	(6,886)
24	CHOICE INTERIM CASH OUT	1,340	5,668
25	CHOICE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(976)
26	GAS LEFT ON FOR RECONNECT	(1,062)	(4,600)
27	TOTAL ADJUST TO ACTUAL	<u>52,569</u>	<u>108,991</u>
28	TOTAL SCHEDULE 3, SHEET 2	<u><u>861,923</u></u>	<u><u>2,306,781</u></u>

EXHIBIT 1-D
SCHEDULE 3
SHEET 3 OF 13

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF HISTORIC COST OF GAS PURCHASES
NON-LOCAL, SHORT & LONG TERM
MARCH 2019

LINE NO.	SUPPLIER	TOTAL COMMODITY DOLLARS	
		VOLUMES	
		(1)	(2)
		Dth	\$
1	<u>ESTIMATE</u>		
2	BP ENERGY COMPANY	2,600	7,235
3	CENTERPOINT ENERGY SERVICES, INC. (ATMOS ENERGY MARKETING)	5,200	14,418
4	CHEVRON NATURAL GAS (CHEVRONTEXACO)	11,500	34,255
5	CITADEL ENERGY MARKETING LLC	85,000	234,225
6	CNX GAS COMPANY LLC	180,000	433,800
7	CONOCOPHILLIPS COMPANY	85,200	210,762
8	DTE ENERGY TRADING, INC.	9,700	24,250
9	EDF TRADING NORTH AMERICA, LLC (EAGLE ENERGY)	1,500	4,121
10	EQT ENERGY, LLC.	35,000	91,563
11	EQUINOR NATURAL GAS LLC (STATOIL)	38,000	130,220
12	FREEPOINT COMMODITIES LLC	93,600	282,496
13	GREYLOCK ENERGY, LLC (ENERGY CORPORATION OF AMERICA)	1,400	3,864
14	INTERSTATE GAS SUPPLY, INC.	40,000	111,425
15	J. ARON & COMPANY	60,000	161,100
16	KAISER MARKETING APPALACHIAN, LLC	20,000	55,800
17	MACQUARIE ENERGY LLC	88,900	235,490
18	MERCURIA ENERGY GAS TRADING LLC	192,800	502,074
19	mitsui & co. ENERGY MARKETING AND SERVICES (USA), INC (MMGS)	30,000	93,400
20	NEXTERA ENERGY POWER MARKETING, LLC	19,900	54,529
21	NJR ENERGY SERVICES COMPANY	15,000	46,463
22	RANGE RESOURCES	30,000	87,750
23	SEQUENT ENERGY MANAGEMENT, LP	129,000	402,975
24	SNYDER BROTHERS INC.	200	525
25	SOUTH JERSEY RESOURCES GROUP, LLC	19,500	53,966
26	SPIRE MARKETING INC. (LACLEDE ENERGY)	298,400	828,200
27	SPOTLIGHT ENERGY LLC	10,500	32,918
28	TENASKA GAS STORAGE, LLC	95,000	246,150
29	TOTAL GAS & POWER NORTH AMERICA, INC.	28,500	89,348
30	TWIN EAGLE RESOURCE MANAGEMENT, LLC	21,600	70,442
31	UNITED ENERGY TRADING, LLC	10,000	30,450
32	WASHINGTON GAS LIGHT COMPANY	2,500	6,875
33	TOTAL ESTIMATE	1,660,500	4,581,085
34	<u>ADJUST TO ACTUAL</u>		
35	MERCURIA ENERGY GAS TRADING LLC	0	2,364
36	GAS LOST DUE TO LINE HITS	(81)	(350)
37	ICE CHARGES	0	35
38	GAS SOLD TO SHIPPER (RADS 3.11)	(2,957)	(13,307)
39	GAS PURCHASED FROM SHIPPER (RADS 3.12)	62,101	124,363
40	OMO/OFO CHARGES (RADS 3.7, 3.8, 4.11)	0	(40,258)
41	CHOICE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(42,637)
42	GAS LEFT ON FOR RECONNECT	(1,265)	(5,499)
43	TOTAL ADJUST TO ACTUAL	57,798	24,711
44	TOTAL SCHEDULE 3, SHEET 3	1,718,298	4,605,796

EXHIBIT 1-D
SCHEDULE 3
SHEET 4 OF 13

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF HISTORIC COST OF GAS PURCHASES
NON-LOCAL, SHORT & LONG TERM
APRIL 2019

LINE NO.	SUPPLIER	TOTAL COMMODITY DOLLARS	
		VOLUMES	DOLLARS
		(1)	(2)
		Dth	\$
1	<u>ESTIMATE</u>		
2	BP ENERGY COMPANY	39,900	98,147
3	CENTERPOINT ENERGY SERVICES, INC. (ATMOS ENERGY MARKETING)	20,600	52,381
4	CHEVRON NATURAL GAS	14,700	34,451
5	CITADEL ENERGY MARKETING LLC	242,400	603,514
6	CITIGROUP ENERGY INC.	65,000	162,488
7	CNX GAS COMPANY LLC	697,500	1,621,671
8	COKINOS ENERGY CORPORATION	600,000	1,464,000
9	COLONIAL ENERGY, INC	359,700	885,483
10	CONOCOPHILLIPS COMPANY	1,300	3,302
11	DIRECT ENERGY BUSINESS MARKETING, LLC	3,800	8,702
12	DTE ENERGY TRADING, INC.	351,200	856,454
13	ELEVATION ENERGY GROUP	22,800	51,752
14	ENI TRADING & SHIPPING INC.	545,000	1,320,325
15	EQT ENERGY, LLC.	20,900	53,906
16	EQUINOR NATURAL GAS LLC (STATOIL)	8,000	20,270
17	FREEPOINT COMMODITIES LLC	13,500	33,871
18	GREYLOCK ENERGY, LLC	12,000	30,230
19	KAISER MARKETING APPALACHIAN, LLC	64,000	154,545
20	MACQUARIE ENERGY LLC	75,000	188,063
21	MERCURIA ENERGY GAS TRADING LLC	274,600	655,258
22	NEXTERA ENERGY POWER MARKETING, LLC	262,800	636,982
23	NJR ENERGY SERVICES COMPANY	1,300	3,205
24	SEQUENT ENERGY MANAGEMENT, LP	20,000	48,575
25	SHELL ENERGY NORTH AMERICA, L.P.	6,100	15,437
26	SOUTH JERSEY RESOURCES GROUP, LLC	25,500	62,730
27	SPIRE MARKETING INC. (LACLEDE ENERGY)	172,000	431,870
28	SPOTLIGHT ENERGY LLC	7,000	17,538
29	SWN ENERGY	5,000	12,925
30	TWIN EAGLE RESOURCE MANAGEMENT, LLC	177,500	435,849
31	WASHINGTON GAS LIGHT COMPANY	120,300	297,370
32	TOTAL ESTIMATE	<u>4,229,400</u>	<u>10,261,291</u>
33	<u>ADJUST TO ACTUAL</u>		
34	MERCURIA ENERGY GAS TRADING LLC	0	3,012
35	GAS LOST DUE TO LINE HITS	(168)	(719)
36	ICE CHARGES	0	331
37	GAS SOLD TO SHIPPER (RADS 3.11)	(690)	(3,009)
38	GAS PURCHASED FROM SHIPPER (RADS 3.12)	9,437	20,481
39	OMO/OFO CHARGES (RADS 3.7, 3.8, 4.11)	0	(7,718)
40	CHOICE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(93)
41	GAS LEFT ON FOR RECONNECT	<u>(666)</u>	<u>(2,760)</u>
42	TOTAL ADJUST TO ACTUAL	<u>7,913</u>	<u>9,526</u>
43	TOTAL SCHEDULE 3, SHEET 4	<u><u>4,237,313</u></u>	<u><u>10,270,817</u></u>

EXHIBIT 1-D
SCHEDULE 3
SHEET 5 OF 13

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF HISTORIC COST OF GAS PURCHASES
NON-LOCAL, SHORT & LONG TERM
MAY 2019

LINE NO.	SUPPLIER	TOTAL COMMODITY DOLLARS	
		VOLUMES	
		(1)	(2)
		Dth	\$
1	<u>ESTIMATE</u>		
2	BP ENERGY COMPANY	5,000	11,075
3	CENTERPOINT ENERGY SERVICES, INC.	15,100	34,504
4	CHEVRON NATURAL GAS	38,400	85,418
5	CITADEL ENERGY MARKETING LLC	330,000	760,400
6	CITIGROUP ENERGY INC.	15,500	34,936
7	CNX GAS COMPANY LLC	553,900	1,271,794
8	COLONIAL ENERGY, INC	389,700	844,921
9	DIRECT ENERGY BUSINESS MARKETING, LLC	48,600	109,525
10	DOMINION ENERGY FUEL SERVICES, INC.	6,000	13,820
11	ELEVATION ENERGY GROUP	20,100	46,230
12	EQT ENERGY, LLC.	2,700	6,224
13	EXELON GENERATION COMPANY, LLC (CONSTELLATION EN COMM)	800	1,748
14	GREEN PLAINS ENERGY SERVICES	12,700	29,856
15	GREYLOCK ENERGY, LLC	1,560,000	3,587,850
16	KAISER MARKETING APPALACHIAN, LLC	70,000	166,488
17	MACQUARIE ENERGY LLC	77,500	181,040
18	MERCURIA ENERGY GAS TRADING LLC	56,826	129,676
19	NEXTERA ENERGY POWER MARKETING, LLC	99,900	234,150
20	NJR ENERGY SERVICES COMPANY	5,000	11,900
21	RANGE RESOURCES	91,869	199,487
22	REPSOL ENERGY NORTH AMERICA CORPORATION	2,500	5,881
23	SEQUENT ENERGY MANAGEMENT, LP	22,700	52,853
24	SNYDER BROTHERS INC.	2,700	6,102
25	SOUTH JERSEY RESOURCES GROUP, LLC	23,500	52,803
26	SOUTHWESTERN ENERGY SERVICES COMPANY	1,500	3,536
27	SPIRE MARKETING INC. (LACLEDE ENERGY)	4,500	10,226
28	SWN ENERGY	15,000	36,300
29	TENASKA GAS STORAGE, LLC	15,000	35,025
30	TWIN EAGLE RESOURCE MANAGEMENT, LLC	35,400	80,544
31	TOTAL ESTIMATE	<u>3,522,395</u>	<u>8,044,312</u>
32	<u>ADJUST TO ACTUAL</u>		
33	COLONIAL ENERGY, INC	0	7,120
34	GAS LOST DUE TO LINE HITS	(161)	(686)
35	ICE CHARGES	0	332
36	GAS SOLD TO SHIPPER (RADS 3.11)	(7,990)	(25,236)
37	GAS PURCHASED FROM SHIPPER (RADS 3.12)	9,930	18,726
38	CHOICE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(164)
39	GAS LEFT ON FOR RECONNECT	(364)	(1,514)
40	TOTAL ADJUST TO ACTUAL	<u>1,415</u>	<u>(1,421)</u>
41	TOTAL SCHEDULE 3, SHEET 5	<u>3,523,810</u>	<u>8,042,890</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF HISTORIC COST OF GAS PURCHASES
NON-LOCAL, SHORT & LONG TERM
JUNE 2019

LINE NO.	SUPPLIER	TOTAL COMMODITY DOLLARS	
		VOLUMES	
		(1)	(2)
		Dth	\$
1	<u>ESTIMATE</u>		
2	BP ENERGY COMPANY	2,500	4,800
3	CASTLETON COMMODITIES MERCHANT TRADING L.P. (LOUIS DREYFUS)	600	1,252
4	CITADEL ENERGY MARKETING LLC	35,000	73,775
5	CNX GAS COMPANY LLC	130,000	274,425
6	COLONIAL ENERGY, INC	441,000	971,868
7	CONOCOPHILLIPS COMPANY	5,000	10,563
8	DIRECT ENERGY BUSINESS MARKETING, LLC	200	431
9	DTE ENERGY TRADING, INC.	1,500	3,270
10	EQT ENERGY, LLC.	495,500	1,083,218
11	GREYLOCK ENERGY, LLC	849,100	1,742,605
12	INTERSTATE GAS SUPPLY, INC.	30,000	60,500
13	KAISER MARKETING APPALACHIAN, LLC	41,300	86,518
14	MACQUARIE ENERGY LLC	15,100	32,276
15	MERCURIA ENERGY GAS TRADING LLC	620,000	1,430,175
16	NEXTERA ENERGY POWER MARKETING, LLC	708,000	1,640,790
17	RANGE RESOURCES	300,000	696,000
18	REPSOL ENERGY NORTH AMERICA CORPORATION	10,000	20,850
19	SEQUENT ENERGY MANAGEMENT, LP	26,200	54,210
20	SOUTHWESTERN ENERGY SERVICES COMPANY	400	869
21	SPIRE MARKETING INC. (LACLEDE ENERGY)	390,500	898,913
22	TENASKA GAS STORAGE, LLC	14,500	30,228
23	TWIN EAGLE RESOURCE MANAGEMENT, LLC	28,800	63,288
24	TOTAL ESTIMATE	4,145,200	9,180,821
25	<u>ADJUST TO ACTUAL</u>		
26	CNX GAS COMPANY LLC	0	840
27	COLONIAL ENERGY, INC	0	8,888
28	SOUTH JERSEY RESOURCES GROUP, LLC	0	13
29	GAS LOST DUE TO LINE HITS	(288)	(1,212)
30	ICE CHARGES	0	289
31	GAS SOLD TO SHIPPER (RADS 3.11)	(1,965)	(6,092)
32	GAS PURCHASED FROM SHIPPER (RADS 3.12)	9,765	18,041
33	GAS LEFT ON FOR RECONNECT	(405)	(1,684)
34	TOTAL ADJUST TO ACTUAL	7,107	19,084
35	TOTAL SCHEDULE 3, SHEET 6	4,152,307	9,199,905

EXHIBIT 1-D
SCHEDULE 3
SHEET 7 OF 13

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF HISTORIC COST OF GAS PURCHASES
NON-LOCAL, SHORT & LONG TERM
JULY 2019

LINE NO.	SUPPLIER	TOTAL COMMODITY DOLLARS	
		VOLUMES	DOLLARS
		(1)	(2)
		Dth	\$
1	<u>ESTIMATE</u>		
2	BP ENERGY COMPANY	4,500	9,020
3	CENTERPOINT ENERGY SERVICES, INC.	10,000	20,400
4	CITADEL ENERGY MARKETING LLC	357,900	762,242
5	CNX GAS COMPANY LLC	60,000	117,975
6	COLONIAL ENERGY, INC	465,700	910,126
7	CONOCOPHILLIPS COMPANY	8,700	17,114
8	DIRECT ENERGY BUSINESS MARKETING, LLC	10,000	20,600
9	DTE ENERGY TRADING, INC.	70,000	147,700
10	ENI TRADING & SHIPPING INC.	20,000	42,925
11	EQT ENERGY, LLC.	227,500	460,988
12	EXELON GENERATION COMPANY, LLC	11,900	23,772
13	FREEPOINT COMMODITIES LLC	14,100	29,892
14	GREEN PLAINS ENERGY SERVICES	10,000	20,100
15	GREYLOCK ENERGY, LLC	1,162,500	2,306,206
16	INTERSTATE GAS SUPPLY, INC.	36,800	73,892
17	MACQUARIE ENERGY LLC	115,700	238,946
18	MERCURIA ENERGY GAS TRADING LLC	78,600	168,582
19	MITSUI & CO. ENERGY MARKETING AND SERVICES (USA), INC (MMGS)	99,500	198,751
20	NEXTERA ENERGY POWER MARKETING, LLC	10,000	21,200
21	NJR ENERGY SERVICES COMPANY	7,600	15,194
22	RANGE RESOURCES	387,500	768,219
23	SHELL ENERGY NORTH AMERICA, L.P.	12,000	27,030
24	SOUTH JERSEY RESOURCES GROUP, LLC	500	995
25	SPIRE MARKETING INC.	183,700	397,005
26	SOUTHWESTERN ENERGY SERVICES COMPANY	289,700	589,586
27	TENASKA GAS STORAGE, LLC	65,000	144,875
28	TWIN EAGLE RESOURCE MANAGEMENT, LLC	10,000	22,275
29	TOTAL ESTIMATE	<u>3,729,400</u>	<u>7,555,608</u>
30	<u>ADJUST TO ACTUAL</u>		
31	COLONIAL ENERGY, INC	0	4,506
32	GAS LOST DUE TO LINE HITS	(111)	(467)
33	ICE CHARGES	0	100
34	GAS SOLD TO SHIPPER (RADS 3.11)	(557)	(1,566)
35	GAS PURCHASED FROM SHIPPER (RADS 3.12)	15,795	26,179
36	CHOICE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(383)
37	GAS LEFT ON FOR RECONNECT	(457)	(1,838)
38	TOTAL ADJUST TO ACTUAL	<u>14,670</u>	<u>26,530</u>
39	TOTAL SCHEDULE 3, SHEET 7	<u><u>3,744,070</u></u>	<u><u>7,582,138</u></u>

EXHIBIT 1-D
SCHEDULE 3
SHEET 8 OF 13

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF HISTORIC COST OF GAS PURCHASES
NON-LOCAL, SHORT & LONG TERM
AUGUST 2019

LINE NO.	SUPPLIER	VOLUMES	TOTAL
			COMMODITY DOLLARS
		(1)	(2)
		Dth	\$
1	<u>ESTIMATE</u>		
2	CASTLETON COMMODITIES MERCHANT TRADING L.P. (LOUIS DREYFUS)	112,300	213,833
3	CENTERPOINT ENERGY SERVICES, INC.	20,000	38,250
4	CITADEL ENERGY MARKETING LLC	935,600	1,756,537
5	CNX GAS COMPANY LLC	231,890	449,073
6	COLONIAL ENERGY, INC	455,700	836,105
7	CONOCOPHILLIPS COMPANY	17,000	33,225
8	DIRECT ENERGY BUSINESS MARKETING, LLC	19,800	37,914
9	EQT ENERGY, LLC.	232,500	403,950
10	EXELON GENERATION COMPANY, LLC	19,000	36,541
11	FREEPOINT COMMODITIES LLC	47,400	92,786
12	GREEN PLAINS ENERGY SERVICES	10,000	19,900
13	GREYLOCK ENERGY, LLC	1,159,000	2,188,870
14	INTERSTATE GAS SUPPLY, INC.	20,000	39,800
15	J. ARON & COMPANY	85,100	160,361
16	KAISER MARKETING APPALACHIAN, LLC	58,200	110,632
17	MERCURIA ENERGY GAS TRADING LLC	328,000	612,945
18	SEQUENT ENERGY MANAGEMENT, LP	11,400	21,717
19	SPIRE MARKETING INC.	77,500	148,878
20	SPOTLIGHT ENERGY LLC	12,000	23,490
21	SPRAGUE OPERATING RESOURCES LLC (SPRAGUE ENER)	200	398
22	SOUTHWESTERN ENERGY SERVICES COMPANY	125,900	242,598
23	TENASKA GAS STORAGE, LLC	37,700	73,942
24	TWIN EAGLE RESOURCE MANAGEMENT, LLC	26,600	51,770
25	TOTAL ESTIMATE	<u>4,042,790</u>	<u>7,593,514</u>
26	<u>ADJUST TO ACTUAL</u>		
27	COLONIAL ENERGY, INC	0	5,972
28	GAS LOST DUE TO LINE HITS	(434)	(1,825)
29	ICE CHARGES	0	217
30	GAS SOLD TO SHIPPER (RADS 3.11)	(1,136)	(3,193)
31	GAS PURCHASED FROM SHIPPER (RADS 3.12)	4,011	6,644
32	CHOICE ANNUAL CASH OUT	100,265	284,981
33	CHOICE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(1,403)
34	GAS LEFT ON FOR RECONNECT	(489)	(1,959)
35	TOTAL ADJUST TO ACTUAL	<u>102,217</u>	<u>289,435</u>
36	TOTAL SCHEDULE 3, SHEET 8	<u><u>4,145,007</u></u>	<u><u>7,882,949</u></u>

EXHIBIT 1-D
SCHEDULE 3
SHEET 9 OF 13

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF HISTORIC COST OF GAS PURCHASES
NON-LOCAL, SHORT & LONG TERM
SEPTEMBER 2019

LINE NO.	SUPPLIER	TOTAL COMMODITY DOLLARS	
		VOLUMES	
		(1)	(2)
		Dth	\$
1	<u>ESTIMATE</u>		
2	ASSOCIATED ENERGY SERVICES, DIV OF SPARK (UTIL RES)	200	464
3	CASTLETON COMMODITIES MERCHANT TRADING L.P.	67,200	141,426
4	CENTERPOINT ENERGY SERVICES, INC.	10,000	21,200
5	CHEVRON NATURAL GAS	12,500	28,969
6	CITADEL ENERGY MARKETING LLC	5,000	10,250
7	CNX GAS COMPANY LLC	15,000	30,300
8	COKINOS ENERGY CORPORATION	22,000	47,916
9	COLONIAL ENERGY, INC	441,000	705,159
10	CONOCOPHILLIPS COMPANY	97,100	202,342
11	DIRECT ENERGY BUSINESS MARKETING, LLC	103,000	197,275
12	EQT ENERGY, LLC.	181,300	312,455
13	EQUINOR ASA	19,000	38,000
14	EXELON GENERATION COMPANY, LLC	700	1,645
15	GREYLOCK ENERGY, LLC	1,817,800	3,433,931
16	INTERSTATE GAS SUPPLY, INC.	22,000	49,335
17	J. ARON & COMPANY	24,000	53,358
18	MACQUARIE ENERGY LLC	25,000	50,500
19	MERCURIA ENERGY GAS TRADING LLC	437,300	904,205
20	NJR ENERGY SERVICES COMPANY	500	1,175
21	SHELL ENERGY NORTH AMERICA, L.P.	17,000	37,570
22	SNYDER BROTHERS INC.	45,000	70,200
23	TWIN EAGLE RESOURCE MANAGEMENT, LLC	7,500	17,381
24	WASHINGTON GAS LIGHT COMPANY	35,200	82,440
25	TOTAL ESTIMATE	<u>3,405,300</u>	<u>6,437,495</u>
26	<u>ADJUST TO ACTUAL</u>		
27	COLONIAL ENERGY, INC	0	4,895
28	GAS LOST DUE TO LINE HITS	(248)	(1,053)
29	ICE CHARGES	0	200
30	GAS SOLD TO SHIPPER (RADS 3.11)	(1,487)	(3,910)
31	GAS PURCHASED FROM SHIPPER (RADS 3.12)	5,494	8,446
32	CHOICE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(73)
33	GAS LEFT ON FOR RECONNECT	(486)	(1,949)
34	TOTAL ADJUST TO ACTUAL	<u>3,273</u>	<u>6,556</u>
35	TOTAL SCHEDULE 3, SHEET 9	<u><u>3,408,573</u></u>	<u><u>6,444,051</u></u>

EXHIBIT 1-D
SCHEDULE 3
SHEET 10 OF 13

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF HISTORIC COST OF GAS PURCHASES
NON-LOCAL, SHORT & LONG TERM
OCTOBER 2019

LINE NO.	SUPPLIER	VOLUMES	TOTAL COMMODITY DOLLARS
		(1) Dth	(2) \$
1	<u>ESTIMATE</u>		
2	CASTLETON COMMODITIES MERCHANT TRADING L.P.	133,400	219,424
3	CENTERPOINT ENERGY SERVICES, INC.	30,000	57,625
4	CITADEL ENERGY MARKETING LLC	60,000	114,788
5	CNX GAS COMPANY LLC	57,112	84,502
6	COLONIAL ENERGY, INC	455,700	621,233
7	CONOCOPHILLIPS COMPANY	1,500	2,884
8	DIRECT ENERGY BUSINESS MARKETING, LLC	10,000	14,800
9	DTE ENERGY TRADING, INC.	95,500	179,889
10	ELEVATION ENERGY GROUP	6,000	6,660
11	EMERA ENERGY SERVICES, INC.	15,000	31,775
12	ENI TRADING & SHIPPING INC.	60,000	103,350
13	EQT ENERGY, LLC.	300,900	479,427
14	EQUINOR ASA	27,300	52,108
15	EXELON GENERATION COMPANY, LLC	7,500	14,713
16	FREEPOINT COMMODITIES LLC	900	1,730
17	GREYLOCK ENERGY, LLC	177,300	314,752
18	INTERSTATE GAS SUPPLY, INC.	64,600	120,210
19	J. ARON & COMPANY	56,800	93,123
20	KAISER MARKETING APPALACHIAN, LLC	10,000	20,475
21	MACQUARIE ENERGY LLC	40,100	64,942
22	MERCURIA ENERGY GAS TRADING LLC	30,250	38,031
23	MITSUI & CO. ENERGY MARKETING AND SERVICES (USA), INC (MMGS)	4,800	8,772
24	NEXTERA ENERGY POWER MARKETING, LLC	34,600	65,888
25	SEQUENT ENERGY MANAGEMENT, LP	40,000	69,250
26	SHELL ENERGY NORTH AMERICA, L.P.	10,932	15,954
27	SNYDER BROTHERS INC.	37,634	50,053
28	SOUTH JERSEY RESOURCES GROUP, LLC	3,000	5,010
29	SPIRE MARKETING INC. (LACLEDE ENERGY)	101,000	164,225
30	SOUTHWESTERN ENERGY SERVICES COMPANY	1,800	3,384
31	TENASKA MARKETING VENTURES	16,000	26,170
32	TEXLA ENERGY MANAGEMENT, INC	14,600	24,720
33	TWIN EAGLE RESOURCE MANAGEMENT, LLC	37,100	61,275
34	UNITED ENERGY TRADING, LLC	312,200	569,777
35	UNIPER GLOBAL COMMODITIES NORTH AMERICA LLC	5,000	9,600
36	VITOL INC.	32,000	64,748
37	WASHINGTON GAS ENERGY SERVICES, INC.	11,700	22,468
38	WASHINGTON GAS LIGHT COMPANY	35,100	54,012
39	TOTAL ESTIMATE	2,337,328	3,851,746
40	<u>ADJUST TO ACTUAL</u>		
41	COLONIAL ENERGY, INC	0	5,904
42	GAS LOST DUE TO LINE HITS	(1,170)	(4,660)
43	ICE CHARGES	0	204
44	GAS SOLD TO SHIPPER (RADS 3.11)	(17,844)	(49,217)
45	GAS PURCHASED FROM SHIPPER (RADS 3.12)	2,575	3,425
46	CHOICE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(302)
47	GAS LEFT ON FOR RECONNECT	(682)	(2,401)
48	TOTAL ADJUST TO ACTUAL	(17,121)	(47,048)
49	TOTAL SCHEDULE 3, SHEET 10	2,320,207	3,804,698

EXHIBIT 1-D
SCHEDULE 3
SHEET 11 OF 13

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF HISTORIC COST OF GAS PURCHASES
NON-LOCAL, SHORT & LONG TERM
NOVEMBER 2019

LINE NO.	SUPPLIER	VOLUMES	TOTAL COMMODITY DOLLARS
		(1) Dth	(2) \$
1	<u>ESTIMATE</u>		
2	CASTLETON COMMODITIES MERCHANT TRADING L.P.	35,000	87,150
3	CENTERPOINT ENERGY SERVICES, INC.	32,400	74,277
4	CITADEL ENERGY MARKETING LLC	63,900	153,213
5	CITIGROUP ENERGY INC.	25,500	58,980
6	COLONIAL ENERGY, INC	110,985	216,143
7	DIRECT ENERGY BUSINESS MARKETING, LLC	70,000	146,050
8	DTE ENERGY TRADING, INC.	4,000	8,480
9	EQT ENERGY, LLC.	468,700	1,089,408
10	EQUINOR ASA	69,800	152,165
11	EXELON GENERATION COMPANY, LLC	12,500	30,538
12	FREEPOINT COMMODITIES LLC	47,800	111,458
13	GREYLOCK ENERGY, LLC	20,000	45,925
14	HARTREE PARTNERS, LP	15,000	33,075
15	INTERSTATE GAS SUPPLY, INC.	45,000	108,800
16	J. ARON & COMPANY	12,000	24,480
17	KAISER MARKETING APPALACHIAN, LLC	42,500	109,331
18	MACQUARIE ENERGY LLC	47,000	106,385
19	MERCURIA ENERGY GAS TRADING LLC	67,400	154,429
20	SEQUENT ENERGY MANAGEMENT, LP	60,000	137,550
21	SHELL ENERGY NORTH AMERICA, L.P.	3,200	7,880
22	SPIRE MARKETING INC. (LACLEDE ENERGY)	25,000	57,688
23	SOUTHWESTERN ENERGY SERVICES COMPANY	45,000	92,200
24	VITOL INC.	490,800	1,171,744
25	WGL MIDSTREAM, INC (CAPITOL)	29,400	71,001
26	TOTAL ESTIMATE	<u>1,842,885</u>	<u>4,248,349</u>
27	<u>ADJUST TO ACTUAL</u>		
28	COLONIAL ENERGY, INC	0	7,298
29	GAS LOST DUE TO LINE HITS	(692)	(2,894)
30	ICE CHARGES	0	314
31	GAS SOLD TO SHIPPER (RADS 3.11)	(7,416)	(17,517)
32	GAS PURCHASED FROM SHIPPER (RADS 3.12)	77,776	80,887
33	OMO/OFO CHARGES (RADS 3.7, 3.8, 4.11)	0	(4,343)
34	CHOICE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(96)
35	GAS LEFT ON FOR RECONNECT	(1,381)	(4,853)
36	TOTAL ADJUST TO ACTUAL	<u>68,287</u>	<u>58,796</u>
37	TOTAL SCHEDULE 3, SHEET 11	<u><u>1,911,172</u></u>	<u><u>4,307,145</u></u>

EXHIBIT 1-D
SCHEDULE 3
SHEET 12 OF 13

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF HISTORIC COST OF GAS PURCHASES
NON-LOCAL, SHORT & LONG TERM
DECEMBER 2019

LINE NO.	SUPPLIER	TOTAL COMMODITY DOLLARS	
		VOLUMES	
		(1)	(2)
		Dth	\$
1	<u>ESTIMATE</u>		
2	ASCENT RESOURCES - UTICA, LLC	20,000	41,100
3	BP ENERGY COMPANY	4,200	8,316
4	CASTLETON COMMODITIES MERCHANT TRADING L.P.	10,000	19,725
5	CENTERPOINT ENERGY SERVICES, INC.	20,000	38,550
6	CHEVRON NATURAL GAS	5,000	9,563
7	CITADEL ENERGY MARKETING LLC	169,600	331,878
8	CITIGROUP ENERGY INC.	316,200	673,506
9	CNX GAS COMPANY LLC	40,600	78,230
10	COLONIAL ENERGY, INC	20,000	39,350
11	CONOCOPHILLIPS COMPANY	108,500	206,654
12	DTE ENERGY TRADING, INC.	235,600	548,948
13	EDF TRADING NORTH AMERICA, LLC (EAGLE ENERGY)	42,500	81,633
14	EMERA ENERGY SERVICES, INC.	80,000	150,513
15	EQT ENERGY, LLC.	105,200	201,783
16	EXELON GENERATION COMPANY, LLC	4,700	9,071
17	GREYLOCK ENERGY, LLC	145,000	269,963
18	HARTREE PARTNERS, LP	30,000	58,950
19	INTERSTATE GAS SUPPLY, INC.	69,500	133,981
20	J. ARON & COMPANY	226,900	450,182
21	KAISER MARKETING APPALACHIAN, LLC	150,000	255,600
22	MACQUARIE ENERGY LLC	438,600	840,151
23	MERCURIA ENERGY GAS TRADING LLC	25,000	49,525
24	NJR ENERGY SERVICES COMPANY	1,900	3,411
25	RANGE RESOURCES - APPALACHIA, LLC	19,000	34,058
26	SEQUENT ENERGY MANAGEMENT, LP	15,000	26,888
27	SPIRE MARKETING INC. (LACLEDE ENERGY)	173,000	335,500
28	SOUTHWESTERN ENERGY SERVICES COMPANY	30,000	57,950
29	TWIN EAGLE RESOURCE MANAGEMENT, LLC	9,300	17,903
30	UNITED ENERGY TRADING, LLC	35,000	69,750
31	VITOL INC.	155,800	318,397
32	TOTAL ESTIMATE	2,706,100	5,361,024
33	<u>ADJUST TO ACTUAL</u>		
34	COLONIAL ENERGY, INC	0	2,630
35	CUSTOMER BILLING ADJUSTMENT	23,738	85,311
36	GAS LOST DUE TO LINE HITS	(88)	(368)
37	ICE CHARGES	0	322
38	GAS SOLD TO SHIPPER (RADS 3.11)	(4,043)	(12,247)
39	GAS PURCHASED FROM SHIPPER (RADS 3.12)	154	247
40	CHOICE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(565)
41	GAS LEFT ON FOR RECONNECT	(1,466)	(5,145)
42	TOTAL ADJUST TO ACTUAL	18,295	70,186
43	TOTAL SCHEDULE 3, SHEET 12	2,724,395	5,431,210

EXHIBIT 1-D
SCHEDULE 3
SHEET 13 OF 13

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF HISTORIC COST OF GAS PURCHASES
NON-LOCAL, SHORT & LONG TERM
JANUARY 2020

LINE NO.	SUPPLIER	TOTAL COMMODITY DOLLARS	
		VOLUMES	DOLLARS
		(1)	(2)
		Dth	\$
1	<u>ESTIMATE</u>		
2	ASSOCIATED ENERGY SERVICES, DIV OF SPARK (UTIL RES)	300	562
3	CASTLETON COMMODITIES MERCHANT TRADING L.P.	50,500	88,915
4	CITADEL ENERGY MARKETING LLC	22,700	42,903
5	CITIGROUP ENERGY INC.	365,400	665,213
6	CNX GAS COMPANY LLC	178,200	322,260
7	COLONIAL ENERGY, INC	74,985	133,736
8	CONOCOPHILLIPS COMPANY	12,000	19,350
9	DIRECT ENERGY BUSINESS MARKETING, LLC	5,000	8,650
10	DOMINION ENERGY FIELD SERVICES, INC	5,500	9,836
11	DTE ENERGY TRADING, INC.	243,600	483,600
12	EQT ENERGY, LLC.	34,800	58,555
13	FREEPOINT COMMODITIES LLC	6,400	11,552
14	GREYLOCK ENERGY, LLC	32,000	54,795
15	J. ARON & COMPANY	40,000	72,400
16	KAISER MARKETING APPALACHIAN, LLC	3,900	6,123
17	MACQUARIE ENERGY LLC	21,200	36,149
18	NEXTERA ENERGY POWER MARKETING, LLC	10,000	18,650
19	REPSOL ENERGY NORTH AMERICA CORPORATION	2,500	4,188
20	SEQUENT ENERGY MANAGEMENT, LP	35,000	55,250
21	SPIRE MARKETING INC. (LACLEDE ENERGY)	30,000	55,475
22	SOUTHWESTERN ENERGY SERVICES COMPANY	15,000	25,250
23	TWIN EAGLE RESOURCE MANAGEMENT, LLC	27,600	44,663
24	UNITED ENERGY TRADING, LLC	10,000	18,900
25	VITOL INC.	148,000	271,074
26	TOTAL ESTIMATE	<u>1,374,585</u>	<u>2,508,047</u>
27	<u>ADJUST TO ACTUAL</u>		
28	GAS LOST DUE TO LINE HITS	(35)	(127)
29	ICE CHARGES	0	322
30	GAS SOLD TO SHIPPER (RADS 3.11)	(12,117)	(31,595)
31	GAS PURCHASED FROM SHIPPER (RADS 3.12)	8,426	12,824
32	CHOICE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(307)
33	GAS LEFT ON FOR RECONNECT	(1,199)	(4,229)
34	TOTAL ADJUST TO ACTUAL	<u>(4,925)</u>	<u>(23,112)</u>
35	TOTAL SCHEDULE 3, SHEET 13	<u><u>1,369,660</u></u>	<u><u>2,484,935</u></u>

EXHIBIT 1-D
 SCHEDULE 4
 SHEET 1 OF 1

COLUMBIA GAS OF PENNSYLVANIA, INC.
 DETAIL OF HISTORIC COST OF GAS PURCHASES
 FROM LOCAL PRODUCERS

LINE NO.	MONTH	VOLUME (1) DTH	TOTAL DOLLARS (2) \$
1	FEBRUARY, 2019	11,000	43,170
2	MARCH	9,601	38,788
3	APRIL	8,700	17,894
4	MAY	10,468	26,319
5	JUNE	10,302	24,217
6	JULY	9,199	15,232
7	AUGUST	5,879	17,566
8	SEPTEMBER	12,935	27,300
9	OCTOBER	9,213	18,039
10	NOVEMBER	11,714	21,062
11	DECEMBER	9,615	22,429
12	JANUARY, 2020	9,528	21,613
13	TOTAL	118,154	293,628

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF HISTORIC COST OF GAS
APPLICABLE TO NET
GAS STORED UNDERGROUND

LINE NO.	MONTH	VOLUMES (1) DTH	DEMAND DOLLARS (2) \$	COMMODITY DOLLARS (3) \$	TOTAL DOLLARS (4=2+3) \$
1	FEBRUARY, 2019	5,585,130	1,487,543	15,685,456	17,172,998
2	MARCH	3,925,766	1,487,543	11,027,274	12,514,817
3	APRIL	(2,574,506)	1,487,543	(6,267,024)	(4,779,481)
4	MAY	(4,090,251)	1,487,543	(9,458,494)	(7,970,952)
5	JUNE	(4,252,687)	1,487,543	(9,313,915)	(7,826,372)
6	JULY	(4,276,132)	1,487,543	(9,141,627)	(7,654,085)
7	AUGUST	(4,160,003)	1,487,543	(8,049,070)	(6,561,528)
8	SEPTEMBER	(3,373,060)	1,487,543	(6,410,492)	(4,922,949)
9	OCTOBER	(1,361,338)	1,487,543	(2,217,714)	(730,171)
10	NOVEMBER	2,925,954	1,487,543	6,630,956	8,118,498
11	DECEMBER	4,908,692	1,487,663	11,223,646	12,711,309
12	JANUARY, 2020	5,769,655	1,487,603	13,208,779	14,696,382
13	TOTAL	(972,780)	17,850,691	6,917,774	24,768,465

EXHIBIT 1-D
SCHEDULE 5
SHEET 2 OF 12

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
APPLICABLE TO NET GAS STORED UNDERGROUND
BLACKHAWK FACILITY

LINE NO.	MONTH	VOLUME INJECTED	RATE	AMOUNT	VOLUME WITHDRAWN	RATE	AMOUNT
		(1) DTH	(2) \$/DTH	(3=1x2) \$	(4) DTH	(5) \$/DTH	(6=4x5) \$
1	FEBRUARY, 2019	0	3.3393	0	1,253	2.7446	3,439
2	ADJUSTMENT	0	3.3393	0	67	2.7446	184
3	ADJUSTMENT	0	3.3393	0	0	2.7446	(185)
4	MARCH	0	2.8966	0	3,886	2.7480	10,679
5	ADJUSTMENT	0	2.8966	0	67	2.7480	184
6	ADJUSTMENT	0	2.8966	0	0	2.7480	(185)
7	APRIL	0	2.5261	0	6,866	2.6748	18,365
8	ADJUSTMENT	0	2.5261	0	67	2.6748	179
9	ADJUSTMENT	0	2.5261	0	0	2.6748	(180)
10	MAY	0	2.3410	0	2,626	2.5577	6,717
11	ADJUSTMENT	0	2.3410	0	67	2.5577	171
12	ADJUSTMENT	0	2.3410	0	0	2.5577	(171)
13	JUNE	0	2.2051	0	0	2.4664	0
14	ADJUSTMENT	0	2.2051	0	67	2.4664	165
15	ADJUSTMENT	0	2.2051	0	0	2.4664	(164)
16	JULY	0	2.0872	0	0	2.4019	0
17	ADJUSTMENT	0	2.0872	0	67	2.4019	161
18	ADJUSTMENT	0	2.0872	0	0	2.4019	(162)
19	AUGUST	(1,956)	1.9570	(3,828) 1/	0	2.3262	0
20	ADJUSTMENT	0	1.9570	0	67	2.3262	156
21	ADJUSTMENT	0	1.9570	0	0	2.3262	(156)
22	SEPTEMBER	0	1.9217	0	526	2.2773	1,198
23	ADJUSTMENT	0	1.9217	0	67	2.2773	153
24	ADJUSTMENT	0	1.9217	0	0	2.2773	(153)
25	OCTOBER	0	1.6755	0	6,783	2.2483	15,250
26	ADJUSTMENT	0	1.6755	0	67	2.2483	151
27	ADJUSTMENT	0	1.6755	0	0	2.2483	(150)
28	NOVEMBER	0	2.2329	0	6,294	2.2483	14,151
29	ADJUSTMENT	0	2.2329	0	67	2.2483	151
30	ADJUSTMENT	0	2.2329	0	0	2.2483	(151)
31	DECEMBER	0	2.1462	0	2,239	2.2485	5,034
32	ADJUSTMENT	0	2.1462	0	67	2.2485	151
33	ADJUSTMENT	0	2.1462	0	0	2.2485	(151)
34	JANUARY, 2020	0	2.0900	0	4,490	2.2482	10,094
35	ADJUSTMENT	0	2.0900	0	67	2.2482	151
36	ADJUSTMENT	0	2.0900	0	0	2.2482	(151)
37	TOTAL	<u>(1,956)</u>		<u>(3,828)</u>	<u>35,767</u>		<u>84,924</u>

1/ INJECTION RELATED TO A REQUIRED EMISSIONS TEST

EXHIBIT 1-D
SCHEDULE 5
SHEET 3 OF 12

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
APPLICABLE TO NET GAS STORED UNDERGROUND
COLUMBIA GAS TRANSMISSION - FSC

LINE NO.	MONTH	VOLUME INJECTED	RATE	AMOUNT	VOLUME WITHDRAWN	RATE	AMOUNT
		(1) DTH	(2) \$/DTH	(3=1x2) \$	(4) DTH	(5) \$/DTH	(6=4x5) \$
1	FEBRUARY, 2019	0	3.3393	0	4,775,340	2.7446	13,106,398
2	ADJUSTMENT	7,268	3.3393	24,270	165,972	2.7446	455,527
3	MARCH	(215,783)	2.8966	(625,037)	3,974,877	2.7480	10,922,962
4	ADJUSTMENT	(1,305)	2.8966	(3,780)	(21,689)	2.7480	(59,601)
5	APRIL	(2,878,993)	2.5261	(7,272,624)	81,075	2.6748	216,859
6	ADJUSTMENT	519,942	2.5261	1,313,425	8,704	2.6748	23,281
7	MAY	(3,923,654)	2.3410	(9,185,274)	0	2.5577	0
8	ADJUSTMENT	11,729	2.3410	27,458	132,934	2.5577	340,005
9	JUNE	(3,843,754)	2.2051	(8,475,862)	0	2.4664	0
10	ADJUSTMENT	149,967	2.2051	330,692	(89,632)	2.4664	(221,068)
11	JULY	(3,807,341)	2.0872	(7,946,682)	(58,885)	2.4019	(141,436)
12	ADJUSTMENT	87,156	2.0872	181,912	0	2.4019	0
13	ADJUSTMENT	3,843,754	2.2051	8,475,862 1/	0	2.4664	0 3/
14	ADJUSTMENT	(149,967)	2.2051	(330,692) 1/	89,632	2.4664	221,068 3/
15	ADJUSTMENT	(3,843,754)	2.2730	(8,736,853) 2/	0	2.4840	0 4/
16	ADJUSTMENT	149,967	2.2730	340,875 2/	(89,632)	2.4840	(222,646) 4/
17	AUGUST	(3,719,490)	1.9570	(7,279,042)	0	2.3262	0
18	ADJUSTMENT	6,447	1.9570	12,617	31,513	2.3262	73,306
19	SEPTEMBER	(3,029,660)	1.9217	(5,822,098)	0	2.2773	0
20	ADJUSTMENT	60,908	1.9217	117,047	12,865	2.2773	29,297
21	OCTOBER	(1,167,126)	1.6755	(1,955,520)	37,531	2.2483	84,381
22	ADJUSTMENT	69,191	1.6755	115,930	12,952	2.2483	29,120
23	NOVEMBER	(2,276)	2.2329	(5,082)	2,617,259	2.2483	5,884,383
24	ADJUSTMENT	81,006	2.2329	180,878	(25,037)	2.2483	(56,291)
25	DECEMBER	(33,317)	2.1462	(71,505)	4,192,051	2.2485	9,425,827
26	ADJUSTMENT	71,308	2.1462	153,041	139,126	2.2485	312,825
27	JANUARY, 2020	(22,922)	2.0900	(47,907)	5,003,028	2.2482	11,247,808
28	ADJUSTMENT	(14,417)	2.0900	(30,132)	47,108	2.2482	105,908
29	TOTAL	<u>(21,595,116)</u>		<u>(46,514,082)</u>	<u>21,037,092</u>		<u>51,777,914</u>

1/ TO REVERSE THE JUNE STORAGE INJECTION AMOUNT
2/ TO RECORD THE JUNE STORAGE INJECTION AMOUNT AT THE ADJUSTED RATE
3/ TO REVERSE THE JUNE STORAGE WITHDRAWAL AMOUNT
4/ TO RECORD THE JUNE STORAGE WITHDRAWAL AMOUNT AT THE ADJUSTED RATE

EXHIBIT 1-D
SCHEDULE 5
SHEET 4 OF 12

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
APPLICABLE TO NET GAS STORED UNDERGROUND
DOMINION

LINE NO.	MONTH	VOLUME INJECTED	RATE	AMOUNT	VOLUME WITHDRAWN	RATE	AMOUNT
		(1) DTH	(2) \$/DTH	(3=1x2) \$	(4) DTH	(5) \$/DTH	(6=4x5) \$
1	FEBRUARY, 2019	0	3.3393	0	381,346	2.7446	1,046,642
2	ADJUSTMENT	0	3.3393	0	0	2.7446	0
3	MARCH	0	2.8966	0	257,526	2.7480	707,681
4	ADJUSTMENT	0	2.8966	0	2,653	2.7480	7,290
5	APRIL	(249,802)	2.5261	(631,025)	0	2.6748	0
6	ADJUSTMENT	0	2.5261	0	235	2.6748	629
7	MAY	(302,738)	2.3410	(708,710)	0	2.5577	0
8	ADJUSTMENT	(666)	2.3410	(1,559)	0	2.5577	0
9	JUNE	(272,264)	2.2051	(600,369)	0	2.4664	0
10	JULY	(277,138)	2.0872	(578,442)	0	2.4019	0
11	ADJUSTMENT	(710)	2.0872	(1,482)	0	2.4019	0
12	ADJUSTMENT	272,264	2.2051	600,369 1/	0	2.4019	0
13	ADJUSTMENT	(272,264)	2.2730	(618,856) 2/	0	2.4019	0
14	AUGUST	(243,144)	1.9570	(475,833)	0	2.3262	0
15	ADJUSTMENT	(92)	1.9570	(180)	0	2.3262	0
16	SEPTEMBER	(221,712)	1.9217	(426,064)	0	2.2773	0
17	OCTOBER	(150,822)	1.6755	(252,702)	0	2.2483	0
18	ADJUSTMENT	(2,130)	1.6755	(3,569)	0	2.2483	0
19	NOVEMBER	0	2.2329	0	253,524	2.2483	569,998
20	ADJUSTMENT	0	2.2329	0	826	2.2483	1,857
21	DECEMBER	0	2.1462	0	430,748	2.2485	968,537
22	JANUARY, 2020	0	2.0900	0	462,965	2.2482	1,040,838
23	TOTAL	<u>(1,721,218)</u>		<u>(3,698,422)</u>	<u>1,789,823</u>		<u>4,343,473</u>

1/ TO REVERSE THE JUNE STORAGE INJECTION AMOUNT

2/ TO RECORD THE JUNE STORAGE INJECTION AMOUNT AT THE ADJUSTED RATE

EXHIBIT 1-D
SCHEDULE 5
SHEET 5 OF 12

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
APPLICABLE TO NET GAS STORED UNDERGROUND
EQUITRANS

LINE NO.	MONTH	VOLUME INJECTED	RATE	AMOUNT	VOLUME WITHDRAWN	RATE	AMOUNT
		(1) DTH	(2) \$/DTH	(3=1x2) \$	(4) DTH	(5) \$/DTH	(6=4x5) \$
1	FEBRUARY, 2019	0	3.3393	0	352,000	2.7446	966,099
2	MARCH	0	2.8966	0	0	2.7480	0
3	APRIL	0	2.5261	0	0	2.6748	0
4	MAY	(3,458)	2.3410	(8,095)	0	2.5577	0
5	JUNE	(188,110)	2.2051	(414,801)	0	2.4664	0
6	JULY	(209,815)	2.0872	(437,926)	0	2.4019	0
7	ADJUSTMENT	188,110	2.2051	414,801 1/	0	2.4019	0
8	ADJUSTMENT	(188,110)	2.2730	(427,574) 2/	0	2.4019	0
9	AUGUST	(224,285)	1.9570	(438,926)	0	2.3262	0
10	SEPTEMBER	(188,100)	1.9217	(361,472)	0	2.2773	0
11	OCTOBER	(161,736)	1.6755	(270,989)	0	2.2483	0
12	NOVEMBER	0	2.2329	0	0	2.2483	0
13	DECEMBER	0	2.1462	0	155,000	2.2485	348,518
14	JANUARY, 2020	0	2.0900	0	360,000	2.2482	809,352
15	TOTAL	<u>(975,504)</u>		<u>(1,944,981)</u>	<u>867,000</u>		<u>2,123,969</u>

1/ TO REVERSE THE JUNE STORAGE INJECTION AMOUNT

2/ TO RECORD THE JUNE STORAGE INJECTION AMOUNT AT THE ADJUSTED RATE

EXHIBIT 1-D
SCHEDULE 5
SHEET 6 OF 12

COLUMBIA GAS OF PENNSYLVANIA, INC
SUMMARY OF HISTORICAL GAS VOLUMES
RETAINAGE BY PIPELINE FOR STORAGE ACTIVITY

LINE NO.	MONTH	TCO - FSS TOTAL (1) DTH
1	FEBRUARY, 2019	(98,116)
2	MARCH	(74,466)
3	APRIL	(62,600)
4	MAY	(7,091)
5	JUNE	(8,961)
6	JULY	(9,466)
7	AUGUST	(9,063)
8	SEPTEMBER	(7,954)
9	OCTOBER	(6,048)
10	NOVEMBER	(5,709)
11	DECEMBER	(48,530)
12	JANUARY, 2020	<u>(70,664)</u>
13	TOTAL	<u><u>(408,668)</u></u>

NOTE: THESE VOLUMES REPRESENT RETAINAGE BY THE PIPELINE.

EXHIBIT 1-D
SCHEDULE 5
SHEET 7 OF 12

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
STORAGE DEMAND CHARGES
COLUMBIA GAS TRANSMISSION CORPORATION

LINE NO.	MONTH	M D S E			S C Q		
		VOLUME (1) DTH	RATE (2) \$/DTH	AMOUNT (3=1x2) \$	VOLUME (4) DTH	RATE (5) \$/DTH	AMOUNT (6=4x5) \$
1	FEBRUARY, 2019	456,876	1.5010	685,771	25,341,126	0.0288	729,824
2	MARCH	456,876	1.5010	685,771	25,341,126	0.0288	729,824
3	APRIL	456,876	1.5010	685,771	25,341,126	0.0288	729,824
4	MAY	456,876	1.5010	685,771	25,341,126	0.0288	729,824
5	JUNE	456,876	1.5010	685,771	25,341,126	0.0288	729,824
6	JULY	456,876	1.5010	685,771	25,341,126	0.0288	729,824
7	AUGUST	456,876	1.5010	685,771	25,341,126	0.0288	729,824
8	SEPTEMBER	456,876	1.5010	685,771	25,341,126	0.0288	729,824
9	OCTOBER	456,876	1.5010	685,771	25,341,126	0.0288	729,824
10	NOVEMBER	456,876	1.5010	685,771	25,341,126	0.0288	729,824
11	DECEMBER	456,876	1.5010	685,771	25,341,126	0.0288	729,824
12	JANUARY, 2020	456,876	1.5010	685,771	25,341,126	0.0288	729,824
13	TOTAL	<u>5,482,512</u>		<u>8,229,251</u>	<u>304,093,512</u>		<u>8,757,893</u>

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
STORAGE DEMAND CHARGES
DOMINION TRANSMISSION

LINE NO.	MONTH	STORAGE DEMAND			STORAGE CAPACITY		
		VOLUME	RATE	AMOUNT	VOLUME	RATE	AMOUNT
		(1) DTH	(2) \$/DTH	(3=1x2) \$	(4) DTH	(5) \$/DTH	(6=4x5) \$
1	FEBRUARY, 2019	28,800	1.8673	53,778	2,111,176	0.0145	30,612
2	ADJUSTMENT	(4,800)	1.8673	(8,963)	(240,000)	0.0145	(3,480)
3	MARCH	28,800	1.8673	53,778	2,111,176	0.0145	30,612
4	ADJUSTMENT	(4,800)	1.8673	(8,963)	(240,000)	0.0145	(3,480)
5	APRIL	28,800	1.8673	53,778	2,111,176	0.0145	30,612
6	ADJUSTMENT	(4,800)	1.8673	(8,963)	(240,000)	0.0145	(3,480)
7	MAY	28,800	1.8673	53,778	2,111,176	0.0145	30,612
8	ADJUSTMENT	(4,800)	1.8673	(8,963)	(240,000)	0.0145	(3,480)
9	JUNE	28,800	1.8673	53,778	2,111,176	0.0145	30,612
10	ADJUSTMENT	(4,800)	1.8673	(8,963)	(240,000)	0.0145	(3,480)
11	JULY	28,800	1.8673	53,778	2,111,176	0.0145	30,612
12	ADJUSTMENT	(4,800)	1.8673	(8,963)	(240,000)	0.0145	(3,480)
13	AUGUST	28,800	1.8673	53,778	2,111,176	0.0145	30,612
14	ADJUSTMENT	(4,800)	1.8673	(8,963)	(240,000)	0.0145	(3,480)
15	SEPTEMBER	28,800	1.8673	53,778	2,111,176	0.0145	30,612
16	ADJUSTMENT	(4,800)	1.8673	(8,963)	(240,000)	0.0145	(3,480)
17	OCTOBER	28,800	1.8673	53,778	2,111,176	0.0145	30,612
18	ADJUSTMENT	(4,800)	1.8673	(8,963)	(240,000)	0.0145	(3,480)
19	NOVEMBER	28,800	1.8673	53,778	2,111,176	0.0145	30,612
20	ADJUSTMENT	(4,800)	1.8673	(8,963)	(240,000)	0.0145	(3,480)
21	DECEMBER	28,800	1.8698	53,850	2,111,176	0.0145	30,612
22	ADJUSTMENT	(4,800)	1.8698	(8,975)	(240,000)	0.0145	(3,480)
23	ADJUSTMENT	0	0.0000	60	0	0.0000	0
24	JANUARY, 2020	28,800	1.8698	53,850	2,111,176	0.0145	30,612
25	ADJUSTMENT	(4,800)	1.8698	(8,975)	(240,000)	0.0145	(3,480)
26	TOTAL	<u>288,000</u>		<u>537,963</u>	<u>22,454,112</u>		<u>325,585</u>

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
STORAGE DEMAND CHARGES
EQUITRANS

LINE NO.	MONTH	STORAGE DEMAND			STORAGE CAPACITY		
		VOLUME	RATE	AMOUNT	VOLUME	RATE	AMOUNT
		(1) DTH	(2) \$/DTH	(3=1x2) \$	(4) DTH	(5) \$/DTH	(6=4x5) \$
1	FEBRUARY, 2019	14,348	1.4949	21,449	1,500,000	0.0262	39,300
2	ADJUSTMENT	(14,348)	1.4949	(21,449)	(1,500,000)	0.0262	(39,300)
3	MARCH	14,348	1.4949	21,449	1,500,000	0.0262	39,300
4	ADJUSTMENT	(14,348)	1.4949	(21,449)	(1,500,000)	0.0262	(39,300)
5	APRIL	14,348	1.4949	21,449	1,500,000	0.0262	39,300
6	ADJUSTMENT	(14,348)	1.4949	(21,449)	(1,500,000)	0.0262	(39,300)
7	MAY	14,348	1.4949	21,449	1,500,000	0.0262	39,300
8	ADJUSTMENT	(14,348)	1.4949	(21,449)	(1,500,000)	0.0262	(39,300)
9	JUNE	14,348	1.4949	21,449	1,500,000	0.0262	39,300
10	ADJUSTMENT	(14,348)	1.4949	(21,449)	(1,500,000)	0.0262	(39,300)
11	JULY	14,348	1.4949	21,449	1,500,000	0.0262	39,300
12	ADJUSTMENT	(14,348)	1.4949	(21,449)	(1,500,000)	0.0262	(39,300)
13	AUGUST	14,348	1.4949	21,449	1,500,000	0.0262	39,300
14	ADJUSTMENT	(14,348)	1.4949	(21,449)	(1,500,000)	0.0262	(39,300)
15	SEPTEMBER	14,348	1.4949	21,449	1,500,000	0.0262	39,300
16	ADJUSTMENT	(14,348)	1.4949	(21,449)	(1,500,000)	0.0262	(39,300)
17	OCTOBER	14,348	1.4949	21,449	1,500,000	0.0262	39,300
18	ADJUSTMENT	(14,348)	1.4949	(21,449)	(1,500,000)	0.0262	(39,300)
19	NOVEMBER	14,348	1.4949	21,449	1,500,000	0.0262	39,300
20	ADJUSTMENT	(14,348)	1.4949	(21,449)	(1,500,000)	0.0262	(39,300)
21	DECEMBER	14,348	1.4949	21,449	1,500,000	0.0262	39,300
22	ADJUSTMENT	(14,348)	1.4949	(21,449)	(1,500,000)	0.0262	(39,300)
23	JANUARY, 2020	14,348	1.4949	21,449	1,500,000	0.0262	39,300
24	ADJUSTMENT	(14,348)	1.4949	(21,449)	(1,500,000)	0.0262	(39,300)
25	TOTAL	<u>0</u>		<u>0</u>	<u>0</u>		<u>0</u>

EXHIBIT 1-D
SCHEDULE 5
SHEET 10 OF 12

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF HISTORIC COST OF GAS
INJECTION/WITHDRAWAL CHARGES
COLUMBIA GAS TRANSMISSION CORPORATION

LINE NO.	MONTH	WITHDRAWAL CHARGES			INJECTION CHARGES		
		VOLUME	RATE	AMOUNT	VOLUME	RATE	AMOUNT
		(1) DTH	(2) \$/DTH	(3=1x2) \$	(4) DTH	(5) \$/DTH	(6=4x5) \$
1	FEBRUARY, 2019	4,775,340	0.0153	73,063	0	0.0000	0
2	ADJUSTMENT	184,040	0.0153	2,816	0	0.0000	4
3	ADJUSTMENT	0	0.0000	308	0	0.0000	0
4	MARCH	3,974,877	0.0000	60,816	0	0.0000	0
5	ADJUSTMENT	702	0.0153	11	0	0.0000	0
6	ADJUSTMENT	0	0.0000	76	0	0.0000	0
7	APRIL	0	0.0000	0	2,878,933	0.0153	44,048
8	ADJUSTMENT	0	0.0000	6,748	219,167	0.0153	3,353
9	ADJUSTMENT	0	0.0000	0	0	0.0000	(1,179)
10	MAY	69,114	0.0153	1,057	3,923,654	0.0153	60,032
11	ADJUSTMENT	0	0.0000	878	(2,276)	0.0153	35
12	ADJUSTMENT	0	0.0000	0	0	0.0000	825
13	JUNE	0	0.0000	2,119	3,858,337	0.0153	59,033
14	ADJUSTMENT	0	0.0000	0	8,005	0.0153	123
15	ADJUSTMENT	0	0.0000	0	0	0.0000	(97)
16	JULY	0	0.0000	829	3,807,341	0.0153	58,252
17	ADJUSTMENT	0	0.0000	0	(33,527)	0.0153	(512)
18	ADJUSTMENT	0	0.0000	0	0	0.0000	(21)
19	AUGUST	0	0.0000	171	3,719,490	0.0153	56,908
20	ADJUSTMENT	0	0.0000	0	2,412	0.0153	37
21	ADJUSTMENT	0	0.0000	0	0	0.0000	237
22	SEPTEMBER	0	0.0000	0	3,029,660	0.0153	46,354
23	ADJUSTMENT	0	0.0000	0	(8,215)	0.0153	(126)
24	ADJUSTMENT	0	0.0000	0	0	0.0000	(624)
25	OCTOBER	32,800	0.0153	502	1,100,000	0.0153	16,830
26	ADJUSTMENT	0	0.0000	34	(22,033)	0.0153	(337)
27	ADJUSTMENT	0	0.0000	0	0	0.0000	(528)
28	NOVEMBER	2,617,259	0.0153	40,044	0	0.0000	0
29	ADJUSTMENT	12,072	0.0153	185	29,850	0.0000	0
30	ADJUSTMENT	0	0.0000	0	0	0.0000	(272)
31	DECEMBER	4,958,074	0.0153	75,859	0	0.0000	0
32	ADJUSTMENT	142,763	0.0153	2,180	0	0.0000	(929)
33	ADJUSTMENT	0	0.0000	156	0	0.0000	0
34	JANUARY, 2020	5,003,028	0.0153	76,546	27,224	0.0153	416
35	ADJUSTMENT	(718,915)	0.0153	(11,020)	0	0.0000	0
36	ADJUSTMENT	0	0.0000	(57)	0	0.0000	0
37	TOTAL	<u>21,051,154</u>		<u>333,320</u>	<u>22,538,022</u>		<u>341,861</u>

EXHIBIT 1-D
SCHEDULE 5
SHEET 11 OF 12

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF HISTORIC COST OF GAS
INJECTION/WITHDRAWAL CHARGES
DOMINION TRANSMISSION

LINE NO.	MONTH	WITHDRAWAL CHARGES			INJECTION CHARGES		
		VOLUME	RATE	AMOUNT	VOLUME	RATE	AMOUNT
		(1) DTH	(2) \$/DTH	(3=1x2) \$	(4) DTH	(5) \$/DTH	(6=4x5) \$
1	FEBRUARY, 2019	0	0.0000	0	0	0.0000	0
2	ADJUSTMENT	468,099	0.0180	8,410	0	0.0000	0
3	ADJUSTMENT	0	0.0000	(1,519)	0	0.0000	0
4	MARCH	0	0.0000	0	0	0.0000	0
5	ADJUSTMENT	383,999	0.0180	6,895	0	0.0000	0
6	ADJUSTMENT	0	0.0000	(716)	0	0.0000	0
7	APRIL	0	0.0000	0	240,892	0.0287	6,914
8	ADJUSTMENT	257,761	0.0180	4,650	0	0.0000	(748)
9	ADJUSTMENT	0	0.0000	281	0	0.0000	0
10	MAY	0	0.0000	0	303,924	0.0287	8,723
11	ADJUSTMENT	0	0.0000	0	9,576	0.0287	275
12	ADJUSTMENT	0	0.0000	0	0	0.0000	(860)
13	JUNE	0	0.0000	0	250,640	0.0287	7,193
14	ADJUSTMENT	0	0.0000	0	(1,186)	0.0287	(34)
15	ADJUSTMENT	0	0.0000	0	0	0.0000	(844)
16	JULY	0	0.0000	0	270,827	0.0287	7,773
17	ADJUSTMENT	0	0.0000	0	22,334	0.0287	641
18	ADJUSTMENT	0	0.0000	0	0	0.0000	(887)
19	AUGUST	0	0.0000	0	209,541	0.0287	6,014
20	ADJUSTMENT	0	0.0000	0	6,403	0.0287	184
21	ADJUSTMENT	0	0.0000	0	0	0.0000	(734)
22	SEPTEMBER	0	0.0000	0	202,950	0.0287	5,825
23	ADJUSTMENT	0	0.0000	0	33,603	0.0287	964
24	ADJUSTMENT	0	0.0000	0	0	0.0000	(794)
25	OCTOBER	4,472	0.0208	93	129,940	0.0287	3,729
26	ADJUSTMENT	0	0.0000	0	25,364	0.0287	728
27	ADJUSTMENT	0	0.0000	0	0	0.0000	(667)
28	NOVEMBER	10,685	0.0208	222	0	0.0000	0
29	ADJUSTMENT	0	0.0000	0	30,741	0.0287	882
30	DECEMBER	253,524	0.0174	4,408	0	0.0000	0
31	ADJUSTMENT	0	0.0000	(304)	0	0.0000	0
32	JANUARY, 2020	430,748	0.0174	7,480	0	0.0000	0
33	ADJUSTMENT	0	0.0000	(548)	0	0.0000	0
34	TOTAL	<u>1,809,288</u>		<u>29,352</u>	<u>1,735,549</u>		<u>44,275</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF HISTORIC COST OF GAS
INJECTION/WITHDRAWAL CHARGES
EQUITRANS

LINE NO.	MONTH	WITHDRAWAL CHARGES			INJECTION CHARGES		
		VOLUME (1) DTH	RATE (2) \$/DTH	AMOUNT (3=1x2) \$	VOLUME (4) DTH	RATE (5) \$/DTH	AMOUNT (6=4x5) \$
1	FEBRUARY, 2019	348,000	0.0069	2,401	0	0.0000	0
2	ADJUSTMENT	(348,000)	0.0069	(2,401)	0	0.0000	0
3	MARCH	352,000	0.0069	2,429	0	0.0000	0
4	ADJUSTMENT	(352,000)	0.0069	(2,429)	0	0.0000	0
5	APRIL	0	0.0000	0	0	0.0000	0
6	ADJUSTMENT	0	0.0000	0	0	0.0000	0
7	MAY	0	0.0000	0	0	0.0000	0
8	ADJUSTMENT	0	0.0000	0	0	0.0000	0
9	JUNE	0	0.0000	0	3,458	0.0069	24
10	ADJUSTMENT	0	0.0000	0	(3,458)	0.0069	(24)
11	JULY	0	0.0000	0	188,110	0.0069	1,298
12	ADJUSTMENT	0	0.0000	0	(188,110)	0.0069	(1,298)
13	AUGUST	0	0.0000	0	209,815	0.0069	1,448
14	ADJUSTMENT	0	0.0000	0	(209,815)	0.0069	(1,448)
15	SEPTEMBER	0	0.0000	0	224,285	0.0069	1,548
16	ADJUSTMENT	0	0.0000	0	(224,285)	0.0069	(1,548)
17	OCTOBER	0	0.0000	0	188,100	0.0069	1,298
18	ADJUSTMENT	0	0.0000	0	(188,100)	0.0069	(1,298)
19	NOVEMBER	0	0.0000	0	161,736	0.0069	1,116
20	ADJUSTMENT	0	0.0000	0	(161,736)	0.0069	(1,116)
21	DECEMBER	0	0.0000	0	0	0.0000	0
22	JANUARY, 2020	155,000	0.0069	1,070	0	0.0000	0
23	ADJUSTMENT	(155,000)	0.0069	(1,070)	0	0.0000	0
24	TOTAL	<u>0</u>		<u>0</u>	<u>0</u>		<u>(0)</u>

EXHIBIT 1-D
SCHEDULE 6
SHEET 1 OF 18

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF HISTORIC COST OF GAS
TRANSPORTATION CHARGES

LINE NO.	MONTH	TRANSPORTATION SHRINKAGE VOLUMES 1/	TOTAL DEMAND COSTS	TOTAL COMMODITY COSTS	TOTAL TRANSPORTATION COSTS
		(1) Dth	(2) \$	(3) \$	(4=2+3) \$
1	FEBRUARY, 2019	(11,776)	4,520,742	114,712	4,635,454
2	MARCH	(24,265)	4,518,662	119,385	4,638,047
3	APRIL	(66,952)	2,892,997	82,988	2,975,985
4	MAY	(65,358)	2,900,433	73,908	2,974,341
5	JUNE	(66,358)	2,953,153	67,330	3,020,482
6	JULY	(65,774)	2,952,677	62,054	3,014,731
7	AUGUST	(64,947)	2,952,782	65,981	3,018,763
8	SEPTEMBER	(51,475)	2,955,320	50,414	3,005,734
9	OCTOBER	(37,478)	4,473,380	40,173	4,513,553
10	NOVEMBER	(28,989)	4,214,171	39,688	4,253,859
11	DECEMBER	(51,669)	4,345,994	110,451	4,456,445
12	JANUARY, 2020	(29,029)	4,302,263	170,313	4,472,576
13	TOTAL	(564,070)	43,982,574	997,395	44,979,970

1/ THESE VOLUMES REPRESENT RETAINAGE BY THE PIPLINES.

EXHIBIT 1-D
SCHEDULE 6
SHEET 2 OF 18

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF HISTORIC COST OF GAS
COLUMBIA GAS TRANSMISSION CORPORATION
RATE SCHEDULE FTS - TRANSPORTATION DEMAND CHARGES

LINE NO.	MONTH	DEMAND VOLUME	BILLING RATE	AMOUNT	CAPACITY RELEASE 1/	TOTAL FTS AMOUNT
		(1) Dth	(2) \$/Dth	(3=1x2) \$	(4) \$	(5=3+4) \$
1	FEBRUARY, 2019	127,588	6.7400	859,943	(162,717)	697,226
2	ADJUSTMENT				(94,650)	(94,650)
3	ADJUSTMENT				(35,149) 2/	(35,149)
4	ADJUSTMENT				94,650	94,650
5	ADJUSTMENT				(49)	(49)
6	MARCH	127,588	6.7400	859,943	(163,054)	696,889
7	ADJUSTMENT				(94,650)	(94,650)
8	ADJUSTMENT				(35,149) 2/	(35,149)
9	ADJUSTMENT				94,650	94,650
10	APRIL	127,588	6.7540	861,729	(164,804)	696,925
11	ADJUSTMENT				(74,908)	(74,908)
12	ADJUSTMENT				(35,222) 2/	(35,222)
13	ADJUSTMENT				74,908	74,908
14	MAY	127,588	6.7390	859,816	(164,877)	694,939
15	ADJUSTMENT				(74,908)	(74,908)
16	ADJUSTMENT				(35,144) 2/	(35,144)
17	ADJUSTMENT				74,908	74,908
18	JUNE	127,588	6.7720	864,026	(165,684)	698,342
19	ADJUSTMENT				(74,908)	(74,908)
20	ADJUSTMENT				(35,316) 2/	(35,316)
21	ADJUSTMENT				74,908	74,908
22	JULY	127,588	6.7720	864,026	(166,449)	697,577
23	ADJUSTMENT				(74,908)	(74,908)
24	ADJUSTMENT				(35,316) 2/	(35,316)
25	ADJUSTMENT				74,908	74,908
26	AUGUST	127,588	6.7720	864,026	(167,289)	696,737
27	ADJUSTMENT				(74,908)	(74,908)
28	ADJUSTMENT				(35,316) 2/	(35,316)
29	ADJUSTMENT				74,908	74,908
30	SEPTEMBER	127,588	6.7720	864,026	(167,290)	696,735
31	ADJUSTMENT				(74,908)	(74,908)
32	ADJUSTMENT				(35,316) 2/	(35,316)
33	ADJUSTMENT				74,908	74,908
34	OCTOBER	127,588	6.7720	864,026	(165,773)	698,253
35	ADJUSTMENT				(74,908)	(74,908)
36	ADJUSTMENT				(35,316) 2/	(35,316)
37	ADJUSTMENT				74,908	74,908
38	NOVEMBER	125,788	6.7720	851,836	(165,413)	686,424
39	ADJUSTMENT				(74,908)	(74,908)
40	ADJUSTMENT				(35,316) 2/	(35,316)
41	ADJUSTMENT				74,908	74,908
42	ADJUSTMENT				(926)	(926)
43	DECEMBER	125,788	6.8140	857,119	(165,798)	691,321
44	ADJUSTMENT				(74,908)	(74,908)
45	ADJUSTMENT				(35,316) 2/	(35,316)
46	ADJUSTMENT				74,908	74,908
47	ADJUSTMENT				(219)	(219)
48	JANUARY, 2020	125,788	6.8140	857,119	(165,260)	691,860
49	ADJUSTMENT				(74,908)	(74,908)
50	ADJUSTMENT				(35,316) 2/	(35,316)
51	ADJUSTMENT				74,908	74,908
52	ADJUSTMENT				(219)	(219)
53	TOTAL	<u>1,525,656</u>		<u>10,327,636</u>	<u>(2,409,013)</u>	<u>7,918,623</u>

1/ INCLUDES CAPACITY ALLOCATED TO SUPPLIERS PARTICIPATING IN COLUMBIA'S CHOICE PROGRAM.
2/ AMOUNT REPRESENTS 5,215 DTH OF CAPACITY RELEASED AT THE APPLICABLE MAXIMUM RATE TO A LARGE INDUSTRIAL CUSTOMER ON COLUMBIA'S SYSTEM AND NOT SUBJECT TO RECALL.

EXHIBIT 1-D
SCHEDULE 6
SHEET 3 OF 18

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF HISTORIC COST OF GAS
COLUMBIA GAS TRANSMISSION CORPORATION
RATE SCHEDULE SST - TRANSPORTATION DEMAND CHARGES

LINE NO.	MONTH	DEMAND VOLUME (1) Dth	BILLING RATE (2) \$/Dth	AMOUNT (3=1x2) \$	CAPACITY RELEASE (4) \$	TOTAL SST AMOUNT (5=3+4) \$
1	FEBRUARY, 2019	456,876	6.5800	3,006,244	(44,399)	2,961,845
2	ADJUSTMENT				44,399	44,399
3	MARCH	456,876	6.5800	3,006,244	(64,837)	2,941,407
4	ADJUSTMENT				64,837	64,837
5	APRIL	228,438	6.5940	1,506,320	(1,306)	1,505,015
6	ADJUSTMENT				1,306	1,306
7	MAY	228,438	6.5790	1,502,894	(5,969)	1,496,925
8	ADJUSTMENT				5,969	5,969
9	JUNE	228,438	6.6120	1,510,432	(2,652)	1,507,780
10	ADJUSTMENT				2,652	2,652
11	JULY	228,438	6.6120	1,510,432	(2,652)	1,507,780
12	ADJUSTMENT				2,652	2,652
13	AUGUST	228,438	6.6120	1,510,432	(415)	1,510,017
14	ADJUSTMENT				415	415
15	SEPTEMBER	228,438	6.6120	1,510,432	0	1,510,432
16	ADJUSTMENT					0
17	OCTOBER	456,876	6.6120	3,020,864	0	3,020,864
18	ADJUSTMENT					0
19	NOVEMBER	456,876	6.6120	3,020,864	(4,513)	3,016,352
20	ADJUSTMENT				4,513	4,513
21	DECEMBER	456,876	6.6540	3,040,053	(943)	3,039,110
22	ADJUSTMENT				943	943
23	JANUARY, 2020	456,876	6.6540	3,040,053	(943)	3,039,110
24	ADJUSTMENT				943	943
25	TOTAL	<u>4,111,884</u>		<u>27,185,264</u>	<u>(0)</u>	<u>27,185,264</u>

EXHIBIT 1-D
SCHEDULE 6
SHEET 4 of 18

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
COLUMBIA GAS TRANSMISSION CORPORATION
RATE SCHEDULE FTS -TRANSPORTATION COMMODITY CHARGES

LINE NO.	MONTH	FTS		
		COMMODITY VOLUME (1) Dth	BILLING RATE (2) \$/Dth	FTS AMOUNT (3=1x2) \$
1	FEBRUARY, 2019	186,284	0.0202	3,763
2	MARCH	378,651	0.0202	7,649
3	APRIL	359,377	0.0175	6,289
4	MAY	321,687	0.0175	5,630
5	JUNE	177,372	0.0177	3,139
6	JULY	257,309	0.0177	4,554
7	AUGUST	189,317	0.0177	3,351
8	SEPTEMBER	200,970	0.0177	3,557
9	OCTOBER	287,805	0.0177	5,094
10	NOVEMBER	298,886	0.0177	5,290
11	DECEMBER	1,889,092	0.0177	33,437
12	JANUARY, 2020	<u>466,262</u>	0.0177	<u>8,253</u>
13	TOTAL	<u><u>5,013,012</u></u>		<u><u>90,007</u></u>

EXHIBIT 1-D
SCHEDULE 6
SHEET 5 of 18

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
COLUMBIA GAS TRANSMISSION CORPORATION
RATE SCHEDULE SST -TRANSPORTATION COMMODITY CHARGES

LINE NO.	MONTH	SST		
		COMMODITY VOLUME (1) Dth	BILLING RATE (2) \$/Dth	SST AMOUNT (3=1x2) \$
1	FEBRUARY, 2019	4,705,906	0.0200	94,118
2	ADJUSTMENT			(5,716)
3	MARCH	4,813,429	0.0200	96,269
4	ADJUSTMENT			(6,069)
5	APRIL	3,451,132	0.0173	59,705
6	ADJUSTMENT			1,691
7	MAY	3,508,952	0.0173	60,705
8	ADJUSTMENT			1,391
9	JUNE	3,349,764	0.0175	58,621
10	ADJUSTMENT			2,265
11	JULY	3,152,255	0.0175	55,164
12	ADJUSTMENT			829
13	AUGUST	3,191,133	0.0175	55,845
14	ADJUSTMENT			(33)
15	SEPTEMBER	2,405,565	0.0175	42,097
16	ADJUSTMENT			(247)
17	OCTOBER	1,519,237	0.0175	26,587
18	ADJUSTMENT			(149)
19	NOVEMBER	1,187,666	0.0175	20,784
20	ADJUSTMENT			(422)
21	DECEMBER	921,671	0.0175	16,129
22	ADJUSTMENT	2,667,842		42,328
23	JANUARY, 2020	5,175,911	0.0164	84,820
24	ADJUSTMENT	3,390,516		53,632
25	TOTAL	<u>43,440,979</u>		<u>760,344</u>

EXHIBIT 1-D
SCHEDULE 6
SHEET 6 OF 18

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
COLUMBIA GULF TRANSMISSION COMPANY
RATE SCHEDULE FTS-1 - TRANSPORTATION DEMAND CHARGES

LINE NO.	MONTH	DEMAND VOLUME	BILLING RATE	AMOUNT	CAPACITY RELEASE 1/	TOTAL FTS-1 AMOUNT
		(1) Dth	(2) \$/Dth	(3=1x2) \$	(4) \$	(5=3+4) \$
1	FEBRUARY, 2019	43,632	4.1700	181,945	(58,021)	123,924
2	MARCH	43,632	4.1700	181,945	(58,651)	123,294
3	APRIL	43,632	4.1700	181,945	(59,348)	122,597
4	MAY	43,632	4.1700	181,945	(59,702)	122,244
5	JUNE	43,632	4.1700	181,945	(59,468)	122,477
6	JULY	43,632	4.1700	181,945	(59,543)	122,402
7	AUGUST	43,632	4.1700	181,945	(60,048)	121,897
8	SEPTEMBER	43,632	4.1700	181,945	(60,186)	121,759
9	OCTOBER	43,632	4.1700	181,945	(59,827)	122,118
10	NOVEMBER	0	0.0000	0	0	0
11	DECEMBER	0	0.0000	0	0	0
12	JANUARY, 2020	0	0.0000	0	0	0
13	TOTAL	<u>392,688</u>		<u>1,637,509</u>	<u>(534,795)</u>	<u>1,102,714</u>

1/ INCLUDES CAPACITY ALLOCATED TO SUPPLIERS PARTICIPATING IN COLUMBIA'S CHOICE PROGRAM.

EXHIBIT 1-D
SCHEDULE 6
SHEET 7 OF 18

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
DOMINION TRANSMISSION
RATE SCHEDULE FTNN - TRANSPORTATION DEMAND CHARGES

LINE NO.	MONTH	DEMAND VOLUME (1) Dth	BILLING RATE (2) \$/Dth	AMOUNT (3=1x2) \$	CAPACITY RELEASE 1/ (4) \$	TOTAL FTNN AMOUNT (5=3+4) \$
1	FEBRUARY, 2019	33,800	4.1742	141,088	(2,446)	138,642
2	ADJUSTMENT			(10,861)		(10,861)
3	MARCH	33,800	4.1742	141,088	(2,459)	138,629
4	ADJUSTMENT			(10,861)		(10,861)
5	APRIL	26,800	4.1742	111,869	(2,513)	109,356
6	ADJUSTMENT			(14,589)		(14,589)
7	MAY	26,800	4.1742	111,869	(2,538)	109,331
8	ADJUSTMENT			(14,589)		(14,589)
9	JUNE	26,800	4.1742	111,869	(2,692)	109,176
10	ADJUSTMENT			(14,589)		(14,589)
11	JULY	26,800	4.1742	111,869	(2,484)	109,385
12	ADJUSTMENT			(14,589)		(14,589)
13	AUGUST	26,800	4.1742	111,869	(2,521)	109,347
14	ADJUSTMENT			(14,589)		(14,589)
15	SEPTEMBER	26,800	4.1742	111,869	(2,529)	109,339
16	ADJUSTMENT			(14,589)		(14,589)
17	OCTOBER	26,800	4.1742	111,869	(2,521)	109,347
18	ADJUSTMENT			(14,589)		(14,589)
19	ADJUSTMENT					0
20	NOVEMBER	33,800	4.1742	141,088	(2,538)	138,550
21	ADJUSTMENT			(14,589)		(14,589)
22	DECEMBER	33,800	4.1732	141,055	(2,518)	138,537
23	ADJUSTMENT			(14,566)		(14,566)
24	ADJUSTMENT			(220)		(220)
25	JANUARY, 2020	33,800	4.1677	140,868	(2,493)	138,375
26	ADJUSTMENT			(14,566)		(14,566)
27	ADJUSTMENT			(164)		(164)
28	TOTAL	<u>356,600</u>		<u>1,320,318</u>	<u>(30,252)</u>	<u>1,290,066</u>

1/ INCLUDES CAPACITY ALLOCATED TO SUPPLIERS PARTICIPATING IN COLUMBIA'S CHOICE PROGRAM.

EXHIBIT 1-D
SCHEDULE 6
SHEET 8 OF 18

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
DOMINION TRANSMISSION
RATE SCHEDULE FTNN - TRANSPORTATION COMMODITY CHARGES

LINE NO.	MONTH	COMMODITY VOLUME (1) Dth	BILLING RATE (2) \$/Dth	TOTAL FTNN AMOUNT (3=1x2) \$
1	FEBRUARY, 2019	327,304	0.0156	5,106
2	ADJUSTMENT			(324)
3	MARCH	220,794	0.0156	3,444
4	ADJUSTMENT			996
5	ADJUSTMENT			9
6	APRIL	161,926	0.0156	2,526
7	ADJUSTMENT			803
8	ADJUSTMENT			(1,066)
9	MAY	213,931	0.0156	3,337
10	ADJUSTMENT			(2,177)
11	ADJUSTMENT			59
12	JUNE	168,540	0.0156	2,629
13	ADJUSTMENT			(2,846)
14	ADJUSTMENT			(62)
15	JULY	188,845	0.0156	2,946
16	ADJUSTMENT			(1,670)
17	AUGUST	166,442	0.0156	2,596
18	ADJUSTMENT			(2,824)
19	SEPTEMBER	152,370	0.0156	2,377
20	ADJUSTMENT			(2,359)
21	ADJUSTMENT			420
22	OCTOBER	83,870	0.0156	1,308
23	ADJUSTMENT			(2,245)
24	ADJUSTMENT			466
25	NOVEMBER	226,688	0.0156	3,536
26	ADJUSTMENT			(1,151)
27	ADJUSTMENT			546
28	DECEMBER	336,200	0.0156	5,245
29	ADJUSTMENT			1,086
30	ADJUSTMENT			(1,119)
31	JANUARY, 2020	422,000	0.0175	7,385
32	ADJUSTMENT			2,142
33	ADJUSTMENT			(1,770)
34	TOTAL	<u>2,668,910</u>		<u>29,352</u>

EXHIBIT 1-D
SCHEDULE 6
SHEET 9 OF 18

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
EQUITRANS
RATE SCHEDULE FTS - TRANSPORTATION DEMAND CHARGES

LINE NO.	MONTH	DEMAND VOLUME	BILLING RATE	TOTAL FTS AMOUNT
		(1) Dth	(2) \$/Dth	(3=1x2) \$
1	FEBRUARY, 2019	14,348	6.1206	87,818
2	ADJUSTMENT			(47,612)
3	MARCH	14,348	6.1206	87,818
4	ADJUSTMENT			(47,612)
5	APRIL	7,500	5.5559	41,669
6	ADJUSTMENT			(30,341)
7	MAY	7,500	5.5559	41,669
8	ADJUSTMENT			(30,341)
9	JUNE	7,500	5.5559	41,669
10	ADJUSTMENT			(30,341)
11	JULY	7,500	5.5559	41,669
12	ADJUSTMENT			(30,341)
13	AUGUST	7,500	5.5559	41,669
14	ADJUSTMENT			(30,341)
15	SEPTEMBER	7,500	5.5559	41,669
16	ADJUSTMENT			(30,341)
17	OCTOBER	7,500	5.5559	41,669
18	ADJUSTMENT			(30,341)
19	NOVEMBER	14,348	6.1206	87,818
20	ADJUSTMENT			(63,942)
21	DECEMBER	14,348	6.1206	87,818
22	ADJUSTMENT			(63,942)
23	JANUARY, 2020	14,348	6.1206	87,818
24	ADJUSTMENT			(63,942)
25	TOTAL	<u>124,240</u>		<u>231,341</u>

EXHIBIT 1-D
SCHEDULE 6
SHEET 10 OF 18

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
TENNESSEE GAS PIPELINE CORPORATION
RATE SCHEDULE FTA - TRANSPORTATION DEMAND CHARGES

LINE NO.	MONTH	DEMAND VOLUME	BILLING RATE	TOTAL FTA AMOUNT
		(1) Dth	(2) \$/Dth	(3=1x2) \$
1	FEBRUARY, 2019	23,600	11.5333	272,186
2	MARCH	23,600	11.5333	272,186
3	APRIL	23,600	11.5333	272,186
4	MAY	23,600	11.5333	272,186
5	JUNE	23,600	11.5333	272,186
6	JULY	23,600	11.5333	272,186
7	AUGUST	23,600	11.5333	272,186
8	SEPTEMBER	23,600	11.5333	272,186
9	OCTOBER	23,600	11.5333	272,186
10	NOVEMBER	23,600	4.7665	112,490
11	DECEMBER	23,600	4.7665	112,490
12	JANUARY, 2020	23,600	4.7665	112,490
13	TOTAL	<u>283,200</u>		<u>2,787,139</u>

EXHIBIT 1-D
SCHEDULE 6
SHEET 11 OF 18

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
TENNESSEE GAS PIPELINE CORPORATION
RATE SCHEDULE FTA - TRANSPORTATION COMMODITY CHARGES

LINE NO.	MONTH	COMMODITY VOLUME	BILLING RATE	TOTAL FTA AMOUNT
		(1) Dth	(2) \$/Dth	(3=1x2) \$
1	FEBRUARY, 2019	326,013	0.0500	16,301
2	ADJUSTMENT	(69)	0.0500	(3)
3	MARCH	321,388	0.0500	16,069
4	ADJUSTMENT			(3)
5	APRIL	253,032	0.0500	12,652
6	ADJUSTMENT			(2)
7	MAY	99,622	0.0495	4,931
8	ADJUSTMENT			(127)
9	JUNE	69,629	0.0495	3,447
11	JULY	65,154	0.0495	3,225
12	AUGUST	77,188	0.0495	3,821
13	SEPTEMBER	89,660	0.0495	4,438
14	OCTOBER	178,802	0.0495	8,851
15	NOVEMBER	357,460	0.0293	10,466
16	DECEMBER	415,523	0.0251	10,450
17	JANUARY, 2020	398,598	0.0258	10,297
18	TOTAL	<u>2,652,000</u>		<u>104,813</u>

EXHIBIT 1-D
SCHEDULE 6
SHEET 12 OF 18

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
TEXAS EASTERN TRANSMISSION CORPORATION
TRANSPORTATION DEMAND CHARGES

LINE NO.	MONTH	TOTAL CDS AND FT1 DEMAND 1/ (1) \$
1	FEBRUARY, 2019	284,566
2	ADJUSTMENT	(12,000)
3	MARCH	284,566
4	ADJUSTMENT	(13,149)
5	APRIL	221,438
6	ADJUSTMENT	(13,149)
7	MAY	221,438
8	JUNE	263,309
9	JULY	263,309
10	AUGUST	264,952
11	SEPTEMBER	264,952
12	OCTOBER	264,952
13	NOVEMBER	265,156
14	DECEMBER	374,011
15	JANUARY, 2020	351,748
16	ADJUSTMENT	(22,262)
17	TOTAL	<u>3,263,834</u>

1/ CDS AND FT1 DEMAND CHARGES ARE DETAILED
ON SHEETS 13-14.

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
TEXAS EASTERN TRANSMISSION CORPORATION
TRANSPORTATION DEMAND CHARGES

LINE NO.	MONTH	DEMAND VOLUME (1) Dth	CDS CONTRACT # 800387		DEMAND VOLUME (4) Dth	CDS CONTRACT # 910463		DEMAND VOLUME (7) Dth	CDS CONTRACT # 910464		TOTAL AMOUNT CDS (10=3+6+9) \$
			RATE (2) \$/Dth	AMOUNT (3=1x2) \$		RATE (5) \$/Dth	AMOUNT (6=4x5) \$		RATE (8) \$/Dth	AMOUNT (9=7x8) \$	
1	FEBRUARY, 2019	5,390	6.6027	35,589	364	6.5990	2,402	9,951	6.6032	65,709	103,699
2	ADJUSTMENT			(1)							
3	MARCH	5,390	6.6027	35,589	364	6.5990	2,402	9,951	6.6032	65,709	103,699
4	ADJUSTMENT			7						15	22
5	APRIL	5,390	6.6040	35,596	364	6.6002	2,402	9,951	6.6047	65,724	103,722
6	ADJUSTMENT			7						15	22
7	MAY	5,390	6.6040	35,596	364	6.6002	2,402	9,951	6.6047	65,724	103,722
8	JUNE	5,390	9.2763	49,999	364	9.2714	3,375	9,951	9.2673	92,219	145,593
9	JULY	5,390	9.2763	49,999	364	9.2714	3,375	9,951	9.2673	92,219	145,593
10	AUGUST	5,390	9.3716	50,513	364	9.3666	3,409	9,951	9.3774	93,314	147,236
11	SEPTEMBER	5,390	9.3716	50,513	364	9.3666	3,409	9,951	9.3774	93,314	147,236
12	OCTOBER	5,390	9.3716	50,513	364	9.3666	3,409	9,951	9.3774	93,314	147,236
13	NOVEMBER	5,390	9.3716	50,513	364	9.3666	3,409	9,951	9.3774	93,314	147,236
14	DECEMBER	5,390	9.3868	50,595	364	9.3818	3,415	9,951	9.3949	93,489	147,499
15	JANUARY, 2020	5,390	9.3868	50,595	364	9.3818	3,415	9,951	9.3949	93,489	147,499
16	TOTAL	<u>64,680</u>		<u>545,620</u>	<u>4,368</u>		<u>36,826</u>	<u>119,412</u>		<u>1,007,567</u>	<u>1,590,014</u>

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
TEXAS EASTERN TRANSMISSION CORPORATION
TRANSPORTATION DEMAND CHARGES

LINE NO.	MONTH	FT-1	FT-1	AMOUNT	FT-1	FT-1	AMOUNT	FT-1	AMOUNT	TOTAL	TOTAL	
		CONTRACT #	CONTRACT #		CONTRACT #	CONTRACT #		AMOUNT		AMOUNT		
		830049	910951	(13=11x12)	911660		(16=14x15)	911660	(19=17x18)	(20=13+16+19)	(21=10+20)	
		(11)	(12)	(13=11x12)	(14)	(15)	(16=14x15)	(17)	(18)	(19=17x18)	(20=13+16+19)	(21=10+20)
		Dth	\$/Dth	\$	Dth	\$/Dth	\$	Dth	\$/Dth	\$	\$	\$
1	FEBRUARY, 2019	10,000	4.9980	49,980	15,335	8.5352	130,887	0	0.0000	0	180,867	284,566
2	ADJUSTMENT						(12,000)				(12,000)	(12,000)
3	MARCH	10,000	4.9980	49,980	15,335	8.5352	130,887	0	0.0000	0	180,867	284,566
4	ADJUSTMENT						(13,171)				(13,171)	(13,149)
5	APRIL	0	0.0000	0	14,835	7.9350	117,716	0	0.0000	0	117,716	221,438
6	ADJUSTMENT						(13,171)				(13,171)	(13,149)
7	MAY	0	0.0000	0	14,835	7.9350	117,716	0	0.0000	0	117,716	221,438
8	JUNE	0	0.0000	0	14,835	7.9350	117,716	0	0.0000	0	117,716	263,309
9	JULY	0	0.0000	0	14,835	7.9350	117,716	0	0.0000	0	117,716	263,309
10	AUGUST	0	0.0000	0	14,835	7.9350	117,716	0	0.0000	0	117,716	264,952
11	SEPTEMBER	0	0.0000	0	14,835	7.9350	117,716	0	0.0000	0	117,716	264,952
12	OCTOBER	0	0.0000	0	14,835	7.9350	117,716	0	0.0000	0	117,716	264,952
13	NOVEMBER	0	0.0000	0	14,835	7.9350	117,716	100	2.0380	204	117,920	265,156
14	DECEMBER	10,000	8.6330	86,330	15,335	9.1280	139,978	100	2.0380	204	226,512	374,011
15	JANUARY, 2020	10,000	8.6330	86,330	14,835	7.9350	117,716	100	2.0380	204	204,250	351,748
16	ADJUSTMENT				(500)		(22,262)				(22,262)	(22,262)
17	TOTAL	40,000		272,620	179,020		1,422,851	300		611	1,673,820	3,263,835

EXHIBIT 1-D
SCHEDULE 6
SHEET 15 OF 18

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
TEXAS EASTERN TRANSMISSION CORPORATION
TRANSPORTATION COMMODITY CHARGES

LINE NO.	MONTH	COMMODITY VOLUME	BILLING RATE	TOTAL FT1 COMMODITY	COMMODITY VOLUME	BILLING RATE	TOTAL CDS COMMODITY	TOTAL FT1 CDS
		(1) Dth	(2) \$/Dth	(3=1x2) \$	(4) Dth	(5) \$/Dth	(6=4x5) \$	(7=3+6) \$
1	FEBRUARY, 2019	20,400	0.0346	706	0	0.0000	0	706
2	ADJUSTMENT	0	0.0000	(118)	0	0.0000	0	(118)
3	MARCH	10,600	0.0346	367	0	0.0000	0	367
4	ADJUSTMENT	0	0.0000	(43)	0	0.0000	0	(43)
5	APRIL	0	0.0000	0	0	0.0000	0	0
6	ADJUSTMENT	0	0.0000	(22)	0	0.0000	0	(22)
7	MAY	0	0.0000	0	0	0.0000	0	0
8	JUNE	0	0.0000	0	0	0.0000	0	0
9	JULY	0	0.0000	0	0	0.0000	0	0
10	AUGUST	0	0.0000	0	0	0.0000	0	0
11	SEPTEMBER	0	0.0000	0	0	0.0000	0	0
12	OCTOBER	0	0.0000	0	0	0.0000	0	0
13	NOVEMBER	0	0.0000	0	0	0.0000	0	0
14	DECEMBER	55,457	0.0436	2,418	0	0.0000	0	2,418
15	JANUARY, 2020	49,500	0.0436	2,158	0	0.0000	0	2,158
16	ADJUSTMENT	0	0.0000	(379)	0	0.0000	0	(379)
17	TOTAL	<u>135,957</u>		<u>5,087</u>	<u>0</u>		<u>0</u>	<u>5,087</u>

EXHIBIT 1-D
 SCHEDULE 6
 SHEET 16 OF 18

COLUMBIA GAS OF PENNSYLVANIA, INC
 DETAIL OF HISTORIC COST OF GAS
 NATIONAL FUEL GAS SUPPLY
 RATE SCHEDULE FT - TRANSPORTATION DEMAND CHARGES

LINE NO.	MONTH	DEMAND VOLUME	BILLING RATE	TOTAL FT AMOUNT
		(1) Dth	(2) \$/Dth	(3=1x2) \$
1	FEBRUARY, 2019	4,304	3.6727	15,807
2	MARCH	4,304	3.6727	15,807
3	APRIL	4,304	3.6727	15,807
4	MAY	4,304	3.6727	15,807
5	JUNE	4,304	3.6727	15,807
6	JULY	4,304	3.6727	15,807
7	AUGUST	4,304	3.6727	15,807
8	SEPTEMBER	4,304	3.6727	15,807
9	OCTOBER	4,304	3.6727	15,807
10	NOVEMBER	4,304	3.7236	16,026
11	DECEMBER	4,304	3.7236	16,026
12	JANUARY, 2020	4,304	3.7236	16,026
13	TOTAL	<u>51,648</u>		<u>190,345</u>

EXHIBIT 1-D
SCHEDULE 6
SHEET 17 OF 18

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
NATIONAL FUEL GAS SUPPLY
TRANSPORTATION COMMODITY CHARGES

LINE NO.	MONTH	COMMODITY VOLUME	BILLING RATE	TOTAL FT COMMODITY
		(1) Dth	(2) \$/Dth	(3=1x2) \$
1	FEBRUARY, 2019	56,742	0.0148	840
2	ADJUSTMENT			40
3	MARCH	49,897	0.0148	738
4	ADJUSTMENT			(42)
5	APRIL	26,581	0.0148	393
6	ADJUSTMENT			19
7	MAY	11,906	0.0148	176
8	ADJUSTMENT			22
9	JUNE	8,424	0.0148	125
10	ADJUSTMENT			11
11	JULY	6,181	0.0148	91
12	ADJUSTMENT			1
13	AUGUST	5,863	0.0148	87
14	ADJUSTMENT			9
15	SEPTEMBER	9,850	0.0148	146
16	ADJUSTMENT			(15)
17	OCTOBER	17,939	0.0148	265
18	ADJUSTMENT			(4)
19	NOVEMBER	43,278	0.0148	641
20	ADJUSTMENT			(2)
21	DECEMBER	55,709	0.0148	824
22	ADJUSTMENT			10
23	JANUARY, 2020	54,821	0.0148	811
24	ADJUSTMENT			(26)
25	TOTAL	<u>347,191</u>		<u>5,162</u>

EXHIBIT 1-D
SCHEDULE 6
SHEET 18 OF 18

COLUMBIA GAS OF PENNSYLVANIA, INC
DETAIL OF HISTORIC COST OF GAS
TRANSPORTATION SHRINKAGE VOLUMES AND OPERATIONAL BALANCING CHARGES
AND OTHER COMMODITY CHARGES

LINE NO.	MONTH	TRANSPORTATION SHRINKAGE VOLUMES	DEMAND OPERATIONAL BALANCING CHARGES	COMMODITY CASH IN/ CASH OUT EXCHANGE FEES	COMMODITY OTHER COMPLIANCE	TOTAL COMMODITY
		(1) Dth	(2) \$	(3) \$	(4) \$	(5=3+4) \$
1	FEBRUARY, 2019	(11,776)	0	0	0	0
2	MARCH	(24,265)	0	0	0	0
3	APRIL	(66,952)	0	0	0	0
4	MAY	(65,358)	0	0	(40)	(40)
5	JUNE	(66,358)	0	0	0	0
6	JULY	(65,774)	156	0	(3,088)	(3,088)
7	AUGUST	(64,947)	0	0	3,128	3,128
8	SEPTEMBER	(51,475)	2,686	0	0	0
9	OCTOBER	(37,478)	8,429	0	0	0
10	NOVEMBER	(28,989)	1,616	0	0	0
11	DECEMBER	(51,669)	0	0	(358)	(358)
12	JANUARY, 2020	<u>(29,029)</u>	<u>362</u>	<u>0</u>	<u>2,989</u>	<u>2,989</u>
13	TOTAL	<u>(564,070)</u>	<u>13,249</u>	<u>0</u>	<u>2,631</u>	<u>2,631</u>

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
E. GAS UTILITIES

25. Submit calculations supporting energy cost per MCF and operating ratio used to determine increase in costs other than production to serve additional load.

Response:

For support of energy cost per Dth included in the base cost of gas, refer to Exhibit No. 12, Schedule No. 5 (31), Page 1.

The Company has not adjusted test year operating expenses to serve additional load other than to reflect the base cost of gas applicable to the adjusted sales volumes.

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 III. BALANCE SHEET AND OPERATING STATEMENT
E. GAS UTILITIES

31. Provide a schedule showing the determination of the fuel costs included in the base cost of fuel.

Response:

The cost of gas included in the base cost of fuel from October 1, 2019 through December 31, 2019 is detailed on Page 2. During this period, the PGC Rate was \$3.5962 per Dth with an E-Factor of \$0.0305, which equals a combined Total Rate of \$3.6267 per Dth.

The cost of gas included in the base cost of fuel from January 1, 2020 through March 31, 2020 is detailed on Page 3. During this period, the PGC Rate was \$3.4425 per Dth with an E-Factor of \$0.0383, which equals a combined Total Rate of \$3.4808 per Dth.

The cost of gas included in the base cost of fuel from April 1, 2020 through September 30, 2020 is detailed on Page 4. During this period, the PGC Rate was \$3.2179 per Dth with an E-Factor of \$0.0383, which equals a combined Total Rate of \$3.2562 per Dth.

The cost of gas included in the base cost of fuel from October 1, 2020 through December 31, 2020 is detailed on Page 5. During this period, the PGC Rate was \$3.4455 per Dth with an E-Factor of (\$0.0451), which equals a combined Total Rate of \$3.4004 per Dth.

Columbia has used its purchased gas cost rates effective January 1, 2021 in determining pro forma revenues and pro forma purchased gas cost expense for the historic and future test years in this case. Please refer to Exhibit No. 3, Schedule No. 1, and Exhibit No. 103, Schedule No. 1.

COLUMBIA GAS OF PENNSYLVANIA, INC.
COMPUTATION OF CHANGE IN RATE PURSUANT TO SECTION 1307(f)
APPLICATION PERIOD: OCTOBER, 2019 THROUGH SEPTEMBER, 2020

Line No.	Description	Amount
		(1)
1	<u>Purchased Gas Commodity Cost</u>	\$
2	Commodity Cost of Gas (Exhibit 1-B, Schedule 1)	92,304,514
3	Projected tariff sales for the twelve billing periods of	
4	October, 2019 through September, 2020	380,962,576 Therms
5	PGCC (Line 2/Line 4)	0.24229
6	<u>Commodity (Over)/Under Collection</u>	
7	Commodity E-Factor	
8	(Exhibit No. 1-E)	(3,087,828)
9	Projected sales for the twelve billing periods of	
10	October, 2019 through September, 2020	380,962,576 Therms
11	Commodity E-Factor (Line 8/ Line 10)	(0.00811)
12	<u>Purchased Gas Demand Cost</u>	
13	Demand cost of gas (Exhibit 1-B, Schedule 1)	60,160,397
14	Less: Purchased Gas Demand recovered under Rate SS	
15	(Exhibit 1-A, Schedule 2, Sheet 2)	489,933
16	Less: Purchased Gas Demand Cost allocated to Rates LTS, STS,	
17	SGS-TS and MLS (Exh 1-A, Sch 2, Page 3)	0
18	Subtotal (Line 13 - Line 15 - Line 17)	59,670,464
19	Projected sales for the twelve billing periods of	
20	October, 2019 through September, 2020	1_/ 474,689,562 Therms
21	PGDC Rate prior to Capacity Release Credit (Line 18 / Line 20)	0.12570
22	Off System Sales and Capacity Release Credit	(0.00837)
23	PGDC Rate	0.11733
24	<u>Demand (Over)/Under Collection</u>	
25	Demand E- Factor	
26	(Exhibit No. 1-E)	5,296,818
27	Projected sales for the twelve billing periods of	
28	October, 2019 through September, 2020	1_/ 474,689,562 Therms
29	Demand E-Factor (Line 26 / Line 28)	0.01116
30	<u>Total Purchased Gas Cost</u>	
31	PGCC Rate (Line 5)	0.24229
32	PGDC Rate (Line 23)	0.11733
33	PGC Rate	0.35962
34	Currently effective PGC	0.40123
35	Increase (Decrease) in PGC	(0.04161)
36	<u>Net (Over) Under Collection</u>	
37	Commodity E-Factor (Line 11)	(0.00811)
38	Demand E-Factor (Line 29)	0.01116
39	E-Factor	0.00305
40	Currently effective E-Factor	(0.00655)
41	Increase (Decrease) in E-Factor	0.00960
42	PGC Rate	0.35962
43	E-Factor	0.00305
44	Total Rate	0.36267
45	Currently effective Rate	0.39468
46	Increase (Decrease) in Rate	(0.03201)

1_/ Includes 93,726,986 Therm Transportation Quantities for the Company's Choice Program

COLUMBIA GAS OF PENNSYLVANIA, INC.
COMPUTATION OF CHANGE IN RATE PURSUANT TO SECTION 1307(f)
APPLICATION PERIOD: OCTOBER, 2019 THROUGH SEPTEMBER, 2020

Line No.	Description	Amount (1)	Change in Rate (2=3-1)	Effective 1-1-20 (3)
1	<u>Purchased Gas Commodity Cost</u>	\$		
2	Commodity Cost of Gas (Exhibit 1-B, Schedule 1)	92,304,514		
3	Projected tariff sales for the twelve billing periods of			
4	October, 2019 through September, 2020	380,962,576	Therms	
5	PGCC (Line 2/Line 4)	0.24229	(0.01465)	0.22764
6	<u>Commodity (Over)/Under Collection</u>			
7	Commodity E-Factor			
8	(Exhibit No. 1-E)	(3,087,828)	498,877	(2,588,951)
9	Projected sales for the twelve billing periods of			
10	October, 2019 through September, 2020	380,962,576	Therms	380,962,576
11	Commodity E-Factor (Line 8/ Line 10)	(0.00811)	0.00131	(0.00680)
12	<u>Purchased Gas Demand Cost</u>			
13	Demand cost of gas (Exhibit 1-B, Schedule 1)	60,160,397		
14	Less: Purchased Gas Demand recovered under Rate SS			
15	(Exhibit 1-A, Schedule 2, Sheet 2)	489,933		
16	Less: Purchased Gas Demand Cost allocated to Rates LTS, STS,			
17	SGS-TS and MLS (Exh 1-A, Sch 2, Page 3)	0		
18	Subtotal (Line 13 - Line 15 - Line 17)	59,670,464		
19	Projected sales for the twelve billing periods of			
20	October, 2019 through September, 2020 1_/	474,689,562	Therms	
21	PGDC Rate prior to Capacity Release Credit (Line 18 / Line 20)	0.12570	(0.00072)	0.12498
22	Off System Sales and Capacity Release Credit	(0.00837)	0.00000	(0.00837)
23	PGDC Rate	0.11733	(0.00072)	0.11661
24	<u>Demand (Over)/Under Collection</u>			
25	Demand E- Factor			
26	(Exhibit No. 1-E)	5,296,818	(248,780)	5,048,037
27	Projected sales for the twelve billing periods of			
28	October, 2019 through September, 2020 1_/	474,689,562	Therms	474,689,562
29	Demand E-Factor (Line 26 / Line 28)	0.01116	(0.00053)	0.01063
30	<u>Total Purchased Gas Cost</u>			
31	PGCC Rate (Line 5)	0.24229	(0.01465)	0.22764
32	PGDC Rate (Line 23)	0.11733	(0.00072)	0.11661
33	PGC Rate	0.35962	(0.01537)	0.34425
34	Currently effective PGC	0.40123		0.35962
35	Increase (Decrease) in PGC	(0.04161)		(0.01537)
36	<u>Net (Over) Under Collection</u>			
37	Commodity E-Factor (Line 11)	(0.00811)	0.00131	(0.00680)
38	Demand E-Factor (Line 29)	0.01116	(0.00053)	0.01063
39	E-Factor	0.00305	0.00078	0.00383
40	Currently effective E-Factor	(0.00655)		0.00305
41	Increase (Decrease) in E-Factor	0.00960		0.00078
42	PGC Rate	0.35962	(0.01537)	0.34425
43	E-Factor	0.00305	0.00078	0.00383
44	Total Rate	0.36267	(0.01459)	0.34808
45	Currently effective Rate	0.39468		0.36267
46	Increase (Decrease) in Rate	(0.03201)		(0.01459)

1_/_ Includes 93,726,986 Therm Transportation Quantities for the Company's Choice Program

COLUMBIA GAS OF PENNSYLVANIA, INC.
COMPUTATION OF CHANGE IN RATE PURSUANT TO SECTION 1307(f)
APPLICATION PERIOD: OCTOBER, 2019 THROUGH SEPTEMBER, 2020

Line No.	Description	Amount (1)	Change in Rate (2=3-1)	Effective 1-1-20 (3)	Change in Rate (4=5-3)	Effective 4-1-20 (5)
1	<u>Purchased Gas Commodity Cost</u>	\$				
2	Commodity Cost of Gas (Exhibit 1-B, Schedule 1)	92,304,514				
3	Projected tariff sales for the twelve billing periods of					
4	October, 2019 through September, 2020	380,962,576	Therms			
5	PGCC (Line 2/Line 4)	0.24229	(0.01465)	0.22764	(0.03636)	0.19128
6	<u>Commodity (Over)/Under Collection</u>					
7	Commodity E-Factor					
8	(Exhibit No. 1-E)	(3,087,828)	498,877	(2,588,951)	0	(2,588,951)
9	Projected sales for the twelve billing periods of					
10	October, 2019 through September, 2020	380,962,576	Therms	380,962,576		380,962,576
11	Commodity E-Factor (Line 8/ Line 10)	(0.00811)	0.00131	(0.00680)	0.00000	(0.00680)
12	<u>Purchased Gas Demand Cost</u>					
13	Demand cost of gas (Exhibit 1-B, Schedule 1)	60,160,397				
14	Less: Purchased Gas Demand recovered under Rate SS					
15	(Exhibit 1-A, Schedule 2, Sheet 2)	489,933				
16	Less: Purchased Gas Demand Cost allocated to Rates LTS, STS,					
17	SGS-TS and MLS (Exh 1-A, Sch 2, Page 3)	0				
18	Subtotal (Line 13 - Line 15 - Line 17)	59,670,464				
19	Projected sales for the twelve billing periods of					
20	October, 2019 through September, 2020	474,689,562	Therms			
21	PGDC Rate prior to Capacity Release Credit (Line 18 / Line 20)	0.12570	(0.00072)	0.12498	0.01390	0.13888
22	Off System Sales and Capacity Release Credit	(0.00837)	0.00000	(0.00837)	0.00000	(0.00837)
23	PGDC Rate	0.11733	(0.00072)	0.11661	0.01390	0.13051
24	<u>Demand (Over)/Under Collection</u>					
25	Demand E- Factor					
26	(Exhibit No. 1-E)	5,296,818	(248,780)	5,048,037	0	5,048,037
27	Projected sales for the twelve billing periods of					
28	October, 2019 through September, 2020	474,689,562	Therms	474,689,562		474,689,562
29	Demand E-Factor (Line 26 / Line 28)	0.01116	(0.00053)	0.01063	0.00000	0.01063
30	<u>Total Purchased Gas Cost</u>					
31	PGCC Rate (Line 5)	0.24229	(0.01465)	0.22764	(0.03636)	0.19128
32	PGDC Rate (Line 23)	0.11733	(0.00072)	0.11661	0.01390	0.13051
33	PGC Rate	0.35962	(0.01537)	0.34425	(0.02246)	0.32179
34	Currently effective PGC	0.40123		0.35962		0.34425
35	Increase (Decrease) in PGC	(0.04161)		(0.01537)		(0.02246)
36	<u>Net (Over) Under Collection</u>					
37	Commodity E-Factor (Line 11)	(0.00811)	0.00131	(0.00680)	0.00000	(0.00680)
38	Demand E-Factor (Line 29)	0.01116	(0.00053)	0.01063	0.00000	0.01063
39	E-Factor	0.00305	0.00078	0.00383	0.00000	0.00383
40	Currently effective E-Factor	(0.00655)		0.00305		0.00383
41	Increase (Decrease) in E-Factor	0.00960		0.00078		0.00000
42	PGC Rate	0.35962	(0.01537)	0.34425	(0.02246)	0.32179
43	E-Factor	0.00305	0.00078	0.00383	0.00000	0.00383
44	Total Rate	0.36267	(0.01459)	0.34808	(0.02246)	0.32562
45	Currently effective Rate	0.39468		0.36267		0.34808
46	Increase (Decrease) in Rate	(0.03201)		(0.01459)		(0.02246)

1_/ Includes 93,726,986 Therm Transportation Quantities for the Company's Choice Program

COLUMBIA GAS OF PENNSYLVANIA, INC.
COMPUTATION OF CHANGE IN RATE PURSUANT TO SECTION 1307(f)
APPLICATION PERIOD: OCTOBER, 2020 THROUGH SEPTEMBER, 2021

Line No.	Description	Amount
		(1)
1	<u>Purchased Gas Commodity Cost</u>	\$
2	Commodity Cost of Gas (Exhibit 1-B, Schedule 1)	74,902,323
3	Projected tariff sales for the twelve billing periods of	
4	October, 2020 through September, 2021	<u>336,852,856</u> Therms
5	PGCC (Line 2/Line 4)	0.22236
6	<u>Commodity (Over)/Under Collection</u>	
7	Commodity E-Factor	
8	(Exhibit No. 1-E)	(5,498,440)
9	Projected sales for the twelve billing periods of	
10	October, 2020 through September, 2021	<u>336,852,856</u> Therms
11	Commodity E-Factor (Line 8/ Line 10)	(0.01632)
12	<u>Purchased Gas Demand Cost</u>	
13	Demand cost of gas (Exhibit 1-B, Schedule 1)	60,885,476
14	Less: Purchased Gas Demand recovered under Rate SS	
15	(Exhibit 1-A, Schedule 2, Sheet 2)	477,544
16	Less: Purchased Gas Demand Cost allocated to Rates LTS, STS,	
17	SGS-TS and MLS (Exh 1-A, Sch 2, Page 3)	<u>0</u>
18	Subtotal (Line 13 - Line 15 - Line 17)	60,407,932
19	Projected sales for the twelve billing periods of	
20	October, 2020 through September, 2021	1_/ <u>475,223,749</u> Therms
21	PGDC Rate prior to Capacity Release Credit (Line 18 / Line 20)	0.12711
22	Off System Sales and Capacity Release Credit	<u>(0.00492)</u>
23	PGDC Rate	0.12219
24	<u>Demand (Over)/Under Collection</u>	
25	Demand E- Factor	
26	(Exhibit No. 1-E)	5,610,854
27	Projected sales for the twelve billing periods of	
28	October, 2020 through September, 2021	1_/ <u>475,223,749</u> Therms
29	Demand E-Factor (Line 26 / Line 28)	0.01181
30	<u>Total Purchased Gas Cost</u>	
31	PGCC Rate (Line 5)	0.22236
32	PGDC Rate (Line 23)	<u>0.12219</u>
33	PGC Rate	0.34455
34	Currently effective PGC	<u>0.32179</u>
35	Increase (Decrease) in PGC	0.02276
36	<u>Net (Over) Under Collection</u>	
37	Commodity E-Factor (Line 11)	(0.01632)
38	Demand E-Factor (Line 29)	<u>0.01181</u>
39	E-Factor	(0.00451)
40	Currently effective E-Factor	<u>0.00383</u>
41	Increase (Decrease) in E-Factor	(0.00834)
42	PGC Rate	0.34455
43	E-Factor	<u>(0.00451)</u>
44	Total Rate	0.34004
45	Currently effective Rate	<u>0.32562</u>
46	Increase (Decrease) in Rate	0.01442

1_/ Includes 138,370,893 Therm Transportation Quantities for the Company's Choice Program

COLUMBIA GAS OF PENNSYLVANIA, INC.
53.53 IV. RATE STRUCTURE
B. GAS UTILITIES

11. Supply the net fuel clause adjustment by month for the test year.

Response:

Columbia Gas of Pennsylvania, Inc. does not have a net fuel clause in its tariff.

COLUMBIA GAS OF PENNSYLVANIA, INC.
OPERATIONS AND MAINTENANCE EXPENSE ADJUSTMENTS
TO THE TWELVE MONTHS ENDED NOVEMBER 30, 2019
ADJUSTMENTS TO PURCHASED GAS EXPENSE
53.62

To adjust the Cost of Purchased Gas Expense to the level being recovered through base tariff rates.

Response:

The adjustment to the Cost of Purchased Gas Expense for the twelve months ended November 30, 2020 was (\$23,952,008). Please see Page 2 of this schedule for detail of this adjustment by rate schedule.

Columbia Gas of Pennsylvania, Inc.
Operations and Maintenance Expense Adjustments
To the Twelve Months Ended November 30, 2020
Adjustments to Purchased Gas Expense
53.62

(1) Purchased Gas Costs \$
Per Books for the Twelve Months Ended 132,972,564
November 30, 2020

(2) Purchased Gas Cost
to be Recovered in Base Tariff Rates:

<u>Rate Schedule</u>	<u>Total Rate</u>	<u>Adjusted Volumes</u>	<u>Gas Cost</u>
<u>Gas Supply Expense</u>			
1/ Residential Sales Service - RSS	3.8512	26,437,781	101,817,181
Small General Sales Service - SGSS	3.8512	7,438,556	28,647,368
Negotiated Sales Service - NSS	Varies	76,583	241,746
Large General Sales Service - LGSS	3.8512	950,988	3,662,445
1/ Residential Distribution Service - RDS	1.9196	7,843,493	15,056,370
Small Commercial Distribution - SCD	1.9196	3,070,807	5,894,721
Small General Distribution Service - SGDS	2.2259	720,941	<u>1,604,742</u>
Total Gas Supply Expense			156,924,572
Gas Supply Expense Adjustment			(23,952,008)

1/ Includes CAP volumes

COLUMBIA GAS OF PENNSYLVANIA, INC
SECTION 53.62 RECOVERIES OF FUEL COSTS BY GAS UTILITIES

In addition to information otherwise required to be filed by a jurisdictional natural gas distributor with gross intrastate annual operating revenues in excess of \$40 million seeking a change in its base rates, each gas utility must also file updates to the information required by Section 53.64(b) (relating to filing requirements for natural gas distributors with gross intrastate annual operating revenues in excess of \$40 million). In the case of a gas utility purchasing gas as defined at Section 53.61(a) (relating to purpose) from an affiliated interest, it shall also file updates to the information required at Section 53.65 (relating to special provisions relating to natural gas distributors with gross intrastate annual operating revenues in excess of \$40 million with affiliated interests). These updates shall be made at the time the base rate case under 66 Pa. C.S. Section 1308 (relating to voluntary changes in rates) is originally filed. Deficiencies in filing will be treated as set forth at Section 53.51(c) (relating to general).

Columbia Gas of Pennsylvania, Inc. hereby incorporates by reference 1307(f) Case R-2020-3018993 consisting of 15 exhibits filed on March 1, 2020. On April 1, 2020, the Company filed its testimony and additional exhibits.

Copies of this filing can be provided upon request.

See Exhibit No. 12, Schedule No. 8, Pages 2-94 for the filing updates of purchased gas cost and revenues. The October 1, 2020 Quarterly PGC comprises Pages 2-46 with rates effective for October 1, 2020 through December 31, 2020. The January 1, 2021 Quarterly PGC comprises Pages 47-94 with rates effective for January 1, 2021 through March 31, 2021.

COLUMBIA GAS OF PENNSYLVANIA, INC.
COMPUTATION OF CHANGE IN RATE PURSUANT TO SECTION 1307(f)
APPLICATION PERIOD: OCTOBER, 2020 THROUGH SEPTEMBER, 2021

Line No.	Description	Amount
		(1)
1	<u>Purchased Gas Commodity Cost</u>	\$
2	Commodity Cost of Gas (Exhibit 1-B, Schedule 1)	74,902,323
3	Projected tariff sales for the twelve billing periods of	
4	October, 2020 through September, 2021	<u>336,852,856</u> Therms
5	PGCC (Line 2/Line 4)	0.22236
6	<u>Commodity (Over)/Under Collection</u>	
7	Commodity E-Factor	
8	(Exhibit No. 1-E)	(5,498,440)
9	Projected sales for the twelve billing periods of	
10	October, 2020 through September, 2021	<u>336,852,856</u> Therms
11	Commodity E-Factor (Line 8/ Line 10)	(0.01632)
12	<u>Purchased Gas Demand Cost</u>	
13	Demand cost of gas (Exhibit 1-B, Schedule 1)	60,885,476
14	Less: Purchased Gas Demand recovered under Rate SS	
15	(Exhibit 1-A, Schedule 2, Sheet 2)	477,544
16	Less: Purchased Gas Demand Cost allocated to Rates LTS, STS,	
17	SGS-TS and MLS (Exh 1-A, Sch 2, Page 3)	<u>0</u>
18	Subtotal (Line 13 - Line 15 - Line 17)	60,407,932
19	Projected sales for the twelve billing periods of	
20	October, 2020 through September, 2021	1_/ <u>475,223,749</u> Therms
21	PGDC Rate prior to Capacity Release Credit (Line 18 / Line 20)	0.12711
22	Off System Sales and Capacity Release Credit	<u>(0.00492)</u>
23	PGDC Rate	0.12219
24	<u>Demand (Over)/Under Collection</u>	
25	Demand E- Factor	
26	(Exhibit No. 1-E)	5,610,854
27	Projected sales for the twelve billing periods of	
28	October, 2020 through September, 2021	1_/ <u>475,223,749</u> Therms
29	Demand E-Factor (Line 26 / Line 28)	0.01181
30	<u>Total Purchased Gas Cost</u>	
31	PGCC Rate (Line 5)	0.22236
32	PGDC Rate (Line 23)	<u>0.12219</u>
33	PGC Rate	0.34455
34	Currently effective PGC	<u>0.32179</u>
35	Increase (Decrease) in PGC	0.02276
36	<u>Net (Over) Under Collection</u>	
37	Commodity E-Factor (Line 11)	(0.01632)
38	Demand E-Factor (Line 29)	<u>0.01181</u>
39	E-Factor	(0.00451)
40	Currently effective E-Factor	<u>0.00383</u>
41	Increase (Decrease) in E-Factor	(0.00834)
42	PGC Rate	0.34455
43	E-Factor	<u>(0.00451)</u>
44	Total Rate	0.34004
45	Currently effective Rate	<u>0.32562</u>
46	Increase (Decrease) in Rate	0.01442

1_/_ Includes 138,370,893 Therm Transportation Quantities for the Company's Choice Program

COLUMBIA GAS OF PENNSYLVANIA, INC.
 PURCHASED GAS COST RECOVERED UNDER RATES SS
 AND COMPUTATION OF DAILY PURCHASED GAS DEMAND
 APPLICATION PERIOD: OCTOBER, 2020 THROUGH SEPTEMBER, 2021

<u>Line</u> <u>No.</u>	<u>Description</u>	<u>Detail</u> (1)	<u>Total</u> (2)
1	Total estimated demand charges for the period		
2	October, 2020 through September, 2021	60,885,476	
3	Estimated Demand Quantity (Therms) 1_/	81,134,160	
4	Daily purchased gas demand rate (Line 2 / line 3)	<u>\$0.75043</u> per Therm	
5	Daily purchased gas demand (Therms)	636,360 Therms	
6	Daily purchased gas demand rate per Therm	<u>\$0.75043</u>	
7	Total rate SS Daily Demand Cost to be		
8	Recovered (Line 5 x Line 6)		<u><u>\$477,544</u></u>

1_/ Monthly Demand Billing Determinants x 12

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF PROJECTED SALES QUANTITIES AND REVENUES FOR THE PERIOD
SALES AT PGCC AND PGDC RATES
OCTOBER, 2020 THROUGH SEPTEMBER, 2021

Line No.	Month	Sales Subject To PGCC (1) Therms	PGCC Rate 1_ (2) \$/Therm	PGCC Revenue (3=1x2) \$	Sales Subject To PGDC (4) Therms	PGDC Rate 1_ (5) \$/Therm	PGDC Revenue (6=4x5) \$	Purchased Gas Cost Revenue (7=3+6) \$
1	October - 2020	9,852,674	0.22236	2,190,841	13,581,994	0.12711	1,726,407	3,917,248
2	November	21,552,033	0.22236	4,792,310	30,860,682	0.12711	3,922,701	8,715,011
3	December	47,722,335	0.22236	10,611,538	67,435,749	0.12711	8,571,758	19,183,296
4	January - 2021	64,656,792	0.22236	14,377,084	91,235,278	0.12711	11,596,916	25,974,000
5	February	64,790,167	0.22236	14,406,742	91,180,642	0.12711	11,589,971	25,996,713
6	March	53,327,882	0.22236	11,857,988	75,479,282	0.12711	9,594,172	21,452,160
7	April	33,868,249	0.22236	7,530,944	48,178,423	0.12711	6,123,959	13,654,903
8	May	16,274,680	0.22236	3,618,838	22,957,813	0.12711	2,918,168	6,537,006
9	June	8,352,965	0.22236	1,857,365	11,676,437	0.12711	1,484,192	3,341,557
10	July	5,648,208	0.22236	1,255,936	7,797,009	0.12711	991,078	2,247,014
11	August	5,248,685	0.22236	1,167,098	7,205,087	0.12711	915,839	2,082,937
12	September	<u>5,558,186</u>	0.22236	<u>1,235,918</u>	<u>7,635,353</u>	0.12711	<u>970,530</u>	<u>2,206,448</u>
13	Total	336,852,856		74,902,602	475,223,749		60,405,691	135,308,293

1_
Excludes refunds and experienced over/undercollections

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF PROJECTED SALES QUANTITIES AND REVENUES FOR THE PERIOD
SALES AT STANDBY RATE
OCTOBER, 2020 THROUGH SEPTEMBER, 2021

Line No.	Month	Daily Purchased Gas Demand Quantity (1) Therms	Daily Gas Demand Rate (2) \$/Therm	Daily Purchased Gas Demand Revenue (3=1x2) \$
1	October - 2020	53,030	0.75043	39,795
2	November	53,030	0.75043	39,795
3	December	53,030	0.75043	39,795
4	January - 2021	53,030	0.75043	39,795
5	February	53,030	0.75043	39,795
6	March	53,030	0.75043	39,795
7	April	53,030	0.75043	39,795
8	May	53,030	0.75043	39,795
9	June	53,030	0.75043	39,795
10	July	53,030	0.75043	39,795
11	August	53,030	0.75043	39,795
12	September	<u>53,030</u>	0.75043	<u>39,795</u>
13	Total	636,360		477,544

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF PROJECTED SALES QUANTITIES AND REVENUES FOR THE PERIOD
SALES AT BANKING AND BALANCING RATES
OCTOBER, 2020 THROUGH SEPTEMBER, 2021

Line No.	Month	Lg. Quantity GDS			Sm. Quantity GDS			Total Trans.
		Deliveries (1) Therms	Rate (2) \$/Therm	Revenue (3=1x2) \$	Deliveries (4) Therms	Rate (5) \$/Therm	Revenue (6=4x5) \$	Revenue (7=3+6) \$
1	October - 2020	0	0.00226	0	0	0.00697	0	0
2	November	0	0.00226	0	0	0.00697	0	0
3	December	0	0.00226	0	0	0.00697	0	0
4	January - 2021	0	0.00226	0	0	0.00697	0	0
5	February	0	0.00226	0	0	0.00697	0	0
6	March	0	0.00226	0	0	0.00697	0	0
7	April	0	0.00226	0	0	0.00697	0	0
8	May	0	0.00226	0	0	0.00697	0	0
9	June	0	0.00226	0	0	0.00697	0	0
10	July	0	0.00226	0	0	0.00697	0	0
11	August	0	0.00226	0	0	0.00697	0	0
12	September	<u>0</u>	<u>0.00226</u>	<u>0</u>	<u>0</u>	<u>0.00697</u>	<u>0</u>	<u>0</u>
13	Total	0		0	0		0	0

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF PROJECTED TOTAL OVER/UNDERCOLLECTION
FOR THE 2020 1307(f) PERIOD
OCTOBER, 2020 THROUGH SEPTEMBER, 2021

Line No.	Month	Commodity Recoveries PGCC Revenue	Total Commodity Cost of Gas 1_/ (2)	Commodity Over/ (Under) collection (3=1-2)	Demand Recoveries PGDC Revenue	Total Demand Cost of Gas 1_/ (5)	Demand Over/ (Under) collection (6=4-5)	Total Over/ (Under) collection (7=3+6)
		(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	(7=3+6)
		\$	\$	\$	\$	\$	\$	\$
1	October - 2020	2,190,841	3,918,927	(1,728,086)	1,766,202	5,789,207	(4,023,005)	(5,751,090)
2	November	4,792,310	4,803,174	(10,864)	3,962,496	5,952,207	(1,989,711)	(2,000,574)
3	December	10,611,538	11,420,545	(809,007)	8,611,553	6,001,737	2,609,816	1,800,810
4	January - 2021	14,377,084	15,609,947	(1,232,863)	11,636,711	6,001,737	5,634,974	4,402,112
5	February	14,406,742	12,566,520	1,840,222	11,629,766	6,001,737	5,628,029	7,468,251
6	March	11,857,988	8,010,160	3,847,828	9,633,967	6,001,737	3,632,230	7,480,058
7	April	7,530,944	5,544,477	1,986,467	6,163,754	4,269,519	1,894,235	3,880,702
8	May	3,618,838	3,862,375	(243,537)	2,957,963	4,173,519	(1,215,556)	(1,459,093)
9	June	1,857,365	2,431,483	(574,118)	1,523,987	4,173,519	(2,649,532)	(3,223,649)
10	July	1,255,936	1,982,855	(726,919)	1,030,873	4,173,519	(3,142,646)	(3,869,564)
11	August	1,167,098	2,178,490	(1,011,392)	955,634	4,173,519	(3,217,885)	(4,229,276)
12	September	1,235,918	2,573,372	(1,337,454)	1,010,325	4,173,519	(3,163,194)	(4,500,647)
13	Total	74,902,602	74,902,323	278	60,883,235	60,885,476	(2,241)	(1,962)

1_/ Refer to Exhibit 1-B, Schedule No. 1.

Columbia Gas of Pennsylvania, Inc.
Capacity Assignment Factor
Assignment of FT Only

Purchased Gas Demand Charge (PGDC) Paid By the CHOICE Customer
Rates Based on Projected Costs For 12 Months Ending September, 2021

\$60,885,476		1. Projected Demand Costs Oct. 2020 through Sept. 2021 (Exh. 1-B, Sch. 1)
(477,544)		1a. Less Purchased Gas Demand Costs Recovered Under Rate SS (Exhibit 1-A, Schedule 1, Sheet 2)
0		1b. Less Purchased Gas Demand Allocated to Rates LTS, STS, SGS-TS, and MLS
5,610,854		1c. Experienced Demand Net Under/(Over) Collection (Exhibit No. 1-E)
<u>\$66,018,787</u>		2. Total Adjusted Demand Costs per 1307(f) Filing (1) + (1a) + (1b) + (1c)
\$82.80 per Dth		3. Unit FT Demand Charge Per Dth of TCO/DTI capacity the marketer would pay TCO and DTI. (Exhibit 1-A, Schedule 3, Sheet 2)
47,522 MMDth		4. Projected Sales & Choice Requirements for 12 billing periods of October, 2020 through September, 2021
48,392 MMDth		5. Projected Sales & Choice Requirements 12 months ended September 2021, including Unaccounted For @ 1.8%
21,755 MMDth		6. Annual Injections and Withdrawals, Normal Weather
1 Dth		7a. Quantity Delivered to the Customer
<u>1.8%</u>		7b. Unaccounted-for & Co. Use Factor from Volume Balancing System
1.0183 Dth		7c. Quantity Delivered to the City Gate. (7a)/(1-7b)
\$1.3892 per Dth		8. Unit Demand Charge: (2) / (4)
(\$0.0492) per Dth		9. OSS and Capacity Release Credit
0.0028 Dth		10. Average Daily FT Delivery: (7c) / 365 days
\$0.2318 per Dth		11. Annual Demand Charge for the Assigned FT Capacity payable to the pipeline(s): (3) X (10)
\$1.1574 per Dth		12. Annual Demand Charge for other capacity that CPA retains (8) - (11)
0.4578 Dth		13. Quantity Injected and Withdrawn to Deliver 1 Dth to the Customer: (6) / (4)
\$0.0070		14a. Injection Charge @ \$0.0153/Dth
\$0.0058		14b. FSS Shrinkage @ 0.49% for gas at \$2.5984/Dth
\$0.0070		14c. Withdrawal Charge @ \$0.0153/Dth
\$0.0087		14d. SST Commodity Charge @ \$0.0191/Dth
<u>\$0.0201</u>		14e. SST retention @ 1.686% for gas at \$2.5984/Dth
<u>\$0.0486</u> per Dth		14f. Total Annual Variable Storage Costs
\$0.2318 per Dth		15. Credit to Purchased Gas Demand Charge for the CHOICE Customer:
(\$0.0486) per Dth		15a. For Demand Cost Paid to Pipelines: = (11)
<u>\$0.1832</u> per Dth		15b. Less Storage Costs: = (14f)
<u>\$0.01832</u> per Therm		15c. Net Credit: (15a) + (15b)
<u>\$1.1568</u> per Dth		15d. Per Therm: (15c)/10 - Capacity Assignment Factor
<u>\$0.11568</u> per Therm		16. Purchased Gas Demand Charge Paid By the CHOICE Customer: (8)+(9) - (15c)
<u>\$0.11568</u> per Therm		17. Per Therm: (16)/10

Columbia Gas of Pennsylvania, Inc. (CPA)
 CPA Capacity Assignment (PCA): Assignment of FT Capacity Only
 CPA Capacity on TCO and DTI. Cost of the Capacity Allocated to Marketers.

	<u>TCO</u> FT <u>Capacity</u>	<u>DTI</u> FT <u>Capacity</u>	<u>Total:</u> TCO and DTI
1. <u>CPA FT Capacity on TCO and DTI</u>			
2. CPA Contract: Dth/d	90,336	5,000	1/
3. <u>Projected Demand Costs</u>			
4. Annual Demand Cost 2/	\$7,643,508	\$250,062	
4a. Monthly Billing Determinants	90,336	5,000	
4b. Annual Demand Charge (4/ 4a)	\$84.61	\$50.01	
4c. Monthly Demand Charge (4b / number of months)	\$7.051	\$4.168	
<u>Allocation Capacity and Costs.</u>			
5. Retained Volume:	1.0000	1.0000	
6. Number of Months	12	12	
7. Capacity Allocation	0.9476 3/	0.0524 4/	
8. Unit Annual Cost of City Gate Capacity: (4c) x (5) x (6) x (7) \$/Dth	\$80.18	\$2.62	<u><u>\$82.80</u></u>

Notes:

- 1/ Non-storage DTI FT capacity
 2/ Projected demand costs for the period 12 months ended September, 2021.
 3/ $90,336 / (90,336 + 5,000) = 0.9476$
 4/ $5,000 / (90,336 + 5,000) = 0.0524$

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Costs
For the Period October 2020 Through September 2021

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
1	Total Quantity													
2	DTH	2,129,000	2,568,000	5,374,000	7,622,000	5,634,000	4,160,000	2,137,000	1,480,000	907,000	731,000	813,000	973,000	34,528,000
3	Total Demand Costs	5,789,207	5,952,207	6,001,737	6,001,737	6,001,737	6,001,737	4,269,519	4,173,519	4,173,519	4,173,519	4,173,519	4,173,519	60,885,476
4	Total Commodity Costs	<u>3,918,927</u>	<u>4,803,174</u>	<u>11,420,545</u>	<u>15,609,947</u>	<u>12,566,520</u>	<u>8,010,160</u>	<u>5,544,477</u>	<u>3,862,375</u>	<u>2,431,483</u>	<u>1,982,855</u>	<u>2,178,490</u>	<u>2,573,372</u>	<u>74,902,323</u>
5	Total Estimated Gas Costs (Line 5 = Line 3 + Line 4)	<u>9,708,134</u>	<u>10,755,381</u>	<u>17,422,282</u>	<u>21,611,684</u>	<u>18,568,257</u>	<u>14,011,897</u>	<u>9,813,996</u>	<u>8,035,894</u>	<u>6,605,002</u>	<u>6,156,374</u>	<u>6,352,009</u>	<u>6,746,891</u>	<u>135,787,799</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Costs
Demand Costs

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	Columbia Gas Transmission	5,048,049	5,048,049	5,048,049	5,048,049	5,048,049	5,048,049	3,526,599	3,526,599	3,526,599	3,526,599	3,526,599	3,526,599	51,447,888
2	Texas Eastern Transmission	240,593	240,593	290,123	290,123	290,123	290,123	240,593	240,593	240,593	240,593	240,593	240,593	3,085,236
3	Dominion Transmission	172,269	201,443	201,443	201,443	201,443	201,443	172,711	172,711	172,711	172,711	172,711	172,711	2,215,750
4	Tennessee Gas	112,200	112,200	112,200	112,200	112,200	112,200	112,200	112,200	112,200	112,200	112,200	112,200	1,346,400
5	National Fuel Gas	19,376	19,376	19,376	19,376	19,376	19,376	19,376	19,376	19,376	19,376	19,376	19,376	232,512
6	Equitrans	221,720	355,546	355,546	355,546	355,546	355,546	223,040	127,040	127,040	127,040	127,040	127,040	2,857,690
7	Less Elective Balancing Svc. Credit	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	300,000
8	Total Demand Cost	<u>5,789,207</u>	<u>5,952,207</u>	<u>6,001,737</u>	<u>6,001,737</u>	<u>6,001,737</u>	<u>6,001,737</u>	<u>4,269,519</u>	<u>4,173,519</u>	<u>4,173,519</u>	<u>4,173,519</u>	<u>4,173,519</u>	<u>4,173,519</u>	<u>60,885,476</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Costs
Commodity Costs

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	Term	1,043,670	1,407,958	3,151,260	2,982,039	2,863,048	1,647,142	1,778,399	2,037,924	2,121,369	2,242,077	2,255,339	2,091,771	25,621,996
2	Spot	3,373,141	0	2,833,973	3,898,984	5,080,864	1,238,748	11,058,442	10,418,508	8,613,868	8,096,759	7,069,525	6,335,048	68,017,860
3	Local	37,378	51,429	63,140	65,890	59,160	62,546	51,786	53,416	51,597	54,868	55,132	52,374	658,716
4	Storage	(535,262)	3,343,787	5,372,172	8,663,034	4,563,448	5,061,724	(7,344,150)	(8,647,473)	(8,355,352)	(8,410,849)	(7,201,506)	(5,905,821)	(19,396,249)
5	Total Commodity Cost	<u>3,918,927</u>	<u>4,803,174</u>	<u>11,420,545</u>	<u>15,609,947</u>	<u>12,566,520</u>	<u>8,010,160</u>	<u>5,544,477</u>	<u>3,862,375</u>	<u>2,431,483</u>	<u>1,982,855</u>	<u>2,178,490</u>	<u>2,573,372</u>	<u>74,902,323</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Costs
Commodity Quantities

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
1	<u>Term</u> Total-DTH	709,000	579,000	1,017,000	888,000	882,000	557,000	693,000	811,000	839,000	877,000	879,000	816,000	9,547,000
2	<u>Spot</u> Total-DTH	1,987,000	0	926,000	1,233,000	1,657,000	387,000	4,347,000	4,162,000	3,403,000	3,160,000	2,749,000	2,475,000	26,486,000
3	<u>Local</u> Total-DTH	22,000	21,000	22,000	22,000	20,000	22,000	21,000	22,000	21,000	22,000	22,000	21,000	258,000
4	<u>Storage</u> Total-DTH	(589,000)	1,968,000	3,409,000	5,479,000	3,075,000	3,194,000	(2,924,000)	(3,515,000)	(3,356,000)	(3,328,000)	(2,837,000)	(2,339,000)	(1,763,000)
5	<u>Total - All Sources</u> Total-DTH	<u>2,129,000</u>	<u>2,568,000</u>	<u>5,374,000</u>	<u>7,622,000</u>	<u>5,634,000</u>	<u>4,160,000</u>	<u>2,137,000</u>	<u>1,480,000</u>	<u>907,000</u>	<u>731,000</u>	<u>813,000</u>	<u>973,000</u>	<u>34,528,000</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Demand Costs
Columbia Gas Transmission Corporation

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
<u>Columbia Gas Transmission</u>														
<u>FTS</u>														
1	Billing Determinant-Dth	95,551	95,551	95,551	95,551	95,551	95,551	95,551	95,551	95,551	95,551	95,551	95,551	95,551
2	Less Capacity Release (1)	5,215	5,215	5,215	5,215	5,215	5,215	5,215	5,215	5,215	5,215	5,215	5,215	5,215
3	Net Billing Determinant - Dth	90,336	90,336	90,336	90,336	90,336	90,336	90,336	90,336	90,336	90,336	90,336	90,336	90,336
4	Demand Rate	7.0510	7.0510	7.0510	7.0510	7.0510	7.0510	7.0510	7.0510	7.0510	7.0510	7.0510	7.0510	7.0510
5	Demand Cost	636,959	636,959	636,959	636,959	636,959	636,959	636,959	636,959	636,959	636,959	636,959	636,959	7,643,508
<u>FSS-Reservation</u>														
6	Billing Determinant-Dth	441,576	441,576	441,576	441,576	441,576	441,576	441,576	441,576	441,576	441,576	441,576	441,576	441,576
7	Demand Rate	1.5010	1.5010	1.5010	1.5010	1.5010	1.5010	1.5010	1.5010	1.5010	1.5010	1.5010	1.5010	1.5010
8	Demand Cost	662,806	662,806	662,806	662,806	662,806	662,806	662,806	662,806	662,806	662,806	662,806	662,806	7,953,672
<u>FSS-Capacity</u>														
9	Total-DTH	24,492,495	24,492,495	24,492,495	24,492,495	24,492,495	24,492,495	24,492,495	24,492,495	24,492,495	24,492,495	24,492,495	24,492,495	24,492,495
10	Demand Rate	0.0288	0.0288	0.0288	0.0288	0.0288	0.0288	0.0288	0.0288	0.0288	0.0288	0.0288	0.0288	0.0288
11	Demand Cost	705,384	705,384	705,384	705,384	705,384	705,384	705,384	705,384	705,384	705,384	705,384	705,384	8,464,608
<u>SST</u>														
12	Billing Determinant-Dth	441,576	441,576	441,576	441,576	441,576	441,576	220,788	220,788	220,788	220,788	220,788	220,788	220,788
13	Demand Rate	6.8910	6.8910	6.8910	6.8910	6.8910	6.8910	6.8910	6.8910	6.8910	6.8910	6.8910	6.8910	6.8910
14	Demand Cost	3,042,900	3,042,900	3,042,900	3,042,900	3,042,900	3,042,900	1,521,450	1,521,450	1,521,450	1,521,450	1,521,450	1,521,450	27,386,100
15	Total TCO Demand Cost	5,048,049	5,048,049	5,048,049	5,048,049	5,048,049	5,048,049	3,526,599	3,526,599	3,526,599	3,526,599	3,526,599	3,526,599	51,447,888

(1) Columbia has included in the application period a projection for the release of 5,215 Dth of capacity to be released at the applicable maximum rate to a large industrial customer on Columbia's system and not subject to recall.

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Demand Costs
Texas Eastern Transmission Corporation

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
<u>FT1-TCO Delmont</u>														
1	Billing Determinant-Dth	3,082	3,082	3,082	3,082	3,082	3,082	3,082	3,082	3,082	3,082	3,082	3,082	
2	Demand Rate	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	
3	Demand Cost	24,456	24,456	24,456	24,456	24,456	24,456	24,456	24,456	24,456	24,456	24,456	24,456	293,472
<u>FT1-Uniontown</u>														
4	Billing Determinant-Dth	11,753	11,753	11,753	11,753	11,753	11,753	11,753	11,753	11,753	11,753	11,753	11,753	
5	Demand Rate	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	
6	Demand Cost	93,260	93,260	93,260	93,260	93,260	93,260	93,260	93,260	93,260	93,260	93,260	93,260	1,119,120
<u>CDS - Eagle/Rockwood</u>														
7	Billing Determinant-Dth	2,342	2,342	2,342	2,342	2,342	2,342	2,342	2,342	2,342	2,342	2,342	2,342	
8	Demand Rate	18.0333	18.0333	18.0333	18.0333	18.0333	18.0333	18.0333	18.0333	18.0333	18.0333	18.0333	18.0333	
9	Demand Cost	42,234	42,234	42,234	42,234	42,234	42,234	42,234	42,234	42,234	42,234	42,234	42,234	506,808
<u>CDS - Rockwood</u>														
10	Billing Determinant-Dth	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	
11	Demand Rate	15.5269	15.5269	15.5269	15.5269	15.5269	15.5269	15.5269	15.5269	15.5269	15.5269	15.5269	15.5269	
12	Demand Cost	77,635	77,635	77,635	77,635	77,635	77,635	77,635	77,635	77,635	77,635	77,635	77,635	931,620
<u>CDS - Chambersburg</u>														
13	Billing Determinant-Dth	158	158	158	158	158	158	158	158	158	158	158	158	
14	Demand Rate	18.0426	18.0426	18.0426	18.0426	18.0426	18.0426	18.0426	18.0426	18.0426	18.0426	18.0426	18.0426	
15	Demand Cost	2,851	2,851	2,851	2,851	2,851	2,851	2,851	2,851	2,851	2,851	2,851	2,851	34,212
<u>FT1-TCO @ Eagle Zone 3 Zone 3</u>														
16	Billing Determinant-Dth	0	0	10,000	10,000	10,000	10,000	0	0	0	0	0	0	
17	Demand Rate	0.0000	0.0000	4.9530	4.9530	4.9530	4.9530	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
18	Demand Cost	0	0	49,530	49,530	49,530	49,530	0	0	0	0	0	0	198,120
<u>FT1-MX</u>														
19	Billing Determinant-Dth	100	100	100	100	100	100	100	100	100	100	100	100	
20	Demand Rate	1.5710	1.5710	1.5710	1.5710	1.5710	1.5710	1.5710	1.5710	1.5710	1.5710	1.5710	1.5710	
21	Demand Cost	157	157	157	157	157	157	157	157	157	157	157	157	1,884
22	Total TETCO Demand Cost	240,593	240,593	290,123	290,123	290,123	290,123	240,593	240,593	240,593	240,593	240,593	240,593	3,085,236

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Demand Costs
Dominion Transmission

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
	<u>Dominion Transmission</u>													
	<u>GSS - Reservation</u>													
1	Billing Determinant-Dth	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	
2	Demand Rate	<u>1.8698</u>												
3	Demand Cost	44,875	44,875	44,875	44,875	44,875	44,875	44,875	44,875	44,875	44,875	44,875	44,875	538,500
	<u>GSS - Capacity</u>													
4	Billing Determinant-Dth	1,871,176	1,871,176	1,871,176	1,871,176	1,871,176	1,871,176	1,871,176	1,871,176	1,871,176	1,871,176	1,871,176	1,871,176	
5	Demand Rate	<u>0.0145</u>												
6	Demand Cost	27,132	27,132	27,132	27,132	27,132	27,132	27,132	27,132	27,132	27,132	27,132	27,132	325,584
	<u>FTNN</u>													
7	Billing Determinant-Dth	0	6,000	6,000	6,000	6,000	6,000	0	0	0	0	0	0	
8	Total-DTH	<u>0.0000</u>	<u>4.1677</u>	<u>4.1677</u>	<u>4.1677</u>	<u>4.1677</u>	<u>4.1677</u>	<u>0.0000</u>	<u>0.0000</u>	<u>0.0000</u>	<u>0.0000</u>	<u>0.0000</u>	<u>0.0000</u>	
9	Demand Cost	0	25,006	25,006	25,006	25,006	25,006	0	0	0	0	0	0	125,030
	<u>FT</u>													
10	Billing Determinant-Dth	24,057	25,057	25,057	25,057	25,057	25,057	24,163	24,163	24,163	24,163	24,163	24,163	
11	Total-DTH	<u>4.1677</u>												
12	Demand Cost	100,262	104,430	104,430	104,430	104,430	104,430	100,704	100,704	100,704	100,704	100,704	100,704	1,226,636
13	Total DTI Demand Cost	<u>172,269</u>	<u>201,443</u>	<u>201,443</u>	<u>201,443</u>	<u>201,443</u>	<u>201,443</u>	<u>172,711</u>	<u>172,711</u>	<u>172,711</u>	<u>172,711</u>	<u>172,711</u>	<u>172,711</u>	<u>2,215,750</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Demand Costs
Tennessee Gas Pipeline Company

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
<u>Tennessee Gas FT-A (Direct) New Castle - 219 Line</u>														
1	Billing Determinant-Dth	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	
2	Demand Rate	4.7650	4.7650	4.7650	4.7650	4.7650	4.7650	4.7650	4.7650	4.7650	4.7650	4.7650	4.7650	
3	Demand Cost	76,240	76,240	76,240	76,240	76,240	76,240	76,240	76,240	76,240	76,240	76,240	76,240	914,880
<u>Tennessee Gas FT-A (Direct) Pitt Terminal - 219 Line</u>														
4	Billing Determinant-Dth	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	
5	Demand Rate	4.7316	4.7316	4.7316	4.7316	4.7316	4.7316	4.7316	4.7316	4.7316	4.7316	4.7316	4.7316	
6	Demand Cost	35,960	35,960	35,960	35,960	35,960	35,960	35,960	35,960	35,960	35,960	35,960	35,960	431,520
7	Total Tennessee Gas Demand Cost	<u>112,200</u>	<u>1,346,400</u>											

COLUMBIA GAS OF PENNSYLVANIA, INC.
Summary of Total Estimated Purchased Gas Demand Costs
National Fuel Gas Supply

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
	<u>National</u>													
1	Billing Determinant-Dth	4,304	4,304	4,304	4,304	4,304	4,304	4,304	4,304	4,304	4,304	4,304	4,304	
2	Demand Rate	<u>4.5019</u>												
3	Demand Cost	<u>19,376</u>	232,512											
4	Total National Fuel Demand Cost	<u><u>19,376</u></u>	<u><u>232,512</u></u>											

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Demand Costs
Equitrans

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
	<u>Equitrans</u>													
	<u>FTS</u>													
1	Billing Determinant-Dth	27,715	27,932	27,932	27,932	27,932	27,932	27,880	15,880	15,880	15,880	15,880	15,880	
2	Demand Rate	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	
3	Demand Cost	221,720	223,456	223,456	223,456	223,456	223,456	223,040	127,040	127,040	127,040	127,040	127,040	2,197,240
	<u>FTS</u>													
4	Billing Determinant-Dth	0	18,870	18,870	18,870	18,870	18,870	0	0	0	0	0	0	
5	Demand Rate	0.0000	7.0000	7.0000	7.0000	7.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
6	Demand Cost	0	132,090	132,090	132,090	132,090	132,090	0	0	0	0	0	0	660,450
7	Total Equitrans Demand Cost	221,720	355,546	355,546	355,546	355,546	355,546	223,040	127,040	127,040	127,040	127,040	127,040	2,857,690

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Commodity Costs
Term Contracts

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
<u>TERM</u>														
<u>COLUMBIA TRANSMISSION</u>														
4	Quantity - DTH	0	0	311,000	311,000	281,000	0	0	0	0	0	0	0	903,000
5	Rate-\$/DTH	0.0000	0.0000	2.9385	3.0657	3.0280	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
6	Cost-\$	0	0	913,874	953,433	850,868	0	0	0	0	0	0	0	2,718,175
<u>TEXAS EASTERN</u>														
7	Quantity - DTH	667,000	667,000	692,000	653,000	626,000	691,000	666,000	686,000	661,000	683,000	683,000	663,000	8,038,000
8	Rate-\$/DTH	1.4138	2.4271	2.8764	3.0057	2.9674	2.8485	2.5731	2.5340	2.5639	2.6019	2.6143	2.6019	
9	Cost-\$	943,005	1,618,876	1,990,469	1,962,722	1,857,592	1,968,314	1,713,685	1,738,324	1,694,738	1,777,098	1,785,567	1,725,060	20,775,450
<u>TENNESSEE GAS PIPELINE</u>														
10	Quantity - DTH	0	0	228,000	228,000	206,000	0	0	0	0	0	0	0	662,000
11	Rate-\$/DTH	0.0000	0.0000	3.3326	3.4847	3.4381	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
12	Cost-\$	0	0	759,833	794,512	708,249	0	0	0	0	0	0	0	2,262,594
<u>CAP</u>														
13	Quantity - DTH	233,000	225,000	233,000	238,000	215,000	238,000	231,000	238,000	231,000	238,000	238,000	231,000	2,789,000
14	Rate-\$/DTH	2.3968	2.3968	2.3968	2.3968	2.3968	2.3968	2.3968	2.3968	2.3968	2.3968	2.3968	2.3968	
15	Cost-\$	558,454	539,280	558,454	570,438	515,312	570,438	553,661	570,438	553,661	570,438	570,438	553,661	6,684,673
<u>LESS CAP BILLING</u>														
16	Quantity - DTH	(191,000)	(313,000)	(447,000)	(542,000)	(446,000)	(372,000)	(204,000)	(113,000)	(53,000)	(44,000)	(42,000)	(78,000)	(2,845,000)
17	Rate-\$/DTH	2.3968	2.3968	2.3968	2.3968	2.3968	2.3968	2.3968	2.3968	2.3968	2.3968	2.3968	2.3968	
18	Cost-\$	(457,789)	(750,198)	(1,071,370)	(1,299,066)	(1,068,973)	(891,610)	(488,947)	(270,838)	(127,030)	(105,459)	(100,666)	(186,950)	(6,818,896)
19	Total - DTH	709,000	579,000	1,017,000	888,000	882,000	557,000	693,000	811,000	839,000	877,000	879,000	816,000	9,547,000
20	Total Term Commodity													
21	Cost-\$	1,043,670	1,407,958	3,151,260	2,982,039	2,863,048	1,647,142	1,778,399	2,037,924	2,121,369	2,242,077	2,255,339	2,091,771	25,621,996

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Commodity Costs
Spot and Local Purchases

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
	<u>SPOT</u>													
	<u>Base</u>													
1	Quantity - DTH	1,677,000	0	907,000	911,000	820,000	387,000	3,658,000	3,852,000	3,103,000	2,908,000	2,439,000	2,175,000	22,837,000
2	Rate-\$/DTH	1.6884	0.0000	3.0630	3.1963	3.1054	3.2009	2.5470	2.5044	2.5325	2.5628	2.5721	2.5601	
3	Cost-\$	2,831,447	0	2,778,141	2,911,829	2,546,428	1,238,748	9,316,926	9,646,949	7,858,348	7,452,622	6,273,352	5,568,218	58,423,008
	<u>Swing</u>													
4	Quantity - DTH	310,000	0	19,000	322,000	837,000	0	689,000	310,000	300,000	252,000	310,000	300,000	3,649,000
5	Rate-\$/DTH	1.7474	0.0000	2.9385	3.0657	3.0280	0.0000	2.5276	2.4889	2.5184	2.5561	2.5683	2.5561	
6	Cost-\$	541,694	0	55,832	987,155	2,534,436	0	1,741,516	771,559	755,520	644,137	796,173	766,830	9,594,852
7	Total - DTH	1,987,000	0	926,000	1,233,000	1,657,000	387,000	4,347,000	4,162,000	3,403,000	3,160,000	2,749,000	2,475,000	26,486,000
8	Total Spot													
9	Commodity Cost - \$	3,373,141	0	2,833,973	3,898,984	5,080,864	1,238,748	11,058,442	10,418,508	8,613,868	8,096,759	7,069,525	6,335,048	68,017,860
	<u>Local Direct</u>													
10	Quantity - DTH	22,000	21,000	22,000	22,000	20,000	22,000	21,000	22,000	21,000	22,000	22,000	21,000	258,000
11	Rate-\$/DTH	1.6990	2.4490	2.8700	2.9950	2.9580	2.8430	2.4660	2.4280	2.4570	2.4940	2.5060	2.4940	
12	Cost-\$	37,378	51,429	63,140	65,890	59,160	62,546	51,786	53,416	51,597	54,868	55,132	52,374	658,716
13	Total - DTH	22,000	21,000	22,000	22,000	20,000	22,000	21,000	22,000	21,000	22,000	22,000	21,000	258,000
14	Total Local													
15	Commodity Cost - \$	37,378	51,429	63,140	65,890	59,160	62,546	51,786	53,416	51,597	54,868	55,132	52,374	658,716

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Commodity Costs

Storage

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
<u>DOMINION TRANSMISSION - GSS</u>														
1	Injections - DTH	(230,000)	0	0	0	0	0	(151,000)	(341,000)	(349,000)	(341,000)	(328,000)	(288,000)	(2,028,000)
2	Injection Rate - \$/Dth	1.6399	2.4220	3.0704	3.2317	3.1211	3.0425	2.5470	2.5062	2.5333	2.5640	2.5736	2.5634	
3	Withdrawals - DTH	0	138,000	472,000	538,000	472,000	407,000	0	0	0	0	0	0	2,027,000
4	Withdrawal Rate - \$/Dth	1.7131	1.7131	1.7131	1.7131	1.7131	1.7131	2.0023	2.1637	2.2536	2.3148	2.3531	2.3763	
5	Cost-\$	(377,177)	236,408	808,583	921,648	808,583	697,232	(384,597)	(854,614)	(884,122)	(874,324)	(844,141)	(738,259)	(1,484,780)
6	Injection Rate \$/Dth	0.0268	0.0268	0.0268	0.0268	0.0268	0.0268	0.0268	0.0268	0.0268	0.0268	0.0268	0.0268	
7	Withdrawal Rate \$/Dth	0.0140	0.0140	0.0140	0.0140	0.0140	0.0140	0.0140	0.0140	0.0140	0.0140	0.0140	0.0140	
8	Cost - \$	6,164	1,932	6,608	7,532	6,608	5,698	4,047	9,139	9,353	9,139	8,790	7,718	82,728
<u>EQUITRANS - SS</u>														
9	Injections - DTH	310,000	0	0	0	0	0	0	310,000	300,000	252,000	310,000	300,000	1,782,000
10	Injection Rate - \$/Dth	1.6399	2.4220	3.0704	3.2317	3.1211	3.0425	2.5470	2.5062	2.5333	2.5640	2.5736	2.5634	
11	Withdrawals - DTH	0	(574,000)	(324,000)	(2,000)	(400,000)	(482,000)	0	0	0	0	0	0	(1,782,000)
12	Withdrawal Rate - \$/Dth	1.7131	1.7131	1.7131	1.7131	1.7131	1.7131	2.0023	2.1637	2.2536	2.3148	2.3531	2.3763	
13	Cost-\$	508,369	(983,319)	(555,044)	(3,426)	(685,240)	(825,714)	0	776,922	759,990	646,128	797,816	769,020	1,205,502
14	Inject/With. Rate \$/DTH	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
15	Cost - \$	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>TCO - FSS</u>														
16	Injections - DTH	(1,102,000)	0	0	0	0	0	(2,812,000)	(3,992,000)	(3,992,000)	(3,992,000)	(3,571,000)	(3,025,000)	(22,486,000)
17	Injection Rate - \$/Dth	1.6399	2.4220	3.0704	3.2317	3.1211	3.0425	2.5470	2.5062	2.5333	2.5640	2.5736	2.5634	
18	Withdrawals - DTH	0	2,552,000	4,029,000	6,118,000	4,065,000	3,960,000	0	0	0	0	0	0	20,724,000
19	Withdrawal Rate - \$/Dth	1.7131	1.7131	1.7131	1.7131	1.7131	1.7131	2.0023	2.1637	2.2536	2.3148	2.3531	2.3763	
20	Cost-\$	(1,807,170)	4,371,831	6,902,080	10,480,746	6,963,752	6,783,876	(7,162,164)	(10,004,750)	(10,112,934)	(10,235,488)	(9,190,326)	(7,754,285)	(20,764,832)
21	Inject/With. Rate \$/DTH	0.0153	0.0153	0.0153	0.0153	0.0153	0.0153	0.0153	0.0153	0.0153	0.0153	0.0153	0.0153	
22	Cost - \$	16,861	39,046	61,644	93,605	62,195	60,588	43,024	61,078	61,078	61,078	54,636	46,283	661,116
23	Quantity - DTH	(1,022,000)	2,116,000	4,177,000	6,654,000	4,137,000	3,885,000	(2,963,000)	(4,023,000)	(4,041,000)	(4,081,000)	(3,589,000)	(3,013,000)	(1,763,000)
24	Total Purchase Cost	(1,675,978)	3,624,920	7,155,619	11,398,968	7,087,095	6,655,394	(7,546,761)	(10,082,442)	(10,237,066)	(10,463,684)	(9,236,651)	(7,723,524)	(21,044,110)
25	Total Inject/With. Cost	23,025	40,978	68,252	101,137	68,803	66,286	47,071	70,217	70,431	70,217	63,426	54,001	743,844

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Commodity Costs
Storage Transportation Charges

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
<u>TCO - SST</u>														
1	Injections - DTH	(1,102,000)	0	0	0	0	0	(2,812,000)	(3,992,000)	(3,992,000)	(3,992,000)	(3,571,000)	(3,025,000)	(22,486,000)
2	Withdrawals - DTH	0	2,552,000	4,029,000	6,118,000	4,065,000	3,960,000	0	0	0	0	0	0	20,724,000
3	Trans. Chrg. \$/Dth	0.0193	0.0191	0.0191	0.0191	0.0191	0.0191	0.0193	0.0193	0.0193	0.0193	0.0193	0.0193	
4	Cost-\$	21,269	48,743	76,954	116,854	77,642	75,636	54,272	77,046	77,046	77,046	68,920	58,383	829,811
<u>DOMINION TRANSMISSION - GSS</u>														
5	Injections - DTH	(230,000)	0	0	0	0	0	(151,000)	(341,000)	(349,000)	(341,000)	(328,000)	(288,000)	(2,028,000)
6	Withdrawals - DTH	0	138,000	472,000	538,000	472,000	407,000	0	0	0	0	0	0	2,027,000
7	Rate-\$/DTH	0.0193	0.0173	0.0173	0.0173	0.0173	0.0173	0.0193	0.0193	0.0193	0.0193	0.0193	0.0193	
8	Cost-\$	4,439	2,387	8,166	9,307	8,166	7,041	2,914	6,581	6,736	6,581	6,330	5,558	74,206
<u>EQUITRANS - SS</u>														
9	Injections - DTH	310,000	0	0	0	0	0	0	310,000	300,000	252,000	310,000	300,000	1,782,000
10	Withdrawals - DTH	0	(574,000)	(324,000)	(2,000)	(400,000)	(482,000)	0	0	0	0	0	0	(1,782,000)
11	Rate-\$/DTH	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
12	Cost-\$	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Total Storage - DTH	(1,022,000)	2,116,000	4,177,000	6,654,000	4,137,000	3,885,000	(2,963,000)	(4,023,000)	(4,041,000)	(4,081,000)	(3,589,000)	(3,013,000)	(1,763,000)
14	Total EUB - DTH	433,000	(148,000)	(768,000)	(1,175,000)	(1,062,000)	(691,000)	39,000	508,000	685,000	753,000	752,000	674,000	0
15	Total DTH	(589,000)	1,968,000	3,409,000	5,479,000	3,075,000	3,194,000	(2,924,000)	(3,515,000)	(3,356,000)	(3,328,000)	(2,837,000)	(2,339,000)	(1,763,000)
16	Total Purchase Cost	(1,675,978)	3,624,920	7,155,619	11,398,968	7,087,095	6,655,394	(7,546,761)	(10,082,442)	(10,237,066)	(10,463,684)	(9,236,651)	(7,723,524)	(21,044,110)
17	Total Choice Bank Cost	1,091,983	(373,241)	(1,936,819)	(2,963,233)	(2,678,258)	(1,742,633)	98,354	1,281,125	1,727,502	1,898,991	1,896,469	1,699,761	0
18	Total Inject/With. Cost	23,025	40,978	68,252	101,137	68,803	66,286	47,071	70,217	70,431	70,217	63,426	54,001	743,844
19	Total Transp. Charge	25,708	51,130	85,120	126,161	85,808	82,677	57,186	83,627	83,782	83,627	75,250	63,941	904,017
20	Total Storage Cost	(535,262)	3,343,787	5,372,172	8,663,034	4,563,448	5,061,724	(7,344,150)	(8,647,473)	(8,355,352)	(8,410,849)	(7,201,506)	(5,905,821)	(19,396,249)

COLUMBIA GAS OF PENNSYLVANIA, INC.
STATEMENT OF EXPERIENCED NET OVER (UNDER) COLLECTION
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

<u>Line No.</u>	<u>Description</u>	<u>Total Demand</u> \$	<u>Total Commodity</u> \$	<u>Total Amount</u> \$
1	Remaining Balance - Over (Under) Collection from 2019 - 1307(f)			
2	(See Schedule 2a and 2b)	(292,664)	(167,519)	(460,183)
3	Unified Credit for Off-system Sales and Capacity Release for the period			
4	October, 2019 through September, 2020 (See Schedule 3 herein)	(2,431,235)	0	(2,431,235)
5	Over (Under) Collection for the period October, 2019 through			
6	September 2020 (See Schedule 4 herein)	(2,950,848)	5,481,065	2,530,217
7	Interest on Over (Under) Collection for the period October, 2019. through			
8	September, 2020 (See Schedule 4 herein)	11,942	184,894	196,836
9	Penalty Credits/Supplier Refunds Received October, 2019 through			
10	September, 2020 (See Schedule 5 herein)	<u>51,951</u>	<u>0</u>	<u>51,951</u>
11	TOTAL EXPERIENCED NET OVER (UNDER) COLLECTION	<u>(5,610,854)</u>	<u>5,498,440</u>	<u>(112,415)</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.
RECONCILIATION OF COMMODITY COST OF GAS
FROM 2019 - 1307(f)
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

COMMODITY

Line No.	Month	Sales Subject to Commodity E-Factor Therm	Rate \$/ Therm	Amount Recovered \$	Net Commodity Over (Under) Collection \$
1	True-up of Net Commodity Costs Included in 2019 1307(f):				2,588,951
2	Beginning Balance Adjustment				(165,607) 2_
3	October, 2019	4,487,543	(0.00811)	(36,394)	
4		4,182,949	(0.00388)	(16,230)	
5	November	27,501,225	(0.00811)	(223,035)	
6		106,216	(0.00388)	(412)	
7	December	58,677,899	(0.00811)	(475,878)	
8	January, 2020 1_	30,926,965	(0.00680)	(210,303)	
9		33,409,779	(0.00811)	(270,953)	
10	February	60,506,846	(0.00680)	(411,447)	
11		(144,188)	(0.00811)	1,169	
12	March	51,563,020	(0.00680)	(350,629)	
13	April	31,585,947	(0.00680)	(214,784)	
14	May	26,848,214	(0.00680)	(182,568)	
15	June	11,232,132	(0.00680)	(76,378)	
16	July	6,405,915	(0.00680)	(43,560)	
17	August	5,682,943	(0.00680)	(38,644)	
18	September	6,002,526	(0.00680)	(40,817)	
19	Amount Collected/(Passed Back) during 2019 1307(f) Period				<u>(2,590,863)</u>
20	Remaining Balance to be Collected in the 2020 1307(f)				<u><u>(167,519)</u></u>

1_ / Rate in effect January 1, 2020.

2_ / Represents a commodity interest adjustment for the period of February 2019 to September 2019 decreasing the interest rate from 5.50% to the prime rate as of January 31, 2020 of 4.75%. Please refer to Exh. 1-E, Schedule 2a, Sheet 2 for a detailed calculation for this adjustment.

COLUMBIA GAS OF PENNSYLVANIA, INC.
STATEMENT OF COMMODITY OVER/(UNDER) COLLECTIONS FROM GAS COST RATE
FEBRUARY, 2019 THROUGH SEPTEMBER, 2020

Line No.	Month	Total Commodity Purchase Gas Cost Recovery (1)	Total Cost of Fuel (2)	Total Over (Under) Collection (3 = 1 - 2)	Number of Months (4)	Rate (5)	Over (Under) Collection Interest (6=3x4x5)	Rate (7)	Over (Under) Collection Interest (8=3x4x7)	Interest Difference (9=8-6)
1	February, 2019	24,387,395	17,023,909	7,363,487	14 / 12	5.50%	472,490	4.75%	408,060	(64,430)
2	March	20,596,583	15,643,460	4,953,123	13 / 12	5.50%	295,124	4.75%	254,879	(40,245)
3	April	11,628,859	5,716,080	5,912,779	12 / 12	5.50%	325,203	4.75%	280,857	(44,346)
4	May	4,416,541	2,692,046	1,724,495	11 / 12	5.50%	86,943	4.75%	75,087	(11,856)
5	June	2,557,349	2,053,585	503,764	10 / 12	5.50%	23,089	4.75%	19,941	(3,148)
6	July	1,851,786	1,915,788	(64,002)	9 / 12	5.50%	(2,640)	4.75%	(2,280)	360
7	August	1,579,035	1,279,027	300,008	8 / 12	5.50%	11,000	4.75%	9,500	(1,500)
8	September	<u>1,730,502</u>	<u>1,629,378</u>	<u>101,124</u>	7 / 12	5.50%	<u>3,244</u>	4.75%	<u>2,802</u>	<u>(442)</u>
9	TOTAL	<u><u>68,748,050</u></u>	<u><u>47,953,272</u></u>	<u><u>20,794,778</u></u>			<u><u>1,214,453</u></u>		<u><u>1,048,846</u></u>	<u><u>(165,607)</u></u>

Exhibit 1-E
Schedule 2b
Sheet 1 of 2

COLUMBIA GAS OF PENNSYLVANIA, INC.
RECONCILIATION OF DEMAND COST OF GAS
FROM 2019 - 1307(f)
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

DEMAND

Line No.	Month	Sales Subject to Demand E-Factor Therm	Rate \$/ Therm	Amount \$	Net Demand Over (Under) Collection \$
1	True-up of Net Demand Costs Included in 2019 1307(f):				(5,048,037)
2	Beginning Balance Adjustment				(9,375) 2_
3	October, 2019	5,729,813	0.01116	63,945	
4		5,278,097	(0.00267)	(14,093)	
5	November	34,497,139	0.01116	384,987	
6		48,805	(0.00267)	(130)	
7	December	73,135,345	0.01116	816,190	
8	January, 2020 1_	38,459,936	0.01063	408,829	
9		41,458,606	0.01116	462,678	
10	February	75,148,727	0.01063	798,831	
11		(178,946)	0.01116	(1,997)	
12	March	63,970,024	0.01063	680,001	
13	April	39,357,012	0.01063	418,365	
14	May	33,071,823	0.01063	351,553	
15	June	14,099,839	0.01063	149,881	
16	July	8,049,000	0.01063	85,561	
17	August	7,182,418	0.01063	76,349	
18	September	7,883,118	0.01063	83,798	
19	Amount Collected/(Passed Back) during 2019 1307(f) Period				<u>4,764,748</u>
20	Remaining Balance to be Collected in the 2020 1307(f)				<u><u>(292,664)</u></u>

1_ Rate in effect January 1, 2020.

2_ Represents a demand interest adjustment for the period of February 2019 to September 2019 decreasing the interest rate from 5.50% to the prime rate as of January 31, 2020 of 4.75%. Please refer to Exh. 1-E, Schedule 2b, Sheet 2 for a detailed calculation for this adjustment.

COLUMBIA GAS OF PENNSYLVANIA, INC.
STATEMENT OF DEMAND OVER/(UNDER) COLLECTIONS FROM GAS COST RATE
FEBRUARY, 2019 THROUGH SEPTEMBER, 2019

Line No.	Month	Total Purchased Gas Cost Recovery (1)	Total Cost of Fuel (2)	Total Over (Under) Collection (3 = 1 - 2)	Number of Months (4)	Rate (5)	Over (Under) Collection Interest (6=3x4x5)	Rate (7)	Over (Under) Collection Interest (8=3x4x7)	Interest Difference (9=8-6)
1	February, 2019	11,492,132	5,983,285	5,508,847	14 / 12	5.50%	353,484	4.75%	305,282	(48,202)
2	March	9,734,819	5,981,206	3,753,613	13 / 12	5.50%	223,653	4.75%	193,155	(30,498)
3	April	5,842,680	4,355,541	1,487,139	12 / 12	5.50%	81,793	4.75%	70,639	(11,154)
4	May	2,525,299	4,362,975	(1,837,677)	11 / 12	5.50%	(92,650)	4.75%	(80,016)	12,634
5	June	1,478,239	4,533,817	(3,055,579)	10 / 12	5.50%	(140,047)	4.75%	(120,950)	19,097
6	July	1,154,822	4,301,276	(3,146,454)	9 / 12	5.50%	(129,791)	4.75%	(112,092)	17,699
7	August	1,062,179	4,416,083	(3,353,905)	8 / 12	5.50%	(122,977)	4.75%	(106,207)	16,770
8	September	<u>1,152,650</u>	<u>4,416,341</u>	<u>(3,263,691)</u>	7 / 12	5.50%	<u>(104,710)</u>	4.75%	<u>(90,431)</u>	<u>14,279</u>
9	TOTAL	<u><u>34,442,818</u></u>	<u><u>38,350,525</u></u>	<u><u>(3,907,706)</u></u>			<u><u>68,755</u></u>		<u><u>59,380</u></u>	<u><u>(9,375)</u></u>

Exhibit 1-E
 Schedule 3

COLUMBIA GAS OF PENNSYLVANIA, INC.

RECONCILIATION OF OFF SYSTEM SALES CREDIT
 FROM 2019 - 1307(f)
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

DEMAND

Line No.	Month	Sales Subject to Off-System Sales		Amount	Net Demand Over (Under) Collection
		Credit Therm	Rate \$/Therm		
1	October, 2019	5,729,813	(0.00837)	(47,959)	
2		5,278,097	(0.01845)	(97,381)	
3	November	34,497,139	(0.00837)	(288,741)	
4		48,805	(0.01845)	(900)	
5	December	73,135,345	(0.00837)	(612,143)	
6	January, 2020 1_/	79,918,542	(0.00837)	(668,918)	
7	February	74,969,781	(0.00837)	(627,497)	
8	March	63,970,024	(0.00837)	(535,429)	
9	April	39,357,012	(0.00837)	(329,418)	
10	May	33,071,823	(0.00837)	(276,811)	
11	June	14,099,839	(0.00837)	(118,016)	
12	July	8,049,000	(0.00837)	(67,370)	
13	August	7,182,418	(0.00837)	(60,117)	
14	September	7,883,118	(0.00837)	(65,982)	
15	Amount Passed Back in the 2019 1307(f)				<u>(3,796,682)</u>
16	Current Estimate Unified Sharing Mechanism - \$1,365,447				1,365,447
17	Amount to be Collected in the 2020 1307(f)				<u><u>(2,431,235)</u></u>

1_/ Rate in effect January 1, 2020.

Exhibit 1-E
Schedule 4
Sheet 1a of 6
Commodity

COLUMBIA GAS OF PENNSYLVANIA, INC.
STATEMENT OF COMMODITY OVER/(UNDER) COLLECTIONS FROM GAS COST RATE
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

Line No.	Month	Total Commodity Sales Revenue (1) \$	Rate Schedule NSS Gas Cost Recovery (2) \$	Total Commodity Purchase Gas Cost Recovery (3 = 1 + 2) \$	Total Commodity Cost of Fuel (4) \$	Total Commodity Over/(Under) Collection (5 = 3 - 4) \$	Number of Months (6)	Rate (7)	Commodity Over/(Under) Collection Interest (8 = 5 x 6 x 7)	Total Commodity Over/(Under) Collection (9 = 5 + 8)
Reference:		Sch. 4, Pg. 2	Sch. 4, Pg. 3							
<i>Actuals through August 2020</i>										
1	October, 2019	2,234,614	5,772	2,240,386	2,957,781	(717,395)	18 / 12	4.75%	(51,114)	(768,509)
2	November	6,693,411	14,674	6,708,085	11,075,571	(4,367,486)	17 / 12	4.75%	(293,895)	(4,661,381)
3	December	14,217,638	20,112	14,237,750	14,806,215	(568,465)	16 / 12	4.75%	(36,003)	(604,468)
4	January, 2020	15,136,469	21,277	15,157,746	14,178,892	978,854	15 / 12	4.75%	58,119	1,036,973
5	February	13,738,954	13,228	13,752,182	12,215,061	1,537,121	14 / 12	4.75%	85,182	1,622,303
6	March	11,738,050	12,681	11,750,731	8,066,235	3,684,495	13 / 12	4.75%	189,598	3,874,093
7	April	6,664,718	11,182	6,675,900	4,258,839	2,417,061	12 / 12	4.75%	114,810	2,531,871
8	May	5,130,578	8,716	5,139,294	3,156,568	1,982,726	11 / 12	4.75%	86,331	2,069,057
9	June	2,148,092	6,812	2,154,904	498,174	1,656,730	10 / 12	4.75%	65,579	1,722,309
10	July	1,225,568	5,539	1,231,107	941,203	289,904	9 / 12	4.75%	10,328	300,232
11	August	1,086,883	4,309	1,091,192	2,330,064	(1,238,872)	8 / 12	4.75%	(39,231)	(1,278,103)
12	September	<u>1,148,163</u>	<u>0</u>	<u>1,148,163</u>	<u>1,321,771</u>	<u>(173,608)</u>	7 / 12	4.75%	<u>(4,810)</u>	<u>(178,418)</u>
13	TOTAL	<u>81,163,139</u>	<u>124,302</u>	<u>81,287,441</u>	<u>75,806,376</u>	<u>5,481,065</u>			<u>184,894</u>	<u>5,665,959</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.
 STATEMENT OF DEMAND OVER/(UNDER) COLLECTIONS FROM GAS COST RATE
 OCTOBER, 2019 THROUGH SEPTEMBER, 2020

Line No.	Month	Total Demand Sales Revenue (1) \$	Total Banking and Balancing Revenue (2) \$	Total Standby Demand Revenue (3) \$	NSS Capacity Release Revenue (4) \$	Demand Purchased Gas Cost Recovery (5 = 1+2+3+4) \$	Demand Cost of Fuel (6) \$	Total Demand Over/(Under) Collection (7 = 5 - 6) \$	Number of Months (8)	Rate (9)	Demand Over/(Under) Collection Interest (10 = 7 x 8 x 9)	Total Demand Over/(Under) Collection (11 = 7 + 10)
	Reference:	Sch. 4, Pg. 4	Sch. 4, Pg. 6	Sch. 4, Pg. 5	Sch. 4, Pg. 6							
	<i>Actuals through August 2020</i>											
1	October, 2019	1,433,808	83	44,955	34	1,478,880	5,940,102	(4,461,222)	18 / 12	4.75%	(317,862)	(4,779,084)
2	November	4,220,519	146	42,490	410	4,263,565	5,676,713	(1,413,148)	17 / 12	4.75%	(95,093)	(1,508,241)
3	December	8,926,565	212	41,589	564	8,968,930	5,808,656	3,160,273	16 / 12	4.75%	200,151	3,360,424
4	January, 2020	9,739,701	255	41,168	1,101	9,782,225	5,764,866	4,017,360	15 / 12	4.75%	238,531	4,255,891
5	February	9,103,773	192	42,145	851	9,146,961	5,964,198	3,182,763	14 / 12	4.75%	176,378	3,359,141
6	March	7,767,894	183	39,094	810	7,807,981	5,973,335	1,834,646	13 / 12	4.75%	94,408	1,929,054
7	April	5,029,033	176	39,271	90	5,068,571	4,133,922	934,648	12 / 12	4.75%	44,396	979,044
8	May	4,478,179	128	39,748	53	4,518,107	3,767,494	750,613	11 / 12	4.75%	32,683	783,296
9	June	1,908,315	103	39,748	42	1,948,207	3,891,869	(1,943,662)	10 / 12	4.75%	(76,937)	(2,020,599)
10	July	1,089,071	85	39,748	34	1,128,938	4,044,509	(2,915,572)	9 / 12	4.75%	(103,867)	(3,019,439)
11	August	970,813	65	39,748	26	1,010,651	4,015,264	(3,004,613)	8 / 12	4.75%	(95,146)	(3,099,759)
12	September	<u>1,094,807</u>	<u>0</u>	<u>39,748</u>	<u>0</u>	<u>1,134,555</u>	<u>4,227,491</u>	<u>(3,092,936)</u>	7 / 12	4.75%	<u>(85,700)</u>	<u>(3,178,636)</u>
13	TOTAL	<u>55,762,479</u>	<u>1,628</u>	<u>489,450</u>	<u>4,015</u>	<u>56,257,571</u>	<u>59,208,420</u>	<u>(2,950,848)</u>			<u>11,942</u>	<u>(2,938,906)</u>

Exhibit 1-E
Schedule 4
Sheet 2a of 6

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF COMMODITY GAS COST RECOVERY
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

LINE NO.	MONTH	SALES	COMMODITY	TOTAL
		SUBJECT TO	COST OF	COMMODITY
		COMMODITY	GAS	COST
		COST OF GAS		RECOVERY
		(1)	(2)	(3 = 1 x 2)
		THERM	\$/THERM	\$
1	October, 2019 Est. Old	4,076,471	0.27486	1,120,459
2	October, 2019 Est. New	4,487,543	0.24229	1,087,287
3	September, 2019 Est.	(6,175,516)	0.27486	(1,697,402)
4	September, 2019 Act.	6,281,994	0.27486	1,726,669
5	September Act. Prior Period Adjustments		-	(2,398)
6	Total	8,670,492		2,234,614
7	November, 2019 Est. New	27,384,298	0.24229	6,634,942
8	October, 2019 Est. Old	(4,076,471)	0.27486	(1,120,459)
9	October, 2019 Est. New	(4,487,543)	0.24229	(1,087,287)
10	October, 2019 Act. Old	4,182,687	0.27486	1,149,653
11	October, 2019 Act. New	4,604,470	0.24229	1,115,617
12	October Act. Prior Period Adjustments		-	945
13	Total	27,607,441		6,693,411
14	December, 2019 Est.	58,322,224	0.24229	14,130,892
15	November, 2019 Est.	(27,384,298)	0.24229	(6,634,942)
16	November, 2019 Act.	27,739,973	0.24229	6,721,118
17	November Act. Prior Period Adjustments		-	570
18	Total	58,677,899		14,217,638
19	January, 2020 Est. Old	33,236,862	0.24229	8,052,959
20	January, 2020 Est. New	30,926,965	0.22764	7,040,214
21	December, 2019 Est.	(58,322,224)	0.24229	(14,130,892)
22	December, 2019 Act.	58,495,141	0.24229	14,172,788
23	December Act. Prior Period Adjustments		-	1,399
24	Total	64,336,744		15,136,469
25	February, 2020 Est. New	60,641,013	0.22764	13,804,320
26	January, 2020 Est. Old	33,092,674	0.24229	8,018,024
27	January, 2020 Est. New	30,792,798	0.22764	7,009,672
28	January, 2020 Act. Old	(33,236,862)	0.24229	(8,052,959)
29	January, 2020 Act. New	(30,926,965)	0.22764	(7,040,214)
30	January Act. Prior Period Adjustments		-	111
31	Total	60,362,658		13,738,954
32	March, 2020 Est.	51,883,342	0.22764	11,810,724
33	February, 2020 Est.	(60,641,013)	0.22764	(13,804,320)
34	February, 2020 Act.	60,320,691	0.22764	13,731,402
35	February Act. Prior Period Adjustments		-	244
36	Total	51,563,020		11,738,050

Exhibit 1-E
Schedule 4
Sheet 2b of 6

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF COMMODITY GAS COST RECOVERY
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

LINE NO.	MONTH	SALES	COMMODITY	TOTAL
		SUBJECT TO	COST OF	COMMODITY
		COST OF GAS	GAS	COST
		(1)	(2)	(3 = 1 x 2)
		THERM	\$/THERM	\$
1	April, 2020 Est. Old	17,446,860	0.22764	3,971,603
2	April, 2020 Est. New	14,390,475	0.19128	2,752,610
3	March, 2020 Est.	(51,883,342)	0.22764	(11,810,724)
4	March, 2020 Act.	51,631,954	0.22764	11,753,498
5	March Act. Prior Period Adjustments		-	(2,270)
6	Total	<u>31,585,947</u>		<u>6,664,718</u>
7	May, 2020 Est.	26,974,926	0.19128	5,159,764
8	April, 2020 Est. Old	(17,446,860)	0.22764	(3,971,603)
9	April, 2020 Est. New	(14,390,475)	0.19128	(2,752,610)
10	April, 2020 Act. Old	17,377,421	0.22764	3,955,796
11	April, 2020 Act. New	14,333,202	0.19128	2,741,655
12	April Act. Prior Period Adjustments		-	(2,423)
13	Total	<u>26,848,214</u>		<u>5,130,578</u>
14	June, 2020 Est.	11,296,641	0.19128	2,160,821
15	May, 2020 Est.	(26,974,926)	0.19128	(5,159,764)
16	May, 2020 Act.	26,910,417	0.19128	5,147,425
17	May Act. Prior Period Adjustments		-	(390)
18	Total	<u>11,232,132</u>		<u>2,148,092</u>
19	July, 2020 Est.	6,442,456	0.19128	1,232,313
20	June, 2020 Est.	(11,296,641)	0.19128	(2,160,821)
21	June, 2020 Act.	11,260,100	0.19128	2,153,832
22	June Act. Prior Period Adjustments		-	245
23	Total	<u>6,405,915</u>		<u>1,225,568</u>
24	August, 2020 Est.	5,705,043	0.19128	1,091,261
25	July, 2020 Est.	(6,442,456)	0.19128	(1,232,313)
26	July, 2020 Act.	6,420,356	0.19128	1,228,086
27	July Act. Prior Period Adjustments	0	-	(151)
28	Total	<u>5,682,943</u>		<u>1,086,883</u>
29	September, 2020 Est.	<u>6,002,526</u>	0.19128	<u>1,148,163</u>
30	Total	<u>6,002,526</u>		<u>1,148,163</u>
31	TOTAL	<u><u>358,975,931</u></u>		<u><u>81,163,139</u></u>

Exhibit 1-E
Schedule 4
Sheet 3 of 6

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF NSS COMMODITY COST RECOVERY
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

LINE NO.	MONTH	RATE SCHEDULE		NSS GAS
		NSS VOLUMES	RATE	COST RECOVERY
		(1) THERM	(2) \$/THERM	(3=1*2) \$
1	October, 2019 Est.	36,000	0.15727	5,662
2	September, 2019 Act.	23,590	0.18613	4,391
3	September, 2019 Est.	<u>(23,000)</u>	0.18613	<u>(4,281)</u>
4		36,590		5,772
5	November, 2019 Est.	69,000	0.22242	15,347
6	October, 2019 Act.	31,720	0.15727	4,989
7	October, 2019 Est.	<u>(36,000)</u>	0.15727	<u>(5,662)</u>
8		64,720		14,674
9	December, 2019 Est.	85,000	0.21322	18,124
10	November, 2019 Act.	77,940	0.22242	17,335
11	November, 2019 Est.	<u>(69,000)</u>	0.22242	<u>(15,347)</u>
12		93,940		20,112
13	January, 2020 Est.	106,000	0.18691	19,812
14	December, 2019 Act.	91,870	0.21322	19,589
15	December, 2019 Est.	<u>(85,000)</u>	0.21322	<u>(18,124)</u>
16		112,870		21,277
17	February, 2020 Est.	101,000	0.16047	16,207
18	January, 2020 Act.	90,060	0.18691	16,833
19	January, 2020 Est.	<u>(106,000)</u>	0.18691	<u>(19,812)</u>
20		85,060		13,228
21	March, 2020 Est.	85,000	0.15668	13,318
22	February, 2020 Act.	97,030	0.16047	15,570
23	February, 2020 Est.	<u>(101,000)</u>	0.16047	<u>(16,207)</u>
24		81,030		12,681
25	April, 2020 Est.	76,000	0.14320	10,883
26	March, 2020 Act.	86,910	0.15668	13,617
27	March, 2020 Est.	<u>(85,000)</u>	0.15668	<u>(13,318)</u>
28		77,910		11,182
29	May, 2020 Est.	45,000	0.15773	7,098
30	April, 2020 Act.	87,300	0.14320	12,501
31	April, 2020 Est.	<u>(76,000)</u>	0.14320	<u>(10,883)</u>
32		56,300		8,716
33	June, 2020 Est.	25,000	0.14422	3,606
34	May, 2020 Act.	65,330	0.15773	10,305
35	May, 2020 Est.	<u>(45,000)</u>	0.15773	<u>(7,098)</u>
36		45,330		6,812
37	July, 2020 Est.	22,000	0.14996	3,299
38	June, 2020 Act.	40,530	0.14422	5,845
39	June, 2020 Est.	<u>(25,000)</u>	0.14422	<u>(3,606)</u>
40		37,530		5,539
41	August, 2020 Est.	22,000	0.15211	3,346
42	July, 2020 Act.	28,420	0.14996	4,262
43	July, 2020 Est.	<u>(22,000)</u>	0.14996	<u>(3,299)</u>
44		28,420		4,309
45	September, 2020 Est.	<u>0</u>	0.00000	<u>0</u>
46		0		0
47	TOTAL	<u>719,700</u>		<u>124,302</u>

Exhibit 1-E
Schedule 4
Sheet 4a of 6

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF DEMAND GAS COST RECOVERY
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

LINE NO.	MONTH	VOLUMES SUBJ. TO DEMAND COST OF GAS	COST OF GAS	DEMAND COST RECOVERY
		(1) THERM	(2) \$/THERM	(3 = 1 x 2) \$
1	October, 2019 Est. Old	4,076,471	0.14482	590,354
2	October, 2019 Est. New	4,487,543	0.12570	564,084
3	October Choice - Est. Old	997,023	0.11407	113,730
4	October Choice - Est. New	1,033,574	0.10627	109,838
5	October Est. Priority One Transportation Old	189,578	0.14482	27,455
6	October Est. Priority One Transportation New	208,696	0.12570	26,233
7	September, 2019 Est.	(6,175,516)	0.14482	(894,338)
8	September 2019 Act.	6,281,994	0.14482	909,758
9	September Choice - Est.	(1,494,364)	0.11407	(170,462)
10	September Choice - Act.	1,496,398	0.11407	170,694
11	September Est. Priority One Transportation	(303,207)	0.14482	(43,910)
12	September Act. Priority One Transportation	209,720	0.14482	30,372
13	Total	11,007,910		1,433,808
14	November, 2019 Est. New	27,384,298	0.12570	3,442,206
15	November Choice - Est. New	6,319,667	0.10627	671,591
16	November Est. Priority One Transportation New	739,508	0.12570	92,956
17	October Est. Old	(4,076,471)	0.14482	(590,354)
18	October Est. New	(4,487,543)	0.12570	(564,084)
19	October Act. Old	4,182,687	0.14482	605,737
20	October Act. New	4,604,470	0.12570	578,782
21	October Choice - Est. Old	(997,023)	0.11407	(113,730)
22	October Choice - Est. New	(1,033,574)	0.10627	(109,838)
23	October Choice - Act. Old	997,972	0.11407	113,839
24	October Choice - Act. New	1,034,557	0.10627	109,942
25	October Est. Priority One Transportation Old	(189,578)	0.14482	(27,455)
26	October Est. Priority One Transportation New	(208,696)	0.12570	(26,233)
27	October Act. Priority One Transportation Old	131,219	0.14482	19,003
28	October Act. Priority One Transportation New	144,451	0.12570	18,157
29	Total	34,545,944		4,220,519
30	December, 2019 Est.	58,322,224	0.12570	7,331,104
31	December Choice - Est.	13,713,421	0.10627	1,457,325
32	December Est. Priority One Transportation	855,781	0.12570	107,572
33	November Est.	(27,384,298)	0.12570	(3,442,206)
34	November Act.	27,739,973	0.12570	3,486,915
35	November Choice - Est.	(6,319,667)	0.10627	(671,591)
36	November Choice - Act.	6,324,619	0.10627	672,117
37	November Est. Priority One Transportation	(739,508)	0.12570	(92,956)
38	November Act. Priority One Transportation	622,800	0.12570	78,286
39	Total	73,135,345		8,926,565
40	January, 2020 Est. Old	33,236,862	0.12570	4,177,874
41	January, 2020 Est. New	30,926,965	0.12498	3,865,252
42	January Choice - Est. Old	7,267,896	0.10627	772,359
43	January Choice - Est. New	6,982,881	0.10537	735,786
44	January Est. Priority One Transportation Old	591,176	0.12570	74,311
45	January Est. Priority One Transportation New	550,091	0.12498	68,750
46	December 2019 Est.	(58,322,224)	0.12570	(7,331,104)
47	December 2019 Act.	58,495,141	0.12570	7,352,839
48	December Choice - Est.	(13,713,421)	0.10627	(1,457,325)
49	December Choice - Act.	13,724,676	0.10627	1,458,521
50	December Est. Priority One Transportation	(855,781)	0.12570	(107,572)
51	December Act. Priority One Transportation	1,034,280	0.12570	130,009
52	Total	79,918,542		9,739,701

Exhibit 1-E
Schedule 4
Sheet 4b of 6

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF DEMAND GAS COST RECOVERY
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

LINE NO.	MONTH	VOLUMES SUBJ. TO DEMAND	COST OF GAS	DEMAND COST RECOVERY
		(1) THERM	(2) \$/THERM	(3 = 1 x 2) \$
1	February, 2020 Est. New	60,641,013	0.12498	7,578,914
2	February Choice - Est. New	13,573,978	0.10537	1,430,290
3	February Est. Priority One Transportation New	1,100,533	0.12498	137,545
4	January Est. Old	(33,236,862)	0.12570	(4,177,874)
5	January Est. New	(30,926,965)	0.12498	(3,865,252)
6	January Act. Old	33,092,674	0.12570	4,159,749
7	January Act. New	30,792,798	0.12498	3,848,484
8	January Choice - Est. Old	(7,267,896)	0.10627	(772,359)
9	January Choice - Est. New	(6,982,881)	0.10537	(735,786)
10	January Choice - Act. Old	7,258,374	0.10627	771,347
11	January Choice - Act. New	6,973,732	0.10537	734,822
12	January Est. Priority One Transportation Old	(591,176)	0.12570	(74,311)
13	January Est. Priority One Transportation New	(550,091)	0.12498	(68,750)
14	January Act. Priority One Transportation Old	565,941	0.12570	71,139
15	January Act. Priority One Transportation New	526,609	0.12498	65,816
16	Total	74,969,781		9,103,773
17	March, 2020 Est.	51,883,342	0.12498	6,484,380
18	March Choice - Est.	11,611,237	0.10537	1,223,476
19	March Est. Priority One Transportation	883,306	0.12498	110,396
20	February Est.	(60,641,013)	0.12498	(7,578,914)
21	February Act.	60,320,691	0.12498	7,538,880
22	February Choice - Est.	(13,573,978)	0.10537	(1,430,290)
23	February Choice - Act.	13,542,512	0.10537	1,426,974
24	February Est. Priority One Transportation	(1,100,533)	0.12498	(137,545)
25	February Act. Priority One Transportation	1,044,460	0.12498	130,537
26	Total	63,970,024		7,767,894
27	April, 2020 Est. Old	17,446,860	0.12498	2,180,509
28	April, 2020 Est. New	14,390,475	0.13888	1,998,549
29	April Choice - Est. Old	3,873,057	0.10537	408,104
30	April Choice - Est. New	3,143,350	0.11893	373,839
31	April Est. Priority One Transportation Old	407,425	0.12498	50,920
32	April Est. Priority One Transportation New	336,052	0.13888	46,671
33	March Est.	(51,883,342)	0.12498	(6,484,380)
34	March Act.	51,631,954	0.12498	6,452,962
35	March Choice - Est.	(11,611,237)	0.10537	(1,223,476)
36	March Choice - Act.	11,587,644	0.10537	1,220,990
37	March Est. Priority One Transportation	(883,306)	0.12498	(110,396)
38	March Act. Priority One Transportation	918,080	0.12498	114,742
39	Total	39,357,012		5,029,033
40	May, 2020 Est.	26,974,926	0.13888	3,746,278
41	May Choice - Est.	5,858,508	0.11893	696,752
42	May Est. Priority One Transportation New	480,669	0.13888	66,755
43	April, 2020 Est. Old	(17,446,860)	0.12498	(2,180,509)
44	April, 2020 Est. New	(14,390,475)	0.13888	(1,998,549)
45	April, 2020 Act. Old	17,377,421	0.12498	2,171,830
46	April, 2020 Act. New	14,333,202	0.13888	1,990,595
47	April Choice - Est. Old	(3,873,057)	0.10537	(408,104)
48	April Choice - Est. New	(3,143,350)	0.11893	(373,839)
49	April Choice - Act. Old	3,867,608	0.10537	407,530
50	April Choice - Act. New	3,138,928	0.11893	373,313
51	April Est. Priority One Transportation Old	(407,425)	0.12498	(50,920)
52	April Est. Priority One Transportation New	(336,052)	0.13888	(46,671)
53	April Act. Priority One Transportation Old	349,503	0.12498	43,681
54	April Act. Priority One Transportation New	288,277	0.13888	40,036
55	Total	33,071,823		4,478,179

Exhibit 1-E
Schedule 4
Sheet 4c of 6

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF DEMAND GAS COST RECOVERY
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

LINE NO.	MONTH	VOLUMES SUBJ. TO DEMAND COST OF GAS	COST OF GAS	DEMAND COST RECOVERY
		(1) THERM	(2) \$/THERM	(3 = 1 x 2) \$
1	June, 2020 Est.	11,296,641	0.13888	1,568,878
2	June Choice - Est.	2,492,164	0.11893	296,393
3	June Est. Priority One Transportation	313,525	0.13888	43,542
4	May Est.	(26,974,926)	0.13888	(3,746,278)
5	May Act.	26,910,417	0.13888	3,737,319
6	May Choice - Est.	(5,858,508)	0.11893	(696,752)
7	May Choice - Act.	5,866,155	0.11893	697,662
8	May Est. Priority One Transportation	(480,669)	0.13888	(66,755)
9	May Act. Priority One Transportation	535,040	0.13888	74,306
10	Total	<u>14,099,839</u>		<u>1,908,315</u>
11	July, 2020 Est.	6,442,456	0.13888	894,728
12	July Choice - Est.	1,441,261	0.11893	171,409
13	July Est. Priority One Transportation	241,944	0.13888	33,601
14	June 2020 Est.	(11,296,641)	0.13888	(1,568,878)
15	June 2020 Act.	11,260,100	0.13888	1,563,803
16	June Choice - Est.	(2,492,164)	0.11893	(296,393)
17	June Choice - Act.	2,493,219	0.11893	296,519
18	June Est. Priority One Transportation	(313,525)	0.13888	(43,542)
19	June Act. Priority One Transportation	272,350	0.13888	37,824
20	Total	<u>8,049,000</u>		<u>1,089,071</u>
21	August, 2020 Est.	5,705,043	0.13888	792,316
22	August Choice - Est.	1,336,176	0.11893	158,911
23	August Est. Priority One Transportation	208,136	0.13888	28,906
24	July, 2020 Est.	(6,442,456)	0.13888	(894,728)
25	July 2020 Act.	6,420,356	0.13888	891,659
26	July Choice - Est.	(1,441,261)	0.11893	(171,409)
27	July Choice - Act.	1,442,458	0.11893	171,552
28	July Est. Priority One Transportation	(241,944)	0.13888	(33,601)
29	July Act. Priority One Transportation	195,910	0.13888	27,208
30	Total	<u>7,182,418</u>		<u>970,813</u>
31	September, 2020 Est.	<u>7,883,118</u>	0.13888	<u>1,094,807</u>
32	Total	<u>7,883,118</u>		<u>1,094,807</u>
33	TOTAL	<u><u>447,190,756</u></u>		<u><u>55,762,479</u></u>

Exhibit 1-E
Schedule 4
Sheet 5 of 6

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF STANDBY DEMAND COST RECOVERY
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

LINE NO.	MONTH	STANDBY VOLUMES	STANDBY DEMAND RATE	STANDBY GAS DEMAND RECOVERIES
		(1) THERM	(2) \$/THERM	(3 = 1 x 2) \$
1	October, 2019 Est.	0		0
2	September, 2019 Act.	57,610	0.78034	44,955
3	September, 2019 Est.	0	-	0
4		<u>57,610</u>		<u>44,955</u>
5	November, 2019 Est.	0	-	0
6	October, 2019 Act.	57,510	0.73883	42,490
7	October, 2019 Est.	0	-	0
8		<u>57,510</u>		<u>42,490</u>
9	December, 2019 Est.	0	-	0
10	November, 2019 Act.	56,290	0.73883	41,589
11	November, 2019 Est.	0	-	0
12		<u>56,290</u>		<u>41,589</u>
13	January, 2020 Est.	0	-	0
14	December, 2019 Act.	55,720	0.73883	41,168
15	December, 2019 Est.	0	-	0
16		<u>55,720</u>		<u>41,168</u>
17	February, 2020 Est.	0	-	0
18	January, 2020 Act.	56,910	0.74055	42,145
19	January, 2020 Est.	0	-	0
20		<u>56,910</u>		<u>42,145</u>
21	March, 2020 Est.	0	-	0
22	February, 2020 Act.	52,790	0.74055	39,094
23	February, 2020 Est.	0	-	0
24		<u>52,790</u>		<u>39,094</u>
25	April, 2020	0	-	0
26	March, 2020 Act.	53,030	0.74055	39,271
27	March, 2020 Est.	0	-	0
28		<u>53,030</u>		<u>39,271</u>
29	May, 2020	0	-	0
30	April, 2020 Act.	53,030	0.74953	39,748
31	April, 2020 Est.	0	-	0
32		<u>53,030</u>		<u>39,748</u>
33	June, 2020	0	-	0
34	May, 2020 Act.	53,030	0.74953	39,748
35	May, 2020 Est.	0	-	0
36		<u>53,030</u>		<u>39,748</u>
37	July, 2020	0	-	0
38	June, 2020 Act.	53,030	0.74953	39,748
39	June, 2020 Est.	0	-	0
40		<u>53,030</u>		<u>39,748</u>
41	August, 2020	0	-	0
42	July, 2020 Act.	53,030	0.74953	39,748
43	July, 2020 Est.	0	-	0
44		<u>53,030</u>		<u>39,748</u>
45	September, 2020	0	-	0
46	August, 2020 Act	53,030	0.74953	39,748
47	August, 2020 Est.	0	-	0
48		<u>53,030</u>		<u>39,748</u>
49	TOTAL	<u>655,010</u>		<u>489,450</u>

Exhibit 1-E
Schedule 4
Sheet 6 of 6

COLUMBIA GAS OF OF PENNSYLVANIA, INC.
DETAIL OF NSS BANKING & BALANCING AND CAPACITY RELEASE REVENUE
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

LINE NO.	DESCRIPTION	NSS-BANKING & BALANCING			NSS-CAPACITY RELEASE		
		VOLUME	RATE	AMOUNT	VOLUME	RATE	AMOUNT
		(1)	(2)	(3=1 x 2)	(4)	(5)	(6=4 x 5)
		THERM	\$/THERM	\$	THERM	\$/THERM	\$
1	October, 2019 Est.	36,000	0.00226	81	36,000	0.00093	33
2	September, 2019 Act.	23,590	0.00226	53	23,590	0.00093	22
3	September, 2019 Est.	<u>(23,000)</u>	0.00226	<u>(52)</u>	<u>(23,000)</u>	0.00093	<u>(21)</u>
4		36,590		83	36,590		34
5	November, 2019 Est.	69,000	0.00226	156	69,000	0.00600	414
6	October, 2019 Act.	31,720	0.00226	72	31,720	0.00093	30
7	October, 2019 Est.	<u>(36,000)</u>	0.00226	<u>(81)</u>	<u>(36,000)</u>	0.00093	<u>(33)</u>
8		64,720		146	64,720		410
9	December, 2019 Est.	85,000	0.00226	192	85,000	0.00600	510
10	November, 2019 Act.	77,940	0.00226	176	77,940	0.00600	468
11	November, 2019 Est.	<u>(69,000)</u>	0.00226	<u>(156)</u>	<u>(69,000)</u>	0.00600	<u>(414)</u>
12		93,940		212	93,940		564
13	January, 2020 Est.	106,000	0.00226	240	106,000	0.01000	1,060
14	December, 2019 Act.	91,870	0.00226	208	91,870	0.00600	551
15	December, 2019 Est.	<u>(85,000)</u>	0.00226	<u>(192)</u>	<u>(85,000)</u>	0.00600	<u>(510)</u>
16		112,870		255	112,870		1,101
17	February, 2020 Est.	101,000	0.00226	228	101,000	0.01000	1,010
18	January, 2020 Act.	90,060	0.00226	204	90,060	0.01000	901
19	January, 2020 Est.	<u>(106,000)</u>	0.00226	<u>(240)</u>	<u>(106,000)</u>	0.01000	<u>(1,060)</u>
20		85,060		192	85,060		851
21	March, 2020 Est.	85,000	0.00226	192	85,000	0.01000	850
22	February, 2020 Act.	97,030	0.00226	219	97,030	0.01000	970
23	February, 2020 Est.	<u>(101,000)</u>	0.00226	<u>(228)</u>	<u>(101,000)</u>	0.01000	<u>(1,010)</u>
24		81,030		183	81,030		810
25	April, 2020 Est.	76,000	0.00226	172	76,000	0.00093	71
26	March, 2020 Act.	86,910	0.00226	196	86,910	0.01000	869
27	March, 2020 Est.	<u>(85,000)</u>	0.00226	<u>(192)</u>	<u>(85,000)</u>	0.01000	<u>(850)</u>
28		77,910		176	77,910		90
29	May, 2020 Est.	45,000	0.00226	102	45,000	0.00093	42
30	April, 2020 Act.	87,300	0.00226	197	87,300	0.00093	81
31	April, 2020 Est.	<u>(76,000)</u>	0.00226	<u>(172)</u>	<u>(76,000)</u>	0.00093	<u>(71)</u>
32		56,300		128	56,300		53
33	June, 2020 Est.	25,000	0.00226	57	25,000	0.00093	23
34	May, 2020 Act.	65,330	0.00226	148	65,330	0.00093	61
35	May, 2020 Est.	<u>(45,000)</u>	0.00226	<u>(102)</u>	<u>(45,000)</u>	0.00093	<u>(42)</u>
36		45,330		103	45,330		42
37	July, 2020 Est.	22,000	0.00226	50	22,000	0.00093	20
38	June, 2020 Act.	40,530	0.00226	92	40,530	0.00093	38
39	June, 2020 Est.	<u>(25,000)</u>	0.00226	<u>(57)</u>	<u>(25,000)</u>	0.00093	<u>(23)</u>
40		37,530		85	37,530		34
41	August, 2020 Est.	22,000	0.00226	50	22,000	0.00093	20
42	July, 2020 Act.	28,420	0.00226	64	28,420	0.00093	26
43	July, 2020 Est.	<u>(22,000)</u>	0.00226	<u>(50)</u>	<u>(22,000)</u>	0.00093	<u>(20)</u>
44		28,420		65	28,420		26
45	September, 2020 Est.	<u>0</u>	0.00000	<u>0</u>	<u>0</u>	0.00000	<u>0</u>
46		0		0	0		0
47	TOTAL	<u>719,700</u>		<u>1,628</u>	<u>719,700</u>		<u>4,015</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.
DEMAND PENALTY CREDITS/SUPPLIER REFUNDS RECEIVED OCTOBER 2019 - SEPTEMBER 2020
FROM VARIOUS SUPPLIERS

<u>Line No.</u>	<u>Refund Type</u>	<u>Date Received</u>	<u>Total</u>
1	Columbia Gas Transmission, LLC: Penalty Credit Docket No. RP20-370	December 2019	50,080
2	Texas Eastern: Penalty Credit Docket No. RP20-69	January 2020	<u>358</u>
3	Total Penalty Credits/Supplier Refunds to Pass Back		50,438
4	Interest Calculated on Schedule 5 Sheet 2 of 2		<u>1,513</u>
5	Total Penalty Credits/Supplier Refunds to Pass Back With Interest		<u><u>51,951</u></u>

COLUMBIA GAS OF PENNSYLVANIA, INC.
PENALTY CREDITS RECEIVED OCTOBER 2019 - SEPTEMBER 2020
PASSBACK INTEREST CALCULATION

Line No.	Month	Refund (1) \$	Number of Months (2)	Rate (3) %	Amount of Interest (4 = 1 x 2 x 3) \$	Total (5 = 1 + 4) \$
1	October, 2020	50,438	6 / 12	6.00%	1,513	51,951
2	November	0	5 / 12	6.00%	0	0
3	December	0	4 / 12	6.00%	0	0
4	January, 2021	0	3 / 12	6.00%	0	0
5	February	0	2 / 12	6.00%	0	0
6	March	<u>0</u>	1 / 12	6.00%	<u>0</u>	<u>0</u>
7	TOTAL	<u>50,438</u>			<u>1,513</u>	<u>51,951</u>

ATTACHMENT A

COLUMBIA GAS OF PENNSYLVANIA, INC.
NON-RESIDENTIAL PORTION OF PENALTY CREDITS AND SUPPLIER REFUNDS
CALCULATED RATE EFFECTIVE OCTOBER 2020 - SEPTEMBER 2021

Line No.	Refund Type	Date Received	Amount	Non-Residential Allocation 1_/_
1	Texas Eastern Transmission: Penalty Credit	July 2020	(1,667)	(459) 2_/_
2	Jul 2019 - Jun 2020 Collection Reconciliation (Attachment A, Sheet 3)			<u>3,227</u>
3	Total to be Collected		(1,667)	2,768
4	SGSS, SGDS (Priority One Only), SCD, LGSS and MLSS Therms			129,647,603
5	Rate per Therm			<u><u>0.00002</u></u> \$/Therms

1_/_ Allocation is based on the PGDC Sales forecast during the periods that refunds were received. See Attachment A Sheet 3 of 4 for Non-Residential Allocation Details.

2_/_ Denotes Supplier Refund that includes applicable interest as shown on Attachment A Sheet 4 of 4.

Attachment A
Sheet 2 of 4

COLUMBIA GAS OF PENNSYLVANIA, INC.
RECONCILIATION OF COLLECTION OF NON-RESIDENTIAL PORTION (OVER)/UNDER
PASSBACK PERIOD JULY 2019 - JUNE 2020

Line No.	Month	Sales Subject to Refund Passback Therm	Rate \$/ Therm	Amount \$	Net Demand (Over) Under Collection \$
1	Non-Residential Penalty Credit Collection in July 1, 2019 PGC Filing				44,825
2	July, 2019	1,451,318	0.00035	490	
3	August	2,502,951	0.00035	862	
4	September	2,742,165	0.00035	929	
5	October	3,574,556	0.00035	1,242	
6	November	9,237,152	0.00035	3,209	
7	December	19,411,095	0.00035	6,788	
8	January, 2020	21,472,066	0.00035	7,518	
9	February	19,790,909	0.00035	6,936	
10	March	16,661,229	0.00035	5,812	
11	April	9,686,380	0.00035	3,397	
12	May	7,699,774	0.00035	2,693	
13	June	3,682,782	0.00035	1,281	
14	July	1,141,664	0.00035	383	
15	August	161,089	0.00035	58	
16	Amount Collected/(Passed Back)				<u>41,598</u>
17	Remaining Balance to be Collected				<u><u>3,227</u></u>

COLUMBIA GAS OF PENNSYLVANIA, INC.
PENALTY CREDIT/SUPPLIER REFUND PASSBACK
NON-RESIDENTIAL ALLOCATION CALCULATION

<u>Line No.</u>	<u>Period & Type</u>	<u>PGDC Sales</u>	<u>Allocation</u>
		Therm	
	October 2019 - September 2020		
1	Residential	347,770,000	73.3%
2	Commercial & Industrial	126,919,562	26.7%
3	Total October 2019 - September 2020	474,689,562	100.0%

Attachment A
 Sheet 4 of 4

COLUMBIA GAS OF PENNSYLVANIA, INC.
 PENALTY CREDITS RECEIVED FEBRUARY 2020 - SEPTEMBER 2020
 PASSBACK OF NON-RESIDENTIAL PORTION INTEREST CALCULATION

Line No.	Month	Refund (1) \$	Number of Months (2)	Rate (3) %	Amount of Interest (4 = 1 x 2 x 3) \$	Total (5 = 1 + 4) \$
1	October, 2020	(446)	6 / 12	6.00%	(13)	(459)
2	November	0	5 / 12	6.00%	0	0
3	December	0	4 / 12	6.00%	0	0
4	January, 2021	0	3 / 12	6.00%	0	0
5	February	0	2 / 12	6.00%	0	0
6	March	<u>0</u>	1 / 12	6.00%	<u>0</u>	<u>0</u>
14	TOTAL	<u>(446)</u>			<u>(13)</u>	<u>(459)</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.
COMPUTATION OF CHANGE IN RATE PURSUANT TO SECTION 1307(f)
APPLICATION PERIOD: OCTOBER, 2020 THROUGH SEPTEMBER, 2021

Line No.	Description	Amount (1)	Change in Rate (2=3-1)	Effective 1-1-20 (3)
1	<u>Purchased Gas Commodity Cost</u>	\$		
2	Commodity Cost of Gas (Exhibit 1-B, Schedule 1)	74,902,323		
3	Projected tariff sales for the twelve billing periods of			
4	October, 2020 through September, 2021	336,852,856	Therms	
5	PGCC (Line 2/Line 4)	0.22236	(0.04557)	0.17679
6	<u>Commodity (Over)/Under Collection</u>			
7	Commodity E-Factor			
8	(Exhibit No. 1-E)	(5,498,440)	695,972	(4,802,468)
9	Projected sales for the twelve billing periods of			
10	October, 2020 through September, 2021	336,852,856	Therms	336,852,856
11	Commodity E-Factor (Line 8/ Line 10)	(0.01632)	0.00206	(0.01426)
12	<u>Purchased Gas Demand Cost</u>			
13	Demand cost of gas (Exhibit 1-B, Schedule 1)	60,885,476		
14	Less: Purchased Gas Demand recovered under Rate SS			
15	(Exhibit 1-A, Schedule 2, Sheet 2)	477,544		
16	Less: Purchased Gas Demand Cost allocated to Rates LTS, STS,			
17	SGS-TS and MLS (Exh 1-A, Sch 2, Page 3)	0		
18	Subtotal (Line 13 - Line 15 - Line 17)	60,407,932		
19	Projected sales for the twelve billing periods of			
20	October, 2020 through September, 2021	475,223,749	Therms	
21	PGDC Rate prior to Capacity Release Credit (Line 18 / Line 20)	0.12711	0.08816	0.21527
22	Off System Sales and Capacity Release Credit	(0.00492)	0.00000	(0.00492)
23	PGDC Rate	0.12219	0.08816	0.21035
24	<u>Demand (Over)/Under Collection</u>			
25	Demand E- Factor			
26	(Exhibit No. 1-E)	5,610,854	207,667	5,818,521
27	Projected sales for the twelve billing periods of			
28	October, 2020 through September, 2021	475,223,749	Therms	475,223,749
29	Demand E-Factor (Line 26 / Line 28)	0.01181	0.00043	0.01224
30	<u>Total Purchased Gas Cost</u>			
31	PGCC Rate (Line 5)	0.22236	(0.04557)	0.17679
32	PGDC Rate (Line 23)	0.12219	0.08816	0.21035
33	PGC Rate	0.34455	0.04259	0.38714
34	Currently effective PGC	0.32179		0.34455
35	Increase (Decrease) in PGC	0.02276		0.04259
36	<u>Net (Over) Under Collection</u>			
37	Commodity E-Factor (Line 11)	(0.01632)	0.00206	(0.01426)
38	Demand E-Factor (Line 29)	0.01181	0.00043	0.01224
39	E-Factor	(0.00451)	0.00249	(0.00202)
40	Currently effective E-Factor	0.00383		(0.00451)
41	Increase (Decrease) in E-Factor	(0.00834)		0.00249
42	PGC Rate	0.34455	0.04259	0.38714
43	E-Factor	(0.00451)	0.00249	(0.00202)
44	Total Rate	0.34004	0.04508	0.38512
45	Currently effective Rate	0.32562		0.34004
46	Increase (Decrease) in Rate	0.01442		0.04508

1_/ Includes 138,370,893 Therm Transportation Quantities for the Company's Choice Program

COLUMBIA GAS OF PENNSYLVANIA, INC.
QUARTERLY PURCHASED GAS ADJUSTMENT
INCREMENTAL CHANGE EFFECTIVE JANUARY 1, 2021

	Projected Over/(Under) Collection 1_/ (1) \$	Actual Over/(Under) Collection (2) \$	Difference (3) \$	Projected Sales (4) (Therms)	Change In Rate (5=3/4) (\$/Therm)
<u>C-FACTOR</u>					
<u>Commodity Cost of Gas</u>					
1	October , 2020	(711,348)	(183,884)		
2	November, 2020	<u>(1,977,502)</u>	<u>(236,942)</u>		
3	Change in PGCC -- January 1	(2,688,850)	(420,825)	336,852,856	(0.00673)
4	December, 2020	0	0		
5	January, 2021	0	0		
6	February, 2021	<u>0</u>	<u>0</u>		
7	Change in PGCC -- April 1	0	0	336,852,856	0.00000
8	March, 2021	0	0		
9	April, 2021	0	0		
10	May, 2021	<u>0</u>	<u>0</u>		
11	Change in PGCC -- July 1	0	0	336,852,856	0.00000
<u>Demand Cost of Gas</u>					
12	October , 2020	(4,023,005)	(3,868,982)		
13	November, 2020	<u>(1,989,711)</u>	<u>(2,443,536)</u>		
14	Change in PGDC -- January 1	(6,012,716)	(6,312,519)	475,223,749	0.00063
15	December, 2020	0	0		
16	January, 2021	0	0		
17	February, 2021	<u>0</u>	<u>0</u>		
18	Change in PGDC -- April 1	0	0	475,223,749	0.00000
19	March, 2021	0	0		
20	April, 2021	0	0		
21	May, 2021	<u>0</u>	<u>0</u>		
22	Change in PGDC -- July 1	0	0	475,223,749	0.00000
<u>E-FACTOR</u>					
23	Commodity E Factor	5,498,440	4,802,468	336,852,856	0.00206
24	Demand E Factor	(5,610,854)	(5,818,521)	475,223,749	0.00043
25	Change in PGCC (line 3 + line 7 + line 11 + line 23)				(0.00467)
26	Change in PGDC (line 14 + line 18 + line 22 + line 24)				0.00106

1_ / Projection per Schedule 2, Sheet 4.

COLUMBIA GAS OF PENNSYLVANIA, INC.
QUARTERLY PURCHASED GAS ADJUSTMENT - COMMODITY
INCREMENTAL CHANGE EFFECTIVE JANUARY 1, 2021

	Original Projected Exhibit 1-B Schedule 1	Updated for 1/1/21 Exhibit 1-B Schedule 1	Difference Included in 1/1/21 GCR	Updated for 4/1/21 Exhibit 1-B Schedule 1	Difference Included in 4/1/21 GCR	Updated for 7/1/21 Exhibit 1-B Schedule 1	Difference Included in 7/1/21 GCR
	(1)	(2)	(3=2-1)	(4)	(5=4-2)	(6)	(7=6-4)
	\$	\$	\$	\$	\$	\$	\$
<u>C-FACTOR</u>							
<u>Commodity Cost of Gas</u>							
1	January, 2021	15,609,947	13,868,366	(1,741,580)			
2	February	12,566,520	11,826,960	(739,560)			
3	March	8,010,160	8,952,985	942,825			
4	April	5,544,477	4,702,476	(842,001)			
5	May	3,862,375	2,050,381	(1,811,994)			
6	June	2,431,483	902,955	(1,528,528)			
7	July	1,982,855	737,186	(1,245,668)			
8	August	2,178,490	660,212	(1,518,278)			
9	September	<u>2,573,372</u>	<u>1,048,684</u>	<u>(1,524,688)</u>			
10	Total	54,759,678	44,750,204	(10,009,473)			
11	Projected Sales			257,725,814			
12	Change in PGCC Rate per Therm			(0.03884)			

COLUMBIA GAS OF PENNSYLVANIA, INC.
QUARTERLY PURCHASED GAS ADJUSTMENT - DEMAND
INCREMENTAL CHANGE EFFECTIVE JANUARY 1, 2021

	Original Projected Exhibit 1-B Schedule 1	Updated for 1/1/21 Exhibit 1-B Schedule 1	Difference Included in 1/1/21 GCR	Updated for 4/1/21 Exhibit 1-B Schedule 1	Difference Included in 4/1/21 GCR	Updated for 7/1/21 Exhibit 1-B Schedule 1	Difference Included in 7/1/21 GCR
	(1)	(2)	(3=2-1)	(4)	(5=4-2)	(6)	(7=6-4)
	\$	\$	\$	\$	\$	\$	\$
<u>D-FACTOR</u>							
<u>Demand Cost of Gas</u>							
1	January, 2021	6,001,737	6,006,160	4,423			
2	February	6,001,737	10,945,288	4,943,551			
3	March	6,001,737	10,945,288	4,943,551			
4	April	4,269,519	7,953,872	3,684,353			
5	May	4,173,519	7,857,872	3,684,353			
6	June	4,173,519	7,857,872	3,684,353			
7	July	4,173,519	7,857,872	3,684,353			
8	August	4,173,519	7,857,872	3,684,353			
9	September	4,173,519	7,857,872	3,684,353			
10	Total	43,142,325	75,139,968	31,997,643			
11	Projected Sales			363,345,324			
12	Change in PGDC Rate per Therm			0.08806			

COLUMBIA GAS OF PENNSYLVANIA, INC.
ACTUAL OVER/(UNDER)COLLECTION FOR THE PERIOD
OCTOBER, 2020 THROUGH SEPTEMBER, 2021

Line No.		Commodity			Demand		
		Actual Recoveries (1) \$	Actual Gas Costs (2) \$	Over/ (Under)Collection (3=1-2) \$	Actual Recoveries (4) \$	Actual Gas Costs (5) \$	Over/ (Under)Collection (6=4-5) \$
	Actuals through November 2020						
1	October, 2020	2,009,682	2,193,565	(183,884)	1,731,731	5,600,714	(3,868,982)
2	November	4,544,754	4,781,696	(236,942)	3,350,519	5,794,055	(2,443,536)
3	December			0			0
4	January, 2021			0			0
5	February			0			0
6	March			0			0
7	April			0			0
8	May			0			0
9	June			0			0
10	July			0			0
11	August			0			0
12	September			0			0
13	Total	6,554,436	6,975,261	(420,825)	5,082,250	11,394,769	(6,312,519)

Exhibit 1-A
Schedule 1
Sheet 6 of 6

COLUMBIA GAS OF PENNSYLVANIA, INC.
PURCHASED GAS COST RECOVERED UNDER RATES SS
AND COMPUTATION OF DAILY PURCHASED GAS DEMAND
APPLICATION PERIOD: OCTOBER, 2020 THROUGH SEPTEMBER, 2021

Line No.	Description	Detail (1)	Total (2)
1	Total estimated demand charges for the period		
2	October, 2020 through September, 2021	92,883,119	
3	Estimated Demand Quantity (Therms) 1_ /	81,134,160	
4	Daily purchased gas demand rate (Line 2 / line 3)	<u>\$1.14481</u> per Therm	
5	Daily purchased gas demand (Therms)	636,360 Therms	
6	Daily purchased gas demand rate per Therm	<u>\$1.14481</u>	
7	Total rate SS Daily Demand Cost to be		
8	Recovered (Line 5 x Line 6)		<u>\$728,511</u>
9	Total Rate SS Daily Demand Cost to be		
10	Recovered (Effective October 1, 2020)		<u>\$477,544</u>
11	Difference (Line 8 minus Line 10)		\$250,968
12	Projected Sales for the Period October 2020 through September 2021		475,223,749
13	Rate Differential		\$ 0.00053

1_ / Monthly Demand Billing Determinants x 12

COLUMBIA GAS OF PENNSYLVANIA, INC.
 SUMMARY OF PROJECTED SALES QUANTITIES AND REVENUES FOR THE PERIOD
 SALES AT PGCC AND PGDC RATES
 OCTOBER, 2020 THROUGH SEPTEMBER, 2021

Line No.	Month	Sales Subject To PGCC (1) Therms	PGCC Rate 1_/ (2) \$/Therm	PGCC Revenue (3=1x2) \$	Sales Subject To PGDC (4) Therms	PGDC Rate 1_/ (5) \$/Therm	PGDC Revenue (6=4x5) \$	Purchased Gas Cost Revenue (7=3+6) \$
1	October - 2020	9,852,674	0.22236	2,190,841	13,581,994	0.12711	1,726,407	3,917,248
2	November	21,552,033	0.22236	4,792,310	30,860,682	0.12711	3,922,701	8,715,011
3	December	47,722,335	0.22236	10,611,538	67,435,749	0.12711	8,571,758	19,183,296
4	January - 2021	64,656,792	0.19958	12,903,879	91,235,278	0.17119	15,618,567	28,522,446
5	February	64,790,167	0.17679	11,454,254	91,180,642	0.21527	19,628,457	31,082,711
6	March	53,327,882	0.17679	9,427,836	75,479,282	0.21527	16,248,425	25,676,261
7	April	33,868,249	0.17679	5,987,568	48,178,423	0.21527	10,371,369	16,358,937
8	May	16,274,680	0.17679	2,877,201	22,957,813	0.21527	4,942,128	7,819,329
9	June	8,352,965	0.17679	1,476,721	11,676,437	0.21527	2,513,587	3,990,308
10	July	5,648,208	0.17679	998,547	7,797,009	0.21527	1,678,462	2,677,009
11	August	5,248,685	0.17679	927,915	7,205,087	0.21527	1,551,039	2,478,954
12	September	<u>5,558,186</u>	0.17679	<u>982,632</u>	<u>7,635,353</u>	0.21527	<u>1,643,662</u>	<u>2,626,294</u>
13	Total	336,852,856		64,631,242	475,223,749		88,416,562	153,047,804

1_ / Excludes refunds and experienced over/undercollections

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF PROJECTED SALES QUANTITIES AND REVENUES FOR THE PERIOD
SALES AT STANDBY RATE
OCTOBER, 2020 THROUGH SEPTEMBER, 2021

Line No.	Month	Daily Purchased Gas Demand Quantity (1) Therms	Daily Gas Demand Rate (2) \$/Therm	Daily Purchased Gas Demand Revenue (3=1x2) \$
1	October - 2020	53,030	0.75043	39,795
2	November	53,030	0.75043	39,795
3	December	53,030	0.75043	39,795
4	January - 2021	53,030	1.14481	60,709
5	February	53,030	1.14481	60,709
6	March	53,030	1.14481	60,709
7	April	53,030	1.14481	60,709
8	May	53,030	1.14481	60,709
9	June	53,030	1.14481	60,709
10	July	53,030	1.14481	60,709
11	August	53,030	1.14481	60,709
12	September	<u>53,030</u>	1.14481	<u>60,709</u>
13	Total	636,360		665,769

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF PROJECTED SALES QUANTITIES AND REVENUES FOR THE PERIOD
SALES AT BANKING AND BALANCING RATES
OCTOBER, 2020 THROUGH SEPTEMBER, 2021

Line No.	Month	Lg. Quantity GDS			Sm. Quantity GDS			Total Trans. Revenue
		Deliveries (1) Therms	Rate (2) \$/Therm	Revenue (3=1x2) \$	Deliveries (4) Therms	Rate (5) \$/Therm	Revenue (6=4x5) \$	Revenue (7=3+6) \$
1	October - 2020	0	0.00226	0	0	0.00697	0	0
2	November	0	0.00226	0	0	0.00697	0	0
3	December	0	0.00226	0	0	0.00697	0	0
4	January - 2021	0	0.00226	0	0	0.00697	0	0
5	February	0	0.00226	0	0	0.00697	0	0
6	March	0	0.00226	0	0	0.00697	0	0
7	April	0	0.00226	0	0	0.00697	0	0
8	May	0	0.00226	0	0	0.00697	0	0
9	June	0	0.00226	0	0	0.00697	0	0
10	July	0	0.00226	0	0	0.00697	0	0
11	August	0	0.00226	0	0	0.00697	0	0
12	September	<u>0</u>	<u>0.00226</u>	<u>0</u>	<u>0</u>	<u>0.00697</u>	<u>0</u>	<u>0</u>
13	Total	0		0	0		0	0

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF PROJECTED TOTAL OVER/UNDERCOLLECTION
FOR THE 2020 1307(f) PERIOD
OCTOBER, 2020 THROUGH SEPTEMBER, 2021

Line No.	Month	Commodity Recoveries PGCC Revenue (1) \$	Total Commodity Cost of Gas 1_ / (2) \$	Commodity Over/ (Under) collection (3=1-2) \$	Demand Recoveries PGDC Revenue (4) \$	Total Demand Cost of Gas 1_ / (5) \$	Demand Over/ (Under) collection (6=4-5) \$	Total Over/ (Under) collection (7=3+6) \$
1	October - 2020	2,190,841	2,902,189 2_ /	(711,348)	1,766,202	5,789,207	(4,023,005)	(4,734,352)
2	November	4,792,310	6,769,812 2_ /	(1,977,502)	3,962,496	5,952,207	(1,989,711)	(3,967,212)
3	December	10,611,538	12,530,633 2_ /	(1,919,095)	8,611,553	6,001,737	2,609,816	690,722
4	January - 2021	12,903,879	13,868,366	(964,487)	15,679,276	6,006,160	9,673,116	8,708,629
5	February	11,454,254	11,826,960	(372,706)	19,689,166	10,945,288	8,743,878	8,371,172
6	March	9,427,836	8,952,985	474,851	16,309,134	10,945,288	5,363,846	5,838,698
7	April	5,987,568	4,702,476	1,285,092	10,432,078	7,953,872	2,478,206	3,763,299
8	May	2,877,201	2,050,381	826,820	5,002,837	7,857,872	(2,855,035)	(2,028,215)
9	June	1,476,721	902,955	573,766	2,574,296	7,857,872	(5,283,576)	(4,709,810)
10	July	998,547	737,186	261,361	1,739,171	7,857,872	(6,118,701)	(5,857,340)
11	August	927,915	660,212	267,703	1,611,748	7,857,872	(6,246,124)	(5,978,420)
12	September	<u>982,632</u>	<u>1,048,684</u>	<u>(66,052)</u>	<u>1,704,371</u>	<u>7,857,872</u>	<u>(6,153,501)</u>	<u>(6,219,552)</u>
13	Total	64,631,242	66,952,838	(2,321,597)	89,082,331	92,883,119	(3,800,788)	(6,122,383)

1_ / Refer to Exhibit 1-B, Schedule No. 1.

2_ / Projected over/under includes corrected Equitrans Commodity costs for October through December on Exhibit 1-B, Schedule 10, Sheet 1. In the October 1, 2020 PGC Filing the injection and withdrawal signs were reversed.

Columbia Gas of Pennsylvania, Inc.
Capacity Assignment Factor
Assignment of FT Only

Purchased Gas Demand Charge (PGDC) Paid By the CHOICE Customer
Rates Based on Projected Costs For 12 Months Ending September, 2021

\$60,885,476	1. Projected Demand Costs Oct. 2020 through Sept. 2021 (Exh. 1-B, Sch. 1 from Oct. 2020 PGC)
(728,511)	1a. Less Purchased Gas Demand Costs Recovered Under Rate SS (Exhibit 1-A, Schedule 1, Sheet 6)
0	1b. Less Purchased Gas Demand Allocated to Rates LTS, STS, SGS-TS, and MLS
5,818,521	1c. Experienced Demand Net Under/(Over) Collection (Exhibit No. 1-E)
<u>\$65,975,486</u>	2. Total Adjusted Demand Costs per 1307(f) Filing (1) + (1a) + (1b) + (1c)
\$124.84 per Dth	3. Unit FT Demand Charge Per Dth of TCO/DTI capacity the marketer would pay Gulf and TCO. (Exhibit 1-A, Schedule 3, Sheet 2)
47,522 MMDth	4. Projected Sales & Choice Requirements for 12 billing periods of October, 2020 through September, 2021
48,392 MMDth	5. Projected Sales & Choice Requirements 12 months ended September 2021, including Unaccounted For @ 1.8%
21,755 MMDth	6. Annual Injections and Withdrawals, Normal Weather
1 Dth	7a. Quantity Delivered to the Customer
<u>1.8%</u>	7b. Unaccounted-for & Co. Use Factor from Volume Balancing System
1.0183 Dth	7c. Quantity Delivered to the City Gate. (7a)/(1-7b)
\$1.3882 per Dth	8. Unit Demand Charge: (2) / (4)
\$0.0063	9a. Quarterly Purchased Gas Demand Adjustment (Jan. 1, 2021 Filing, Schedule 1, Sheet 2)
\$0.8806	9b. Quarterly Purchased Gas Demand Adjustment (Jan. 1, 2021 Filing, Schedule 1, Sheet 4)
<u>\$2.2751</u>	10. Net Unit Demand Charge (8) + (9a) + (9b)
(\$0.0492) per Dth	11. OSS and Capacity Release Credit
0.0028 Dth	12. Average Daily FT Delivery: (7c) / 365 days
\$0.3496 per Dth	13. Annual Demand Charge for the Assigned FT Capacity payable to the pipeline(s): (3) X (12)
\$1.0386 per Dth	14. Annual Demand Charge for other capacity that CPA retains (8) - (13)
0.4578 Dth	15. Quantity Injected and Withdrawn to Deliver 1 Dth to the Customer: (6) / (4)
\$0.0070	14a. Injection Charge @ \$0.0153/Dth
\$0.0049	14b. FSS Shrinkage @ 0.49% for gas at \$2.1633/Dth
\$0.0070	14c. Withdrawal Charge @ \$0.0153/Dth
\$0.0077	14d. SST Commodity Charge @ \$0.0169/Dth
<u>\$0.0167</u>	14e. SST retention @ 1.686% for gas at \$2.1633/Dth
<u>\$0.0433</u> per Dth	16f. Total Annual Variable Storage Costs
\$0.3496 per Dth	17. Credit to Purchased Gas Demand Charge for the CHOICE Customer:
(\$0.0433) per Dth	17a. For Demand Cost Paid to Pipelines: = (13)
<u>\$0.3063</u> per Dth	17b. Less Storage Costs: = (16f)
<u>\$0.03063</u> per Therm	17c. Net Credit: (17a) + (17b)
	17d. Per Therm: (17c)/10 - Capacity Assignment Factor
<u>\$1.9196</u> per Dth	18. Purchased Gas Demand Charge Paid By the CHOICE Customer: (10)+(11) - (17c)
<u>\$0.19196</u> per Therm	19. Per Therm: (18)/10

Columbia Gas of Pennsylvania, Inc. (CPA)
 CPA Capacity Assignment (PCA): Assignment of FT Capacity Only
 CPA Capacity on TCO and DTI. Cost of the Capacity Allocated to Marketers.

	<u>TCO</u> FT <u>Capacity</u>	<u>DTI</u> FT <u>Capacity</u>	<u>Total:</u> TCO and DTI
1. <u>CPA FT Capacity on TCO and DTI</u>			
2. CPA Contract: Dth/d	90,336	5,000 1/	
3. <u>Projected Demand Costs</u>			
4. Annual Demand Cost 2/	\$11,650,905	\$250,350	
4a. Monthly Billing Determinants	90,336	5,000	
4b. Annual Demand Charge (4/ 4a)	\$128.97	\$50.07	
4c. Monthly Demand Charge (4b / number of months)	\$10.748	\$4.173	
<u>Allocation Capacity and Costs.</u>			
5. Retained Volume:	1.0000	1.0000	
6. Number of Months	12	12	
7. Capacity Allocation	0.9476 3/	0.0524 4/	
8. Unit Annual Cost of City Gate Capacity: (4c) x (5) x (6) x (7) \$/Dth	\$122.22	\$2.63	<u><u>\$124.84</u></u>

Notes:

- 1/ Non-storage DTI FT capacity
 2/ Projected demand costs for the period 12 months ended September, 2021.
 3/ $90,336 / (90,336 + 5,000) = 0.9476$
 4/ $5,000 / (90,336 + 5,000) = 0.0524$

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Costs
For the Period October 2020 Through September 2021

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
1	Total Quantity													
2	DTH	1,509,000	3,716,000	6,022,000	7,625,000	6,439,000	5,066,000	2,137,000	861,000	308,000	229,000	195,000	375,000	34,482,000
3	Total Demand Costs	5,789,207	5,952,207	6,001,737	6,006,160	10,945,288	10,945,288	7,953,872	7,857,872	7,857,872	7,857,872	7,857,872	7,857,872	92,883,119
4	Total Commodity Costs	<u>2,902,189</u>	<u>6,769,812</u>	<u>12,530,633</u>	<u>13,868,366</u>	<u>11,826,960</u>	<u>8,952,985</u>	<u>4,702,476</u>	<u>2,050,381</u>	<u>902,955</u>	<u>737,186</u>	<u>660,212</u>	<u>1,048,684</u>	<u>66,952,838</u>
5	Total Estimated Gas Costs (Line 5 = Line 3 + Line 4)	<u>8,691,396</u>	<u>12,722,019</u>	<u>18,532,370</u>	<u>19,874,526</u>	<u>22,772,248</u>	<u>19,898,273</u>	<u>12,656,348</u>	<u>9,908,253</u>	<u>8,760,827</u>	<u>8,595,058</u>	<u>8,518,084</u>	<u>8,906,556</u>	<u>159,835,957</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Costs
Demand Costs

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	Columbia Gas Transmission	5,048,049	5,048,049	5,048,049	5,052,836	9,991,964	9,991,964	7,211,360	7,211,360	7,211,360	7,211,360	7,211,360	7,211,360	83,449,071
2	Texas Eastern Transmission	240,593	240,593	290,123	290,123	290,123	290,123	240,593	240,593	240,593	240,593	240,593	240,593	3,085,236
3	Dominion Transmission	172,269	201,443	201,443	201,685	201,685	201,685	172,909	172,909	172,909	172,909	172,909	172,909	2,217,664
4	Tennessee Gas	112,200	112,200	112,200	111,594	111,594	111,594	111,594	111,594	111,594	111,594	111,594	111,594	1,340,946
5	National Fuel Gas	19,376	19,376	19,376	19,376	19,376	19,376	19,376	19,376	19,376	19,376	19,376	19,376	232,512
6	Equitrans	221,720	355,546	355,546	355,546	355,546	355,546	223,040	127,040	127,040	127,040	127,040	127,040	2,857,690
7	Less Elective Balancing Svc. Credit	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	300,000
8	Total Demand Cost	<u>5,789,207</u>	<u>5,952,207</u>	<u>6,001,737</u>	<u>6,006,160</u>	<u>10,945,288</u>	<u>10,945,288</u>	<u>7,953,872</u>	<u>7,857,872</u>	<u>7,857,872</u>	<u>7,857,872</u>	<u>7,857,872</u>	<u>7,857,872</u>	<u>92,883,119</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Costs
Commodity Costs

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	Term	1,043,670	1,407,958	3,151,260	2,059,527	1,988,508	1,173,098	1,442,889	1,614,800	1,687,186	1,766,765	1,753,192	1,524,533	20,613,386
2	Spot	3,373,141	0	2,833,973	3,578,314	3,250,204	1,194,250	5,913,107	8,397,801	7,203,301	7,121,583	6,063,660	4,935,646	53,864,980
3	Local	37,378	51,429	63,140	46,662	43,160	46,904	44,510	45,430	43,691	46,486	46,354	41,622	556,766
4	Storage	(1,552,000)	5,310,425	6,482,260	8,183,863	6,545,088	6,538,733	(2,698,030)	(8,007,650)	(8,031,223)	(8,197,648)	(7,202,994)	(5,453,117)	(8,082,294)
5	Total Commodity Cost	<u>2,902,189</u>	<u>6,769,812</u>	<u>12,530,633</u>	<u>13,868,366</u>	<u>11,826,960</u>	<u>8,952,985</u>	<u>4,702,476</u>	<u>2,050,381</u>	<u>902,955</u>	<u>737,186</u>	<u>660,212</u>	<u>1,048,684</u>	<u>66,952,838</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Costs
Commodity Quantities

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
1	<u>Term</u> Total-DTH	709,000	579,000	1,017,000	902,000	859,000	531,000	673,000	791,000	820,000	857,000	859,000	796,000	9,393,000
2	<u>Spot</u> Total-DTH	1,987,000	0	926,000	1,594,000	1,427,000	510,000	2,704,000	3,943,000	3,375,000	3,301,000	2,830,000	2,447,000	25,044,000
3	<u>Local</u> Total-DTH	22,000	21,000	22,000	22,000	20,000	22,000	21,000	22,000	21,000	22,000	22,000	21,000	258,000
4	<u>Storage</u> Total-DTH	(1,209,000)	3,116,000	4,057,000	5,107,000	4,133,000	4,003,000	(1,261,000)	(3,895,000)	(3,908,000)	(3,951,000)	(3,516,000)	(2,889,000)	(213,000)
5	<u>Total - All Sources</u> Total-DTH	<u>1,509,000</u>	<u>3,716,000</u>	<u>6,022,000</u>	<u>7,625,000</u>	<u>6,439,000</u>	<u>5,066,000</u>	<u>2,137,000</u>	<u>861,000</u>	<u>308,000</u>	<u>229,000</u>	<u>195,000</u>	<u>375,000</u>	<u>34,482,000</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Demand Costs
Columbia Gas Transmission Corporation

Line No.	Description	2020			2021									Total \$
		October \$	November \$	December \$	January \$	February (2) \$	March (2) \$	April (2) \$	May (2) \$	June (2) \$	July (2) \$	August (2) \$	September (2) \$	
<u>Columbia Gas Transmission</u>														
<u>FTS</u>														
1	Billing Determinant-Dth	95,551	95,551	95,551	95,551	95,551	95,551	95,551	95,551	95,551	95,551	95,551	95,551	
2	Less Capacity Release (1)	5,215	5,215	5,215	5,215	5,215	5,215	5,215	5,215	5,215	5,215	5,215	5,215	
3	Net Billing Determinant - Dth	90,336	90,336	90,336	90,336	90,336	90,336	90,336	90,336	90,336	90,336	90,336	90,336	
4	Demand Rate	7.0510	7.0510	7.0510	7.0600	12.5950	12.5950	12.5950	12.5950	12.5950	12.5950	12.5950	12.5950	
5	Demand Cost	636,959	636,959	636,959	637,772	1,137,782	1,137,782	1,137,782	1,137,782	1,137,782	1,137,782	1,137,782	1,137,782	11,650,905
<u>FSS-Reservation</u>														
6	Billing Determinant-Dth	441,576	441,576	441,576	441,576	441,576	441,576	441,576	441,576	441,576	441,576	441,576	441,576	
7	Demand Rate	1.5010	1.5010	1.5010	1.5010	3.7300	3.7300	3.7300	3.7300	3.7300	3.7300	3.7300	3.7300	
8	Demand Cost	662,806	662,806	662,806	662,806	1,647,078	1,647,078	1,647,078	1,647,078	1,647,078	1,647,078	1,647,078	1,647,078	15,827,848
<u>FSS-Capacity</u>														
9	Total-DTH	24,492,495	24,492,495	24,492,495	24,492,495	24,492,495	24,492,495	24,492,495	24,492,495	24,492,495	24,492,495	24,492,495	24,492,495	
10	Demand Rate	0.0288	0.0288	0.0288	0.0288	0.0672	0.0672	0.0672	0.0672	0.0672	0.0672	0.0672	0.0672	
11	Demand Cost	705,384	705,384	705,384	705,384	1,645,896	1,645,896	1,645,896	1,645,896	1,645,896	1,645,896	1,645,896	1,645,896	15,988,704
<u>SST</u>														
12	Billing Determinant-Dth	441,576	441,576	441,576	441,576	441,576	441,576	220,788	220,788	220,788	220,788	220,788	220,788	
13	Demand Rate	6.8910	6.8910	6.8910	6.9000	12.5940	12.5940	12.5940	12.5940	12.5940	12.5940	12.5940	12.5940	
14	Demand Cost	3,042,900	3,042,900	3,042,900	3,046,874	5,561,208	5,561,208	2,780,604	2,780,604	2,780,604	2,780,604	2,780,604	2,780,604	39,981,614
15	Total TCO Demand Cost	5,048,049	5,048,049	5,048,049	5,052,836	9,991,964	9,991,964	7,211,360	7,211,360	7,211,360	7,211,360	7,211,360	7,211,360	83,449,071

(1) Columbia has included in the application period a projection for the release of 5,215 Dth of capacity to be released at the applicable maximum rate to a large industrial customer on Columbia's system and not subject to recall.

(2) Rates per FERC Docket RP20-1060

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Demand Costs
Texas Eastern Transmission Corporation

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
<u>FT1-TCO Delmont</u>														
1	Billing Determinant-Dth	3,082	3,082	3,082	3,082	3,082	3,082	3,082	3,082	3,082	3,082	3,082	3,082	
2	Demand Rate	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	
3	Demand Cost	24,456	24,456	24,456	24,456	24,456	24,456	24,456	24,456	24,456	24,456	24,456	24,456	293,472
<u>FT1-Uniontown</u>														
4	Billing Determinant-Dth	11,753	11,753	11,753	11,753	11,753	11,753	11,753	11,753	11,753	11,753	11,753	11,753	
5	Demand Rate	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	7.9350	
6	Demand Cost	93,260	93,260	93,260	93,260	93,260	93,260	93,260	93,260	93,260	93,260	93,260	93,260	1,119,120
<u>CDS - Eagle/Rockwood</u>														
7	Billing Determinant-Dth	2,342	2,342	2,342	2,342	2,342	2,342	2,342	2,342	2,342	2,342	2,342	2,342	
8	Demand Rate	18.0333	18.0333	18.0333	18.0333	18.0333	18.0333	18.0333	18.0333	18.0333	18.0333	18.0333	18.0333	
9	Demand Cost	42,234	42,234	42,234	42,234	42,234	42,234	42,234	42,234	42,234	42,234	42,234	42,234	506,808
<u>CDS - Rockwood</u>														
10	Billing Determinant-Dth	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	
11	Demand Rate	15.5269	15.5269	15.5269	15.5269	15.5269	15.5269	15.5269	15.5269	15.5269	15.5269	15.5269	15.5269	
12	Demand Cost	77,635	77,635	77,635	77,635	77,635	77,635	77,635	77,635	77,635	77,635	77,635	77,635	931,620
<u>CDS - Chambersburg</u>														
13	Billing Determinant-Dth	158	158	158	158	158	158	158	158	158	158	158	158	
14	Demand Rate	18.0426	18.0426	18.0426	18.0426	18.0426	18.0426	18.0426	18.0426	18.0426	18.0426	18.0426	18.0426	
15	Demand Cost	2,851	2,851	2,851	2,851	2,851	2,851	2,851	2,851	2,851	2,851	2,851	2,851	34,212
<u>FT1-TCO @ Eagle Zone 3 Zone 3</u>														
16	Billing Determinant-Dth	0	0	10,000	10,000	10,000	10,000	0	0	0	0	0	0	
17	Demand Rate	0.0000	0.0000	4.9530	4.9530	4.9530	4.9530	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
18	Demand Cost	0	0	49,530	49,530	49,530	49,530	0	0	0	0	0	0	198,120
<u>FT1-MX</u>														
19	Billing Determinant-Dth	100	100	100	100	100	100	100	100	100	100	100	100	
20	Demand Rate	1.5710	1.5710	1.5710	1.5710	1.5710	1.5710	1.5710	1.5710	1.5710	1.5710	1.5710	1.5710	
21	Demand Cost	157	157	157	157	157	157	157	157	157	157	157	157	1,884
22	Total TETCO Demand Cost	240,593	240,593	290,123	290,123	290,123	290,123	240,593	240,593	240,593	240,593	240,593	240,593	3,085,236

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Demand Costs
Dominion Transmission

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
	<u>Dominion Transmission</u>													
	<u>GSS - Reservation</u>													
1	Billing Determinant-Dth	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	
2	Demand Rate	<u>1.8698</u>	<u>1.8698</u>	<u>1.8698</u>	<u>1.8716</u>									
3	Demand Cost	44,875	44,875	44,875	44,918	44,918	44,918	44,918	44,918	44,918	44,918	44,918	44,918	538,887
	<u>GSS - Capacity</u>													
4	Billing Determinant-Dth	1,871,176	1,871,176	1,871,176	1,871,176	1,871,176	1,871,176	1,871,176	1,871,176	1,871,176	1,871,176	1,871,176	1,871,176	
5	Demand Rate	<u>0.0145</u>												
6	Demand Cost	27,132	27,132	27,132	27,132	27,132	27,132	27,132	27,132	27,132	27,132	27,132	27,132	325,584
	<u>FTNN</u>													
7	Billing Determinant-Dth	0	6,000	6,000	6,000	6,000	6,000	0	0	0	0	0	0	
8	Total-DTH	<u>0.0000</u>	<u>4.1677</u>	<u>4.1677</u>	<u>4.1741</u>	<u>4.1741</u>	<u>4.1741</u>	<u>0.0000</u>	<u>0.0000</u>	<u>0.0000</u>	<u>0.0000</u>	<u>0.0000</u>	<u>0.0000</u>	
9	Demand Cost	0	25,006	25,006	25,045	25,045	25,045	0	0	0	0	0	0	125,147
	<u>FT</u>													
10	Billing Determinant-Dth	24,057	25,057	25,057	25,057	25,057	25,057	24,163	24,163	24,163	24,163	24,163	24,163	
11	Total-DTH	<u>4.1677</u>	<u>4.1677</u>	<u>4.1677</u>	<u>4.1741</u>									
12	Demand Cost	100,262	104,430	104,430	104,590	104,590	104,590	100,859	100,859	100,859	100,859	100,859	100,859	1,228,046
13	Total DTI Demand Cost	<u>172,269</u>	<u>201,443</u>	<u>201,443</u>	<u>201,685</u>	<u>201,685</u>	<u>201,685</u>	<u>172,909</u>	<u>172,909</u>	<u>172,909</u>	<u>172,909</u>	<u>172,909</u>	<u>172,909</u>	<u>2,217,664</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Demand Costs
Tennessee Gas Pipeline Company

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
<u>Tennessee Gas FT-A (Direct) New Castle - 219 Line</u>														
1	Billing Determinant-Dth	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	
2	Demand Rate	4.7650	4.7650	4.7650	4.7650	4.7650	4.7650	4.7650	4.7650	4.7650	4.7650	4.7650	4.7650	
3	Demand Cost	76,240	76,240	76,240	76,240	76,240	76,240	76,240	76,240	76,240	76,240	76,240	76,240	914,880
<u>Tennessee Gas FT-A (Direct) Pitt Terminal - 219 Line</u>														
4	Billing Determinant-Dth	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	7,600	
5	Demand Rate	4.7316	4.7316	4.7316	4.6518	4.6518	4.6518	4.6518	4.6518	4.6518	4.6518	4.6518	4.6518	
6	Demand Cost	35,960	35,960	35,960	35,354	35,354	35,354	35,354	35,354	35,354	35,354	35,354	35,354	426,066
7	Total Tennessee Gas Demand Cost	<u>112,200</u>	<u>112,200</u>	<u>112,200</u>	<u>111,594</u>	<u>1,340,946</u>								

COLUMBIA GAS OF PENNSYLVANIA, INC.
 Summary of Total Estimated Purchased Gas Demand Costs
National Fuel Gas Supply

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
	<u>National</u>													
1	Billing Determinant-Dth	4,304	4,304	4,304	4,304	4,304	4,304	4,304	4,304	4,304	4,304	4,304	4,304	
2	Demand Rate	4.5019	4.5019	4.5019	4.5019	4.5019	4.5019	4.5019	4.5019	4.5019	4.5019	4.5019	4.5019	
3	Demand Cost	19,376	19,376	19,376	19,376	19,376	19,376	19,376	19,376	19,376	19,376	19,376	19,376	232,512
4	Total National Fuel Demand Cost	<u>19,376</u>	<u>232,512</u>											

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Demand Costs
Equitrans

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
	<u>Equitrans</u>													
	<u>FTS</u>													
1	Billing Determinant-Dth	27,715	27,932	27,932	27,932	27,932	27,932	27,880	15,880	15,880	15,880	15,880	15,880	
2	Demand Rate	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	
3	Demand Cost	221,720	223,456	223,456	223,456	223,456	223,456	223,040	127,040	127,040	127,040	127,040	127,040	2,197,240
	<u>FTS</u>													
4	Billing Determinant-Dth	0	18,870	18,870	18,870	18,870	18,870	0	0	0	0	0	0	
5	Demand Rate	0.0000	7.0000	7.0000	7.0000	7.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
6	Demand Cost	0	132,090	132,090	132,090	132,090	132,090	0	0	0	0	0	0	660,450
7	Total Equitrans Demand Cost	221,720	355,546	355,546	355,546	355,546	355,546	223,040	127,040	127,040	127,040	127,040	127,040	2,857,690

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Commodity Costs
Term Contracts

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
<u>TERM</u>														
<u>COLUMBIA TRANSMISSION</u>														
4	Quantity - DTH	0	0	311,000	311,000	281,000	0	0	0	0	0	0	0	903,000
5	Rate-\$/DTH	0.0000	0.0000	2.9385	2.1767	2.2119	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
6	Cost-\$	0	0	913,874	676,954	621,544	0	0	0	0	0	0	0	2,212,372
<u>TEXAS EASTERN</u>														
7	Quantity - DTH	667,000	667,000	692,000	667,000	603,000	665,000	646,000	666,000	642,000	663,000	663,000	643,000	7,884,000
8	Rate-\$/DTH	1.4138	2.4271	2.8764	2.1609	2.1966	2.1800	2.1473	2.0372	2.0557	2.0608	2.0341	1.8798	
9	Cost-\$	943,005	1,618,876	1,990,469	1,441,320	1,324,550	1,449,700	1,387,156	1,356,775	1,319,759	1,366,310	1,348,608	1,208,711	16,755,239
<u>TENNESSEE GAS PIPELINE</u>														
10	Quantity - DTH	0	0	228,000	228,000	206,000	0	0	0	0	0	0	0	662,000
11	Rate-\$/DTH	0.0000	0.0000	3.3326	2.4946	2.5206	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
12	Cost-\$	0	0	759,833	568,769	519,244	0	0	0	0	0	0	0	1,847,846
<u>CAP</u>														
13	Quantity - DTH	233,000	225,000	233,000	238,000	215,000	238,000	231,000	238,000	231,000	238,000	238,000	231,000	2,789,000
14	Rate-\$/DTH	2.3968	2.3968	2.3968	2.0642	2.0642	2.0642	2.0642	2.0642	2.0642	2.0642	2.0642	2.0642	
15	Cost-\$	558,454	539,280	558,454	491,280	443,803	491,280	476,830	491,280	476,830	491,280	491,280	476,830	5,986,881
<u>LESS CAP BILLING</u>														
16	Quantity - DTH	(191,000)	(313,000)	(447,000)	(542,000)	(446,000)	(372,000)	(204,000)	(113,000)	(53,000)	(44,000)	(42,000)	(78,000)	(2,845,000)
17	Rate-\$/DTH	2.3968	2.3968	2.3968	2.0642	2.0642	2.0642	2.0642	2.0642	2.0642	2.0642	2.0642	2.0642	
18	Cost-\$	(457,789)	(750,198)	(1,071,370)	(1,118,796)	(920,633)	(767,882)	(421,097)	(233,255)	(109,403)	(90,825)	(86,696)	(161,008)	(6,188,952)
19	Total - DTH	709,000	579,000	1,017,000	902,000	859,000	531,000	673,000	791,000	820,000	857,000	859,000	796,000	9,393,000
20	Total Term Commodity													
21	Cost-\$	1,043,670	1,407,958	3,151,260	2,059,527	1,988,508	1,173,098	1,442,889	1,614,800	1,687,186	1,766,765	1,753,192	1,524,533	20,613,386

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Commodity Costs
Spot and Local Purchases

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
	<u>SPOT</u>													
	<u>Base</u>													
1	Quantity - DTH	1,677,000	0	907,000	910,000	823,000	389,000	2,413,000	3,943,000	3,145,000	2,991,000	2,520,000	2,147,000	21,865,000
2	Rate-\$/DTH	1.6884	0.0000	3.0630	2.2961	2.3259	2.3159	2.1885	2.1298	2.1344	2.1565	2.1405	2.0148	
3	Cost-\$	2,831,447	0	2,778,141	2,089,451	1,914,216	900,885	5,280,851	8,397,801	6,712,688	6,450,092	5,394,060	4,325,776	47,075,408
	<u>Swing</u>													
4	Quantity - DTH	310,000	0	19,000	684,000	604,000	121,000	291,000	0	230,000	310,000	310,000	300,000	3,179,000
5	Rate-\$/DTH	1.7474	0.0000	2.9385	2.1767	2.2119	2.4245	2.1727	0.0000	2.1331	2.1661	2.1600	2.0329	
6	Cost-\$	541,694	0	55,832	1,488,863	1,335,988	293,365	632,256	0	490,613	671,491	669,600	609,870	6,789,572
7	Total - DTH	1,987,000	0	926,000	1,594,000	1,427,000	510,000	2,704,000	3,943,000	3,375,000	3,301,000	2,830,000	2,447,000	25,044,000
8	Total Spot													
9	Commodity Cost - \$	3,373,141	0	2,833,973	3,578,314	3,250,204	1,194,250	5,913,107	8,397,801	7,203,301	7,121,583	6,063,660	4,935,646	53,864,980
	<u>Local Direct</u>													
10	Quantity - DTH	22,000	21,000	22,000	22,000	20,000	22,000	21,000	22,000	21,000	22,000	22,000	21,000	258,000
11	Rate-\$/DTH	1.6990	2.4490	2.8700	2.1210	2.1580	2.1320	2.1195	2.0650	2.0805	2.1130	2.1070	1.9820	
12	Cost-\$	37,378	51,429	63,140	46,662	43,160	46,904	44,510	45,430	43,691	46,486	46,354	41,622	556,766
13	Total - DTH	22,000	21,000	22,000	22,000	20,000	22,000	21,000	22,000	21,000	22,000	22,000	21,000	258,000
14	Total Local													
15	Commodity Cost - \$	37,378	51,429	63,140	46,662	43,160	46,904	44,510	45,430	43,691	46,486	46,354	41,622	556,766

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Commodity Costs

Storage

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
<u>DOMINION TRANSMISSION - GSS</u>														
1	Injections - DTH	(230,000)	0	0	0	0	0	(211,000)	(240,000)	(202,000)	(233,000)	(233,000)	(238,000)	(1,587,000)
2	Injection Rate - \$/Dth	1.6399	2.4220	3.0704	2.2444	2.2796	2.2574	2.1788	2.1177	2.1237	2.1426	2.1246	1.9971	
3	Withdrawals - DTH	0	138,000	472,000	528,000	317,000	253,000	0	0	0	0	0	0	1,708,000
4	Withdrawal Rate - \$/Dth	1.7131	1.7131	1.7131	1.7019	1.7019	1.7019	1.8234	1.9597	2.0131	2.0455	2.0601	2.0517	
5	Cost-\$	(377,177)	236,408	808,583	898,603	539,502	430,581	(459,727)	(508,248)	(428,987)	(499,226)	(495,032)	(475,310)	(330,030)
6	Injection Rate \$/Dth	0.0268	0.0268	0.0268	0.0268	0.0268	0.0268	0.0268	0.0268	0.0268	0.0268	0.0268	0.0268	
7	Withdrawal Rate \$/Dth	0.0140	0.0140	0.0140	0.0140	0.0140	0.0140	0.0140	0.0140	0.0140	0.0140	0.0140	0.0140	
8	Cost - \$	6,164	1,932	6,608	7,392	4,438	3,542	5,655	6,432	5,414	6,244	6,244	6,378	66,443
<u>EQUITRANS - SS</u>														
9	Injections - DTH	(310,000)	0	0	0	0	0	0	0	(230,000)	(310,000)	(310,000)	(300,000)	(1,460,000)
10	Injection Rate - \$/Dth	1.6399	2.4220	3.0704	2.2444	2.2796	2.2574	2.1788	2.1177	2.1237	2.1426	2.1246	1.9971	
11	Withdrawals - DTH	0	574,000	324,000	304,000	400,000	200,000	0	0	0	0	0	0	1,802,000
12	Withdrawal Rate - \$/Dth	1.7131	1.7131	1.7131	1.7019	1.7019	1.7019	1.8234	1.9597	2.0131	2.0455	2.0601	2.0517	
13	Cost-\$	(508,369)	983,319	555,044	517,378	680,760	340,380	0	0	(488,451)	(664,206)	(658,626)	(599,130)	158,099
14	Inject/With. Rate \$/DTH	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
15	Cost - \$	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>TCO - FSS</u>														
16	Injections - DTH	(1,102,000)	0	0	0	0	0	(1,090,000)	(4,164,000)	(4,161,000)	(4,161,000)	(3,725,000)	(3,025,000)	(21,428,000)
17	Injection Rate - \$/Dth	1.6399	2.4220	3.0704	2.2444	2.2796	2.2574	2.1788	2.1177	2.1237	2.1426	2.1246	1.9971	
18	Withdrawals - DTH	0	2,552,000	4,029,000	5,450,000	4,478,000	4,241,000	0	0	0	0	0	0	20,750,000
19	Withdrawal Rate - \$/Dth	1.7131	1.7131	1.7131	1.7019	1.7019	1.7019	1.8234	1.9597	2.0131	2.0455	2.0601	2.0517	
20	Cost-\$	(1,807,170)	4,371,831	6,902,080	9,275,355	7,621,108	7,217,758	(2,374,892)	(8,818,103)	(8,836,716)	(8,915,359)	(7,914,135)	(6,041,228)	(9,319,471)
21	Inject/With. Rate \$/DTH	0.0153	0.0153	0.0153	0.0153	0.0153	0.0153	0.0153	0.0153	0.0153	0.0153	0.0153	0.0153	
22	Cost - \$	16,861	39,046	61,644	83,385	68,513	64,887	16,677	63,709	63,663	63,663	56,993	46,283	645,324
23	Quantity - DTH	(1,642,000)	3,264,000	4,825,000	6,282,000	5,195,000	4,694,000	(1,301,000)	(4,404,000)	(4,593,000)	(4,704,000)	(4,268,000)	(3,563,000)	(215,000)
24	Total Purchase Cost	(2,692,716)	5,591,558	8,265,707	10,691,336	8,841,370	7,988,719	(2,834,619)	(9,326,351)	(9,754,154)	(10,078,791)	(9,067,793)	(7,115,668)	(9,491,402)
25	Total Inject/With. Cost	23,025	40,978	68,252	90,777	72,951	68,429	22,332	70,141	69,077	69,907	63,237	52,661	711,767

* Includes corrected Equitrans injections and withdrawals for October through December. In the October 1, 2020 PGC Filing the signs were reversed.

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Commodity Costs
Storage Transportation Charges

Line No.	Description	2020			2021									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
<u>TCO - SST</u>														
1	Injections - DTH	(1,102,000)	0	0	0	0	0	(1,090,000)	(4,164,000)	(4,161,000)	(4,161,000)	(3,725,000)	(3,025,000)	(21,428,000)
2	Withdrawals - DTH	0	2,552,000	4,029,000	5,450,000	4,478,000	4,241,000	0	0	0	0	0	0	20,750,000
3	Trans. Chrg. \$/Dth	0.0193	0.0191	0.0191	0.0191	0.0169	0.0169	0.0169	0.0169	0.0169	0.0169	0.0169	0.0169	
4	Cost-\$	21,269	48,743	76,954	104,095	75,678	71,673	18,421	70,372	70,321	70,321	62,953	51,123	741,923
<u>DOMINION TRANSMISSION - GSS</u>														
5	Injections - DTH	(230,000)	0	0	0	0	0	(211,000)	(240,000)	(202,000)	(233,000)	(233,000)	(238,000)	(1,587,000)
6	Withdrawals - DTH	0	138,000	472,000	528,000	317,000	253,000	0	0	0	0	0	0	1,708,000
7	Rate-\$/DTH	0.0193	0.0173	0.0173	0.0153	0.0153	0.0153	0.0169	0.0169	0.0169	0.0169	0.0169	0.0169	
8	Cost-\$	4,439	2,387	8,166	8,078	4,850	3,871	3,566	4,056	3,414	3,938	3,938	4,022	54,725
<u>EQUITRANS - SS</u>														
9	Injections - DTH	(310,000)	0	0	0	0	0	0	0	(230,000)	(310,000)	(310,000)	(300,000)	(1,460,000)
10	Withdrawals - DTH	0	574,000	324,000	304,000	400,000	200,000	0	0	0	0	0	0	1,802,000
11	Rate-\$/DTH	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
12	Cost-\$	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Total Storage - DTH	(1,642,000)	3,264,000	4,825,000	6,282,000	5,195,000	4,694,000	(1,301,000)	(4,404,000)	(4,593,000)	(4,704,000)	(4,268,000)	(3,563,000)	(215,000)
14	Total EUB - DTH	433,000	(148,000)	(768,000)	(1,175,000)	(1,062,000)	(691,000)	40,000	509,000	685,000	753,000	752,000	674,000	2,000
15	Total DTH	(1,209,000)	3,116,000	4,057,000	5,107,000	4,133,000	4,003,000	(1,261,000)	(3,895,000)	(3,908,000)	(3,951,000)	(3,516,000)	(2,889,000)	(213,000)
16	Total Purchase Cost	(2,692,716)	5,591,558	8,265,707	10,691,336	8,841,370	7,988,719	(2,834,619)	(9,326,351)	(9,754,154)	(10,078,791)	(9,067,793)	(7,115,668)	(9,491,402)
17	Total Choice Bank Cost	1,091,983	(373,241)	(1,936,819)	(2,710,423)	(2,449,761)	(1,593,959)	92,270	1,174,132	1,580,119	1,736,977	1,734,671	1,554,745	(99,307)
18	Total Inject/With. Cost	23,025	40,978	68,252	90,777	72,951	68,429	22,332	70,141	69,077	69,907	63,237	52,661	711,767
19	Total Transp. Charge	25,708	51,130	85,120	112,173	80,528	75,544	21,987	74,428	73,735	74,259	66,891	55,145	796,648
20	Total Storage Cost	(1,552,000)	5,310,425	6,482,260	8,183,863	6,545,088	6,538,733	(2,698,030)	(8,007,650)	(8,031,223)	(8,197,648)	(7,202,994)	(5,453,117)	(8,082,294)

COLUMBIA GAS OF PENNSYLVANIA, INC.
STATEMENT OF EXPERIENCED NET OVER (UNDER) COLLECTION
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

<u>Line No.</u>	<u>Description</u>	<u>Total Demand</u> \$	<u>Total Commodity</u> \$	<u>Total Amount</u> \$
1	Remaining Balance - Over (Under) Collection from 2019 - 1307(f)			
2	(See Schedule 2a and 2b)	(291,878)	(170,300)	(462,178)
3	Unified Credit for Off-system Sales and Capacity Release for the period			
4	October, 2019 through September, 2020 (See Schedule 3 herein)	(2,437,312)	0	(2,437,312)
5	Over (Under) Collection for the period October, 2019 through			
6	September 2020 (See Schedule 4 herein)	(3,147,768)	4,806,564	1,658,796
7	Interest on Over (Under) Collection for the period October, 2019. through			
8	September, 2020 (See Schedule 4 herein)	6,486	166,204	172,690
9	Penalty Credits/Supplier Refunds Received October, 2019 through			
10	September, 2020 (See Schedule 5 herein)	<u>51,951</u>	<u>0</u>	<u>51,951</u>
11	TOTAL EXPERIENCED NET OVER (UNDER) COLLECTION	<u>(5,818,521)</u>	<u>4,802,468</u>	<u>(1,016,053)</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.
RECONCILIATION OF COMMODITY COST OF GAS
FROM 2019 - 1307(f)
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

<u>COMMODITY</u>					
Line No.	Month	Sales Subject to Commodity E-Factor Therm	Rate \$/ Therm	Amount Recovered \$	Net Commodity Over (Under) Collection \$
1	True-up of Net Commodity Costs Included in 2019 1307(f):				2,588,951
2	Beginning Balance Adjustment				(165,607) 2_ /
3	October, 2019	4,487,543	(0.00811)	(36,394)	
4		4,182,949	(0.00388)	(16,230)	
5	November	27,501,225	(0.00811)	(223,035)	
6		106,216	(0.00388)	(412)	
7	December	58,677,899	(0.00811)	(475,878)	
8	January, 2020 1_ /	30,926,965	(0.00680)	(210,303)	
9		33,409,779	(0.00811)	(270,953)	
10	February	60,506,846	(0.00680)	(411,447)	
11		(144,188)	(0.00811)	1,169	
12	March	51,563,020	(0.00680)	(350,629)	
13	April	31,585,947	(0.00680)	(214,784)	
14	May	26,848,214	(0.00680)	(182,568)	
15	June	11,232,132	(0.00680)	(76,378)	
16	July	6,405,915	(0.00680)	(43,560)	
17	August	5,682,943	(0.00680)	(38,644)	
18	September	6,411,537	(0.00680)	(43,598)	
19	Amount Collected/(Passed Back) during 2019 1307(f) Period				<u>(2,593,644)</u>
20	Remaining Balance to be Collected in the 2020 1307(f)				<u><u>(170,300)</u></u>

1_ / Rate in effect January 1, 2020.

2_ / Represents a commodity interest adjustment for the period of February 2019 to September 2019 decreasing the interest rate from 5.50% to the prime rate as of January 31, 2020 of 4.75%. Please refer to Exh. 1-E, Schedule 2a, Sheet 2 for a detailed calculation for this adjustment.

COLUMBIA GAS OF PENNSYLVANIA, INC.
STATEMENT OF COMMODITY OVER/(UNDER) COLLECTIONS FROM GAS COST RATE
FEBRUARY, 2019 THROUGH SEPTEMBER, 2020

Line No.	Month	Total Commodity Purchase Gas Cost Recovery (1)	Total Cost of Fuel (2)	Total Over (Under) Collection (3 = 1 - 2)	Number of Months (4)	Rate (5)	Over (Under) Collection Interest (6=3x4x5)	Rate (7)	Over (Under) Collection Interest (8=3x4x7)	Interest Difference (9=8-6)
1	February, 2019	24,387,395	17,023,909	7,363,487	14 / 12	5.50%	472,490	4.75%	408,060	(64,430)
2	March	20,596,583	15,643,460	4,953,123	13 / 12	5.50%	295,124	4.75%	254,879	(40,245)
3	April	11,628,859	5,716,080	5,912,779	12 / 12	5.50%	325,203	4.75%	280,857	(44,346)
4	May	4,416,541	2,692,046	1,724,495	11 / 12	5.50%	86,943	4.75%	75,087	(11,856)
5	June	2,557,349	2,053,585	503,764	10 / 12	5.50%	23,089	4.75%	19,941	(3,148)
6	July	1,851,786	1,915,788	(64,002)	9 / 12	5.50%	(2,640)	4.75%	(2,280)	360
7	August	1,579,035	1,279,027	300,008	8 / 12	5.50%	11,000	4.75%	9,500	(1,500)
8	September	<u>1,730,502</u>	<u>1,629,378</u>	<u>101,124</u>	7 / 12	5.50%	<u>3,244</u>	4.75%	<u>2,802</u>	<u>(442)</u>
9	TOTAL	<u><u>68,748,050</u></u>	<u><u>47,953,272</u></u>	<u><u>20,794,778</u></u>			<u><u>1,214,453</u></u>		<u><u>1,048,846</u></u>	<u><u>(165,607)</u></u>

Exhibit 1-E
Schedule 2b
Sheet 1 of 2

COLUMBIA GAS OF PENNSYLVANIA, INC.
RECONCILIATION OF DEMAND COST OF GAS
FROM 2019 - 1307(f)
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

DEMAND

Line No.	Month	Sales Subject to Demand E-Factor Therm	Rate \$/ Therm	Amount \$	Net Demand Over (Under) Collection \$
1	True-up of Net Demand Costs Included in 2019 1307(f):				(5,048,037)
2	Beginning Balance Adjustment				(9,375) 2_/
3	October, 2019	5,729,813	0.01116	63,945	
4		5,278,097	(0.00267)	(14,093)	
5	November	34,497,139	0.01116	384,987	
6		48,805	(0.00267)	(130)	
7	December	73,135,345	0.01116	816,190	
8	January, 2020 1_/	38,459,936	0.01063	408,829	
9		41,458,606	0.01116	462,678	
10	February	75,148,727	0.01063	798,831	
11		(178,946)	0.01116	(1,997)	
12	March	63,970,024	0.01063	680,001	
13	April	39,357,012	0.01063	418,365	
14	May	33,071,823	0.01063	351,553	
15	June	14,099,839	0.01063	149,881	
16	July	8,049,000	0.01063	85,561	
17	August	7,182,418	0.01063	76,349	
18	September	7,957,149	0.01063	84,584	
19	Amount Collected/(Passed Back) during 2019 1307(f) Period				<u>4,765,534</u>
20	Remaining Balance to be Collected in the 2020 1307(f)				<u><u>(291,878)</u></u>

1_/ Rate in effect January 1, 2020.

2_/ Represents a demand interest adjustment for the period of February 2019 to September 2019 decreasing the interest rate from 5.50% to the prime rate as of January 31, 2020 of 4.75%. Please refer to Exh. 1-E, Schedule 2b, Sheet 2 for a detailed calculation for this adjustment.

COLUMBIA GAS OF PENNSYLVANIA, INC.
STATEMENT OF DEMAND OVER/(UNDER) COLLECTIONS FROM GAS COST RATE
FEBRUARY, 2019 THROUGH SEPTEMBER, 2019

Line No.	Month	Total Purchased Gas Cost Recovery (1)	Total Cost of Fuel (2)	Total Over (Under) Collection (3 = 1 - 2)	Number of Months (4)	Rate (5)	Over (Under) Collection Interest (6=3x4x5)	Rate (7)	Over (Under) Collection Interest (8=3x4x7)	Interest Difference (9=8-6)
1	February, 2019	11,492,132	5,983,285	5,508,847	14 / 12	5.50%	353,484	4.75%	305,282	(48,202)
2	March	9,734,819	5,981,206	3,753,613	13 / 12	5.50%	223,653	4.75%	193,155	(30,498)
3	April	5,842,680	4,355,541	1,487,139	12 / 12	5.50%	81,793	4.75%	70,639	(11,154)
4	May	2,525,299	4,362,975	(1,837,677)	11 / 12	5.50%	(92,650)	4.75%	(80,016)	12,634
5	June	1,478,239	4,533,817	(3,055,579)	10 / 12	5.50%	(140,047)	4.75%	(120,950)	19,097
6	July	1,154,822	4,301,276	(3,146,454)	9 / 12	5.50%	(129,791)	4.75%	(112,092)	17,699
7	August	1,062,179	4,416,083	(3,353,905)	8 / 12	5.50%	(122,977)	4.75%	(106,207)	16,770
8	September	<u>1,152,650</u>	<u>4,416,341</u>	<u>(3,263,691)</u>	7 / 12	5.50%	<u>(104,710)</u>	4.75%	<u>(90,431)</u>	<u>14,279</u>
9	TOTAL	<u><u>34,442,818</u></u>	<u><u>38,350,525</u></u>	<u><u>(3,907,706)</u></u>			<u><u>68,755</u></u>		<u><u>59,380</u></u>	<u><u>(9,375)</u></u>

Exhibit 1-E
 Schedule 3

COLUMBIA GAS OF PENNSYLVANIA, INC.

RECONCILIATION OF OFF SYSTEM SALES CREDIT
 FROM 2019 - 1307(f)
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

DEMAND

Line No.	Month	Sales Subject to Off-System Sales		Amount	Net Demand Over (Under) Collection
		Credit Therm	Rate \$/Therm		
1	October, 2019	5,729,813	(0.00837)	(47,959)	
2		5,278,097	(0.01845)	(97,381)	
3	November	34,497,139	(0.00837)	(288,741)	
4		48,805	(0.01845)	(900)	
5	December	73,135,345	(0.00837)	(612,143)	
6	January, 2020 1_/	79,918,542	(0.00837)	(668,918)	
7	February	74,969,781	(0.00837)	(627,497)	
8	March	63,970,024	(0.00837)	(535,429)	
9	April	39,357,012	(0.00837)	(329,418)	
10	May	33,071,823	(0.00837)	(276,811)	
11	June	14,099,839	(0.00837)	(118,016)	
12	July	8,049,000	(0.00837)	(67,370)	
13	August	7,182,418	(0.00837)	(60,117)	
14	September	7,957,149	(0.00837)	(66,601)	
15	Amount Passed Back in the 2019 1307(f)				<u>(3,797,301)</u>
16	Current Estimate Unified Sharing Mechanism - \$1,359,989				1,359,989
17	Amount to be Collected in the 2020 1307(f)				<u><u>(2,437,312)</u></u>

1_/ Rate in effect January 1, 2020.

Exhibit 1-E
Schedule 4
Sheet 1a of 6
Commodity

COLUMBIA GAS OF PENNSYLVANIA, INC.
STATEMENT OF COMMODITY OVER/(UNDER) COLLECTIONS FROM GAS COST RATE
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

Line No.	Month	Total Commodity Sales Revenue (1) \$	Rate Schedule NSS Gas Cost Recovery (2) \$	Total Commodity Purchase Gas Cost Recovery (3 = 1 + 2) \$	Total Commodity Cost of Fuel (4) \$	Total Commodity Over/(Under) Collection (5 = 3 - 4) \$	Number of Months (6)	Rate (7)	Commodity Over/(Under) Collection Interest (8 = 5 x 6 x 7)	Total Commodity Over/(Under) Collection (9 = 5 + 8)
Reference:		Sch. 4, Pg. 2	Sch. 4, Pg. 3							
<i>Actuals through September 2020</i>										
1	October, 2019	2,234,614	5,772	2,240,386	2,957,781	(717,395)	18 / 12	4.75%	(51,114)	(768,509)
2	November	6,693,411	14,674	6,708,085	11,075,571	(4,367,486)	17 / 12	4.75%	(293,895)	(4,661,381)
3	December	14,217,638	20,112	14,237,750	14,806,215	(568,465)	16 / 12	4.75%	(36,003)	(604,468)
4	January, 2020	15,136,469	21,277	15,157,746	14,178,892	978,854	15 / 12	4.75%	58,119	1,036,973
5	February	13,738,954	13,228	13,752,182	12,215,061	1,537,121	14 / 12	4.75%	85,182	1,622,303
6	March	11,738,050	12,681	11,750,731	8,066,235	3,684,495	13 / 12	4.75%	189,598	3,874,093
7	April	6,664,718	11,182	6,675,900	4,258,839	2,417,061	12 / 12	4.75%	114,810	2,531,871
8	May	5,130,578	8,716	5,139,294	3,156,568	1,982,726	11 / 12	4.75%	86,331	2,069,057
9	June	2,148,092	6,812	2,154,904	498,174	1,656,730	10 / 12	4.75%	65,579	1,722,309
10	July	1,225,568	5,539	1,231,107	941,203	289,904	9 / 12	4.75%	10,328	300,232
11	August	1,086,883	4,309	1,091,192	2,330,064	(1,238,872)	8 / 12	4.75%	(39,231)	(1,278,103)
12	September	<u>1,226,125</u>	<u>4,240</u>	<u>1,230,364</u>	<u>2,078,473</u>	<u>(848,109)</u>	7 / 12	4.75%	<u>(23,500)</u>	<u>(871,609)</u>
13	TOTAL	<u>81,241,100</u>	<u>128,542</u>	<u>81,369,642</u>	<u>76,563,078</u>	<u>4,806,564</u>			<u>166,204</u>	<u>4,972,768</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.
STATEMENT OF DEMAND OVER/(UNDER) COLLECTIONS FROM GAS COST RATE
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

Line No.	Month	Total Demand Sales Revenue (1) \$	Total Banking and Balancing Revenue (2) \$	Total Standby Demand Revenue (3) \$	NSS Capacity Release Revenue (4) \$	Demand Purchased Gas Cost Recovery (5 = 1+2+3+4) \$	Demand Cost of Fuel (6) \$	Total Demand Over/(Under) Collection (7 = 5 - 6) \$	Number of Months (8)	Rate (9)	Demand Over/(Under) Collection Interest (10 = 7 x 8 x 9)	Total Demand Over/(Under) Collection (11 = 7 + 10)
	Reference:	Sch. 4, Pg. 4	Sch. 4, Pg. 6	Sch. 4, Pg. 5	Sch. 4, Pg. 6							
	<i>Actuals through September 2020</i>											
1	October, 2019	1,433,808	83	44,955	34	1,478,880	5,940,102	(4,461,222)	18 / 12	4.75%	(317,862)	(4,779,084)
2	November	4,220,519	146	42,490	410	4,263,565	5,676,713	(1,413,148)	17 / 12	4.75%	(95,093)	(1,508,241)
3	December	8,926,565	212	41,589	564	8,968,930	5,808,656	3,160,273	16 / 12	4.75%	200,151	3,360,424
4	January, 2020	9,739,701	255	41,168	1,101	9,782,225	5,764,866	4,017,360	15 / 12	4.75%	238,531	4,255,891
5	February	9,103,773	192	42,145	851	9,146,961	5,964,198	3,182,763	14 / 12	4.75%	176,378	3,359,141
6	March	7,767,894	183	39,094	810	7,807,981	5,973,335	1,834,646	13 / 12	4.75%	94,408	1,929,054
7	April	5,029,033	176	39,271	90	5,068,571	4,133,922	934,648	12 / 12	4.75%	44,396	979,044
8	May	4,478,179	128	39,748	53	4,518,107	3,767,494	750,613	11 / 12	4.75%	32,683	783,296
9	June	1,908,315	103	39,748	42	1,948,207	3,891,869	(1,943,662)	10 / 12	4.75%	(76,937)	(2,020,599)
10	July	1,089,071	85	39,748	34	1,128,938	4,044,509	(2,915,572)	9 / 12	4.75%	(103,867)	(3,019,439)
11	August	970,813	65	39,748	26	1,010,651	4,015,264	(3,004,613)	8 / 12	4.75%	(95,146)	(3,099,759)
12	September	<u>1,077,963</u>	<u>66</u>	<u>39,748</u>	<u>27</u>	<u>1,117,804</u>	<u>4,407,659</u>	<u>(3,289,855)</u>	7 / 12	4.75%	<u>(91,156)</u>	<u>(3,381,011)</u>
13	TOTAL	<u>55,745,635</u>	<u>1,694</u>	<u>489,450</u>	<u>4,042</u>	<u>56,240,820</u>	<u>59,388,588</u>	<u>(3,147,768)</u>			<u>6,486</u>	<u>(3,141,282)</u>

Exhibit 1-E
Schedule 4
Sheet 2a of 6

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF COMMODITY GAS COST RECOVERY
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

LINE NO.	MONTH	SALES	COMMODITY	TOTAL
		SUBJECT TO	COST OF	COMMODITY
		COST OF GAS	GAS	COST RECOVERY
		(1)	(2)	(3 = 1 x 2)
		THERM	\$/THERM	\$
1	October, 2019 Est. Old	4,076,471	0.27486	1,120,459
2	October, 2019 Est. New	4,487,543	0.24229	1,087,287
3	September, 2019 Est.	(6,175,516)	0.27486	(1,697,402)
4	September, 2019 Act.	6,281,994	0.27486	1,726,669
5	September Act. Prior Period Adjustments		-	(2,398)
6	Total	8,670,492		2,234,614
7	November, 2019 Est. New	27,384,298	0.24229	6,634,942
8	October, 2019 Est. Old	(4,076,471)	0.27486	(1,120,459)
9	October, 2019 Est. New	(4,487,543)	0.24229	(1,087,287)
10	October, 2019 Act. Old	4,182,687	0.27486	1,149,653
11	October, 2019 Act. New	4,604,470	0.24229	1,115,617
12	October Act. Prior Period Adjustments		-	945
13	Total	27,607,441		6,693,411
14	December, 2019 Est.	58,322,224	0.24229	14,130,892
15	November, 2019 Est.	(27,384,298)	0.24229	(6,634,942)
16	November, 2019 Act.	27,739,973	0.24229	6,721,118
17	November Act. Prior Period Adjustments		-	570
18	Total	58,677,899		14,217,638
19	January, 2020 Est. Old	33,236,862	0.24229	8,052,959
20	January, 2020 Est. New	30,926,965	0.22764	7,040,214
21	December, 2019 Est.	(58,322,224)	0.24229	(14,130,892)
22	December, 2019 Act.	58,495,141	0.24229	14,172,788
23	December Act. Prior Period Adjustments		-	1,399
24	Total	64,336,744		15,136,469
25	February, 2020 Est. New	60,641,013	0.22764	13,804,320
26	January, 2020 Est. Old	33,092,674	0.24229	8,018,024
27	January, 2020 Est. New	30,792,798	0.22764	7,009,672
28	January, 2020 Act. Old	(33,236,862)	0.24229	(8,052,959)
29	January, 2020 Act. New	(30,926,965)	0.22764	(7,040,214)
30	January Act. Prior Period Adjustments		-	111
31	Total	60,362,658		13,738,954
32	March, 2020 Est.	51,883,342	0.22764	11,810,724
33	February, 2020 Est.	(60,641,013)	0.22764	(13,804,320)
34	February, 2020 Act.	60,320,691	0.22764	13,731,402
35	February Act. Prior Period Adjustments		-	244
36	Total	51,563,020		11,738,050

Exhibit 1-E
Schedule 4
Sheet 2b of 6

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF COMMODITY GAS COST RECOVERY
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

LINE NO.	MONTH	SALES	COMMODITY	TOTAL
		SUBJECT TO	COST OF	COMMODITY
		COST OF GAS	GAS	COST RECOVERY
		(1)	(2)	(3 = 1 x 2)
		THERM	\$/THERM	\$
1	April, 2020 Est. Old	17,446,860	0.22764	3,971,603
2	April, 2020 Est. New	14,390,475	0.19128	2,752,610
3	March, 2020 Est.	(51,883,342)	0.22764	(11,810,724)
4	March, 2020 Act.	51,631,954	0.22764	11,753,498
5	March Act. Prior Period Adjustments		-	(2,270)
6	Total	<u>31,585,947</u>		<u>6,664,718</u>
7	May, 2020 Est.	26,974,926	0.19128	5,159,764
8	April, 2020 Est. Old	(17,446,860)	0.22764	(3,971,603)
9	April, 2020 Est. New	(14,390,475)	0.19128	(2,752,610)
10	April, 2020 Act. Old	17,377,421	0.22764	3,955,796
11	April, 2020 Act. New	14,333,202	0.19128	2,741,655
12	April Act. Prior Period Adjustments		-	(2,423)
13	Total	<u>26,848,214</u>		<u>5,130,578</u>
14	June, 2020 Est.	11,296,641	0.19128	2,160,821
15	May, 2020 Est.	(26,974,926)	0.19128	(5,159,764)
16	May, 2020 Act.	26,910,417	0.19128	5,147,425
17	May Act. Prior Period Adjustments		-	(390)
18	Total	<u>11,232,132</u>		<u>2,148,092</u>
19	July, 2020 Est.	6,442,456	0.19128	1,232,313
20	June, 2020 Est.	(11,296,641)	0.19128	(2,160,821)
21	June, 2020 Act.	11,260,100	0.19128	2,153,832
22	June Act. Prior Period Adjustments		-	245
23	Total	<u>6,405,915</u>		<u>1,225,568</u>
24	August, 2020 Est.	5,705,043	0.19128	1,091,261
25	July, 2020 Est.	(6,442,456)	0.19128	(1,232,313)
26	July, 2020 Act.	6,420,356	0.19128	1,228,086
27	July Act. Prior Period Adjustments	0	-	(151)
28	Total	<u>5,682,943</u>		<u>1,086,883</u>
29	September, 2020 Est.	6,421,225	0.19128	1,228,252
30	August, 2020 Est.	(5,705,043)	0.19128	(1,091,261)
31	August, 2020 Act.	5,695,355	0.19128	1,089,408
32	August Act. Prior Period Adjustments		-	(274)
33	Total	<u>6,411,537</u>		<u>1,226,125</u>
34	TOTAL	<u><u>359,384,942</u></u>		<u><u>81,241,100</u></u>

Exhibit 1-E
Schedule 4
Sheet 3 of 6

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF NSS COMMODITY COST RECOVERY
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

LINE NO.	MONTH	RATE SCHEDULE		NSS GAS COST RECOVERY (3=1*2) \$
		NSS VOLUMES (1) THERM	RATE (2) \$/THERM	
1	October, 2019 Est.	36,000	0.15727	5,662
2	September, 2019 Act.	23,590	0.18613	4,391
3	September, 2019 Est.	<u>(23,000)</u>	0.18613	<u>(4,281)</u>
4		36,590		5,772
5	November, 2019 Est.	69,000	0.22242	15,347
6	October, 2019 Act.	31,720	0.15727	4,989
7	October, 2019 Est.	<u>(36,000)</u>	0.15727	<u>(5,662)</u>
8		64,720		14,674
9	December, 2019 Est.	85,000	0.21322	18,124
10	November, 2019 Act.	77,940	0.22242	17,335
11	November, 2019 Est.	<u>(69,000)</u>	0.22242	<u>(15,347)</u>
12		93,940		20,112
13	January, 2020 Est.	106,000	0.18691	19,812
14	December, 2019 Act.	91,870	0.21322	19,589
15	December, 2019 Est.	<u>(85,000)</u>	0.21322	<u>(18,124)</u>
16		112,870		21,277
17	February, 2020 Est.	101,000	0.16047	16,207
18	January, 2020 Act.	90,060	0.18691	16,833
19	January, 2020 Est.	<u>(106,000)</u>	0.18691	<u>(19,812)</u>
20		85,060		13,228
21	March, 2020 Est.	85,000	0.15668	13,318
22	February, 2020 Act.	97,030	0.16047	15,570
23	February, 2020 Est.	<u>(101,000)</u>	0.16047	<u>(16,207)</u>
24		81,030		12,681
25	April, 2020 Est.	76,000	0.14320	10,883
26	March, 2020 Act.	86,910	0.15668	13,617
27	March, 2020 Est.	<u>(85,000)</u>	0.15668	<u>(13,318)</u>
28		77,910		11,182
29	May, 2020 Est.	45,000	0.15773	7,098
30	April, 2020 Act.	87,300	0.14320	12,501
31	April, 2020 Est.	<u>(76,000)</u>	0.14320	<u>(10,883)</u>
32		56,300		8,716
33	June, 2020 Est.	25,000	0.14422	3,606
34	May, 2020 Act.	65,330	0.15773	10,305
35	May, 2020 Est.	<u>(45,000)</u>	0.15773	<u>(7,098)</u>
36		45,330		6,812
37	July, 2020 Est.	22,000	0.14996	3,299
38	June, 2020 Act.	40,530	0.14422	5,845
39	June, 2020 Est.	<u>(25,000)</u>	0.14422	<u>(3,606)</u>
40		37,530		5,539
41	August, 2020 Est.	22,000	0.15211	3,346
42	July, 2020 Act.	28,420	0.14996	4,262
43	July, 2020 Est.	<u>(22,000)</u>	0.14996	<u>(3,299)</u>
44		28,420		4,309
45	September, 2020 Est.	24,000	0.14357	3,446
46	August, 2020 Act.	27,220	0.15211	4,140
47	August, 2020 Est.	<u>(22,000)</u>	0.15211	<u>(3,346)</u>
48		29,220		4,240
49	TOTAL	<u>748,920</u>		<u>128,542</u>

Exhibit 1-E
Schedule 4
Sheet 4a of 6

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF DEMAND GAS COST RECOVERY
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

LINE NO.	MONTH	VOLUMES SUBJ. TO DEMAND	COST OF GAS	DEMAND COST RECOVERY
		(1) THERM	(2) \$/THERM	(3 = 1 x 2) \$
1	October, 2019 Est. Old	4,076,471	0.14482	590,354
2	October, 2019 Est. New	4,487,543	0.12570	564,084
3	October Choice - Est. Old	997,023	0.11407	113,730
4	October Choice - Est. New	1,033,574	0.10627	109,838
5	October Est. Priority One Transportation Old	189,578	0.14482	27,455
6	October Est. Priority One Transportation New	208,696	0.12570	26,233
7	September, 2019 Est.	(6,175,516)	0.14482	(894,338)
8	September 2019 Act.	6,281,994	0.14482	909,758
9	September Choice - Est.	(1,494,364)	0.11407	(170,462)
10	September Choice - Act.	1,496,398	0.11407	170,694
11	September Est. Priority One Transportation	(303,207)	0.14482	(43,910)
12	September Act. Priority One Transportation	209,720	0.14482	30,372
13	Total	11,007,910		1,433,808
14	November, 2019 Est. New	27,384,298	0.12570	3,442,206
15	November Choice - Est. New	6,319,667	0.10627	671,591
16	November Est. Priority One Transportation New	739,508	0.12570	92,956
17	October Est. Old	(4,076,471)	0.14482	(590,354)
18	October Est. New	(4,487,543)	0.12570	(564,084)
19	October Act. Old	4,182,687	0.14482	605,737
20	October Act. New	4,604,470	0.12570	578,782
21	October Choice - Est. Old	(997,023)	0.11407	(113,730)
22	October Choice - Est. New	(1,033,574)	0.10627	(109,838)
23	October Choice - Act. Old	997,972	0.11407	113,839
24	October Choice - Act. New	1,034,557	0.10627	109,942
25	October Est. Priority One Transportation Old	(189,578)	0.14482	(27,455)
26	October Est. Priority One Transportation New	(208,696)	0.12570	(26,233)
27	October Act. Priority One Transportation Old	131,219	0.14482	19,003
28	October Act. Priority One Transportation New	144,451	0.12570	18,157
29	Total	34,545,944		4,220,519
30	December, 2019 Est.	58,322,224	0.12570	7,331,104
31	December Choice - Est.	13,713,421	0.10627	1,457,325
32	December Est. Priority One Transportation	855,781	0.12570	107,572
33	November Est.	(27,384,298)	0.12570	(3,442,206)
34	November Act.	27,739,973	0.12570	3,486,915
35	November Choice - Est.	(6,319,667)	0.10627	(671,591)
36	November Choice - Act.	6,324,619	0.10627	672,117
37	November Est. Priority One Transportation	(739,508)	0.12570	(92,956)
38	November Act. Priority One Transportation	622,800	0.12570	78,286
39	Total	73,135,345		8,926,565
40	January, 2020 Est. Old	33,236,862	0.12570	4,177,874
41	January, 2020 Est. New	30,926,965	0.12498	3,865,252
42	January Choice - Est. Old	7,267,896	0.10627	772,359
43	January Choice - Est. New	6,982,881	0.10537	735,786
44	January Est. Priority One Transportation Old	591,176	0.12570	74,311
45	January Est. Priority One Transportation New	550,091	0.12498	68,750
46	December 2019 Est.	(58,322,224)	0.12570	(7,331,104)
47	December 2019 Act.	58,495,141	0.12570	7,352,839
48	December Choice - Est.	(13,713,421)	0.10627	(1,457,325)
49	December Choice - Act.	13,724,676	0.10627	1,458,521
50	December Est. Priority One Transportation	(855,781)	0.12570	(107,572)
51	December Act. Priority One Transportation	1,034,280	0.12570	130,009
52	Total	79,918,542		9,739,701

Exhibit 1-E
Schedule 4
Sheet 4b of 6

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF DEMAND GAS COST RECOVERY
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

LINE NO.	MONTH	VOLUMES SUBJ. TO DEMAND	COST OF GAS	DEMAND COST RECOVERY
		(1) THERM	(2) \$/THERM	(3 = 1 x 2) \$
1	February, 2020 Est. New	60,641,013	0.12498	7,578,914
2	February Choice - Est. New	13,573,978	0.10537	1,430,290
3	February Est. Priority One Transportation New	1,100,533	0.12498	137,545
4	January Est. Old	(33,236,862)	0.12570	(4,177,874)
5	January Est. New	(30,926,965)	0.12498	(3,865,252)
6	January Act. Old	33,092,674	0.12570	4,159,749
7	January Act. New	30,792,798	0.12498	3,848,484
8	January Choice - Est. Old	(7,267,896)	0.10627	(772,359)
9	January Choice - Est. New	(6,982,881)	0.10537	(735,786)
10	January Choice - Act. Old	7,258,374	0.10627	771,347
11	January Choice - Act. New	6,973,732	0.10537	734,822
12	January Est. Priority One Transportation Old	(591,176)	0.12570	(74,311)
13	January Est. Priority One Transportation New	(550,091)	0.12498	(68,750)
14	January Act. Priority One Transportation Old	565,941	0.12570	71,139
15	January Act. Priority One Transportation New	526,609	0.12498	65,816
16	Total	74,969,781		9,103,773
17	March, 2020 Est.	51,883,342	0.12498	6,484,380
18	March Choice - Est.	11,611,237	0.10537	1,223,476
19	March Est. Priority One Transportation	883,306	0.12498	110,396
20	February Est.	(60,641,013)	0.12498	(7,578,914)
21	February Act.	60,320,691	0.12498	7,538,880
22	February Choice - Est.	(13,573,978)	0.10537	(1,430,290)
23	February Choice - Act.	13,542,512	0.10537	1,426,974
24	February Est. Priority One Transportation	(1,100,533)	0.12498	(137,545)
25	February Act. Priority One Transportation	1,044,460	0.12498	130,537
26	Total	63,970,024		7,767,894
27	April, 2020 Est. Old	17,446,860	0.12498	2,180,509
28	April, 2020 Est. New	14,390,475	0.13888	1,998,549
29	April Choice - Est. Old	3,873,057	0.10537	408,104
30	April Choice - Est. New	3,143,350	0.11893	373,839
31	April Est. Priority One Transportation Old	407,425	0.12498	50,920
32	April Est. Priority One Transportation New	336,052	0.13888	46,671
33	March Est.	(51,883,342)	0.12498	(6,484,380)
34	March Act.	51,631,954	0.12498	6,452,962
35	March Choice - Est.	(11,611,237)	0.10537	(1,223,476)
36	March Choice - Act.	11,587,644	0.10537	1,220,990
37	March Est. Priority One Transportation	(883,306)	0.12498	(110,396)
38	March Act. Priority One Transportation	918,080	0.12498	114,742
39	Total	39,357,012		5,029,033
40	May, 2020 Est.	26,974,926	0.13888	3,746,278
41	May Choice - Est.	5,858,508	0.11893	696,752
42	May Est. Priority One Transportation New	480,669	0.13888	66,755
43	April, 2020 Est. Old	(17,446,860)	0.12498	(2,180,509)
44	April, 2020 Est. New	(14,390,475)	0.13888	(1,998,549)
45	April, 2020 Act. Old	17,377,421	0.12498	2,171,830
46	April, 2020 Act. New	14,333,202	0.13888	1,990,595
47	April Choice - Est. Old	(3,873,057)	0.10537	(408,104)
48	April Choice - Est. New	(3,143,350)	0.11893	(373,839)
49	April Choice - Act. Old	3,867,608	0.10537	407,530
50	April Choice - Act. New	3,138,928	0.11893	373,313
51	April Est. Priority One Transportation Old	(407,425)	0.12498	(50,920)
52	April Est. Priority One Transportation New	(336,052)	0.13888	(46,671)
53	April Act. Priority One Transportation Old	349,503	0.12498	43,681
54	April Act. Priority One Transportation New	288,277	0.13888	40,036
55	Total	33,071,823		4,478,179

Exhibit 1-E
Schedule 4
Sheet 4c of 6

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF DEMAND GAS COST RECOVERY
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

LINE NO.	MONTH	VOLUMES SUBJ. TO DEMAND	COST OF	DEMAND
		COST OF GAS	GAS	COST RECOVERY
		(1)	(2)	(3 = 1 x 2)
		THERM	\$/THERM	\$
1	June, 2020 Est.	11,296,641	0.13888	1,568,878
2	June Choice - Est.	2,492,164	0.11893	296,393
3	June Est. Priority One Transportation	313,525	0.13888	43,542
4	May Est.	(26,974,926)	0.13888	(3,746,278)
5	May Act.	26,910,417	0.13888	3,737,319
6	May Choice - Est.	(5,858,508)	0.11893	(696,752)
7	May Choice - Act.	5,866,155	0.11893	697,662
8	May Est. Priority One Transportation	(480,669)	0.13888	(66,755)
9	May Act. Priority One Transportation	535,040	0.13888	74,306
10	Total	14,099,839		1,908,315
11	July, 2020 Est.	6,442,456	0.13888	894,728
12	July Choice - Est.	1,441,261	0.11893	171,409
13	July Est. Priority One Transportation	241,944	0.13888	33,601
14	June 2020 Est.	(11,296,641)	0.13888	(1,568,878)
15	June 2020 Act.	11,260,100	0.13888	1,563,803
16	June Choice - Est.	(2,492,164)	0.11893	(296,393)
17	June Choice - Act.	2,493,219	0.11893	296,519
18	June Est. Priority One Transportation	(313,525)	0.13888	(43,542)
19	June Act. Priority One Transportation	272,350	0.13888	37,824
20	Total	8,049,000		1,089,071
21	August, 2020 Est.	5,705,043	0.13888	792,316
22	August Choice - Est.	1,336,176	0.11893	158,911
23	August Est. Priority One Transportation	208,136	0.13888	28,906
24	July, 2020 Est.	(6,442,456)	0.13888	(894,728)
25	July 2020 Act.	6,420,356	0.13888	891,659
26	July Choice - Est.	(1,441,261)	0.11893	(171,409)
27	July Choice - Act.	1,442,458	0.11893	171,552
28	July Est. Priority One Transportation	(241,944)	0.13888	(33,601)
29	July Act. Priority One Transportation	195,910	0.13888	27,208
30	Total	7,182,418		970,813
31	September, 2020 Est.	6,421,225	0.13888	891,780
32	September Choice - Est.	1,357,640	0.11893	161,464
33	September Est. Priority One Transportation	218,332	0.13888	30,322
34	August Est.	(5,705,043)	0.13888	(792,316)
35	August Act.	5,695,355	0.13888	790,971
36	August Choice - Est.	(1,336,176)	0.11893	(158,911)
37	August Choice - Act.	1,338,212	0.11893	159,154
38	August Est. Priority One Transportation	(208,136)	0.13888	(28,906)
39	August Act. Priority One Transportation	175,740	0.13888	24,407
40	Total	7,957,149		1,077,963
41	TOTAL	447,264,787		55,745,635

Exhibit 1-E
Schedule 4
Sheet 5 of 6

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF STANDBY DEMAND COST RECOVERY
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

LINE NO.	MONTH	STANDBY VOLUMES	STANDBY DEMAND RATE	STANDBY GAS DEMAND RECOVERIES
		(1) THERM	(2) \$/THERM	(3 = 1 x 2) \$
1	October, 2019 Est.	0		0
2	September, 2019 Act.	57,610	0.78034	44,955
3	September, 2019 Est.	0	-	0
4		<u>57,610</u>		<u>44,955</u>
5	November, 2019 Est.	0	-	0
6	October, 2019 Act.	57,510	0.73883	42,490
7	October, 2019 Est.	0	-	0
8		<u>57,510</u>		<u>42,490</u>
9	December, 2019 Est.	0	-	0
10	November, 2019 Act.	56,290	0.73883	41,589
11	November, 2019 Est.	0	-	0
12		<u>56,290</u>		<u>41,589</u>
13	January, 2020 Est.	0	-	0
14	December, 2019 Act.	55,720	0.73883	41,168
15	December, 2019 Est.	0	-	0
16		<u>55,720</u>		<u>41,168</u>
17	February, 2020 Est.	0	-	0
18	January, 2020 Act.	56,910	0.74055	42,145
19	January, 2020 Est.	0	-	0
20		<u>56,910</u>		<u>42,145</u>
21	March, 2020 Est.	0	-	0
22	February, 2020 Act.	52,790	0.74055	39,094
23	February, 2020 Est.	0	-	0
24		<u>52,790</u>		<u>39,094</u>
25	April, 2020	0	-	0
26	March, 2020 Act.	53,030	0.74055	39,271
27	March, 2020 Est.	0	-	0
28		<u>53,030</u>		<u>39,271</u>
29	May, 2020	0	-	0
30	April, 2020 Act.	53,030	0.74953	39,748
31	April, 2020 Est.	0	-	0
32		<u>53,030</u>		<u>39,748</u>
33	June, 2020	0	-	0
34	May, 2020 Act.	53,030	0.74953	39,748
35	May, 2020 Est.	0	-	0
36		<u>53,030</u>		<u>39,748</u>
37	July, 2020	0	-	0
38	June, 2020 Act.	53,030	0.74953	39,748
39	June, 2020 Est.	0	-	0
40		<u>53,030</u>		<u>39,748</u>
41	August, 2020	0	-	0
42	July, 2020 Act.	53,030	0.74953	39,748
43	July, 2020 Est.	0	-	0
44		<u>53,030</u>		<u>39,748</u>
45	September, 2020	0	-	0
46	August, 2020 Act.	53,030	0.74953	39,748
47	August, 2020 Est.	0	-	0
48		<u>53,030</u>		<u>39,748</u>
49	TOTAL	<u>655,010</u>		<u>489,450</u>

Exhibit 1-E
Schedule 4
Sheet 6 of 6

COLUMBIA GAS OF OF PENNSYLVANIA, INC.
DETAIL OF NSS BANKING & BALANCING AND CAPACITY RELEASE REVENUE
OCTOBER, 2019 THROUGH SEPTEMBER, 2020

LINE NO.	DESCRIPTION	NSS-BANKING & BALANCING			NSS-CAPACITY RELEASE		
		VOLUME	RATE	AMOUNT	VOLUME	RATE	AMOUNT
		(1)	(2)	(3=1 x 2)	(4)	(5)	(6=4 x 5)
		THERM	\$/THERM	\$	THERM	\$/THERM	\$
1	October, 2019 Est.	36,000	0.00226	81	36,000	0.00093	33
2	September, 2019 Act.	23,590	0.00226	53	23,590	0.00093	22
3	September, 2019 Est.	<u>(23,000)</u>	0.00226	<u>(52)</u>	<u>(23,000)</u>	0.00093	<u>(21)</u>
4		36,590		83	36,590		34
5	November, 2019 Est.	69,000	0.00226	156	69,000	0.00600	414
6	October, 2019 Act.	31,720	0.00226	72	31,720	0.00093	30
7	October, 2019 Est.	<u>(36,000)</u>	0.00226	<u>(81)</u>	<u>(36,000)</u>	0.00093	<u>(33)</u>
8		64,720		146	64,720		410
9	December, 2019 Est.	85,000	0.00226	192	85,000	0.00600	510
10	November, 2019 Act.	77,940	0.00226	176	77,940	0.00600	468
11	November, 2019 Est.	<u>(69,000)</u>	0.00226	<u>(156)</u>	<u>(69,000)</u>	0.00600	<u>(414)</u>
12		93,940		212	93,940		564
13	January, 2020 Est.	106,000	0.00226	240	106,000	0.01000	1,060
14	December, 2019 Act.	91,870	0.00226	208	91,870	0.00600	551
15	December, 2019 Est.	<u>(85,000)</u>	0.00226	<u>(192)</u>	<u>(85,000)</u>	0.00600	<u>(510)</u>
16		112,870		255	112,870		1,101
17	February, 2020 Est.	101,000	0.00226	228	101,000	0.01000	1,010
18	January, 2020 Act.	90,060	0.00226	204	90,060	0.01000	901
19	January, 2020 Est.	<u>(106,000)</u>	0.00226	<u>(240)</u>	<u>(106,000)</u>	0.01000	<u>(1,060)</u>
20		85,060		192	85,060		851
21	March, 2020 Est.	85,000	0.00226	192	85,000	0.01000	850
22	February, 2020 Act.	97,030	0.00226	219	97,030	0.01000	970
23	February, 2020 Est.	<u>(101,000)</u>	0.00226	<u>(228)</u>	<u>(101,000)</u>	0.01000	<u>(1,010)</u>
24		81,030		183	81,030		810
25	April, 2020 Est.	76,000	0.00226	172	76,000	0.00093	71
26	March, 2020 Act.	86,910	0.00226	196	86,910	0.01000	869
27	March, 2020 Est.	<u>(85,000)</u>	0.00226	<u>(192)</u>	<u>(85,000)</u>	0.01000	<u>(850)</u>
28		77,910		176	77,910		90
29	May, 2020 Est.	45,000	0.00226	102	45,000	0.00093	42
30	April, 2020 Act.	87,300	0.00226	197	87,300	0.00093	81
31	April, 2020 Est.	<u>(76,000)</u>	0.00226	<u>(172)</u>	<u>(76,000)</u>	0.00093	<u>(71)</u>
32		56,300		128	56,300		53
33	June, 2020 Est.	25,000	0.00226	57	25,000	0.00093	23
34	May, 2020 Act.	65,330	0.00226	148	65,330	0.00093	61
35	May, 2020 Est.	<u>(45,000)</u>	0.00226	<u>(102)</u>	<u>(45,000)</u>	0.00093	<u>(42)</u>
36		45,330		103	45,330		42
37	July, 2020 Est.	22,000	0.00226	50	22,000	0.00093	20
38	June, 2020 Act.	40,530	0.00226	92	40,530	0.00093	38
39	June, 2020 Est.	<u>(25,000)</u>	0.00226	<u>(57)</u>	<u>(25,000)</u>	0.00093	<u>(23)</u>
40		37,530		85	37,530		34
41	August, 2020 Est.	22,000	0.00226	50	22,000	0.00093	20
42	July, 2020 Act.	28,420	0.00226	64	28,420	0.00093	26
43	July, 2020 Est.	<u>(22,000)</u>	0.00226	<u>(50)</u>	<u>(22,000)</u>	0.00093	<u>(20)</u>
44		28,420		65	28,420		26
45	September, 2020 Est.	24,000	0.00226	54	24,000	0.00093	22
46	August, 2020 Act.	27,220	0.00226	62	27,220	0.00093	25
47	August, 2020 Est.	<u>(22,000)</u>	0.00226	<u>(50)</u>	<u>(22,000)</u>	0.00093	<u>(20)</u>
48		29,220		66	29,220		27
49	TOTAL	<u>748,920</u>		<u>1,694</u>	<u>748,920</u>		<u>4,042</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.
DEMAND PENALTY CREDITS/SUPPLIER REFUNDS RECEIVED OCTOBER 2019 - SEPTEMBER 2020
FROM VARIOUS SUPPLIERS

<u>Line No.</u>	<u>Refund Type</u>	<u>Date Received</u>	<u>Total</u>
1	Columbia Gas Transmission, LLC: Penalty Credit Docket No. RP20-370	December 2019	50,080
2	Texas Eastern: Penalty Credit Docket No. RP20-69	January 2020	<u>358</u>
3	Total Penalty Credits/Supplier Refunds to Pass Back		50,438
4	Interested Calculated on Schedule 5 Sheet 2 of 2		<u>1,513</u>
5	Total Penalty Credits/Supplier Refunds to Pass Back With Interest		<u><u>51,951</u></u>

COLUMBIA GAS OF PENNSYLVANIA, INC.
PENALTY CREDITS RECEIVED OCTOBER 2019 - SEPTEMBER 2020
PASSBACK INTEREST CALCULATION

Line No.	Month	Refund (1) \$	Number of Months (2)	Rate (3) %	Amount of Interest (4 = 1 x 2 x 3) \$	Total (5 = 1 + 4) \$
1	October, 2020	50,438	6 / 12	6.00%	1,513	51,951
2	November	0	5 / 12	6.00%	0	0
3	December	0	4 / 12	6.00%	0	0
4	January, 2021	0	3 / 12	6.00%	0	0
5	February	0	2 / 12	6.00%	0	0
6	March	<u>0</u>	1 / 12	6.00%	<u>0</u>	<u>0</u>
7	TOTAL	<u>50,438</u>			<u>1,513</u>	<u>51,951</u>

ATTACHMENT A

COLUMBIA GAS OF PENNSYLVANIA, INC.
 PENALTY CREDITS/SUPPLIER REFUNDS RECEIVED MAY 2020 - DECEMBER 2020
 PASSBACK OF NON-RESIDENTIAL PORTION
 CALCULATED RATE EFFECTIVE JANUARY 2021 - DECEMBER 2021

Line No.	Refund Type	Date Received	Amount	Non-Residential Allocation 1_ /
1	Texas Eastern Transmission: Supplier Refund Docket No. RP19-343	May 2020	226,366	(64,761) 2_ /
2	Texas Eastern Transmission: Supplier Refund Docket No. RP19-343	June 2020	151,456	(43,127) 2_ /
3	Dominion Energy Transmission: Penalty Credit Docket No. RP20-1009	September 2020	<u>1,501</u>	<u>(419) 2_ /</u>
4	Total Refunds to Pass Back		379,323	(108,308)
5	SGSS, SGDS (Priority One Only), SCD, LGSS and MLSS Therms			129,647,603
6	Rate per Therm			<u>(0.00084) \$/Therms</u>

1_ / Allocation is based on the PGDC Sales forecast during the periods that refunds were received. See Attachment A Sheet 2 of 3 for Non-Residential Allocation Details.

2_ / Includes applicable interest as shown on Attachment A Sheet 3 of 3.

COLUMBIA GAS OF PENNSYLVANIA, INC.
PENALTY CREDIT/SUPPLIER REFUND PASSBACK
NON-RESIDENTIAL ALLOCATION CALCULATION

<u>Line No.</u>	<u>Period & Type</u>	<u>PGDC Sales</u>	<u>Allocation</u>
		Therm	
	October 2019 - September 2020		
1	Residential	347,770,000	73.3%
2	Commercial & Industrial	126,919,562	26.7%
3	Total October 2019 - September 2020	474,689,562	100.0%

Attachment A
Sheet 3 of 3

COLUMBIA GAS OF PENNSYLVANIA, INC.
PENALTY CREDITS/SUPPLIER REFUNDS RECEIVED MAY 2020 - DECEMBER 2020
PASSBACK OF NON-RESIDENTIAL PORTION INTEREST CALCULATION

Line No.	Month	Refund (1) \$	Number of Months (2)	Rate (3) %	Amount of Interest (4 = 1 x 2 x 3) \$	Total (5 = 1 + 4) \$
1	May, 2020	(60,524)	14 / 12	6.00%	(4,237)	(64,761)
2	June	(40,495)	13 / 12	6.00%	(2,632)	(43,127)
3	July	0	12 / 12	6.00%	0	0
4	August	0	11 / 12	6.00%	0	0
5	September		10 / 12	6.00%	0	0
6	October	(401)	9 / 12	6.00%	(18)	(419)
7	November	0	8 / 12	6.00%	0	0
8	December	0	7 / 12	6.00%	0	0
9	January, 2021	0	6 / 12	6.00%	0	0
10	February	0	5 / 12	6.00%	0	0
11	March	<u>0</u>	4 / 12	6.00%	<u>0</u>	<u>0</u>
12	TOTAL	<u>(101,421)</u>			<u>(6,887)</u>	<u>(108,308)</u>