

COLUMBIA GAS OF PENNSYLVANIA, INC.
STATEMENT OF ANNUAL DEPRECIATION EXPENSE AT PRESENT RATES
TWELVE MONTHS ENDED NOVEMBER 30, 2017

	\$
Annual Depreciation Accruals related to Gas Plant in Service at November 30, 2017	56,564,805
Plus: 5 Year Amortization of Negative Net Salvage at November 30, 2017	<u>4,041,500</u>
Total	<u><u>60,606,305</u></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, 2017

Acct No.	DEPRECIABLE GROUP (1)	SURVIVOR CURVE (2)	ORIGINAL COST AS OF NOVEMBER 30, 2017 (3)	BOOK RESERVE (4)	FUTURE BOOK ACCRUAL (5)	CALCULATED ANNUAL ACCRUAL AMOUNT (6)	CALCULATED ANNUAL ACCRUAL RATE (7)=(6)/(3)	COMPOSITE REMAINING LIFE (8)=(5)/(6)
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 *	3,287,122.58	1,304,750	1,982,373	264,366	8.04	7.5
WELLS								
352	CONSTRUCTION	SQUARE *	799,133.73	799,118	16	2	-	8.0
352	EQUIPMENT	50-S2.5 *	168,679.67	168,680	0	0	-	-
TOTAL ACCOUNT 352			967,813.40	967,798	16	2		
352.1	STORAGE LEASEHOLDS AND RIGHTS	SQUARE *	206,940.78	206,932	9	1	-	7.6
353	LINES	50-S1.5 *	399,542.52	399,543	0	0	-	-
354	COMPRESSOR STATION EQUIPMENT	55-R2.5 *	864,751.66	699,570	165,182	22,068	2.55	7.5
355	MEASURING AND REGULATING EQUIPMENT	37-R1.5 *	104,476.92	104,477	0	0	-	-
TOTAL UNDERGROUND STORAGE PLANT			5,832,579.94	3,685,001	2,147,581	286,437	4.91	
DISTRIBUTION PLANT								
LAND AND LAND RIGHTS								
374.4	LAND RIGHTS	70-R2.5	2,670,339	667,725	2,002,614	44,334	1.66	45.2
374.5	RIGHTS-OF-WAY	80-S4	3,239,641	1,643,493	1,596,148	35,648	1.10	44.8
TOTAL ACCOUNT 374			5,909,980	2,311,218	3,598,762	79,982	1.35	
STRUCTURES AND IMPROVEMENTS								
375.34	MEASURING AND REGULATING	60-R1	5,729,198.24	1,213,191	4,516,007	135,579	2.37	33.3
375.6	INDUSTRIAL MEASURING AND REGULATING	55-R1	87,669.84	74,553	13,117	589	0.67	22.3
375.7	OTHER DISTRIBUTION SYSTEMS							
	DISTRIBUTION SYSTEM STRUCTURES	90-R1.5 *	4,937,982.55	1,917,190	3,020,792	135,986	2.75	22.2
	OTHER BUILDINGS	35-R2	2,449,730.24	799,806	1,649,924	71,515	2.92	23.1
TOTAL ACCOUNT 375.70			7,387,712.79	2,716,996	4,670,716	207,501	2.81	22.5
375.8	COMMUNICATION STRUCTURES	45-R3	16,515.17	6,825	9,690	373	2.26	26.0
TOTAL ACCOUNT 375			13,221,096.04	4,011,565	9,209,530	344,042	2.60	

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TABLE 1. ESTIMATED SURVIVOR CURVES, ORIGINAL COST, BOOK RESERVE AND
CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO GAS PLANT AT NOVEMBER 30, 2017

Acct No.	DEPRECIABLE GROUP (1)	SURVIVOR CURVE (2)	ORIGINAL COST	BOOK	FUTURE	CALCULATED		COMPOSITE
			AS OF NOVEMBER 30, 2017 (3)	RESERVE (4)	BOOK ACCRUAL (5)	ANNUAL ACCRUAL AMOUNT (6)	RATE (7)=(6)/(3)	REMAINING LIFE (8)=(5)/(6)
376	MAINS							
	CAST IRON	71-R1 *	401,655.64	358,577	43,079	6,120	1.52	7.0
	BARE STEEL	71-R1 *	66,940,943.83	63,102,913	3,838,031	321,178	0.48	11.9
	OTHER	71-R1	<u>1,344,071,421.71</u>	<u>156,851,372</u>	<u>1,187,220,050</u>	<u>29,510,555</u>	2.20	40.2
	TOTAL ACCOUNT 376		1,411,414,021.18	220,312,862	1,191,101,160	29,837,853	2.11	
378	MEASURING AND REGULATING EQUIPMENT - GENERAL	45-O1	58,450,086.57	10,073,380	48,376,707	2,328,404	3.98	20.8
379.1	MEASURING AND REGULATING EQUIPMENT - CITY GATE	35-S2	140,227.51	95,966	44,262	4,026	2.87	11.0
380	SERVICES							
	BARE STEEL	50-R0.5 *	898,311.12	730,900	167,411	18,424	2.05	9.1
	OTHER	50-R0.5	<u>483,475,480.22</u>	<u>113,522,031</u>	<u>369,953,449</u>	<u>14,027,425</u>	2.90	26.4
	TOTAL ACCOUNT 380		484,373,791.34	114,252,931	370,120,860	14,045,849	2.90	
381	METERS	44-S1	37,708,686.29	15,801,176	21,907,510	908,099	2.41	24.1
381	METERS - AMR	15-S2.5	23,950,869.03	10,261,568	13,689,301	1,732,872	7.24	7.9
382	METER INSTALLATIONS	55-R3	38,336,244.15	12,461,669	25,874,575	723,979	1.89	35.7
383	HOUSE REGULATORS	45-S2	12,036,517.80	3,881,080	8,155,438	264,376	2.20	30.8
384	HOUSE REGULATOR INSTALLATIONS	45-S2	3,864,772.07	3,032,646	832,126	38,695	1.00	21.5
385	INDUSTRIAL MEASURING AND REGULATING EQUIPMENT - OTHER THAN METERS	30-R0.5	7,123,055.78	2,643,672	4,479,384	332,000	4.66	13.5
	OTHER EQUIPMENT							
387	GENERAL	32-R0.5	136,698.14	75,906	60,792	3,786	2.77	16.1
387.4	CUSTOMER INFORMATION SERVICES	25-R2	8,021,658.42	1,069,199	6,952,459	430,981	5.37	16.1
387.5	GPS EQUIPMENT	10-S3	<u>2,053,366.00</u>	<u>514,814</u>	<u>1,538,552</u>	<u>259,015</u>	12.61	5.9
	TOTAL ACCOUNT 387		<u>10,211,722.56</u>	<u>1,659,919</u>	<u>8,551,803</u>	<u>693,782</u>	6.79	
	TOTAL DISTRIBUTION PLANT		2,106,741,070.69	400,799,652	1,705,941,418	51,333,959	2.44	
GENERAL PLANT								
390.1	STRUCTURES AND IMPROVEMENTS - COMMUNICATIONS	45-R2	120,070.46	85,423	34,647	1,907	1.59	18.2
	OFFICE FURNITURE AND EQUIPMENT							
391.1	FURNITURE	20-SQ	3,278,017.98	1,662,145	1,615,873	97,299	2.97	16.6
391.11	EQUIPMENT	15-SQ	91,303.67	23,133	68,171	5,903	6.47	11.5
391.12	INFORMATION SYSTEMS	5-SQ	<u>3,117,085.86</u>	<u>1,348,842</u>	<u>1,768,244</u>	<u>627,181</u>	20.12	2.8
	TOTAL ACCOUNT 391		6,486,407.51	3,034,120	3,452,288	730,383	11.26	

COLUMBIA GAS OF PENNSYLVANIA, INC.

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CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO GAS PLANT AT NOVEMBER 30, 2017

Acct No.	DEPRECIABLE GROUP (1)	SURVIVOR CURVE (2)	ORIGINAL COST	BOOK	FUTURE	CALCULATED		COMPOSITE
			AS OF NOVEMBER 30, 2017 (3)	RESERVE (4)	BOOK ACCRUAL (5)	ANNUAL ACCRUAL AMOUNT (6)	RATE (7)=(6)/(3) (7)	REMAINING LIFE (8)=(5)/(6) (8)
392	TRANSPORTATION EQUIPMENT - TRAILERS	15-SQ	96,521	88,926	7,595	718	0.74	10.6
393	STORES EQUIPMENT	20-SQ	13,435	13,435	0	0	-	-
	TOOLS, SHOP AND GARAGE EQUIPMENT							
394	EQUIPMENT	25-SQ	15,376,593	6,087,689	9,288,904	567,720	3.69	16.4
394.12	CNG FACILITIES	12-S1.5	1,953,498	1,953,091	407	222	0.01	1.8
	TOTAL ACCOUNT 394		17,330,091	8,040,780	9,289,311	567,942	3.28	
395	LABORATORY EQUIPMENT	20-SQ	273,740	36,580	237,160	14,905	5.44	15.9
396	POWER OPERATED EQUIPMENT	13-L2	1,216,922	1,256,735	(39,813)	0	-	-
397.5	COMMUNICATION EQUIPMENT - TELEMETERING	19-R2.5	1,276,431	743,236	533,195	141,497	11.09	3.8
398	MISCELLANEOUS EQUIPMENT	15-SQ	1,219,845	247,882	971,963	82,784	6.79	11.7
	TOTAL GENERAL PLANT		28,033,464	13,547,117	14,486,346	1,540,136	5.49	
	SUBTOTAL DEPRECIABLE PLANT		2,140,607,114	418,031,770	1,722,575,345	53,160,532	2.48	
	AMORTIZABLE PLANT							
303	MISCELLANEOUS INTANGIBLE PLANT		27,039,391	10,398,453	16,640,938	3,224,729	**	
362.1	ENVIRONMENTAL REMEDIATION			(318,584)				
374.2	LAND, OTHER DISTRIBUTION SYSTEMS		477,102	210,197				
375.71	STRUCTURES AND IMPROVEMENTS - LEASED		2,830,323	1,099,938	1,730,385	179,544	**	
	SUBTOTAL AMORTIZABLE PLANT		30,346,816	11,390,004	18,371,323	3,404,273		
	NONDEPRECIABLE PLANT		172,413					
	TOTAL GAS PLANT		2,171,126,344	429,421,774	1,740,946,668	56,564,805		

* 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> \$
2012	3,151,214	25,333	(3,125,881)
2013	2,838,110	157,757	(2,680,353)
2014	6,493,118	0	(6,493,118)
2015	4,164,784	156,362	(4,008,422)
2016	<u>4,171,396</u>	<u>271,675</u>	<u>(3,899,721)</u>
Total	20,818,623	611,127	(20,207,495)
Five Year Amortization of Negative Net Salvage			(4,041,500)

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 Ill. 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:

Not Applicable.

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 the capital stock tax was phased out in 2016 and is no longer applicable.

Columbia Gas Pennsylvania, Inc.
Statement of Projected Taxes Other Than Income Taxes at Present Rates
Twelve Months Ended November 30, 2017

Line No.	Description	Per Books	Adjustments	Normalized
		Twelve Months Ended Nov. 30, 2017		Twelve Months Ended Nov. 30, 2017
		\$	\$	\$
1	FICA	2,426,164	(9,444)	2,416,720
2	FUTA & SUTA	137,971	0	137,971
3	Property Tax	404,238	1,666	405,904
4	License and Franchise	275	0	275
5	Sales and Use	284,465	0	284,465
6	Other	180	0	180
7	Total Taxes Other Than Income Taxes	<u>3,253,293</u>	<u>(7,778)</u>	<u>3,245,515</u>

Columbia Gas Pennsylvania, Inc.
Taxes Other Than Income Taxes
To Annualized Increase In FICA Tax
Twelve Months Ended November 30, 2017

<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	32,807,405	Exh 4, Sch 1, Pg 2, Ln 1+2
2	Total FICA charged per Books	<u>2,426,164</u>	Exh 6, Sch 2, Pg 2
3	FICA Experience Factor	7.3952%	Ln 2 / Ln 1
<u>HTY FICA Adjustment</u>			
4	O&M Payroll Adjustment	665,156	Exh 4, Sch 1, Pg 2, Ln 1
5	O&M Incentive Compensation Adjustment	<u>(792,856)</u>	Exh 4, Sch 1, Pg 2, Ln 2
6	Total O&M Payroll & Incentive Adjustment	(127,700)	Ln 4 + Ln 5
7	Annualized Payroll Tax FICA Adjustment	<u><u>(9,444)</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, 2017

Line No.	<u>Description</u>	Annualized <u>Nov. 30, 2017</u> \$
1	2016 PURTA Tax on property as of 12/31/2016	171,494
2	Locally Assessed PA Property Tax - Latest Paid	15,910
3	WV Tax Year as of 12/31/2016 Assessed Value on Stored Gas	11,139,629
4	2016 WV Tax Year Effective Tax Rate	<u>0.01961463</u>
5	Annualized WV Property Tax on Stored Gas	<u>218,500</u>
6	Total Property Tax Expense - Annualized	Line 1 + Line 2 + Line 5 405,904
7	Property Tax Expense - Per Books	<u>404,238</u>
8	Total Property Tax Adjustment	Line 6 - Line 7 <u><u>1,666</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:

The capital stock tax report is no longer applicable. The capital stock tax was phased out in 2016.

COLUMBIA GAS OF PENNSYLVANIA, INC
53.53 Ill. 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 include property, license or franchise tax for gas storage maintained in West Virginia as follows:

<u>Type of Tax</u>	<u>For the 12 Months Ended</u> <u>11/30/2017</u>
WV Property – Storage	225,739
License/Franchise	0

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	\$33,318,203
b.	Annualized test year-end	\$34,495,081
c.	Proposed test year-end	\$34,495,081

Response: See Exhibit No. 2, Sch 3, Page 4 for detail of the debt interest computation.

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. See Exhibit No. 2, Sch 3, Page 4 for detail of the debt interest computation.

26. Provide the following income tax data:

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

Response: For the twelve months ended November 30, 2017:

- a. See Exhibit No. 7, Pages 2-4.
- b. See Exhibit No. 2, Schedule No. 3, Page 4 for interest calculation.

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

<i>Company</i>	2014 Taxable Income 1/	2015 Taxable Income 1/	2016 Taxable Income 1/	2014-2016 Taxable Income
<i>Regulated</i>				
<u>Positive Regulated Companies</u>				
Northern Indiana Public Service Company	86,682,322	(27,042,518)	(18,374,119)	41,265,685
NiSource Corporate Services Company	3,157,437	2,956,022	21,087,381	27,200,840
Central Kentucky Transmission Company	46,860	33,631	58,729	139,220
Subtotal: Positive Regulated Companies	89,886,619	(24,052,865)	2,771,991	68,605,745
<u>Loss Regulated Companies</u>				
Columbia Gas of Ohio, Inc.	(26,148,630)	9,965,210	(66,018,630)	(82,202,050)
Columbia Gas of Kentucky, Inc.	144,816	(111,117)	(12,033,547)	(11,999,848)
Columbia Gas of Maryland, Inc.	(4,980,590)	(2,630,044)	(4,701,007)	(12,311,641)
Columbia Gas of Virginia, Inc.	(26,663,345)	1,262,838	(13,877,899)	(39,278,406)
Bay State Gas Company	(15,278,640)	(3,107,284)	(42,158,281)	(60,544,205)
Columbia Gas of Pennsylvania, Inc.	1,851,749	12,882,108	(24,798,164)	(10,064,307)
Subtotal: Loss Regulated Companies	(71,074,640)	18,261,711	(163,587,528)	(216,400,457)
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

<u>Company</u>	<u>2014 Taxable Income 1/</u>	<u>2015 Taxable Income 1/</u>	<u>2016 Taxable Income 1/</u>	<u>2014-2016 Taxable Income</u>
<i>Non Regulated</i>				
<i>Non Regulated Profitable Taxable Income Companies</i>				
NiSource Insurance Corporation	3,123,616	8,073,063	9,537,830	20,734,509
Northern Indiana Trading Company	-	-	-	-
NIPSCO Accounts Receivables Corporation	3,437,640	3,033,138	2,106,266	8,577,044
Columbia Gas of Ohio Receivables Corp.	1,592,736	381,098	1,193,763	3,167,597
Columbia Gas of Pennsylvania Receivables Corp	860,111	758,446	715,432	2,333,989
Subtotal: Positive Unregulated Companies	9,014,103	12,245,745	13,553,291	34,813,139
<i>Unregulated Loss Companies of Three Year Period</i>				
Eliminations (Inter-Company profit on Columbia Transmission)	(2,730,203)	8,160,489	-	5,430,286
EnergyUSA Inc. (IN)	(585,654)	(265,008)	(428,542)	(1,279,204)
Lake Erie Land Company	(17,616,892)	720,077	(386,767)	(17,283,582)
NiSource Energy Technologies, Inc.	(730,343)	(596,913)	225,256	(1,102,000)
NiSource Capital Markets, Inc.	(3,455,004)	(3,680,847)	(4,578,810)	(11,714,661)
IWC Resources Corp.	(89,748)	(92,022)	(90,552)	(272,322)
NiSource Finance Corp.	(7,058,074)	9,604,457	(10,250,156)	(7,703,773)
NiSource Development Company, Inc.	(2,376,070)	(2,268,585)	(2,387,190)	(7,031,845)
Primary Energy, Inc.	(1,727,397)	(1,368,627)	(2,348,188)	(5,444,212)
EnergyUSA-TPC Corp.	(547,250)	(476,070)	60,842	(962,478)
NiSource Inc.	(52,697,869)	(355,245,137)	(143,375,407)	(551,318,413)
NiSource Corporate Group	-	-	-	-
NGD Holding Company	-	-	-	-
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

<i>Company</i>	2014 Taxable Income 1/	2015 Taxable Income 1/	2016 Taxable Income 1/	2014-2016 Taxable Income
NiSource Inc. Interest on Columbia Stock Purchase Allocated Under SEC Order	(177,344,944)	-	(23,440,522)	(200,785,466)
Subtotal: Interest on Columbia Stock Purchase	(177,344,944)	-	(23,440,522)	(200,785,466)
<i>Other Companies Sold or In Process of Being Sold/or Inactive</i>				
NDC Douglas Properties, Inc.	(407,489)	3,385,008	(85,085)	2,892,434 2/
NiSource Retail Services, Inc.	1,780,747	133,982	306,579	2,221,308 3/
Crossroads Pipeline Company	748,087	-	-	748,087 4/
Columbia Gulf Transmission Company	43,234,658	-	-	43,234,658 4/
Columbia Hardy Corp.	2,226,517	-	-	2,226,517 4/
Columbia Energy Group	(6,692,837)	(148,957,604)	-	(155,650,441) 4/
CNS Microwave, Inc.	946,658	-	-	946,658 4/
Columbia Remainder Corporation	(275,876)	-	-	(275,876) 4/
Subtotal: Unregulated Companies Sold or In Process of Being Sold/or Inactive	41,560,465	(145,438,614)	221,494	(103,656,655)
Total Consolidated Taxable Income	(197,572,901)	(484,492,209)	(334,040,788)	(1,016,105,898)

1/ Separate Return amount includes non-deductible Charitable Contributions as a result of Consolidated Net Operating Loss

2/ Company in process of being sold. An investment in real estate for benefit of low income housing credits

3/ Company sold in 2013

4/ Company no longer part of the consolidated group pursuant to a spin off in 2015.

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 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 2016 and 2017 accrual. 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) of \$118,876,853 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

<u>Tax Year Ending</u>	<u>Year Settled</u>	<u>Tax</u>	<u>Interest</u>	<u>Total</u>
12/31/05	2013	-	(18,141)	(18,141)
12/31/06	2013	-	(1,402)	(1,402)
12/31/08	2013	(11,209,099)	(396,185)	(11,605,284)
12/31/09	2013	(4,967,774)	(286,920)	(5,254,694)
12/31/10	2015	265,662		265,662
12/31/11	2015	(142,365)		(142,365)
12/31/12	2015	(2,068)		(2,068)
12/31/13	2015	1,644		1,644
		<u>(16,054,000)</u>	<u>(702,648)</u>	<u>(16,756,648)</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.
 Tax & Book Depreciation Expense

	2016			Fiscal Year Ending 11/2016			
	Basis	Composite Depr Rate	Tax Depr	Book Depr	Difference	Tax Rate	Deferred Taxes
Class Life ADR (Pre-1971)	91,331,133	0.006382161	582,890	1,745,802	(1,162,912)		N/A
Book Depr. On Basis Diff				16,447,741	(16,447,741)		N/A
ADR	84,327,595	0.000003961	334	N/A	334	0.35	117
ACRS	78,075,476	0.000044175	3,449	N/A	3,449	0.35	1,207
MACRS	483,730,563	0.190667411	92,231,654	N/A	92,231,654	0.35	32,281,079
Other-MAPCO	-	-	-	N/A	-	0.35	-
Book Depr. Normalized	-	-	-	28,261,680	(28,261,680)	0.35	(9,891,588)
Total	737,464,767		92,818,327	46,455,223	63,973,757	0.35	22,390,815
		Allocation	0.0833				
		Tax Depreciation	7,734,861	Less: 11 mos.	(58,642,611)		(20,524,914)
					5,331,146	0.35	1,865,901
	2017			Fiscal Year Ending 11/2017			
	Basis	Composite Depr Rate	Tax Depr	Book Depr	Difference	Tax Rate	Deferred Taxes
Class Life ADR (Pre-1971)	89,866,534	0.000270535	24,312	1,637,429	(1,613,117)		N/A
Book Depr. On Basis Diff				16,037,658	(16,037,658)		N/A
ADR	84,327,594	0.000003961	334	N/A	334	0.35	117
ACRS	76,674,290	0.000044982	3,449	N/A	3,449	0.35	1,207
MACRS	556,567,142	0.217795313	121,217,715	N/A	121,217,715	0.35	42,426,200
Other-MAPCO	-	-	-	N/A	-	0.35	-
Book Depr. Normalized	-	-	-	31,790,517	(31,790,517)	0.35	(11,126,681)
Total	807,435,560		121,245,810	49,465,604	89,430,981	0.35	31,300,843
		Allocation	0.9167	Less: 1 mo.	(7,452,582)		(2,608,404)
		Tax Depreciation	111,141,993		81,978,399	0.35	28,692,440
				Pro Forma Adjustments	(9,432,728)	0.35	(3,301,455)
Total Test Year Tax Depreciation			118,876,853	Total Test Year	77,876,818	0.35	27,256,886

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 11/30/17	Pro-Forma Adjustments Existing Rates	Pro-Forma Balance 11/30/17	Pro-Forma Adjustments Proposed Rates	Pro-Forma Balance 11/30/17
<u>Account 190 - Deferred Income Taxes</u>					
19001000 Tax Inventory Adj - Fed	14,439,739	-	14,439,739	-	14,439,739
19002000 Tax Inventory Adj - St	4,578,951	-	4,578,951	-	4,578,951
19001000 Capitalized Inventory - Fed	2,129,881	-	2,129,881	-	2,129,881
19002000 Capitalized Inventory - St	675,402	-	675,402	-	675,402
19005000 Customer Advances - Fed	1,581,978	-	1,581,978	-	1,581,978
19006000 Customer Advances - St	501,657	-	501,657	-	501,657
19005000 Federal Net Operating Loss	59,869,325	-	59,869,325	-	59,869,325
Subtotal Rate Base	<u>83,776,933</u>	<u>-</u>	<u>83,776,933</u>	<u>-</u>	<u>83,776,933</u>
19001000/19005000 Tax Method Change: Repair - Fed	-	-	-	-	-
19002000/19006000 Tax Method Change: Repair - St	-	-	-	-	-
19002000/19006000 Pennsylvania Net Operating Loss	16,076,571	(16,076,571)	-	-	-
All Other Deferred 190 Income Taxes	14,089,905	(14,089,905)	-	-	-
Subtotal Non Rate Base	<u>30,166,476</u>	<u>(30,166,476)</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total Account 190	<u>113,943,409</u>	<u>(30,166,476)</u>	<u>83,776,933</u>	<u>-</u>	<u>83,776,933</u>
<u>Account 255 - Deferred Investment Tax Credits</u>					
Investment Tax Credits (1962-1969)	-	-	-	-	-
Job Development Tax Credits (1971-1988)	(2,155,793)	2,155,793	-	-	-
Total Account 255 (Non Rate Base)	<u>(2,155,793)</u>	<u>2,155,793</u>	<u>-</u>	<u>-</u>	<u>-</u>
<u>Account 282 - Deferred Income Taxes-Depreciation</u>					
Various Excess Accelerated Tax Depreciation - Fed	(429,041,466)	979,464	(428,062,002)	-	(428,062,002)
Subtotal Rate Base	<u>(429,041,466)</u>	<u>979,464</u>	<u>(428,062,002)</u>	<u>-</u>	<u>(428,062,002)</u>
28205100 SFAS 109 Offset - Fed	(101,419,651)	101,419,651	-	-	-
28206100 SFAS 109 Offset - St	(123,676,765)	123,676,765	-	-	-
28205000 Non-Utility Other - Fed	-	-	-	-	-
28205000 Non-Utility Book Gain on Sale Property - Fed	(95,847)	95,847	-	-	-
Subtotal Non Rate Base	<u>(225,192,263)</u>	<u>225,192,263</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total Account 282	<u>(654,233,729)</u>	<u>226,171,727</u>	<u>(428,062,002)</u>	<u>-</u>	<u>(428,062,002)</u>
28301000/28305000 Pennsylvania Net Operating Loss: Federal Offset	(5,626,800)	5,626,800	-	-	-
All Other Deferred 283 Income Taxes	(6,614,861)	6,614,861	-	-	-
Subtotal Non Rate Base	<u>(12,241,661)</u>	<u>12,241,661</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total Account 283	<u>(12,241,661)</u>	<u>12,241,661</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total Accumulated Deferred Taxes	<u>(554,687,774)</u>	<u>210,402,705</u>	<u>(344,285,069)</u>	<u>-</u>	<u>(344,285,069)</u>

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, 2017

Line No.	Vintage Year	J.D.C. 4%	1/	J.D.C. 10%	1/	J.D.C. 8%	1/	Amortizable Credit	Amortization
	(1)	(2)		(3)		(4)		(5)	
	\$	\$		\$		\$		\$	
1	1971	1,930		0		0		1,930	3,301
2	1972	0		0		0		0	2,793
3	1973	19,446		0		0		19,446	4,236
4	1974	50,661		0		0		50,661	5,280
5	1975	0		0		0		0	7,908
6	1976	0		0		0		0	8,184
7	1977	0		0		0		0	14,565
8	1978	5		87,731		0		87,736	24,492
9	1979	0		77,232		0		77,232	29,904
10	1980	0		474,901		0		474,901	34,956
11	1981	0		280,335		0		280,335	42,576
12	1982	0		372,978		0		372,978	43,452
13	1983	0		40,411		245,873		286,284	33,360
14	1984	0		1,094		222,906		224,000	34,032
15	1985	0		0		218,459		218,459	39,132
16	1986	0		61,831		0		61,831	8,160
17	Total	<u>72,042</u>		<u>1,396,513</u>		<u>687,238</u>		<u>2,155,793</u>	<u>336,331</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, 2017**

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	550,150,052	(1)	13,016,853	563,166,905	(402,683)	562,764,222
2	Net Gas Purchased for Resale	(162,850,774)	(1)	3,734,375	(159,116,399)	0	(159,116,399)
3	Operation and Maintenance Expense	(196,972,809)	(2)	2,467,622	(194,505,187)	4,794	(194,500,393)
4	Depreciation & Amortization Expense	(56,766,826)	(3)	(3,839,478)	(60,606,304)	0	(60,606,304)
5	Taxes Other Than Income Taxes	(3,253,294)	(4)	7,779	(3,245,515)	0	(3,245,515)
6	Net Operating Income Before Income Taxes	130,306,349		15,387,151	145,693,500	(397,889)	145,295,611
7	Investment in Subsidiary Income	332,403		(332,403)	0	0	0
8	Non-Utility Income - Net	(509,010)	(5)	509,010	0	0	0
9	Interest Charges	(33,318,203)	(5)	33,318,203	0	0	0
10	Net Income Before Income Taxes	96,811,539		48,881,961	145,693,500	(397,889)	145,295,611
11	Less: Investment in Subsidiary Income	(332,403)		332,403	0	0	0
12	Net Income Before Income Taxes	96,479,136		49,214,364	145,693,500	(397,889)	145,295,611
13	Statutory Adjustments (Page 14, Line 35)	(146,037,677)		(32,080,341)	(178,118,018)	0	(178,118,018)
14	Deductible State Income Tax	(2,985,427)		693,887	(2,291,540)	27,824	(2,263,716)
15	Taxable Income	(52,543,968)		17,827,910	(34,716,058)	(370,065)	(35,086,123)
16	Federal Income Tax	(18,390,389)		11,100,017	(7,290,372)	(77,714)	(7,368,086)
17	Federal Net Operating Loss Carryforward	42,150,384		(42,150,384)	0	0	0
18	Prior Year Adjustments	406,828	(8)	(406,828)	0	0	0
19	Job Development Credit Allowance	0		0	0	0	0
20	Federal Income Tax	24,166,823		(31,457,195)	(7,290,372)	(77,714)	(7,368,086)
21	Deferred Federal Income Tax - Net	55,856,297		(22,619,237)	33,237,060	0	33,237,060
22	Other Direct Federal Deferred Adjustments	(1,003,091)	(8)	1,003,091	0	0	0
23	Amortization of Tax Refund	(56,828)		0	(56,828)	0	(56,828)
24	Federal Net Operating Loss Carryforward	(42,150,384)		42,150,384	0	0	0
25	Flow Back of Excess Deferred Income Taxes	(71,365)	(9)	0	(71,365)	0	(71,365)
26	Effect of CNIT Deferred Tax	72,278	(10)	(1,267)	71,011	0	71,011
27	Total Federal Income Tax	36,813,730		(10,924,224)	25,889,506	(77,714)	25,811,792
28	Deferral of Current Job Development Credit	0		0	0	0	0
29	Amortization of Investment Tax Credits	(336,331)		0	(336,331)	0	(336,331)
30	Net Federal Income Tax Expense	36,477,399		(10,924,224)	25,553,175	(77,714)	25,475,461
31	State Income Tax Expense	488,073		1,465,319	1,953,392	(27,824)	1,925,568
32	Total Income Tax Expense	36,965,472		(9,458,905)	27,506,567	(105,538)	27,401,029
33	NET INCOME	59,513,664		58,673,269	118,186,933	(292,351)	117,894,582

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, 2017**

Line No.	Description	Per Books (1) \$	Pro Forma Adjustments		Pro Forma at Test Year Base Rates (4=1+3) \$
			Reference (2)	Amount (3) \$	
1	<u>Flow Through Adjustments</u>				
2	Book/Tax Depreciation, Net	10,828,858		-	10,828,858
3	Book Depreciation- Net Salvage Amtz	4,418,137		-	4,418,137
4	Property Removal Costs - ADR Property	(545,669)		-	(545,669)
5	Loss on Retirement - ACRS/MACRS Removal Costs	(417,396)		-	(417,396)
6	Interest on Debt	-	(7)	(34,495,081)	(34,495,081)
7	Political Action Expenses (Sec. 162E)	(26,262)	(6)	26,262	-
8	Employee Business Expense Disallowance	343,740		-	343,740
9	Employee Stock Purchase Plan	16,550		-	16,550
10	Rent Expense - Luxury Autos	4,559		-	4,559
11	AFUDC Equity	(1,076,515)	(6)	1,076,515	-
12	Penalties	5,740	(8)	(5,740)	-
13	Total Flow Through Adjustments	13,551,742		(33,398,044)	(19,846,302)
14	<u>Deferred Adjustments</u>				
15	Excess Tax Depreciation Over Book	3,604,268		-	3,604,268
16	Repairs on Gas Pipeline	(85,033,364)		-	(85,033,364)
17	Bonus Depreciation	(81,481,086)		-	(81,481,086)
18	Sec 263A Mixed Service Costs	(1,154,984)		-	(1,154,984)
19	Avoided Cost Interest	159,843		-	159,843
20	Loss on Retirement - ACRS/MACRS Property Basis	(626,849)		-	(626,849)
21	Builder Incentives Capitalized	(42,978)		-	(42,978)
22	Stored Gas Losses	2,206		-	2,206
23	Contributions In Aid of Construction	2,916,382		-	2,916,382
24	Tax Inventory Adj	3,264,604		-	3,264,604
25	Capitalized Inventory	(9,595)		-	(9,595)
26	Customer Advances	129,837		-	129,837
27	Deferred Compensation	1,730,699		(1,730,699)	-
28	Off System Sales	(3,592,542)		3,592,542	-
29	Deferred Gas Costs	5,511,924		(5,511,924)	-
30	Customer Assistance Plan (Cap)	(2,092,711)		2,092,711	-
31	Accrued Interest Incomee	247,627		(247,627)	-
27	Other	(3,122,700)		3,122,700	-
28	Total Deferred Adjustments	(159,589,419)		1,317,703	(158,271,716)
29	Total Statutory Adjustments	(146,037,677)		(32,080,341)	(178,118,018)

() 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) See Exhibit No. 6.
- (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, 2017**

Line No.	Description	Pro Forma At Test Year Base Rates	Pro Forma At Proposed Base Rates
		(1)	(2)
		\$	\$
1	Operating Income Before Income Taxes (Exhibit No. 2, Sch 3, Pg 3)	145,693,500	145,295,611
2	Pennsylvania Corporate Net Income Tax Deductible (P20, L8)	<u>(2,291,540)</u>	<u>(2,263,716)</u>
3	<u>Statutory Adjustments</u>		
4	<u>Flow-Through Adjustments</u>		
5	Book/ Tax Depreciation, Net	10,828,858	10,828,858
6	Book Depreciation- Net Salvage Amtz	4,418,137	4,418,137
7	Property Removal Costs - ADR	(545,669)	(545,669)
8	Loss on Retirement - ACRS/MACRS Removal Costs	(417,396)	(417,396)
9	Interest on Debt (1)	(34,495,081)	(34,495,081)
10	Employee Business Expense Disallowance	343,740	343,740
11	AFUDC Equity	0	0
12	Employee Stock Purchase Plan	16,550	16,550
13	Rent Expense - Luxury Autos	<u>4,559</u>	<u>4,559</u>
14	Total Flow Through Adjustments	(19,846,302)	(19,846,302)
15	<u>Deferred Adjustments</u>		
16	Excess Tax Depreciation Over Book	3,604,268	3,604,268
17	Repairs on Gas Pipeline	(85,033,364)	(85,033,364)
18	Bonus Depreciation	(81,481,086)	(81,481,086)
19	Sec 263A Mixed Service Costs	(1,154,984)	(1,154,984)
20	Loss On Retirement - ACRS/MACRS Property Basis	(626,849)	(626,849)
21	Avoided Cost Interest	159,843	159,843
22	Builder Incentives Capitalized	(42,978)	(42,978)
23	Stored Gas Losses	2,206	2,206
24	Contributions In Aid of Construction	2,916,382	2,916,382
25	Tax Inventory Adj	3,264,604	3,264,604
26	Capitalized Inventory	(9,595)	(9,595)
27	Customer Advances	<u>129,837</u>	<u>129,837</u>
28	Total Deferred Adjustments	(158,271,716)	(158,271,716)
29	Taxable Income (Lines 1,2,14,28)	(34,716,058)	(35,086,123)
30	Federal Income Tax Payable @ 21%	(7,290,372)	(7,368,086)
31	Deferred Income Taxes (Line 28 @ 21%)	33,237,060	33,237,060
32	Amortization of Tax Refund	(56,828)	(56,828)
33	Flow Back Of Excess Deferred Taxes	(71,365)	(71,365)
34	Effect of CNIT Deferred Tax on FIT (P20, Lines 9-12 @21%)	<u>71,011</u>	<u>71,011</u>
35	Net Federal Income Tax Expense (Lines 30-34)	25,889,506	25,811,792
36	State Income Tax Expense (P20, L13)	<u>1,953,394</u>	<u>1,925,570</u>
37	Total Income Tax Expense (Lines 35-36)	<u>27,842,900</u>	<u>27,737,362</u>

(1) Interest expense for rate purposes has been calculated as follows: 2.370% weighted cost of short-term and long-term debt x original cost rate base of \$1,455,488,639 = \$34,495,081

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 no 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 affect 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 and 2016. 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.

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 deferral.

- 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 deferral 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.

		ORIGINAL NOL INCURRED IN:									
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
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										(9,360,662)
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)	(75,544,178)
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	142,859,624

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, 2017

<u>Taxes Accrued Balance</u>	<u>Amount</u> \$	<u>Basis for Accrued Tax</u>
Federal Income Tax	(1,197,159)	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 35% of taxable income. The monthly accrual is based on the taxable income or loss achieved from that month's operations.
Social Security Taxes (FICA)	384,815	Social Security tax for 2016 is based on the first \$118,500 of taxable wages paid to an employee at a rate of 6.20% (for 2017, \$127,200 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)	1,252	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	(10,913)	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	330,122	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, 2017

<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)	28,081	Tax is based on the first \$9,750 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	2,796	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.
License and Franchise and Other Local Taxes	(2,250)	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>(463,256)</u></u>	

COLUMBIA GAS OF PENNSYLVANIA, INC.
 MONTHLY TAX ACCRUALS
 TWELVE MONTHS ENDED NOVEMBER 30, 2017

Line No.	Month	Federal Taxes				Pennsylvania State and Other Taxes						
		Income Tax		Social Security FICA	Unemployment FUTA	Corporate Net Income		Property	Unemployment SUTA	Sales and Use	License & Franchise	All Other
		Current	Prior Years			Current	Prior Years					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)		
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
1	December-2016	24,235,499	142,997	203,083	62	-	-	39,693	240	-	-	-
2	January-2017	8,504,485	-	190,471	12,467	2,363,785	-	33,816	84,027	-	-	-
3	February	5,799,882	-	175,083	2,672	1,735,303	-	33,816	24,933	-	-	1,013
4	March	(801,321)	-	200,206	302	217,627	-	33,816	3,520	-	100	(1,013)
5	April	(2,953,426)	-	186,463	116	(282,115)	-	33,816	946	-	-	-
6	May	(5,205,639)	-	211,504	206	(795,415)	-	29,637	1,268	-	-	-
7	June	(5,343,981)	-	210,606	261	(1,208,581)	-	32,980	1,809	51,000	-	296
8	July	-	-	211,925	152	359,261	3,052,549	32,980	1,212	-	175	-
9	August	-	-	211,343	77	(1,365,157)	-	33,487	204	-	-	-
10	September	-	-	206,175	142	(1,024,708)	-	34,108	903	33,465	-	-
11	October	-	-	206,227	190	-	-	33,044	1,237	-	-	(116)
12	November	-	-	213,080	105	-	-	33,044	921	200,000	-	-
13	TOTAL	<u>24,235,499</u>	<u>142,997</u>	<u>2,426,166</u>	<u>16,752</u>	<u>0</u>	<u>3,052,549</u>	<u>404,237</u>	<u>121,220</u>	<u>284,465</u>	<u>275</u>	<u>180</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 \$27,256,886. See Exhibit No. 7, Page 7.
- c. None.
- d. For the twelve months ended November 30, 2017 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 \$336,331. (Note: This amortization includes portions of JDC accrued at 4%, 10%, and 8%).
- 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, 2017

Accounting entries per Books for:

a. Accelerated Depreciation Deferred

Dr. 410011000 Deferred Federal Income Tax	\$27,256,886
Cr. 282050000 Accumulated Deferred Income Taxes	\$27,256,886

b. Amortization of Job Development Credits

Dr. 255000000 Deferred Investment Tax Credit	\$ 336,331
Cr. 411410000 Deferred Federal Income Tax	\$ 336,331

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 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, 2017.

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, 2017.

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 chose 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 - 47) which was revised effective April 6, 2016, and amended effective August 17, 2016, as approved by the Commission in Docket No. G-2016-2531552. For the allocations from 2014-2016, please see Exhibit No. 7, pages 2-4.
- c. See the 2014-2016 allocations (Exhibit No. 7, pages 2-4) discussed in b, above.
- d. The income tax return is available for review at the Harrisburg law office of Post & Schell.

April 7, 2016

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, 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 Parties desire to amend and restate the 2002 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.

“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) on the assumption that the “exemption amount” 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) 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 immediately prior to the time such 2002 Agreement is superseded by this Agreement.

(f) 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 Articles 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 55, 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.

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, 2015 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 shall be deemed to have been superseded and replaced in its 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 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 shall survive only with respect to Taxable Periods or portions thereof ending prior to July 1, 2015, 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 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 4.4 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 4.5 Benefit and Burden. This Agreement shall inure to the benefit of, and shall be binding upon, the parties hereto and their respective successors.

Section 4.6 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 4.7 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 4.8 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 4.9 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 4.10 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 4.11 Applicable Law. **THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF INDIANA.**

Section 4.12 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.

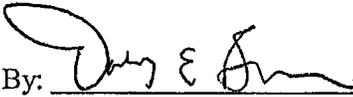
Section 4.13 Attorneys' Fees. If any Member or former member hereto commences an action against another party to enforce any of the terms, covenants, conditions or provisions of this Agreement, or because of a default by a party under this Agreement, the prevailing party in any such action shall be entitled 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.

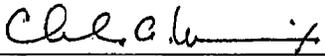
Section 4.14 No Third Party Rights. Nothing in this Agreement shall be deemed to create any right in any creditor or other person or entity not a party hereto and this Agreement shall not be construed in any respect to be a contract in whole or in part of the benefit of any third party.

Section 4.15 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 4.16 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: 
Printed Name: Donald E. Brown
Title: Executive Vice President
NiSource Inc.

By: 
Printed Name: Charles A. Mannix
Title: Vice President, Tax Services
[List of companies attached as Exhibit A]

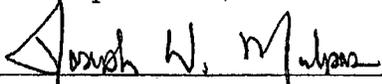
By: 
Printed Name: Joseph W. Mulpas
Title: Vice President
NiSource Insurance Corporation, Inc.

Exhibit A

Bay State Gas Company (dba Columbia Gas of Massachusetts)
Columbia Gas of Kentucky, Inc.
Central Kentucky Transmission Company
Columbia Gas of Maryland, Inc.
Columbia Gas of Ohio, Inc.
Columbia Gas of Ohio Receivables Corporation
Columbia Gas of Pennsylvania, Inc.
Columbia Gas of Pennsylvania Receivables Corporation
Columbia Gas of Virginia, Inc.
The Darlington Water Works Company
Energy USA, Inc.
Energy USA-TPC Corp.
Harbour Water Corporation
Indianapolis Water Company
Irishman's Run Acquisition Corp.
IWC Morgan Water Company
IWC Resources Corporation
Lake Erie Land Company
Liberty Water Corporation
NDC Douglas Properties, Inc.
NiSource Capital Markets, Inc.
NiSource Corporate Group, Inc.
NiSource Corporate Services Company
NiSource Development Company, Inc.
NiSource Energy Technologies, Inc.
NiSource Finance Corp.
NiSource Gas Distribution Group, Inc.
NiSource Insurance Corporation, Inc.
NiSource Retail Services, Inc.
Northern Indiana Public Service Company
NIPSCO Accounts Receivable Corporation
PEI Holdings, Inc.

August 17, 2016

NISOURCE INC. AND SUBSIDIARY COMPANIES

FIRST AMENDMENT TO AMENDED & RESTATED
INTERCOMPANY INCOME TAX ALLOCATION AGREEMENT

Whereas, NISource Inc. and Subsidiary Companies (collectively the "Parties") have entered into the Amended and Restated InterCompany Income Tax Allocation Agreement ("Agreement"), which Agreement is an affiliate Interest agreement that has been approved by the Virginia State Corporation Commission on March 3, 2016 and by the Pennsylvania Public Utility Commission on May 5, 2016; and

Whereas, the Parties desire to amend the Agreement in order to comply with the 5 year term limit required under the General Administrative Order of The Indiana Utility Regulatory Commission 2016-1; and

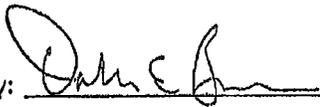
Whereas, the Agreement, in Section 4.6, provides that any amendment shall be valid only if the amendment is in writing and signed by the Parties; and

Whereas, all capitalized terms in this First Amendment to the Agreement (the "First Amendment") shall have the same meaning as set forth in the Agreement; and

Whereas, this First Amendment, upon signature by the Parties will become part of the Agreement; and

Now, therefore, the Parties hereby covenant and agree with one another that the Agreement will terminate on the date five years from the Effective Date per Section 4.2 of the Agreement.

Subject to all necessary regulatory approvals this First Amendment is executed and made part of the Agreement as of the date and year first above written.

By: 

Printed Name: Donald E. Brown

Title: Executive Vice President

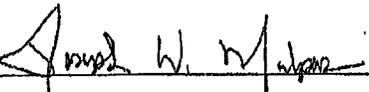
NISource Inc.

By: 

Printed Name: Charles A. Mannix

Title: Vice President, Tax Services

[List of companies attached as Exhibit A to Agreement]

By: 

Printed Name: Joseph W. Mulpas

Title: Vice President

NISource Insurance Corporation, Inc.

By: 

Printed Name: Violet Sistovaris

Title: Executive Vice President

Northern Indiana Public Service Company

Columbia Gas of Pennsylvania
PowerTax Depreciation Summary Report 7

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Attachment 1
Exhibit No. 7
Witness: Panpilas W. Fischer
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Grouped By: Total Tax Classes

Tax Book : Federal

Tax Year : 2016

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	\$14,273,267	(\$427,243)	\$14,273,267	\$14,228,334	\$249,260	\$0	\$0	\$19,484	\$248,520	\$13,846,024	\$13,821,316
V1954	\$2,157,604	(\$20,005)	\$2,157,604	\$2,157,604	\$10,525	\$0	\$0	\$895	\$11,420	\$2,137,600	\$2,137,600
V1955	\$4,892,789	(\$36,762)	\$4,892,789	\$4,892,789	\$15,807	\$0	\$0	\$1,345	\$17,152	\$4,856,027	\$4,856,027
V1956	\$3,057,946	(\$22,465)	\$3,057,946	\$3,057,946	\$11,446	\$0	\$0	\$974	\$12,420	\$3,035,481	\$3,035,481
V1957	\$3,977,753	(\$81,204)	\$3,977,753	\$3,977,753	\$32,196	\$0	\$0	\$2,739	\$34,935	\$3,896,549	\$3,896,549
V1958	\$4,611,188	(\$41,900)	\$4,611,188	\$4,611,188	\$18,763	\$0	\$0	\$1,596	\$20,360	\$4,569,287	\$4,569,287
V1959	\$4,134,799	(\$34,351)	\$4,134,799	\$4,134,799	\$17,332	\$0	\$0	\$1,474	\$18,806	\$4,100,448	\$4,100,448
V1960	\$4,310,687	(\$55,311)	\$4,310,687	\$4,310,687	\$20,482	\$0	\$0	\$1,742	\$22,225	\$4,255,376	\$4,255,376
V1961	\$4,735,453	(\$49,239)	(\$18)	\$4,735,453	\$20,503	\$0	\$0	\$1,744	\$22,247	\$4,686,214	\$4,686,214
V1962	\$4,271,968	(\$24,242)	\$0	\$4,271,968	\$11,338	\$0	\$0	\$965	\$12,302	\$4,247,725	\$4,247,725
V1963	\$5,088,087	(\$49,825)	\$0	\$5,088,087	\$23,998	\$0	\$0	\$2,041	\$26,039	\$5,038,262	\$5,038,262
V1964	\$5,365,118	(\$43,377)	\$0	\$5,365,118	\$19,931	\$0	\$0	\$1,696	\$21,627	\$5,321,740	\$5,321,740
V1965	\$4,512,053	(\$48,220)	\$0	\$4,512,053	\$18,488	\$0	\$0	\$1,573	\$20,061	\$4,463,833	\$4,463,833
V1966	\$6,167,610	(\$65,287)	\$0	\$6,167,610	\$20,566	\$0	\$0	\$1,750	\$22,315	\$6,102,322	\$6,102,322
V1967	\$6,161,738	(\$71,420)	\$0	\$6,161,738	\$29,756	\$0	\$0	\$2,531	\$32,287	\$6,090,318	\$6,090,318
V1968	\$5,612,380	(\$43,284)	\$10,219	\$5,602,160	\$21,486	\$0	\$0	\$1,480	\$18,878	\$5,569,095	\$5,562,964
V1969	\$4,403,394	(\$61,274)	\$1	\$4,403,393	\$27,405	\$0	\$0	\$2,331	\$29,736	\$4,342,120	\$4,342,119
V1970	\$3,597,303	(\$34,289)	\$1	\$3,597,301	\$13,609	\$0	\$0	\$1,158	\$14,767	\$3,563,014	\$3,563,013
V1971	\$9,434,565	(\$75,600)	\$57,395	\$9,445,810	\$0	\$0	\$1,362	\$3,061	\$39,047	\$9,434,565	\$9,447,509
V1972	\$5,775,200	(\$44,935)	\$3,264	\$5,787,740	\$0	\$0	\$0	\$2,030	\$25,897	\$5,775,200	\$5,789,771
V1973	\$4,866,020	(\$62,245)	\$13,423	\$4,866,020	\$0	\$0	\$3,026	\$3,026	\$38,593	\$4,866,020	\$4,866,020
V1974	\$6,670,944	(\$95,609)	\$0	\$6,670,944	\$0	\$0	\$4,449	\$4,449	\$56,743	\$6,670,944	\$6,670,944
V1975	\$6,249,649	(\$84,276)	\$4,869	\$6,248,510	\$0	\$0	\$4,109	\$4,109	\$52,410	\$6,249,649	\$6,248,510
V1976	\$5,570,314	(\$250,122)	\$17,969	\$5,488,748	\$0	\$0	\$0	\$11,941	\$152,303	\$5,570,314	\$5,500,688
V1977	\$9,828,321	(\$266,914)	\$733	\$9,764,914	\$0	\$0	\$0	\$12,828	\$163,626	\$9,828,321	\$9,777,743
V1978	\$10,299,560	(\$203,795)	\$0	\$10,143,503	\$0	\$0	\$0	\$9,826	\$125,325	\$10,299,560	\$10,153,328
V1979	\$13,288,569	(\$306,830)	\$116,665	\$13,319,762	\$0	\$0	\$7,904	\$14,171	\$180,755	\$13,288,569	\$13,326,029
V1980	\$12,344,453	(\$141,634)	\$44,320	\$12,426,188	\$334	\$0	\$4,172	\$4,172	\$53,220	\$12,344,453	\$12,426,523
V1981	\$14,151,849	(\$355,982)	\$13,795,867	\$14,124,016	\$768	\$0	\$15,366	\$15,366	\$195,988	\$13,795,867	\$13,768,802
V1982	\$13,117,792	(\$238,342)	\$12,879,449	\$13,092,207	\$660	\$0	\$10,444	\$10,444	\$133,216	\$12,879,449	\$12,854,525
V1983	\$10,942,071	(\$204,179)	\$10,737,892	\$10,926,683	\$377	\$0	\$8,837	\$8,837	\$112,721	\$10,737,892	\$10,722,881

Columbia Gas of Pennsylvania
PowerTax Depreciation Summary Report 7

Attachment 1
Exhibit No. 7
Witness: Panpilas W. Fischer
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Grouped By: Total Tax Classes

Tax Book : Federal

Tax Year : 2016

Vintage	Beginning Asset Balance	Additions/Retirements	Depreciable Base	Beginning Reserve	Depreciation	Capitalized Depreciation	Gain/(Loss)	Salvage	Cost of Removal	Ending Asset Balance	Ending Reserve
V1984	\$12,839,883	(\$151,803)	\$12,688,081	\$12,822,222	\$422	\$0	\$6,122	\$6,122	\$78,081	\$12,688,081	\$12,670,842
V1985	\$12,867,034	(\$151,074)	\$12,715,960	\$12,825,356	\$978	\$0	\$6,628	\$6,628	\$84,546	\$12,715,960	\$12,675,260
V1986	\$14,156,847	(\$193,370)	\$13,963,477	\$14,146,146	\$244	\$0	\$8,122	\$8,122	\$103,595	\$13,963,477	\$13,953,019
V1987	\$237,569	\$0	\$237,569	\$204,822	\$7,134	\$0	\$0	\$0	\$0	\$237,569	\$211,956
V1987 Q1	\$2,798,423	(\$39,157)	\$18,261	\$2,798,423	\$0	\$0	\$1,655	\$1,655	\$21,110	\$2,759,266	\$2,759,266
V1987 Q2	\$3,497,274	(\$49,120)	\$0	\$3,497,274	\$0	\$0	\$2,007	\$2,007	\$25,603	\$3,448,154	\$3,448,154
V1987 Q3	\$3,900,295	(\$53,508)	\$0	\$3,900,295	\$0	\$0	\$2,264	\$2,264	\$28,876	\$3,846,787	\$3,846,787
V1987 Q4	\$4,845,241	(\$64,233)	\$3,710	\$4,845,241	\$0	\$0	\$2,647	\$2,647	\$33,764	\$4,781,008	\$4,781,008
V1988	(\$404,843)	\$0	(\$404,843)	(\$421,655)	\$1,147	\$0	\$0	\$0	\$0	(\$404,843)	(\$420,508)
V1988 Q1	\$2,800,068	(\$29,993)	\$0	\$2,800,068	\$0	\$0	\$1,262	\$1,262	\$16,099	\$2,770,075	\$2,770,075
V1988 Q2	\$3,099,840	(\$50,943)	\$0	\$3,099,840	\$0	\$0	\$2,042	\$2,042	\$26,048	\$3,048,896	\$3,048,896
V1988 Q3	\$1,099,302	(\$44,658)	\$0	\$1,099,302	\$0	\$0	\$1,879	\$1,879	\$23,961	\$1,054,644	\$1,054,644
V1988 Q4	\$875,570	(\$35,918)	\$0	\$875,570	\$0	\$0	\$1,420	\$1,420	\$18,106	\$839,652	\$839,652
V1989	(\$309,355)	\$0	(\$309,355)	(\$361,412)	\$2,176	\$0	\$0	\$0	\$0	(\$309,355)	(\$359,237)
V1989 Q1	\$1,812,369	(\$45,689)	\$0	\$1,812,369	\$0	\$0	\$1,604	\$1,604	\$20,464	\$1,766,680	\$1,766,680
V1989 Q2	\$1,642,276	(\$55,438)	\$0	\$1,642,276	\$0	\$0	\$2,195	\$2,195	\$28,000	\$1,586,839	\$1,586,839
V1989 Q3	\$1,932,452	(\$85,665)	\$13,619	\$1,932,452	\$0	\$0	\$3,698	\$3,698	\$47,164	\$1,846,787	\$1,846,787
V1989 Q4	\$1,299,023	(\$61,336)	\$0	\$1,299,023	\$0	\$0	\$2,450	\$2,450	\$31,246	\$1,237,687	\$1,237,687
V1990	\$6,134,230	(\$359,051)	(\$345,467)	\$6,105,737	\$626	\$0	\$15,406	\$15,406	\$196,497	\$5,775,179	\$5,747,312
V1991	(\$308,261)	\$0	(\$308,261)	(\$337,294)	\$606	\$0	\$0	\$0	\$0	(\$308,261)	(\$336,688)
V1991 Q1	\$1,757,600	(\$41,433)	\$0	\$1,757,600	\$0	\$0	\$1,349	\$1,349	\$17,201	\$1,716,166	\$1,716,166
V1991 Q2	\$1,311,433	(\$80,149)	\$0	\$1,311,433	\$0	\$0	\$1,346	\$1,346	\$17,166	\$1,231,284	\$1,231,284
V1991 Q3	\$689,553	(\$54,285)	\$0	\$689,553	\$0	\$0	\$552	\$552	\$7,035	\$635,268	\$635,268
V1991 Q4	\$2,475,958	(\$130,225)	\$11,138	\$2,475,958	\$0	\$0	\$2,594	\$2,594	\$33,083	\$2,345,733	\$2,345,733
V1992	(\$328,999)	\$0	(\$328,999)	(\$379,759)	\$1,861	\$0	\$0	\$0	\$0	(\$328,999)	(\$377,898)
V1992 Q1	\$1,275,786	(\$36,957)	\$0	\$1,275,786	\$0	\$0	\$1,284	\$1,284	\$16,372	\$1,238,829	\$1,238,829
V1992 Q2	\$2,036,123	(\$62,312)	\$0	\$2,036,123	\$0	\$0	\$2,283	\$2,283	\$29,122	\$1,973,811	\$1,973,811
V1992 Q3	\$1,593,162	(\$53,319)	\$0	\$1,593,162	\$0	\$0	\$2,223	\$2,223	\$28,349	\$1,539,843	\$1,539,843
V1992 Q4	\$1,727,356	(\$59,574)	\$0	\$1,727,356	\$0	\$0	\$2,468	\$2,468	\$31,477	\$1,667,782	\$1,667,782
V1993	(\$404,067)	\$0	(\$404,067)	(\$446,394)	\$916	\$0	\$0	\$0	\$0	(\$404,067)	(\$445,477)
V1993 Q1	\$1,484,180	(\$33,075)	\$0	\$1,484,180	\$0	\$0	\$1,108	\$1,108	\$14,133	\$1,451,105	\$1,451,105

Columbia Gas of Pennsylvania
PowerTax Depreciation Summary Report 7

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Exhibit No. 7
Witness: Panpilas W. Fischer
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Rpt # 17 1/16/2018 12:46 PM

Grouped By: Total Tax Classes

Tax Book : Federal

Tax Year : 2016

Vintage	Beginning Asset Balance	Additions/Retirements	Depreciable Base	Beginning Reserve	Depreciation	Capitalized Depreciation	Gain/(Loss)	Salvage	Cost of Removal	Ending Asset Balance	Ending Reserve
V1993 Q2	\$1,906,191	(\$46,527)	\$0	\$1,906,191	\$0	\$0	\$1,740	\$1,740	\$22,200	\$1,859,664	\$1,859,664
V1993 Q3	\$2,090,363	(\$51,452)	\$0	\$2,090,363	\$0	\$0	\$1,894	\$1,894	\$24,152	\$2,038,912	\$2,038,912
V1993 Q4	\$1,782,294	(\$46,653)	\$1,507	\$1,782,294	\$0	\$0	\$1,844	\$1,844	\$23,523	\$1,735,641	\$1,735,641
V1994	(\$303,206)	\$0	(\$346,116)	(\$448,617)	\$4,257	\$0	\$0	\$0	\$0	(\$303,206)	(\$444,359)
V1994 Q1	\$2,578,841	(\$51,493)	\$0	\$2,578,841	\$0	\$0	\$2,266	\$2,266	\$28,904	\$2,527,349	\$2,527,349
V1994 Q2	\$1,982,935	(\$48,079)	\$0	\$1,982,935	\$0	\$0	\$2,003	\$2,003	\$25,554	\$1,934,856	\$1,934,856
V1994 Q3	\$1,754,778	(\$43,941)	\$0	\$1,754,778	\$0	\$0	\$1,825	\$1,825	\$23,272	\$1,710,837	\$1,710,837
V1994 Q4	\$2,796,794	(\$63,426)	\$0	\$2,796,794	\$0	\$0	\$2,514	\$2,514	\$32,071	\$2,733,369	\$2,733,369
V1995	(\$237,457)	\$0	(\$237,457)	(\$474,892)	\$4,618	\$0	\$0	\$0	\$0	(\$237,457)	(\$470,275)
V1995 Q1	\$138	(\$3)	\$0	\$138	\$0	\$0	\$0	\$0	\$2	\$135	\$135
V1995 Q2	\$2,297,483	(\$80,452)	\$0	\$2,297,483	\$0	\$0	\$3,613	\$3,613	\$46,077	\$2,217,030	\$2,217,030
V1995 Q3	\$1,490,684	(\$41,758)	\$0	\$1,490,684	\$0	\$0	\$1,876	\$1,876	\$23,925	\$1,448,926	\$1,448,926
V1995 Q4	\$4,349,387	(\$183,273)	\$0	\$4,349,387	\$0	\$0	\$2,831	\$2,831	\$36,113	\$4,166,114	\$4,166,114
V1996	\$8,904,173	(\$299,019)	(\$255,352)	\$8,644,591	\$178,959	\$0	\$14,936	\$16,774	\$213,958	\$8,605,155	\$8,526,370
V1997	(\$227,386)	\$0	(\$255,461)	(\$520,279)	(\$24,007)	\$0	\$0	\$0	\$0	(\$227,386)	(\$544,285)
V1997 Q1	\$1,306,650	(\$36,039)	\$60,972	\$1,244,778	\$54,440	\$0	\$525	\$1,522	\$19,411	\$1,270,611	\$1,264,175
V1997 Q2	\$1,710,718	(\$51,596)	\$100,267	\$1,608,873	\$73,188	\$0	\$6	\$2,010	\$25,637	\$1,659,122	\$1,632,469
V1997 Q3	\$2,526,265	(\$71,037)	\$180,255	\$2,343,443	\$111,268	\$0	(\$1,369)	\$2,181	\$27,819	\$2,455,228	\$2,387,223
V1997 Q4	\$5,696,637	(\$152,688)	\$400,451	\$5,289,819	\$214,145	\$0	(\$6,475)	\$2,855	\$36,412	\$5,543,949	\$5,360,605
V1998	(\$325,232)	\$0	(\$325,232)	(\$375,326)	(\$18,133)	\$0	\$0	\$0	\$0	(\$325,232)	(\$393,459)
V1998 Q1	\$3,604,561	(\$110,132)	\$311,018	\$3,288,335	\$146,707	\$0	(\$3,246)	\$4,713	\$60,113	\$3,494,429	\$3,332,870
V1998 Q2	\$2,979,433	(\$105,418)	\$295,614	\$2,678,242	\$124,731	\$0	(\$4,579)	\$4,222	\$53,849	\$2,874,015	\$2,706,356
V1998 Q3	\$1,429,107	(\$29,209)	\$158,748	\$1,268,652	\$60,591	\$0	(\$1,610)	\$1,153	\$14,705	\$1,399,898	\$1,302,797
V1998 Q4	\$1,953,147	(\$33,803)	\$222,950	\$1,728,034	\$77,682	\$0	(\$2,146)	\$1,427	\$18,197	\$1,919,344	\$1,775,487
V1999	\$10,226,752	(\$311,489)	\$1,123,096	\$8,605,152	\$426,431	\$0	(\$27,871)	\$13,821	\$176,280	\$9,915,264	\$8,761,785
V2000	(\$658,705)	\$0	(\$644,546)	(\$512,069)	(\$28,714)	\$0	\$0	\$0	\$0	(\$658,705)	(\$540,783)
V2000 Q1	\$1,551,994	(\$38,393)	\$263,607	\$1,285,896	\$62,882	\$0	(\$4,549)	\$1,649	\$21,030	\$1,513,601	\$1,316,584
V2000 Q2	\$1,497,531	(\$44,331)	\$284,193	\$1,209,662	\$64,390	\$0	(\$5,615)	\$2,042	\$26,040	\$1,453,200	\$1,237,377
V2000 Q3	\$3,163,519	(\$79,586)	\$713,425	\$2,455,126	\$141,961	\$0	(\$12,538)	\$2,087	\$26,623	\$3,083,933	\$2,532,126
V2000 Q4	\$3,137,446	(\$78,101)	\$696,948	\$2,432,020	\$143,111	\$0	(\$11,981)	\$3,235	\$41,267	\$3,059,345	\$2,512,246
V2001	\$9,745,729	(\$267,306)	\$2,410,491	\$7,369,320	\$420,162	\$0	(\$49,123)	\$10,507	\$134,013	\$9,478,424	\$7,581,806

Columbia Gas of Pennsylvania
PowerTax Depreciation Summary Report 7

Attachment 1
Exhibit No. 7
Witness: Panpilas W. Fischer
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Grouped By: Total Tax Classes

Tax Book : Federal											
Tax Year : 2016											
Vintage	Beginning Asset Balance	Additions/Retirements	Depreciable Base	Beginning Reserve	Depreciation	Capitalized Depreciation	Gain/(Loss)	Salvage	Cost of Removal	Ending Asset Balance	Ending Reserve
V2001 30% Bonus	(\$238,213)	(\$10,189)	(\$452,697)	(\$188,359)	(\$16,107)	\$0	(\$2,273)	\$0	\$0	(\$248,402)	(\$212,382)
V2002	\$3,709,734	(\$52,603)	\$2,984,614	\$1,638,052	\$96,020	\$0	(\$14,178)	\$0	\$0	\$3,657,131	\$1,695,647
V2002 30% Bonus	\$4,610,167	(\$107,616)	\$1,075,348	\$3,300,596	\$204,830	\$0	(\$28,808)	\$0	\$0	\$4,502,551	\$3,426,619
V2003	\$594,197	(\$11,498)	\$269,571	\$367,057	\$26,422	\$0	(\$3,591)	\$0	\$0	\$582,699	\$385,571
V2003 30% Bonus	(\$491,385)	(\$45,606)	(\$130,306)	(\$368,709)	(\$17,375)	\$0	(\$14,243)	\$0	\$0	(\$536,990)	(\$417,447)
V2003 50% Bonus	\$2,667,256	(\$81,606)	\$766,020	\$1,774,745	\$117,188	\$0	(\$25,486)	\$0	\$0	\$2,585,651	\$1,835,813
V2004	\$855,075	(\$14,142)	\$131,610	\$705,698	\$36,351	\$0	(\$5,048)	\$0	\$0	\$840,933	\$732,955
V2004 30%	\$1,133,603	(\$29,900)	\$424,194	\$703,739	\$49,902	\$0	(\$10,672)	\$0	\$0	\$1,103,703	\$734,414
V2004 50% Bonus	\$6,273,850	(\$168,741)	\$2,157,662	\$3,913,821	\$273,868	\$0	(\$60,227)	\$0	\$0	\$6,105,109	\$4,079,175
V2005	\$9,383,338	(\$694,152)	\$5,803,413	\$6,474,690	\$492,823	\$0	(\$203,011)	\$0	\$0	\$8,689,185	\$6,476,371
V2005 50% Bonus	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
V2006	\$11,751,415	(\$453,809)	\$11,497,190	\$7,875,173	\$682,605	\$0	(\$133,985)	\$0	\$0	\$11,297,606	\$8,237,954
V2007	\$20,462,445	(\$221,768)	\$20,324,774	\$13,149,622	\$1,262,201	\$0	(\$78,572)	\$0	\$0	\$20,240,677	\$14,268,626
V2008	(\$7,941,302)	(\$49,906)	(\$8,068,552)	(\$3,474,743)	(\$516,476)	\$0	(\$20,629)	\$0	\$0	(\$7,991,209)	(\$4,020,497)
V2008 50%	\$28,643,659	(\$228,848)	\$28,506,032	\$16,341,389	\$1,730,142	\$0	(\$94,593)	\$0	\$0	\$28,414,811	\$17,937,276
V2009	\$3,413,009	(\$13,861)	\$3,288,885	\$1,618,243	\$181,597	\$0	(\$5,158)	\$0	\$0	\$3,399,147	\$1,791,137
V2009 50%	\$14,047,998	(\$218,476)	\$13,938,760	\$7,274,439	\$840,762	\$0	(\$92,233)	\$0	\$0	\$13,829,522	\$7,988,958
V2010	\$1,003,464	(\$170,369)	\$930,825	\$1,048,071	\$151,814	\$0	(\$15,886)	\$0	\$0	\$833,095	\$1,045,402
V2010 100%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
V2010 50%	\$8,042,477	(\$108,663)	\$7,988,146	\$3,534,578	\$471,344	\$0	(\$57,166)	\$0	\$0	\$7,933,814	\$3,954,426
V2011	\$4,361,584	(\$8,706)	\$4,362,675	\$1,583,224	\$271,798	\$0	(\$7,548)	\$0	\$0	\$4,352,878	\$1,853,864
V2011 100%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
V2011 50%	\$759,235	(\$110,605)	\$703,932	\$577,509	\$13,595	\$0	(\$899)	\$0	\$0	\$648,630	\$481,399
V2012	\$80,815	(\$476)	\$74,698	(\$904)	\$388	\$0	(\$349)	\$0	\$0	\$80,340	(\$643)
V2012 50%	\$46,182,806	(\$169,210)	\$46,079,947	\$11,919,177	\$2,567,206	\$0	(\$119,897)	\$0	\$0	\$46,013,596	\$14,437,070
V2013	\$1,652,973	(\$27)	\$1,562,108	\$106,943	\$43,295	\$0	(\$22)	\$0	\$0	\$1,652,946	\$150,233
V2013 50%	\$55,773,835	(\$239,349)	\$55,565,821	\$10,510,287	\$3,541,014	\$0	(\$158,144)	\$0	\$0	\$55,534,486	\$13,970,096
V2014	\$1,815,706	(\$65)	\$1,780,241	\$288,939	\$191,113	\$0	(\$56)	\$0	\$0	\$1,815,641	\$480,042
V2014 50%	\$73,184,311	(\$178,114)	\$73,045,871	\$9,758,783	\$6,050,029	\$0	(\$152,630)	\$0	\$0	\$73,006,197	\$15,783,328
V2015	\$1,003,164	(\$1)	\$993,372	\$12,267	\$26,245	\$0	(\$1)	\$0	\$0	\$1,003,163	\$38,512
V2015 50%	\$61,714,220	(\$116,925)	\$61,194,052	\$2,880,150	\$5,426,214	\$0	(\$108,319)	\$0	\$0	\$61,597,295	\$8,297,759

**Columbia Gas of Pennsylvania
PowerTax Depreciation Summary Report 7**

Rpt # 17 1/16/2018 12:46 PM

Grouped By: Total Tax Classes

Tax Book : Federal											
Tax Year : 2016											
Vintage	Beginning Asset Balance	Additions/Retirements	Depreciable Base	Beginning Reserve	Depreciation	Capitalized Depreciation	Gain/(Loss)	Salvage	Cost of Removal	Ending Asset Balance	Ending Reserve
V2016	\$0	\$106,731	\$106,731	\$0	\$1,525	\$0	\$0	\$0	\$0	\$106,731	\$1,525
V2016 50%	\$0	\$63,097,776	\$63,097,776	\$0	\$65,778,185	\$0	(\$200,049)	\$0	\$0	\$63,097,776	\$2,480,360
Total Tax Classes	\$737,464,765	\$51,771,629	\$521,810,994	\$477,167,206	\$92,818,327	\$0	(\$1,570,627)	\$320,987	\$4,094,185	\$790,768,352	\$497,872,257
Company Total:	\$737,464,765	\$51,771,629	\$521,810,994	\$477,167,206	\$92,818,327	\$0	(\$1,570,627)	\$320,987	\$4,094,185	\$790,768,352	\$497,872,257
Tax Year:	\$737,464,765	\$51,771,629	\$521,810,994	\$477,167,206	\$92,818,327	\$0	(\$1,570,627)	\$320,987	\$4,094,185	\$790,768,352	\$497,872,257

Columbia Gas of Pennsylvania
PowerTax Depreciation Summary Report 7

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Attachment 2
Exhibit No. 7
Witness: Panpilas W. Fischer
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Grouped By: Total Tax Classes

Tax Book : Federal

Tax Year : 2017

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	\$13,712,566	\$0	\$13,712,566	\$13,687,857	\$20,224	\$0	\$0	\$0	\$0	\$13,712,566	\$13,708,081
V1954	\$2,137,093	\$0	\$2,137,093	\$2,137,093	\$0	\$0	\$0	\$0	\$0	\$2,137,093	\$2,137,093
V1955	\$4,851,999	\$0	\$4,851,999	\$4,851,999	\$0	\$0	\$0	\$0	\$0	\$4,851,999	\$4,851,999
V1956	\$3,022,658	\$0	\$3,022,658	\$3,022,658	\$0	\$0	\$0	\$0	\$0	\$3,022,658	\$3,022,658
V1957	\$3,881,450	\$0	\$3,881,450	\$3,881,450	\$0	\$0	\$0	\$0	\$0	\$3,881,450	\$3,881,450
V1958	\$4,552,999	\$0	\$4,552,999	\$4,552,999	\$0	\$0	\$0	\$0	\$0	\$4,552,999	\$4,552,999
V1959	\$4,092,565	\$0	\$4,092,565	\$4,092,565	\$0	\$0	\$0	\$0	\$0	\$4,092,565	\$4,092,565
V1960	\$4,252,947	\$0	\$4,252,947	\$4,252,947	\$0	\$0	\$0	\$0	\$0	\$4,252,947	\$4,252,947
V1961	\$4,685,040	\$0	(\$18)	\$4,685,040	\$0	\$0	\$0	\$0	\$0	\$4,685,040	\$4,685,040
V1962	\$4,241,874	\$0	\$0	\$4,241,874	\$0	\$0	\$0	\$0	\$0	\$4,241,874	\$4,241,874
V1963	\$5,035,459	\$0	\$0	\$5,035,459	\$0	\$0	\$0	\$0	\$0	\$5,035,459	\$5,035,459
V1964	\$5,312,784	\$0	\$0	\$5,312,784	\$0	\$0	\$0	\$0	\$0	\$5,312,784	\$5,312,784
V1965	\$4,458,864	\$0	\$0	\$4,458,864	\$0	\$0	\$0	\$0	\$0	\$4,458,864	\$4,458,864
V1966	\$6,083,149	\$0	\$0	\$6,083,149	\$0	\$0	\$0	\$0	\$0	\$6,083,149	\$6,083,149
V1967	\$6,088,070	\$0	\$0	\$6,088,070	\$0	\$0	\$0	\$0	\$0	\$6,088,070	\$6,088,070
V1968	\$5,564,976	\$0	\$6,131	\$5,558,845	\$4,088	\$0	\$0	\$0	\$0	\$5,564,976	\$5,562,932
V1969	\$4,337,587	\$0	\$1	\$4,337,586	\$0	\$0	\$0	\$0	\$0	\$4,337,587	\$4,337,586
V1970	\$3,554,455	\$0	\$1	\$3,554,454	\$0	\$0	\$0	\$0	\$0	\$3,554,455	\$3,554,454
V1971	\$9,434,565	\$0	\$57,395	\$9,447,058	\$0	\$0	\$0	\$0	\$0	\$9,434,565	\$9,447,058
V1972	\$5,775,200	\$0	\$3,264	\$5,789,628	\$0	\$0	\$0	\$0	\$0	\$5,775,200	\$5,789,628
V1973	\$4,866,020	\$0	\$13,423	\$4,866,020	\$0	\$0	\$0	\$0	\$0	\$4,866,020	\$4,866,020
V1974	\$6,670,944	\$0	\$0	\$6,670,944	\$0	\$0	\$0	\$0	\$0	\$6,670,944	\$6,670,944
V1975	\$6,249,649	\$0	\$4,869	\$6,248,510	\$0	\$0	\$0	\$0	\$0	\$6,249,649	\$6,248,510
V1976	\$5,570,314	\$0	\$17,969	\$5,496,434	\$0	\$0	\$0	\$0	\$0	\$5,570,314	\$5,496,434
V1977	\$9,828,321	\$0	\$733	\$9,773,361	\$0	\$0	\$0	\$0	\$0	\$9,828,321	\$9,773,361
V1978	\$10,299,560	\$0	\$0	\$10,150,048	\$0	\$0	\$0	\$0	\$0	\$10,299,560	\$10,150,048
V1979	\$13,288,569	\$0	\$116,665	\$13,324,154	\$0	\$0	\$0	\$0	\$0	\$13,288,569	\$13,324,154
V1980	\$12,344,453	\$0	\$44,320	\$12,426,523	\$334	\$0	\$0	\$0	\$0	\$12,344,453	\$12,426,857
V1981	\$13,782,765	\$0	\$13,782,765	\$13,755,699	\$768	\$0	\$0	\$0	\$0	\$13,782,765	\$13,756,467
V1982	\$12,857,628	\$0	\$12,857,628	\$12,832,703	\$660	\$0	\$0	\$0	\$0	\$12,857,628	\$12,833,363
V1983	\$10,726,377	\$0	\$10,726,377	\$10,711,367	\$377	\$0	\$0	\$0	\$0	\$10,726,377	\$10,711,744

Columbia Gas of Pennsylvania
PowerTax Depreciation Summary Report 7

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Attachment 2
Exhibit No. 7
Witness: Panpilas W. Fischer
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Grouped By: Total Tax Classes

Tax Book : Federal											
Tax Year : 2017											
Vintage	Beginning Asset Balance	Additions/Retirements	Depreciable Base	Beginning Reserve	Depreciation	Capitalized Depreciation	Gain/(Loss)	Salvage	Cost of Removal	Ending Asset Balance	Ending Reserve
V1984	\$12,657,595	\$0	\$12,657,595	\$12,640,356	\$422	\$0	\$0	\$0	\$0	\$12,657,595	\$12,640,779
V1985	\$12,705,202	\$0	\$12,705,202	\$12,664,501	\$978	\$0	\$0	\$0	\$0	\$12,705,202	\$12,665,479
V1986	\$13,944,723	\$0	\$13,944,723	\$13,934,266	\$244	\$0	\$0	\$0	\$0	\$13,944,723	\$13,934,509
V1987	\$237,569	\$0	\$237,569	\$211,956	\$7,136	\$0	\$0	\$0	\$0	\$237,569	\$219,092
V1987 Q1	\$2,754,573	\$0	\$18,261	\$2,754,573	\$0	\$0	\$0	\$0	\$0	\$2,754,573	\$2,754,573
V1987 Q2	\$3,442,237	\$0	\$0	\$3,442,237	\$0	\$0	\$0	\$0	\$0	\$3,442,237	\$3,442,237
V1987 Q3	\$3,840,173	\$0	\$0	\$3,840,173	\$0	\$0	\$0	\$0	\$0	\$3,840,173	\$3,840,173
V1987 Q4	\$4,773,320	\$0	\$3,710	\$4,773,320	\$0	\$0	\$0	\$0	\$0	\$4,773,320	\$4,773,320
V1988	(\$404,843)	\$0	(\$404,843)	(\$420,508)	\$1,147	\$0	\$0	\$0	\$0	(\$404,843)	(\$419,361)
V1988 Q1	\$2,764,712	\$0	\$0	\$2,764,712	\$0	\$0	\$0	\$0	\$0	\$2,764,712	\$2,764,712
V1988 Q2	\$3,031,720	\$0	\$0	\$3,031,720	\$0	\$0	\$0	\$0	\$0	\$3,031,720	\$3,031,720
V1988 Q3	\$1,043,656	\$0	\$0	\$1,043,656	\$0	\$0	\$0	\$0	\$0	\$1,043,656	\$1,043,656
V1988 Q4	\$833,849	\$0	\$0	\$833,849	\$0	\$0	\$0	\$0	\$0	\$833,849	\$833,849
V1989	(\$309,355)	\$0	(\$309,355)	(\$359,237)	\$2,145	\$0	\$0	\$0	\$0	(\$309,355)	(\$357,092)
V1989 Q1	\$1,763,908	\$0	\$0	\$1,763,908	\$0	\$0	\$0	\$0	\$0	\$1,763,908	\$1,763,908
V1989 Q2	\$1,583,459	\$0	\$0	\$1,583,459	\$0	\$0	\$0	\$0	\$0	\$1,583,459	\$1,583,459
V1989 Q3	\$1,841,086	\$0	\$13,619	\$1,841,086	\$0	\$0	\$0	\$0	\$0	\$1,841,086	\$1,841,086
V1989 Q4	\$1,233,673	\$0	\$0	\$1,233,673	\$0	\$0	\$0	\$0	\$0	\$1,233,673	\$1,233,673
V1990	\$5,724,920	\$0	(\$345,467)	\$5,697,053	\$626	\$0	\$0	\$0	\$0	\$5,724,920	\$5,697,679
V1991	(\$308,261)	\$0	(\$308,261)	(\$336,688)	\$606	\$0	\$0	\$0	\$0	(\$308,261)	(\$336,081)
V1991 Q1	\$1,711,062	\$0	\$0	\$1,711,062	\$0	\$0	\$0	\$0	\$0	\$1,711,062	\$1,711,062
V1991 Q2	\$1,227,873	\$0	\$0	\$1,227,873	\$0	\$0	\$0	\$0	\$0	\$1,227,873	\$1,227,873
V1991 Q3	\$634,653	\$0	\$0	\$634,653	\$0	\$0	\$0	\$0	\$0	\$634,653	\$634,653
V1991 Q4	\$2,338,309	\$0	\$11,138	\$2,338,309	\$0	\$0	\$0	\$0	\$0	\$2,338,309	\$2,338,309
V1992	(\$328,999)	\$0	(\$328,999)	(\$377,898)	\$1,861	\$0	\$0	\$0	\$0	(\$328,999)	(\$376,037)
V1992 Q1	\$1,237,260	\$0	\$0	\$1,237,260	\$0	\$0	\$0	\$0	\$0	\$1,237,260	\$1,237,260
V1992 Q2	\$1,972,170	\$0	\$0	\$1,972,170	\$0	\$0	\$0	\$0	\$0	\$1,972,170	\$1,972,170
V1992 Q3	\$1,538,027	\$0	\$0	\$1,538,027	\$0	\$0	\$0	\$0	\$0	\$1,538,027	\$1,538,027
V1992 Q4	\$1,665,627	\$0	\$0	\$1,665,627	\$0	\$0	\$0	\$0	\$0	\$1,665,627	\$1,665,627
V1993	(\$404,067)	\$0	(\$404,067)	(\$445,477)	\$916	\$0	\$0	\$0	\$0	(\$404,067)	(\$444,561)
V1993 Q1	\$1,447,991	\$0	\$0	\$1,447,991	\$0	\$0	\$0	\$0	\$0	\$1,447,991	\$1,447,991

Columbia Gas of Pennsylvania
PowerTax Depreciation Summary Report 7

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Attachment 2
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Witness: Panpilas W. Fischer
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Grouped By: Total Tax Classes

Tax Book : Federal

Tax Year : 2017

Vintage	Beginning Asset Balance	Additions/Retirements	Depreciable Base	Beginning Reserve	Depreciation	Capitalized Depreciation	Gain/(Loss)	Salvage	Cost of Removal	Ending Asset Balance	Ending Reserve
V1993 Q2	\$1,855,363	\$0	\$0	\$1,855,363	\$0	\$0	\$0	\$0	\$0	\$1,855,363	\$1,855,363
V1993 Q3	\$2,034,268	\$0	\$0	\$2,034,268	\$0	\$0	\$0	\$0	\$0	\$2,034,268	\$2,034,268
V1993 Q4	\$1,731,343	\$0	\$1,507	\$1,731,343	\$0	\$0	\$0	\$0	\$0	\$1,731,343	\$1,731,343
V1994	(\$303,206)	\$0	(\$348,142)	(\$444,359)	\$4,257	\$0	\$0	\$0	\$0	(\$303,206)	(\$440,102)
V1994 Q1	\$2,524,536	\$0	\$0	\$2,524,536	\$0	\$0	\$0	\$0	\$0	\$2,524,536	\$2,524,536
V1994 Q2	\$1,932,364	\$0	\$0	\$1,932,364	\$0	\$0	\$0	\$0	\$0	\$1,932,364	\$1,932,364
V1994 Q3	\$1,708,705	\$0	\$0	\$1,708,705	\$0	\$0	\$0	\$0	\$0	\$1,708,705	\$1,708,705
V1994 Q4	\$2,730,399	\$0	\$0	\$2,730,399	\$0	\$0	\$0	\$0	\$0	\$2,730,399	\$2,730,399
V1995	(\$237,457)	\$0	(\$237,457)	(\$470,275)	\$4,618	\$0	\$0	\$0	\$0	(\$237,457)	(\$465,657)
V1995 Q1	\$135	\$0	\$0	\$135	\$0	\$0	\$0	\$0	\$0	\$135	\$135
V1995 Q2	\$2,210,195	\$0	\$0	\$2,210,195	\$0	\$0	\$0	\$0	\$0	\$2,210,195	\$2,210,195
V1995 Q3	\$1,444,293	\$0	\$0	\$1,444,293	\$0	\$0	\$0	\$0	\$0	\$1,444,293	\$1,444,293
V1995 Q4	\$4,154,872	\$0	\$0	\$4,154,872	\$0	\$0	\$0	\$0	\$0	\$4,154,872	\$4,154,872
V1996	\$8,563,849	\$0	(\$445,887)	\$8,485,064	\$3,843	\$0	\$0	\$0	\$0	\$8,563,849	\$8,488,908
V1997	(\$227,386)	\$0	(\$257,004)	(\$544,285)	(\$8,350)	\$0	\$0	\$0	\$0	(\$227,386)	(\$552,636)
V1997 Q1	\$1,269,116	\$0	\$6,428	\$1,262,688	\$6,428	\$0	\$0	\$0	\$0	\$1,269,116	\$1,269,116
V1997 Q2	\$1,657,153	\$0	\$26,621	\$1,630,533	\$26,621	\$0	\$0	\$0	\$0	\$1,657,153	\$1,657,153
V1997 Q3	\$2,448,094	\$0	\$67,807	\$2,380,287	\$67,807	\$0	\$0	\$0	\$0	\$2,448,094	\$2,448,094
V1997 Q4	\$5,539,937	\$0	\$183,188	\$5,356,749	\$183,188	\$0	\$0	\$0	\$0	\$5,539,937	\$5,539,937
V1998	(\$325,232)	\$0	(\$325,232)	(\$393,459)	(\$18,126)	\$0	\$0	\$0	\$0	(\$325,232)	(\$411,585)
V1998 Q1	\$3,479,339	\$0	\$160,806	\$3,318,533	\$143,577	\$0	\$0	\$0	\$0	\$3,479,339	\$3,462,110
V1998 Q2	\$2,863,735	\$0	\$167,030	\$2,696,705	\$121,920	\$0	\$0	\$0	\$0	\$2,863,735	\$2,818,625
V1998 Q3	\$1,397,243	\$0	\$96,909	\$1,300,334	\$59,820	\$0	\$0	\$0	\$0	\$1,397,243	\$1,360,154
V1998 Q4	\$1,916,459	\$0	\$143,617	\$1,772,841	\$76,801	\$0	\$0	\$0	\$0	\$1,916,459	\$1,849,642
V1999	\$9,893,148	\$0	\$651,829	\$8,742,137	\$418,478	\$0	\$0	\$0	\$0	\$9,893,148	\$9,160,615
V2000	(\$658,705)	\$0	(\$643,630)	(\$540,783)	(\$28,707)	\$0	\$0	\$0	\$0	(\$658,705)	(\$569,490)
V2000 Q1	\$1,509,107	\$0	\$197,495	\$1,312,715	\$61,825	\$0	\$0	\$0	\$0	\$1,509,107	\$1,374,539
V2000 Q2	\$1,448,154	\$0	\$215,752	\$1,233,090	\$63,172	\$0	\$0	\$0	\$0	\$1,448,154	\$1,296,262
V2000 Q3	\$3,072,933	\$0	\$564,117	\$2,522,902	\$139,694	\$0	\$0	\$0	\$0	\$3,072,933	\$2,662,596
V2000 Q4	\$3,049,507	\$0	\$545,402	\$2,504,105	\$140,932	\$0	\$0	\$0	\$0	\$3,049,507	\$2,645,037
V2001	\$9,458,339	\$0	\$1,963,443	\$7,565,753	\$413,294	\$0	\$0	\$0	\$0	\$9,458,339	\$7,979,048

Columbia Gas of Pennsylvania
PowerTax Depreciation Summary Report 7

Attachment 2
Exhibit No. 7
Witness: Panpilas W. Fischer
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Grouped By: Total Tax Classes

Tax Book : Federal											
Tax Year : 2017											
Vintage	Beginning Asset Balance	Additions/Retirements	Depreciable Base	Beginning Reserve	Depreciation	Capitalized Depreciation	Gain/(Loss)	Salvage	Cost of Removal	Ending Asset Balance	Ending Reserve
V2001 30% Bonus	(\$248,651)	\$0	(\$461,403)	(\$212,581)	(\$16,351)	\$0	\$0	\$0	\$0	(\$248,651)	(\$228,931)
V2002	\$3,656,711	\$0	\$2,924,442	\$1,695,330	\$94,817	\$0	\$0	\$0	\$0	\$3,656,711	\$1,790,147
V2002 30% Bonus	\$4,499,782	\$0	\$842,895	\$3,424,529	\$202,322	\$0	\$0	\$0	\$0	\$4,499,782	\$3,626,851
V2003	\$573,007	\$0	\$241,962	\$378,690	\$25,731	\$0	\$0	\$0	\$0	\$573,007	\$404,421
V2003 30% Bonus	(\$537,821)	\$0	(\$119,785)	(\$418,037)	(\$18,428)	\$0	\$0	\$0	\$0	(\$537,821)	(\$436,464)
V2003 50% Bonus	\$2,578,815	\$0	\$627,452	\$1,830,960	\$115,049	\$0	\$0	\$0	\$0	\$2,578,815	\$1,946,009
V2004	\$820,074	\$0	\$86,468	\$719,076	\$35,111	\$0	\$0	\$0	\$0	\$820,074	\$754,187
V2004 30%	\$1,098,195	\$0	\$367,447	\$730,749	\$48,995	\$0	\$0	\$0	\$0	\$1,098,195	\$779,744
V2004 50% Bonus	\$6,059,992	\$0	\$1,828,220	\$4,049,155	\$268,127	\$0	\$0	\$0	\$0	\$6,059,992	\$4,317,282
V2005	\$8,585,097	\$0	\$5,199,807	\$6,399,493	\$468,299	\$0	\$0	\$0	\$0	\$8,585,097	\$6,867,792
V2005 50% Bonus	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
V2006	\$11,222,055	\$0	\$11,186,317	\$8,182,479	\$664,752	\$0	\$0	\$0	\$0	\$11,222,055	\$8,847,231
V2007	\$20,211,526	\$0	\$20,182,540	\$14,248,942	\$1,253,887	\$0	\$0	\$0	\$0	\$20,211,526	\$15,502,830
V2008	(\$7,995,231)	\$0	(\$8,105,677)	(\$4,022,975)	(\$555,082)	\$0	\$0	\$0	\$0	(\$7,995,231)	(\$4,578,058)
V2008 50%	\$28,394,930	\$0	\$28,371,726	\$17,925,026	\$1,722,244	\$0	\$0	\$0	\$0	\$28,394,930	\$19,647,269
V2009	\$3,399,090	\$0	\$3,264,033	\$1,791,106	\$177,364	\$0	\$0	\$0	\$0	\$3,399,090	\$1,968,470
V2009 50%	\$13,796,976	\$0	\$13,796,976	\$7,970,826	\$834,233	\$0	\$0	\$0	\$0	\$13,796,976	\$8,805,060
V2010	\$832,889	\$0	\$933,147	\$1,045,299	\$89,964	\$0	\$0	\$0	\$0	\$832,889	\$1,135,263
V2010 100%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
V2010 50%	\$7,915,350	\$0	\$7,915,350	\$3,945,229	\$467,078	\$0	\$0	\$0	\$0	\$7,915,350	\$4,412,306
V2011	\$4,352,878	\$0	\$4,360,150	\$1,853,864	\$255,283	\$0	\$0	\$0	\$0	\$4,352,878	\$2,109,147
V2011 100%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
V2011 50%	\$644,902	\$0	\$644,902	\$480,100	\$12,359	\$0	\$0	\$0	\$0	\$644,902	\$492,459
V2012	\$80,154	\$0	\$72,593	(\$698)	\$623	\$0	\$0	\$0	\$0	\$80,154	(\$74)
V2012 50%	\$45,933,390	\$0	\$45,915,777	\$14,413,380	\$2,365,106	\$0	\$0	\$0	\$0	\$45,933,390	\$16,778,486
V2013	\$1,652,939	\$0	\$1,525,152	\$150,231	\$43,241	\$0	\$0	\$0	\$0	\$1,652,939	\$193,472
V2013 50%	\$55,493,930	\$0	\$55,414,474	\$13,960,434	\$3,130,407	\$0	\$0	\$0	\$0	\$55,493,930	\$17,090,842
V2014	\$1,815,637	\$0	\$1,756,171	\$480,042	\$118,377	\$0	\$0	\$0	\$0	\$1,815,637	\$598,419
V2014 50%	\$72,569,825	\$0	\$72,502,054	\$15,706,326	\$4,986,418	\$0	\$0	\$0	\$0	\$72,569,825	\$20,692,744
V2015	\$1,003,162	\$0	\$972,073	\$38,512	\$26,242	\$0	\$0	\$0	\$0	\$1,003,162	\$64,755
V2015 50%	\$61,561,658	\$0	\$60,347,589	\$8,293,850	\$4,836,375	\$0	\$0	\$0	\$0	\$61,561,658	\$13,130,225

**Columbia Gas of Pennsylvania
PowerTax Depreciation Summary Report 7**

Attachment 2
Exhibit No. 7
Witness: Panpilas W. Fischer
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Grouped By: Total Tax Classes

Tax Book : Federal											
Tax Year : 2017											
Vintage	Beginning Asset Balance	Additions/Retirements	Depreciable Base	Beginning Reserve	Depreciation	Capitalized Depreciation	Gain/(Loss)	Salvage	Cost of Removal	Ending Asset Balance	Ending Reserve
V2016	\$667,997	\$0	\$662,621	\$8,408	\$17,755	\$0	\$0	\$0	\$0	\$667,997	\$26,163
V2016 50%	\$80,900,984	\$0	\$80,808,874	\$3,214,503	\$6,170,791	\$0	\$0	\$0	\$0	\$80,900,984	\$9,385,294
V2017 50%	\$0	\$87,709,893	\$87,709,893	\$0	\$91,481,096	\$0	\$0	\$0	\$0	\$87,709,893	\$3,771,203
V2017*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Tax Classes	\$807,435,559	\$87,709,893	\$620,135,461	\$497,515,799	\$121,245,810	\$0	\$0	\$0	\$0	\$895,145,452	\$531,051,717
Company Total:	\$807,435,559	\$87,709,893	\$620,135,461	\$497,515,799	\$121,245,810	\$0	\$0	\$0	\$0	\$895,145,452	\$531,051,717
Tax Year:	\$807,435,559	\$87,709,893	\$620,135,461	\$497,515,799	\$121,245,810	\$0	\$0	\$0	\$0	\$895,145,452	\$531,051,717

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, 2017 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, 2017, and Exhibit No. 8, Page 4, for Columbia's rate base using a fully projected future test year ending December 31, 2017 from the last base rate case R-2016-2529660, which was a negotiated settlement.

Columbia Gas of Pennsylvania, Inc.
Statement of Rate Base at Present Rates
November 30, 2017

<u>Line No.</u>	<u>Acct. No.</u>	<u>Description</u>	<u>Per Books</u> (1) \$	<u>Adjustments</u> (2) \$	<u>Pro Forma</u> (3) \$	<u>Reference</u> (4)
1		Property Plant and Equipment				
2	101	Gas Plant in Service	2,090,211,977	(32,886,587)	2,057,325,390	Exh 8, Schedule 1
3	106	Completed Construction Not Classified	113,800,953	0	113,800,953	Exh 8, Schedule 1
4	107	Construction Work in Progress	0	0	0	Exh 8, Schedule 2
5	117/191	Gas Stored Underground - Non-Current	3,794,693	0	3,794,693	
6	108-111	Depreciation Reserve	(431,216,251)	1,794,477	(429,421,774)	Exh 8, Schedule 3
7	117	Accum. Provision Gas Lost - Underground Storage	<u>(163,467)</u>	<u>0</u>	<u>(163,467)</u>	Exh 1, Schedule 1
8		Net Plant in Service	1,776,427,906	(31,092,110)	1,745,335,796	
9		Working Capital				
10	154-163-186	Materials and Supplies - 13 Month Average	874,033	(84,996)	789,037	Exh 8, Schedule 5
11	165	Prepayments	3,255,062	(970,155)	2,284,907	Exh 8, Schedule 6
12	164	Gas Storage Underground	80,485,726	(26,269,395)	54,216,331	Exh 8, Schedule 7
13		Cash Allowance	<u>0</u>	<u>0</u>	<u>0</u>	Exh 8, Schedule 4
14		Total Working Capital	84,614,821	(27,324,546)	57,290,275	
15		Deferred Income Taxes				
16	190	Income Taxes	83,776,933	0	83,776,933	Exh 8, Schedule 8
17	282	Depreciation	(429,041,466)	979,464	(428,062,002)	Exh 8, Schedule 8
18	283	Other	<u>0</u>	<u>0</u>	<u>0</u>	Exh 8, Schedule 8
19		Total Deferred Income Taxes	(345,264,533)	979,464	(344,285,069)	
20		Customer Deposits				
21	235	13 Month Average	(2,929,924)	77,079	(2,852,845)	Exh 8, Schedule 9
22		Customer Advances for Construction				
23	252/186	Cash Deposits	<u>482</u>	<u>0</u>	<u>482</u>	Exh 8, Schedule 10
24		Total Rate Base	<u>1,512,848,752</u>	<u>(57,360,113)</u>	<u>1,455,488,639</u>	

Columbia Gas of Pennsylvania, Inc.
Statement of Rate Base at Present Rates
November 30, 2017

<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	2,211,566,200	
3	107	Construction Work in Progress - In Service	0	
4	117/191	Gas Stored Underground - Non-Current	3,794,693	
5	108-111	Depreciation Reserve	(421,089,299)	
6	117	Accum. Provision Gas Lost - Underground Storage	<u>(163,467)</u>	
7		Net Plant in Service	1,794,108,127	
8		Working Capital		
9	154-163-186	Materials and Supplies	738,718	
10	165	Prepayments	2,175,574	
11	164	Gas Storage Underground	48,336,766	
12		Cash Allowance	<u>0</u>	
13		Total Working Capital	51,251,058	
14		Deferred Income Taxes		
15	190	Income Taxes	41,598,839	
16	282	Depreciation	(389,606,268)	
17	283	Other	<u>0</u>	
18		Total Deferred Income Taxes	(348,007,429)	
19		Customer Deposits		
20	235	13 Month Average	(3,164,548)	
21		Customer Advances for Construction		
22	252/186	Cash Deposits	<u>(96,133)</u>	
23		Total Rate Base	<u>1,494,091,075</u>	

Note:

1/ Rate base for the Fully Projected Future Test Year from the company's last rate case at R-2016-2529660. See Exhibit No. 108, Page 3 of 11, Column 5 of that case. The case was a negotiated settlement.

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, 2017. 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 claim.

Response: The rate base claim at original cost as of November 30, 2017 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.

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, 2017										
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> (5) \$	Completed Construction Not Classified Account <u>106</u> (6) \$	Construction Work In Progress Account <u>107</u> (7) \$	Total Gas Plant In Service (8)=(1 thru 7) \$
Intangible Plant										
1	301.00	Organization Costs	100,099	0	0	0	0	0	0	100,099
2	302.10	Franchises/Consent, Perpetual	26,489	0	0	0	0	0	0	26,489
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	22,230,329	0	0	0	0	0	0	22,230,329
5		Total Intangible Plant	27,165,979	0	0	0	0	0	0	27,165,979
Underground Storage Plant										
6	350.10	Land	23,882	0	0	0	0	0	0	23,882
7	350.20	Rights of Way	1,932	0	0	0	0	0	0	1,932
8	351.20	Compressor Station Structures	3,200,532	0	0	0	0	86,590	0	3,287,123
9	352.01	Wells Construction	799,134	0	0	0	0	0	0	799,134
10	352.02	Wells Equipment	168,680	0	0	0	0	0	0	168,680
11	352.10	Storage Leasehold and Rights	139,442	0	0	0	0	0	0	139,442
12	352.12	Other Leases	67,498	0	0	0	0	0	0	67,498
13	353.00	Lines	399,543	0	0	0	0	0	0	399,543
14	354.00	Compressor Station Equipment	864,752	0	0	0	0	0	0	864,752
15	355.00	Measuring & Regulating Equipment	104,477	0	0	0	0	0	0	104,477
16		Total Underground Storage Plant	5,769,871	0	0	0	0	86,590	0	5,856,461
Distribution Plant										
17	374.10	Land, City Gate/Main Line Industrial	21,944	0	0	0	0	0	0	21,944
18	374.20	Land, Other Distribution System	477,102	0	0	0	0	0	0	477,102
19	374.30	Land Rights, City Gate/Main Line	95,361	0	0	0	0	0	0	95,361
20	374.40	Land Rights, City Other Distribution System	2,663,201	(11,729)	0	(106,236)	0	29,730	0	2,574,965
21	374.41	Land Rights, City Other Distribution System, Loc	13	0	0	0	0	0	0	13
22	374.50	Rights of Way	3,257,453	(19,163)	0	(5,147)	0	0	0	3,233,143
23	375.20	Structures, City Gate Measurement & Regulating	7,026	0	0	0	0	0	0	7,026
24	375.31	Structures, General Meas & Reg Local Gas	4,012	0	0	0	0	0	0	4,012
25	375.40	Structures, Regulating	4,703,743	(82,237)	0	(40,624)	0	194,364	0	4,775,247
26	375.60	Structures, Distribution Industrial M&R	87,670	0	0	0	0	0	0	87,670
27	375.70	Structures, Other Distribution System	7,226,624	0	0	0	0	161,089	0	7,387,713
28	375.71	Structures, Other Distribution System, Leased	2,830,323	0	0	0	0	0	0	2,830,323
29	375.80	Structures, Communication	16,515	0	0	0	0	0	0	16,515
30	376.00	Mains	1,230,252,769	(8,654,232)	(8,637)	(4,128,568)	(19,760)	102,280,184	0	1,319,721,756
31	376.08	Mains - CSL Replacements	23,760,169	0	0	0	0	0	0	23,760,169
32	376.30	Mains - Bare Steel	66,998,019	0	0	0	0	0	0	66,998,019
33	376.80	Mains - Cast Iron	406,130	0	0	0	0	0	0	406,130
34	378.10	Measuring & Regulating Equipment General	1,534,858	(162,340)	0	(1,068)	0	0	0	1,371,450
35	378.20	Measuring & Regulating Equipment Regulating	51,889,246	(133,773)	0	(180,688)	0	7,063,663	0	58,638,449
36	378.30	Measuring & Regulating Equipment Local Gas	646,670	(190,096)	0	0	0	15,389	0	471,962
37	379.10	Measuring & Regulating Equipment City Gate	140,677	0	0	0	0	0	0	140,677
38	379.11	Measuring & Regulating Equipment Exchange Gas	9,244	(9,694)	0	0	0	0	0	(450)
39	380.00	Services	485,373,208	(1,272,483)	0	(17,664)	0	290,730	0	484,373,791

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, 2017										
Line No.	Account No.	Description	Gas Plant In Service Account 101-1000 (1)	Contribution In Aid of Construction Account 101-2000 (2)	Contribution In Aid of Construction Affiliated Companies Account 101-3000 (3)	Non-Taxable Relocation Reimbursements Account 101-4000 (4)	Customer Advances for Construction (Deposits) Account 101-4005 (5)	Completed Construction Not Classified Account 106 (6)	Construction Work In Progress Account 107 (7)	Total Gas Plant In Service (8)=(1 thru 7)
			\$	\$	\$	\$	\$	\$	\$	\$
1	381.00	Meters	37,704,015	0	0	0	0	4,671	0	37,708,686
2	381.10	Auto Meter Reading Devices	23,951,898	0	0	0	0	(1,029)	0	23,950,869
3	382.00	Meter Installations	38,389,203	(52,412)	0	(547)	0	0	0	38,336,244
4	383.00	House Regulators	12,075,694	(38,809)	0	(368)	0	0	0	12,036,518
5	384.00	House Regulators Installations	3,872,510	(6,880)	0	(858)	0	0	0	3,864,772
6	385.00	Industrial M&R Equipment. Station Equipment	5,215,873	(137,663)	0	(15,248)	0	974,820	0	6,037,782
7	385.10	Industrial M&R Equipment. Large Volume	1,129,978	(26,526)	0	(19,937)	0	1,759	0	1,085,273
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	627,109	0	0	0	0	0	0	627,109
12	387.45	Other Equipment, Telemetering	4,734,974	0	0	0	0	2,280,530	0	7,015,504
13	387.46	Other Equipment, Customer Information Service	259,436	0	0	0	0	0	0	259,436
14	387.50	GPS Pipe Locators	2,053,366	0	0	0	0	0	0	2,053,366
15		Total Distribution Plant	2,012,672,343	(10,798,036)	(8,637)	(4,516,953)	(19,760)	113,295,899	0	2,110,624,856
		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	3,275,011	0	0	0	0	0	0	3,275,011
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	3,117,086	0	0	0	0	0	0	3,117,086
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	85,691	0	0	0	0	0	0	85,691
22	392.21	Transportation Equipment, Trailers \$1,000 or <	10,830	0	0	0	0	0	0	10,830
23	393.00	Stores Equipment	13,435	0	0	0	0	0	0	13,435
24	394.10	Tools, Garage & Service Equipment	94,327	0	0	0	0	0	0	94,327
25	394.11	Tools, CNG Equipment, Stationary	2,248,741	0	0	(474,551)	0	0	0	1,774,190
26	394.12	Tools, CNG Equipment, Portable	179,308	0	0	0	0	0	0	179,308
27	394.20	Tools, Shop Equipment	63,653	0	0	0	0	0	0	63,653
28	394.30	Tools and Other	15,204,872	0	0	0	0	2,894	0	15,207,766
29	394.31	Tools, High Pressure Stopping	10,847	0	0	0	0	0	0	10,847
30	395.00	Laboratory Equipment Gas	273,740	0	0	0	0	0	0	273,740
31	396.00	Power Operated Equipment	1,216,922	0	0	0	0	0	0	1,216,922
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	792,264	0	0	0	0	0	0	792,264
37	398.00	Miscellaneous Equipment	804,275	0	0	0	0	415,570	0	1,219,845
38		Total General Plant	27,538,214	(3,080)	0	(474,551)	0	418,464	0	27,479,047
39		Total Gas Plant in Service	2,073,146,407	(10,801,116)	(8,637)	(4,991,504)	(19,760)	113,800,953	0	2,171,126,344

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, 2017		
			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	332,556	332,556	0
5	303.30	Intangible Plant, Miscellaneous Software	<u>1,570,985</u>	<u>1,570,985</u>	<u>0</u>
6		Total Intangible Plant	1,903,541	1,903,541	0
7		Underground Storage Plant			
8	350.10	Land	0	0	0
9	350.20	Rights of Way	0	0	0
10	351.20	Compressor Station Structures	51,136	51,136	0
11	352.01	Wells Construction	0	0	0
12	352.02	Wells Equipment	0	0	0
13	352.10	Storage Leasehold and Rights	0	0	0
14	352.12	Other Leases	0	0	0
15	353.00	Lines	0	0	0
16	354.00	Compressor Station Equipment	0	0	0
17	355.00	Measuring & Regulating Equipment	<u>0</u>	<u>0</u>	<u>0</u>
18		Total Underground Storage Plant	51,136	51,136	0
19		Distribution Plant			
20	374.10	Land, City Gate/Main Line Industrial	0	0	0
21	374.20	Land, Other Distribution System	0	0	0
22	374.30	Land Rights, City Gate/Main Line	0	0	0
23	374.40	Land Rights, City Other Distribution System	620,519	620,519	0
24	374.41	Land Rights, City Other Distribution System, Loc	0	0	0
25	374.50	Rights of Way	0	0	0
26	375.20	Structures, City Gate Measurement & Regulating	0	0	0
27	375.31	Structures, General Meas & Reg Local Gas	0	0	0
28	375.40	Structures, Regulating	236,534	236,534	0
29	375.60	Structures, Distribution Industrial M&R	0	0	0
30	375.70	Structures, Other Distribution System	173,794	173,794	0
31	375.71	Structures, Other Distribution System, Leased	697,289	697,289	0
32	375.80	Structures, Communication	0	0	0
33	376.00	Mains	52,144,169	52,144,169	0
34	376.08	Mains - CSL Replacements	0	0	0
35	376.25	BS & CI Replaced Total	2,223	2,223	0
36	378.10	Measuring & Regulating Equipment General	0	0	0
37	378.20	Measuring & Regulating Equipment Regulating	6,932,901	6,932,901	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, 2017		
			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	6,818	6,818	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	506,808	506,808	0
5	380.12	CSL Replacement	0	0	0
6	380.13	Customer Service	0	0	0
7	381.00	Meters	35,257	35,257	0
8	381.10	Auto Meter Reading Devices	28,723	28,723	0
9	382.00	Meter Installations	195,893	195,893	0
10	383.00	House Regulators	51,182	51,182	0
11	384.00	House Regulators Installations	0	0	0
12	385.00	Industrial M&R Equipment. Station Equipment	308,421	308,421	0
13	385.10	Industrial M&R Equipment. Large Volume	0	0	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	1,117,758	1,117,758	0
19	387.46	Other Equipment, Customer Information Service	0	0	0
20	398.00	Miscellaneous Equipment	0	0	0
21		Total Distribution Plant	63,058,288	63,058,288	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	(35)	(35)	0
26	391.11	Office Furniture & Equipment, Data handling Equip	0	0	0
27	391.12	Office Furniture & Equipment, Information Systems	1,144,905	1,144,905	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	85,019	85,019	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, Telemetry	0	0	0
45	398.00	Miscellaneous Equipment	11,503	11,503	0
46		Bonus Accruals, New Business Overheads & Reconciliation Difference	2,166,961	2,166,961	0
47		Total General Plant	3,408,353	3,408,353	0
48		Total Plant	68,421,317	68,421,317	0

Columbia Gas of Pennsylvania, Inc.
Depreciation Reserve at November 30, 2017

<u>Line</u> <u>No.</u>	<u>Description</u>	<u>Amount</u> \$
1	Amortizable Plant	(11,390,004)
2	Underground Storage Plant	(3,685,001)
3	Distribution Plant	(400,799,652)
4	General Plant	<u>(13,547,117)</u>
5	Total (Exhibit 5)	<u>(429,421,774)</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, 2017

<u>Line No.</u>	<u>Month</u>	<u>Amount</u> \$
1	Nov-16	699,749
2	Dec-16	749,078
3	Jan-17	744,866
4	Feb-17	761,321
5	Mar-17	772,106
6	Apr-17	780,507
7	May-17	786,427
8	Jun-17	794,707
9	Jul-17	809,676
10	Aug-17	816,687
11	Sep-17	829,229
12	Oct-17	839,101
13	Nov-17	<u>874,033</u>
14	Total	10,257,487
15	13 Month Average Balance	<u><u>789,037</u></u>

COLUMBIA GAS OF PENNSYLVANIA, INC
PREPAYMENTS
AVERAGE OF THIRTEEN MONTHLY BALANCES ENDED
NOVEMBER 30, 2017

		Accounts							
Line No.	Month	Corp. Ins. 16521000 (1) \$	Medical LTD Ins. 16500010 (2) \$	1/	Prepaid Ins. I/C 16520000 (3) \$	Prepaid Payroll 16500000- 1022 (4) \$	1/	PUC,OCA, OSBA Fees 16503600 (5) \$	Total (6) \$
1	Nov-16	1,224,154	0		829,492	0		1,191,500	3,245,147
2	Dec-16	1,067,837	0		684,151	0		1,021,286	2,773,274
3	Jan-17	911,520	0		569,982	0		851,072	2,332,574
4	Feb-17	755,203	0		757,634	0		680,857	2,193,694
5	Mar-17	598,886	0		613,283	0		510,643	1,722,812
6	Apr-17	442,569	0		468,932	0		340,429	1,251,930
7	May-17	286,252	0		324,581	0		170,214	781,047
8	Jun-17	1,288,504	0		194,381	0	0		1,482,885
9	Jul-17	1,304,794	0		1,365,267	0	0		2,670,061
10	Aug-17	1,277,126	0		1,224,587	0	0		2,501,713
11	Sep-17	1,122,562	0		1,112,258	0	0		2,234,820
12	Oct-17	988,227	0		962,129	0		1,353,467	3,303,823
13	Nov-17	<u>1,204,906</u>			<u>820,822</u>			<u>1,184,283</u>	<u>3,210,011</u>
14	Total	12,472,540	-		9,927,499	-		7,303,751	29,703,791
15	13 Month Average Balance								<u><u>2,284,907</u></u>

1/ Items included in the calculation of cash working capital.

COLUMBIA GAS OF PENNSYLVANIA, INC
GAS STORED UNDERGROUND
AVERAGE OF TWELVE MONTHLY BALANCES ENDED
NOVEMBER 30, 2017

Line No.	Month	Injections		Injection Activity		Monthly WACOG		Withdrawals		Ending Cumulative Balance		Ending Cumulative Balance		Monthly Average Rate	
		DTH	ACOG	\$	\$	\$	DTH	\$	\$	DTH	DTH	\$	DTH	\$	
		(A)	(B)	(C = A * B)	(D)	(E)	(F = D * E)	(G)	(H)	(I = G / H)					
1	11/30/2016 Balance							70,405,749	26,584,800						
2	Dec-16	(11,229)	3.4094	(38,284)	2.6480	4,442,501	(11,763,851)	58,603,614	22,131,070	2.6480					
3	Jan-17	(3,658)	3.8843	(14,209)	2.6478	5,525,555	(14,630,675)	43,958,730	16,601,857	2.6478					
4	Feb-17	6,677	3.6793	24,567	2.6482	3,522,076	(9,327,285)	34,656,012	13,086,458	2.6482					
5	Mar-17	-	3.3438	-	2.6482	5,402,541	(14,307,195)	20,348,817	7,683,917	2.6482					
6	Apr-17	2,683,983	3.1843	8,546,607	2.7870	203,895	(568,256)	28,327,168	10,164,006	2.7870					
7	May-17	3,093,308	3.2206	9,962,308	2.8882	27,816	(80,339)	38,209,137	13,229,497	2.8882					
8	Jun-17	3,635,356	3.0092	10,939,513	2.9143	34,929	(101,793)	49,046,857	16,829,924	2.9143					
9	Jul-17	3,391,583	2.9492	10,002,457	2.9201	27,442	(80,135)	58,969,179	20,194,065	2.9201					
10	Aug-17	4,732,398	2.8888	13,670,951	2.9142	40,920	(119,249)	72,520,881	24,885,543	2.9142					
11	Sep-17	3,181,740	2.8128	8,949,598	2.9027	23,888	(69,339)	81,401,140	28,043,395	2.9027					
12	Oct-17	1,173,180	2.6819	3,146,351	2.8938	165,448	(478,777)	84,068,714	29,051,126	2.8938					
13	Nov-17	67,808	2.6623	180,525	2.8933	1,300,777	(3,763,513)	80,485,726	27,818,157	2.8933					
14	Twelve Month Average ((Lns. 3 thru 14)/12)							54,216,331							

COLUMBIA GAS OF PENNSYLVANIA, INC
DEFERRED INCOME TAXES
BALANCE ENDED
NOVEMBER 30, 2017

Line No.	Acct		Pro Forma Balance 11/30/17 (\$)	Reference
1		<u>Account 190 - Deferred Income Taxes</u>		
2	19001000	LIFO Inventory Adj - Federal	14,439,739	
3	19002000	LIFO Inventory Adj - State	4,578,951	
4	19001000	Capitalized Inventory - Fed	2,129,881	
5	19002000	Capitalized Inventory - St	675,402	
6	19005000	Cust. Advances - Fed	1,581,978	
7	19006000	Cust. Advances - St	501,657	
8	19005000	Federal Net Operating Loss	59,869,325	
9		Total Account 190	<u>83,776,933</u>	
10		<u>Account 282 - Deferred Income Taxes-Depreciation</u>		
11	Various	Excess Accelerated Tax Depreciation - Fed	(428,062,002)	
12		Total Account 282	<u>(428,062,002)</u>	
13		<u>Account 283 - Deferred Income Taxes - Other</u>		
14	28305000	Legal Liability-Lease on G.O. Bldg. - Fed	0	
15	28306000	Legal Liability-Lease on G.O. Bldg. - St	0	
16		Total Account 283	<u>0</u>	
17		Total Accumulated Deferred Taxes	<u>(344,285,069)</u>	Exhibit 7, Pg. 8 & 9

COLUMBIA GAS OF PENNSYLVANIA, INC
CUSTOMER DEPOSITS
AVERAGE OF THIRTEEN MONTHLY BALANCES ENDED
NOVEMBER 30, 2017

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-16	(140,000)	(2,935,475)	(3,075,475)
2	Dec-16	(140,000)	(2,990,590)	(3,130,590)
3	Jan-17	(140,000)	(2,875,861)	(3,015,861)
4	Feb-17	(140,000)	(2,781,332)	(2,921,332)
5	Mar-17	(140,000)	(2,701,723)	(2,841,723)
6	Apr-17	(140,000)	(2,642,642)	(2,782,642)
7	May-17	(140,000)	(2,568,999)	(2,708,999)
8	Jun-17	(140,000)	(2,559,122)	(2,699,122)
9	Jul-17	(140,000)	(2,560,717)	(2,700,717)
10	Aug-17	(140,000)	(2,551,351)	(2,691,351)
11	Sep-17	(140,000)	(2,606,974)	(2,746,974)
12	Oct-17	(140,000)	(2,702,285)	(2,842,285)
13	Nov-17	<u>(140,000)</u>	<u>(2,789,924)</u>	<u>(2,929,924)</u>
14	Total	(1,820,000)	(35,266,991)	(37,086,991)
15	13 Month Average Balance	<u><u>(140,000)</u></u>	<u><u>(2,712,845)</u></u>	<u><u>(2,852,845)</u></u>

COLUMBIA GAS OF PENNSYLVANIA, INC
CUSTOMER ADVANCES
NOVEMBER 30, 2017

Line No.	Month	Customer	Customer	Net
		Advances - Deposit Account <u>25200000</u>	Advances - Deposit (Post 12/31/99) Account <u>18600400</u>	<u>252</u> (3=1+2)
		(1) \$	(2) \$	
1	Nov-17	(5,021,595)	5,022,077	<u>482</u>

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.

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.

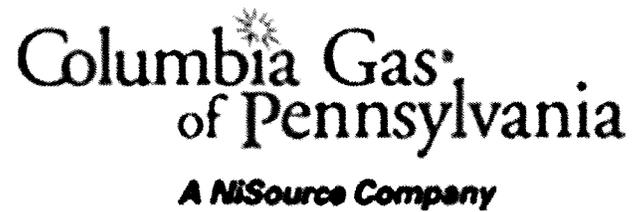
4. Set forth, in exhibit form, charts depicting the original and estimated survivor curves and a tabular presentation of the original life table plotted on the chart for each account, where the retirement rate method of analysis is utilized.
 - a. If any utility plant was excluded from the measures of 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, 2017, by vintage by account and including applicable depreciation reserves and accruals begin on page II-8.



2017 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION
ACCRUALS RELATED TO GAS PLANT
AS OF NOVEMBER 30, 2017

Prepared by:



Excellence Delivered As Promised

COLUMBIA GAS OF PENNSYLVANIA, INC.
Pittsburgh, Pennsylvania

2017 DEPRECIATION STUDY
CALCULATED ANNUAL DEPRECIATION ACCRUALS
RELATED TO GAS PLANT
AS OF NOVEMBER 30, 2017

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



Excellence Delivered As Promised

February 23, 2018

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, 2017. 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, "2018 Depreciation Study - Calculated Annual Depreciation Accruals Related to Gas Plant as of November 30, 2018".

Respectfully submitted,

**GANNETT FLEMING VALUATION
AND RATE CONSULTANTS, LLC**

JOHN J. SPANOS
Sr. Vice President

JJS:mle

063476

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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, 2017. Table 2 presents the experienced salvage and cost of removal associated with regular retirements during the five-year period, 2012-2016 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 2012 through 2016, beginning on beginning on III-2 through III-4.



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, 2017

DEPRECIABLE GROUP (1)	SURVIVOR CURVE (2)	ORIGINAL COST AS OF NOVEMBER 30, 2017 (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 *	3,287,122.58	1,304,750	1,982,373	264,366	8.04	7.5
WELLS								
352.01	CONSTRUCTION	SQUARE *	799,133.73	799,118	16	2	-	8.0
352.02	EQUIPMENT	50-S2.5 *	168,679.67	168,680	0	0	-	-
	TOTAL ACCOUNT 352		967,813.40	967,798	16	2		
352.1	STORAGE LEASEHOLDS AND RIGHTS	SQUARE *	206,940.78	206,932	9	1	-	7.6
353	LINES	50-S1.5 *	399,542.52	399,543	0	0	-	-
354	COMPRESSOR STATION EQUIPMENT	55-R2.5 *	864,751.66	699,570	165,182	22,068	2.55	7.5
355	MEASURING AND REGULATING EQUIPMENT	37-R1.5 *	104,476.92	104,477	0	0	-	-
	TOTAL UNDERGROUND STORAGE PLANT		5,832,579.94	3,685,001	2,147,581	286,437	4.91	
DISTRIBUTION PLANT								
LAND AND LAND RIGHTS								
374.4	LAND RIGHTS	70-R2.5	2,670,339.26	667,725	2,002,614	44,334	1.66	45.2
374.5	RIGHTS OF WAY	80-S4	3,239,641.11	1,643,493	1,596,148	35,648	1.10	44.8
	TOTAL ACCOUNT 374		5,909,980.37	2,311,218	3,598,762	79,982	1.35	
STRUCTURES AND IMPROVEMENTS								
375.34	MEASURING AND REGULATING	60-R1	5,729,198.24	1,213,191	4,516,007	135,579	2.37	33.3
375.6	INDUSTRIAL MEASURING AND REGULATING	55-R1	87,669.84	74,553	13,117	589	0.67	22.3
375.7	OTHER DISTRIBUTION SYSTEMS							
	DISTRIBUTION SYSTEM STRUCTURES	90-R1.5 *	4,937,982.55	1,917,190	3,020,792	135,986	2.75	22.2
	OTHER BUILDINGS	35-R2	2,449,730.24	799,806	1,649,924	71,515	2.92	23.1
	TOTAL ACCOUNT 375.7		7,387,712.79	2,716,996	4,670,716	207,501	2.81	22.5
375.8	COMMUNICATION	45-R3	16,515.17	6,825	9,690	373	2.26	26.0
	TOTAL ACCOUNT 375		13,221,096.04	4,011,565	9,209,530	344,042	2.60	
376	MAINS							
	CAST IRON	71-R1 *	401,655.64	358,577	43,079	6,120	1.52	7.0
	BARE STEEL	71-R1 *	66,940,943.83	63,102,913	3,838,031	321,178	0.48	11.9
	OTHER	71-R1	1,344,071,421.71	156,851,372	1,187,220,050	29,510,555	2.20	40.2
	TOTAL ACCOUNT 376		1,411,414,021.18	220,312,862	1,191,101,160	29,837,853	2.11	



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, 2017

	DEPRECIABLE GROUP (1)	SURVIVOR CURVE (2)	ORIGINAL COST	BOOK	FUTURE	CALCULATED		COMPOSITE
			AS OF NOVEMBER 30, 2017 (3)	RESERVE (4)	BOOK ACCRUALS (5)	ANNUAL ACCRUAL AMOUNT (6)	RATE (7)=(6)/(3)	REMAINING LIFE (8)=(5)/(6)
378	MEASURING AND REGULATING EQUIPMENT - GENERAL	45-O1	58,450,086.57	10,073,380	48,376,707	2,328,404	3.98	20.8
379.1	MEASURING AND REGULATING EQUIPMENT - CITY GATE	35-S2	140,227.51	95,966	44,262	4,026	2.87	11.0
380	SERVICES							
	BARE STEEL	50-R0.5	898,311.12	730,900	167,411	18,424	2.05	9.1
	OTHER	50-R0.5	483,475,480.22	113,522,031	369,953,449	14,027,425	2.90	26.4
	TOTAL ACCOUNT 380		484,373,791.34	114,252,931	370,120,860	14,045,849	2.90	
381	METERS	44-S1	37,708,686.29	15,801,176	21,907,510	908,099	2.41	24.1
381.1	METERS - AMR	15-S2.5	23,950,869.03	10,261,568	13,689,301	1,732,872	7.24	7.9
382	METER INSTALLATIONS	55-R3	38,336,244.15	12,461,669	25,874,575	723,979	1.89	35.7
383	HOUSE REGULATORS	45-S2	12,036,517.80	3,881,080	8,155,438	264,376	2.20	30.8
384	HOUSE REGULATOR INSTALLATIONS	45-S2	3,864,772.07	3,032,646	832,126	38,695	1.00	21.5
385	INDUSTRIAL MEASURING AND REGULATING EQUIPMENT - OTHER THAN METERS	30-R0.5	7,123,055.78	2,643,672	4,479,384	332,000	4.66	13.5
	OTHER EQUIPMENT							
387	GENERAL	32-R0.5	136,698.14	75,906	60,792	3,786	2.77	16.1
387.4	COMMUNICATION EQUIPMENT	25-R2	8,021,658.42	1,069,199	6,952,459	430,981	5.37	16.1
387.5	GPS EQUIPMENT	10-S3	2,053,366.00	514,814	1,538,552	259,015	12.61	5.9
	TOTAL ACCOUNT 387		10,211,722.56	1,659,919	8,551,803	693,782	6.79	
	TOTAL DISTRIBUTION PLANT		2,106,741,070.69	400,799,652	1,705,941,418	51,333,959	2.44	
	GENERAL PLANT							
390.1	STRUCTURES AND IMPROVEMENTS - COMMUNICATION	45-R2	120,070.46	85,423	34,647	1,907	1.59	18.2
	OFFICE FURNITURE AND EQUIPMENT							
391.1	FURNITURE	20-SQ	3,278,017.98	1,662,145	1,615,873	97,299	2.97	16.6
391.11	EQUIPMENT	15-SQ	91,303.67	23,133	68,171	5,903	6.47	11.5
391.12	INFORMATION SYSTEMS	5-SQ	3,117,085.86	1,348,842	1,768,244	627,181	20.12	2.8
	TOTAL ACCOUNT 391		6,486,407.51	3,034,120	3,452,288	730,383	11.26	
392	TRANSPORTATION EQUIPMENT - TRAILERS	15-SQ	96,520.90	88,926	7,595	718	0.74	10.6
393	STORES EQUIPMENT	20-SQ	13,435.25	13,435	0	0	-	-
	TOOLS, SHOP AND GARAGE EQUIPMENT							
394	EQUIPMENT	25-SQ	15,376,593.25	6,087,689	9,288,904	567,720	3.69	16.4
394.12	CNG FACILITIES	12-S1.5	1,953,497.84	1,953,091	407	222	0.01	1.8
	TOTAL ACCOUNT 394		17,330,091.09	8,040,780	9,289,311	567,942	3.28	

Witness: J. J. Spanos

Schedule No. 1
Page 10 of 39

Exhibit 9

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, 2017

DEPRECIABLE GROUP (1)	SURVIVOR CURVE (2)	ORIGINAL COST	BOOK	FUTURE	CALCULATED ANNUAL ACCRUAL		COMPOSITE	
		AS OF NOVEMBER 30, 2017 (3)	RESERVE (4)	BOOK ACCRUALS (5)	AMOUNT (6)	RATE (7)=(6)/(3)	REMAINING LIFE (8)=(5)/(6)	
395	LABORATORY EQUIPMENT	20-SQ	273,740.05	36,580	237,160	14,905	5.44	15.9
396	POWER OPERATED EQUIPMENT	13-L2	1,216,922.12	1,256,735	(39,813)	0	-	-
397.5	COMMUNICATION EQUIPMENT - TELEMETERING	19-R2.5	1,276,430.90	743,236	533,195	141,497	11.09	3.8
398	MISCELLANEOUS EQUIPMENT	15-SQ	1,219,845.23	247,882	971,963	82,784	6.79	11.7
TOTAL GENERAL PLANT			28,033,463.51	13,547,117	14,486,346	1,540,136	5.49	
SUBTOTAL DEPRECIABLE PLANT			2,140,607,114.14	418,031,770	1,722,575,345	53,160,532	2.48	
AMORTIZABLE PLANT								
303	MISCELLANEOUS INTANGIBLE PLANT		27,039,391.46	10,398,453	16,640,938	3,224,729	**	
362.1	ENVIRONMENTAL REMEDIATION			(318,584)				
374.2	LAND, OTHER DISTRIBUTION SYSTEMS		477,102.49	210,197				
375.71	STRUCTURES AND IMPROVEMENTS - LEASED		2,830,322.52	1,099,938	1,730,385	179,544	**	
SUBTOTAL AMORTIZABLE PLANT			30,346,816.47	11,390,004	18,371,323	3,404,273		
NONDEPRECIABLE PLANT			172,413.08					
TOTAL GAS PLANT			2,171,126,343.69	429,421,774	1,740,946,668	56,564,805		

* 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)	2012		2013		2014		2015		2016		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			608.46								(608.46)	(122)
362.10	6,457.05		40,496.89		461,689.98		56,875.48		27,770.30		(593,289.70)	(118,658)
374.20			57,633.75		(211,267.49)				192.38		153,441.36	30,688
374.40	260.16		4,911.96		21.91		2,713.76		17.13		(7,924.92)	(1,585)
374.50							14,909.72				(14,909.72)	(2,982)
375.34	17,416.11		22,427.70		20,674.45				26,961.80		(87,480.06)	(17,496)
375.60			1,091.39								(1,091.39)	(218)
375.70	5,103.09						22,140.00				(27,243.09)	(5,449)
376.00	886,996.12		691,743.41	2,051.59	1,281,289.43		978,776.00	20,828.00	1,131,099.09	3,855.00	(4,943,169.46)	(988,634)
378.00	18,887.95		216,795.76		185,399.17		104,647.11		63,141.34		(588,871.33)	(117,774)
379.10					91.84						(91.84)	(18)
380.00	2,192,533.99		1,750,826.78		4,690,972.30		2,926,513.18		2,853,156.51		(14,414,002.76)	(2,882,801)
381.00	305.85	25,333.32	23.20	6,554.08					675.71	215,365.51	246,248.15	49,250
385.00	23,198.35		51,158.61		63,312.71		27,745.87		64,142.79		(229,558.33)	(45,912)
387.40	55.60		392.50		933.57		1,060.39		1,807.70		(4,249.76)	(850)
392.00				44,482.18				26,139.89			70,622.07	14,124
394.00									2,431.14		(2,431.14)	(486)
396.00				104,669.48				109,393.82		52,454.60	266,517.90	53,304
397.50							29,402.56				(29,402.56)	(5,881)
TOTAL	<u>3,151,214.27</u>	<u>25,333.32</u>	<u>2,838,110.41</u>	<u>157,757.33</u>	<u>6,493,117.87</u>	<u>0.00</u>	<u>4,164,784.07</u>	<u>156,361.71</u>	<u>4,171,395.89</u>	<u>271,675.11</u>	<u>(20,207,495.04)</u>	<u>(4,041,500)</u>

**PART II. DETAILED DEPRECIATION
CALCULATIONS**

CUMULATIVE DEPRECIATED ORIGINAL COST

COLUMBIA GAS OF PENNSYLVANIA, INC.

CUMULATIVE DEPRECIATED ORIGINAL COST BY YEAR INSTALLED
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR INST (1)	ORIGINAL COST (2)	ACCRUED DEPRECIATION (3)	AMOUNT		DEPRECIATED ORIGINAL COST	PCT OF
			(2)	(3)	CUMULATIVE AMOUNT (5)	COL 4 TOTAL (6)
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	9,112	9,112				0.0
1888	7,418	7,418				0.0
1889	7,449	7,449				0.0
1890	5,643	5,643				0.0
1891	8,617	8,617				0.0
1892	2,295	2,295				0.0
1893	1,156	1,156				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	13,898	13,898			1-	0.0
1901	598,720	597,000	1,720		1,719	0.0
1902	62,253	62,236	17		1,736	0.0
1903	49,448	49,411	37		1,773	0.0
1904	46,813	46,743	70		1,843	0.0
1905	47,077	47,029	48		1,891	0.0
1906	25,726	25,726			1,891	0.0
1907	76,960	76,960			1,891	0.0
1908	38,317	38,316	1		1,892	0.0
1909	26,942	26,941	1		1,893	0.0
1910	22,058	22,059	1-		1,892	0.0
1911	26,420	26,350	70		1,962	0.0
1912	16,012	16,007	5		1,967	0.0
1913	45,452	45,312	140		2,107	0.0
1914	32,041	31,977	64		2,171	0.0
1915	30,079	30,036	43		2,214	0.0
1916	20,901	20,897	4		2,218	0.0
1917	26,255	26,146	109		2,327	0.0
1918	9,781	9,753	28		2,355	0.0
1919	15,580	15,530	50		2,405	0.0
1920	16,040	15,579	461		2,866	0.0
1921	38,675	36,611	2,064		4,930	0.0
1922	58,029	57,747	282		5,212	0.0
1923	41,334	40,698	636		5,848	0.0
1924	90,703	87,917	2,786		8,634	0.0
1925	114,195	111,671	2,524		11,158	0.0
1926	158,906	153,363	5,543		16,701	0.0

COLUMBIA GAS OF PENNSYLVANIA, INC.

CUMULATIVE DEPRECIATED ORIGINAL COST BY YEAR INSTALLED
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR INST (1)	ORIGINAL COST (2)	ACCRUED DEPRECIATION (3)	AMOUNT		DEPRECIATED ORIGINAL COST CUMULATIVE AMOUNT (5)	PCT OF COL 4 TOTAL (6)
			(2)	(3)		
1927	108,198	105,342		2,856	19,557	0.0
1928	166,685	163,261		3,424	22,981	0.0
1929	210,376	203,869		6,507	29,488	0.0
1930	168,455	164,839		3,616	33,104	0.0
1931	163,580	161,480		2,100	35,204	0.0
1932	33,958	32,841		1,117	36,321	0.0
1933	38,671	36,045		2,626	38,947	0.0
1934	47,565	46,161		1,404	40,351	0.0
1935	46,543	46,020		523	40,874	0.0
1936	56,140	54,298		1,842	42,716	0.0
1937	89,571	88,333		1,238	43,954	0.0
1938	84,866	82,328		2,538	46,492	0.0
1939	226,930	205,414		21,516	68,008	0.0
1940	167,496	162,311		5,185	73,193	0.0
1941	236,391	229,388		7,003	80,196	0.0
1942	134,951	127,949		7,002	87,198	0.0
1943	78,287	75,376		2,911	90,109	0.0
1944	39,122	36,523		2,599	92,708	0.0
1945	33,926	31,435		2,491	95,199	0.0
1946	158,680	151,975		6,705	101,904	0.0
1947	141,035	130,803		10,232	112,136	0.0
1948	313,503	293,764		19,739	131,875	0.0
1949	773,972	739,294		34,678	166,553	0.0
1950	1,305,930	1,245,036		60,894	227,447	0.0
1951	1,119,524	1,050,598		68,926	296,373	0.0
1952	2,362,014	2,170,711		191,303	487,676	0.0
1953	1,635,935	1,518,750		117,185	604,861	0.0
1954	2,053,303	1,908,495		144,808	749,669	0.0
1955	4,790,038	4,421,518		368,520	1,118,189	0.1
1956	3,054,941	2,738,350		316,591	1,434,780	0.1
1957	3,951,735	3,564,989		386,746	1,821,526	0.1
1958	4,702,943	4,206,536		496,407	2,317,933	0.1
1959	3,973,525	3,487,096		486,429	2,804,362	0.2
1960	4,370,982	3,769,580		601,402	3,405,764	0.2
1961	4,627,977	4,046,820		581,157	3,986,921	0.2
1962	4,224,886	3,589,632		635,254	4,622,175	0.3
1963	5,166,772	4,441,715		725,057	5,347,232	0.3
1964	5,230,894	4,447,607		783,287	6,130,519	0.4
1965	4,340,574	3,649,476		691,098	6,821,617	0.4
1966	5,974,904	5,028,904		946,000	7,767,617	0.5
1967	5,743,159	4,796,618		946,541	8,714,158	0.5
1968	5,007,675	3,947,805		1,059,870	9,774,028	0.6

COLUMBIA GAS OF PENNSYLVANIA, INC.

CUMULATIVE DEPRECIATED ORIGINAL COST BY YEAR INSTALLED
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR INST (1)	ORIGINAL COST (2)	ACCRUED DEPRECIATION (3)	AMOUNT		DEPRECIATED ORIGINAL COST CUMULATIVE AMOUNT (5)	PCT OF COL 4 TOTAL (6)
			(2)	(3)		
1969	4,458,664	3,310,091	1,148,573		10,922,601	0.6
1970	4,354,767	3,290,824	1,063,943		11,986,544	0.7
1971	6,364,132	4,578,520	1,785,612		13,772,156	0.8
1972	3,727,907	2,340,800	1,387,107		15,159,263	0.9
1973	4,233,571	2,056,330	2,177,241		17,336,504	1.0
1974	3,493,817	1,299,812	2,194,005		19,530,509	1.1
1975	3,613,194	1,354,894	2,258,300		21,788,809	1.3
1976	3,679,683	1,792,981	1,886,702		23,675,511	1.4
1977	7,813,363	3,842,504	3,970,859		27,646,370	1.6
1978	7,446,375	3,641,919	3,804,456		31,450,826	1.8
1979	9,190,851	4,417,988	4,772,863		36,223,689	2.1
1980	12,232,527	5,972,009	6,260,518		42,484,207	2.5
1981	14,257,591	6,844,873	7,412,718		49,896,925	2.9
1982	13,480,509	6,122,820	7,357,689		57,254,614	3.3
1983	11,036,377	4,998,749	6,037,628		63,292,242	3.7
1984	12,722,560	5,657,305	7,065,255		70,357,497	4.1
1985	12,916,653	5,770,173	7,146,480		77,503,977	4.5
1986	14,392,629	6,312,749	8,079,880		85,583,857	5.0
1987	14,835,404	6,550,477	8,284,927		93,868,784	5.4
1988	17,290,815	7,365,200	9,925,615		103,794,399	6.0
1989	16,479,355	7,025,866	9,453,489		113,247,888	6.6
1990	14,615,750	6,145,174	8,470,576		121,718,464	7.1
1991	14,590,799	6,028,931	8,561,868		130,280,332	7.6
1992	16,162,324	6,457,778	9,704,546		139,984,878	8.1
1993	17,572,569	7,042,596	10,529,973		150,514,851	8.7
1994	20,846,624	8,018,300	12,828,324		163,343,175	9.5
1995	20,858,106	8,118,329	12,739,777		176,082,952	10.2
1996	21,603,241	8,108,678	13,494,563		189,577,515	11.0
1997	24,082,437	8,610,760	15,471,677		205,049,192	11.9
1998	22,280,058	7,848,237	14,431,821		219,481,013	12.7
1999	21,315,728	6,959,521	14,356,207		233,837,220	13.6
2000	22,095,821	7,407,271	14,688,550		248,525,770	14.4
2001	22,389,013	6,753,801	15,635,212		264,160,982	15.3
2002	18,053,454	5,368,351	12,685,103		276,846,085	16.1
2003	22,394,785	6,319,866	16,074,919		292,921,004	17.0
2004	30,797,588	7,644,403	23,153,185		316,074,189	18.3
2005	36,595,928	8,021,592	28,574,336		344,648,525	20.0
2006	25,385,732	5,514,343	19,871,389		364,519,914	21.2
2007	57,736,945	10,885,275	46,851,670		411,371,584	23.9
2008	81,191,580	14,011,333	67,180,247		478,551,831	27.8
2009	56,702,696	9,243,140	47,459,556		526,011,387	30.5
2010	70,594,158	10,376,309	60,217,849		586,229,236	34.0
2011	127,220,415	19,160,785	108,059,630		694,288,866	40.3

COLUMBIA GAS OF PENNSYLVANIA, INC.

CUMULATIVE DEPRECIATED ORIGINAL COST BY YEAR INSTALLED
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR INST (1)	ORIGINAL COST (2)	ACCRUED DEPRECIATION (3)	AMOUNT		CUMULATIVE AMOUNT (5)	PCT OF COL 4 TOTAL (6)
			(2)	(3)		
2012	140,699,270	17,516,736	123,182,534		817,471,400	47.5
2013	168,614,765	15,863,458	152,751,307		970,222,707	56.3
2014	187,044,975	15,035,579	172,009,396		1,142,232,103	66.3
2015	180,666,926	10,770,844	169,896,082		1,312,128,185	76.2
2016	223,589,017	8,143,524	215,445,493		1,527,573,678	88.7
2017	197,906,751	2,905,086	195,001,665		1,722,575,343	100.0
SUBTOTAL	2,140,607,114	418,031,770	1,722,575,345			
AMORTIZABLE PLANT	30,346,816	11,390,004	18,956,812			
NONDEPRECIABLE PLANT	172,413	-	172,413			
TOTAL	2,171,126,343	429,421,774	1,741,704,570			

UTILITY PLANT IN SERVICE

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 350.2 RIGHTS OF WAY

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
INTERIM SURVIVOR CURVE.. SQUARE						
PROBABLE RETIREMENT YEAR.. 6-2025						
NET SALVAGE PERCENT.. 0						
1972	1,896.43	1,625	1,896			
1973	35.65	30	35	1	7.58	
	1,932.08	1,655	1,931	1		
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 0.0 0.00						

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 351.2 COMPRESSOR STATION STRUCTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
INTERIM SURVIVOR CURVE.. IOWA 65-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2025						
NET SALVAGE PERCENT.. 0						
1970	124,246.77	106,516	90,200	34,047	7.17	4,749
1971	44,955.88	38,429	32,542	12,414	7.19	1,727
1972	23,833.95	20,312	17,201	6,633	7.21	920
1973	1,046.90	889	753	294	7.23	41
1996	107,318.16	79,523	67,342	39,976	7.49	5,337
1997	932.86	684	579	354	7.44	48
1998	7,804.72	5,637	4,774	3,031	7.47	406
2001	87,639.68	60,138	50,926	36,714	7.51	4,889
2003	212,167.85	139,479	118,114	94,054	7.51	12,524
2004	195,419.81	125,323	106,126	89,294	7.50	11,906
2008	670,893.34	373,352	316,162	354,731	7.50	47,297
2009	11,299.51	5,973	5,058	6,242	7.51	831
2012	59,116.96	24,752	20,960	38,157	7.52	5,074
2013	744,499.19	275,539	233,332	511,167	7.52	67,974
2014	847,869.30	265,044	224,444	623,425	7.51	83,013
2015	51,937.15	12,642	10,706	41,231	7.51	5,490
2016	9,550.22	1,518	1,285	8,265	7.50	1,102
2017	86,590.33	5,014	4,246	82,344	7.46	11,038
	3,287,122.58	1,540,764	1,304,750	1,982,373		264,366
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						7.5 8.04

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 352 WELLS - CONSTRUCTION

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
INTERIM SURVIVOR CURVE.. SQUARE						
PROBABLE RETIREMENT YEAR.. 6-2025						
NET SALVAGE PERCENT.. 0						
1970	326,259.85	281,295	326,260			
1971	246,359.45	211,778	246,359			
1972	166,322.06	142,535	166,322			
1978	60,192.37	50,480	60,177	15	7.58	2
	799,133.73	686,088	799,118	16		2
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..					8.0	0.00

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 352 WELLS - EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
INTERIM SURVIVOR CURVE.. IOWA 50-S2.5						
PROBABLE RETIREMENT YEAR.. 6-2025						
NET SALVAGE PERCENT.. 0						
1970	62,707.48	54,337	62,707			
1971	61,403.78	53,060	61,404			
1972	42,286.87	36,425	42,287			
1978	2,281.54	1,951	2,282			
	168,679.67	145,773	168,680			
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						0.0 0.00

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 352.1 STORAGE LEASEHOLDS AND RIGHTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
INTERIM SURVIVOR CURVE.. SQUARE						
PROBABLE RETIREMENT YEAR.. 6-2025						
NET SALVAGE PERCENT.. 0						
1970	206,940.78	178,420	206,932	9	7.58	1
	206,940.78	178,420	206,932	9		1
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						9.0 0.00

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 353 LINES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
INTERIM SURVIVOR CURVE.. IOWA 50-S1.5						
PROBABLE RETIREMENT YEAR.. 6-2025						
NET SALVAGE PERCENT.. 0						
1971	260,327.01	222,197	260,327			
1972	56,879.31	48,416	56,879			
1973	54,831.76	46,541	54,832			
1984	13,885.22	11,507	13,885			
1989	13,619.22	10,914	13,620			
	399,542.52	339,575	399,543			

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

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 354 COMPRESSOR STATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
INTERIM SURVIVOR CURVE.. IOWA 55-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2025						
NET SALVAGE PERCENT.. 0						
1950	5,342.87	4,806	5,343			
1952	23,888.55	21,407	23,889			
1957	363.93	323	364			
1967	1,175.28	1,017	1,175			
1969	2,168.00	1,866	2,164	4	6.74	1
1970	491,576.16	421,822	489,184	2,392	6.79	352
1971	21,258.89	18,185	21,089	170	6.84	25
1972	4,125.93	3,518	4,080	46	6.88	7
1979	1,860.35	1,572	1,823	37	7.04	5
1987	19,667.77	15,852	18,384	1,284	7.32	175
1991	11,137.86	8,709	10,100	1,038	7.37	141
1993	1,506.99	1,159	1,344	163	7.33	22
2013	280,679.08	104,020	120,631	160,048	7.50	21,340
	864,751.66	604,256	699,570	165,182		22,068
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 7.5 2.55						

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 355 MEASURING AND REGULATING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
INTERIM SURVIVOR CURVE.. IOWA 37-R1.5						
PROBABLE RETIREMENT YEAR.. 6-2025 .						
NET SALVAGE PERCENT.. 0						
1970	56,228.75	47,966	56,229			
1975	2,685.09	2,246	2,685			
1981	13,738.52	11,757	13,739			
1986	29,489.73	24,459	29,490			
1987	2,334.83	1,917	2,334			
	104,476.92	88,345	104,477			
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						0.0 0.00

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 374.4 LAND AND LAND RIGHTS - LAND RIGHTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 70-R2.5						
NET SALVAGE PERCENT.. 0						
1920	1,634.55	1,448	1,355	280	7.98	35
1953	2.00	1	1	1	19.48	
1957	3,252.89	2,245	2,101	1,152	21.69	53
1961	830.30	545	510	320	24.07	13
1962	323.98	210	197	127	24.69	5
1963	5,711.92	3,646	3,413	2,299	25.32	91
1964	3,704.51	2,331	2,182	1,523	25.96	59
1965	1,147.61	711	666	482	26.61	18
1966	2,376.18	1,450	1,357	1,019	27.27	37
1967	11,428.60	6,867	6,428	5,001	27.94	179
1968	1,995.68	1,180	1,105	891	28.62	31
1969	12,228.67	7,110	6,655	5,574	29.30	190
1970	8,052.25	4,602	4,308	3,744	29.99	125
1971	20,679.96	11,610	10,867	9,813	30.70	320
1972	11,643.88	6,419	6,008	5,636	31.41	179
1973	5,483.64	2,967	2,777	2,707	32.12	84
1974	16,686.28	8,856	8,290	8,396	32.85	256
1975	25,272.60	13,149	12,308	12,965	33.58	386
1976	24,345.48	14,116	13,213	11,132	30.01	371
1977	54,514.15	30,844	28,871	25,643	31.01	827
1978	21,191.48	11,778	11,025	10,166	31.50	323
1979	36,560.99	19,944	18,669	17,892	32.01	559
1980	22,999.87	12,307	11,520	11,480	32.51	353
1981	39,985.17	20,824	19,492	20,493	33.51	612
1982	62,933.13	32,096	30,043	32,890	34.03	967
1983	40,223.76	20,072	18,788	21,436	34.55	620
1984	44,787.52	21,852	20,455	24,333	35.08	694
1985	66,040.22	31,468	29,456	36,584	35.61	1,027
1986	40,012.58	18,478	17,296	22,717	36.61	621
1987	63,884.90	28,761	26,922	36,963	37.15	995
1988	98,844.45	43,324	40,553	58,291	37.70	1,546
1989	131,142.91	55,893	52,318	78,825	38.25	2,061
1990	84,064.46	34,567	32,356	51,708	39.25	1,317
1991	49,247.11	19,645	18,389	30,858	39.81	775
1992	13,465.78	5,202	4,869	8,597	40.38	213
1993	43,321.43	16,185	15,150	28,171	40.94	688
1994	35,296.72	12,728	11,914	23,383	41.52	563
1995	19,271.18	6,652	6,227	13,044	42.52	307
1996	46,023.19	15,280	14,303	31,720	43.10	736
1997	41,340.31	13,167	12,325	29,015	43.69	664
1998	9,183.56	2,799	2,620	6,564	44.28	148
1999	6,027.94	1,754	1,642	4,386	44.87	98
2000	14,218.67	3,937	3,685	10,534	45.48	232

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 374.4 LAND AND LAND RIGHTS - LAND RIGHTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 70-R2.5						
NET SALVAGE PERCENT.. 0						
2001	14,607.40	3,837	3,592	11,015	46.08	239
2002	3,026.59	747	699	2,328	47.08	49
2003	43,663.62	10,134	9,486	34,178	47.70	717
2004	46,284.94	10,062	9,418	36,867	48.31	763
2005	26,785.92	5,421	5,074	21,712	48.93	444
2006	37,665.30	7,051	6,600	31,065	49.56	627
2007	66,976.43	11,580	10,840	56,136	49.83	1,127
2008	28,129.15	4,425	4,142	23,987	50.46	475
2009	154,820.42	21,892	20,492	134,328	51.11	2,628
2010	80,507.25	10,088	9,443	71,064	51.76	1,373
2011	76,852.69	8,431	7,892	68,961	52.06	1,325
2012	208,077.90	19,393	18,153	189,925	52.72	3,603
2013	199,508.04	15,322	14,342	185,166	53.06	3,490
2014	89,872.29	5,437	5,089	84,783	53.08	1,597
2015	127,348.29	5,540	5,186	122,162	53.14	2,299
2016	172,392.74	4,499	4,211	168,182	52.93	3,177
2017	52,437.83	467	437	52,001	50.83	1,023
	2,670,339.26	713,346	667,725	2,002,614		44,334
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						45.2 1.66

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 374.5 LAND AND LAND RIGHTS - RIGHTS OF WAY

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 80-S4						
NET SALVAGE PERCENT.. 0						
1883	866.25	851	866			
1884	2,319.40	2,276	2,319			
1885	952.00	933	952			
1886	9,401.15	9,205	9,401			
1887	4,690.00	4,585	4,690			
1888	6,579.75	6,426	6,580			
1889	6,551.18	6,391	6,551			
1890	1,679.50	1,636	1,680			
1891	8,350.23	8,123	8,350			
1892	1,354.95	1,316	1,355			
1893	650.85	632	651			
1894	1,616.78	1,567	1,617			
1895	1,133.20	1,096	1,133			
1896	4,260.56	4,117	4,261			
1897	2,267.65	2,188	2,268			
1898	1,633.73	1,574	1,634			
1899	934.25	899	934			
1900	8,185.42	7,861	8,185			
1901	15,227.76	14,602	15,228			
1902	7,330.74	7,018	7,331			
1903	15,446.32	14,761	15,446			
1904	8,443.31	8,055	8,443			
1905	13,211.32	12,582	13,211			
1906	5,826.89	5,539	5,827			
1907	4,318.72	4,097	4,319			
1908	5,084.82	4,816	5,085			
1909	5,578.23	5,273	5,578			
1910	944.58	891	945			
1911	1,805.52	1,699	1,806			
1912	1,590.08	1,494	1,590			
1913	4,199.64	3,936	4,200			
1914	6,522.34	6,099	6,522			
1915	9,299.36	8,675	9,299			
1916	2,133.53	1,986	2,131	3	5.54	1
1917	2,947.27	2,737	2,937	10	5.72	2
1918	969.85	898	964	6	5.92	1
1919	713.16	659	707	6	6.12	1
1920	1,116.43	1,028	1,103	13	6.32	2
1921	2,386.50	2,192	2,352	34	6.52	5
1922	5,478.84	5,017	5,384	95	6.74	14
1923	5,748.64	5,248	5,632	117	6.97	17
1924	2,962.36	2,696	2,893	69	7.19	10
1925	8,085.67	7,335	7,871	215	7.43	29

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 374.5 LAND AND LAND RIGHTS - RIGHTS OF WAY

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 80-S4						
NET SALVAGE PERCENT.. 0						
1926	3,690.49	3,336	3,580	110	7.68	14
1927	3,441.21	3,100	3,327	114	7.93	14
1928	3,616.30	3,246	3,483	133	8.19	16
1929	9,736.71	8,706	9,342	395	8.47	47
1930	3,705.73	3,300	3,541	165	8.75	19
1931	4,695.61	4,165	4,469	227	9.04	25
1932	2,031.20	1,794	1,925	106	9.34	11
1933	2,540.95	2,234	2,397	144	9.66	15
1934	4,020.82	3,519	3,776	245	9.98	25
1935	866.62	755	810	57	10.32	6
1936	4,994.63	4,328	4,644	351	10.67	33
1937	3,607.79	3,110	3,337	271	11.03	25
1938	1,245.49	1,068	1,146	99	11.41	9
1939	956.06	815	875	81	11.80	7
1940	13,850.45	11,737	12,595	1,255	12.21	103
1941	4,887.61	4,116	4,417	471	12.63	37
1942	8,169.68	6,836	7,336	834	13.06	64
1943	1,693.42	1,407	1,510	183	13.52	14
1944	3,627.62	2,993	3,212	416	13.99	30
1945	1,007.81	825	885	123	14.48	8
1946	623.85	507	544	80	14.98	5
1947	215.02	173	186	29	15.50	2
1948	3,109.38	2,486	2,668	441	16.05	27
1949	16,198.32	12,835	13,773	2,425	16.61	146
1950	20,944.17	16,444	17,646	3,298	17.19	192
1951	11,956.42	9,298	9,978	1,978	17.79	111
1952	8,038.39	6,188	6,640	1,398	18.42	76
1953	5,949.87	4,532	4,863	1,087	19.06	57
1954	21,585.01	16,264	17,453	4,132	19.72	210
1955	32,149.56	23,948	25,698	6,452	20.41	316
1956	51,558.51	37,953	40,727	10,832	21.11	513
1957	19,916.61	14,479	15,537	4,380	21.84	201
1958	63,499.25	45,577	48,908	14,591	22.58	646
1959	28,371.09	20,090	21,558	6,813	23.35	292
1960	26,305.63	18,371	19,714	6,592	24.13	273
1961	15,768.03	10,854	11,647	4,121	24.93	165
1962	18,087.78	12,266	13,162	4,926	25.75	191
1963	27,374.57	18,276	19,612	7,763	26.59	292
1964	40,027.79	26,293	28,215	11,813	27.45	430
1965	17,574.04	11,353	12,183	5,391	28.32	190
1966	18,597.25	11,809	12,672	5,925	29.20	203
1967	96,910.77	60,448	64,866	32,045	30.10	1,065
1968	82,637.79	50,595	54,293	28,345	31.02	914

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 374.5 LAND AND LAND RIGHTS - RIGHTS OF WAY

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 80-S4						
NET SALVAGE PERCENT.. 0						
1969	46,057.56	27,669	29,691	16,367	31.94	512
1970	45,097.36	26,568	28,510	16,587	32.87	505
1971	54,600.87	31,518	33,821	20,780	33.82	614
1972	80,822.88	45,696	49,035	31,788	34.77	914
1973	31,060.02	17,188	18,444	12,616	35.73	353
1974	42,716.26	23,120	24,810	17,906	36.70	488
1975	53,203.52	28,151	30,208	22,996	37.67	610
1976	46,796.87	25,004	26,831	19,966	36.10	553
1977	50,016.13	26,078	27,984	22,032	37.10	594
1978	27,600.77	14,035	15,061	12,540	38.10	329
1979	28,400.77	14,075	15,104	13,297	39.10	340
1980	24,054.08	11,611	12,460	11,594	40.10	289
1981	55,235.53	25,950	27,846	27,390	41.10	666
1982	47,534.94	21,719	23,306	24,229	42.10	576
1983	27,148.25	12,054	12,935	14,213	43.10	330
1984	30,306.87	13,065	14,020	16,287	44.10	369
1985	72,105.59	30,155	32,359	39,747	45.10	881
1986	17,533.91	7,106	7,625	9,909	46.10	215
1987	27,416.83	10,758	11,544	15,873	47.10	337
1988	11,339.22	4,303	4,617	6,722	48.10	140
1989	70,100.72	25,699	27,577	42,524	49.10	866
1990	44,760.66	15,832	16,989	27,772	50.10	554
1991	35,224.46	12,004	12,881	22,343	51.10	437
1992	54,141.31	17,753	19,050	35,091	52.10	674
1993	58,993.43	18,583	19,941	39,052	53.10	735
1994	184,531.84	55,747	59,821	124,711	54.10	2,305
1995	584,928.49	169,161	181,524	403,404	55.10	7,321
1996	126,940.88	35,074	37,637	89,304	56.10	1,592
1997	68,030.65	17,919	19,229	48,802	57.10	855
1998	40,132.45	10,053	10,788	29,344	58.10	505
2000	15,568.19	3,498	3,754	11,814	60.10	197
2001	39,714.12	8,411	9,026	30,688	61.10	502
2002	181,571.19	36,115	38,754	142,817	62.10	2,300
2003	1,938.28	361	387	1,551	63.10	25
2006	3,432.18	506	543	2,889	66.10	44
	3,239,641.11	1,535,977	1,643,493	1,596,148		35,648

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 44.8 1.10

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 375.34 STRUCTURES AND IMPROVEMENTS - MEASURING AND REGULATING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R1						
NET SALVAGE PERCENT.. 0						
1905	88.10	84	74	14	2.73	5
1913	430.94	394	346	85	5.19	16
1914	264.24	240	211	53	5.49	10
1925	211.96	180	158	54	8.93	6
1927	225.68	190	167	59	9.60	6
1928	563.20	470	413	150	9.95	15
1929	4,540.76	3,762	3,306	1,235	10.29	120
1930	4,816.07	3,962	3,482	1,334	10.64	125
1931	1,233.39	1,007	885	348	11.00	32
1932	2,321.06	1,882	1,654	667	11.35	59
1933	5,274.20	4,244	3,730	1,544	11.72	132
1934	2,043.98	1,632	1,434	610	12.08	50
1935	97.20	77	68	29	12.46	2
1936	2,449.81	1,926	1,693	757	12.83	59
1938	618.55	478	420	199	13.60	15
1939	7,835.95	6,009	5,281	2,555	13.99	183
1940	554.29	421	370	184	14.38	13
1941	897.54	676	594	304	14.78	21
1942	785.20	587	516	269	15.18	18
1943	695.22	515	453	242	15.59	16
1945	639.53	465	409	231	16.42	14
1946	1,024.41	737	648	376	16.84	22
1947	2,770.44	1,973	1,734	1,036	17.27	60
1948	6,715.12	4,734	4,161	2,554	17.70	144
1949	1,156.73	807	709	448	18.14	25
1950	5,042.16	3,481	3,059	1,983	18.58	107
1951	12,332.57	8,421	7,401	4,932	19.03	259
1952	32,701.42	22,084	19,410	13,291	19.48	682
1953	28,927.89	19,314	16,975	11,953	19.94	599
1954	17,463.31	11,523	10,128	7,335	20.41	359
1955	15,777.06	10,287	9,041	6,736	20.88	323
1956	39,397.82	25,379	22,306	17,092	21.35	801
1957	82,700.06	52,611	46,240	36,460	21.83	1,670
1958	64,158.72	40,292	35,413	28,746	22.32	1,288
1959	42,177.26	26,143	22,977	19,200	22.81	842
1960	113,082.06	69,150	60,777	52,305	23.31	2,244
1961	57,593.59	34,739	30,532	27,062	23.81	1,137
1962	94,815.41	56,384	49,556	45,259	24.32	1,861
1963	33,291.42	19,509	17,147	16,144	24.84	650
1964	47,454.79	27,397	24,079	23,376	25.36	922
1965	29,276.43	16,644	14,629	14,647	25.89	566
1966	27,208.84	15,228	13,384	13,825	26.42	523
1967	26,173.57	14,413	12,668	13,506	26.96	501

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 375.34 STRUCTURES AND IMPROVEMENTS - MEASURING AND REGULATING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R1						
NET SALVAGE PERCENT.. 0						
1968	8,481.65	4,594	4,038	4,444	27.50	162
1969	18,276.97	9,732	8,554	9,723	28.05	347
1970	5,926.91	3,101	2,725	3,202	28.61	112
1971	36,957.10	18,990	16,690	20,267	29.17	695
1972	11,926.98	6,015	5,287	6,640	29.74	223
1973	13,378.97	6,620	5,818	7,561	30.31	249
1974	12,610.14	6,118	5,377	7,233	30.89	234
1975	16,872.99	8,023	7,051	9,822	31.47	312
1976	26,321.53	15,806	13,892	12,430	27.55	451
1977	22,573.98	13,411	11,787	10,787	27.61	391
1978	35,415.99	20,662	18,160	17,256	28.15	613
1979	37,541.40	21,489	18,887	18,654	28.70	650
1980	27,793.54	15,703	13,802	13,992	28.81	486
1981	27,705.54	15,335	13,478	14,228	29.38	484
1982	41,835.46	22,671	19,926	21,909	29.94	732
1983	29,837.10	15,918	13,990	15,847	30.10	526
1984	18,763.32	9,781	8,597	10,166	30.69	331
1985	12,792.93	6,510	5,722	7,071	31.28	226
1986	26,393.61	13,184	11,588	14,806	31.48	470
1987	3,272.42	1,593	1,400	1,872	32.08	58
1988	29,318.30	13,973	12,281	17,037	32.31	527
1989	30,639.10	14,278	12,549	18,090	32.56	556
1990	18,481.76	8,361	7,349	11,133	33.19	335
1991	35,776.94	15,785	13,874	21,903	33.46	655
1992	129.79	56	49	81	33.76	2
1993	23,505.08	9,757	8,575	14,930	34.41	434
1994	1,512.34	609	535	977	34.72	28
1995	13,604.01	5,306	4,663	8,941	35.06	255
1996	50,616.16	19,077	16,767	33,849	35.40	956
1997	20,588.07	7,482	6,576	14,012	35.76	392
1998	64,006.33	22,492	19,768	44,238	35.83	1,235
1999	2,550.99	860	756	1,795	36.23	50
2000	28,133.10	9,115	8,011	20,122	36.34	554
2001	26,878.06	8,295	7,291	19,587	36.78	533
2002	34,952.26	10,293	9,047	25,905	36.94	701
2003	62,637.02	17,520	15,398	47,239	37.13	1,272
2004	35,190.50	9,301	8,175	27,016	37.35	723
2005	52,335.53	13,063	11,481	40,855	37.33	1,094
2006	81,834.39	19,059	16,751	65,083	37.60	1,731
2007	190,663.65	41,317	36,314	154,350	37.66	4,099
2008	468,725.58	94,026	82,640	386,086	37.53	10,287
2009	103,405.28	18,975	16,677	86,728	37.45	2,316
2010	175,158.80	28,971	25,463	149,696	37.43	3,999

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 375.34 STRUCTURES AND IMPROVEMENTS - MEASURING AND REGULATING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R1						
NET SALVAGE PERCENT.. 0						
2011	204,892.27	30,099	26,454	178,438	37.25	4,790
2012	581,425.93	74,655	65,615	515,811	36.78	14,024
2013	238,922.32	25,947	22,805	216,117	36.24	5,963
2014	410,055.97	36,003	31,644	378,412	35.49	10,662
2015	923,441.27	60,670	53,324	870,117	34.35	25,331
2016	393,549.55	16,490	14,493	379,057	32.37	11,710
2017	173,761.41	2,798	2,459	171,302	28.03	6,111
	5,729,198.24	1,380,340	1,213,191	4,516,007		135,579
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						33.3 2.37

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 375.6 STRUCTURES AND IMPROVEMENTS - INDUSTRIAL MEASURING AND
 REGULATING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R1						
NET SALVAGE PERCENT.. 0						
1922	114.31	104	114			
1928	87.15	77	87			
1930	127.57	111	128			
1931	263.40	227	263			
1934	783.68	661	784			
1935	147.25	123	147			
1936	21.46	18	21			
1937	618.76	510	619			
1938	1,463.03	1,197	1,463			
1940	440.04	354	440			
1942	1,018.37	806	1,018			
1944	2,850.41	2,217	2,850			
1946	377.07	288	377			
1947	568.77	430	566	3	13.40	
1948	482.71	362	476	7	13.80	1
1950	1,857.60	1,364	1,795	63	14.62	4
1951	3,131.90	2,275	2,993	139	15.04	9
1952	3,969.07	2,853	3,754	215	15.46	14
1953	4,259.74	3,029	3,985	275	15.89	17
1955	4,904.63	3,410	4,486	419	16.76	25
1956	2,507.83	1,724	2,268	240	17.20	14
1957	14,375.38	9,762	12,844	1,531	17.65	87
1958	1,667.93	1,119	1,472	196	18.11	11
1959	5,902.55	3,910	5,144	759	18.57	41
1960	1,345.00	879	1,157	188	19.04	10
1961	1,954.81	1,261	1,659	296	19.52	15
1963	3,416.99	2,145	2,822	595	20.48	29
1964	1,441.97	892	1,174	268	20.98	13
1967	1,614.49	954	1,255	359	22.49	16
1970	2,450.11	1,378	1,813	637	24.06	26
1971	7,721.50	4,268	5,615	2,106	24.60	86
1972	1.00	1	1			
1980	3,885.67	2,312	3,042	844	25.48	33
1988	11,897.69	6,020	7,921	3,977	28.72	138
	87,669.84	57,041	74,553	13,117		589

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 22.3 0.67

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 375.7 STRUCTURES AND IMPROVEMENTS - OTHER DISTRIBUTION SYSTEM
STRUCTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
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	18,058	21,535	1,669	14.52	115
1959	530.28	411	490	40	14.55	3
1978	1,767.28	1,282	1,529	238	14.93	16
1985	19,951.17	13,647	16,275	3,676	14.98	245
1987	7,647.96	5,141	6,131	1,517	14.83	102
1995	8,147.09	4,876	5,815	2,332	15.04	155
1998	14,593.54	8,218	9,800	4,793	15.07	318
1999	5,204.23	2,866	3,418	1,786	15.03	119
2003	17,099.66	8,382	9,996	7,104	14.99	474
2007	4,558.44	1,866	2,225	2,333	15.03	155
2010	1,391.88	460	549	843	15.00	56
2012	15,971.90	4,249	5,067	10,905	14.95	729
2014	1,825.22	341	407	1,419	14.86	95
2015	221,738.88	31,132	37,127	184,612	14.80	12,474
2016	74,700.89	6,596	7,866	66,835	14.63	4,568
	418,332.22	107,525	128,230	290,102		19,624
WASHINGTON SERVICE CENTER						
INTERIM SURVIVOR CURVE.. IOWA 90-R1.5						
PROBABLE RETIREMENT YEAR.. 6-2030						
NET SALVAGE PERCENT.. 0						
1928	539.04	464	539			
1933	401.96	344	402			
1937	77.17	66	77			
1955	8,925.95	7,310	8,718	208	11.85	18
1957	17,943.97	14,616	17,431	513	11.89	43

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 375.7 STRUCTURES AND IMPROVEMENTS - OTHER DISTRIBUTION SYSTEM
STRUCTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
WASHINGTON SERVICE CENTER						
INTERIM SURVIVOR CURVE.. IOWA 90-R1.5						
PROBABLE RETIREMENT YEAR.. 6-2030						
NET SALVAGE PERCENT.. 0						
1958	1,091.86	887	1,058	34	11.90	3
1962	275.80	221	264	12	11.97	1
1963	17,141.83	13,708	16,348	794	11.99	66
1964	81,035.39	64,590	77,030	4,005	12.00	334
1965	2,232.00	1,773	2,114	118	12.02	10
1968	462.64	363	433	30	12.06	2
1969	861.74	674	804	58	12.07	5
1973	1,166.63	896	1,069	98	12.12	8
1976	1,998.47	1,548	1,846	152	12.06	13
1978	1,705.03	1,304	1,555	150	12.13	12
1982	1,111.41	827	986	125	12.20	10
1984	4,760.67	3,484	4,155	606	12.25	49
1985	911.17	662	790	122	12.23	10
1987	180,447.17	128,984	153,826	26,621	12.14	2,193
1995	194,747.16	126,157	150,455	44,292	12.19	3,633
1996	41,750.41	26,557	31,672	10,079	12.25	823
1997	51,204.74	31,993	38,155	13,050	12.26	1,064
1998	27,872.99	17,103	20,397	7,476	12.23	611
2005	152,784.63	76,835	91,633	61,151	12.27	4,984
2006	8,853.44	4,275	5,098	3,755	12.22	307
2008	7,810.00	3,397	4,051	3,759	12.23	307
2010	86,191.80	32,537	38,804	47,388	12.23	3,875
2011	15,761.85	5,432	6,478	9,284	12.20	761
2013	102,652.64	27,295	32,552	70,101	12.19	5,751
2015	29,890.28	4,977	5,936	23,955	12.10	1,980
2016	11,433.54	1,206	1,438	9,995	12.01	832
2017	121,873.14	4,582	5,464	116,409	11.74	9,916
	1,175,916.52	605,067	721,579	454,338		37,621

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
1964	300.54	301	301

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 375.7 STRUCTURES AND IMPROVEMENTS - OTHER DISTRIBUTION SYSTEM
STRUCTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
BRADFORD OFFICE						
FULLY ACCRUED						
NET SALVAGE PERCENT.. 0						
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			
HANOVER SERVICE CENTER						
INTERIM SURVIVOR CURVE.. IOWA 90-R1.5						
PROBABLE RETIREMENT YEAR.. 6-2029						
NET SALVAGE PERCENT.. 0						
1939	1,201.91	1,030	1,202			
1949	338.10	285	338			
1979	85,249.40	66,154	79,369	5,881	11.09	530
1983	5,480.40	4,131	4,956	524	11.25	47
1991	1,625.41	1,138	1,365	260	11.32	23
1992	3,087.69	2,143	2,571	517	11.21	46
1998	249,117.92	157,692	189,192	59,926	11.26	5,322
2000	1,971.28	1,195	1,434	538	11.32	48
2007	8,637.28	4,139	4,966	3,671	11.32	324
2009	8,908.99	3,801	4,560	4,349	11.31	385
2013	76,855.87	21,658	25,984	50,872	11.26	4,518
2014	4,037.54	942	1,130	2,907	11.22	259
2015	4,344.34	772	926	3,418	11.19	305
2016	18,864.29	2,132	2,558	16,306	11.12	1,466
	469,720.42	267,212	320,551	149,169		13,273
JEANNETTE SERVICE CENTER AND SHOP						
INTERIM SURVIVOR CURVE.. IOWA 90-R1.5						
PROBABLE RETIREMENT YEAR.. 6-2056						
NET SALVAGE PERCENT.. 0						
1981	595,157.67	314,243	376,970	218,188	32.55	6,703
1986	14,531.65	7,077	8,490	6,042	33.10	183
1987	10,690.59	5,105	6,124	4,567	33.28	137
1988	10,177.82	4,791	5,747	4,430	33.08	134
1996	15,873.85	6,188	7,423	8,451	33.53	252
1997	7,912.22	2,988	3,584	4,328	33.64	129
1998	1,295.01	473	567	728	33.78	22

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 375.7 STRUCTURES AND IMPROVEMENTS - OTHER DISTRIBUTION SYSTEM
STRUCTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
JEANNETTE SERVICE CENTER AND SHOP						
INTERIM SURVIVOR CURVE.. IOWA 90-R1.5						
PROBABLE RETIREMENT YEAR.. 6-2056						
NET SALVAGE PERCENT.. 0						
2000	2,043.39	698	837	1,206	33.60	36
2003	23,934.57	7,178	8,611	15,324	33.66	455
2006	122,192.82	30,964	37,145	85,048	33.63	2,529
2007	83,513.69	19,751	23,694	59,820	33.63	1,779
2009	23,195.60	4,667	5,599	17,597	33.42	527
2010	4,267.07	775	930	3,337	33.40	100
2013	784,265.50	92,857	111,392	672,873	32.90	20,452
2015	1,037,129.72	72,703	87,215	949,914	32.07	29,620
2016	79,468.00	3,449	4,137	75,331	31.26	2,410
	2,815,649.17	573,907	688,466	2,127,183		65,468

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	2,587	2,601			
1954	2,263.57	2,237	2,264			
1955	7,045.40	6,913	7,045			
1956	294.53	287	295			
1961	5,869.31	5,482	5,869			
1966	2,114.98	1,888	2,115			
1969	1,259.56	1,092	1,260			
1971	106,649.53	90,621	106,650			
1972	9,337.50	7,849	9,338			
1975	5,803.33	4,709	5,702	101	6.60	15
1976	6,723.83	5,820	6,724			
1984	43,036.41	33,508	40,598	2,439	9.50	257
1985	3,259.62	2,494	3,022	238	9.96	24
1987	14,383.92	10,631	12,880	1,504	10.74	140
1988	14,889.44	10,774	13,054	1,836	11.24	163
1989	11,476.85	8,121	9,839	1,638	11.74	140
1990	32,260.00	22,288	27,004	5,256	12.27	428
1993	8,113.24	5,190	6,288	1,825	13.75	133

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 375.7 STRUCTURES AND IMPROVEMENTS - OTHER DISTRIBUTION SYSTEM
STRUCTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
OTHER BUILDINGS						
SURVIVOR CURVE.. IOWA 35-R2						
NET SALVAGE PERCENT.. 0						
1994	15,147.02	9,435	11,431	3,716	14.18	262
1995	27,857.47	16,798	20,352	7,505	14.76	508
1996	2,392.16	1,393	1,688	704	15.35	46
1997	1,337.50	754	914	424	15.82	27
1998	56,879.39	30,812	37,331	19,548	16.43	1,190
1999	23,666.45	12,335	14,945	8,722	16.92	515
2000	187,147.80	93,218	112,941	74,207	17.55	4,228
2001	9,051.12	4,309	5,221	3,830	18.07	212
2003	12,533.29	5,384	6,523	6,010	19.14	314
2006	1,753.31	620	751	1,002	20.84	48
2007	26,323.12	8,610	10,432	15,891	21.43	742
2008	132,433.81	39,783	48,200	84,233	21.93	3,841
2009	186,519.97	50,864	61,626	124,894	22.45	5,563
2010	11,740.04	2,865	3,471	8,269	22.98	360
2011	8,340.00	1,793	2,172	6,168	23.43	263
2012	10,145.94	1,874	2,271	7,875	23.91	329
2013	565,538.18	87,149	105,588	459,950	24.24	18,975
2014	306,772.00	37,426	45,345	261,427	24.59	10,631
2015	164,570.14	14,630	17,725	146,845	24.76	5,931
2016	328,827.65	17,921	21,713	307,115	24.56	12,505
2017	88,828.91	1,714	2,077	86,752	23.29	3,725
	2,449,730.24	666,721	799,806	1,649,924		71,515
	7,387,712.79	2,278,797	2,716,996	4,670,716		207,501
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						22.5 2.81

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 375.8 STRUCTURES AND IMPROVEMENTS - COMMUNICATION STRUCTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 45-R3						
NET SALVAGE PERCENT.. 0						
2001	16,515.17	6,398	6,825	9,690	25.96	373
	16,515.17	6,398	6,825	9,690		373
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						26.0 2.26

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 376.1 MAINS - CAST IRON

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
INTERIM SURVIVOR CURVE.. IOWA 71-R1						
PROBABLE RETIREMENT YEAR.. 12-2025						
NET SALVAGE PERCENT.. 0						
1901	21,185.07	19,482	19,465	1,720	5.69	302
1902	207.30	190	190	17	5.76	3
1903	429.79	394	394	36	5.84	6
1904	822.71	754	753	70	5.91	12
1905	402.40	368	368	34	5.98	6
1908	12.38	11	11	1	6.18	
1911	778.25	708	707	71	6.34	11
1912	62.67	57	57	6	6.40	1
1913	599.77	544	544	56	6.45	9
1914	111.28	101	101	10	6.49	2
1915	454.56	412	412	43	6.54	7
1917	1,022.70	925	924	99	6.63	15
1918	36.45	33	33	3	6.67	
1919	36.74	33	33	4	6.71	1
1920	1,089.96	983	982	108	6.75	16
1921	19,866.65	17,911	17,895	1,972	6.78	291
1922	360.98	325	325	36	6.82	5
1923	1,936.84	1,743	1,741	196	6.86	29
1924	23,309.22	20,958	20,939	2,370	6.89	344
1925	15,009.34	13,484	13,472	1,537	6.92	222
1926	44,802.56	40,216	40,180	4,623	6.95	665
1927	17,548.78	15,738	15,724	1,825	6.98	261
1928	21,230.63	19,023	19,006	2,225	7.01	317
1929	35,155.65	31,472	31,444	3,712	7.04	527
1930	13,049.13	11,670	11,660	1,389	7.07	196
1931	9,905.88	8,851	8,843	1,063	7.10	150
1932	0.23					
1933	1,837.88	1,639	1,638	200	7.15	28
1934	541.26	482	482	59	7.17	8
1937	81.46	72	72	9	7.24	1
1938	3,245.48	2,880	2,877	368	7.26	51
1939	137,856.73	122,203	122,093	15,764	7.28	2,165
1940	3,407.53	3,017	3,014	394	7.31	54
1941	7,520.69	6,651	6,645	876	7.33	120
1942	563.35	498	498	65	7.35	9
1943	1,938.15	1,710	1,708	230	7.36	31
1944	2,499.80	2,203	2,201	299	7.38	41
1945	1,824.21	1,606	1,605	219	7.40	30
1946	1,343.91	1,181	1,180	164	7.42	22
1947	600.28	527	526	74	7.44	10
1948	8,577.14	7,520	7,513	1,064	7.45	143

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 376.1 MAINS - CAST IRON

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
INTERIM SURVIVOR CURVE.. IOWA 71-R1						
PROBABLE RETIREMENT YEAR.. 12-2025						
NET SALVAGE PERCENT.. 0						
1949	30.51	27	27	4	7.47	1
1951	22.71	20	20	3	7.50	
1982	336.63	275	275	62	7.87	8
	401,655.64	358,897	358,577	43,079		6,120
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 7.0						1.52

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 376.3 MAINS - BARE STEEL

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
INTERIM SURVIVOR CURVE.. IOWA 71-R1						
PROBABLE RETIREMENT YEAR.. 12-2030						
NET SALVAGE PERCENT.. 0						
1901	562,307.39	504,272	562,307			
1902	51,600.51	46,149	51,601			
1903	31,931.17	28,485	31,931			
1904	35,248.86	31,369	35,249			
1905	31,719.81	28,160	31,720			
1906	18,208.69	16,125	18,209			
1907	70,422.04	62,231	70,422			
1908	30,248.56	26,669	30,249			
1909	19,145.17	16,842	19,145			
1910	18,849.65	16,546	18,850			
1911	22,243.98	19,486	22,244			
1912	12,695.83	11,100	12,696			
1913	38,125.27	33,264	38,125			
1914	23,396.96	20,374	23,397			
1915	17,813.69	15,482	17,814			
1916	16,995.48	14,743	16,995			
1917	20,948.40	18,139	20,948			
1918	7,027.22	6,073	7,027			
1919	12,819.62	11,060	12,820			
1920	10,287.01	8,860	10,287			
1921	14,611.08	12,561	14,611			
1922	48,508.24	41,633	48,508			
1923	27,183.57	23,288	27,184			
1924	58,667.63	50,174	58,668			
1925	79,903.98	68,216	79,904			
1926	98,633.30	84,070	98,633			
1927	74,252.78	63,174	74,253			
1928	126,859.48	107,751	126,859			
1929	145,850.87	123,667	145,851			
1930	139,988.14	118,510	139,988			
1931	140,093.10	118,384	140,093			
1932	27,301.18	23,028	27,301			
1933	23,782.10	20,025	23,782			
1934	36,202.78	30,431	36,203			
1935	42,684.71	35,815	42,685			
1936	43,900.05	36,767	43,900			
1937	72,580.59	60,682	72,573	8	10.88	1
1938	55,273.74	46,123	55,161	113	10.94	10
1939	53,062.31	44,197	52,857	205	10.99	19
1940	127,347.17	105,873	126,619	728	11.04	66
1941	190,118.36	157,756	188,668	1,450	11.09	131
1942	89,766.33	74,336	88,902	864	11.14	78

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 376.3 MAINS - BARE STEEL

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
INTERIM SURVIVOR CURVE.. IOWA 71-R1						
PROBABLE RETIREMENT YEAR.. 12-2030						
NET SALVAGE PERCENT.. 0						
1943	56,847.43	46,980	56,186	661	11.19	59
1944	18,100.55	14,927	17,852	249	11.24	22
1945	17,019.59	14,005	16,749	271	11.29	24
1946	123,105.92	101,096	120,906	2,200	11.33	194
1947	84,172.00	68,976	82,492	1,680	11.37	148
1948	213,906.62	174,871	209,137	4,770	11.42	418
1949	649,489.25	529,769	633,577	15,912	11.46	1,388
1950	1,117,179.95	909,128	1,087,272	29,908	11.50	2,601
1951	884,326.92	717,905	858,579	25,748	11.54	2,231
1952	1,933,384.43	1,565,635	1,872,422	60,962	11.58	5,264
1953	1,352,744.33	1,092,585	1,306,677	46,067	11.62	3,964
1954	1,697,569.69	1,367,732	1,635,739	61,831	11.65	5,307
1955	4,127,491.61	3,316,274	3,966,099	161,393	11.69	13,806
1956	2,402,897.02	1,925,081	2,302,301	100,596	11.73	8,576
1957	3,143,684.79	2,511,710	3,003,880	139,805	11.76	11,888
1958	3,673,429.22	2,926,584	3,500,049	173,380	11.79	14,706
1959	2,954,879.62	2,346,618	2,806,438	148,442	11.83	12,548
1960	3,165,033.38	2,505,789	2,996,799	168,234	11.86	14,185
1961	3,493,450.22	2,756,961	3,297,188	196,262	11.89	16,506
1962	2,958,609.32	2,327,153	2,783,159	175,450	11.92	14,719
1963	3,876,017.24	3,038,294	3,633,649	242,368	11.95	20,282
1964	3,728,980.91	2,912,595	3,483,319	245,662	11.98	20,506
1965	2,976,668.31	2,316,354	2,770,244	206,424	12.01	17,188
1966	4,294,714.54	3,329,091	3,981,427	313,288	12.04	26,021
1967	4,044,280.49	3,123,155	3,735,138	309,142	12.06	25,634
1968	3,027,300.49	2,328,024	2,784,201	243,099	12.09	20,107
1969	2,375,760.87	1,819,595	2,176,145	199,616	12.11	16,484
1970	1,089,197.45	830,437	993,161	96,036	12.14	7,911
1971	2,618,818.46	1,987,736	2,377,233	241,585	12.16	19,867
1972	942,694.81	711,989	851,504	91,191	12.19	7,481
1973	616,273.43	463,210	553,976	62,297	12.21	5,102
1974	1,349.53	1,009	1,207	143	12.23	12
1975	814.03	605	724	90	12.25	7
1976	259.38	201	240	19	12.06	2
1977	2,152.90	1,653	1,977	176	12.22	14
1978	175,582.00	134,268	160,578	15,004	12.13	1,237
1979	18,317.33	13,932	16,662	1,655	12.09	137
1980	211,560.34	159,897	191,228	20,332	12.09	1,682
1981	60.06	45	54	6	12.13	
1983	7,789.49	5,737	6,861	928	12.31	75
1984	207.92	152	182	26	12.25	2
1985	36.16	26	31	5	12.23	

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 376.3 MAINS - BARE STEEL

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
INTERIM SURVIVOR CURVE.. IOWA 71-R1						
PROBABLE RETIREMENT YEAR.. 12-2030						
NET SALVAGE PERCENT.. 0						
1986	83.84	60	72	12	12.25	1
1988	0.10					
1989	911.06	634	758	153	12.40	12
1990	11,903.30	8,192	9,797	2,106	12.42	170
1992	45,851.46	30,881	36,932	8,919	12.32	724
1997	4,061.62	2,529	3,025	1,037	12.37	84
1998	670.88	409	489	182	12.43	15
2008	78.49	34	41	37	12.42	3
2011	32,618.28	11,136	13,318	19,300	12.38	1,559
	66,940,943.83	52,833,549	63,102,913	3,838,031		321,178
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						11.9 0.48

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 376.45 MAINS - OTHER

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 71-R1						
NET SALVAGE PERCENT.. 0						
1952	111,459.20	66,153	52,212	59,247	28.86	2,053
1954	28,214.94	16,333	12,891	15,324	29.90	513
1955	105,063.39	60,049	47,394	57,669	30.42	1,896
1956	95,668.62	53,951	42,581	53,088	30.96	1,715
1957	90,452.59	50,335	39,727	50,726	31.49	1,611
1958	83,929.33	46,066	36,358	47,571	32.03	1,485
1959	92,433.22	50,018	39,477	52,956	32.58	1,625
1960	63,152.55	33,684	26,585	36,568	33.13	1,104
1961	28,166.95	14,805	11,685	16,482	33.68	489
1962	80,851.54	41,861	33,039	47,813	34.24	1,396
1963	104,339.72	53,199	41,988	62,352	34.80	1,792
1964	168,175.53	84,396	66,610	101,566	35.37	2,872
1965	81,816.03	40,389	31,877	49,939	35.95	1,389
1966	115,932.61	56,284	44,423	71,510	36.53	1,958
1967	74,004.26	35,324	27,880	46,124	37.11	1,243
1968	314,831.45	147,659	116,541	198,290	37.70	5,260
1969	673,159.49	310,125	244,770	428,389	38.29	11,188
1970	705,978.66	319,279	251,994	453,985	38.89	11,674
1971	1,419,163.34	629,825	497,096	922,067	39.49	23,349
1972	1,108,289.16	482,339	380,691	727,598	40.10	18,145
1973	2,529,877.94	1,079,297	851,847	1,678,031	40.71	41,219
1974	2,911,226.84	1,216,573	960,194	1,951,033	41.33	47,206
1975	2,873,390.20	1,175,648	927,893	1,945,497	41.95	46,377
1976	2,688,810.57	1,447,656	1,142,578	1,546,233	35.51	43,544
1977	5,215,723.25	2,761,725	2,179,722	3,036,001	35.92	84,521
1978	5,145,965.81	2,677,446	2,113,204	3,032,762	36.34	83,455
1979	6,261,615.04	3,199,059	2,524,892	3,736,723	36.77	101,624
1980	7,785,738.61	3,903,769	3,081,092	4,704,647	37.21	126,435
1981	8,812,762.38	4,332,354	3,419,358	5,393,404	37.66	143,213
1982	9,106,788.54	4,386,740	3,462,283	5,644,506	38.11	148,111
1983	7,221,456.04	3,404,917	2,687,368	4,534,088	38.58	117,524
1984	8,344,720.01	3,848,585	3,037,538	5,307,182	39.04	135,942
1985	7,824,543.43	3,550,778	2,802,490	5,022,053	39.01	128,738
1986	8,704,877.42	3,856,261	3,043,596	5,661,281	39.50	143,324
1987	8,326,024.14	3,596,010	2,838,190	5,487,834	40.01	137,162
1988	9,657,423.23	4,062,878	3,206,671	6,450,752	40.51	159,239
1989	8,643,189.91	3,560,994	2,810,554	5,832,636	40.55	143,838
1990	7,091,055.91	2,838,550	2,240,357	4,850,699	41.08	118,079
1991	7,231,930.74	2,808,159	2,216,370	5,015,561	41.61	120,537
1992	8,075,249.07	3,058,097	2,413,637	5,661,612	41.70	135,770
1993	8,743,727.91	3,201,953	2,527,177	6,216,551	42.25	147,137
1994	10,758,628.93	3,828,996	3,022,077	7,736,552	42.38	182,552
1995	10,793,482.26	3,725,910	2,940,715	7,852,767	42.52	184,684

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 376.45 MAINS - OTHER

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 71-R1						
NET SALVAGE PERCENT.. 0						
1996	10,566,691.64	3,508,142	2,768,840	7,797,852	43.10	180,925
1997	13,308,419.65	4,265,348	3,366,473	9,941,947	43.28	229,712
1998	11,286,698.13	3,484,204	2,749,946	8,536,752	43.48	196,337
1999	10,504,921.71	3,114,709	2,458,318	8,046,604	43.70	184,133
2000	9,865,134.24	2,800,712	2,210,493	7,654,641	43.93	174,246
2001	11,672,739.66	3,162,145	2,495,758	9,176,982	44.19	207,671
2002	7,558,249.94	1,957,587	1,545,047	6,013,203	44.11	136,323
2003	11,306,077.40	2,771,120	2,187,137	9,118,940	44.41	205,335
2004	17,381,289.89	4,034,197	3,184,034	14,197,256	44.39	319,830
2005	23,814,549.10	5,203,479	4,106,903	19,707,646	44.40	443,866
2006	13,128,204.07	2,683,405	2,117,907	11,010,297	44.45	247,701
2007	37,924,433.34	7,190,473	5,675,160	32,249,273	44.53	724,215
2008	57,884,683.46	10,141,397	8,004,209	49,880,474	44.34	1,124,954
2009	35,825,295.45	5,728,465	4,521,254	31,304,041	44.22	707,916
2010	47,085,957.13	6,808,629	5,373,785	41,712,172	43.87	950,813
2011	85,344,741.30	10,949,730	8,642,194	76,702,547	43.58	1,760,040
2012	94,471,936.78	10,543,068	8,321,232	86,150,705	43.13	1,997,466
2013	121,574,642.29	11,488,804	9,067,664	112,506,978	42.31	2,659,111
2014	126,879,367.68	9,668,208	7,630,739	119,248,629	41.43	2,878,316
2015	124,476,957.44	7,095,187	5,599,954	118,877,003	39.96	2,974,900
2016	170,619,218.29	6,193,478	4,888,270	165,730,948	37.64	4,403,054
2017	131,297,922.36	1,825,041	1,440,433	129,857,489	32.54	3,990,703
	1,344,071,421.71	198,731,957	156,851,372	1,187,220,050		29,510,555
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						40.2 2.20

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 378 MEASURING AND REGULATING EQUIPMENT - GENERAL

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 45-01						
NET SALVAGE PERCENT.. 0						
1894	756.79	757	757			
1903	4.21	4	4			
1912	38.19	38	38			
1914	87.37	87	87			
1920	86.01	86	86			
1928	132.97	132	115	18	0.29	18
1929	428.62	421	366	63	0.79	63
1930	205.41	200	174	31	1.29	24
1931	188.76	181	158	31	1.79	17
1932	399.18	379	330	69	2.29	30
1933	1,475.13	1,384	1,204	271	2.79	97
1934	358.71	332	289	70	3.29	21
1935	402.10	368	320	82	3.79	22
1936	261.36	236	205	56	4.29	13
1938	546.21	482	419	127	5.29	24
1939	515.35	449	391	124	5.79	21
1940	1,029.49	886	771	258	6.29	41
1941	2,261.67	1,920	1,671	591	6.79	87
1942	5,604.72	4,697	4,087	1,518	7.29	208
1943	131.78	109	95	37	7.79	5
1944	1,659.33	1,354	1,178	481	8.29	58
1945	800.07	644	560	240	8.79	27
1946	265.58	211	184	82	9.29	9
1947	1,076.33	842	733	343	9.79	35
1948	931.01	718	625	306	10.29	30
1949	1,487.90	1,131	984	504	10.79	47
1950	12,814.54	9,600	8,354	4,461	11.29	395
1951	20,491.10	15,122	13,159	7,332	11.79	622
1952	75,787.08	55,089	47,938	27,849	12.29	2,266
1953	83,302.75	59,626	51,886	31,417	12.79	2,456
1954	33,325.71	23,484	20,436	12,890	13.29	970
1955	119,689.13	83,012	72,237	47,452	13.79	3,441
1956	70,695.38	48,245	41,983	28,712	14.29	2,009
1957	79,247.25	53,201	46,295	32,952	14.79	2,228
1958	150,059.15	99,072	86,212	63,847	15.29	4,176
1959	109,708.32	71,213	61,969	47,739	15.79	3,023
1960	249,177.40	158,975	138,339	110,838	16.29	6,804
1961	122,924.82	77,060	67,057	55,868	16.79	3,327
1962	162,678.64	100,174	87,171	75,508	17.29	4,367
1963	157,601.78	95,297	82,927	74,675	17.79	4,198
1964	92,041.51	54,632	47,541	44,501	18.29	2,433
1965	82,336.31	47,956	41,731	40,605	18.79	2,161
1966	122,850.76	70,188	61,077	61,774	19.29	3,202

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 378 MEASURING AND REGULATING EQUIPMENT - GENERAL

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 45-01						
NET SALVAGE PERCENT.. 0						
1967	59,050.18	33,081	28,787	30,263	19.79	1,529
1968	61,839.59	33,957	29,549	32,291	20.29	1,591
1969	77,650.55	41,776	36,353	41,298	20.79	1,986
1970	44,219.92	23,299	20,275	23,945	21.29	1,125
1971	177,938.69	91,777	79,864	98,075	21.79	4,501
1972	138,217.88	69,754	60,700	77,518	22.29	3,478
1973	145,073.16	71,602	62,308	82,765	22.79	3,632
1974	118,592.64	57,214	49,787	68,806	23.29	2,954
1975	109,519.37	51,620	44,920	64,599	23.79	2,715
1976	92,004.52	60,971	53,057	38,948	21.08	1,848
1977	72,289.41	47,039	40,933	31,356	21.70	1,445
1978	68,027.21	43,707	38,034	29,993	21.93	1,368
1979	84,528.60	53,583	46,628	37,901	22.19	1,708
1980	132,010.86	82,494	71,786	60,225	22.46	2,681
1981	182,607.15	112,376	97,789	84,818	22.76	3,727
1982	483,681.15	292,917	254,895	228,786	23.06	9,921
1983	186,097.82	110,803	96,420	89,678	23.39	3,834
1984	168,579.39	98,585	85,788	82,791	23.73	3,489
1985	245,785.20	141,032	122,725	123,060	24.08	5,110
1986	225,255.61	127,382	110,847	114,409	24.14	4,739
1987	202,823.16	112,283	97,708	105,115	24.53	4,285
1988	371,897.19	202,386	176,115	195,782	24.64	7,946
1989	400,918.05	213,048	185,394	215,524	25.06	8,600
1990	295,618.57	153,988	134,000	161,619	25.22	6,408
1991	241,637.24	123,187	107,197	134,440	25.40	5,293
1992	134,281.76	66,899	58,215	76,067	25.60	2,971
1993	226,617.03	110,113	95,820	130,797	25.83	5,064
1994	370,482.28	175,238	152,491	217,991	26.09	8,355
1995	227,160.77	104,903	91,286	135,875	26.13	5,200
1996	454,030.84	203,224	176,845	277,186	26.43	10,488
1997	474,886.48	206,528	179,720	295,166	26.53	11,126
1998	365,022.25	153,784	133,822	231,200	26.67	8,669
1999	729,250.49	298,118	259,421	469,829	26.63	17,643
2000	1,141,063.50	449,123	390,825	750,238	26.83	27,963
2001	327,262.22	124,098	107,990	219,272	26.87	8,160
2002	365,471.84	133,543	116,209	249,263	26.78	9,308
2003	617,636.19	215,493	187,521	430,115	26.90	15,989
2004	521,593.67	174,264	151,644	369,950	26.74	13,835
2005	547,262.23	173,263	150,773	396,489	26.80	14,794
2006	1,249,647.13	375,269	326,557	923,090	26.60	34,703
2007	594,025.21	167,693	145,926	448,099	26.48	16,922
2008	1,871,118.11	493,414	429,367	1,441,751	26.30	54,819
2009	1,326,870.04	324,950	282,770	1,044,100	25.95	40,235

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 378 MEASURING AND REGULATING EQUIPMENT - GENERAL

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 45-01						
NET SALVAGE PERCENT.. 0						
2010	1,507,209.55	337,615	293,791	1,213,419	25.70	47,215
2011	2,206,966.82	447,573	389,476	1,817,491	25.23	72,037
2012	1,657,943.86	299,093	260,269	1,397,675	24.61	56,793
2013	3,290,431.83	512,978	446,391	2,844,041	23.91	118,948
2014	11,510,420.44	1,490,599	1,297,113	10,213,307	22.97	444,637
2015	223,926.55	22,460	19,545	204,382	21.68	9,427
2016	9,092,658.31	609,208	530,130	8,562,528	19.73	433,985
2017	11,265,118.18	316,550	275,461	10,989,657	15.83	694,230
	58,450,086.57	11,575,848	10,073,380	48,376,707		2,328,404
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						20.8 3.98

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 379.1 MEASURING AND REGULATING EQUIPMENT - CITY GATE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 35-S2						
NET SALVAGE PERCENT.. 0						
1976	591.42	514	494	97	6.20	16
1983	32,512.26	26,296	25,280	7,232	8.14	888
1984	1,528.08	1,215	1,168	360	8.60	42
1987	7,476.62	5,685	5,465	2,012	9.58	210
1988	15,907.49	11,838	11,381	4,526	10.11	448
1989	34,134.70	24,929	23,966	10,169	10.49	969
1996	48,076.94	29,346	28,212	19,865	13.67	1,453
	140,227.51	99,823	95,966	44,262		4,026

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 11.0 2.87

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 380.3 SERVICES - BARE STEEL

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
INTERIM SURVIVOR CURVE.. IOWA 50-R0.5						
PROBABLE RETIREMENT YEAR.. 12-2030						
NET SALVAGE PERCENT.. 0						
1887	4,421.71	4,422	4,422			
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	5,712.61	5,713	5,713			
1902	3,090.42	3,090	3,090			
1903	1,636.13	1,636	1,636			
1904	2,298.28	2,298	2,298			
1905	1,655.75	1,656	1,656			
1906	1,690.26	1,690	1,690			
1907	2,219.40	2,219	2,219			
1908	2,971.19	2,971	2,971			
1909	2,218.38	2,218	2,218			
1910	2,263.67	2,264	2,264			
1911	1,592.73	1,593	1,593			
1912	1,625.59	1,626	1,626			
1913	2,045.55	2,046	2,046			
1914	1,642.26	1,642	1,642			
1915	2,489.26	2,489	2,489			
1916	1,712.19	1,712	1,712			
1917	1,156.79	1,157	1,157			
1918	914.38	909	896	18	0.30	18
1919	1,379.40	1,358	1,339	40	0.79	40
1920	1,538.70	1,500	1,479	60	1.27	47
1921	1,181.65	1,140	1,124	58	1.75	33
1922	2,610.36	2,494	2,459	151	2.23	68
1923	4,798.59	4,539	4,475	324	2.70	120
1924	4,534.10	4,247	4,187	347	3.17	109
1925	8,381.85	7,773	7,664	718	3.63	198
1926	8,575.58	7,876	7,766	810	4.08	199
1927	8,302.81	7,551	7,445	858	4.53	189
1928	8,013.19	7,217	7,116	897	4.97	180
1929	9,155.96	8,167	8,053	1,103	5.40	204

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 380.3 SERVICES - BARE STEEL

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
INTERIM SURVIVOR CURVE.. IOWA 50-R0.5						
PROBABLE RETIREMENT YEAR.. 12-2030						
NET SALVAGE PERCENT.. 0						
1930	5,418.95	4,788	4,721	698	5.82	120
1931	3,147.99	2,756	2,717	431	6.23	69
1932	1,904.99	1,654	1,631	274	6.59	42
1933	3,101.19	2,672	2,635	466	6.91	67
1934	2,700.96	2,312	2,280	421	7.19	59
1935	2,200.15	1,872	1,846	354	7.44	48
1936	4,066.36	3,442	3,394	672	7.66	88
1937	5,597.56	4,715	4,649	949	7.86	121
1938	9,313.95	7,810	7,701	1,613	8.05	200
1939	15,357.56	12,819	12,639	2,719	8.23	330
1940	12,615.36	10,487	10,340	2,275	8.39	271
1941	16,559.94	13,713	13,521	3,039	8.54	356
1942	16,761.89	13,826	13,632	3,130	8.69	360
1943	7,121.28	5,852	5,770	1,351	8.83	153
1944	5,307.86	4,346	4,285	1,023	8.96	114
1945	5,980.97	4,881	4,813	1,168	9.08	129
1946	14,953.74	12,160	11,990	2,964	9.20	322
1947	29,926.16	24,250	23,910	6,016	9.32	645
1948	39,238.57	31,690	31,246	7,993	9.43	848
1949	58,612.52	47,190	46,529	12,084	9.53	1,268
1950	76,462.72	61,361	60,501	15,962	9.63	1,658
1951	97,589.16	78,056	76,962	20,627	9.73	2,120
1952	102,018.95	81,320	80,180	21,839	9.83	2,222
1953	96,641.71	76,785	75,709	20,933	9.92	2,110
1954	150,660.25	119,306	117,633	33,027	10.01	3,299
	898,311.12	740,497	730,900	167,411		18,424

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 9.1 2.05

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 380.45 SERVICES - OTHER

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-R0.5						
NET SALVAGE PERCENT.. 0						
1955	226,896.78	154,426	152,425	74,472	15.97	4,663
1956	287,198.22	192,997	190,496	96,702	16.40	5,896
1957	271,715.79	180,256	177,920	93,796	16.83	5,573
1958	361,197.14	236,440	233,376	127,821	17.27	7,401
1959	463,507.88	299,333	295,454	168,054	17.71	9,489
1960	493,627.07	314,440	310,365	183,262	18.15	10,097
1961	591,326.28	371,353	366,540	224,786	18.60	12,085
1962	588,358.14	364,076	359,358	229,000	19.06	12,015
1963	678,707.64	413,876	408,512	270,196	19.51	13,849
1964	686,278.84	412,042	406,702	279,577	19.98	13,993
1965	679,142.79	401,509	396,305	282,838	20.44	13,837
1966	901,889.24	524,719	517,919	383,970	20.91	18,363
1967	935,393.94	535,232	528,295	407,099	21.39	19,032
1968	1,012,044.72	569,376	561,997	450,048	21.87	20,578
1969	752,565.79	416,169	410,775	341,791	22.35	15,293
1970	714,372.13	388,047	383,018	331,354	22.84	14,508
1971	643,476.95	343,102	338,655	304,822	23.34	13,060
1972	656,581.05	343,655	339,201	317,380	23.83	13,319
1973	507,668.75	260,536	257,159	250,510	24.34	10,292
1974	131,259.74	66,024	65,168	66,092	24.85	2,660
1975	221,800.32	109,303	107,886	113,914	25.36	4,492
1976	617,817.18	401,705	396,499	221,318	22.28	9,933
1977	2,152,092.36	1,382,935	1,365,012	787,080	22.48	35,012
1978	1,655,822.60	1,044,327	1,030,792	625,031	23.08	27,081
1979	2,115,171.88	1,316,483	1,299,421	815,751	23.31	34,996
1980	2,954,556.86	1,812,916	1,789,420	1,165,137	23.56	49,454
1981	3,215,142.39	1,931,979	1,906,940	1,308,202	24.19	54,080
1982	2,719,574.91	1,608,629	1,587,781	1,131,794	24.46	46,271
1983	2,564,276.84	1,491,383	1,472,055	1,092,222	24.76	44,112
1984	2,987,547.36	1,707,085	1,684,961	1,302,586	25.06	51,979
1985	3,407,092.55	1,910,698	1,885,935	1,521,158	25.39	59,912
1986	3,863,654.56	2,124,237	2,096,707	1,766,948	25.73	68,673
1987	4,466,473.16	2,404,749	2,373,583	2,092,890	26.08	80,249
1988	5,378,207.21	2,832,164	2,795,459	2,582,748	26.45	97,646
1989	5,172,754.11	2,660,347	2,625,869	2,546,885	26.83	94,927
1990	5,360,029.54	2,689,127	2,654,276	2,705,754	27.23	99,367
1991	5,037,873.20	2,475,611	2,443,527	2,594,346	27.34	94,892
1992	5,759,365.80	2,751,825	2,716,161	3,043,205	27.78	109,547
1993	6,036,526.85	2,815,436	2,778,948	3,257,579	27.94	116,592
1994	7,163,664.34	3,237,260	3,195,305	3,968,359	28.40	139,731
1995	6,631,197.74	2,913,748	2,875,985	3,755,213	28.60	131,301
1996	6,298,914.69	2,684,597	2,649,804	3,649,111	28.83	126,573
1997	6,678,070.76	2,754,036	2,718,343	3,959,728	29.09	136,120

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 380.45 SERVICES - OTHER

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-R0.5						
NET SALVAGE PERCENT.. 0						
1998	7,146,449.02	2,844,287	2,807,425	4,339,024	29.37	147,737
1999	7,536,890.91	2,900,949	2,863,352	4,673,539	29.43	158,802
2000	7,684,873.09	2,837,255	2,800,484	4,884,389	29.75	164,181
2001	7,363,963.46	2,611,261	2,577,419	4,786,544	29.88	160,192
2002	6,455,156.58	2,189,589	2,161,212	4,293,945	30.04	142,941
2003	6,179,064.47	2,004,489	1,978,511	4,200,553	30.03	139,879
2004	8,772,687.86	2,694,970	2,660,043	6,112,645	30.25	202,071
2005	9,441,219.09	2,754,948	2,719,244	6,721,975	30.14	223,025
2006	9,255,188.08	2,535,922	2,503,056	6,752,132	30.25	223,211
2007	12,777,872.02	3,273,691	3,231,264	9,546,608	30.24	315,695
2008	15,173,273.75	3,614,274	3,567,432	11,605,842	30.11	385,448
2009	14,123,826.62	3,103,005	3,062,790	11,061,037	29.90	369,934
2010	16,375,585.34	3,278,392	3,235,904	13,139,681	29.62	443,608
2011	23,741,916.66	4,266,422	4,211,129	19,530,788	29.30	666,580
2012	29,867,659.21	4,707,143	4,646,138	25,221,521	28.95	871,210
2013	35,784,587.09	4,838,076	4,775,374	31,009,213	28.26	1,097,283
2014	37,474,125.04	4,148,386	4,094,622	33,379,503	27.45	1,216,011
2015	42,864,890.63	3,626,370	3,579,371	39,285,520	26.15	1,502,314
2016	33,675,304.47	1,865,612	1,841,433	31,833,871	24.16	1,317,627
2017	47,740,110.74	1,069,378	1,055,519	46,684,592	20.03	2,330,733
	483,475,480.22	115,012,607	113,522,031	369,953,449		14,027,425
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						26.4 2.90

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 381 METERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
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	945.76	946	946			
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	3,203.65	3,204	3,204			
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	366	368			
1931	23.47	23	23			
1934	122.80	119	123			
1935	25.42	25	25			
1936	446.25	428	441	5	1.76	3
1937	73.25	70	72	1	2.04	
1938	221.34	210	217	4	2.31	2
1939	405.31	381	393	12	2.59	5
1941	2,023.14	1,878	1,937	86	3.15	27
1942	2,786.14	2,568	2,648	138	3.44	40
1943	1,829.64	1,675	1,727	103	3.73	28
1944	113.98	104	107	7	4.01	2
1945	678.05	612	631	47	4.31	11
1946	4,096.95	3,669	3,784	313	4.60	68
1947	2,214.86	1,968	2,030	185	4.90	38
1948	15,259.78	13,456	13,877	1,383	5.20	266
1949	15,997.14	13,997	14,435	1,562	5.50	284
1950	28,650.43	24,867	25,646	3,004	5.81	517
1951	54,027.63	46,513	47,970	6,058	6.12	990
1952	34,451.07	29,416	30,337	4,114	6.43	640
1953	18,661.71	15,799	16,294	2,368	6.75	351
1954	53,145.64	44,606	46,003	7,143	7.07	1,010
1955	66,838.45	55,613	57,355	9,483	7.39	1,283
1956	30,366.06	25,038	25,822	4,544	7.72	589
1957	130,233.62	106,407	109,740	20,494	8.05	2,546
1958	168,320.65	136,264	140,532	27,789	8.38	3,316

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 381 METERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 44-S1						
NET SALVAGE PERCENT.. 0						
1959	172,012.51	137,923	142,243	29,770	8.72	3,414
1960	175,851.57	139,642	144,016	31,836	9.06	3,514
1961	227,945.41	179,197	184,810	43,135	9.41	4,584
1962	225,024.24	175,109	180,594	44,430	9.76	4,552
1963	140,203.49	107,989	111,371	28,832	10.11	2,852
1964	208,300.02	158,735	163,707	44,593	10.47	4,259
1965	243,049.15	183,172	188,909	54,140	10.84	4,994
1966	252,095.47	187,869	193,753	58,342	11.21	5,204
1967	249,178.40	183,600	189,350	59,828	11.58	5,166
1968	197,776.10	144,017	148,528	49,248	11.96	4,118
1969	200,529.57	144,245	148,763	51,767	12.35	4,192
1970	170,915.23	121,427	125,230	45,685	12.74	3,586
1971	295,106.33	206,976	213,459	81,647	13.14	6,214
1972	250,098.69	173,136	178,559	71,540	13.54	5,284
1973	146,072.37	99,760	102,885	43,187	13.95	3,096
1974	189,220.60	127,423	131,414	57,807	14.37	4,023
1975	223,760.25	148,496	153,147	70,613	14.80	4,771
1976	103,952.60	78,359	80,813	23,140	13.53	1,710
1977	185,537.70	137,984	142,306	43,232	13.93	3,104
1978	182,053.08	134,191	138,394	43,659	14.06	3,105
1979	310,793.16	225,667	232,735	78,058	14.49	5,387
1980	605,113.89	432,475	446,020	159,094	14.94	10,649
1981	653,170.39	461,465	475,918	177,252	15.13	11,715
1982	442,226.29	306,993	316,608	125,618	15.60	8,052
1983	329,392.22	225,601	232,667	96,725	15.83	6,110
1984	436,183.19	292,984	302,160	134,023	16.33	8,207
1985	558,179.80	369,124	380,685	177,495	16.60	10,692
1986	604,488.54	391,225	403,479	201,010	17.13	11,734
1987	609,934.93	387,736	399,880	210,055	17.43	12,051
1988	681,259.14	424,833	438,139	243,120	17.75	13,697
1989	772,944.91	470,028	484,750	288,195	18.31	15,740
1990	488,433.97	290,569	299,670	188,764	18.67	10,111
1991	544,580.43	316,510	326,423	218,157	19.04	11,458
1992	813,464.69	461,072	475,513	337,952	19.43	17,393
1993	944,534.92	521,194	537,518	407,017	19.83	20,525
1994	390,036.36	209,137	215,687	174,349	20.25	8,610
1995	8,146.20	4,237	4,370	3,776	20.69	183
1996	1,737,905.01	874,688	902,084	835,821	21.14	39,537
1997	738,337.06	358,758	369,995	368,342	21.60	17,053
1998	1,056,899.27	494,523	510,012	546,887	22.08	24,768
1999	1,205,382.80	541,699	558,665	646,718	22.57	28,654
2000	42,692.36	18,366	18,941	23,751	23.07	1,030
2001	482,841.21	198,158	204,365	278,476	23.58	11,810

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 381 METERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)	
SURVIVOR CURVE.. IOWA 44-S1							
NET SALVAGE PERCENT.. 0							
2002	1,155,652.44	452,553	466,727	688,925	23.95	28,765	
2003	853,905.01	316,372	326,281	527,624	24.49	21,544	
2004	1,145,878.36	399,682	412,200	733,678	25.05	29,289	
2005	505,458.88	165,083	170,254	335,205	25.60	13,094	
2006	509,343.11	154,688	159,533	349,810	26.18	13,362	
2007	1,039,273.15	291,204	300,325	738,948	26.76	27,614	
2008	1,073,910.57	275,028	283,642	790,269	27.35	28,895	
2009	1,413,877.85	327,313	337,565	1,076,313	27.95	38,509	
2010	1,114,015.23	228,819	235,986	878,029	28.69	30,604	
2011	1,053,062.68	189,235	195,162	857,901	29.30	29,280	
2012	1,352,230.19	206,621	213,093	1,139,137	30.04	37,921	
2013	1,305,523.06	163,713	168,840	1,136,683	30.80	36,905	
2014	1,137,236.98	111,108	114,588	1,022,649	31.55	32,414	
2015	2,513,799.96	174,960	180,440	2,333,360	32.31	72,218	
2016	1,268,258.95	51,872	53,497	1,214,762	33.19	36,600	
2017	1,113,441.62	14,697	15,157	1,098,285	34.15	32,161	
	37,708,686.29	15,322,126	15,801,176	21,907,510		908,099	
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						24.1	2.41

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 381.1 METERS - AMR

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 15-S2.5						
NET SALVAGE PERCENT.. 0						
2000	296,427.01	261,241	255,044	41,383	2.35	17,610
2001	278,746.25	240,251	234,552	44,194	2.63	16,804
2003	514.10	420	410	104	3.25	32
2004	107,825.28	84,923	82,909	24,916	3.62	6,883
2005	169,036.06	127,605	124,578	44,458	4.03	11,032
2007	107,411.45	72,610	70,888	36,523	4.99	7,319
2008	485,486.24	305,371	298,128	187,358	5.55	33,758
2009	420,783.25	242,582	236,828	183,955	6.18	29,766
2010	824,868.47	428,272	418,113	406,755	6.87	59,207
2011	11,263,089.05	5,146,105	5,024,040	6,239,049	7.63	817,700
2012	8,735,379.14	3,411,166	3,330,253	5,405,126	8.45	639,660
2014	306,936.92	76,857	75,034	231,903	10.23	22,669
2015	372,440.91	66,146	64,577	307,864	11.19	27,512
2016	392,723.42	40,961	39,989	352,734	12.17	28,984
2017	189,201.48	6,376	6,225	182,976	13.13	13,936
	23,950,869.03	10,510,886	10,261,568	13,689,301		1,732,872
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						7.9 7.24

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 382 METER INSTALLATIONS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R3						
NET SALVAGE PERCENT.. 0						
1937	5,816.81	5,494	5,817			
1938	12,721.71	11,956	12,708			
1939	9,392.36	8,783	9,336	14	3.31	4
1940	8,251.67	7,679	8,162	56	3.57	16
1941	11,712.89	10,844	11,526	90	3.82	24
1942	8,759.99	8,069	8,577	187	4.08	46
1943	3,963.87	3,632	3,861	183	4.34	42
1944	3,997.40	3,644	3,873	103	4.60	22
1945	5,300.88	4,807	5,109	124	4.86	26
1946	12,830.81	11,576	12,304	192	5.12	38
1947	18,676.09	16,757	17,811	527	5.38	98
1948	23,712.95	21,160	22,491	865	5.65	153
1949	30,584.40	27,137	28,845	1,222	5.92	206
1950	35,528.38	31,342	33,314	1,739	6.20	280
1951	30,962.56	27,146	28,854	2,214	6.48	342
1952	32,228.26	28,074	29,841	2,109	6.78	311
1953	38,526.30	33,343	35,441	2,387	7.09	337
1954	36,169.40	31,086	33,042	3,085	7.40	417
1955	45,374.68	38,717	41,153	3,127	7.73	405
1956	47,867.16	40,531	43,081	4,222	8.07	523
1957	43,972.72	36,937	39,261	4,786	8.43	568
1958	56,565.54	47,114	50,079	4,712	8.80	535
1959	68,439.89	56,507	60,063	6,487	9.19	706
1960	49,854.41	40,781	43,347	8,377	9.59	874
1961	43,164.15	34,963	37,163	6,507	10.01	650
1962	61,702.89	49,475	52,588	6,001	10.45	574
1963	65,682.02	52,104	55,383	9,115	10.90	836
1964	117,746.10	92,355	98,166	10,299	11.37	906
1965	156,218.11	121,083	128,702	19,580	11.86	1,651
1966	144,702.96	110,790	117,761	27,516	12.37	2,224
1967	133,216.26	100,688	107,024	26,942	12.89	2,090
1968	171,134.21	127,605	135,634	26,192	13.43	1,950
1969	161,914.98	119,051	126,542	35,500	13.99	2,538
1970	148,332.61	107,474	114,237	35,373	14.56	2,429
1971	129,531.85	92,414	98,229	34,096	15.15	2,251
1972	81,417.16	57,170	60,767	31,303	15.76	1,986
1973	75,626.18	52,237	55,524	20,650	16.38	1,261
1974	13,573.50	9,215	9,795	20,102	17.01	1,182
1975	24,250.71	16,173	17,191	3,778	17.66	214
1976	45,531.96	32,246	34,275	7,060	18.32	385
1977	51,391.94	35,728	37,976	11,257	17.06	660
1978	49,841.17	33,987	36,126	13,416	17.72	757
1979	119,280.69	79,727	84,744	13,715	18.39	746
				34,537	19.06	1,812

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 382 METER INSTALLATIONS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R3						
NET SALVAGE PERCENT.. 0						
1980	288,970.95	189,218	201,124	87,847	19.73	4,452
1981	393,108.95	251,944	267,797	125,312	20.40	6,143
1982	307,919.04	193,034	205,181	102,738	21.08	4,874
1983	361,281.99	222,586	236,592	124,690	21.45	5,813
1984	436,869.45	262,777	279,312	157,557	22.14	7,116
1985	454,106.83	266,424	283,189	170,918	22.83	7,487
1986	527,961.36	301,888	320,884	207,077	23.53	8,801
1987	593,674.99	330,439	351,232	242,443	24.23	10,006
1988	678,646.91	367,352	390,467	288,180	24.93	11,560
1989	774,182.81	406,988	432,597	341,586	25.64	13,322
1990	785,490.74	400,600	425,808	359,683	26.34	13,655
1991	704,611.94	348,078	369,981	334,631	27.06	12,366
1992	768,592.46	367,233	390,341	378,251	27.78	13,616
1993	651,236.98	300,546	319,458	331,779	28.49	11,645
1994	754,450.45	335,655	356,776	397,674	29.22	13,610
1995	665,106.39	284,799	302,720	362,386	29.94	12,104
1996	757,980.76	311,682	331,294	426,687	30.67	13,912
1997	724,787.02	285,566	303,535	421,252	31.40	13,416
1998	621,744.85	234,211	248,949	372,796	32.13	11,603
1999	522,279.59	187,551	199,352	322,928	32.87	9,824
2000	1,149,971.91	392,600	417,304	732,668	33.60	21,806
2001	1,032,367.13	332,216	353,120	679,247	34.60	19,631
2002	1,005,237.51	305,291	324,501	680,737	35.35	19,257
2003	1,103,155.63	314,841	334,652	768,504	36.09	21,294
2004	1,073,469.03	286,616	304,651	768,818	36.83	20,875
2005	769,542.57	191,077	203,100	566,443	37.58	15,073
2006	215,417.03	49,438	52,549	162,868	38.33	4,249
2007	2,953,400.19	621,395	660,496	2,292,904	39.09	58,657
2008	1,423,650.46	270,778	287,817	1,135,833	40.09	28,332
2009	1,840,441.29	314,531	334,323	1,506,118	40.84	36,879
2010	1,434,914.45	217,103	230,764	1,204,150	41.60	28,946
2011	1,566,615.10	206,010	218,973	1,347,642	42.37	31,807
2012	1,665,248.39	185,842	197,536	1,467,712	43.13	34,030
2013	1,028,513.05	94,006	99,921	928,592	43.89	21,157
2014	1,231,165.01	87,536	93,044	1,138,121	44.66	25,484
2015	1,353,625.99	68,358	72,659	1,280,967	45.43	28,197
2016	1,383,959.01	41,380	43,984	1,339,975	45.98	29,143
2017	1,897,075.36	18,781	19,963	1,877,112	46.05	40,762
	38,336,244.15	11,723,971	12,461,669	25,874,575		723,979
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						35.7 1.89

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 383 HOUSE REGULATORS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 45-S2						
NET SALVAGE PERCENT.. 0						
1918	113.14	113	113			
1939	77.64	74	78			
1949	77.13	70	77			
1955	432.93	377	433			
1957	490.94	422	491			
1958	704.49	601	704			
1960	354.57	298	355			
1961	925.50	771	926			
1962	7,064.95	5,842	7,065			
1963	11,335.62	9,295	11,241	95	8.10	12
1964	16,073.66	13,066	15,801	273	8.42	32
1965	20,111.70	16,206	19,598	514	8.74	59
1966	51,043.10	40,755	49,286	1,757	9.07	194
1967	39,700.39	31,399	37,971	1,729	9.41	184
1968	52,162.89	40,849	49,399	2,764	9.76	283
1969	47,765.97	37,034	44,786	2,980	10.11	295
1970	51,829.86	39,759	48,081	3,749	10.48	358
1971	43,735.55	33,190	40,137	3,599	10.85	332
1972	25,258.06	18,949	22,915	2,343	11.24	208
1973	22,289.80	16,524	19,983	2,307	11.64	198
1974	2,504.12	1,834	2,218	286	12.05	24
1975	2,056.04	1,486	1,797	259	12.47	21
1976	3,857.04	3,019	3,651	206	11.49	18
1977	4,177.06	3,225	3,900	277	11.94	23
1978	6,389.73	4,861	5,878	512	12.40	41
1979	14,225.19	10,712	12,954	1,271	12.60	101
1980	28,271.05	20,943	25,327	2,944	13.09	225
1981	46,489.01	33,858	40,945	5,544	13.58	408
1982	44,112.48	31,717	38,356	5,756	13.84	416
1983	45,628.26	32,191	38,929	6,699	14.37	466
1984	50,121.45	34,839	42,131	7,990	14.66	545
1985	51,060.84	34,762	42,038	9,023	15.20	594
1986	66,204.33	44,092	53,321	12,883	15.75	818
1987	71,897.12	47,021	56,863	15,034	16.09	934
1988	88,867.25	56,724	68,597	20,270	16.67	1,216
1989	95,342.40	59,608	72,085	23,257	17.04	1,365
1990	92,641.07	56,381	68,182	24,459	17.63	1,387
1991	77,087.45	45,613	55,160	21,927	18.23	1,203
1992	84,494.92	48,534	58,693	25,802	18.83	1,370
1993	60,756.92	33,969	41,079	19,678	19.25	1,022
1994	73,407.91	39,706	48,017	25,391	19.87	1,278
1995	81,768.22	42,708	51,647	30,121	20.50	1,469
1996	86,381.27	43,476	52,576	33,805	21.14	1,599

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 383 HOUSE REGULATORS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 45-S2						
NET SALVAGE PERCENT.. 0						
1997	99,762.12	48,275	58,380	41,382	21.78	1,900
1998	36,721.38	17,042	20,609	16,112	22.42	719
1999	19,250.98	8,509	10,290	8,961	23.25	385
2000	180,130.54	75,925	91,817	88,314	23.90	3,695
2001	69,907.89	27,886	33,723	36,185	24.74	1,463
2002	379,376.85	143,291	173,284	206,093	25.40	8,114
2003	548,005.66	194,323	234,997	313,009	26.24	11,929
2004	900,987.21	298,587	361,085	539,902	27.07	19,945
2005	720,509.33	221,845	268,280	452,229	27.91	16,203
2006	426,887.69	121,364	146,767	280,121	28.74	9,747
2007	857,448.35	223,280	270,016	587,432	29.58	19,859
2008	554,465.50	131,076	158,512	395,954	30.42	13,016
2009	786,078.82	166,098	200,864	585,215	31.42	18,626
2010	623,867.35	116,164	140,479	483,388	32.42	14,910
2011	700,421.37	113,258	136,964	563,457	33.27	16,936
2012	687,933.57	93,903	113,558	574,376	34.27	16,760
2013	507,746.93	56,512	68,341	439,406	35.27	12,458
2014	641,635.64	55,245	66,809	574,827	36.27	15,849
2015	543,533.27	33,101	40,029	503,504	37.27	13,510
2016	545,650.90	19,480	23,558	522,093	38.27	13,642
2017	636,907.43	7,388	8,934	627,973	39.22	16,012
	12,036,517.80	3,209,425	3,881,080	8,155,438		264,376

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 30.8 2.20

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 384 HOUSE REGULATOR INSTALLATIONS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 45-S2						
NET SALVAGE PERCENT.. 0						
1956	4,098.01	3,544	4,098			
1957	11,093.12	9,528	11,093			
1958	8,984.62	7,661	8,985			
1959	10,504.99	8,892	10,505			
1960	6,886.85	5,785	6,887			
1961	5,770.97	4,810	5,771			
1962	6,336.36	5,239	6,336			
1963	9,429.02	7,732	9,429			
1964	13,020.68	10,584	13,021			
1965	14,473.42	11,662	14,473			
1966	13,305.16	10,623	13,305			
1967	17,106.02	13,529	17,106			
1968	26,484.46	20,740	26,484			
1969	37,452.06	29,038	37,452			
1970	54,867.42	42,089	54,867			
1971	52,330.89	39,713	52,331			
1972	30,594.70	22,953	30,595			
1973	41,286.72	30,607	41,287			
1974	15,958.45	11,685	15,958			
1975	25,717.11	18,591	25,435	282	12.47	23
1976	13,626.03	10,666	13,626			
1978	1,304.20	992	1,304			
1979	41,749.48	31,437	41,749			
1980	78,231.18	57,954	78,231			
1981	103,540.67	75,409	103,306	235	13.58	17
1982	111,541.38	80,198	109,867	1,674	13.84	121
1983	94,279.56	66,514	91,121	3,159	14.37	220
1984	100,051.83	69,546	95,274	4,778	14.66	326
1985	116,774.98	79,500	108,911	7,864	15.20	517
1986	125,389.90	83,510	114,404	10,986	15.75	698
1987	160,772.64	105,145	144,043	16,730	16.09	1,040
1988	175,315.37	111,904	153,303	22,012	16.67	1,320
1989	145,310.01	90,848	124,457	20,853	17.04	1,224
1990	142,228.97	86,561	118,584	23,645	17.63	1,341
1991	135,142.11	79,964	109,546	25,596	18.23	1,404
1992	132,043.34	75,846	103,905	28,138	18.83	1,494
1993	112,250.88	62,759	85,976	26,275	19.25	1,365
1994	183,968.70	99,509	136,322	47,647	19.87	2,398
1995	147,476.46	77,027	105,523	41,953	20.50	2,046
1996	122,299.49	61,553	84,324	37,975	21.14	1,796
1997	182,246.23	88,189	120,814	61,432	21.78	2,821
1998	181,143.04	84,068	115,169	65,974	22.42	2,943
1999	139,857.78	61,817	84,686	55,172	23.25	2,373

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 384 HOUSE REGULATOR INSTALLATIONS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 45-S2						
NET SALVAGE PERCENT.. 0						
2000	194,710.12	82,070	112,432	82,278	23.90	3,443
2001	229,158.59	91,411	125,228	103,931	24.74	4,201
2002	154,765.04	58,455	80,080	74,685	25.40	2,940
2003	133,893.06	47,478	65,043	68,850	26.24	2,624
	3,864,772.07	2,235,335	3,032,646	832,126		38,695
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						21.5 1.00

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 385 INDUSTRIAL MEASURING AND REGULATING EQUIPMENT - OTHER THAN METERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 30-R0.5						
NET SALVAGE PERCENT.. 0						
1890	24.00	24	24			
1893	24.00	24	24			
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	22.94	23	23			
1933	257.28	257	257			
1934	12.20	12	12			
1935	119.38	119	119			
1937	1,117.32	1,117	1,117			
1938	216.32	216	216			
1939	268.73	269	269			
1941	371.05	371	371			
1942	668.42	668	668			
1943	4,065.91	4,066	4,066			
1944	964.96	965	965			
1945	674.42	674	674			
1946	57.67	58	58			
1947	815.20	815	815			
1948	1,325.51	1,326	1,326			
1950	1,960.33	1,960	1,960			
1951	4,588.37	4,588	4,588			
1952	4,087.86	4,088	4,088			
1953	4,318.02	4,318	4,318			
1954	12,905.57	12,906	12,906			
1955	23,909.50	23,910	23,910			
1956	22,391.65	22,392	22,392			
1957	27,056.77	27,057	27,057			
1958	24,939.36	24,698	20,670	4,269	0.29	4,269
1959	22,603.90	22,016	18,425	4,179	0.78	4,179
1960	25,591.09	24,516	20,518	5,073	1.26	4,026
1961	32,286.85	30,425	25,463	6,824	1.73	3,945
1962	13,130.56	12,172	10,187	2,944	2.19	1,344
1963	36,518.99	33,305	27,873	8,646	2.64	3,275
1964	26,311.91	23,610	19,759	6,553	3.08	2,128
1965	32,503.99	28,701	24,020	8,484	3.51	2,417
1966	28,073.20	24,405	20,425	7,648	3.92	1,951
1967	53,481.28	45,762	38,298	15,183	4.33	3,506
1968	50,523.18	42,541	35,603	14,920	4.74	3,148
1969	51,012.35	42,272	35,378	15,634	5.14	3,042
1970	45,567.30	37,152	31,093	14,474	5.54	2,613

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 385 INDUSTRIAL MEASURING AND REGULATING EQUIPMENT - OTHER THAN METERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 30-R0.5						
NET SALVAGE PERCENT.. 0						
1971	103,718.15	83,216	69,644	34,074	5.93	5,746
1972	77,768.22	61,359	51,352	26,416	6.33	4,173
1973	41,482.17	32,190	26,940	14,542	6.72	2,164
1974	26,557.23	20,254	16,951	9,606	7.12	1,349
1975	24,859.38	18,628	15,590	9,269	7.52	1,233
1976	737.80	626	524	214	7.37	29
1977	2,893.97	2,433	2,036	858	7.66	112
1978	11,235.18	9,344	7,820	3,415	7.98	428
1979	35,557.03	29,096	24,351	11,206	8.53	1,314
1980	68,195.71	55,116	46,127	22,069	8.88	2,485
1981	105,339.02	84,008	70,306	35,033	9.25	3,787
1982	110,913.73	87,600	73,313	37,601	9.43	3,987
1983	72,405.29	56,317	47,132	25,273	9.83	2,571
1984	33,031.22	25,275	21,153	11,878	10.25	1,159
1985	42,102.55	31,800	26,613	15,490	10.50	1,475
1986	85,156.13	63,135	52,838	32,318	10.96	2,949
1987	19,788.26	14,445	12,089	7,699	11.25	684
1988	57,395.30	41,026	34,335	23,060	11.74	1,964
1989	70,164.87	49,249	41,217	28,948	12.07	2,398
1990	68,720.87	47,294	39,580	29,141	12.42	2,346
1991	115,487.95	77,793	65,105	50,383	12.80	3,936
1992	90,736.66	59,732	49,990	40,747	13.19	3,089
1993	120,474.89	77,658	64,992	55,483	13.46	4,122
1994	181,398.24	113,846	95,278	86,120	13.90	6,196
1995	126,308.80	77,301	64,693	61,616	14.21	4,336
1996	180,550.46	107,500	89,967	90,583	14.55	6,226
1997	114,286.02	66,034	55,264	59,022	14.92	3,956
1998	126,279.38	70,615	59,098	67,181	15.31	4,388
1999	55,036.14	29,797	24,937	30,099	15.60	1,929
2000	163,145.26	85,243	71,340	91,805	15.92	5,767
2001	13,293.63	6,679	5,590	7,704	16.26	474
2002	233,225.25	112,531	94,177	139,048	16.53	8,412
2003	502,848.76	231,964	194,131	308,718	16.83	18,343
2004	13,738.26	6,027	5,044	8,694	17.17	506
2005	56,902.64	23,671	19,810	37,093	17.43	2,128
2006	152,401.90	59,848	50,087	102,315	17.65	5,797
2007	252,319.72	93,056	77,879	174,441	17.83	9,784
2008	232,860.64	80,034	66,981	165,880	17.98	9,226
2009	181,786.43	57,844	48,410	133,376	18.04	7,393
2010	265,612.54	77,214	64,620	200,993	18.09	11,111
2011	233,580.62	61,151	51,177	182,404	18.09	10,083
2012	205,094.55	47,438	39,701	165,394	18.00	9,189
2013	297,602.04	59,163	49,514	248,088	17.80	13,938

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 385 INDUSTRIAL MEASURING AND REGULATING EQUIPMENT - OTHER THAN METERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 30-R0.5						
NET SALVAGE PERCENT.. 0						
2014	200,511.77	32,884	27,521	172,991	17.42	9,931
2015	311,550.74	39,318	32,905	278,646	16.74	16,646
2016	556,054.52	46,375	38,811	517,244	15.56	33,242
2017	525,504.44	18,077	15,129	510,375	12.87	39,656
	7,123,055.78	3,136,677	2,643,672	4,479,384		332,000
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						13.5 4.66

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 387 OTHER EQUIPMENT - GENERAL

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
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	4,184	4,288			
1957	14,374.70	13,598	14,148	227	1.73	131
1959	188.29	173	180	8	2.65	3
1962	7,626.48	6,685	6,956	670	3.95	170
1967	445.13	362	377	68	5.97	11
1972	7,910.24	5,943	6,183	1,727	7.96	217
1981	13,548.93	10,510	10,935	2,614	10.53	248
1985	14,556.64	10,618	11,048	3,509	12.03	292
1992	2,228.63	1,416	1,473	756	14.58	52
2010	68,488.09	18,999	19,768	48,720	19.32	2,522
2015	2,847.08	341	355	2,492	17.74	140
	136,698.14	73,024	75,906	60,792		3,786
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						16.1 2.77

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 387.4 OTHER EQUIPMENT - COMMUNICATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 25-R2						
NET SALVAGE PERCENT.. 0						
1973	917.13	898	693	224	0.52	224
1974	11,561.27	11,201	8,643	2,918	0.78	2,918
1975	3,189.09	3,055	2,357	832	1.05	792
1976	6,308.81	6,114	4,718	1,591	1.32	1,205
1980	1,144.78	1,075	830	315	2.42	130
1983	10,695.21	9,791	7,555	3,140	3.18	987
1984	4,730.23	4,284	3,306	1,424	3.48	409
1985	27,353.09	24,473	18,885	8,468	3.82	2,217
1986	61,596.14	54,574	42,112	19,484	4.04	4,823
1987	40,005.58	35,045	27,042	12,964	4.31	3,008
1989	3,425.59	2,911	2,246	1,180	5.03	235
1990	37,952.71	31,736	24,489	13,464	5.37	2,507
1991	31,594.95	25,958	20,031	11,564	5.74	2,015
1992	6,510.50	5,246	4,048	2,462	6.13	402
1993	1,718.09	1,355	1,046	672	6.54	103
1994	4,082.11	3,145	2,427	1,655	6.98	237
2000	47,842.64	30,581	23,598	24,245	9.83	2,466
2001	142,467.12	87,475	67,500	74,967	10.32	7,264
2003	2,326.24	1,298	1,002	1,324	11.42	116
2004	119,576.43	63,208	48,774	70,802	11.96	5,920
2005	235,835.64	117,423	90,609	145,227	12.52	11,600
2006	17,269.88	8,044	6,207	11,063	13.09	845
2007	9,937.59	4,306	3,323	6,615	13.62	486
2008	0.11					
2009	5,832.45	2,121	1,637	4,195	14.73	285
2010	123,486.39	40,294	31,093	92,393	15.31	6,035
2011	49,875.40	14,369	11,088	38,787	15.86	2,446
2012	163,197.40	40,669	31,382	131,815	16.32	8,077
2013	708,244.07	147,315	113,676	594,568	16.82	35,349
2014	2,010,024.12	332,458	256,541	1,753,483	17.24	101,710
2015	778,665.98	94,296	72,763	705,903	17.54	40,245
2016	1,923,522.20	143,110	110,431	1,813,091	17.63	102,841
2017	1,430,769.48	37,772	29,147	1,401,622	16.87	83,084
	8,021,658.42	1,385,600	1,069,199	6,952,459		430,981

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 16.1 5.37

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 387.5 OTHER EQUIPMENT - GPS EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 10-S3						
NET SALVAGE PERCENT.. 0						
2014	2,053,366.00	749,889	514,814	1,538,552	5.94	259,015
	2,053,366.00	749,889	514,814	1,538,552		259,015
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 5.9						12.61

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 390.1 STRUCTURES AND IMPROVEMENTS - COMMUNICATION

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 45-R2						
NET SALVAGE PERCENT.. 0						
1955	1,170.54	1,017	1,156	15	5.92	3
1958	192.08	163	185	7	6.85	1
1959	2,129.94	1,791	2,037	93	7.17	13
1971	17,971.09	13,263	15,082	2,889	11.79	245
1983	7,872.27	5,364	6,100	1,772	16.09	110
1984	3,449.87	2,306	2,622	828	16.58	50
1987	6,786.87	4,253	4,836	1,951	18.13	108
1988	9,428.54	5,769	6,560	2,869	18.66	154
1989	9,423.51	5,624	6,396	3,028	19.20	158
1990	45,343.53	26,354	29,969	15,375	19.75	778
1991	16,302.22	9,216	10,480	5,822	20.31	287
	120,070.46	75,120	85,423	34,647		1,907
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						18.2 1.59

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 391.1 OFFICE FURNITURE AND EQUIPMENT - FURNITURE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
1997	329,548.76	329,549	329,549			
1998	480,955.49	466,926	480,955			
1999	80,599.29	74,218	80,599			
2000	95,723.34	83,359	95,723			
2001	173,686.96	142,567	171,044	2,643	3.58	738
2002	94,356.55	72,733	87,261	7,096	4.58	1,549
2003	96,741.60	69,734	83,663	13,079	5.58	2,344
2004	31,580.89	21,185	25,417	6,164	6.58	937
2005	522.52	324	389	134	7.58	18
2007	4,181.56	2,178	2,613	1,569	9.58	164
2010	7,734.00	2,868	3,441	4,293	12.58	341
2011	12,031.56	3,860	4,631	7,401	13.58	545
2012	1,550.11	420	504	1,046	14.58	72
2014	565,919.21	96,676	115,986	449,933	16.58	27,137
2015	1,175,148.72	141,993	170,356	1,004,793	17.58	57,155
2016	113,113.73	8,012	9,612	103,502	18.58	5,571
2017	14,623.69	335	402	14,222	19.54	728
	3,278,017.98	1,516,937	1,662,145	1,615,873		97,299

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 16.6 2.97

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 391.11 OFFICE FURNITURE AND EQUIPMENT - EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2011	24,427.00	10,449	11,389	13,038	8.58	1,520
2015	66,876.67	10,775	11,744	55,133	12.58	4,383
	91,303.67	21,224	23,133	68,171		5,903
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						11.5 6.47

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 391.12 OFFICE FURNITURE AND EQUIPMENT - INFORMATION SYSTEMS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 5-SQUARE						
NET SALVAGE PERCENT.. 0						
2013	299,109.66	264,213	253,988	45,122	0.58	45,122
2014	380,331.60	259,892	249,834	130,498	1.58	82,594
2015	941,918.01	455,257	437,637	504,281	2.58	195,458
2016	1,495,726.59	423,784	407,383	1,088,344	3.58	304,007
	3,117,085.86	1,403,146	1,348,842	1,768,244		627,181
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 2.8						20.12

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 392 TRANSPORTATION EQUIPMENT - TRAILERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2004	70,904.01	63,419	70,904			
2011	3,781.00	1,617	3,438	343	8.58	40
2012	14,849.79	5,362	11,401	3,449	9.58	360
2013	2,789.00	821	1,746	1,043	10.58	99
2015	4,197.10	676	1,437	2,760	12.58	219
	96,520.90	71,895	88,926	7,595		718
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						10.6 0.74

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 393 STORES EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
1998	13,435.25	13,043	13,435			
	13,435.25	13,043	13,435			
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						0.0 0.00

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 394 TOOLS, SHOP AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 25-SQUARE						
NET SALVAGE PERCENT.. 0						
1992	980.00	980	980			
1993	413,416.69	403,772	413,417			
1994	566,669.51	530,782	546,872	19,798	1.58	12,530
1995	162,417.47	145,635	150,050	12,367	2.58	4,793
1996	552,198.39	473,052	487,392	64,806	3.58	18,102
1997	1,161,874.46	948,868	977,633	184,241	4.58	40,227
1998	383,704.26	298,012	307,046	76,658	5.58	13,738
1999	191,341.50	140,956	145,229	46,112	6.58	7,008
2000	296,716.81	206,714	212,980	83,737	7.58	11,047
2001	186,888.81	122,724	126,444	60,445	8.58	7,045
2002	303,527.92	187,177	192,851	110,677	9.58	11,553
2003	291,419.99	168,053	173,148	118,272	10.58	11,179
2004	366,999.55	196,958	202,929	164,071	11.58	14,168
2005	79,725.36	39,597	40,797	38,928	12.58	3,094
2006	167,413.05	76,453	78,771	88,642	13.58	6,527
2007	835,832.86	348,266	358,824	477,009	14.58	32,717
2008	1,181,797.10	445,148	458,642	723,155	15.58	46,416
2009	278,442.30	93,743	96,585	181,857	16.58	10,968
2010	777,173.73	230,564	237,553	539,621	17.58	30,695
2011	595,579.35	152,867	157,501	438,078	18.58	23,578
2012	870,830.41	188,683	194,403	676,427	19.58	34,547
2013	784,168.63	138,539	142,739	641,430	20.58	31,168
2014	894,641.85	122,271	125,978	768,664	21.58	35,619
2015	1,788,936.70	172,937	178,179	1,610,758	22.58	71,336
2016	971,312.23	55,044	56,713	914,599	23.58	38,787
2017	1,272,584.32	23,326	24,033	1,248,551	24.54	50,878
	15,376,593.25	5,911,121	6,087,689	9,288,904		567,720
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						16.4 3.69

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 394.12 TOOLS, SHOP AND GARAGE EQUIPMENT - CNG FACILITIES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
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	95,944.79	95,945	95,945			
1994	117,928.20	117,916	117,928			
1995	1,135,467.56	1,122,523	1,135,468			
1996	280,092.23	272,950	280,092			
1998	98,401.65	93,236	98,402			
1999	18,450.18	17,227	18,450			
2001	80,747.15	72,640	80,340	407	1.83	222
	1,953,497.84	1,918,903	1,953,091	407		222
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						1.8 0.01

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 395 LABORATORY EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
1998	4,710.24	4,573	3,813	897	0.58	897
2000	2,990.39	2,604	2,172	818	2.58	317
2002	1,118.18	862	719	399	4.58	87
2011	19,084.33	6,123	5,106	13,978	13.58	1,029
2015	245,836.91	29,704	24,770	221,067	17.58	12,575
	273,740.05	43,866	36,580	237,160		14,905
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..					15.9	5.44

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 396 POWER OPERATED EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 13-L2						
NET SALVAGE PERCENT.. 0						
1990	14,666.07	13,873	14,666			
1991	70,212.28	65,663	70,212			
1992	7,619.70	7,069	7,620			
1993	2,619.06	2,405	2,619			
1994	45,419.28	41,268	45,419			
1995	19,277.60	17,329	19,278			
1997	945.49	826	945			
1999	176,977.59	149,935	176,978			
2000	424,416.34	352,605	424,416			
2001	23,340.60	19,006	23,341			
2002	21,599.55	17,249	21,600			
2003	380,392.15	296,668	380,392			
2011	25,036.41	13,174	25,036			
2014	4,400.00	1,371	44,213	39,813-		
	1,216,922.12	998,441	1,256,735	39,813-		
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 0.0 0.00						

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 397.5 COMMUNICATION EQUIPMENT - TELEMETERING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
 RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 19-R2.5						
NET SALVAGE PERCENT.. 0						
1991	226,631.93	210,745	153,596	73,036	1.99	36,702
1992	170,079.95	156,048	113,731	56,349	2.29	24,607
1995	11,741.33	10,370	7,558	4,183	2.96	1,413
1996	127,204.35	110,337	80,416	46,788	3.27	14,308
1997	73,865.20	62,734	45,722	28,143	3.62	7,774
1998	6,337.07	5,254	3,829	2,508	4.00	627
1999	96,304.72	77,862	56,748	39,557	4.36	9,073
2000	260,901.27	204,494	149,040	111,861	4.80	23,304
2001	117,197.05	88,507	64,506	52,691	5.32	9,904
2002	106,166.48	77,087	56,183	49,983	5.82	8,588
2004	2,975.42	1,964	1,431	1,544	6.91	223
2012	1,384.24	433	316	1,068	11.92	90
2013	24,065.63	6,250	4,555	19,511	12.59	1,550
2015	51,576.26	7,690	5,605	45,971	13.79	3,334
	1,276,430.90	1,019,775	743,236	533,195		141,497
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 3.8						11.09

COLUMBIA GAS OF PENNSYLVANIA, INC.

ACCOUNT 398 MISCELLANEOUS EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF NOVEMBER 30, 2017

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2003	4,830.16	4,642	4,463	367	0.58	367
2004	11,186.58	10,006	9,619	1,568	1.58	992
2005	23,458.02	19,418	18,667	4,791	2.58	1,857
2006	8,228.13	6,263	6,021	2,207	3.58	616
2007	136.82	95	91	46	4.58	10
2008	2,264.03	1,421	1,366	898	5.58	161
2009	11,311.50	6,347	6,102	5,210	6.58	792
2010	25,988.40	12,850	12,353	13,635	7.58	1,799
2011	41,741.60	17,856	17,166	24,576	8.58	2,864
2012	129,294.07	46,689	44,884	84,410	9.58	8,811
2013	14,421.00	4,246	4,082	10,339	10.58	977
2014	94,460.48	21,516	20,684	73,776	11.58	6,371
2015	389,797.34	62,800	60,373	329,424	12.58	26,186
2016	462,727.10	43,700	42,011	420,716	13.58	30,981
	1,219,845.23	257,849	247,882	971,963		82,784
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						11.7 6.79

PART III. EXPERIENCED NET SALVAGE

COLUMBIA GAS OF PENNSYLVANIA, INC.

EXPERIENCED RETIREMENTS BY ACCOUNT AND ASSOCIATED
 COST OF REMOVAL, GROSS SALVAGE, AND NET SALVAGE

ACCT	REGULAR RETIREMENTS	COST OF REMOVAL	GROSS SALVAGE	NET SALVAGE
2012 TRANSACTION YEAR				
362.10		6,457.05		6,457.05-
374.40	15,595.34	260.16		260.16-
375.34	32,534.20	17,416.11		17,416.11-
375.60	22.40			
375.70	6,691.59	5,103.09		5,103.09-
376.00	6,717,810.62	886,996.12		886,996.12-
378.00	261,314.24	18,887.95		18,887.95-
380.00	5,021,027.74	2,192,533.99		2,192,533.99-
381.00	574,916.43	305.85	25,333.32	25,027.47
382.00	71,791.00			
383.00	12,740.78			
385.00	129,670.47	23,198.35		23,198.35-
387.40	18,518.39	55.60		55.60-
396.00	61,173.74			
397.10	379,511.34			
	13,303,318.28	3,151,214.27	25,333.32	3,125,880.95-
2013 TRANSACTION YEAR				
351.20		608.46		608.46-
362.10		40,496.89		40,496.89-
374.20	1,583.70	57,633.75		57,633.75-
374.40	4,567.77	4,911.96		4,911.96-
375.34	21,986.97	22,427.70		22,427.70-
375.60		1,091.39		1,091.39-
376.00	7,496,191.99	691,743.41	2,051.59	689,691.82-
378.00	216,579.21	216,795.76		216,795.76-
380.00	5,734,991.74	1,750,826.78		1,750,826.78-
381.00	421,072.33	23.20	6,554.08	6,530.88
382.00	91,732.07			
383.00	9,962.93			
385.00	250,693.05	51,158.61		51,158.61-
387.00	4,694.90			
387.40	7,558.85	392.50		392.50-
392.00	118,202.85		44,482.18	44,482.18
396.00	349,409.40		104,669.48	104,669.48
397.50	23,451.88			
	14,752,679.64	2,838,110.41	157,757.33	2,680,353.08-

COLUMBIA GAS OF PENNSYLVANIA, INC.

EXPERIENCED RETIREMENTS BY ACCOUNT AND ASSOCIATED
 COST OF REMOVAL, GROSS SALVAGE, AND NET SALVAGE

ACCT	REGULAR RETIREMENTS	COST OF REMOVAL	GROSS SALVAGE	NET SALVAGE
2014 TRANSACTION YEAR				
362.10		461,689.98		461,689.98-
374.20	104.80	211,267.49-		211,267.49
374.40	24,414.93	21.91		21.91-
375.34	59,724.17	20,674.45		20,674.45-
376.00	7,885,751.50	1,281,289.43		1,281,289.43-
378.00	433,323.74	185,399.17		185,399.17-
379.10	12,676.85	91.84		91.84-
380.00	6,142,996.19	4,690,972.30		4,690,972.30-
381.00	393,244.36			
382.00	107,002.51			
383.00	8,132.91			
385.00	232,189.97	63,312.71		63,312.71-
387.40	27,680.85	933.57		933.57-
392.00	10,545.15			
397.10	605,672.59			
397.50	28,765.62			
	15,972,226.14	6,493,117.87		6,493,117.87-
2015 TRANSACTION YEAR				
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-
392.00	12,904.19		26,139.89	26,139.89
394.00	758,805.48			
396.00			109,393.82	109,393.82
397.10	173,475.92			
397.50	29,824.98	29,402.56		29,402.56-
	15,991,758.19	4,164,784.07	156,361.71	4,008,422.36-

COLUMBIA GAS OF PENNSYLVANIA, INC.

EXPERIENCED RETIREMENTS BY ACCOUNT AND ASSOCIATED
COST OF REMOVAL, GROSS SALVAGE, AND NET SALVAGE

ACCT	REGULAR RETIREMENTS	COST OF REMOVAL	GROSS SALVAGE	NET SALVAGE
2016 TRANSACTION YEAR				
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-
394.00	161,691.96	2,431.14		2,431.14-
396.00	218,570.62		52,454.60	52,454.60
397.10	168,830.82			
397.50	14,631.27			
	17,904,946.77	4,171,395.89	271,675.11	3,899,720.78-
TOTAL	77,924,929.02	20,818,622.51	611,127.47	20,207,495.04-

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, 2017, 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, 2017

<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	1,655	1,931
351	COMPRESSOR STATION STRUCTURES	1,540,764	1,304,750
	WELLS		
352.01	CONSTRUCTION	686,088	799,118
352.02	EQUIPMENT	145,773	168,680
	<i>TOTAL ACCOUNT 352</i>	<u>831,861</u>	<u>967,798</u>
352.1	STORAGE LEASEHOLDS AND RIGHTS	178,420	206,932
353	LINES	339,575	399,543
354	COMPRESSOR STATION EQUIPMENT	604,256	699,570
355	MEASURING AND REGULATING EQUIPMENT	88,345	104,477
	TOTAL UNDERGROUND STORAGE PLANT	3,584,876	3,685,001
DISTRIBUTION PLANT			
	LAND AND LAND RIGHTS		
374.4	LAND RIGHTS	713,346	667,725
374.5	RIGHTS-OF-WAY	1,535,977	1,643,493
	<i>TOTAL ACCOUNT 374</i>	<u>2,249,323</u>	<u>2,311,218</u>
	STRUCTURES AND IMPROVEMENTS		
375.34	MEASURING AND REGULATING	1,380,340	1,213,191
375.6	INDUSTRIAL MEASURING AND REGULATING	57,041	74,553
375.7	OTHER DISTRIBUTION SYSTEMS		
	DISTRIBUTION SYSTEM STRUCTURES	1,612,076	1,917,190
	OTHER BUILDINGS	666,721	799,806
	<i>TOTAL ACCOUNT 375.70</i>	<u>2,278,797</u>	<u>2,716,996</u>
375.8	COMMUNICATION STRUCTURES	6,398	6,825
	<i>TOTAL ACCOUNT 375</i>	<u>3,722,576</u>	<u>4,011,565</u>
376	MAINS		
	CAST IRON	358,897	358,577
	BARE STEEL	52,833,549	63,102,913
	OTHER	198,731,957	156,851,372
	<i>TOTAL ACCOUNT 376</i>	<u>251,924,403</u>	<u>220,312,862</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.

COMPARISON OF CALCULATED ACCRUED DEPRECIATION
AND BOOK RESERVE AS OF NOVEMBER 30, 2017

DEPRECIABLE GROUP		CALCULATED ACCRUED DEPRECIATION	BOOK RESERVE
(1)		(2)	(3)
		\$	\$
378	MEASURING AND REGULATING EQUIPMENT - GENERAL	11,575,848	10,073,380
379.1	MEASURING AND REGULATING EQUIPMENT - CITY GATE	99,823	95,966
380	SERVICES		
	BARE STEEL	740,497	730,900
	OTHER	115,012,607	113,522,031
	<i>TOTAL ACCOUNT 380</i>	115,753,104	114,252,931
381	METERS	15,322,126	15,801,176
381.1	METERS - AMR	10,510,886	10,261,568
382	METER INSTALLATIONS	11,723,971	12,461,669
383	HOUSE REGULATORS	3,209,425	3,881,080
384	HOUSE REGULATOR INSTALLATIONS	2,235,335	3,032,646
385	INDUSTRIAL MEASURING AND REGULATING EQUIPMENT - OTHER THAN METERS	3,136,677	2,643,672
	OTHER EQUIPMENT		
387	GENERAL	73,024	75,906
387.4	CUSTOMER INFORMATION SERVICES	1,385,600	1,069,199
387.5	GPS EQUIPMENT	749,889	514,814
	<i>TOTAL ACCOUNT 387</i>	2,208,513	1,659,919
	TOTAL DISTRIBUTION PLANT	433,672,010	400,799,652
GENERAL PLANT			
390.1	STRUCTURES AND IMPROVEMENTS - COMMUNICATIONS	75,120	85,423
	OFFICE FURNITURE AND EQUIPMENT		
391.1	FURNITURE	1,516,937	1,662,145
391.11	EQUIPMENT	21,224	23,133
391.12	INFORMATION SYSTEMS	1,403,146	1,348,842
	<i>TOTAL ACCOUNT 391</i>	2,941,307	3,034,120
392	TRANSPORTATION EQUIPMENT - TRAILERS	71,895	88,926
393	STORES EQUIPMENT	13,043	13,435
	TOOLS, SHOP AND GARAGE EQUIPMENT		
394	EQUIPMENT	5,911,121	6,087,689
394.12	CNG FACILITIES	1,918,903	1,953,091
	<i>TOTAL ACCOUNT 394</i>	7,830,024	8,040,780
395	LABORATORY EQUIPMENT	43,866	36,580
396	POWER OPERATED EQUIPMENT	998,441	1,256,735

COLUMBIA GAS OF PENNSYLVANIA, INC.

COMPARISON OF CALCULATED ACCRUED DEPRECIATION
AND BOOK RESERVE AS OF NOVEMBER 30, 2017

DEPRECIABLE GROUP		CALCULATED ACCRUED DEPRECIATION	BOOK RESERVE
(1)		(2)	(3)
		\$	\$
397.5	TELEMETERING	1,019,775	743,236
398	MISCELLANEOUS EQUIPMENT	257,849	247,882
	TOTAL GENERAL PLANT	13,251,320	13,547,117
	SUBTOTAL DEPRECIABLE PLANT	450,508,206	418,031,770
AMORTIZABLE PLANT			
303	MISCELLANEOUS INTANGIBLE PLANT	10,398,453	10,398,453
362.1	ENVIRONMENTAL REMEDIATION	(318,584)	(318,584)
374.2	LAND, OTHER DISTRIBUTION SYSTEMS	210,197	210,197
375.71	STRUCTURES AND IMPROVEMENTS - LEASED	1,099,938	1,099,938
	SUBTOTAL AMORTIZABLE PLANT	11,390,004	11,390,004
	TOTAL GAS PLANT	461,898,210	429,421,774

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.
- b. (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 are consistent with the service life study filed on August 31, 2017. Service Life Studies are filed every 5 years per the requirements in Pennsylvania.

COLUMBIA GAS OF PENNSYLVANIA, INC.

TABLE 1. ESTIMATED SURVIVOR CURVES, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO GAS PLANT AS OF NOVEMBER 30, 2015

DEPRECIABLE GROUP (1)		SURVIVOR CURVE (2)	ORIGINAL COST AS OF NOVEMBER 30, 2015 (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 *	3,190,888.99	815,948	2,374,941	251,914	7.89	9.4
WELLS								
352.01	CONSTRUCTION	SQUARE *	799,133.73	799,118	16	2	-	8.0
352.02	EQUIPMENT	45-S2.5 *	168,679.67	168,680	0	0	-	-
	TOTAL ACCOUNT 352		967,813.40	967,798	16	2		
352.1	STORAGE LEASEHOLDS AND RIGHTS	SQUARE *	206,940.78	206,932	9	1	-	9.6
353	LINES	50-S1.5 *	405,287.78	405,288	0	0	-	-
354	COMPRESSOR STATION EQUIPMENT	50-R2.5 *	864,751.67	629,878	234,874	25,371	2.93	9.3
355	MEASURING AND REGULATING EQUIPMENT	37-R1.5 *	123,010.01	123,010	0	0	-	-
	TOTAL UNDERGROUND STORAGE PLANT		5,760,624.71	3,150,785	2,609,841	277,288	4.81	
DISTRIBUTION PLANT								
LAND AND LAND RIGHTS								
374.4	LAND RIGHTS	65-R3	2,356,007.44	638,692	1,717,315	40,771	1.73	42.1
374.5	RIGHTS-OF-WAY	75-S4	3,233,103.61	1,555,059	1,678,045	42,628	1.32	39.4
	TOTAL ACCOUNT 374		5,589,111.05	2,193,751	3,395,360	83,399	1.49	
STRUCTURES AND IMPROVEMENTS								
375.34	MEASURING AND REGULATING	60-R1.5	3,619,401.71	852,297	2,767,105	79,574	2.20	34.8
375.6	INDUSTRIAL MEASURING AND REGULATING	50-R1.5	87,669.84	72,496	15,174	922	1.05	16.5
375.7	OTHER DISTRIBUTION SYSTEMS							
	DISTRIBUTION SYSTEM STRUCTURES	90-R1 *	4,597,310.03	1,581,304	3,016,005	132,314	2.88	22.8
	OTHER BUILDINGS	33-S1	1,987,208.48	676,147	1,311,061	60,735	3.06	21.6
	TOTAL ACCOUNT 375.70		6,584,518.51	2,257,451	4,327,066	193,049	2.93	
375.8	COMMUNICATION STRUCTURES	50-R2	16,515.17	6,173	10,342	335	2.03	30.9
	TOTAL ACCOUNT 375		10,308,105.23	3,188,417	7,119,687	273,880	2.66	
376	MAINS							
	CAST IRON	72-R1.5 *	531,679.21	480,871	50,808	6,128	1.15	8.3
	BARE STEEL	72-R1.5 *	69,144,064.77	60,545,733	8,598,332	917,650	1.33	9.4
	OTHER	72-R1.5	1,033,342,815.25	128,406,502	904,936,313	20,546,900	1.99	44.0
	TOTAL ACCOUNT 376		1,103,018,559.23	189,433,106	913,585,453	21,470,678	1.95	

COLUMBIA GAS OF PENNSYLVANIA, INC.

TABLE 1. ESTIMATED SURVIVOR CURVES, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO GAS PLANT AS OF NOVEMBER 30, 2015

	DEPRECIABLE GROUP (1)	SURVIVOR CURVE (2)	ORIGINAL COST	BOOK	FUTURE	CALCULATED		COMPOSITE
			AS OF NOVEMBER 30, 2015 (3)	RESERVE (4)	BOOK ACCRUALS (5)	ANNUAL ACCRUAL AMOUNT (6)	RATE (7)=(6)/(3)	REMAINING LIFE (8)=(5)/(6)
378	MEASURING AND REGULATING EQUIPMENT - GENERAL	45-R0.5	32,549,970.77	6,386,761	26,163,210	1,120,905	3.44	23.3
379.1	MEASURING AND REGULATING EQUIPMENT - CITY GATE	35-S2.5	141,117.10	88,433	52,684	4,704	3.33	11.2
380	SERVICES							
	BARE STEEL	50-R0.5 *	924,380.82	790,151	134,230	17,066	1.85	7.9
	OTHER	50-R0.5	409,697,801.44	100,368,364	309,329,437	11,780,140	2.88	26.3
	TOTAL ACCOUNT 380		410,622,182.26	101,158,515	309,463,667	11,797,206	2.87	
381	METERS	43-S1.5	35,087,262.39	14,892,010	20,195,252	872,308	2.49	23.2
381.1	METERS - AMR	15-S2.5	23,368,944.13	6,856,655	16,512,289	1,751,702	7.50	9.4
382	METER INSTALLATIONS	55-R2.5	35,055,628.47	11,317,669	23,737,959	680,889	1.94	34.9
383	HOUSE REGULATORS	40-S2	10,737,766.58	3,331,440	7,406,327	276,188	2.57	26.8
384	HOUSE REGULATOR INSTALLATIONS	35-S3	3,864,772.07	2,903,241	961,531	68,743	1.78	14.0
385	INDUSTRIAL MEASURING AND REGULATING EQUIPMENT - OTHER THAN METERS	30-R0.5	6,281,253.24	2,716,955	3,564,298	259,212	4.13	13.8
	OTHER EQUIPMENT							
387	GENERAL	30-R0.5	133,851.06	63,150	70,701	6,756	5.05	10.5
387.4	CUSTOMER INFORMATION SERVICES	25-R2.5	4,334,343.11	612,361	3,721,982	226,422	5.22	16.4
387.5	GPS EQUIPMENT	10-S3	2,053,366.00	63,040	1,990,326	253,545	12.35	7.8
	TOTAL ACCOUNT 387		6,521,560.17	738,551	5,783,009	486,723	7.46	
	TOTAL DISTRIBUTION PLANT		1,683,146,232.69	345,205,504	1,337,940,726	39,146,537	2.33	
	GENERAL PLANT							
390.1	STRUCTURES AND IMPROVEMENTS - COMMUNICATIONS	40-R2.5	49,821.42	49,821	0	0	-	-
	OFFICE FURNITURE AND EQUIPMENT							
391.1	FURNITURE	20-SQ	2,470,110.10	1,735,919	734,191	54,163	2.19	13.6
391.11	EQUIPMENT	15-SQ	24,427.00	12,632	11,795	1,115	4.56	10.6
391.12	INFORMATION SYSTEMS	5-SQ	3,416,994.58	1,943,844	1,473,151	576,700	16.88	2.6
	TOTAL ACCOUNT 391		5,911,531.68	3,692,395	2,219,137	631,978	10.69	
392	TRANSPORTATION EQUIPMENT - TRAILERS	15-SQ	97,532.51	54,631	42,902	9,103	9.33	4.7
393	STORES EQUIPMENT	20-SQ	16,674.52	16,675	0	0	-	-
	TOOLS, SHOP AND GARAGE EQUIPMENT							
394	EQUIPMENT	25-SQ	12,689,023.51	5,310,787	7,378,237	467,453	3.68	15.8
394.12	CNG FACILITIES	12-S1.5	1,953,497.84	1,953,091	407	172	0.01	2.4
	TOTAL ACCOUNT 394		14,642,521.35	7,263,878	7,378,644	467,625	3.19	

COLUMBIA GAS OF PENNSYLVANIA, INC.

TABLE 1. ESTIMATED SURVIVOR CURVES, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO GAS PLANT AS OF NOVEMBER 30, 2015

	DEPRECIABLE GROUP (1)	SURVIVOR CURVE (2)	ORIGINAL COST	BOOK	FUTURE	CALCULATED ANNUAL ACCRUAL		COMPOSITE
			AS OF NOVEMBER 30, 2015 (3)	RESERVE (4)	BOOK ACCRUALS (5)	AMOUNT (6)	RATE (7)=(6)/(3)	REMAINING LIFE (8)=(5)/(6)
395	LABORATORY EQUIPMENT	20-SQ	50,660.92	32,343	18,318	2,680	5.29	6.8
396	POWER OPERATED EQUIPMENT	12-L3	1,435,492.74	1,384,199	51,294	13,914	0.97	3.7
	COMMUNICATION EQUIPMENT							
397.1	TELEPHONE	10-SQ	329,298.88	307,765	21,534	21,534	6.54	1.0
397.5	TELEMETERING	17-R3	798,398.27	598,594	199,804	48,888	6.12	4.1
	TOTAL ACCOUNT 397		1,127,697.15	906,359	221,338	70,422	6.24	
398	MISCELLANEOUS EQUIPMENT	15-SQ	493,216.84	166,596	326,621	28,706	5.82	11.4
	TOTAL GENERAL PLANT		23,825,149.13	13,566,897	10,258,254	1,224,428	5.14	
	SUBTOTAL DEPRECIABLE PLANT		1,712,732,006.53	361,923,186	1,350,808,821	40,648,253	2.37	
	AMORTIZABLE PLANT							
303	MISCELLANEOUS INTANGIBLE PLANT		22,446,878.65	7,048,270	15,398,609	2,232,147	**	
362.1	ENVIRONMENTAL REMEDIATION			(545,874)				
374.2	LAND, OTHER DISTRIBUTION SYSTEMS		477,118.40	210,205				
375.71	STRUCTURES AND IMPROVEMENTS - LEASED		1,673,890.17	948,691	725,199	32,288	**	
	SUBTOTAL AMORTIZABLE PLANT		24,597,887.22	7,661,292	16,123,808	2,264,435		
	NONDEPRECIABLE PLANT		172,413.08					
	TOTAL GAS PLANT		1,737,502,306.83	369,584,478	1,366,932,629	42,912,688		

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

** Accrual rate based on individual asset amortization.

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-5 of Columbia's historic test year depreciation study is included in Exhibit No.9, Schedule No.1.

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 2019 to December 2019 (1)	856	1,036	826	724	493	220	86	10	3	47	88	430	4,819
3	December 2017 to November 2018 (1)	856	1,036	826	724	493	220	86	10	3	47	88	430	4,819
4	December 2016 to November 2017 (2)	807	1,036	826	724	493	220	86	10	3	47	88	430	4,770
5	December 2015 to November 2016 (3)	647	929	1,022	724	493	278	90	6	1	4	108	369	4,671
6	December 2014 to November 2015 (3)	909	1,131	1,208	1,145	597	227	63	8	2	16	146	368	5,820
7	December 2013 to November 2014 (3)	920	1,183	1,222	1,040	634	295	64	7	16	38	171	465	6,055
8	Residential Heating Sales - Dth													
9	January 2019 to December 2019 (1)	3,312,105	4,870,117	4,765,554	3,857,138	2,454,436	886,544	280,934	-	-	13,270	298,103	1,434,586	22,172,788
10	December 2017 to November 2018 (1)	3,284,566	4,852,706	4,748,962	3,842,597	2,433,831	894,916	279,635	-	-	14,051	298,217	1,420,248	22,069,730
11	December 2016 to November 2017 (2)	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
12	December 2015 to November 2016 (3)	2,397,509	3,865,736	4,666,698	3,330,229	2,026,864	892,329	313,579	-	-	880	158,873	1,100,320	18,753,019
13	December 2014 to November 2015 (3)	3,590,275	4,743,430	5,266,435	5,143,920	2,537,988	796,705	162,281	-	-	-	276,499	1,074,667	23,592,201
14	December 2013 to November 2014 (3)	3,218,427	4,575,408	4,931,500	4,176,034	2,431,277	898,900	161,807	-	-	6,975	237,168	1,248,794	21,886,289

(1) Rate test year and Future test year reflecting normal weather based upon the 20 Year (1998-2017) 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 2019 to December 2019 (1)	856	1,036	826	724	493	220	86	10	3	47	88	430	4,819
3	December 2017 to November 2018 (1)	856	1,036	826	724	493	220	86	10	3	47	88	430	4,819
4	December 2016 to November 2017 (2)	807	1,036	826	724	493	220	86	10	3	47	88	430	4,770
5	December 2015 to November 2016 (3)	647	929	1,022	724	493	278	90	6	1	4	108	369	4,671
6	December 2014 to November 2015 (3)	909	1,131	1,208	1,145	597	227	63	8	2	16	146	368	5,820
7	December 2013 to November 2014 (3)	920	1,183	1,222	1,040	634	295	64	7	16	38	171	465	6,055
8	Commercial Heating Sales - Dth													
9	January 2019 to December 2019 (1)	928,815	1,609,746	1,622,436	1,256,295	674,793	163,840	28,602	-	-	1,385	94,342	324,245	6,704,499
10	December 2017 to November 2018 (1)	883,068	1,583,886	1,595,150	1,234,973	653,221	166,717	27,283	-	-	1,433	91,310	310,840	6,547,880
11	December 2016 to November 2017 (2)	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
12	December 2015 to November 2016 (3)	598,725	1,065,629	1,373,230	921,068	499,180	202,410	48,971	-	-	1,977	52,871	264,361	5,028,421
13	December 2014 to November 2015 (3)	996,035	1,394,513	1,622,682	1,573,584	684,109	174,274	26,357	-	-	3,512	70,381	260,163	6,805,611
14	December 2013 to November 2014 (3)	1,054,384	1,570,765	1,784,425	1,455,028	795,997	253,313	31,952	-	-	-	70,287	387,247	7,403,398

(1) Rate test year and Future test year reflecting normal weather based upon the 20 Year (1998-2017) 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, 2013

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 2012	379,623	3062	1362	4424	11.65	37236	1126	1590	2716	72.95	283	21	1870	1892	6,683.78
2	Jan 2013	380,619	4245	1864	6109	16.05	37314	1587	2000	3586	96.12	285	33	1879	1911	6,705.58
3	Feb	381,284	4429	1925	6354	16.66	37340	1701	2181	3882	103.97	285	33	1960	1993	6,991.31
4	Mar	381,599	4068	1774	5842	15.31	37327	1547	1904	3452	92.47	285	29	1894	1923	6,746.29
5	Apr	380,607	2951	1299	4250	11.17	37260	1112	1487	2599	69.74	285	21	1885	1906	6,688.70
6	May	379,336	1065	485	1551	4.09	37170	423	780	1203	32.35	284	11	1780	1791	6,306.52
7	Jun	377,613	637	285	922	2.44	37067	267	574	841	22.70	284	8	1682	1690	5,952.32
8	Jul	376,661	408	174	582	1.54	36939	204	472	676	18.31	284	8	1721	1729	6,088.20
9	Aug	375,908	386	163	548	1.46	36888	205	511	716	19.41	284	9	1660	1668	5,874.58
10	Sep	375,638	408	179	587	1.56	36854	216	532	747	20.28	285	9	1662	1671	5,862.56
11	Oct	376,864	530	246	777	2.06	36888	265	626	891	24.16	284	11	1732	1743	6,138.21
12	Nov 2013	379,437	1642	764	2406	6.34	37051	639	1149	1788	48.26	283	20	1960	1980	6,996.43
13																
14	Total or Average	378,766	23,830	10,520	34,350	90.34	37,111	9,292	13,806	23,098	620.72	284	212	21,686	21,897	77,034.47
15																
16	Heating Season (November-March)		17,445	7,689	25,134	11		6,601	8,824	15,425	113		135	9,563	9,698	34,123
17	Non-Heating Season (April-October)		6,385	2,831	9,216	79		2,691	4,982	7,674	508		77	12,123	12,199	42,911
18	Daily Average = Total/365		65	29	94			25	38	63			1	59	60	

(1) Actual sales, not weather normalized.

Columbia Gas of Pennsylvania, Inc
Analysis of the Average Monthly Consumption
Twelve Months Ended November 30, 2014

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	2013	381,727	3639	1650	5290	13.86	37191	1374	1861	3235	86.98	282	30	1891	1921	6,813.1
2	Jan	2014	382,786	5012	2253	7265	18.98	37259	1925	2303	4229	113.49	282	38	2189	2226	7,895.0
3	Feb		383,383	5317	2390	7708	20.10	37336	2096	2529	4625	123.88	280	41	2211	2252	8,044.2
4	Mar		383,689	4561	2054	6616	17.24	37335	1771	2080	3851	103.15	280	36	2221	2257	8,061.2
5	Apr		383,352	2823	1284	4107	10.71	37256	1099	1438	2538	68.11	281	24	2000	2024	7,201.7
6	May		381,674	1291	600	1891	4.96	37104	527	831	1358	36.61	280	12	1798	1811	6,467.1
7	Jun		379,906	560	251	811	2.13	37003	265	542	807	21.80	280	9	1750	1759	6,282.3
8	Jul		378,757	405	173	578	1.53	36918	209	475	684	18.52	279	8	1647	1655	5,931.1
9	Aug		378,119	387	165	552	1.46	36892	205	506	711	19.27	279	8	1749	1757	6,297.4
10	Sep		378,304	408	176	583	1.54	36863	218	513	731	19.83	278	8	1833	1841	6,623.4
11	Oct		379,371	621	282	903	2.38	36903	291	613	904	24.50	277	9	1848	1857	6,702.8
12	Nov	2014	381,823	1634	725	2359	6.18	37095	636	1107	1743	47.00	277	20	1957	1977	7,137.5
13																	
14	Total or Average		381,074	26,660	12,002	38,663	101.07	37,096	10,617	14,798	25,416	683.15	280	242	23,095	23,338	83,456.78
15																	
16	Heating Season			20,164	9,073	29,238	76		7,803	9,880	17,684	475		165	10,469	10,634	37,951
17	(November-March)																
18	Non-Heating Season			6,496	2,929	9,425	25		2,814	4,918	7,732	209		77	12,626	12,703	45,506
19	(April-October)																
20	Daily Average = Total/365			73	33	106			29	41	70			1	63	64	

(1) Actual sales, not weather normalized.

Columbia Gas of Pennsylvania, Inc
Analysis of the Average Monthly Consumption
Twelve Months Ended November 30, 2015

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	2014	384230	4041	1174	5215	13.57	37284	1317	1856	3173	85.10	274	32	1924	1957	7,142
2	Jan	2015	385187	5206	1495	6701	17.40	37341	1736	2278	4014	107.50	275	41	2020	2060	7,492
3	Feb		385718	5678	1604	7283	18.88	37396	1926	2528	4454	119.09	274	42	2039	2080	7,592
4	Mar		386105	5557	1563	7120	18.44	37384	1889	2322	4211	112.63	274	33	1838	1871	6,828
5	Apr		384943	2966	833	3799	9.87	37306	975	1465	2440	65.41	273	17	1611	1628	5,962
6	May		383544	1210	344	1554	4.05	37156	401	843	1244	33.48	273	8	1660	1667	6,107
7	Jun		381643	585	169	754	1.98	37006	220	603	822	22.22	273	6	1445	1451	5,315
8	Jul		380412	456	133	589	1.55	36932	189	535	724	19.61	273	5	1541	1546	5,663
9	Aug		379773	403	115	518	1.36	36883	175	516	691	18.73	272	4	1560	1564	5,750
10	Sep		379879	421	121	542	1.43	36858	183	545	728	19.75	271	6	1576	1582	5,837
11	Oct		381209	689	195	885	2.32	36910	261	700	961	26.05	271	8	1634	1643	6,062
12	Nov	2015	383419	1483	420	1903	4.96	37048	491	986	1476	39.85	271	16	1924	1939	7,156
13																	
14	Total or Average		383,005	28,696	8,166	36,862	95.81	37,125	9,764	15,175	24,939	669.42	273	216	20,772	20,988	76,905.94
15																	
16	Heating Season			21,966	6,256	28,222	73		7,359	9,969	17,328	464		163	9,744	9,908	36,210
17	(November-March)																
18	Non-Heating Season			6,730	1,910	8,640	23		2,405	5,206	7,611	205		53	11,027	11,080	40,696
19	(April-October)																
20	Daily Average = Total/365			79	22	101			27	42	68			1	57	58	

(1) Actual sales, not weather normalized.

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 (November-March)		17,362	4,747	22,108	57		5,609	8,541	14,150	380		104	8,736	8,840	32,616
17	Non-Heating Season (April-October)		6,169	1,656	7,824	20		2,195	5,056	7,251	196		37	11,421	11,458	42,616
18	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					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 2017	391831	3738	948	4686	11.96	37269	1207	1700	2907	78	274	20	1912	1932	7,051
2	Jan 2018	393045	5319	1348	6667	16.96	37376	1969	2131	4100	110	274	37	2061	2098	7,657
3	Feb	393716	5163	1309	6472	16.44	37443	1934	2131	4065	109	274	28	2167	2195	8,011
4	Mar	394041	4257	1079	5336	13.54	37447	1574	1733	3307	88	274	20	2143	2163	7,894
5	Apr	393093	2868	727	3595	9.15	37378	955	1408	2363	63	274	13	1992	2005	7,318
6	May	391629	1308	332	1640	4.19	37272	369	929	1298	35	274	9	1920	1929	7,040
7	Jun	390041	708	179	887	2.27	37159	163	723	886	24	274	6	1876	1882	6,869
8	Jul	389123	425	108	533	1.37	37089	95	649	744	20	274	4	1725	1729	6,310
9	Aug	388647	413	105	518	1.33	37036	74	628	702	19	273	4	1792	1796	6,579
10	Sep	388748	439	111	550	1.41	37035	81	664	745	20	274	6	1859	1865	6,807
11	Oct	390084	712	180	892	2.29	37093	258	843	1101	30	274	9	1897	1906	6,956
12	Nov 2018	392508	1841	467	2308	5.88	37257	530	1217	1747	47	274	13	1969	1982	7,234
13																
14	Total or Average	391,376	27,191	6,893	34,084	86.79	37,238	9,209	14,756	23,965	642.15	274	169	23,313	23,482	85,724.73
15																
16	Heating Season (November-March)		20,318	5,151	25,469	65		7,214	8,912	16,126	431		118	10,252	10,370	37,847
17	Non-Heating Season (April-October)		6,873	1,742	8,615	22		1,995	5,844	7,839	211		51	13,061	13,112	47,878
18																
19	Daily Average = Total/365		74	19	93			25	40	66			0	64	64	

Columbia Gas of Pennsylvania, Inc
 Analysis of the Average Monthly Consumption
 Twelve Months Ended December 31, 2019

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	2019	396079	5338	1353	6691	16.89	37518	2001	2148	4149	111	274	37	2106	2143	7,821
2	Feb		396768	5181	1314	6495	16.37	37587	1967	2146	4113	109	274	28	2210	2238	8,168
3	Mar		397112	4273	1083	5356	13.49	37594	1601	1746	3347	89	274	20	2123	2143	7,821
4	Apr		396183	2878	730	3608	9.11	37526	974	1417	2391	64	274	13	2009	2022	7,380
5	May		394739	1314	333	1647	4.17	37423	377	935	1312	35	274	9	1941	1950	7,117
6	Jun		393175	710	180	890	2.26	37313	170	726	896	24	274	6	1891	1897	6,923
7	Jul		392286	427	108	535	1.36	37244	102	651	753	20	274	4	1772	1776	6,482
8	Aug		391834	415	105	520	1.33	37195	80	630	710	19	273	4	1805	1809	6,626
9	Sep		391964	440	112	552	1.41	37198	87	667	754	20	274	6	1875	1881	6,865
10	Oct		393336	714	181	895	2.28	37259	267	848	1115	30	274	9	1917	1926	7,029
11	Nov		395792	1849	469	2318	5.86	37427	545	1226	1771	47	274	13	1983	1996	7,285
12	Dec	2019	398163	3775	957	4732	11.88	37589	1267	1730	2997	80	274	20	1975	1995	7,281
13																	
14	Total or Average		394,786	27,314	6,925	34,239	86.41	37,406	9,438	14,870	24,308	648.39	274	169	23,607	23,776	86,797.92
15																	
16	Heating Season			20,416	5,176	25,592	64		7,381	8,996	16,377	436		118	10,397	10,515	38,376
17	(November-March)																
18	Non-Heating Season			6,898	1,749	8,647	22		2,057	5,874	7,931	212		51	13,210	13,261	48,422
19	(April-October)																
20	Daily Average = Total/365			75	19	94			26	41	67			0	65	65	

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, 2017 (Historic Test Year), the twelve months ended November 30, 2018 (Future Test Year) or the twelve months ending December 31, 2019 (Fully Projected Future Test Year).

See pages 2 through 8 for Columbia's Natural Gas Emergency plan filed in accordance with 52 Pa. Code §59.72.

Details of Columbia's Natural Gas Emergency Plan can be found in Tariff 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

A NiSource Company

650 Washington Road
Pittsburgh, PA 15228-2703

March 14, 2002

James J. McNulty, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building,
400 North Street,
Harrisburg, PA 17120

Re: Natural Gas Emergency Plan of
Columbia Gas of Pennsylvania, Inc.
Filed Pursuant to 52 PA Code §59.72

Dear Mr. McNulty:

Enclosed are an original and four copies of Columbia Gas of Pennsylvania, Inc.'s Natural Gas Emergency Plan ("Emergency Plan") to be filed in accordance with 52 Pa. Code §59.72. Please date-stamp one copy of the enclosed Emergency Plan and return it to me in the enclosed envelope.

While compiling its Emergency Plan, Columbia Gas of Pennsylvania, Inc. ("Columbia") identified several sections of its tariff that need to be updated to comply with the changes made to 52 Pa Code Chapters 59 and 69. Columbia will file a compliance tariff in the near future to make these revisions.

As always, if you have any questions, please feel free to call me at 412.572.7142.

Sincerely,



Mark Kempic,
Senior Attorney

enclosures

cc: Office of Consumer Advocate
Office of Small Business Advocate
Office of Trial Staff

Background

Columbia Gas of Pennsylvania, Inc. ("Columbia") serves the energy needs of over 390,000 customers in over 400 communities in 27 of Pennsylvania's 67 counties. These customers are located in over 68 isolated natural gas distribution systems or market areas having their own unique operating characteristics. This results in a very complex distribution system dependent upon upstream pipeline and locally sourced supply deliveries at over 400 points of delivery. In consideration of these factors, combined with the fact that the Company's firm service customers have demand requirements that are highly temperature sensitive, it is incumbent upon Columbia to design, structure and manage its supply/capacity portfolio in a manner which ensures a measure of reliability in serving its firm customer requirements and minimizes the need for effectuating a gas emergency plan for reasons related to supply.

Factors critical to this process for Columbia include its:

- "design" daily/seasonal weather extremes and probabilities
- longer term planning efforts
- function as supplier of last resort (SOLR), and
- management of seasonal operations.

In terms of weather, Columbia designs its supply/capacity portfolio for those daily and seasonal extremes having a 10% probability of occurrence. That means there is a 10% probability, or risk, that Columbia will experience a winter day or winter season with temperatures colder than considered in designing its portfolio.

For planning purposes Columbia forecasts seasonal, annual and peak day demand five years into the future. This forecast horizon enables Columbia to develop, plan, negotiate and contract for the services and capacity needed to timely and capably meet the future expected demand on its system.

In fulfilling its function as the supplier of last resort (SOLR), as specified under Section 2201 of the Natural Gas Choice and Competition Act, Columbia must consider its service obligations to sales customers, and to residential and small commercial CHOICE Service customers whose marketers may fail to deliver adequate supplies when and where needed.

Given the variability of temperatures over the course of a winter season, and inability to predict their timing or duration, combined with other factors that may influence customer demand (sales and CHOICE) and/or adequacy of their supply (CHOICE service), it is imperative that Columbia carefully plan for the utilization of the assets it has call upon. To ensure adequate resources, like storage

inventory and withdrawal ability, are available when and where needed to fulfill its firm service obligations, Columbia models its system demand under multiple weather scenarios and tracks the actual disposition of its assets on a continual basis throughout a season.

Safe and reliable service to firm, human needs and high priority requirements is of foremost concern to Columbia. In its efforts to structure and manage a portfolio that by design is intended to meet this concern, Columbia recognizes the need for and value of contingency plans as well as emergency plans.

Introduction

In accordance with Title 52 Pa. Code §59.72 relating to Natural Gas Emergency Planning, the following will present simplified and understandable rules and procedures to be followed during a crisis and address issues specific to Columbia so that all customers and NGSs on Columbia's system can appropriately prepare to respond to a natural gas emergency.

Columbia maintains an Emergency Manual for internal purposes, which sets forth procedures to be used by employees at both the local level and state level to minimize any hazards which may result from a gas pipeline emergency. Columbia's Emergency Manual is updated from time to time on an as-needed basis and supports the procedures outlined in this Natural Gas Emergency Plan and in Columbia's tariff. The Emergency Manual includes procedures for managing emergencies such as outages (resulting from a shortage of gas supply), civil disturbances, explosions, fires, floods, line breaks, low pressures, odor of gas (wide area) or bomb threats.

(1) Emergency Load Shedding

Emergency load shedding will be required during periods when a natural gas emergency exists¹ and, if there has been sufficient time, the company has already interrupted interruptible services, issued Operational Flow Orders and called for voluntary usage reductions. When emergency load shedding is required, it shall occur according to Columbia's "Limitation Provisions – Daily Requirements", found in paragraph 2.3 (page 32) of Columbia's tariff.

¹According to § 59.73 (a), an emergency exists whenever the aggregate demand of firm service customers on an NGDC's system or confined segment of the system exceeds or threatens to exceed the gas supply or capacity that is actually and lawfully available to the NGDC to meet the demands, and the actual or threatened excess creates an immediate threat to the NGDC's system operating integrity with respect to Priority 1 customers. For the purposes of this Natural Gas Emergency Plan, "firm customers" will be defined as those customers for whom Columbia has contracted firm pipeline capacity, namely sales service customers and CHOICE service customers.

Columbia's Emergency Manual provides further information for Columbia's field personnel on the implementation of emergency load shedding. The Gas Supply Emergency Operating Policy segregates the management of a gas supply emergency in to three phases:

- Phase A: Operations to reduce service
- Phase B: Operations during suspended service
- Phase C: Operations to re-establish service

During Phase A, load will be shed at the industrial and commercial levels prior to interrupting service to residential customers. Every effort will be made to provide as much advance notice as possible to all classes of customers prior to implementing emergency supply reduction. When the shedding of industrial load is required, reductions will occur on a pro-rata basis for each "Order of Interruption" (as detailed in paragraph 2.3 of Columbia's tariff) without regard to priorities of use.

(2) Voluntary Usage Reductions.

To the extent possible, prior to initiating load shedding activities Columbia will appeal to all gas customers to voluntarily reduce gas usage by issuing radio and TV news bulletins requesting that nonessential natural gas requirements be curtailed. For Commercial and Industrial General Distribution Service customers, Columbia will follow the "Operational Alert" procedures set forth in paragraph 3.5 of the Rules Applicable to Distribution Service section of Columbia's tariff.

An appeal will be made to residential customers to turn down their thermostat setting as low as possible, shut off the heat, close doors to unused rooms, close drapes and window shades to reduce heat loss, and reduce hot water usage. News Bulletins for use in the radio and TV media have been pre-drafted by Columbia's Communications personnel to issue an appeal for voluntary gas usage reduction.

(3) Mandatory usage reductions for certain customers consistent with §59.73(c).

In the event of a natural gas emergency, Columbia may require each commercial and industrial retail and transportation customer that is not a Priority 1² customer to reduce its consumption of gas. Columbia has outlined a procedure for communicating an "Emergency Alert" to its General Distribution Service customers in paragraph 3.5.2 of the Rules Applicable to Distribution Service

² A Priority 1 customer is defined as one requiring service for essential human needs use.

section of the tariff. Accordingly, Columbia will use the medium most reasonably expected to reach the customer or the NGS (Natural Gas Supplier) acting as the customer's duly authorized agent in a timely manner, including but not limited to: telephonic, e-mail, facsimile, Nomination EBB, or personal contact. Similarly, Columbia will make every attempt to contact industrial and commercial customers that are served on traditional sales service rates (that is, customers not taking General Distribution Service) using the medium most reasonably expected to reach the customer.

Usage reductions will be segmented by rate schedule and by the type of gas flowing on behalf of customers, according to the "Limitation Provisions – Daily Requirements" section of Columbia's tariff (paragraph 2.3).

An authorized usage factor will be provided to General Distribution Service customers. This factor will represent a percentage of the Maximum Daily Volume specified in each customer's General Distribution Service Application and Agreement. This will enable customers and NGSs to calculate their authorized usage by applying the specified percentage to their Maximum Daily Volume (shown on Columbia's monthly General Distribution Service bill).

(4) Issuance of periodic reports to the media concerning the existing natural gas emergency.

During a natural gas emergency, Columbia will coordinate with public officials, media and civil defense in keeping the public advised of the status and duration of the service interruption. Columbia's Emergency Manual sets forth procedures to be used by personnel from Columbia's Communications department during an emergency in order to assure that all appropriate media contacts are involved as necessary.

(5) Notice to affected customers and NGSs of the expected initiation of emergency actions under § 59.73.

Columbia's communication plan for industrial, commercial customers and NGSs is detailed in section (3) above.

For residential customers, communication during a natural gas emergency will be adapted to best meet the needs of the community or communities involved. Methods used to address gas emergencies may include the following: public radio, television, news media, police radio, telephone, letters, etc.

News bulletins have been pre-drafted for use during natural gas emergencies to address low pressure situations, interruptions and service outages. As addressed in section (2) of this Natural Gas Emergency Plan, a news bulletin has also been drafted for use on radio or TV to appeal for a voluntary usage reduction.

(6) Customer and NGS delivery requirements that apply during the term of emergency action under §59.73, regardless of customer-specific usage reductions that arise or may arise from end-use curtailments.

Columbia's delivery requirements for customers and NGSs are detailed in the Operational Flow Orders (OFO) and Operational Matching Orders (OMO) sections of its tariff (sections 3.7 and 3.8, of the Rules Applicable to Distribution Service section of the tariff, pages 206 and 207).

According to Columbia's OFO provisions, Columbia may direct General Distribution Service customers and NGSs to deliver specified volumes, which may exceed the customer's maximum daily volume which is specified in the General Distribution Application and Agreement. Therefore, customers and NGSs subject to OFOs may be directed to schedule natural gas deliveries that exceed actual consumption.

According to Columbia's OMO provisions, Columbia may direct customers and NGSs to deliver natural gas volumes to match consumption. Therefore, customers and NGSs subject to OMOs may be requested to schedule natural gas deliveries that exceed actual consumption, but Columbia may not require deliveries that exceed actual consumption.

NGSs providing service to CHOICE customers are subject to OFOs and may be directed to schedule deliveries that exceed their customer groups' Daily Delivery Requirement (section 4.11 of the Rules Applicable to Distribution Service section of the tariff, page 242).

(7) Procedure for focusing emergency measures to confined geographic or operational portions, segments or zones of the NGDC (Natural Gas Distribution Company) system where a natural gas emergency exists.

In the event of a natural gas emergency Columbia will exercise all available means to discern:

- its nature
- its location
- the prospective duration

- the availability of alternative sources of supply or capacity
- the customers that may be affected, and
- if other customers may provide assistance by reducing their demand.

This will occur by Columbia's use of information obtained from any one or all of the following:

- Columbia's Supervisory Control and Data Acquisition (SCADA) system
- contacts with upstream pipeline personnel
- contacts with Columbia personnel,
- contacts with other industry counterparts and
- other generally available information pertinent to the Company's operations.

The Company will endeavor to confine its emergency measures to as limited or confined portion of its system, as possible to minimize the number of customers affected and actions needed by the Company.

(8) Procedures for establishing communications with electric system control area operators, if the NGDC provides gas service to electric generation stations.

For each electric generation customer served on its system Columbia maintains distribution service agreements that set forth notification procedures for OFOs, OMOs and emergency situations. During a natural gas emergency, Columbia will adhere to these notification procedures.

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 is currently staffed with eight New Business Representatives – three Conversion Consultants, whose primary focus is converting PA residents from alternate fuel sources to natural gas, and five Development Managers whose focus is on residential new construction projects where main is needed, as well as commercial and industrial projects. All eight positions work with Columbia's new business team and the Company's internal stakeholders to implement the process of connecting the customers to Columbia's system. 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 this Exhibit. Page Nos. 38 through 54 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. Please refer to Exhibit No. 14, Schedule No. 2, for a complete copy of Columbia's tariff.

**RULES AND REGULATIONS GOVERNING THE
DISTRIBUTION AND SALE OF GAS (Continued)**

3. Application for Service

3.1 Application

All Applicants desiring any type of service from the Company under this Tariff shall contact the Company and specifically request the type and nature of service. Applications for service may be made by telephoning the Company or its authorized agent, or through application via the Internet.

Upon being contacted by a customer requesting service, the Company will advise the customer that Choice service is available and that the Company can mail them a list of licensed NGSs offering retail service in the Company's service territory with appropriate contact information for those suppliers. The Company will also advise the customer that they can view this information on the Internet and refer the customer to the Commission for further information.

Prior to providing utility service, the Company may require the applicant to provide:

1. Information that positively identifies him/her self.
2. The name of any adult occupant whose name appears on the mortgage, deed or lease of the property for which the residential utility service is requested.
3. The names of each adult occupant residing at the location, and proof of their identity.
4. A cash deposit, when applicable, as described in the Credit section of this tariff.

(C)

The Company may ask for the combined gross income of all adult occupants; however, the applicant is not required to provide the information as a condition of receiving gas service, unless the applicant is seeking to enroll in the Company's Customer Assistance Program, or the applicant is applying for service at a location previously terminated for non-payment, in which cases the applicant must provide the combined gross income of all adult occupants.

3.2 Right to Reject

The Company may place limitations on the amount or character of service it will supply, or may reject applications for any of the following reasons:

- (a) Until the customer has complied with the state and municipal regulations governing gas service.
- (b) If the Company does not have adequate facilities to render the service desired.
- (c) If such service is of a character that it is likely to affect unfavorably service to other customers.
- (d) If, in the judgment of the Company, the applicant's installation of piping or gas equipment is hazardous, or of such a character that satisfactory service cannot be rendered.
- (e) If an extension of street main, except as set forth under Section 8--Extensions, is required to furnish such service.
- (f) Where the service proposed is from a transmission pipeline as specified in the Transmission Lines section of this tariff.
- (g) When it is necessary to conserve the supply of gas as specified in the Service Limitations section of this tariff.
- (h) Until the customer has complied with minimum insulation standards as specified in the Compliance with Minimum Insulation Standards section of this tariff.

(C) Indicates Change

**RULES AND REGULATIONS GOVERNING THE
DISTRIBUTION AND SALE OF GAS (Continued)**

3. Application for Service – Continued

3.5 Fraud or Material Misrepresentation

The Company may immediately terminate service when fraud or material misrepresentation of the customer's identity is used for the purpose of obtaining service as specified in the Termination of Service section of this tariff.

4. Customer's Installations

4.1 Information from Customer

Anyone desiring to equip his premises for the use of gas shall communicate with the Company personally, or through his contractor or agent, giving the exact location of the premises and details of all gas consuming equipment to be installed.

4.2 Point of Connection

The Company will designate the point where the customer would be required to terminate his piping for connection to the lines of the Company. The furnishing of such information does not constitute an agreement, or obligation, on the part of the Company to render service.

4.3 Excess Flow Valves

(C)

A customer who qualifies pursuant to 49 CFR Section 192.383 may request installation of an Excess Flow Valve (EFV). The customer will be required to pay all EFV installation costs associated with such installation before the Company begins work, if:

- a. the Company has not scheduled the customer's premises for a service line replacement or a new service line, or
- b. the customer requests the installation prior to the Company's scheduled installation time.

4.4 Meter Connections

(C)

A domestic customer, at his expense, shall furnish and install the necessary piping, valves and fittings, exclusive of meter swivels, for the installation of the Company's meter or meters. All other customers may be required to furnish said piping, etc. depending upon the quantity of gas to be used and the conditions under which service is to be rendered.

4.5 Meter Space

(C)

The customer shall provide, free of expense to the Company, a space satisfactory to the Company for meters, regulators, pipes, meter protection equipment or other equipment of the Company which may be necessary for the rendering of adequate service, the Company reserving the right to establish standards as to the location, size, fire-proofing, ventilating, etc. of such space in accordance with pressure conditions, quantities and other pertinent factors. In certain buildings, the Company may require that an approved meter room be provided.

(C) Indicates Change

Issued: April 6, 2017

**M. A. Huwar
President**

Effective: June 5, 2017

**Supplement No. 259 to
Tariff Gas – Pa. P.U.C. No. 9
Second Revised Page No. 40b**

Columbia Gas of Pennsylvania, Inc.

Canceling First Revised Page No. 40b

**RULES AND REGULATIONS GOVERNING THE
DISTRIBUTION AND SALE OF GAS (Continued)**

4. Customer's Installations – continued

4.6 Meter Location - continued

(C)

4.6.2 Inside Meter Location

(C)

4.6.2.1 An inside meter location shall be considered only when:

(C)

- (a) The service line pressure is less than 10 PSIG; or,
- (b) A meter is located in a building that meets one of the following criteria:
 - (i) The building is listed in the National Register of Historic Places or the customer or building owner notifies the Company that the building is eligible to be listed in the National Register of Historic Places and the eligibility can be readily confirmed by the Company.
 - (ii) A building is located within a historic district that is listed in the National Register of Historic Places or the customer or building owner notifies the utility that the historic district is eligible to be listed in the National Register of Historic Places and the eligibility can be readily confirmed by the Company.
 - (iii) A building has been designated as historic under the Pennsylvania Historic District Act, Municipalities Planning Code, or Municipal Home Rule Charter.
 - (iv) A building is located within a locally designated historic district or is eligible for such listing or a building is individually designated pursuant to local ordinance as a historic landmark or is eligible for such listing.
- (c) Protection from ambient temperatures is necessary to avoid meter freeze-ups; or
- (d) The Company determines that a meter is subject to a high risk of vandalism based on the Company's prior experience; or
- (e) The Company determines that an outside meter location is neither feasible nor practical.

4.6.2.2 Installed inside meters must be attached to an operable outside shut off valve.

(C)

4.6.2.3 Meters installed within a building must be located in a ventilated place not less than three (3) feet from a source of ignition or source of heat which may damage the meter.

(C)

(C) Indicates Change

Issued: April 6, 2017

**M. A. Huwar
President**

Effective: June 5, 2017

**Supplement No. 259 to
Tariff Gas – Pa. P.U.C. No. 9
Second Revised Page No. 40d**

Columbia Gas of Pennsylvania, Inc.

Canceling First Revised Page No. 40d

**RULES AND REGULATIONS GOVERNING THE
DISTRIBUTION AND SALE OF GAS (Continued)**

4. Customer's Installations – continued

4.6 Meter Location - continued

4.6.4 Vaults or Meter Boxes

(C)

4.6.4.1 The Company may consider a specially constructed cabinet recessed in the building wall, sealed from inside the building and vented to and accessible from outside the building.

(C)

4.6.4.2 The Company shall consider proper design and location criteria for a meter box including:

(C)

- (a) ventilation;
- (b) vehicular traffic;
- (c) soil accumulation;
- (d) surface water runoff;
- (e) high water table;
- (f) proximity to building air intakes or openings; and
- (g) proximity to an excessive heat source as defined under 49 C.F.R. §192.353(C).

4.6.4.3 Piping installed through vault walls shall be properly coated to protect from corrosion.

(C)

4.6.4.4 Vaults containing gas piping may not be connected by means of a drain connection to any other underground structure.

(C)

4.6.4.5 When a meter box is located outside a paved surface, the Company shall consider fill, topsoil, or sod being placed over the vault and, when feasible and practical to do so, choose an alternate location.

(C)

(C) Indicates Change

Issued: April 6, 2017

**M. A. Huwar
President**

Effective: June 5, 2017

**Supplement No. 259 to
Tariff Gas – Pa. P.U.C. No. 9
Third Revised Page No. 41
Canceling Second Revised Page No. 41**

Columbia Gas of Pennsylvania, Inc.

Canceling Second Revised Page No. 41

**RULES AND REGULATIONS GOVERNING THE
DISTRIBUTION AND SALE OF GAS (Continued)**

4. Customer's Installations – Continued

4.8 Temporary Service

(C)

The customer shall pay the cost for all material, labor and all other necessary expense incurred by the Company in supplying gas service to the customer for any temporary purpose or use, and shall pay the cost of removing material after service is discontinued, in addition to the regular payments for gas used. The Company will credit the customer with the reasonable salvage value of any material recovered.

4.9 Service Lines

(C)

4.9.1 The customer shall install at his expense the service line to the point of connection designated by the Company. (See Rule 8.1 Service Connections.)

(C)

4.9.2 The service line to be installed by the customer shall be in accordance with the Company's requirements as to diameter. All material and construction must be of a quality accepted by the best gas fitting practices, and must conform with the Company's Rules and Regulations governing the installation of service lines.

(C)

4.9.3 In those cases where the service connection of the Company has been installed, the customer shall connect the service line installed by him to the service connection of the Company in a manner required by the Company. In those cases where the service connection of the Company has not been installed, the Company shall connect the service line installed by the customer to the service connection of the Company.

(C)

4.9.4 When feasible and practical to do so, a building may not have more than one service line. No additional tap or service lines shall be made or meter set for gas service to a garage, or other building on any lot where there already exists a service line to the residence or main building of the customer.

(C)

4.9.5 When feasible and practical to do so, a service line must terminate at the inlet valve of the meter set in the building in which the service line enters.

(C)

4.9.6 When feasible and practical to do so, the customer's service line must be installed in a straight line perpendicular to the main.

(C)

4.10 Regulators

(C)

Except as otherwise provided herein, the pressure of gas flowing into a customer's meter shall be controlled by a device owned by the Company and referred to as a regulator. The Company shall determine the type and size of the regulator as well as procure, install and maintain the regulator. The Company may from time to time change or alter the regulator to ensure adequate pressure to serve the customer.

In rural areas, where gas service is obtained from a high pressure line, the necessary regulator or regulators and safety devices required to reduce the pressure from the maximum pressure at the high pressure line to a suitable utilization pressure are to be installed at the customer's expense.

(C) Indicates Change

Issued: April 6, 2017

**M. A. Huwar
President**

Effective: June 5, 2017

Columbia Gas of Pennsylvania, Inc.

**RULES AND REGULATIONS GOVERNING THE
DISTRIBUTION AND SALE OF GAS (Continued)**

4. Customer's Installations – Continued

4.12 Relocation of a Regulator

(C)

Whenever a regulator is relocated it must meet the Regulator Location criteria specified in the General and Outside Regulators subparagraphs above.

4.12.1 Notice of Relocation

(C)

4.12.1.1 Except in the case of an emergency, the Company shall provide written notice to a customer by first class mail or by personal delivery at least 30 days prior to relocating and subsequently installing a regulator outside the customer's building.

(C)

4.12.1.1.1 The notice must request that if the customer is not the owner of the building, the customer shall forward the written notices to the owner of the building.

(C)

4.12.1.1.2 If the Company knows the current address of the owner of the building, notice shall also be mailed or delivered to that address.

(C)

4.12.1.2 The written notice must inform the customer and building owner of the equipment that the Company proposes to relocate, the planned new location, and how to contact the Company to provide supplemental information that the Company may not have, such as the building's historic status. The written notice must include contact information for the Commission's Bureau of Consumer Services.

(C)

4.12.2 Responsibility of Cost

(C)

4.12.2.1 Unless caused by a customer's or building owner's violation of applicable gas safety or tariff rules, the Company shall pay the costs of relocating a regulator when the relocation is performed to meet the Company or Commission safety requirements, including, but not limited to, 52 Pa. Code § 59.18.

(C)

4.12.2.2 Unless caused by a customer's or building owner's violation of applicable gas safety or tariff rules, the Company shall bear the cost of extending customer-owned facilities to the new regulator location when the relocation is performed to meet the Company or Commission safety requirements, including, but not limited to, 52 Pa. Code § 59.18.

(C)

4.12.2.3 A customer or building owner requesting that a regulator be moved shall pay the costs associated with relocation when the regulator is currently situated in a suitable location under State and Federal regulations.

(C)

(C) Indicates Change

Issued: April 6, 2017

**M. A. Huwar
President**

Effective: June 5, 2017

**RULES AND REGULATIONS GOVERNING THE
DISTRIBUTION AND SALE OF GAS (Continued)**

5. Testing and Inspecting of Customer's Installations

5.1 Requirement

Prior to the introduction of gas service, the service line of the customer must be tested and inspected to ensure compliance with the Company's standards for gas piping on the customer's premises. Prior to the introduction of gas service, the house piping of the customer must be tested and inspected to ensure compliance with all applicable codes for house piping on the customer's premises.

5.2 Company's Right to Inspect Customer Service Lines

(C)

The Company shall have the right, but shall not be obliged, to inspect any new installation before service is introduced or at any later time, and reserves the right to reject any piping or appliances that is not in accordance with the Company's standard for gas piping on the customer's premises or any applicable codes. However, any such inspection, or failure to inspect, or to reject, shall not render the Company liable or responsible for any loss or damage, resulting from defects in the installation, piping, or appliances, or from violation of Company rules, or from accidents which may occur upon the premises of the customer.

5.3 Testing of Service Lines and House Piping

The customer's service line and house piping must be tested by the owner or his competent representative before service is rendered to a customer, or before service is resumed to a customer whose service line or house piping has been repaired, renewed, enlarged or changed in any manner. Such test is to be made in accordance with the Company's standards for gas piping on customer's premises and all applicable codes.

5.4 Defective Installation

The Company may refuse to connect if, in its judgment, the Customer's installation is defective, or unsatisfactory; it does not meet company standards; or if it fails to meet any applicable code.

(C) Indicates Change

Issued: December 15, 2015

**Mark Kempic
President**

Effective: December 18, 2015

Columbia Gas of Pennsylvania, Inc.

**RULES AND REGULATIONS GOVERNING THE
DISTRIBUTION AND SALE OF GAS (Continued)**

6. Credit - Continued

6.1 Prior Debts

6.1.1 Residential Prior Debts – continued

- (3) Information contained in the Company's records that indicate that the applicant was an occupant living at the premise for which the applicant is requesting service during the time frame that the bill accrued.
- (4) Use of a skip tracing software that contains records of names and addresses. This information is maintained by a third party vendor that contains multiple sources of public information. (C)
- (5) Information provided by the applicant or customer and accepted by the Company that verifies that the applicant or customer resided at another address during the period of time in which the bill accrued. (C)

If an outstanding balance exists at the property for which service is being requested, before providing service the Company may require the payment of any outstanding balance or portion of an outstanding balance if the applicant resided at the property for which service is requested during the time the outstanding balance accrued. (C)

6.1.2 Commercial or Industrial Prior Debts

Service will not be furnished to a former commercial or industrial customer until amounts due for gas service at a previous location and in the customer's name have been satisfied.

(C) Indicates Change

**RULES AND REGULATIONS GOVERNING THE
DISTRIBUTION AND SALE OF GAS (Continued)**

6. Credit - Continued

6.2 Deposits – Continued

3. A customer who fails to comply with a material term or condition of a settlement or payment arrangement. (C)

(B) The Company may accept a third-party guarantor in lieu of a cash deposit for a residential account. The guaranty shall be in writing and shall state the terms of the guaranty. The Guarantor shall be responsible for all missed payments owed to the Company.

(2) Non-Residential Deposits or Other Form of Adequate Financial Assurance

(A) Letters of credit or other forms of financial assurance acceptable to the Company may be required from all other applicants or customers. The Company shall perform a creditworthiness evaluation of the Applicant or Customer, including an assessment of the credit risk exposure resulting from, but not limited to, distribution rates, customer charges, charges for natural gas supply, interstate pipeline capacity charges, imbalance charges, cash-out charges, pipeline penalty charges, and any other amounts that may become owed to the Company by the Applicant or Customer. If at any time before or during the provision of service to the Applicant or Customer the Company determines that the credit risk exposure is greater than any secured and/or unsecured credit that may be granted resulting from the creditworthiness evaluation, the Applicant or Customer must provide the Company with adequate financial assurance to cover the difference between the credit risk exposure and any secured and/or unsecured credit granted prior to, or to continue receiving any type of service from the Company.

6.3 Return of Deposit or Other Form of Adequate Financial Assurance

The Company may hold a deposit secured from a residential customer until a timely payment history is established. A timely payment history is established when a Residential Customer has paid in full and on time for twelve (12) consecutive months. If a Residential Customer becomes delinquent before the end of the deposit holding period the Company may deduct the outstanding balance from the deposit. At the end of the deposit-holding period, the Company shall deduct the outstanding balance from the deposit and return or credit any positive difference to the customer. If service is terminated before the end of the deposit-holding period, the Company shall deduct the outstanding balance from the deposit and return any positive difference to the customer within sixty (60) days of the termination. (C)

Deposits or other forms of adequate financial assurance secured from a non-residential customer shall be returned to the depositor when undisputed bills covering a period of twelve (12) months have been paid, provided, however, that the Customer's credit profile determined from an updated creditworthiness evaluation conducted by the Company in its reasonable judgment has not so deteriorated by the end of the twelve months as to warrant continued retention of the deposit or other adequate financial assurance. The payment of any undisputed bill, within the meaning of the Public Utility Law, shall be payment of the bill with or without discount or penalty, within thirty (30) days following the period for which the bill was rendered, or payment within thirty (30) days following presentation of the bill, or the payment of any contested bill, payment of which is withheld beyond the period herein mentioned, and the dispute is terminated substantially in favor of the customer, and payment made by the customer within ten (10) days thereafter.

(C) Indicates Change

**Supplement No. 155 to
Tariff Gas – Pa. P.U.C. No. 9
Sixth Revised Page No. 47**

Columbia Gas of Pennsylvania, Inc.

Canceling Fourth and Fifth Revised Page No. 47

**RULES AND REGULATIONS GOVERNING THE
DISTRIBUTION AND SALE OF GAS (Continued)**

7. Point of Delivery of Gas to Customer

7.1 Point of Delivery

The point of delivery of gas to a customer shall be at the outlet side of the curb valve, or the property or lot line if there is no curb valve, at which point title of the gas shall pass to the customer; provided, however, in the territory formerly served under Tariff Gas - Pa. P.U.C. Nos. 6 and 7, the point of delivery shall be the outlet side of the meter at which point title of the gas shall pass to the customer. (See the Description of Territory section of this tariff to identify territory formerly served under Tariff Gas - Pa. P.U.C. No. 6 and Tariff Gas - Pa. P.U.C. No. 7.)

(C) Indicates Change

**RULES AND REGULATIONS GOVERNING THE
DISTRIBUTION AND SALE OF GAS (Continued)**

8. Extensions - Continued

8.2 Capital Expenditure Policy – Continued

8.2.2 Commercial and Industrial Distribution Service

The applicants will be required to provide a refundable cash deposit to the Company equal to the difference between the minimum capital investment required to serve the applicant's gas requirements and the amount of capital that the Company can justify investing in the project, based on the anticipated gas requirements of the applicant(s). Minimum capital investment is the capital expenditure required to serve only the gas requirements requested by the particular applicant(s).

- (a) Projects Where the Net Present Value of the Cash Flows, Using the Minimum Capital Investment, is Equal to or Greater than Zero.

Such projects are economically feasible provided that there are assurances that the applicant will use the projected quantities of gas for the minimum time period stated in the agreement. Such assurances may be provided in the form of a minimum use agreement, in which applicant contractually agrees to take delivery of certain minimum quantities of gas, and to pay the applicable distribution charges for such quantities, irrespective of applicant's actual consumption of gas. At the Company's sole discretion, a deposit may be required if the Company is not certain that the applicant will use the quantity of gas, as projected, for the entire Minimum Time Period. The maximum required deposit shall be no more than the minimum capital investment.

- (b) Projects Where the Net Present Value of the Cash Flows, Using the Minimum Capital Investment, is Less than Zero.

The Company shall require a refundable deposit in the amount equal to the net present value when the net present value is less than zero. For example, if the net present value of a project is -\$1,000, the Company shall require a \$1,000 refundable deposit. In addition, if there is uncertainty that the applicant will use the projected quantity of gas for the minimum time period stated in the agreement, the Company may, in its sole discretion, (1) require the Applicant to pay an additional refundable deposit, or (2) require the applicant to enter into a minimum use agreement, in which applicant contractually agrees to take delivery of certain minimum quantities of gas, and to pay the applicable distribution charges for such quantity, irrespective of applicant's actual consumption of gas. The additional refundable deposit, if required, shall be no more than the combined total of the Company's minimum capital investment and the net present value. For example, if the Company's minimum capital investment is \$10,000 and the net present value of the project is -\$1,000, the applicant shall be required to provide an additional \$9,000 deposit. (C)

For purposes of subsection (a) and (b), above, the maximum allowable investment is the amount of capital expenditure which the estimated revenues generated from a proposed project would support and still provide the necessary return to the Company, taking into consideration the estimated additional annual quantity, rate schedule, cost of gas, operating and maintenance expense, interest and taxes.

(C) Indicates Change

**Supplement No. 251 to
Tariff Gas – Pa. P.U.C. No. 9
Eighth Revised Page No. 50**

Columbia Gas of Pennsylvania, Inc. Canceling Sixth and Seventh Revised Page No. 50

**RULES AND REGULATIONS GOVERNING THE
DISTRIBUTION AND SALE OF GAS (Continued)**

8. Extensions - continued

8.3 Deposits and Refunds

When a deposit is required by the Company, the terms and conditions of the project and the refund will be specified in an agreement between the Company and the applicant.

Part or all of the deposit may be subject to refund to the applicant upon such basis or conditions as may be mutually agreeable to the Company and the applicant.

8.4 Ownership and Maintenance

The Company shall own, maintain and renew, when necessary, its main extension and/or service line from its main to the point of delivery, as defined in Rule 7.1.

8.5 Interference with Facilities

The Company's main, service line, curb valve shall not be opened, tampered or interfered with at any time. Any action taken, without the Company's prior knowledge, will be considered an action endangering the safety of a person or the integrity of the Company's delivery system and will be grounds for immediate termination of service.

8.6 Special Facilities

Any special services, facilities, instrumentalities or non-standard construction methodologies which may be rendered or furnished by the Company for an applicant or customer at his request or at the direction of a governmental authority, and not provided for in the Company's rate schedules, and not ordinarily, necessarily, or directly involved in the furnishing of natural gas distribution service, including but not limited to any distribution system improvements necessary to serve customers seeking to add gas fired generating units, natural gas vehicle filling stations or other customer equipment that places higher than typical demands on the distribution system, shall be paid for by the applicant or customer for whom such services, facilities, instrumentalities or non-standard construction methodologies are furnished, and such costs shall be in addition to the charges for natural gas distribution service provided for in the applicable rate schedule or in addition to any deposit required under this section.

(C) Indicates Change

Issued: December 14, 2016

Mark Kempic
President

Effective: December 19, 2016

**RULES AND REGULATIONS GOVERNING THE
DISTRIBUTION AND SALE OF GAS (Continued)**

10. Introduction of Service

10.1 Customer to be Present When Service is Commenced

As a safety precaution, the customer, or an adult representative of the customer, shall specify the time when gas service is to be turned on, and the Company will not turn on such service unless said customer or adult representative so directs.

11. Company Equipment on Customer's Premises

11.1 Maintenance

The Company shall keep in repair and maintain its own property installed on the premises of the customer.

11.2 Customer's Responsibility

The customer shall be responsible for safe keeping of the Company's property while located on the customer's premises. In the event of injury or destruction of any such property from the act of negligence of the customer or his agent, the customer shall pay the costs of repairs and replacement.

11.3 Protection by Customer

The customer shall protect the equipment of the Company on his premises, and shall not permit any person, except a Company employee having proper Company identification, to break any seals upon, or do any work on, any meter, service pipe or other equipment of the Company located on the customer's premises.

11.4 Tampering

In the event of the Company's meters or other property being tampered or interfered with, the customer being supplied through such equipment shall pay the amount which may be reasonably estimated to be due for service used but not registered on the Company's meter, and for any repairs, replacements or changes in facilities required, as well as for costs of inspections, investigations and protective installations.

11.5 Access to Premises

The Company, or its authorized agents, shall have access at all reasonable times to the property or premises in or on which gas is used, to determine if the gas is being carried, distributed and burned in a proper and safe manner and in accordance with these Rules and Regulations, or to read, inspect and test the meter or house lines and other appliances, equipment or facilities. Refusal on the part of the customer to allow access to his premises shall constitute sufficient cause for turning off the gas supply to such premises.

(C) Indicates Change

**Supplement No. 155 to
Tariff Gas – Pa. P.U.C. No. 9
Second Revised Page No. 54
Canceling Original and First Page No. 54**

Columbia Gas of Pennsylvania, Inc.

**RULES AND REGULATIONS GOVERNING THE
DISTRIBUTION AND SALE OF GAS (Continued)**

12. Selection of Rate Schedule

12.1 Choice of Rate and Company Assistance

Where optional rate schedules are available for the same class of service, the customer shall designate the schedule he desires. Where selection of the most favorable schedule is difficult to predetermine, the Company will, at the request of the customer, assist the customer in the choice of the schedule most advantageous to the customer. The customer will be given reasonable opportunity to change to another schedule, but the Company shall not be required to make refunds for any previous billing under any schedule prior to the time of receipt of a written request from the customer for a change to another schedule.

While the Company will explain the contents of each of its rate schedules to customers, the Company shall not be required to assist customers in choosing between sales service and distribution service or in evaluating proposals of natural gas suppliers.

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 daily maximum and annual volume of the load being evaluated, the character of service being requested (sales service or general distribution service, firm service or interruptible service) and 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. 40-42) 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 Ending</u>	11/30/2017	11/30/2016	11/30/2015	11/30/2014	11/30/2013
	641,074	631,317	740,299	733,227	632,443

**Maximum Coincident Three-Day Peak Day Demand
 (Dth)**

<u>Twelve Months Ending</u>	11/30/2017	11/30/2016	11/30/2015	11/30/2014	11/30/2013
Day 1	551,205	596,348	617,841	680,730	632,443
Day 2	578,140	550,658	740,299	733,227	585,786
Day 3	607,435	631,317	638,205	561,193	577,246

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, 2020

Line No.	Period	Residential					Commercial					Industrial					
		Sales Customers	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	MDth	Dth/Cust	MDth	MDth	MDth	MDth	Dth/Cust	MDth	MDth	MDth	MDth	Dth/Cust	
1	Jan	2020	399,407	4,833	1,885	6,718	16.8	37,687	2,034	2,164	4,198	111.4	183	37	2,110	2,147	11,711
2	Feb		400,119	4,698	1,824	6,522	16.3	37,757	1,999	2,162	4,161	110.2	183	28	2,220	2,248	12,262
3	Mar		400,487	3,880	1,498	5,378	13.4	37,766	1,628	1,758	3,386	89.7	183	20	2,160	2,180	11,891
4	Apr		399,583	2,614	1,010	3,624	9.1	37,701	992	1,427	2,419	64.2	183	13	2,017	2,030	11,073
5	May		398,165	1,176	478	1,654	4.2	37,600	389	940	1,329	35.3	183	9	1,947	1,956	10,669
6	Jun		396,632	646	248	894	2.3	37,492	175	731	906	24.2	183	6	1,899	1,905	10,391
7	Jul		395,779	392	146	538	1.4	37,426	105	655	760	20.3	183	4	1,780	1,784	9,731
8	Aug		395,357	385	138	523	1.3	37,380	84	634	718	19.2	183	4	1,783	1,787	9,747
9	Sep		395,526	408	146	554	1.4	37,385	92	671	763	20.4	183	6	1,873	1,879	10,249
10	Oct		396,945	624	276	900	2.3	37,448	274	854	1,128	30.1	183	9	1,929	1,938	10,571
11	Nov		399,448	1,647	682	2,329	5.8	37,619	556	1,235	1,791	47.6	183	13	1,990	2,003	10,925
12	Dec	2020	401,854	3,413	1,343	4,756	11.8	37,784	1,287	1,743	3,030	80.2	183	20	1,981	2,001	10,914
13																	
14	Total or Average		398,275	24,716	9,674	34,390	86.04	37,587	9,615	14,974	24,589	652.77	183	169	23,689	23,858	130,134.54
15																	
16	Heating Season			18,471	7,232	25,703	64		7,504	9,062	16,566	439		118	10,461	10,579	57,704
17	(November-March)																
18	Non-Heating Season			6,245	2,442	8,687	22		2,111	5,912	8,023	214		51	13,228	13,279	72,431
19	(April-October)																
20	Daily Average = Total/365			67.72	26.50	94.22			26.34	41.02	67.37			0.46	64.90	65.36	

Columbia Gas of Pennsylvania, Inc
 Analysis of the Average Monthly Consumption
 Twelve Months Ended December 31, 2021

Line No.	Period	Residential					Commercial					Industrial					
		Customers	Sales	Trans	Through-	Average	Total Customers	Sales	Trans	Through-	Average	Total Customers	Sales	Trans	Through-	Average	
			Volume	Volume	Put			Volume	Volume	Volume			Volume	Put			
			MDth	MDth	MDth			Dth/Cust	MDth	MDth			MDth	Dth/Cust	MDth		MDth
1	Jan	2021	403,102	4,863	1,892	6,755	16.8	37,877	2,040	2,167	4,207	111.1	183	37	2,123	2,160	11,782
2	Feb		403,828	4,727	1,831	6,558	16.2	37,949	2,006	2,165	4,171	109.9	183	28	2,223	2,251	12,278
3	Mar		404,210	3,904	1,504	5,408	13.4	37,959	1,634	1,759	3,393	89.4	183	20	2,162	2,182	11,902
4	Apr		403,322	2,630	1,014	3,644	9.0	37,897	995	1,428	2,423	63.9	183	13	2,012	2,025	11,045
5	May		401,922	1,184	479	1,663	4.1	37,799	389	941	1,330	35.2	183	9	1,949	1,958	10,680
6	Jun		400,408	651	249	900	2.2	37,693	174	732	906	24.0	183	6	1,902	1,908	10,407
7	Jul		399,579	395	146	541	1.4	37,630	104	655	759	20.2	183	4	1,783	1,787	9,747
8	Aug		399,176	388	138	526	1.3	37,585	83	634	717	19.1	183	4	1,816	1,820	9,927
9	Sep		399,369	411	147	558	1.4	37,593	91	671	762	20.3	183	6	1,888	1,894	10,331
10	Oct		400,815	628	277	905	2.3	37,659	273	855	1,128	30.0	183	9	1,932	1,941	10,587
11	Nov		403,344	1,658	685	2,343	5.8	37,833	557	1,237	1,794	47.4	183	13	1,993	2,006	10,942
12	Dec	2021	405,769	3,435	1,349	4,784	11.8	38,000	1,293	1,745	3,038	79.9	183	20	1,984	2,004	10,931
13																	
14	Total or Average		402,070	24,874	9,711	34,585	85.72	37,790	9,639	14,989	24,628	650.36	183	169	23,767	23,936	130,560.00
15																	
16	Heating Season			18,587	7,261	25,848	64		7,530	9,073	16,603	438		118	10,485	10,603	57,834
17	(November-March)																
18	Non-Heating Season			6,287	2,450	8,737	22		2,109	5,916	8,025	213		51	13,282	13,333	72,726
19	(April-October)																
20	Daily Average = Total/365			68.15	26.61	94.75			26.41	41.07	67.47			0.46	65.12	65.58	

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

Line No.	Period	Residential					Commercial					Industrial					
		Customers	Sales	Trans	Through-	Average	Total Customers	Sales	Trans	Through-	Average	Total Customers	Sales	Trans	Through-	Average	
			Volume	Volume	Put			Put	Volume	Volume			Put	Put	Volume		Volume
MDth	MDth	MDth	Dth/Cust	MDth	MDth	MDth	MDth	MDth	Dth/Cust	MDth	MDth	MDth	MDth	Dth/Cust			
1	Jan	2022	407,022	4,899	1,901	6,800	16.7	38,088	2,049	2,173	4,222	110.8	183	37	2,124	2,161	11,787
2	Feb		407,762	4,762	1,840	6,602	16.2	38,162	2,014	2,172	4,186	109.7	183	28	2,194	2,222	12,120
3	Mar		408,159	3,933	1,511	5,444	13.3	38,174	1,641	1,765	3,406	89.2	183	20	2,163	2,183	11,907
4	Apr		407,288	2,650	1,019	3,669	9.0	38,114	1,001	1,432	2,433	63.8	183	13	2,020	2,033	11,089
5	May		405,906	1,193	482	1,675	4.1	38,019	392	944	1,336	35.1	183	9	1,950	1,959	10,685
6	Jun		404,414	656	250	906	2.2	37,917	176	734	910	24.0	183	6	1,904	1,910	10,418
7	Jul		403,608	398	147	545	1.4	37,855	108	656	764	20.2	183	4	1,777	1,781	9,715
8	Aug		403,226	391	139	530	1.3	37,813	86	635	721	19.1	183	4	1,817	1,821	9,933
9	Sep		403,444	414	148	562	1.4	37,823	93	673	766	20.3	183	6	1,889	1,895	10,336
10	Oct		404,919	634	278	912	2.3	37,893	277	857	1,134	29.9	183	9	1,933	1,942	10,593
11	Nov		407,475	1,672	688	2,360	5.8	38,069	562	1,240	1,802	47.3	183	13	1,994	2,007	10,947
12	Dec	2022	409,920	3,462	1,356	4,818	11.8	38,239	1,301	1,750	3,051	79.8	183	20	1,985	2,005	10,936
13																	
14	Total or Average		406,095	25,064	9,759	34,823	85.47	38,014	9,700	15,031	24,731	649.29	183	169	23,750	23,919	130,467.27
15																	
16	Heating Season			18,728	7,296	26,024	64		7,567	9,100	16,667	437		118	10,460	10,578	57,698
17	(November-March)																
18	Non-Heating Season			6,336	2,463	8,799	22		2,133	5,931	8,064	212		51	13,290	13,341	72,769
19	(April-October)																
20	Daily Average = Total/365			68.67	26.74	95.41			26.58	41.18	67.76			0.46	65.07	65.53	

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, 2017
Dth

Description	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Total
Requirements													
Residential	3,776,093	5,131,730	4,196,339	3,605,226	2,546,462	1,090,231	670,110	447,384	402,935	474,538	536,367	1,824,936	24,702,350
Commercial	1,176,601	1,716,237	1,387,533	1,148,516	859,059	349,424	251,136	201,724	182,324	206,398	240,399	586,986	8,306,334
Industrial	19,813	32,791	13,708	12,092	8,082	6,298	5,001	5,766	5,328	7,618	8,341	13,231	138,068
Public Authority	0	0	0	0	0	0	0	0	0	0	0	0	0
Unbilled Revenue - Dth	1,210,000	(484,000)	(1,028,000)	194,000	(1,591,000)	(175,000)	(262,000)	2,000	28,000	77,000	724,000	1,650,000	345,000
Other	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Retail	6,182,507	6,396,757	4,569,579	4,959,834	1,822,602	1,270,953	664,247	656,873	618,587	765,554	1,509,107	4,075,153	33,491,752
Other Company Use	8,535	7,965	(7,965)	0	0	0	0	0	0	0	0	0	8,535
Gas Left On For Reconnect/Gas Lost - Line Breaks	(252)	(50)	(48)	(652)	(242)	(154)	1,065	(234)	123	2,103	(521)	938	2,075
Gas Lost from Storage - Current	67	67	67	67	67	67	67	66	67	66	67	67	799.16
Non-Traditional Sales - Dth	182,900	95,700	98,000	51,339	90,900	542,500	0	51,000	973,600	276,810	112,800	22,500	2,498,049
Total Miscellaneous Deliveries	191,250	103,682	90,054	50,754	90,724	542,413	1,132	50,832	973,790	278,978	112,346	23,505	2,509,459
Unaccounted for - Losses in Black	2,070,085	557,954	(1,664,379)	(492,106)	(826,899)	(79,525)	(228,186)	47,332	172,102	(98,550)	(303,314)	(55,404)	(900,892)
Total Requirements	8,443,842	7,058,393	2,995,254	4,518,481	1,086,427	1,733,840	437,192	755,037	1,764,479	945,983	1,318,138	4,043,254	35,100,319
Supply													
Field Line Purchases	10,081	8,903	11,135	10,186	9,926	10,423	10,176	11,611	6,586	9,344	9,495	10,899	118,765
Transmission Line Purchases	2,400,685	1,207,565	434,690	185,248	2,436,583	3,555,670	3,504,910	3,519,413	5,782,897	3,120,851	1,813,370	2,273,839	30,235,721
City Gate Purchases	842,095	801,905	672,240	430,900	347,751	516,385	442,350	237,785	239,785	232,050	301,016	731,518	5,795,780
Other Purchased Gas Expenses	0	0	0	0	0	0	0	0	0	0	0	0	0
Exchange Activity	737,251	(489,193)	(1,638,210)	(1,510,394)	772,255	716,854	80,183	350,369	426,689	741,589	201,989	(205,971)	183,410
Total Purchases	3,990,112	1,529,180	(520,145)	(884,060)	3,566,515	4,799,332	4,037,619	4,119,178	6,455,957	4,103,835	2,325,870	2,810,285	36,333,676
Storage	4,453,663	5,529,146	3,515,332	5,402,474	(2,480,155)	(3,065,558)	(3,600,493)	(3,364,206)	(4,691,545)	(3,157,918)	(1,007,799)	1,232,903	(1,234,156)
Shrinkage	67	67	67	67	67	67	67	66	67	66	67	67	799
Gas Volumes Available - Steamed	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Supply	8,443,842	7,058,393	2,995,254	4,518,481	1,086,427	1,733,840	437,192	755,037	1,764,479	945,983	1,318,138	4,043,254	35,100,319

Columbia Gas of Pennsylvania, Inc.
Twelve Months Ended November 30, 2016
Dth

Description	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Total
Requirements													
Residential	2,817,455	4,292,049	5,049,853	3,715,924	2,423,108	1,272,621	711,073	442,206	380,724	394,643	544,491	1,486,412	23,530,557
Commercial	910,027	1,419,043	1,675,937	1,241,735	739,392	428,314	248,835	179,629	165,468	174,847	229,380	491,804	7,904,411
Industrial	16,480	29,787	42,919	32,599	17,586	9,419	4,030	4,557	4,239	945	7,255	10,778	180,595
Public Authority	0	0	0	0	0	0	0	0	0	0	0	0	0
Unbilled Revenue - Dth	15,000	1,355,000	(555,000)	(1,441,000)	(552,000)	(469,000)	(316,000)	0	33,000	17,000	771,000	1,264,000	122,000
Other	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Retail	3,758,962	7,095,878	6,213,709	3,549,258	2,628,086	1,241,354	647,938	626,392	583,431	587,436	1,552,125	3,252,994	31,737,562
Other Company Use	8,759	9,450	10,251	10,684	7,805	6,309	5,782	4,237	3,380	4,342	4,276	20,387	95,661
Gas Left On For Reconnect	0	0	0	0	(140)	(495)	(141)	(54)	(95)	(113)	(9,479)	(84)	(10,601)
Gas Lost from Storage - Current	68	68	68	67	67	67	68	67	66	67	64	66	802
Non-Traditional Sales - Dth	40,000	156,890	229,633	451,900	356,300	506,700	164,400	20,000	53,189	15,000	92,500	1,300	2,087,812
Total Miscellaneous Deliveries	48,827	166,408	239,952	462,651	364,032	512,580	170,109	24,250	56,540	19,295	87,361	21,669	2,173,674
Unaccounted for - Losses in Black	665,743	968,543	(73,117)	(640,092)	(2,084,415)	324,085	(383,215)	(605,430)	(59,036)	27,724	426,493	685,176	(747,541)
Total Requirements	4,473,532	8,230,829	6,380,544	3,371,817	907,703	2,078,020	434,832	45,211	580,935	634,455	2,065,979	3,959,839	33,163,695
Supply													
Field Line Purchases	12,145	13,528	10,379	10,023	12,331	9,839	14,373	9,356	7,317	9,338	10,250	10,701	129,580
Transmission Line Purchases	1,187,420	555,978	467,170	472,705	3,612,446	3,667,893	3,293,012	3,538,724	3,217,671	2,628,461	1,927,504	550,054	25,119,038
City Gate Purchases	762,405	554,048	821,918	711,746	639,068	569,564	456,650	456,795	459,885	445,040	503,695	696,650	7,077,464
Other Purchased Gas Expenses	0	0	0	0	0	0	0	0	0	0	0	0	0
Exchange Activity	382,947	(661,456)	(612,747)	(1,021,329)	(962,787)	894,103	(212,743)	(397,051)	166,057	598,428	649,511	534,239	(642,829)
Total Purchases	2,344,917	462,098	686,720	173,145	3,301,058	5,141,399	3,551,292	3,607,824	3,850,929	3,681,267	3,090,960	1,791,644	31,683,253
Storage	2,128,547	7,768,663	5,693,756	3,198,605	(2,393,421)	(3,063,446)	(3,116,529)	(3,562,680)	(3,270,060)	(3,046,879)	(1,025,045)	2,168,129	1,479,639
Shrinkage	68	68	68	67	67	67	68	67	66	67	64	66	802
Gas Volumes Available - Steamed	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Supply	4,473,532	8,230,829	6,380,543	3,371,817	907,703	2,078,020	434,831	45,211	580,935	634,454	2,065,979	3,959,839	33,163,694

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 =		1998	2017	20 year average					
		Customers	Actual	Dth/Cus			HDD	HDD	Normal		
			Dth	Actual	NTS	TS Actual	TS Normal	Normal	Actual	Normal	Dth
2017	Jan	390,253	6,429,805	16.48	1.50	14.97	15.61	17.11	1036	1080	6,677,953
2017	Feb	390,777	5,242,543	13.42	1.34	12.07	15.19	16.53	826	1039	6,459,211
2017	Mar	391,078	4,495,983	11.50	1.34	10.16	12.17	13.50	724	867	5,280,850
2017	Apr	390,176	3,171,594	8.13	1.37	6.76	7.49	8.86	493	546	3,455,271
2017	May	388,794	1,359,587	3.50	1.37	2.12	2.54	3.91	220	263	1,520,884
2017	Jun	387,557	836,206	2.16	1.40	0.76	0.77	2.17	86	87	839,639
2017	Jul	386,740	556,756	1.44	1.44	0.00	0.00	1.44	10	9	556,756
2017	Aug	386,176	501,907	1.30	1.30	0.00	0.00	1.30	3	3	501,907
2017	Sep	386,502	588,674	1.52	1.39	0.14	0.06	1.45	47	21	559,191
2017	Oct	387,584	663,210	1.71	1.35	0.36	0.66	2.00	88	159	776,644
2017	Nov	389,898	2,256,947	5.79	1.35	4.44	4.59	5.94	430	445	2,317,279
2016	Dec	388,829	4,741,754	12.19	1.47	10.72	10.73	12.21	807	808	4,746,920
			30,844,966	79.13	16.62	62.51	69.80	86.42	4770	5327	33,692,504

Commercial Normalization Routine											
		Normal =		1998	2017	20 year average					
		Customers	Actual	Dth/Cus			HDD	HDD	Normal		
			Dth	Actual	NTS	TS Actual	TS Normal	Normal	Actual	Normal	Dth
2017	Jan	37,243	3,956,547	106.24	21.32	84.92	88.52	109.84	1036	1080	4,090,863
2017	Feb	37,262	3,339,991	89.64	19.02	70.62	88.83	107.85	826	1039	4,018,522
2017	Mar	37,266	2,909,089	78.06	18.93	59.14	70.82	89.74	724	867	3,344,360
2017	Apr	37,197	2,155,300	57.94	19.36	38.59	42.73	62.09	493	546	2,309,601
2017	May	37,099	1,179,656	31.80	19.48	12.32	14.73	34.21	220	263	1,268,977
2017	Jun	37,059	898,375	24.24	19.79	4.46	4.51	24.29	86	87	900,295
2017	Jul	36,957	718,903	19.45	19.45	0.00	0.00	19.45	10	9	718,903
2017	Aug	36,924	714,382	19.35	19.35	0.00	0.00	19.35	3	3	714,382
2017	Sep	36,904	788,156	21.36	19.63	1.72	0.77	20.40	47	21	752,957
2017	Oct	36,928	857,570	23.22	19.11	4.11	7.43	26.54	88	159	980,069
2017	Nov	37,076	1,771,702	47.79	19.17	28.61	29.61	48.78	430	445	1,808,709
2016	Dec	37,148	3,023,746	81.40	20.89	60.51	60.58	81.47	807	808	3,026,531
			22,313,418	600.48	235.50	364.98	408.52	644.02	4770	5327	23,934,168

Exhibit No. 10
Schedule No. 9
Page 1 of 1
Witness: C. H. Chen

COLUMBIA GAS OF PENNSYLVANIA, INC.
VOLUMETRIC PORTION OF THE LOAD GROWTH ADJUSTMENT
TWELVE MONTHS ENDED NOVEMBER 30, 2017
53.62

Response:

Please see Exhibit 3, Schedule 5.

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.

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, 2017 (Historic Test Year).

	(MDth)
Interstate Pipeline Purchases	30,421
City Gate Purchases	5,795
Local Production	119
Storage	
Withdrawal	20,718
Injection	<u>(21,951)</u>
Net	(1,233)
All Sources	35,102

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 2016, January 2017, April 2017, July 2017 and October 2017.
- 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, 2016, the cost of purchased gas exceeded the revenues collected in tariff rates by \$8,952,321.

(ii) During the twelve month period ended November 30, 2017, the revenues exceeded the cost of purchased gas collected in tariff rates by \$762,084.
- d. All purchased gas costs are included in Base Tariff Rates for the twelve months ending November 30, 2017.
- e. The purchased gas cost charged to the operating expense account during the twelve month period ended November 30, 2017 totaled \$163,188,842.94.
- 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-16	(7,633,493)
Nov-16	(6,218,373)
Dec-16	(4,603,306)
Jan-17	6,770,904
Feb-17	9,866,855
Mar-17	2,290,979
Apr-17	9,311,122
May-17	(984,806)
Jun-17	(1,493,724)
Jul-17	(3,028,690)
Aug-17	(3,624,618)
Sep-17	(3,245,623)
Oct-17	(5,824,525)
Nov-17	(4,672,486)

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, 2018 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 61.

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 62.
These pages are Exhibit 1-D from Columbia's 2017 1307(f) filing at Docket No. R-2017-2591326.

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, 2016

<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>	129,580	285,214
2	803	<u>Natural Gas Transmission line Purchases</u>		
3		Non-Appalachian Sources	26,081,595	57,338,510
4		Transportation- Affiliates	0	0
5		Transportation- Non-Affiliates	(534,203)	42,262,009
6		Storage - Affiliates	0	0
7		Storage - Non-Affiliates	(440,333)	18,440,564
8		Off System Sales - Purchases	0	2,703
9		Off System Sales - Transportation	0	0
10		Total Transmission line Purchases	<u>25,107,059</u>	<u>118,043,787</u>
11	804	<u>Natural Gas City Gate Purchases</u>	7,077,464	18,733,436
12	805	<u>Propane Purchases</u>	0	0
13	806	<u>Exchange Gas (Net)</u>	(642,829)	1,964,245
14	807	<u>Broker Fees</u>	0	0
15	808	<u>Storage Activity</u>		
16		Gas Withdrawn from Underground Storage	21,908,185	65,797,319
17		Gas Delivered to Underground Storage	<u>(20,427,744)</u>	<u>(50,282,744)</u>
18		Total Gas Stored (Net)	<u>1,480,441</u>	<u>15,514,575</u>
19	813	<u>Exchange Fees</u>		
20		Fees - Nonaffiliated	0	4,500
21		Fees - Affiliated	0	0
22		Total Exchange Fees	<u>0</u>	<u>4,500</u>
23		<u>Gas Lost From Storage</u>	0	0
24		TOTAL GAS PURCHASED	33,151,715	154,545,756

() 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, 2017

Line No.	Account No.	Description	Volumes	Costs
			(1) Dth	(2) \$
1	801	<u>Natural Gas Field Line Purchases</u>	118,765	358,407
2	803	<u>Natural Gas Transmission line Purchases</u>		
3		Non-Appalachian Sources	31,297,585	90,412,187
4		Transportation- Affiliates	0	0
5		Transportation- Non-Affiliates	(509,324)	42,034,004
6		Storage - Affiliates	0	0
7		Storage - Non-Affiliates	(550,466)	18,481,269
8		Off System Sales - Purchases	0	844
9		Off System Sales - Transportation	0	0
10		Total Transmission line Purchases	<u>30,237,795</u>	<u>150,928,305</u>
11	804	<u>Natural Gas City Gate Purchases</u>	5,795,780	17,924,203
12	805	<u>Propane Purchases</u>	0	0
13	806	<u>Exchange Gas (Net)</u>	183,410	(651,241)
14	807	<u>Broker Fees</u>	0	0
15	808	<u>Storage Activity</u>		
16		Gas Withdrawn from Underground Storage	20,717,789	55,288,235
17		Gas Delivered to Underground Storage	(21,951,146)	(65,370,384)
18		Total Gas Stored (Net)	<u>(1,233,357)</u>	<u>(10,082,149)</u>
19	813	<u>Exchange Fees</u>		
20		Fees - Nonaffiliated	0	0
21		Fees - Affiliated	0	112,917
22		Total Exchange Fees	<u>0</u>	<u>112,917</u>
23		<u>Gas Lost From Storage</u>	0	0
24		TOTAL GAS PURCHASED	35,102,393	158,590,443

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

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

EXHIBIT 1-D
SCHEDULE 1
SHEET 1 OF 3

COLUMBIA GAS OF PENNSYLVANIA, INC.
Summary of Purchased Gas Costs
by Type by Month

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
	\$	\$	\$	\$	\$	\$
	(1)	(2)	(3)	(4)	(5)	(6=1+2+3+4+5)
February, 2016	1,361,261	(270,964)	22,845	18,938,335	4,430,201	24,481,678
March	837,960	382,250	21,973	11,384,183	4,397,902	17,024,268
April	819,408	6,595,517	23,135	(3,060,152)	2,892,664	7,270,572
May	688,494	7,101,111	11,605	(4,466,193)	2,750,384	6,085,401
June	460,018	7,816,052	26,476	(5,486,327)	2,766,663	5,582,882
July	727,191	10,682,937	18,018	(8,779,505)	2,810,449	5,459,091
August	661,125	8,464,224	21,372	(6,571,159)	2,615,332	5,190,895
September	693,027	8,398,758	24,320	(7,632,648)	2,781,843	4,265,299
October	875,570	5,480,334	29,144	(1,277,895)	4,139,185	9,246,338
November	1,383,214	1,394,587	29,909	7,265,312	4,101,735	14,174,756
December	2,095,909	7,794,742	30,121	13,351,437	4,193,093	27,465,302
January, 2017	2,354,587	3,879,231	29,020	16,252,596	4,169,110	26,684,544
Total	12,957,764	67,718,779	287,939	29,917,983	42,048,561	152,931,026

COLUMBIA GAS OF PENNSYLVANIA, INC.
Summary of Purchased Gas Costs
by Type by Month

Month	City Gate Purchases (Schedule 2)	City Gate Purchases (Schedule 2)	Non-Local Purchases (Schedule 3)	Non-Local Purchases (Schedule 3)	Local Purchases (Schedule 4)	Local Purchases (Schedule 4)	Gas Stored Underground (Schedule 5)	Gas Stored Underground (Schedule 5)	Transportation & Gathering (Schedule 6)	Transportation & Gathering (Schedule 6)	Total	Total	Total
	Demand	Commodity	Demand	Commodity	Demand	Commodity	Demand	Commodity	Demand	Commodity	Demand	Commodity	Schedules
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
February, 2016	0	1,361,261	0	(270,964)	0	22,845	1,487,370	17,450,964	4,333,352	96,849	5,820,722	18,660,956	24,481,678
March	0	837,960	0	382,250	0	21,973	1,487,411	9,896,772	4,334,183	63,719	5,821,593	11,202,675	17,024,268
April	0	819,408	0	6,595,517	0	23,135	1,487,417	(4,547,570)	2,817,856	74,808	4,305,273	2,965,298	7,270,572
May	0	688,494	0	7,101,111	0	11,605	1,487,411	(5,953,603)	2,677,699	72,685	4,165,110	1,920,291	6,085,401
June	0	460,018	0	7,816,052	0	26,476	1,487,411	(6,973,737)	2,718,317	48,346	4,205,727	1,377,155	5,582,882
July	0	727,191	0	10,682,937	0	18,018	1,487,411	(10,266,916)	2,758,313	52,136	4,245,723	1,213,367	5,459,091
August	0	661,125	0	8,464,224	0	21,372	1,487,411	(8,058,569)	2,726,433	(111,101)	4,213,844	977,051	5,190,895
September	0	693,027	0	8,398,758	0	24,320	1,487,411	(9,120,059)	2,726,503	55,339	4,213,914	51,385	4,265,299
October	0	875,570	0	5,480,334	0	29,144	1,487,411	(2,765,305)	4,104,037	35,148	5,591,447	3,654,891	9,246,338
November	0	1,383,214	0	1,394,587	0	29,909	1,487,567	5,777,745	4,042,386	59,349	5,529,953	8,644,803	14,174,756
December	0	2,095,909	0	7,794,742	0	30,121	1,487,567	11,863,871	4,096,290	96,803	5,583,856	21,881,446	27,465,302
January, 2017	0	2,354,587	0	3,879,231	0	29,020	1,487,567	14,765,029	4,098,299	70,811	5,585,866	21,098,679	26,684,544
Total	0	12,957,764	0	67,718,779	0	287,939	17,849,361	12,068,622	41,433,668	614,893	59,283,029	93,647,997	152,931,026

EXHIBIT 1-D
SCHEDULE 1
SHEET 3 OF 3

COLUMBIA GAS OF PENNSYLVANIA, INC.
Summary of Purchased Gas Costs
by Type by Month

Month	City Gate Purchases (Schedule 2) Dth	Non-Local Purchases (Schedule 3) Dth	Local Purchases (Schedule 4) Dth	Gas Stored Underground (Schedule 5) Dth	Transportation & Shrinkage (Schedule 6) Dth	Total Dth
February, 2016	601,895	385,646	10,379	5,549,058	(15,532)	6,531,446
March	476,549	456,683	10,023	3,121,170	(16,772)	4,047,653
April	411,458	3,735,026	12,341	(2,449,553)	(74,338)	1,634,934
May	334,365	3,878,172	9,840	(3,093,017)	(78,826)	1,050,534
June	229,040	3,516,333	14,180	(3,132,368)	(63,619)	563,566
July	236,695	3,820,444	9,356	(3,570,219)	(65,696)	430,580
August	239,785	3,416,581	7,355	(3,278,651)	(60,809)	324,261
September	232,040	2,933,506	9,301	(3,053,645)	(58,251)	62,951
October	283,595	2,136,620	10,250	(1,032,738)	(44,239)	1,353,488
November	483,650	640,021	10,701	2,160,715	(11,001)	3,284,086
December	621,995	2,380,791	10,081	4,401,167	(46,507)	7,367,527
January, 2017	581,805	1,094,148	8,903	5,442,833	(27,718)	7,099,971
Total	<u>4,732,872</u>	<u>28,393,972</u>	<u>122,710</u>	<u>1,064,752</u>	<u>(563,308)</u>	<u>33,750,998</u>

EXHIBIT 1-D
SCHEDULE 2
PAGE 1 OF 3

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

LINE NO.	MONTH	VOLUME	DEMAND	COMMODITY	TOTAL
		DTH	\$	\$	\$
1	FEBRUARY - 2016	601,015	0	1,361,766	1,361,766
2	ADJUSTMENT	880	0	(505)	(505)
3	MARCH	477,505	0	836,868	836,868
4	ADJUSTMENT	(956)	0	1,092	1,092
5	APRIL	412,078	0	809,346	809,346
6	ADJUSTMENT	(620)	0	10,062	10,062
7	MAY	334,395	0	686,680	686,680
8	ADJUSTMENT	(30)	0	1,814	1,814
9	JUNE	229,350	0	458,660	458,660
10	ADJUSTMENT	(310)	0	1,358	1,358
11	JULY	236,995	0	723,594	723,594
12	ADJUSTMENT	(300)	0	3,597	3,597
13	AUGUST	240,095	0	665,971	665,971
14	ADJUSTMENT	(310)	0	(4,845)	(4,845)
15	SEPTEMBER	232,350	0	694,408	694,408
16	ADJUSTMENT	(310)	0	(1,382)	(1,382)
17	OCTOBER	283,895	0	878,965	878,965
18	ADJUSTMENT	(300)	0	(3,395)	(3,395)
19	NOVEMBER	483,960	0	1,389,260	1,389,260
20	ADJUSTMENT	(310)	0	(6,046)	(6,046)
21	DECEMBER	622,905	0	2,109,395	2,109,395
22	ADJUSTMENT	(910)	0	(13,486)	(13,486)
23	JANUARY - 2017	582,425	0	2,391,348	2,391,348
24	ADJUSTMENT	(620)	0	(36,761)	(36,761)
25	TOTAL	<u>4,732,872</u>	<u>0</u>	<u>12,957,764</u>	<u>12,957,764</u>

EXHIBIT 1-D
SCHEDULE 2
SHEET 2 OF 3

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF HISTORIC COST OF CITY GATE PURCHASES
FROM EQUITABLE/PEOPLES

LINE NO.	MONTH	VOLUME (1) DTH	RATE (2) \$/DTH	TOTAL GAS COST (3=1x2) \$
1	FEBRUARY - 2016	1,200	2.5327	3,039
2	ADJUSTMENT TO ACTUAL	(620)	2.6100	(1,618)
3	MARCH	620	1.9800	1,228
4	ADJUSTMENT TO ACTUAL	(1,200)	2.5327	(3,039)
5	ADJUSTMENT TO ACTUAL	244	3.4836	850
6	APRIL	30	2.1900	66
7	ADJUSTMENT TO ACTUAL	(620)	1.9800	(1,228)
8	MAY	310	2.2700	704
9	ADJUSTMENT TO ACTUAL	(30)	2.1900	(66)
10	JUNE	300	2.2500	675
11	ADJUSTMENT TO ACTUAL	(310)	2.2700	(704)
12	JULY	310	3.2100	995
13	ADJUSTMENT TO ACTUAL	(300)	2.2500	(675)
14	AUGUST	310	2.9900	927
15	ADJUSTMENT TO ACTUAL	(310)	3.2100	(995)
16	SEPTEMBER	300	3.0900	927
17	ADJUSTMENT TO ACTUAL	(310)	2.9900	(927)
18	OCTOBER	310	3.1800	986
19	ADJUSTMENT TO ACTUAL	(300)	3.0900	(927)
20	NOVEMBER	910	3.0349	2,762
21	ADJUSTMENT TO ACTUAL	(310)	3.1800	(986)
22	DECEMBER	620	3.4700	2,151
23	ADJUSTMENT TO ACTUAL	(910)	3.0349	(2,762)
24	JANUARY - 2017	1,240	3.8000	4,712
25	ADJUSTMENT TO ACTUAL	(620)	3.4700	(2,151)
26	TOTAL	<u>864</u>		<u>3,944</u>

EXHIBIT 1-D
SCHEDULE 2
SHEET 3 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 - 2016	599,815	2.2652	1,358,727
2	ADJUSTMENT TO ACTUAL	1,500	1.9050	2,858
3	ADJUSTMENT TO ACTUAL	0	0.0000	(1,745)
4	MARCH	476,885	1.7523	835,641
5	ADJUSTMENT TO ACTUAL	0	0.0000	3,281
6	APRIL	412,048	1.9640	809,280
7	ADJUSTMENT TO ACTUAL	0	0.0000	11,290
8	MAY	334,085	2.0533	685,977
9	ADJUSTMENT TO ACTUAL	0	0.0000	1,879
10	JUNE	229,050	1.9995	457,985
11	ADJUSTMENT TO ACTUAL	0	0.0000	2,061
12	JULY	236,685	3.0530	722,599
13	ADJUSTMENT TO ACTUAL	0	0.0000	4,272
14	AUGUST	239,785	2.7735	665,044
15	ADJUSTMENT TO ACTUAL		0.0000	(3,850)
16	SEPTEMBER	232,050	2.9885	693,481
17	ADJUSTMENT TO ACTUAL		0.0000	(455)
18	OCTOBER	283,585	3.0960	877,979
19	ADJUSTMENT TO ACTUAL		0.0000	(2,468)
20	NOVEMBER	483,050	2.8703	1,386,498
21	ADJUSTMENT TO ACTUAL		0.0000	(5,061)
22	DECEMBER	622,285	3.3863	2,107,244
23	ADJUSTMENT TO ACTUAL	0	0.0000	(10,725)
24	JANUARY - 2017	581,185	4.1065	2,386,636
25	ADJUSTMENT TO ACTUAL	0	0.0000	(34,610)
26	TOTAL	<u>4,732,008</u>		<u>12,953,820</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.	DESCRIPTION	VOLUME	DEMAND DOLLARS	COMMODITY DOLLARS	TOTAL DOLLARS
		(1) Dth	(2) \$	(3) \$	(4=2+3) \$
1	FEBRUARY, 2016	385,646	0	(270,964)	(270,964)
2	MARCH	456,683	0	382,250	382,250
3	APRIL	3,735,026	0	6,595,517	6,595,517
4	MAY	3,878,172	0	7,101,111	7,101,111
5	JUNE	3,516,333	0	7,816,052	7,816,052
6	JULY	3,820,444	0	10,682,937	10,682,937
7	AUGUST	3,416,581	0	8,464,224	8,464,224
8	SEPTEMBER	2,933,506	0	8,398,758	8,398,758
9	OCTOBER	2,136,620	0	5,480,334	5,480,334
10	NOVEMBER	640,021	0	1,394,587	1,394,587
11	DECEMBER	2,380,791	0	7,794,742	7,794,742
12	JANUARY, 2017	<u>1,094,148</u>	<u>0</u>	<u>3,879,231</u>	<u>3,879,231</u>
13	TOTAL	<u><u>28,393,972</u></u>	<u><u>0</u></u>	<u><u>67,718,779</u></u>	<u><u>67,718,779</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 2016

SUPPLIER	VOLUMES	COMMODITY DOLLARS	TOTAL DOLLARS
	(1) Dth	(3) \$	(4=2+3) \$
<u>ESTIMATE</u>			
BIOURJA TRADING, LLC	11,934	23,407	23,407
BNP PARIBAS ENERGY TRADING GP (FORTIS)(CINERGY)	9,000	14,063	14,063
BP ENERGY COMPANY	7,000	8,665	8,665
CABOT OIL & GAS CORPORATION	101,500	192,850	192,850
J. ARON & COMPANY (NEXEN MARKETING U.S.A., INC)	217,500	349,631	349,631
MACQUARIE ENERGY LLC (MACQUARIE COOK)	10,400	20,280	20,280
MERCURIA ENERGY GAS TRADING LLC	51,900	117,725	117,725
NEXTERA ENERGY POWER MARKETING, LLC (FPL)	1,000	1,440	1,440
SEQUENT ENERGY MANAGEMENT, LP	122,056	226,966	226,966
SOUTHWESTERN ENERGY SERVICES COMPANY	22,500	42,769	42,769
SHELL ENERGY NORTH AMERICA (US), L.P. (CORAL)	22,000	30,665	30,665
SNYDER BROTHERS INC.	3,500	7,088	7,088
SPRAGUE OPERATING RESOURCES LLC (SPRAGUE ENER)	7,500	10,163	10,163
TOTAL GAS & POWER NORTH AMERICA, INC.	9,800	14,820	14,820
UNITED ENERGY TRADING, LLC	15,000	30,400	30,400
TOTAL ESTIMATE	612,590	1,090,930	1,090,930
<u>ADJUST TO ACTUAL</u>			
GAS LOST DUE TO LINE HITS	(536)	(2,069)	(2,069)
ICE CHARGES	0	29	29
GAS SOLD TO SHIPPER (RADS 3.11)	(4,601)	(13,302)	(13,302)
GAS PURCHASED FROM SHIPPER (RADS 3.12)	17,136	29,450	29,450
GAS PURCHASED FROM SHIPPER (RADS 3.12) - ADJ	2,344	2,403	2,403
CAP CHOICE CUSTOMER SALES	(241,287)	(704,486)	(704,486)
OMO/OFO CHARGES (RADS 3.7, 3.8, 4.11)	0	(673,856)	(673,856)
CHOICE DEMAND CURVE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(62)	(62)
TOTAL ADJUST TO ACTUAL	(226,944)	(1,361,894)	(1,361,894)
TOTAL SCHEDULE 3	385,646	(270,964)	(270,964)

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 2016

SUPPLIER	VOLUMES	COMMODITY DOLLARS	TOTAL DOLLARS
	(1) Dth	(3) \$	(4=2+3) \$
<u>ESTIMATE</u>			
BP ENERGY COMPANY	3,300	3,861	3,861
CABOT OIL & GAS CORPORATION	108,500	155,155	155,155
CONOCOPHILLIPS COMPANY	10,700	12,882	12,882
MACQUARIE ENERGY LLC (MACQUARIE COOK)	192,000	231,011	231,011
MERCURIA ENERGY GAS TRADING LLC	215,500	377,621	377,621
SEQUENT ENERGY MANAGEMENT, LP	6,000	8,490	8,490
SOUTH JERSEY RESOURCES GROUP, LLC	8,000	9,440	9,440
SPRAGUE OPERATING RESOURCES LLC (SPRAGUE ENER)	16,600	22,957	22,957
SOUTHWESTERN ENERGY SERVICES COMPANY	496	703	703
TWIN EAGLE RESOURCE MANAGEMENT, LLC	2,000	2,670	2,670
TOTAL ESTIMATE	563,096	824,789	824,789
<u>ADJUST TO ACTUAL</u>			
BIOURJA TRADING, LLC	(56)	(114)	(114)
MERCURIA ENERGY GAS TRADING LLC	0	(463)	(463)
EQUITABLE GAS COMPANY, LLC	0	3,200	3,200
GAS LOST DUE TO LINE HITS	(168)	(626)	(626)
ICE CHARGES	0	58	58
GAS SOLD TO SHIPPER (RADS 3.11)	(3,795)	(9,669)	(9,669)
GAS PURCHASED FROM SHIPPER (RADS 3.12)	9,344	11,657	11,657
GAS PURCHASED FROM SHIPPER (RADS 3.12) - ADJ	(1,610)	(2,767)	(2,767)
CAP CHOICE CUSTOMER SALES	(110,128)	(321,540)	(321,540)
OMO/OFO CHARGES (RADS 3.7, 3.8, 4.11)	0	(57,691)	(57,691)
OMO/OFO CHARGES (RADS 3.7, 3.8, 4.11) - ADJ	0	(62,629)	(62,629)
CHOICE DEMAND CURVE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(1,955)	(1,955)
TOTAL ADJUST TO ACTUAL	(106,413)	(442,539)	(442,539)
TOTAL SCHEDULE 3	456,683	382,250	382,250

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 2016

SUPPLIER	VOLUMES	COMMODITY DOLLARS	TOTAL DOLLARS
	(1)	(3)	(4=2+3)
	Dth	\$	\$
<u>ESTIMATE</u>			
BIOURJA TRADING, LLC	242,500	437,078	437,078
BNP PARIBAS ENERGY TRADING GP (FORTIS)(CINERGY)	21,900	31,542	31,542
BP ENERGY COMPANY	14,300	23,402	23,402
CARGILL, INCORPORATED	4,000	6,320	6,320
CHEVRON NATURAL GAS (CHEVRONTEXACO)	14,000	22,060	22,060
CONOCOPHILLIPS COMPANY	7,000	11,410	11,410
DIRECT	57,200	102,693	102,693
DTE ENERGY TRADING, INC. (COENERGY TRADING)	41,600	76,769	76,769
ESERVICES, LLC (ESERVICES, INC.)	9,400	16,976	16,976
EXELON GENERATION COMPANY, LLC (CONSTELLATION EN COMM)	117,900	217,628	217,628
INTERSTATE GAS SUPPLY, INC.	51,500	92,936	92,936
KOCH ENERGY SERVICES, LLC	100	182	182
MACQUARIE ENERGY LLC (MACQUARIE COOK)	176,700	250,368	250,368
MERCURIA ENERGY GAS TRADING LLC	343,600	665,045	665,045
MMGS INC.	875,400	1,557,365	1,557,365
NEXTERA ENERGY POWER MARKETING, LLC (FPL)	85,900	154,556	154,556
NOBLE AMERICAS GAS & POWER CORP.	87,900	160,926	160,926
RANGE RESOURCES - APPALACHIA, LLC	370,500	666,363	666,363
SEQUENT ENERGY MANAGEMENT, LP	57,000	97,543	97,543
SHELL ENERGY NORTH AMERICA (US), L.P. (CORAL)	9,000	13,320	13,320
SNYDER BROTHERS INC.	24,500	39,039	39,039
SOUTH JERSEY RESOURCES GROUP, LLC	30,500	46,154	46,154
SPOTLIGHT ENERGY LLC	8,500	15,768	15,768
STATOIL NATURAL GAS LLC	27,100	50,107	50,107
SOUTHWESTERN ENERGY SERVICES COMPANY	92,464	168,801	168,801
TENASKA GAS STORAGE, LLC	29,100	46,929	46,929
TOTAL GAS & POWER NORTH AMERICA, INC.	7,600	10,757	10,757
TWIN EAGLE RESOURCE MANAGEMENT, LLC	81,200	149,607	149,607
UNITED ENERGY TRADING, LLC	111,400	201,664	201,664
VIRGINIA POWER ENERGY MARKETING, INC.	10,000	18,550	18,550
VITOL INC. (VITOL S.A., INC.)	600,000	1,069,800	1,069,800
WGL ENERGY	60,900	103,551	103,551
WGL MIDSTREAM, INC (CAPITOL)	76,200	139,209	139,209
TOTAL ESTIMATE	3,746,864	6,664,412	6,664,412
<u>ADJUST TO ACTUAL</u>			
MMGS INC.	0	1,422	1,422
EQUITABLE GAS COMPANY, LLC	0	1,600	1,600
GAS LOST DUE TO LINE HITS	(140)	(529)	(529)
ICE CHARGES	0	38	38
GAS SOLD TO SHIPPER (RADS 3.11)	(4,187)	(9,240)	(9,240)
GAS PURCHASED FROM SHIPPER (RADS 3.12)	273	335	335
CAP CHOICE CUSTOMER SALES	(7,784)	(22,727)	(22,727)
OMO/OFO CHARGES (RADS 3.7, 3.8, 4.11)	0	(38,983)	(38,983)
CHOICE DEMAND CURVE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(42)	(42)
NON-COMPLIANCE CHARGES (RADS 4.12) - ADJ	0	(770)	(770)
TOTAL ADJUST TO ACTUAL	(11,838)	(68,896)	(68,126)
TOTAL SCHEDULE 3	3,735,026	6,595,517	6,596,287

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 2016

SUPPLIER	VOLUMES	COMMODITY DOLLARS	TOTAL DOLLARS
	(1) Dth	(3) \$	(4=2+3) \$
<u>ESTIMATE</u>			
BIOURJA TRADING, LLC	576,000	1,063,465	1,063,465
BNP PARIBAS ENERGY TRADING GP (FORTIS)(CINERGY)	9,500	13,874	13,874
BP ENERGY COMPANY	49,100	82,493	82,493
CARGILL, INCORPORATED	77,500	140,158	140,158
CHEVRON NATURAL GAS (CHEVRONTEXACO)	24,483	33,916	33,916
CONOCOPHILLIPS COMPANY	187,400	278,447	278,447
DIRECT	35,000	62,725	62,725
DOMINION FIELD SERVICES, INC.	1,000	1,880	1,880
DTE ENERGY TRADING, INC. (COENERGY TRADING)	15,000	25,875	25,875
ESERVICES, LLC (ESERVICES, INC.)	37,000	65,133	65,133
EXELON GENERATION COMPANY, LLC (CONSTELLATION EN COMM)	665,000	1,245,450	1,245,450
INTERSTATE GAS SUPPLY, INC.	20,000	37,500	37,500
MACQUARIE ENERGY LLC (MACQUARIE COOK)	10,600	19,239	19,239
MERCURIA ENERGY GAS TRADING LLC	483,200	976,567	976,567
MMGS INC.	223,100	411,460	411,460
NEXTERA ENERGY POWER MARKETING, LLC (FPL)	103,700	187,535	187,535
NOBLE AMERICAS GAS & POWER CORP.	34,500	59,340	59,340
NOBLE ENERGY, INC.	3,000	5,550	5,550
RANGE RESOURCES - APPALACHIA, LLC	30,000	49,700	49,700
SEQUENT ENERGY MANAGEMENT, LP	223,100	390,641	390,641
SOUTHWESTERN ENERGY SERVICES COMPANY	22,000	38,875	38,875
SHELL ENERGY NORTH AMERICA (US), L.P. (CORAL)	300	560	560
SNYDER BROTHERS INC.	1,500	2,843	2,843
SOUTH JERSEY RESOURCES GROUP, LLC	6,000	10,800	10,800
TENASKA GAS STORAGE, LLC	31,000	54,338	54,338
TWIN EAGLE RESOURCE MANAGEMENT, LLC	95,700	168,581	168,581
UNITED ENERGY TRADING, LLC	55,000	102,900	102,900
WASHINGTON GAS LIGHT COMPANY	125,000	231,940	231,940
WGL ENERGY	625,000	1,178,275	1,178,275
TOTAL ESTIMATE	3,769,683	6,940,056	6,940,056
<u>ADJUST TO ACTUAL</u>			
EQUITABLE GAS COMPANY, LLC	0	1,600	1,600
MERCURIA ENERGY GAS TRADING LLC	0	(4,540)	(4,540)
GAS LOST DUE TO LINE HITS	(495)	(1,894)	(1,894)
ICE CHARGES	0	396	396
GAS SOLD TO SHIPPER (RADS 3.11)	(1,071)	(2,645)	(2,645)
GAS PURCHASED FROM SHIPPER (RADS 3.12)	1,424	1,993	1,993
GAS PURCHASED FROM SHIPPER (RADS 3.12) - ADJ	4,257	4,989	4,989
CAP CHOICE CUSTOMER PURCHASES	104,374	304,741	304,741
OMO/OFO CHARGES (RADS 3.7, 3.8, 4.11)	0	(142,879)	(142,879)
CHOICE DEMAND CURVE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(395)	(395)
NON-COMPLIANCE CHARGES (RADS 4.12) - ADJ	0	(310)	(310)
TOTAL ADJUST TO ACTUAL	108,489	161,055	161,055
TOTAL SCHEDULE 3	3,878,172	7,101,111	7,101,111

EXHIBIT 1-D
SCHEDULE 3
SHEET 6 OF 13

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF HISTORIC COST OF GAS PURCHASES
NON-LOCAL, SHORT & LONG TERM
JUNE 2016

SUPPLIER	VOLUMES	COMMODITY DOLLARS	TOTAL DOLLARS
	(1)	(3)	(4=2+3)
	Dth	\$	\$
<u>ESTIMATE</u>			
BIOURJA TRADING, LLC	840,000	1,598,250	1,598,250
BP ENERGY COMPANY	127,500	297,351	297,351
CARGILL, INCORPORATED	20,000	44,350	44,350
CHEVRON NATURAL GAS (CHEVRONTEXACO)	34,000	59,900	59,900
COLONIAL ENERGY, INC	600	1,608	1,608
CONOCOPHILLIPS COMPANY	14,400	35,966	35,966
DIRECT	664,400	1,646,746	1,646,746
DTE ENERGY TRADING, INC. (COENERGY TRADING)	34,100	83,609	83,609
EDF TRADING NORTH AMERICA, LLC (EAGLE ENERGY)	18,000	39,438	39,438
ENERGY CORPORATION OF AMERICA	14,000	33,265	33,265
ESERVICES, LLC (ESERVICES, INC.)	3,000	6,615	6,615
EXELON GENERATION COMPANY, LLC (CONSTELLATION EN COMM)	13,800	32,396	32,396
INTERSTATE GAS SUPPLY, INC.	33,500	77,202	77,202
J. ARON & COMPANY (NEXEN MARKETING U.S.A., INC)	12,100	30,371	30,371
KOCH ENERGY SERVICES, LLC	5,600	14,723	14,723
MERCURIA ENERGY GAS TRADING LLC	655,770	1,317,195	1,317,195
MUNICH RE TRADING LLC (RENAISSANCE)	5,600	12,460	12,460
NEXTERA ENERGY POWER MARKETING, LLC (FPL)	109,300	202,980	202,980
NJR ENERGY SERVICES COMPANY	9,000	22,783	22,783
NOBLE AMERICAS GAS & POWER CORP.	58,800	152,887	152,887
NOBLE ENERGY, INC.	6,800	15,284	15,284
RANGE RESOURCES - APPALACHIA, LLC	76,900	169,308	169,308
SEQUENT ENERGY MANAGEMENT, LP	140,000	342,975	342,975
SHELL ENERGY NORTH AMERICA (US), L.P. (CORAL)	400	982	982
SNYDER BROTHERS INC.	9,400	23,441	23,441
SOUTH JERSEY RESOURCES GROUP, LLC	10,000	27,500	27,500
SPRAGUE OPERATING RESOURCES LLC (SPRAGUE ENER)	1,200	2,829	2,829
TENASKA GAS STORAGE, LLC	209,800	522,776	522,776
TWIN EAGLE RESOURCE MANAGEMENT, LLC	46,500	109,313	109,313
UNITED ENERGY TRADING, LLC	18,400	48,576	48,576
WASHINGTON GAS LIGHT COMPANY	158,700	379,418	379,418
WGL ENERGY	12,400	28,112	28,112
TOTAL ESTIMATE	<u>3,363,970</u>	<u>7,380,605</u>	<u>7,380,605</u>
<u>ADJUST TO ACTUAL</u>			
MERCURIA ENERGY GAS TRADING LLC	0	(7,797)	(7,797)
EQUITABLE GAS COMPANY, LLC	0	1,600	1,600
GAS LOST DUE TO LINE HITS	(141)	(534)	(534)
ICE CHARGES	0	431	431
GAS SOLD TO SHIPPER (RADS 3.11)	(14,794)	(36,723)	(36,723)
GAS PURCHASED FROM SHIPPER (RADS 3.12)	7,858	10,640	10,640
GAS PURCHASED FROM SHIPPER (RADS 3.12) - ADJ	0	2,328	2,328
CAP CHOICE CUSTOMER PURCHASES	159,440	465,518	465,518
NON-COMPLIANCE CHARGES (RADS 4.12) - ADJ	0	(15)	(15)
TOTAL ADJUST TO ACTUAL	<u>152,363</u>	<u>435,447</u>	<u>435,447</u>
TOTAL SCHEDULE 3	<u>3,516,333</u>	<u>7,816,052</u>	<u>7,816,052</u>

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 2016

SUPPLIER	VOLUMES	COMMODITY DOLLARS	TOTAL DOLLARS
	(1)	(3)	(4=2+3)
	Dth	\$	\$
<u>ESTIMATE</u>			
BP ENERGY COMPANY	147,000	348,274	348,274
CARGILL, INCORPORATED	27,300	74,433	74,433
CONOCOPHILLIPS COMPANY	12,000	16,830	16,830
DIRECT	111,700	306,209	306,209
DTE ENERGY TRADING, INC. (COENERGY TRADING)	13,500	37,005	37,005
EDF TRADING NORTH AMERICA, LLC (EAGLE ENERGY)	4,900	13,297	13,297
ENERGY CORPORATION OF AMERICA	6,600	17,622	17,622
EQT ENERGY, LLC. (EQUITABLE ENERGY, LLC)	97,000	260,370	260,370
EXELON GENERATION COMPANY, LLC (CONSTELLATION EN COMM)	940,000	2,630,525	2,630,525
INTERSTATE GAS SUPPLY, INC.	142,500	389,671	389,671
KAISER MARKETING APPALACHIAN, LLC	35,000	94,425	94,425
KOCH ENERGY SERVICES, LLC	2,500	3,700	3,700
MACQUARIE ENERGY LLC (MACQUARIE COOK)	5,000	13,700	13,700
MERCURIA ENERGY GAS TRADING LLC	629,789	1,894,021	1,894,021
NEXTERA ENERGY POWER MARKETING, LLC (FPL)	11,300	30,908	30,908
NJR ENERGY SERVICES COMPANY	40,000	113,100	113,100
NOBLE AMERICAS GAS & POWER CORP.	4,736	10,795	10,795
NOBLE ENERGY, INC.	41,200	110,914	110,914
RANGE RESOURCES - APPALACHIA, LLC	74,700	183,225	183,225
SEQUENT ENERGY MANAGEMENT, LP	104,000	279,315	279,315
SOUTHWESTERN ENERGY SERVICES COMPANY	68,600	184,457	184,457
SHELL ENERGY NORTH AMERICA (US), L.P. (CORAL)	20,000	56,200	56,200
SOUTH JERSEY RESOURCES GROUP, LLC	19,000	45,410	45,410
SPRAGUE OPERATING RESOURCES LLC (SPRAGUE ENER)	800	2,184	2,184
TENASKA GAS STORAGE, LLC	408,900	1,136,710	1,136,710
TEXLA ENERGY MANAGEMENT, INC	6,000	16,470	16,470
TWIN EAGLE RESOURCE MANAGEMENT, LLC	1,000	2,643	2,643
UNITED ENERGY TRADING, LLC	50,000	140,150	140,150
WASHINGTON GAS LIGHT COMPANY	115,900	314,865	314,865
WELLS FARGO COMMODITIES, LLC	485,000	1,359,535	1,359,535
TOTAL ESTIMATE	3,625,925	10,086,960	10,086,960
<u>ADJUST TO ACTUAL</u>			
DIRECT	0	(20)	(20)
MERCURIA ENERGY GAS TRADING LLC	479	(8,163)	(8,163)
GAS LOST DUE TO LINE HITS	(54)	(209)	(209)
ICE CHARGES	0	2,053	2,053
GAS SOLD TO SHIPPER (RADS 3.11)	(1,245)	(4,062)	(4,062)
GAS SOLD TO SHIPPER (RADS 3.11) - ADJ	3,679	9,132	9,132
GAS PURCHASED FROM SHIPPER (RADS 3.12)	8,088	12,454	12,454
CAP CHOICE CUSTOMER PURCHASES	183,572	592,349	592,349
CHOICE DEMAND CURVE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(8,653)	(8,653)
NON-COMPLIANCE CHARGES (RADS 4.12) - APRIL, MAY, JUNE ADJ	0	1,095	1,095
TOTAL ADJUST TO ACTUAL	194,519	595,977	595,977
TOTAL SCHEDULE 3	3,820,444	10,682,937	10,682,937

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 2016

SUPPLIER	VOLUMES	COMMODITY DOLLARS	TOTAL DOLLARS
	(1) Dth	(3) \$	(4=2+3) \$
<u>ESTIMATE</u>			
BP ENERGY COMPANY	5,000	13,825	13,825
CARGILL, INCORPORATED	17,000	38,975	38,975
CONOCOPHILLIPS COMPANY	6,800	17,856	17,856
<u>DIRECT</u>			
DTE ENERGY TRADING, INC. (COENERGY TRADING)	13,000	33,260	33,260
EDF TRADING NORTH AMERICA, LLC (EAGLE ENERGY)	64,400	170,707	170,707
EQT ENERGY, LLC. (EQUITABLE ENERGY, LLC)	22,100	59,781	59,781
EXELON GENERATION COMPANY, LLC (CONSTELLATION EN COMM)	236,300	627,815	627,815
INTERSTATE GAS SUPPLY, INC.	40,500	109,078	109,078
J. ARON & COMPANY (NEXEN MARKETING U.S.A., INC)	44,100	113,438	113,438
KAISER MARKETING APPALACHIAN, LLC	635,000	1,643,550	1,643,550
KOCH ENERGY SERVICES, LLC	1,500	4,020	4,020
MACQUARIE ENERGY LLC (MACQUARIE COOK)	77,500	107,105	107,105
MERCURIA ENERGY GAS TRADING LLC	669,685	1,833,492	1,833,492
NEXTERA ENERGY POWER MARKETING, LLC (FPL)	47,400	129,383	129,383
NOBLE AMERICAS GAS & POWER CORP.	5,100	6,375	6,375
NOBLE ENERGY, INC.	620,000	1,604,250	1,604,250
RANGE RESOURCES - APPALACHIA, LLC	9,500	12,994	12,994
SOUTHWESTERN ENERGY SERVICES COMPANY	4,500	11,578	11,578
SPRAGUE OPERATING RESOURCES LLC (SPRAGUE ENER)	2,700	7,317	7,317
TENASKA GAS STORAGE, LLC	18,900	50,984	50,984
TOTAL GAS & POWER NORTH AMERICA, INC.	34,900	90,761	90,761
UNITED ENERGY TRADING, LLC	6,300	16,632	16,632
VITOL INC. (VITOL S.A., INC.)	39,948	106,328	106,328
WASHINGTON GAS LIGHT COMPANY	54,300	144,301	144,301
WORLD FUEL SERVICES, INC.	40,000	105,200	105,200
TOTAL ESTIMATE	<u>2,784,633</u>	<u>7,239,897</u>	<u>7,239,897</u>
<u>ADJUST TO ACTUAL</u>			
MERCURIA ENERGY GAS TRADING LLC	0	(17,270)	(17,270)
EQUITABLE GAS COMPANY, LLC	0	1,600	1,600
GAS LOST DUE TO LINE HITS	(95)	(417)	(417)
ICE CHARGES		348	348
GAS SOLD TO SHIPPER (RADS 3.11)	(514)	(1,849)	(1,849)
GAS SOLD TO SHIPPER (RADS 3.11) - ADJ	19	62	62
GAS PURCHASED FROM SHIPPER (RADS 3.12)	6,478	9,438	9,438
CAP CHOICE CUSTOMER PURCHASES	189,846	610,981	610,981
OMO/OFO CHARGES (RADS 3.7, 3.8, 4.11)	0	(250)	(250)
CHOICE DEMAND CURVE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(344,531)	(344,531)
CHOICE ANNUAL CASH OUT	436,215	966,215	966,215
TOTAL ADJUST TO ACTUAL	<u>631,948</u>	<u>1,224,327</u>	<u>1,224,327</u>
TOTAL SCHEDULE 3	<u>3,416,581</u>	<u>8,464,224</u>	<u>8,464,224</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 2016

SUPPLIER	VOLUMES	COMMODITY DOLLARS	TOTAL DOLLARS
	(1)	(3)	(4=2+3)
	Dth	\$	\$
<u>ESTIMATE</u>			
BNP PARIBAS ENERGY TRADING GP (FORTIS)(CINERGY)	4,100	12,300	12,300
BP ENERGY COMPANY	109,300	311,596	311,596
CITIGROUP ENERGY INC.	80,399	239,143	239,143
DIRECT	40,300	112,590	112,590
EDF TRADING NORTH AMERICA, LLC (EAGLE ENERGY)	9,300	26,738	26,738
ENERGY CORPORATION OF AMERICA	21,900	63,617	63,617
EQT ENERGY, LLC. (EQUITABLE ENERGY, LLC)	34,100	96,226	96,226
EXELON GENERATION COMPANY, LLC (CONSTELLATION EN COMM)	96,598	246,283	246,283
HARTREE PARTNERS, LP (HESS ENERGY TRADING)	10,000	30,500	30,500
INTERSTATE GAS SUPPLY, INC.	44,100	128,049	128,049
J. ARON & COMPANY (NEXEN MARKETING U.S.A., INC)	4,000	10,940	10,940
KAISER MARKETING APPALACHIAN, LLC	450,000	1,216,350	1,216,350
MACQUARIE ENERGY LLC (MACQUARIE COOK)	89,997	135,265	135,265
MERCURIA ENERGY GAS TRADING LLC	621,000	1,815,068	1,815,068
MUNICH RE TRADING LLC (RENAISSANCE)	26,700	75,780	75,780
NJR ENERGY SERVICES COMPANY	7,400	22,182	22,182
NOBLE AMERICAS GAS & POWER CORP.	22,400	64,134	64,134
NOBLE ENERGY, INC.	6,000	17,018	17,018
RANGE RESOURCES - APPALACHIA, LLC	40,000	115,400	115,400
REPSOL ENERGY NORTH AMERICA CORPORATION	300	900	900
SEQUENT ENERGY MANAGEMENT, LP	5,000	14,525	14,525
SOUTHWESTERN ENERGY SERVICES COMPANY	9,600	26,558	26,558
SHELL ENERGY NORTH AMERICA (US), L.P. (CORAL)	22,000	62,070	62,070
SNYDER BROTHERS INC.	7,300	20,587	20,587
SOUTH JERSEY RESOURCES GROUP, LLC	5,000	6,250	6,250
TENASKA GAS STORAGE, LLC	45,000	128,175	128,175
TEXLA ENERGY MANAGEMENT, INC	20,000	60,000	60,000
TOTAL GAS & POWER NORTH AMERICA, INC.	35,000	99,038	99,038
UNITED ENERGY TRADING, LLC	20,000	57,950	57,950
VITOL INC. (VITOL S.A., INC.)	585,400	1,625,686	1,625,686
WORLD FUEL SERVICES, INC.	280,000	798,750	798,750
TOTAL ESTIMATE	2,752,194	7,639,665	7,639,665
<u>ADJUST TO ACTUAL</u>			
MERCURIA ENERGY GAS TRADING LLC	0	(17,292)	(17,292)
EQUITABLE GAS COMPANY, LLC	0	1,600	1,600
GAS LOST DUE TO LINE HITS	(113)	(479)	(479)
ICE CHARGES	0	248	248
GAS SOLD TO SHIPPER (RADS 3.11)	(366)	(1,284)	(1,284)
GAS PURCHASED FROM SHIPPER (RADS 3.12)	505	654	654
CAP CHOICE CUSTOMER PURCHASES	181,286	584,972	584,972
CAP CHOICE CUSTOMER PURCHASES ADJ	0	200,616 1/	200,616
OMO/OFO CHARGES (RADS 3.7, 3.8, 4.11)	0	(499)	(499)
CHOICE DEMAND CURVE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(9,443)	(9,443)
TOTAL ADJUST TO ACTUAL	181,312	759,093	568,420
TOTAL SCHEDULE 3	2,933,506	8,398,758	8,208,084

1/ Correcting CAP gas cost expense January 2015-March 2015 due to an incorrect CAP rate.

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 2016

SUPPLIER	VOLUMES	COMMODITY DOLLARS	TOTAL DOLLARS
	(1) Dth	(3) \$	(4=2+3) \$
<u>ESTIMATE</u>			
BNP PARIBAS ENERGY TRADING GP (FORTIS)(CINERGY)	8,500	11,178	11,178
BP ENERGY COMPANY	111,586	150,417	150,417
CARGILL, INCORPORATED	5,400	6,264	6,264
CASTLETON COMMODITIES MERCHANT TRADING L.P.	3,400	4,896	4,896
CHEVRON NATURAL GAS (CHEVRONTEXACO)	50,500	42,195	42,195
CITIGROUP ENERGY INC.	10,000	25,750	25,750
CONCORD ENERGY LLC	15,000	38,625	38,625
CONOCOPHILLIPS COMPANY	23,600	55,070	55,070
DIRECT	7,100	16,861	16,861
DOMINION FIELD SERVICES, INC.	5,000	12,550	12,550
DTE ENERGY TRADING, INC. (COENERGY TRADING)	10,000	25,750	25,750
EDF TRADING NORTH AMERICA, LLC (EAGLE ENERGY)	25,000	63,000	63,000
ENERGY CORPORATION OF AMERICA	39,400	104,236	104,236
EQT ENERGY, LLC. (EQUITABLE ENERGY, LLC)	15,000	40,750	40,750
EXELON GENERATION COMPANY, LLC (CONSTELLATION EN COMM)	4,200	10,532	10,532
INTERSTATE GAS SUPPLY, INC.	3,700	10,989	10,989
MACQUARIE ENERGY LLC (MACQUARIE COOK)	35,700	40,306	40,306
MERCURIA ENERGY GAS TRADING LLC	647,810	1,948,592	1,948,592
MMGS INC.	50,000	126,325	126,325
NJR ENERGY SERVICES COMPANY	1,000	2,890	2,890
NOBLE ENERGY, INC.	9,000	26,010	26,010
RANGE RESOURCES - APPALACHIA, LLC	24,500	35,050	35,050
SNYDER BROTHERS INC.	5,900	14,780	14,780
SOUTH JERSEY RESOURCES GROUP, LLC	15,000	14,750	14,750
SPOTLIGHT ENERGY LLC	15,000	12,000	12,000
TENASKA GAS STORAGE, LLC	8,500	11,263	11,263
TWIN EAGLE RESOURCE MANAGEMENT, LLC	1,000	890	890
UNITED ENERGY TRADING, LLC	30,000	38,150	38,150
VITOL INC. (VITOL S.A., INC.)	662,500	1,828,925	1,828,925
WASHINGTON GAS LIGHT COMPANY	20,000	52,500	52,500
WGL ENERGY	5,000	12,525	12,525
WORLD FUEL SERVICES, INC.	110,000	313,775	313,775
TOTAL ESTIMATE	1,978,296	5,097,792	5,097,792
<u>ADJUST TO ACTUAL</u>			
MERCURIA ENERGY GAS TRADING LLC	0	(20,139)	(20,139)
EQUITABLE GAS COMPANY, LLC	0	1,600	1,600
GAS LOST DUE TO LINE HITS	(9,479)	(39,530)	(39,530)
ICE CHARGES	0	308	308
GAS SOLD TO SHIPPER (RADS 3.11)	(1,245)	(4,630)	(4,630)
CAP CHOICE CUSTOMER PURCHASES	169,407	517,487	517,487
OMO/OFO CHARGES (RADS 3.7, 3.8, 4.11)	0	(60,318)	(60,318)
CHOICE DEMAND CURVE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(10,733)	(10,733)
GAS LEFT ON FOR RECONNECT	(359)	(1,503)	(1,503)
TOTAL ADJUST TO ACTUAL	158,324	382,542	382,542
TOTAL SCHEDULE 3	2,136,620	5,480,334	5,480,334

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 2016

<u>SUPPLIER</u>	<u>VOLUMES</u>	<u>COMMODITY DOLLARS</u>	<u>TOTAL DOLLARS</u>
	(1)	(3)	(4=2+3)
<u>ESTIMATE</u>	Dth	\$	\$
BP ENERGY COMPANY	9,100	22,838	22,838
CABOT OIL & GAS CORPORATION	105,000	260,820	260,820
CHEVRON NATURAL GAS (CHEVRONTEXACO)	35,700	56,385	56,385
CITIGROUP ENERGY INC.	3,500	7,945	7,945
CONCORD ENERGY LLC	4,500	11,205	11,205
ENERGY CORPORATION OF AMERICA	1,300	3,887	3,887
EXELON GENERATION COMPANY, LLC (CONSTELLATION EN COMM)	8,700	19,908	19,908
MACQUARIE ENERGY LLC (MACQUARIE COOK)	142,400	210,592	210,592
MERCURIA ENERGY GAS TRADING LLC	187,000	536,746	536,746
MMGS INC.	9,400	22,607	22,607
NEXTERA ENERGY POWER MARKETING, LLC (FPL)	17,400	33,045	33,045
NOBLE AMERICAS GAS & POWER CORP.	15,000	31,350	31,350
RANGE RESOURCES - APPALACHIA, LLC	5,000	12,075	12,075
SOUTHWESTERN ENERGY SERVICES COMPANY	2,500	5,225	5,225
SOUTH JERSEY RESOURCES GROUP, LLC	24,500	54,042	54,042
TOTAL GAS & POWER NORTH AMERICA, INC.	1,500	3,686	3,686
TWIN EAGLE RESOURCE MANAGEMENT, LLC	2,400	4,872	4,872
VITOL INC. (VITOL S.A., INC.)	600	1,443	1,443
WGL ENERGY	3,800	9,443	9,443
TOTAL ESTIMATE	579,300	1,308,114	1,308,114
<u>ADJUST TO ACTUAL</u>			
MERCURIA ENERGY GAS TRADING LLC	(8,840)	(45,692)	(45,692)
GAS LOST DUE TO LINE HITS	(84)	(350)	(350)
ICE CHARGES	0	189	189
GAS SOLD TO SHIPPER (RADS 3.11)	(543)	(1,959)	(1,959)
GAS PURCHASED FROM SHIPPER (RADS 3.12)	2,544	1,685	1,685
CAP CHOICE CUSTOMER PURCHASES	68,046	207,859	207,859
OMO/OFO CHARGES (RADS 3.7, 3.8, 4.11)	0	(73,189)	(73,189)
CHOICE DEMAND CURVE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(416)	(416)
GAS LEFT ON FOR RECONNECT	(401)	(1,655)	(1,655)
TOTAL ADJUST TO ACTUAL	60,721	86,472	86,472
TOTAL SCHEDULE 3	640,021	1,394,587	1,394,587

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, 2016

SUPPLIER	VOLUMES	COMMODITY DOLLARS	TOTAL DOLLARS
	(1)	(3)	(4=2+3)
	Dth	\$	\$
<u>ESTIMATE</u>			
BP ENERGY COMPANY	16,600	57,177	57,177
CABOT OIL & GAS CORPORATION	108,500	320,292	320,292
CASTLETON COMMODITIES MERCHANT TRADING L.P.	18,400	56,672	56,672
CITIGROUP ENERGY INC.	215,000	728,325	728,325
CONCORD ENERGY LLC	2,300	7,567	7,567
CONOCOPHILLIPS COMPANY	1,200	4,200	4,200
DOMINION FIELD SERVICES, INC.	300	1,015	1,015
DTE ENERGY TRADING, INC. (COENERGY TRADING)	16,900	51,494	51,494
EXELON GENERATION COMPANY, LLC (CONSTELLATION EN COMM)	338,100	954,685	954,685
FREEPOINT COMMODITIES LLC	5,000	16,950	16,950
INTERSTATE GAS SUPPLY, INC.	22,500	77,425	77,425
J. ARON & COMPANY (NEXEN MARKETING U.S.A., INC)	2,200	6,204	6,204
MACQUARIE ENERGY LLC (MACQUARIE COOK)	185,600	612,388	612,388
MERCURIA ENERGY GAS TRADING LLC	70,100	237,380	237,380
NEXTERA ENERGY POWER MARKETING, LLC (FPL)	21,000	69,720	69,720
NOBLE AMERICAS GAS & POWER CORP.	9,700	32,810	32,810
RANGE RESOURCES - APPALACHIA, LLC	508,900	1,611,713	1,611,713
SEQUENT ENERGY MANAGEMENT, LP	316,200	970,734	970,734
SOUTHWESTERN ENERGY SERVICES COMPANY	1,000	3,390	3,390
SNYDER BROTHERS INC.	3,000	10,155	10,155
SOUTH JERSEY RESOURCES GROUP, LLC	13,300	46,659	46,659
SPOTLIGHT ENERGY LLC	3,000	9,690	9,690
SPRAGUE OPERATING RESOURCES LLC (SPRAGUE ENER)	100	339	339
TENASKA GAS STORAGE, LLC	1,600	5,392	5,392
TOTAL GAS & POWER NORTH AMERICA, INC.	80,000	278,545	278,545
TWIN EAGLE RESOURCE MANAGEMENT, LLC	55,000	189,600	189,600
UNITED ENERGY TRADING, LLC	16,800	56,548	56,548
VITOL INC. (VITOL S.A., INC.)	255,100	867,137	867,137
WASHINGTON GAS LIGHT COMPANY	159,500	541,064	541,064
WORLD FUEL SERVICES, INC.	30,000	105,300	105,300
TOTAL ESTIMATE	2,476,900	7,930,568	7,930,568
<u>ADJUST TO ACTUAL</u>			
MERCURIA ENERGY GAS TRADING LLC	0	(7,817)	(7,817)
EQUITABLE GAS COMPANY, LLC	0	34	34
GAS LOST DUE TO LINE HITS	(252)	(1,055)	(1,055)
ICE CHARGES	0	41	41
GAS SOLD TO SHIPPER (RADS 3.11)	(1,389)	(4,257)	(4,257)
GAS PURCHASED FROM SHIPPER (RADS 3.12)	24,242	26,116	26,116
CAP CHOICE CUSTOMER SALES	(118,275)	(361,296)	(361,296)
OMO/OFO CHARGES (RADS 3.7, 3.8, 4.11)	0	(66,512)	(66,512)
OMO/OFO CHARGES (RADS 3.7, 3.8, 4.11) - ADJ	0	279,924	279,924
CHOICE DEMAND CURVE NON-COMPLIANCE CHARGES (RADS 4.12)	0	(354)	(354)
GAS LEFT ON FOR RECONNECT	(435)	(651)	(651)
TOTAL ADJUST TO ACTUAL	(96,109)	(135,826)	(135,826)
TOTAL SCHEDULE 3	2,380,791	7,794,742	7,794,742

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, 2017

<u>SUPPLIER</u>	<u>VOLUMES</u>	<u>COMMODITY DOLLARS</u>	<u>TOTAL DOLLARS</u>
	(1)	(3)	(4=2+3)
<u>ESTIMATE</u>	Dth	\$	\$
CABOT OIL & GAS CORPORATION	108,500	396,025	396,025
CITIGROUP ENERGY INC.	57,900	179,797	179,797
CONOCOPHILLIPS COMPANY	1,600	5,040	5,040
ENERGY CORPORATION OF AMERICA	2,000	6,320	6,320
EXELON GENERATION COMPANY, LLC (CONSTELLATION EN COMM)	244,500	875,928	875,928
MACQUARIE ENERGY LLC (MACQUARIE COOK)	31,100	97,242	97,242
MERCURIA ENERGY GAS TRADING LLC	111,200	456,643	456,643
NEXTERA ENERGY POWER MARKETING, LLC (FPL)	3,500	10,575	10,575
RANGE RESOURCES - APPALACHIA, LLC	116,700	372,733	372,733
SEQUENT ENERGY MANAGEMENT, LP	321,200	1,195,051	1,195,051
SOUTH JERSEY RESOURCES GROUP, LLC	13,000	41,035	41,035
SPOTLIGHT ENERGY LLC	1,000	3,098	3,098
TENASKA GAS STORAGE, LLC	2,600	8,333	8,333
TOTAL GAS & POWER NORTH AMERICA, INC.	1,100	3,432	3,432
VITOL INC. (VITOL S.A., INC.)	280,000	882,150	882,150
WASHINGTON GAS LIGHT COMPANY	17,000	52,700	52,700
WGL ENERGY	9,000	28,463	28,463
TOTAL ESTIMATE	<u>1,321,900</u>	<u>4,614,563</u>	<u>4,614,563</u>
<u>ADJUST TO ACTUAL</u>			
MACQUARIE ENERGY LLC (MACQUARIE COOK)	0	125	125
MERCURIA ENERGY GAS TRADING LLC	0	(4,814)	(4,814)
VITOL INC. (VITOL S.A., INC.)	0	5	5
GAS LOST DUE TO LINE HITS	(50)	(217)	(217)
ICE CHARGES	0	293	293
GAS SOLD TO SHIPPER (RADS 3.11)	(654)	(2,868)	(2,868)
GAS PURCHASED FROM SHIPPER (RADS 3.12)	315	837	837
CAP CHOICE CUSTOMER SALES	(227,077)	(727,826)	(727,826)
OMO/OFO CHARGES (RADS 3.7, 3.8, 4.11)	0	(33)	(33)
GAS LEFT ON FOR RECONNECT	(286)	(834)	(834)
TOTAL ADJUST TO ACTUAL	<u>(227,752)</u>	<u>(735,332)</u>	<u>(735,332)</u>
TOTAL SCHEDULE 3	<u>1,094,148</u>	<u>3,879,231</u>	<u>3,879,231</u>

EXHIBIT 1-D
 SCHEDULE 4
 SHEET 1 OF 8

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

LINE NO.	DESCRIPTION	VOLUME	DEMAND DOLLARS	COMMODITY DOLLARS	TOTAL DOLLARS
		(1) DTH	(2) \$	(3) \$	(4=2+3) \$
1	FEBRUARY 2016	10,379	0	22,845	22,845
2	MARCH	10,023	0	21,973	21,973
3	APRIL	12,341	0	23,135	23,135
4	MAY	9,840	0	11,605	11,605
5	JUNE	14,180	0	26,476	26,476
6	JULY	9,356	0	18,018	18,018
7	AUGUST	7,355	0	21,372	21,372
8	SEPTEMBER	9,301	0	24,320	24,320
9	OCTOBER	10,250	0	29,144	29,144
10	NOVEMBER	10,701	0	29,909	29,909
11	DECEMBER	10,081	0	30,121	30,121
12	JANUARY 2017	8,903	0	29,020	29,020
13	TOTAL	122,710	0	287,939	287,939

EXHIBIT 1-D
SCHEDULE 4
SHEET 2 OF 8

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

LINE NO.	MONTH	BLX, INC. 11591			WILLIAM MCINTIRE COAL 17356			BRUDERHOF COMMUNITIES IN PA 11934		
		VOLUME	RATE	AMOUNT	VOLUME	RATE	AMOUNT	VOLUME	RATE	AMOUNT
		(1) DTH	(2) \$/DTH	(3=1*2) \$	(4) DTH	(5) \$/DTH	(6=4*5) \$	(7) DTH	(8) \$/DTH	(9=7*8) \$
1	FEBRUARY 2016	150	2.47	371	0	0.00	0	415	2.36	979
2	ADJUSTMENT	5		5	(55)		(124)	14		31
3	MARCH	278	2.32	645	21	2.25	47	336	2.20	739
4	ADJUSTMENT	0		0	(521)		(1,290)	0		0
5	APRIL	278	1.84	512	0	0.00	0	384	1.73	664
6	ADJUSTMENT	0		0	(21)		(47)	0		0
7	MAY	168	1.85	310	0	0.00	0	375	1.94	728
8	ADJUSTMENT	(16)		(29)	0		0	0		0
9	JUNE	168	1.91	320	0	0.00	0	408	2.02	824
10	ADJUSTMENT	0		0	0		0	0		0
11	JULY	151	1.91	288	0	0.00	0	408	2.00	816
12	ADJUSTMENT	(17)		(29)	0		0	0		0
13	AUGUST	255	2.96	755	0	0.00	0	431	2.96	1,276
14	ADJUSTMENT	66		126	0		0	(51)		(102)
15	SEPTEMBER	267	2.66	711	0	0.00	0	348	2.74	954
16	ADJUSTMENT	0		(18)	0		0	0		0
17	OCTOBER	267	3.01	804	0	0.00	0	376	2.84	1,068
18	ADJUSTMENT	0		0	0		0	0		0
19	NOVEMBER	167	3.01	503	0	0.00	0	419	2.93	1,228
20	ADJUSTMENT	(70)		(259)	0		0	0		0
21	DECEMBER	167	3.35	560	0	0.00	0	13	2.71	35
22	ADJUSTMENT	0		8	0		0	0		0
23	JANUARY 2017	134	4.02	539	0	0.00	0	13	3.22	42
24	ADJUSTMENT	(33)		(111)	0		0	0		0
25	TOTAL	<u>2,385</u>		<u>6,009</u>	<u>(576)</u>		<u>(1,414)</u>	<u>3,889</u>		<u>9,281</u>

EXHIBIT 1-D
SCHEDULE 4
SHEET 3 OF 8

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

LINE NO.	MONTH	BUCKEYE ENERGY, INC. 11631			CGAS EXPLORATION 11335			CRUDEACO OIL & GAS 11534		
		VOLUME	RATE	AMOUNT	VOLUME	RATE	AMOUNT	VOLUME	RATE	AMOUNT
		(1)	(2)	(3=1*2)	(4)	(5)	(6=4*5)	(7)	(8)	(9=7*8)
	DTH	\$/DTH	\$	DTH	\$/DTH	\$	DTH	\$/DTH	\$	
1	FEBRUARY 2016	217	2.32	503	152	2.21	336	121	2.36	286
2	ADJUSTMENT	6		(20)	(47)		(96)	122		268
3	MARCH	225	2.32	522	141	2.05	289	367	2.20	807
4	ADJUSTMENT	27		100	0		0	0		0
5	APRIL	225	1.84	414	202	1.58	319	400	1.73	692
6	ADJUSTMENT	0		0	0		0	0		0
7	MAY	272	1.93	524	273	1.79	489	194	1.94	376
8	ADJUSTMENT	47		87	0		0	0		0
9	JUNE	332	1.91	633	295	1.87	552	532	2.02	1,075
10	ADJUSTMENT	60		116	0		0	0		0
11	JULY	255	1.91	486	295	1.85	546	532	2.00	1,064
12	ADJUSTMENT	(77)		(147)	0		0	0		0
13	AUGUST	233	2.96	690	274	2.81	770	255	2.96	755
14	ADJUSTMENT	(22)		(42)	(29)		(54)	(25)		(50)
15	SEPTEMBER	295	2.66	785	310	2.59	803	228	2.74	625
16	ADJUSTMENT	45		114	0		0	0		0
17	OCTOBER	295	3.01	888	301	2.69	810	661	2.84	1,877
18	ADJUSTMENT	0		0	0		0	0		0
19	NOVEMBER	255	2.83	722	264	2.78	734	411	2.93	1,204
20	ADJUSTMENT	(40)		(120)	0		0	0		0
21	DECEMBER	336	3.35	1,126	189	2.56	484	386	2.71	1,046
22	ADJUSTMENT	81		306	0		0	0		0
23	JANUARY 2017	313	4.02	1,259	189	3.07	580	386	3.22	1,243
24	ADJUSTMENT	(23)		(240)	0		0	0		(0)
25	TOTAL	<u>3,357</u>		<u>8,706</u>	<u>2,809</u>		<u>6,561</u>	<u>4,570</u>		<u>11,268</u>

EXHIBIT 1-D
SCHEDULE 4
SHEET 4 OF 8

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

LINE NO	MONTH	DEVELOPED RESOURCES INC 15854			DICK RADAKER 1710			DONALD DEITZ 17266		
		VOLUME	RATE	AMOUNT	VOLUME	RATE	AMOUNT	VOLUME	RATE	AMOUNT
		(1) DTH	(2) \$/DTH	(3=1*2) \$	(4) DTH	(5) \$/DTH	(6=4*5) \$	(7) DTH	(8) \$/DTH	(9=7*8) \$
1	FEBRUARY 2016	158	2.36	373	21	2.50	53	0	0.00	0
2	ADJUSTMENT	16		35	6		5	(196)		(441)
3	MARCH	151	2.20	332	21	2.50	53	0	0.00	0
4	ADJUSTMENT	0		0	0		(3)	0		0
5	APRIL	167	1.73	289	9	2.50	23	702	1.78	1,250
6	ADJUSTMENT	0		0	(11)		(28)	3,093		6,959
7	MAY	151	1.94	293	9	2.50	23	507	1.99	1,009
8	ADJUSTMENT	0		0	(1)		(3)	315		(6,251)
9	JUNE	178	2.02	360	4	2.50	10	210	2.07	435
10	ADJUSTMENT	0		0	(5)		(13)	(446)		(846)
11	JULY	178	2.00	356	4	2.50	10	210	2.05	431
12	ADJUSTMENT	0		0	(6)		(8)	0		0
13	AUGUST	181	2.96	536	1	2.50	3	0	0.00	0
14	ADJUSTMENT	16		32	(3)		(8)	(210)		(431)
15	SEPTEMBER	194	2.74	532	1	2.50	3	0	0.00	0
16	ADJUSTMENT	0		0	0		0	0		0
17	OCTOBER	197	2.84	559	1	2.50	3	0	0.00	0
18	ADJUSTMENT	0		0	0		0	0		0
19	NOVEMBER	199	2.93	583	5	2.50	13	13	2.98	39
20	ADJUSTMENT	0		0	8		10	0		0
21	DECEMBER	202	2.71	547	5	2.50	13	13	2.76	36
22	ADJUSTMENT	0		0	(8)		(10)	0		0
23	JANUARY 2017	202	3.22	650	2	2.50	5	11	3.27	36
24	ADJUSTMENT	0		0	(6)		(8)	(2)		(6)
25	TOTAL	<u>2,190</u>		<u>5,477</u>	<u>57</u>		<u>145</u>	<u>4,220</u>		<u>2,220</u>

EXHIBIT 1-D
SCHEDULE 4
SHEET 5 OF 8

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

LINE NO.	MONTH	D N STOVER 13721			CHERRY RUN RESOURCE 17154			EOG RESOURCES APPALACHIAN LLC 1717		
		VOLUME	RATE	AMOUNT	VOLUME	RATE	AMOUNT	VOLUME	RATE	AMOUNT
		(1) DTH	(2) \$/DTH	(3=1*2) \$	(4) DTH	(5) \$/DTH	(6=4*5) \$	(7) DTH	(8) \$/DTH	(9=7*8) \$
1	FEBRUARY 2016	2,464	2.47	6,091	1,007	2.36	2,376	155	2.10	326
2	ADJUSTMENT	17		(389)	222		488	10		11
3	MARCH	2,568	2.32	5,958	980	2.20	2,155	59	2.10	124
4	ADJUSTMENT	0		0	0		0	14		15
5	APRIL	2,568	1.84	4,728	1,220	1.73	2,111	7	2.10	15
6	ADJUSTMENT	0		0	0		0	0		0
7	MAY	2,954	1.85	5,450	1,105	1.94	2,144	7	2.10	15
8	ADJUSTMENT	440		810	0		0	0		0
9	JUNE	2,954	1.91	5,633	952	2.02	1,923	205	2.10	431
10	ADJUSTMENT	0		0	0		0	198		416
11	JULY	2,721	1.91	5,189	952	2.00	1,904	223	2.10	468
12	ADJUSTMENT	(233)		(390)	0		0	36		38
13	AUGUST	2,470	2.96	7,311	549	2.96	1,625	188	2.10	395
14	ADJUSTMENT	(201)		(383)	(316)		(632)	(35)		(74)
15	SEPTEMBER	2,695	2.66	7,174	744	2.74	2,039	219	2.10	460
16	ADJUSTMENT	0		(173)	0		0	37		78
17	OCTOBER	2,695	3.01	8,112	735	2.84	2,087	197	2.10	414
18	ADJUSTMENT	0		0	0		0	0		0
19	NOVEMBER	2,393	3.01	7,203	908	2.93	2,660	197	2.10	414
20	ADJUSTMENT	(103)		(948)	0		0	0		0
21	DECEMBER	2,393	3.35	8,019	999	2.71	2,707	169	2.10	355
22	ADJUSTMENT	0		120	0		0	(162)		(170)
23	JANUARY 2017	2,225	4.02	8,951	999	3.22	3,217	169	2.10	355
24	ADJUSTMENT	(168)		(1,720)	0		0	0		0
25	TOTAL	<u>30,852</u>		<u>76,746</u>	<u>11,056</u>		<u>26,804</u>	<u>1,893</u>		<u>4,082</u>

EXHIBIT 1-D
SCHEDULE 4
SHEET 6 OF 8

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

LINE NO	MONTH	ERIC CICIARELLI 14735			MOUNTAIN V 11321			JOHN H WEAVER SR 11385		
		VOLUME	RATE	AMOUNT	VOLUME	RATE	AMOUNT	VOLUME	RATE	AMOUNT
		(1) DTH	(2) \$/DTH	(3=1*2) \$	(4) DTH	(5) \$/DTH	(6=4*5) \$	(7) DTH	(8) \$/DTH	(9=7*8) \$
1	FEBRUARY 2016	94	2.21	208	825	2.32	1,914	314	2.21	694
2	ADJUSTMENT	5		10	(114)		(415)	4		8
3	MARCH	0	0.00	0	643	2.32	1,492	305	2.05	625
4	ADJUSTMENT	0		0	(372)		(794)	0		0
5	APRIL	0	0.00	0	643	1.84	1,184	400	1.58	632
6	ADJUSTMENT	0		0	0		0	0		0
7	MAY	0	0.00	0	935	1.93	1,802	411	1.79	736
8	ADJUSTMENT	0		0	292		541	0		0
9	JUNE	20	1.87	37	948	1.91	1,808	454	1.87	849
10	ADJUSTMENT	0		0	13		25	0		0
11	JULY	20	1.85	37	970	1.91	1,850	454	1.85	840
12	ADJUSTMENT	0		0	22		42	0		0
13	AUGUST	214	2.81	601	956	2.96	2,830	454	2.81	1,276
14	ADJUSTMENT	111		205	(14)		(27)	2		4
15	SEPTEMBER	219	2.59	567	1,000	2.66	2,662	499	2.59	1,292
16	ADJUSTMENT	0		0	206		528	0		0
17	OCTOBER	192	2.69	516	1,000	3.01	3,010	411	2.69	1,106
18	ADJUSTMENT	0		0	0		0	0		0
19	NOVEMBER	187	2.78	520	961	3.01	2,893	431	2.78	1,198
20	ADJUSTMENT	0		0	(27)		(321)	0		0
21	DECEMBER	68	2.56	174	961	3.35	3,220	383	2.56	980
22	ADJUSTMENT	0		0	0		48	0		0
23	JANUARY 2017	68	3.07	209	647	4.02	2,603	383	3.07	1,176
24	ADJUSTMENT	0		0	(314)		(1,389)	0		0
25	TOTAL	<u>1,198</u>		<u>3,085</u>	<u>10,181</u>		<u>25,506</u>	<u>4,905</u>		<u>11,416</u>

EXHIBIT 1-D
SCHEDULE 4
SHEET 7 OF 8

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

LINE NO.	MONTH	KAHLE HAHN 17285			MARYGLENN FMS & ORCH 17336			STORM KING ENERGY 17346		
		VOLUME	RATE	AMOUNT	VOLUME	RATE	AMOUNT	VOLUME	RATE	AMOUNT
		(1) DTH	(2) \$/DTH	(3=1*2) \$	(4) DTH	(5) \$/DTH	(6=4*5) \$	(7) DTH	(8) \$/DTH	(9=7*8) \$
1	FEBRUARY 2016	3,060	2.21	6,763	94	2.41	227	38	2.41	92
2	ADJUSTMENT	(21)		(43)	19		43	(2,012)		(4,986)
3	MARCH	3,060	2.05	6,273	124	2.25	279	0	0.00	0
4	ADJUSTMENT	0		0	0		0	0		0
5	APRIL	698	1.58	1,103	88	1.78	157	30	1.78	53
6	ADJUSTMENT	18		37	0		0	21		47
7	MAY	505	1.79	904	78	1.99	155	22	1.99	44
8	ADJUSTMENT	0		0	0		0	0		0
9	JUNE	1,386	1.87	2,592	65	2.07	135	22	2.07	46
10	ADJUSTMENT	4,226		7,208	0		0	0		0
11	JULY	1,386	1.85	2,564	65	2.05	133	30	2.05	62
12	ADJUSTMENT	0		0	0		0	8		17
13	AUGUST	831	2.81	2,335	41	3.01	123	58	3.01	175
14	ADJUSTMENT	333		382	(13)		(27)	32		66
15	SEPTEMBER	1,162	2.59	3,010	28	2.79	78	51	2.79	142
16	ADJUSTMENT	0		0	0		0	0		0
17	OCTOBER	1,800	2.69	4,842	16	2.89	46	41	2.89	118
18	ADJUSTMENT	0		0	0		0	0		0
19	NOVEMBER	2,393	2.78	6,653	19	2.98	57	53	2.98	158
20	ADJUSTMENT	0		0	0		0	0		0
21	DECEMBER	2,445	2.56	6,259	14	2.76	39	63	2.76	174
22	ADJUSTMENT	0		0	0		0	0		0
23	JANUARY 2017	2,445	3.07	7,506	14	3.27	46	63	3.27	206
24	ADJUSTMENT	0		0	0		0	0		0
25	TOTAL	<u>25,727</u>		<u>58,387</u>	<u>652</u>		<u>1,490</u>	<u>(1,480)</u>		<u>(3,587)</u>

EXHIBIT 1-D
SCHEDULE 4
SHEET 8 OF 8

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

LINE NO	MONTH	QUESTA PETROLEUM COMPANY 11345			J.D. EXPLORATION 17131			ATLAS RESOURCES LLC 17156		
		VOLUME	RATE	AMOUNT	VOLUME	RATE	AMOUNT	VOLUME	RATE	AMOUNT
		(1) DTH	(2) \$/DTH	(3=1*2) \$	(4) DTH	(5) \$/DTH	(6=4*5) \$	(7) DTH	(8) \$/DTH	(9=7*8) \$
1	FEBRUARY 2016	559	2.21	1,235	559	2.47	1,382	18	2.41	43
2	ADJUSTMENT	1,234		2,530	814		1,880	(91)		(205)
3	MARCH	631	2.05	1,294	323	2.32	749	121	2.25	272
4	ADJUSTMENT	0		0	521		1,290	0		0
5	APRIL	844	1.58	1,334	323	1.84	595	53	1.78	94
6	ADJUSTMENT	0		0	0		0	0		0
7	MAY	572	1.79	1,024	217	1.85	400	72	1.99	143
8	ADJUSTMENT	0		0	(64)		(118)	0		0
9	JUNE	641	1.87	1,199	217	1.91	414	143	2.07	296
10	ADJUSTMENT	0		0	0		0	0		0
11	JULY	641	1.85	1,186	101	1.91	193	143	2.05	293
12	ADJUSTMENT	0		0	(116)		(219)	0		0
13	AUGUST	268	2.81	753	0	0.00	0	78	3.01	235
14	ADJUSTMENT	5		9	63		120	(91)		(187)
15	SEPTEMBER	726	2.59	1,880	0	0.00	0	27	2.79	75
16	ADJUSTMENT	0		0	0		0	0		0
17	OCTOBER	969	2.69	2,607	0	0.00	0	96	2.89	277
18	ADJUSTMENT	0		0	0		0	0		0
19	NOVEMBER	795	2.78	2,210	641	3.01	1,929	64	2.98	191
20	ADJUSTMENT	0		0	158		437	0		0
21	DECEMBER	654	2.56	1,674	641	3.35	2,148	69	2.76	190
22	ADJUSTMENT	0		0	0		32	0		0
23	JANUARY 2017	654	3.07	2,008	552	4.02	2,221	69	3.27	226
24	ADJUSTMENT	0		0	(89)		(585)	0		0
25	TOTAL	<u>9,193</u>		<u>20,942</u>	<u>4,861</u>		<u>12,868</u>	<u>771</u>		<u>1,945</u>

EXHIBIT 1-D
SCHEDULE 5
SHEET 1 OF 12

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

LINE NO.	MONTH	VOLUMES	DEMAND DOLLARS	COMMODITY DOLLARS	TOTAL DOLLARS
		(1) DTH	(2) \$	(3) \$	(4=2+3) \$
1	FEBRUARY - 2016	5,549,058	1,487,370	17,450,964	18,938,335
2	MARCH	3,121,170	1,487,411	9,896,772	11,384,183
3	APRIL	(2,449,553)	1,487,417	(4,547,570)	(3,060,152)
4	MAY	(3,093,017)	1,487,411	(5,953,603)	(4,466,193)
5	JUNE	(3,132,368)	1,487,411	(6,973,737)	(5,486,327)
6	JULY	(3,570,219)	1,487,411	(10,266,916)	(8,779,505)
7	AUGUST	(3,278,651)	1,487,411	(8,058,569)	(6,571,159)
8	SEPTEMBER	(3,053,645)	1,487,411	(9,120,059)	(7,632,648)
9	OCTOBER	(1,032,738)	1,487,411	(2,765,305)	(1,277,895)
10	NOVEMBER	2,160,715	1,487,567	5,777,745	7,265,312
11	DECEMBER	4,401,167	1,487,567	11,863,871	13,351,437
12	JANUARY - 2017	<u>5,442,833</u>	<u>1,487,567</u>	<u>14,765,029</u>	<u>16,252,596</u>
13	TOTAL	<u><u>1,064,752</u></u>	<u><u>17,849,361</u></u>	<u><u>12,068,622</u></u>	<u><u>29,917,983</u></u>

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) \$	(1) DTH	(2) \$/DTH	(3=1x2) \$
1	FEBRUARY - 2016	0	2.3354	0	68	3.0495	207
2	ADJUSTMENT	0	2.3354	0	62,326	3.0495	190,063
3	ADJUSTMENT	0	2.3354	0	0	3.0495	(159)
4	MARCH	0	1.9904	0	67	3.0391	204
5	ADJUSTMENT	0	1.9904	0	138	3.0391	419
6	ADJUSTMENT	0	1.9904	0	0	3.0391	(159)
7	APRIL	0	1.9282	0	66	2.8089	185
8	ADJUSTMENT	0	1.9282	0	204	2.8089	573
9	ADJUSTMENT	0	1.9282	0	0	2.8089	(159)
10	MAY	0	1.9612	0	67	2.6318	176
11	ADJUSTMENT	0	1.9612	0	272	2.6318	716
12	ADJUSTMENT	0	1.9612	0	0	2.6318	(133)
13	JUNE	0	2.2533	0	68	2.5657	174
14	ADJUSTMENT	0	2.2533	0	0	2.5657	(153)
15	JULY	0	2.8962	0	67	2.6207	176
16	ADJUSTMENT	0	2.8962	0	408	2.6207	1,069
17	ADJUSTMENT	0	2.8962	0	0	2.6207	(197)
18	AUGUST	0	2.4732	0	66	2.6012	172
19	ADJUSTMENT	0	2.4732	0	477	2.6012	1,241
20	ADJUSTMENT	0	2.4732	0	0	2.6012	(168)
21	SEPTEMBER	0	3.0089	0	67	2.6460	177
22	ADJUSTMENT	0	3.0089	0	544	2.6460	1,439
23	ADJUSTMENT	0	3.0089	0	0	2.6460	(202)
23	OCTOBER	0	2.7039	0	64	2.6484	169
24	ADJUSTMENT	0	2.7039	0	(1,332)	2.6484	(3,528)
25	ADJUSTMENT	0	2.7039	0	0	2.6484	(173)
25	NOVEMBER	0	2.6420	0	66	2.6483	175
26	ADJUSTMENT	0	2.6420	0	0	2.6483	(169)
27	DECEMBER	0	3.4094	0	67	2.6480	177
28	ADJUSTMENT	0	3.4094	0	0	2.6480	(218)
29	JANUARY - 2017	0	3.8843	0	67	2.6453	177
30	ADJUSTMENT	(1,010)	3.8843	(3,923)	0	2.6453	(249)
31	TOTAL	(1,010)		(3,923)	63,837		192,025

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 - FSS

LINE NO.	MONTH	VOLUME INJECTED	RATE	AMOUNT	VOLUME WITHDRAWN	RATE	AMOUNT
		(1) DTH	(2) \$/DTH	(3=1x2) \$	(1) DTH	(2) \$/DTH	(3=1x2) \$
1	FEBRUARY - 2016	0	2.3354	0	4,704,017	3.0495	14,344,900
2	ADJUSTMENT	(5,766)	2.3354	(13,466)	360,077	3.0495	1,098,055
3	MARCH	(110,529)	1.9904	(219,997)	2,745,791	3.0391	8,344,733
4	ADJUSTMENT	(14,352)	1.9904	(28,566)	98,217	3.0391	298,491
5	APRIL	(2,247,955)	1.9282	(4,334,507)	98,131	2.8089	275,640
6	ADJUSTMENT	54,936	1.9282	105,928	(64,281)	2.8089	(180,559)
7	MAY	(2,690,175)	1.9612	(5,276,091)	15,693	2.6318	41,301
8	ADJUSTMENT	(67,162)	1.9612	(131,721)	1,374	2.6318	3,616
9	JUNE	(2,634,392)	2.2533	(5,936,093)	0	2.5657	0
10	ADJUSTMENT	(117,895)	2.2533	(265,654)	939	2.5657	2,409
11	JULY	(3,132,569)	2.8962	(9,072,527)	0	2.6207	0
12	ADJUSTMENT	(41,427)	2.8962	(119,981)	(457)	2.6207	(1,198)
13	AUGUST	(2,803,555)	2.4732	(6,933,720)	0	2.6012	0
14	ADJUSTMENT	(39,871)	2.4732	(98,609)	0	2.6012	0
15	SEPTEMBER	(2,702,553)	3.0089	(8,131,716)	0	2.6460	0
16	ADJUSTMENT	2,836	3.0089	8,533	0	2.6460	0
17	OCTOBER	(843,165)	2.7039	(2,279,849)	169,963	2.6484	450,130
18	ADJUSTMENT	49,530	2.7039	133,925	0	2.6484	0
19	NOVEMBER	(152,770)	2.6420	(403,614)	2,086,226	2.6483	5,524,952
20	ADJUSTMENT	57,137	2.6420	150,954	0	2.6483	0
21	DECEMBER	0	3.4094	0	3,756,357	2.6480	9,946,833
22	ADJUSTMENT	11,229	3.4094	38,285	0	2.6480	0
23	JANUARY - 2017	0	3.8843	0	4,713,738	2.6453	12,469,251
24	ADJUSTMENT	49,148	3.8843	190,906	0	2.6453	0
25	TOTAL	<u>(17,379,320)</u>		<u>(42,617,581)</u>	<u>18,685,785</u>		<u>52,618,556</u>

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) \$	(1) DTH	(2) \$/DTH	(3=1x2) \$
1	FEBRUARY - 2016	0	2.3354	0	288,958	3.0495	881,177
2	ADJUSTMENT	0	2.3354	0	(4,856)	3.0495	(14,808)
3	MARCH	0	1.9904	0	186,382	3.0391	566,434
4	ADJUSTMENT	0	1.9904	0	(7,042)	3.0391	(21,401)
5	APRIL	(159,655)	1.9282	(307,847)	0	2.8089	0
6	ADJUSTMENT	0	1.9282	0	(3,191)	2.8089	(8,963)
7	MAY	(204,371)	1.9612	(400,822)	0	2.6318	0
8	ADJUSTMENT	178	1.9612	349	0	2.6318	0
9	JUNE	(200,159)	2.2533	(451,020)	0	2.5657	0
10	ADJUSTMENT	(82)	2.2533	(185)	0	2.5657	0
11	JULY	(221,931)	2.8962	(642,755)	0	2.6207	0
12	ADJUSTMENT	(38)	2.8962	(110)	0	2.6207	0
13	AUGUST	(219,832)	2.4732	(543,686)	0	2.6012	0
14	ADJUSTMENT	(21)	2.4732	(52)	0	2.6012	0
15	SEPTEMBER	(175,436)	3.0089	(527,870)	0	2.6460	0
16	ADJUSTMENT	2,450	3.0089	7,372	0	2.6460	0
16	OCTOBER	(180,290)	2.7039	(487,489)	0	2.6484	0
17	ADJUSTMENT	0	2.7039	0	0	2.6484	0
18	NOVEMBER	0	2.6420	0	137,467	2.6483	364,054
19	ADJUSTMENT	69	2.6420	182	0	2.6483	0
20	DECEMBER	0	3.4094	0	357,531	2.6480	946,742
21	ADJUSTMENT	0	3.4094	0	546	2.6480	1,446
22	JANUARY - 2017	0	3.8843	0	437,270	2.6453	1,156,710
23	ADJUSTMENT	0	3.8843	0	0	2.6453	0
24	TOTAL	<u>(1,359,118)</u>		<u>(3,353,932)</u>	<u>1,393,065</u>		<u>3,871,390</u>

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) \$	(1) DTH	(2) \$/DTH	(3=1x2) \$
1	FEBRUARY - 2016	0	2.3354	0	289,000	3.0495	881,306
2	MARCH	0	1.9904	0	300,000	3.0391	911,730
3	APRIL	(71,610)	1.9282	(138,078)	0	2.8089	0
4	MAY	(119,255)	1.9612	(233,888)	0	2.6318	0
5	JUNE	(164,940)	2.2533	(371,660)	0	2.5657	0
6	JULY	(166,208)	2.8962	(481,371)	0	2.6207	0
7	ADJUSTMENT	(458)	2.8962	(1,326)	0	2.6207	0
8	AUGUST	(207,258)	2.4732	(512,588)	0	2.6012	0
9	SEPTEMBER	(174,720)	3.0089	(525,715)	0	2.6460	0
10	OCTOBER	(219,751)	2.7039	(594,189)	0	2.6484	0
11	NOVEMBER	0	2.6420	0	40,000	2.6483	105,932
12	DECEMBER	0	3.4094	0	328,000	2.6480	868,544
13	JANUARY - 2017	0	3.8843	0	330,000	2.6453	872,949
14	TOTAL	<u>(1,124,200)</u>		<u>(2,858,816)</u>	<u>1,287,000</u>		<u>3,640,461</u>

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

<u>LINE NO.</u>	<u>MONTH</u>	<u>TCO - FSS TOTAL</u> (1) DTH
1	FEBRUARY - 2016	(144,766)
2	MARCH	(77,502)
3	APRIL	(56,198)
4	MAY	(29,638)
5	JUNE	(15,907)
6	JULY	(7,606)
7	AUGUST	(8,657)
8	SEPTEMBER	(6,833)
9	OCTOBER	(7,757)
10	NOVEMBER	(7,480)
11	DECEMBER	(52,563)
12	JANUARY - 2017	<u>(86,380)</u>
13	TOTAL	<u><u>(501,287)</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 - 2016	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 - 2017	<u>456,876</u>	1.5010	<u>685,771</u>	<u>25,341,126</u>	0.0288	<u>729,824</u>
13	TOTAL	<u>5,482,512</u>		<u>8,229,251</u>	<u>304,093,512</u>		<u>8,757,893</u>

EXHIBIT 1-D
SCHEDULE 5
SHEET 8 OF 12

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 - 2016	28,800	1.8618	53,620	2,111,176	0.0145	30,612
2	ADJUSTMENT	(4,822)	1.8618	(8,977)	(240,000)	0.0145	(3,480)
3	MARCH	28,800	1.8618	53,620	2,111,176	0.0145	30,612
4	ADJUSTMENT	(4,800)	1.8618	(8,937)	(240,000)	0.0145	(3,480)
5	APRIL	28,800	1.8618	53,620	2,111,176	0.0145	30,612
6	ADJUSTMENT	(4,796)	1.8618	(8,930)	(240,000)	0.0145	(3,480)
7	MAY	28,800	1.8618	53,620	2,111,176	0.0145	30,612
8	ADJUSTMENT	(4,800)	1.8618	(8,937)	(240,000)	0.0145	(3,480)
9	ADJUSTMENT	0	0.0000	(21,449)	0	0.0145	0
10	JUNE	28,800	1.8618	53,620	2,111,176	0.0145	30,612
11	ADJUSTMENT	(4,800)	1.8618	(8,937)	(240,000)	0.0145	(3,480)
12	ADJUSTMENT	0	0.0000	21,449	0	0.0000	0
13	JULY	28,800	1.8618	53,620	2,111,176	0.0145	30,612
14	ADJUSTMENT	(4,800)	1.8618	(8,937)	(240,000)	0.0145	(3,480)
15	AUGUST	28,800	1.8618	53,620	2,111,176	0.0145	30,612
16	ADJUSTMENT	(4,800)	1.8618	(8,937)	(240,000)	0.0145	(3,480)
17	SEPTEMBER	28,800	1.8618	53,620	2,111,176	0.0145	30,612
18	ADJUSTMENT	(4,800)	1.8618	(8,937)	(240,000)	0.0145	(3,480)
19	OCTOBER	28,800	1.8618	53,620	2,111,176	0.0145	30,612
20	ADJUSTMENT	(4,800)	1.8618	(8,937)	(240,000)	0.0145	(3,480)
21	NOVEMBER	28,800	1.8683	53,807	2,111,176	0.0145	30,612
22	ADJUSTMENT	(4,800)	1.8683	(8,968)	(240,000)	0.0145	(3,480)
23	DECEMBER	28,800	1.8683	53,807	2,111,176	0.0145	30,612
24	ADJUSTMENT	(4,800)	1.8683	(8,968)	(240,000)	0.0145	(3,480)
25	JANUARY - 2017	28,800	1.8683	53,807	2,111,176	0.0145	30,612
26	ADJUSTMENT	(4,800)	1.8683	(8,968)	(240,000)	0.0145	(3,480)
27	TOTAL	<u>287,982</u>		<u>536,633</u>	<u>22,454,112</u>		<u>325,585</u>

EXHIBIT 1-D
SCHEDULE 5
SHEET 9 OF 12

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

LINE NO.	MONTH	STORAGE DEMAND			STORAGE CAPACITY		
		VOLUME (1) DTH	RATE (2) \$/DTH	AMOUNT (3=1x2) \$	VOLUME (4) DTH	RATE (5) \$/DTH	AMOUNT (6=4x5) \$
1	FEBRUARY - 2016	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)
2	MARCH	14,348	1.4949	21,449	1,500,000	0.0262	39,300
3	ADJUSTMENT	(14,348)	1.4949	(21,449)	(1,500,000)	0.0262	(39,300)
3	APRIL	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	MAY	14,348	1.4949	21,449	1,500,000	0.0262	39,300
6	ADJUSTMENT	0	0.0000	0	(1,500,000)	0.0262	(39,300)
7	JUNE	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	ADJUSTMENT	(14,348)	1.4949	(21,449)	0	0.0000	0
10	JULY	14,348	1.4949	21,449	1,500,000	0.0262	39,300
11	ADJUSTMENT	(14,348)	1.4949	(21,449)	(1,500,000)	0.0262	(39,300)
12	AUGUST	14,348	1.4949	21,449	1,500,000	0.0262	39,300
13	ADJUSTMENT	(14,348)	1.4949	(21,449)	(1,500,000)	0.0262	(39,300)
14	SEPTEMBER	14,348	1.4949	21,449	1,500,000	0.0262	39,300
15	ADJUSTMENT	(14,348)	1.4949	(21,449)	(1,500,000)	0.0262	(39,300)
16	OCTOBER	14,348	1.4949	21,449	1,500,000	0.0262	39,300
17	ADJUSTMENT	(14,348)	1.4949	(21,449)	(1,500,000)	0.0262	(39,300)
18	NOVEMBER	14,348	1.4949	21,449	1,500,000	0.0262	39,300
19	ADJUSTMENT	(14,348)	1.4949	(21,449)	(1,500,000)	0.0262	(39,300)
20	DECEMBER	14,348	1.4949	21,449	1,500,000	0.0262	39,300
21	ADJUSTMENT	(14,348)	1.4949	(21,449)	(1,500,000)	0.0262	(39,300)
22	JANUARY - 2017	14,348	1.4949	21,449	1,500,000	0.0262	39,300
23	ADJUSTMENT	(14,348)	1.4949	(21,449)	(1,500,000)	0.0262	(39,300)
24	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 - 2016	4,704,069	0.0153	71,972	0	0.0000	0
2	ADJUSTMENT	(6,900,000)	0.0153	(105,570)	0	0.0000	(16)
3	ADJUSTMENT	7,380,970	0.0153	113,046	0	0.0000	0
4	MARCH	2,745,791	0.0153	42,011	0	0.0000	0
5	ADJUSTMENT	(4,704,069)	0.0153	(71,972)	0	0.0000	(1)
6	ADJUSTMENT	4,741,410	0.0153	72,427	0	0.0000	0
6	APRIL	29,008	0.0153	444	2,247,955	0.0153	34,394
7	ADJUSTMENT	(2,745,791)	0.0153	(42,011)	91,783	0.0141	1,297
8	ADJUSTMENT	2,725,616	0.0156	42,486	0	0.0000	0
9	MAY	26,733	0.0153	409	2,690,175	0.0153	41,160
10	ADJUSTMENT	(29,008)	0.0153	(444)	(193,501)	0.0152	(2,950)
11	ADJUSTMENT	77,455	0.0152	1,174	0	0.0000	0
12	JUNE	2,884	0.0153	44	2,634,392	0.0153	40,306
13	ADJUSTMENT	(26,733)	0.0153	(409)	112,062	0.0154	1,730
14	ADJUSTMENT	11,326	0.0153	173	0	0.0000	0
15	ADJUSTMENT	0	0.0000	13	0	0.0000	0
16	JULY	18,473	0.0153	283	3,132,569	0.0153	47,928
17	ADJUSTMENT	(2,884)	0.0153	(44)	42,867	0.0152	651
18	ADJUSTMENT	0	0.0000	1	0	0.0000	0
19	AUGUST	2,428	0.0153	37	2,803,555	0.0153	42,894
20	ADJUSTMENT	(18,473)	0.0153	(282)	35,424	0.0152	538
21	SEPTEMBER	1,408	0.0153	22	2,702,553	0.0153	41,349
22	ADJUSTMENT	(2,428)	0.0153	(37)	(2,803,555)	0.0153	(42,894)
23	ADJUSTMENT	0	0.0000	0	2,799,809	0.0153	42,830
24	OCTOBER	2,346	0.0153	36	843,165	0.0153	12,900
25	ADJUSTMENT	(1,408)	0.0153	(22)	(2,031)	0.0153	(31)
26	ADJUSTMENT	0	0.0000	370	0	0.0000	(1,818)
27	NOVEMBER	2,086,226	0.0153	31,919	0	0.0000	0
28	ADJUSTMENT	170,183	0.0153	2,604	(18,451)	0.0153	(282)
29	ADJUSTMENT	0	0.0000	35	0	0.0000	996
30	DECEMBER	3,756,357	0.0153	57,472	0	0.0000	0
31	ADJUSTMENT	(11,816)	0.0153	(181)	133,190	0.0153	2,038
32	ADJUSTMENT	0	0.0000	51	0	0.0000	(43)
33	JANUARY - 2017	4,713,738	0.0153	72,120	0	0.0000	0
34	ADJUSTMENT	56,243	0.0153	861	0	0.0000	(8)
35	ADJUSTMENT	0	0.0000	129	0	0.0000	0
36	TOTAL	<u>18,810,054</u>		<u>289,166</u>	<u>17,251,961</u>		<u>262,968</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 - 2016	298,940	0.0135	4,036	0	0.0000	0
2	ADJUSTMENT	398,978	0.0162	6,478	0	0.0000	0
3	ADJUSTMENT	(379,005)	0.0149	(5,647)	0	0.0000	0
4	ADJUSTMENT	0	0.0000	(609)	0	0.0000	0
5	MARCH	192,678	0.0135	2,601	0	0.0000	0
6	ADJUSTMENT	(298,940)	0.0135	(4,036)	0	0.0000	0
7	ADJUSTMENT	294,629	0.0156	4,585	0	0.0000	0
8	ADJUSTMENT	0	0.0000	(730)	0	0.0000	0
9	APRIL	14,130	0.0135	191	183,479	0.0262	4,807
10	ADJUSTMENT	(192,678)	0.0135	(2,601)	0	0.0000	379
11	ADJUSTMENT	189,735	0.0157	2,972	0	0.0000	0
12	ADJUSTMENT	0	0.0000	(71)	0	0.0000	0
13	MAY	310	0.0150	5	200,601	0.0262	5,256
14	ADJUSTMENT	(14,130)	0.0135	(191)	(183,479)	0.0262	(4,807)
15	ADJUSTMENT	25,036	0.0090	225	223,458	0.0202	4,508
16	ADJUSTMENT	0	0.0000	0	0	0.0000	(1,450)
17	JUNE	300	0.0150	5	194,160	0.0262	5,087
18	ADJUSTMENT	(310)	0.0150	(5)	3,797	0.0262	99
19	ADJUSTMENT	0	0.0000	0	0	0.0000	(670)
20	JULY	310	0.0149	5	109,430	0.0262	2,867
21	ADJUSTMENT	(300)	0.0150	(5)	6,037	0.0262	158
22	ADJUSTMENT	0	0.0000	0	0	0.0000	(539)
23	AUGUST	310	0.0149	5	112,468	0.0262	2,947
24	ADJUSTMENT	(310)	0.0149	(5)	112,522	0.0262	2,948
25	ADJUSTMENT	0	0.0000	0	0	0.0000	(744)
26	ADJUSTMENT	0	0.0000	0	0	0.0000	(3,514) 1/
27	SEPTEMBER	300	0.0150	5	176,490	0.0262	4,624
28	ADJUSTMENT	(310)	0.0149	(5)	104,914	0.0262	2,749
29	ADJUSTMENT	0	0.0000	0	0	0.0000	(720)
30	OCTOBER	310	0.0150	5	192,120	0.0262	5,034
31	ADJUSTMENT	(300)	0.0150	(5)	(1,054)	0.0262	(28)
32	ADJUSTMENT	0	0.0000	0	0	0.0000	(744)
33	NOVEMBER	0	0.0000	0	0	0.0000	0
34	ADJUSTMENT	7,584	0.0148	112	(4,005)	0.0262	(105)
35	DECEMBER	0	0.0000	0	0	0.0000	0
36	ADJUSTMENT	240,453	0.0113	2,724	0	0.0000	0
37	JANUARY - 2017	0	0.0000	0	0	0.0000	0
38	ADJUSTMENT	546,083	0.0122	6,680	0	0.0000	0
39	ADJUSTMENT	0	0.0000	(575)	0	0.0000	0
40	TOTAL	<u>1,323,803</u>		<u>16,149</u>	<u>1,430,938</u>		<u>28,141</u>

1/ Correcting Dominion injection and withdrawal charges for April 2014-June 2014.

EXHIBIT 1-D
SCHEDULE 5
SHEET 12 OF 12

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

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 - 2016	317,000	0.0069	2,187	0	0.0000	0
2	ADJUSTMENT	(317,000)	0.0069	(2,187)	(165,000)	0.0069	(1,139) 1/
3	ADJUSTMENT	0	0.0000	0	165,000	0.0069	1,139
4	MARCH	289,000	0.0069	1,994	0	0.0000	0
5	ADJUSTMENT	(289,000)	0.0069	(1,994)	0	0.0000	0
6	APRIL	0	0.0000	0	0	0.0000	0
7	ADJUSTMENT	0	0.0000	(2,070)	0	0.0000	0
8	MAY	0	0.0000	0	0	0.0000	0
9	JUNE	0	0.0000	0	0	0.0000	0
10	ADJUSTMENT	0	0.0000	2,070	0	0.0000	0
11	JULY	0	0.0000	0	165,398	0.0069	1,141
12	ADJUSTMENT	0	0.0000	0	(165,398)	0.0069	(1,141)
13	AUGUST	0	0.0000	0	166,208	0.0069	1,147
14	ADJUSTMENT	0	0.0000	0	(166,208)	0.0069	(1,147)
15	ADJUSTMENT	0	0.0000	(8,556) 2/	0	0.0000	(7,426) 2/
16	SEPTEMBER	0	0.0000	0	207,258	0.0069	1,430
17	ADJUSTMENT	0	0.0000	0	(207,258)	0.0069	(1,430)
18	OCTOBER	0	0.0000	0	174,720	0.0069	1,206
19	ADJUSTMENT	0	0.0000	0	(174,720)	0.0069	(1,206)
20	NOVEMBER	0	0.0000	0	219,751	0.0069	1,516
21	ADJUSTMENT	0	0.0000	0	(219,751)	0.0069	(1,516)
22	DECEMBER	40,000	0.0069	276	0	0.0000	0
23	ADJUSTMENT	(40,000)	0.0069	(276)	0	0.0000	0
24	JANUARY - 2017	328,000	0.0069	2,263	0	0.0000	0
25	ADJUSTMENT	(328,000)	0.0069	(2,263)	0	0.0000	0
26	TOTAL	<u>0</u>		<u>(8,556)</u>	<u>0</u>		<u>(7,426)</u>

1/ Correcting injection charge that was recorded in May 2015 to transportation.

2/ Correcting Equitrans injection and withdrawal charges for April 2014-February 2015.

EXHIBIT 1-D
SCHEDULE 6
SHEET 1 OF 19

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 2016	(15,532)	4,333,352	96,849	4,430,201
2	March	(16,772)	4,334,183	63,719	4,397,902
3	April	(74,338)	2,817,856	74,808	2,892,664
4	May	(78,826)	2,677,699	72,685	2,750,384
5	June	(63,619)	2,718,317	48,346	2,766,663
6	July	(65,696)	2,758,313	52,136	2,810,449
7	August	(60,809)	2,726,433	(111,101)	2,615,332
8	September	(58,251)	2,726,503	55,339	2,781,843
9	October	(44,239)	4,104,037	35,148	4,139,185
10	November	(11,001)	4,042,386	59,349	4,101,735
11	December	(46,507)	4,096,290	96,803	4,193,093
12	January 2017	<u>(27,718)</u>	<u>4,098,299</u>	<u>70,811</u>	<u>4,169,110</u>
13	TOTAL	<u>(563,308)</u>	<u>41,433,668</u>	<u>614,893</u>	<u>42,048,561</u>

1/ These volumes represent retainage by the pipelines.

EXHIBIT 1-D
SCHEDULE 6
SHEET 2 OF 19

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 (1) Dth	Billing Rate (2) \$/Dth	Amount (3=1x2) \$	Capacity Release 1/ (4) \$	Total FTS Amount (5=3+4) \$
1	February 2016	132,588	6.4200	851,215	(229,380)	621,835
2	Adjustment				(22,259)	(22,259)
3	Adjustment				(33,480) 2/	(33,480)
4	Adjustment				22,259	22,259
5	March	132,588	6.4200	851,215	(228,674)	622,541
6	Adjustment				(22,259)	(22,259)
7	Adjustment				(33,480) 2/	(33,480)
8	Adjustment				22,259	22,259
9	April	132,588	6.4050	849,226	(227,730)	621,496
10	Adjustment				(33,402) 2/	(33,402)
11	May	132,588	6.1900	820,720	(218,538)	602,182
12	Adjustment				(32,281) 2/	(32,281)
13	June	132,588	6.1900	820,720	(216,433)	604,286
14	Adjustment				(32,281) 2/	(32,281)
15	July	132,588	6.1900	820,720	(212,843)	607,877
16	Adjustment				(32,281) 2/	(32,281)
17	August	132,588	6.1900	820,720	(212,323)	608,397
18	Adjustment				(32,281) 2/	(32,281)
19	September	132,588	6.1900	820,720	(211,964)	608,756
20	Adjustment				(32,281) 2/	(32,281)
21	October	132,588	6.1900	820,720	(210,584)	610,136
22	Adjustment				(32,281) 2/	(32,281)
23	November	127,588	6.1900	789,770	(209,203)	580,566
24	Adjustment				(62,893)	(62,893)
25	Adjustment				(32,281) 2/	(32,281)
26	Adjustment				62,893	62,893
27	December	127,588	6.1360	782,880	(206,341)	576,539
28	Adjustment				(63,175)	(63,175)
29	Adjustment				(31,999) 2/	(31,999)
30	Adjustment				63,175	63,175
31	January 2017	127,588	6.1360	782,880	(205,347)	577,532
32	Adjustment				(63,175)	(63,175)
33	Adjustment				(31,999) 2/	(31,999)
34	Adjustment				63,175	63,175
35	TOTAL	<u>1,576,056</u>		<u>9,831,504</u>	<u>(2,979,690)</u>	<u>6,851,814</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 19

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	Billing Rate	Amount	Capacity Release	Total SST Amount
		(1) Dth	(2) \$/Dth	(3=1x2) \$	(4) \$	(5=3+4) \$
1	February 2016	456,876	6.2500	2,855,475	(52,612)	2,802,863
2	Adjustment				52,612	52,612
3	March	456,876	6.2500	2,855,475	(13,705)	2,841,771
4	Adjustment				13,705	13,705
5	April	228,438	6.2350	1,424,311	(7,965)	1,416,346
6	Adjustment				7,965	7,965
7	May	228,438	6.0200	1,375,197	(9,714)	1,365,483
8	Adjustment				9,714	9,714
9	June	228,438	6.0200	1,375,197	(5,649)	1,369,548
10	Adjustment				5,649	5,649
11	July	228,438	6.0200	1,375,197	(7,741)	1,367,456
	Adjustment				7,741	7,741
12	August	228,438	6.0200	1,375,197	(8,923)	1,366,274
13	Adjustment				8,923	8,923
14	September	228,438	6.0200	1,375,197	(8,901)	1,366,296
15	Adjustment				8,901	8,901
16	October	456,876	6.0200	2,750,394	(2,270)	2,748,123
17	Adjustment				2,270	2,270
18	November	456,876	6.0200	2,750,394	(57,857)	2,692,537
19	Adjustment				57,857	57,857
20	December	456,876	5.9660	2,725,722	(42,827)	2,682,895
21	Adjustment				42,827	42,827
22	January 2017	456,876	5.9660	2,725,722	(67,193)	2,658,530
23	Adjustment				67,193	67,193
24	TOTAL	<u>4,111,884</u>		<u>24,963,476</u>	<u>0</u>	<u>24,963,476</u>

EXHIBIT 1-D
SCHEDULE 6
SHEET 4 of 19

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 2016	83,303	0.0194	1,616
2	Adjustment			(7)
3	Adjustment			(11,627)
4	March	231,467	0.0194	4,490
5	April	115,013	0.0195	2,243
6	May	191,077	0.0195	3,726
7	Adjustment			7,766
8	June	212,585	0.0195	4,145
9	Adjustment			5
10	July	327,426	0.0195	6,385
11	August	338,354	0.0195	6,598
12	September	234,887	0.0195	4,580
13	October	359,786	0.0194	6,980
14	Adjustment			7
15	November	345,620	0.0194	6,705
16	Adjustment			59
17	December	1,241,687	0.0194	24,089
18	January 2017	<u>641,026</u>	0.0194	<u>12,436</u>
19	TOTAL	<u><u>4,322,231</u></u>		<u><u>80,197</u></u>

EXHIBIT 1-D
SCHEDULE 6
SHEET 5 of 19

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 2016	4,797,930	0.0192	92,120
2	Adjustment			(4,674)
3	March	2,694,028	0.0192	51,725
4	Adjustment			(7,653)
5	April	2,953,796	0.0193	57,008
6	Adjustment			(3,056)
7	May	2,981,876	0.0193	57,550
8	Adjustment			(7,407)
9	June	2,208,648	0.0193	42,627
10	Adjustment			(1,370)
11	July	2,253,886	0.0193	43,500
12	Adjustment			(355)
13	August	1,926,934	0.0193	37,190
14	Adjustment			(500)
15	September	1,919,976	0.0193	37,056
16	Adjustment			7,379
17	October	976,591	0.0192	18,751
18	Adjustment			576
19	November	2,118,408	0.0192	40,673
20	Adjustment			1,201
21	December	4,459,757	0.0192	85,627
22	Adjustment			(4,351)
23	January 2017	270,922	0.0192	5,202
24	Adjustment			(6,647)
25	TOTAL	<u>29,562,752</u>		<u>542,173</u>

EXHIBIT 1-D
SCHEDULE 6
SHEET 6 OF 19

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/	Capacity Acquisition	Total FTS-1 Amount
		(1) Dth	(2) \$/Dth	(3=1x2) \$	(4) \$	(5) \$	(6=3+4+5) \$
1	February 2016	43,632	4.2917	187,255	(114,013)	0	73,242
2	March	43,632	4.2917	187,255	(113,889)	0	73,367
3	April	43,632	4.2917	187,255	(113,940)	0	73,315
4	May	43,632	4.2917	187,255	(112,743)	0	74,512
5	June	43,632	4.2917	187,255	(111,254)	0	76,002
6	July	43,632	4.2917	187,255	(108,846)	0	78,409
7	August	43,632	4.2917	187,255	(108,677)	0	78,578
8	September	43,632	4.2917	187,255	(108,331)	0	78,924
9	October	43,632	4.2917	187,255	(107,391)	0	79,864
10	November	43,632	4.1700	181,945	(103,862)	0	78,083
11	December	43,632	4.1700	181,945	(103,950)	0	77,996
12	January 2017	<u>43,632</u>	4.1700	<u>181,945</u>	<u>(103,349)</u>	<u>0</u>	<u>78,596</u>
13	TOTAL	<u>523,584</u>		<u>2,231,135</u>	<u>(1,310,246)</u>	<u>0</u>	<u>920,889</u>

1/ Includes capacity allocated to suppliers participating in Columbia's Choice Program.

EXHIBIT 1-D
SCHEDULE 6
SHEET 7 OF 19

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 (4) \$	Total FTNN Amount (5=3+4) \$
1	February 2016	33,800	4.1619	140,672	0	140,672
2	Adjustment			(10,917)	0	(10,917)
3	March	33,800	4.1619	140,672	0	140,672
4	Adjustment			(10,917)	0	(10,917)
5	April	26,800	4.1619	111,539	0	111,539
6	Adjustment			16,993	0	16,993
7	May	26,800	4.1619	111,539	0	111,539
8	Adjustment			(52,960)	0	(52,960)
9	June	26,800	4.1619	111,539	0	111,539
10	Adjustment			(17,984)	0	(17,984)
11	July	26,800	4.1619	111,539	0	111,539
12	Adjustment			(17,984)	0	(17,984)
13	Adjustment			33,986	0	33,986
14	August	26,800	4.1619	111,539	0	111,539
15	Adjustment			(17,984)	0	(17,984)
16	September	26,800	4.1619	111,539	0	111,539
17	Adjustment			(17,984)	0	(17,984)
18	October	26,800	4.1619	111,539	0	111,539
19	Adjustment			(17,984)	0	(17,984)
20	November	33,800	4.1629	140,706	0	140,706
21	Adjustment			(11,556)	0	(11,556)
22	Adjustment			(33,986)	0	(33,986)
23	December	33,800	4.1629	140,706	0	140,706
24	Adjustment			(11,568)	0	(11,568)
25	Adjustment			142	0	142
26	January 2017	33,800	4.1667	140,835	0	140,835
27	Adjustment			(11,580)	0	(11,580)
28	Adjustment			142	0	142
29	TOTAL	<u>356,600</u>		<u>1,302,226</u>	<u>0</u>	<u>1,302,226</u>

EXHIBIT 1-D
SCHEDULE 6
SHEET 8 OF 19

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF HISTORIC COST OF GAS
DOMINION TRANSMISSION
TRANSPORTATION COMMODITY CHARGES

Line No.	Month	FTNN			IT			Total FTNN & IT Commodity (7=3 + 6) \$
		Commodity Volume	Billing Rate	Amount	Commodity Volume	Billing Rate	Amount	
		(1) Dth	(2) \$/Dth	(3=1x2) \$	(4) Dth	(5) \$/Dth	(6=4x5) \$	
1	February 2016	293,101	0.0146	4,291	0	0.0000	0	4,291
2	Adjustment			115	0	0.0000	0	115
3	Adjustment			(994)	0	0.0000	0	(994)
4	March	188,910	0.0145	2,747	0	0.0000	0	2,747
5	Adjustment			(373)	0	0.0000	0	(373)
6	Adjustment			(604)	0	0.0000	0	(604)
7	April	123,238	0.0148	1,823	0	0.0000	0	1,823
8	Adjustment			(203)	0	0.0000	0	(203)
9	Adjustment			45	0	0.0000	0	45
10	May	140,554	0.0142	1,996	0	0.0000	0	1,996
11	Adjustment			(1,335)	0	0.0000	0	(1,335)
12	Adjustment			(173)	0	0.0000	0	(173)
13	June	168,720	0.0142	2,396	0	0.0000	0	2,396
14	Adjustment			(1,619)	0	0.0000	0	(1,619)
15	Adjustment			(26)	0	0.0000	0	(26)
16	July	82,088	0.0142	1,166	0	0.0000	0	1,166
17	Adjustment			(4,565)	0	0.0000	0	(4,565)
18	August	90,055	0.0142	1,279	0	0.0000	0	1,279
19	Adjustment			(1,900)	0	0.0000	0	(1,900)
20	Adjustment			4,380	0	0.0000	0	4,380
21	Adjustment			(92) 1/	0	0.0000	0	(92)
22	September	153,570	0.0141	2,171	0	0.0000	0	2,171
23	Adjustment			(484)	0	0.0000	0	(484)
24	October	185,004	0.0141	2,609	0	0.0000	0	2,609
25	Adjustment			(1,322)	0	0.0000	0	(1,322)
26	Adjustment			(27)	0	0.0000	0	(27)
27	November	137,700	0.0164	2,258	0	0.0000	0	2,258
28	Adjustment			(1,302)	0	0.0000	0	(1,302)
29	Adjustment			(31)	0	0.0000	0	(31)
30	December	351,000	0.0164	5,756	0	0.0000	0	5,756
31	Adjustment			(42)	0	0.0000	0	(42)
32	Adjustment			(614)	0	0.0000	0	(614)
33	January 2017	429,500	0.0164	7,044	0	0.0000	0	7,044
34	Adjustment			(10)	0	0.0000	0	(10)
35	Adjustment			(1,422)	0	0.0000	0	(1,422)
36	TOTAL	<u>2,343,440</u>		<u>22,938</u>	<u>0</u>		<u>0</u>	<u>22,938</u>

1/ Correcting Dominion FTS commodity from July 2014-October 2014.

EXHIBIT 1-D
SCHEDULE 6
SHEET 9 OF 19

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	Amount	Capacity Release	Total FTS Amount
		(1) Dth	(2) \$/Dth	(3=1x2) \$	(4) \$	(5=3+4) \$
1	February 2016	14,348	6.1206	87,818	0	87,818
2	Adjustment			(47,979)	0	(47,979)
3	March	14,348	6.1206	87,818	0	87,818
4	Adjustment			(47,979)	0	(47,979)
5	April	7,500	5.5559	41,669	0	41,669
6	Adjustment			(35,461)		(35,461)
7	May	7,500	5.5559	41,669	0	41,669
8	Adjustment			(39,555)		(39,555)
9	June	7,500	5.5559	41,669	0	41,669
10	Adjustment			(37,508)		(37,508)
11	July	7,500	5.5559	41,669	0	41,669
12	Adjustment			(37,508)		(37,508)
13	August	7,500	5.5559	41,669	0	41,669
14	Adjustment			(37,508)		(37,508)
15	September	7,500	5.5559	41,669	0	41,669
16	Adjustment			(37,508)		(37,508)
17	October	7,500	5.5559	41,669	0	41,669
18	Adjustment			(37,508)		(37,508)
19	November	14,348	6.1206	87,818	0	87,818
20	Adjustment			(50,783)		(50,783)
21	December	14,348	6.1206	87,818	0	87,818
22	Adjustment			(50,783)		(50,783)
23	January 2017	14,348	6.1206	87,818	0	87,818
24	Adjustment			(50,783)		(50,783)
25	TOTAL	<u>124,240</u>		<u>219,915</u>	<u>0</u>	<u>219,915</u>

EXHIBIT 1-D
 SCHEDULE 6
 SHEET 10 OF 19

COLUMBIA GAS OF PENNSYLVANIA, INC.
 DETAIL OF HISTORIC COST OF GAS
 EQUITRANS
 TRANSPORTATION COMMODITY CHARGES

Line No.	Month	Commodity Volume (1) Dth	Billing Rate (2) \$/Dth	Amount (3=1x2) \$
1	February 2016	0	0.0000	(1,139) 2/
2	March	0	0.0000	0
3	April	0	0.0000	2,070
4	May	0	0.0000	0
5	June	0	0.0000	(2,070)
6	July	0	0.0000	0
7	August	0	0.0000	0
8	Adjustment			(162,051) 1/
9	September	0	0.0000	0
10	October	0	0.0000	0
11	November	0	0.0000	0
12	December	0	0.0000	0
13	January 2017	<u>0</u>	0.0000	<u>0</u>
14	TOTAL	<u><u>0</u></u>		<u><u>(163,189)</u></u>

1/ Correcting Equitrans FTS commodity from April 2014-September 2014.

2/ Correcting injection charge that was recorded in May 2015 to transportation.

EXHIBIT 1-D
SCHEDULE 6
SHEET 11 OF 19

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	Net Demand Amount	Capacity Release	Total FTA Amount
		(1) Dth	(2) \$/Dth	(3=1x2) \$	(4) \$	(5=3+4) \$
1	February 2016	36,100	9.5283	343,973	0	343,973
2	March	36,100	9.5283	343,973	0	343,973
3	April	36,100	9.5283	343,973	0	343,973
4	May	36,100	9.5283	343,973	0	343,973
5	June	36,100	9.5283	343,973	0	343,973
6	July	36,100	9.5283	343,973	0	343,973
7	August	36,100	9.5283	343,973	0	343,973
8	September	36,100	9.5283	343,973	0	343,973
9	October	36,100	9.5283	343,973	0	343,973
10	November	23,600	11.7787	277,978	0	277,978
11	December	23,600	11.7799	278,006	0	278,006
12	Adjustment			28	0	28
13	January 2017	<u>23,600</u>	11.7799	<u>278,006</u>	<u>0</u>	<u>278,006</u>
14	TOTAL	<u>395,700</u>		<u>3,929,773</u>	<u>0</u>	<u>3,929,773</u>

EXHIBIT 1-D
SCHEDULE 6
SHEET 12 OF 19

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF HISTORIC COST OF GAS
TENNESSEE GAS PIPELINE CORPORATION
TRANSPORTATION COMMODITY CHARGES

Line No.	Month	FTA			IT			Total FTA & IT Commodity
		Commodity Volume	Billing Rate	Amount	Commodity Volume	Billing Rate	Amount	
		(1)	(2)	(3=1x2)	(4)	(5)	(6=4x5)	(7=3 + 6)
		Dth	\$/Dth	\$	Dth	\$/Dth	\$	\$
1	February 2016	346,725	0.0520	18,030	0	0.0000	0	18,030
2	March	230,612	0.0520	11,992	0	0.0000	0	11,992
3	April	260,844	0.0520	13,564	0	0.0000	0	13,564
4	May	191,875	0.0520	9,978	0	0.0000	0	9,978
5	Adjustment			(574)	0	0.0000	0	(574)
6	June	89,700	0.0520	4,664	0	0.0000	0	4,664
7	Adjustment			(422)	0	0.0000	0	(422)
8	July	111,130	0.0520	5,779	0	0.0000	0	5,779
9	Adjustment			(197)	0	0.0000	0	(197)
10	August	82,254	0.0520	4,277	0	0.0000	0	4,277
11	Adjustment			(245)	0	0.0000	0	(245)
12	September	89,723	0.0520	4,666	0	0.0000	0	4,666
13	Adjustment			(181)	0	0.0000	0	(181)
14	October	133,986	0.0519	6,954	0	0.0000	0	6,954
15	Adjustment			(197)	0	0.0000	0	(197)
16	November	204,680	0.0499	10,214	0	0.0000	0	10,214
17	Adjustment			(295)	0	0.0000	0	(295)
18	December	420,064	0.0499	20,961	0	0.0000	0	20,961
19	January 2017	328,778	0.0499	16,406	0	0.0000	0	16,406
20	TOTAL	2,490,371		125,372	0		0	125,372

EXHIBIT 1-D
SCHEDULE 6
SHEET 13 OF 19

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

Line No.	Month	CDS CAPACITY	FT1 CAPACITY	CDS AND FT1	TOTAL
		RELEASE	RELEASE	DEMAND 1/	DEMAND
		(1)	(2)	(3)	(4 = 1 + 2 + 3)
		\$	\$	\$	\$
1	February 2016	0	0	286,767	286,767
2	March	0	0	286,767	286,767
3	April	0	0	237,477	237,477
4	May	0	0	237,477	237,477
5	June	0	0	237,477	237,477
6	July	0	0	237,477	237,477
7	August	0	0	238,272	238,272
8	September	0	0	238,272	238,272
9	October	0	0	238,272	238,272
10	November	0	0	238,272	238,272
11	December	0	0	288,387	288,387
12	January 2017	0	0	288,387	288,387
13	TOTAL	0	0	3,053,308	3,053,308

1/ CDS and FT1 Demand Charges are detailed on Sheets 14-15.

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

Line No.	Month	CDS Contract # 800387			CDS Contract # 910463			CDS Contract # 910464			TOTAL AMOUNT CDS
		Demand Volume (1) Dth	Rate (2) \$/Dth	Amount (3=1x2) \$	Demand Volume (4) Dth	Rate (5) \$/Dth	Amount (6=4x5) \$	Demand Volume (7) Dth	Rate (8) \$/Dth	Amount (9=7x8) \$	
1	February 2016	5,390	6.5104	35,091	364	6.5067	2,368	9,951	6.4967	64,649	102,108
2	March	5,390	6.5104	35,091	364	6.5067	2,368	9,951	6.4967	64,649	102,108
3	April	5,390	6.5104	35,091	364	6.5067	2,368	9,951	6.4967	64,649	102,108
4	May	5,390	6.5104	35,091	364	6.5067	2,368	9,951	6.4967	64,649	102,108
5	June	5,390	6.5104	35,091	364	6.5067	2,368	9,951	6.4967	64,649	102,108
6	July	5,390	6.5104	35,091	364	6.5067	2,368	9,951	6.4967	64,649	102,108
7	August	5,390	6.5564	35,339	364	6.5527	2,385	9,951	6.5500	65,179	102,903
8	September	5,390	6.5564	35,339	364	6.5527	2,385	9,951	6.5500	65,179	102,903
9	October	5,390	6.5564	35,339	364	6.5527	2,385	9,951	6.5500	65,179	102,903
10	November	5,390	6.5564	35,339	364	6.5527	2,385	9,951	6.5500	65,179	102,903
11	December	5,390	6.5729	35,428	364	6.5692	2,391	9,951	6.5691	65,369	103,188
12	January 2017	5,390	6.5729	35,428	364	6.5692	2,391	9,951	6.5691	65,369	103,188
13	TOTAL	<u>64,680</u>		<u>422,758</u>	<u>4,368</u>		<u>28,534</u>	<u>119,412</u>		<u>779,344</u>	<u>1,230,635</u>

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

Line No.	Month	Demand Volume	FT-1 Contract # 830049 Rate	Amount	Demand Volume	FT-1 Contract # 910951 Rate	Amount	TOTAL AMOUNT FT-1	Total CDS AND FT-1 Demand
		(11) Dth	(12) \$/Dth	(13=11x12) \$	(14) Dth	(15) \$/Dth	(16=14x15) \$	(17=13+16) \$	
1	February 2016	10,000	4.9290	49,290	14,835	9.1250	135,369	184,659	286,767
2	March	10,000	4.9290	49,290	14,835	9.1250	135,369	184,659	286,767
3	April	0	0.0000	0	14,835	9.1250	135,369	135,369	237,477
4	May	0	0.0000	0	14,835	9.1250	135,369	135,369	237,477
5	June	0	0.0000	0	14,835	9.1250	135,369	135,369	237,477
6	July	0	0.0000	0	14,835	9.1250	135,369	135,369	237,477
7	August	0	0.0000	0	14,835	9.1250	135,369	135,369	238,272
8	September	0	0.0000	0	14,835	9.1250	135,369	135,369	238,272
9	October	0	0.0000	0	14,835	9.1250	135,369	135,369	238,272
10	November	0	0.0000	0	14,835	9.1250	135,369	135,369	238,272
11	December	10,000	4.9830	49,830	14,835	9.1250	135,369	185,199	288,387
12	January 2017	10,000	4.9830	49,830	14,835	9.1250	135,369	185,199	288,387
13	TOTAL	40,000		198,240	178,020		1,624,433	1,822,673	3,053,308

EXHIBIT 1-D
SCHEDULE 6
SHEET 16 OF 19

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+5)
1	February 2016	33,100	0.0261	864	0	0.0000	0	864
2	Adjustment			(3,390)			0	(3,390)
3	March	1,000	0.0261	26	0	0.0000	0	26
4	Adjustment			(66)			0	(66)
5	April	0	0.0000	0	0	0.0000	0	0
6	Adjustment			(2)			0	(2)
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	Adjustment			598				598
14	November	0	0.0000	0	0	0.0000	0	0
15	Adjustment			(599)				(599)
16	December	40,800	0.1963	8,009	0	0.0000	0	8,009
17	January 2017	19,900	0.0208	414	0	0.0000	0	414
18	Adjustment			(6,977)				(6,977)
19	TOTAL	<u>94,800</u>		<u>(1,123)</u>	<u>0</u>		<u>0</u>	<u>(1,123)</u>

EXHIBIT 1-D
SCHEDULE 6
SHEET 17 OF 19

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 (1) Dth	Billing Rate (2) \$/Dth	Amount (3=1x2) \$	Capacity Release (4) \$	Total FT Amount (5=3+4) \$
1	February 2016	4,304	3.7049	15,946	0	15,946
2	March	4,304	3.7049	15,946	0	15,946
3	April	4,304	3.7049	15,946	0	15,946
4	May	4,304	3.7049	15,946	0	15,946
5	June	4,304	3.7049	15,946	0	15,946
6	July	4,304	3.7049	15,946	0	15,946
7	August	4,304	3.7049	15,946	0	15,946
8	September	4,304	3.7049	15,946	0	15,946
9	October	4,304	3.7049	15,946	0	15,946
10	November	4,304	3.7049	15,946	0	15,946
11	December	4,304	3.6293	15,621	0	15,621
12	Adjustment			(325)	0	(325)
13	January 2017	<u>4,304</u>	3.6293	<u>15,621</u>	<u>0</u>	<u>15,621</u>
14	TOTAL	<u>51,648</u>		<u>190,375</u>	<u>0</u>	<u>190,375</u>

EXHIBIT 1-D
SCHEDULE 6
SHEET 18 OF 19

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 2016	51,030	0.0149	760
2	Adjustment			(18)
3	March	34,495	0.0149	514
4	Adjustment			21
5	April	28,102	0.0149	419
6	Adjustment			(2)
7	May	17,003	0.0149	253
8	Adjustment			5
9	June	2,800	0.0149	42
10	Adjustment			(27)
11	July	17,880	0.0149	266
12	Adjustment			158
13	August	6,814	0.0149	102
14	Adjustment			(138)
15	September	9,973	0.0149	149
16	Adjustment			4
17	October	16,523	0.0148	245
18	Adjustment			(24)
19	November	30,315	0.0148	449
20	Adjustment			17
21	December	64,878	0.0148	960
22	Adjustment			13
23	January 2017	57,816	0.0148	856
24	Adjustment			(97)
25	TOTAL	<u>337,629</u>		<u>4,925</u>

EXHIBIT 1-D
SCHEDULE 6
SHEET 19 OF 19

COLUMBIA GAS OF 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 2016	(15,532)	0	900	0	900
2	March	(16,772)	0	900	0	900
3	April	(74,338)	0	900	0	900
4	May	(78,826)	0	900	0	900
5	June	(63,619)	0	0	0	0
6	July	(65,696)	12	0	0	0
7	August	(60,809)	635	0	0	0
8	September	(58,251)	0	0	0	0
9	October	(44,239)	16	0	0	0
10	November	(11,001)	1,229	0	0	0
11	December	(46,507)	0	0	(43,606)	(43,606)
12	January 2017	(27,718)	0	0	43,606	43,606
13	TOTAL	(563,308)	1,892	3,600	0	3,600

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, 2016 through December 31, 2016 is detailed on Page 2. During this period, the PGC Rate was \$4.0551 per Dth with an E-Factor of (\$0.1355), which equals a combined Total Rate of \$3.9196 per Dth.

The cost of gas included in the base cost of fuel from January 1, 2017 through March 31, 2017 is detailed on Page 3. During this period, the PGC Rate was \$4.2032 per Dth with an E-Factor of (\$0.1126), which equals a combined Total Rate of \$4.0906 per Dth.

The cost of gas included in the base cost of fuel from April 1, 2017 through June 30, 2017 is detailed on Page 4. During this period, the PGC Rate was \$3.9611 per Dth with an E-Factor of (\$0.1126), which equals a combined Total Rate of \$3.8485 per Dth.

The cost of gas included in the base cost of fuel from July 1, 2017 through September 30, 2017 is detailed on Page 5. During this period, the PGC Rate was \$4.0993 per Dth with an E-Factor of (\$0.1126), which equals a combined Total Rate of \$3.9867 per Dth.

The cost of gas included in the base cost of fuel from October 1, 2017 through December 31, 2017 is detailed on Page 6. During this period, the PGC Rate was \$4.2647 per Dth with an E-Factor of \$0.0645, which equals a combined Total Rate of \$4.3292 per Dth.

Columbia has used its purchased gas cost rates effective January 1, 2018 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, 2016 THROUGH SEPTEMBER, 2017

Line No.	Description	Amount
		(1)
1	<u>Purchased Gas Commodity Cost</u>	\$
2	Commodity Cost of Gas (Exhibit 1-B, Schedule 1)	95,937,270
3	Projected tariff sales for the twelve billing periods of	
4	October, 2016 through September, 2017	<u>332,476,097</u> Therms
5	PGCC (Line 2/Line 4)	0.28855
6	<u>Commodity (Over)/Under Collection</u>	
7	Commodity E-Factor	
8	(Exhibit No. 1-E)	(6,372,700)
9	Projected sales for the twelve billing periods of	
10	October, 2016 through September, 2017	<u>332,476,097</u> Therms
11	Commodity E-Factor (Line 8/ Line 10)	(0.01917)
12	<u>Purchased Gas Demand Cost</u>	
13	Demand cost of gas (Exhibit 1-B, Schedule 1)	62,156,240
14	Less: Purchased Gas Demand recovered under Rate SS	
15	(Exhibit 1-A, Schedule 2, Sheet 2)	529,898
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)	61,626,342
19	Projected sales for the twelve billing periods of	
20	October, 2016 through September, 2017	<u>463,638,520</u> Therms
21	PGDC Rate prior to Capacity Release Credit (Line 18 / Line 20)	0.13292
22	Off System Sales and Capacity Release Credit	<u>(0.01596)</u>
23	PGDC Rate	0.11696
24	<u>Demand (Over)/Under Collection</u>	
25	Demand E- Factor	
26	(Exhibit No. 1-E)	2,606,823
27	Projected sales for the twelve billing periods of	
28	October, 2016 through September, 2017	<u>463,638,520</u> Therms
29	Demand E-Factor (Line 26 / Line 28)	0.00562
30	<u>Total Purchased Gas Cost</u>	
31	PGCC Rate (Line 5)	0.28855
32	PGDC Rate (Line 23)	<u>0.11696</u>
33	PGC Rate	0.40551
34	Currently effective PGC	<u>0.44658</u>
35	Increase (Decrease) in PGC	(0.04107)
36	<u>Net (Over) Under Collection</u>	
37	Commodity E-Factor (Line 11)	(0.01917)
38	Demand E-Factor (Line 29)	<u>0.00562</u>
39	E-Factor	(0.01355)
40	Currently effective E-Factor	<u>(0.08233)</u>
41	Increase (Decrease) in E-Factor	0.06878
42	PGC Rate	0.40551
43	E-Factor	<u>(0.01355)</u>
44	Total Rate	0.39196
45	Currently effective Rate	<u>0.36425</u>
46	Increase (Decrease) in Rate	0.02771

1_/ Includes 131,162,423 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, 2016 THROUGH SEPTEMBER, 2017

Line No.	Description	Amount (1)	Change in Rate (2=3-1)	Effective 1-1-17 (3)
1	<u>Purchased Gas Commodity Cost</u>	\$		
2	Commodity Cost of Gas (Exhibit 1-B, Schedule 1)	95,937,270		
3	Projected tariff sales for the twelve billing periods of			
4	October, 2016 through September, 2017	<u>332,476,097</u> Therms		
5	PGCC (Line 2/Line 4)	0.28855	0.01536	0.30391
6	<u>Commodity (Over)/Under Collection</u>			
7	Commodity E-Factor			
8	(Exhibit No. 1-E)	(6,372,700)	884,096	(5,488,604)
9	Projected sales for the twelve billing periods of			
10	October, 2016 through September, 2017	<u>332,476,097</u> Therms		<u>332,476,097</u>
11	Commodity E-Factor (Line 8/ Line 10)	(0.01917)	0.00266	(0.01651)
12	<u>Purchased Gas Demand Cost</u>			
13	Demand cost of gas (Exhibit 1-B, Schedule 1)	62,156,240		
14	Less: Purchased Gas Demand recovered under Rate SS			
15	(Exhibit 1-A, Schedule 2, Sheet 2)	529,898		
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)	61,626,342		
19	Projected sales for the twelve billing periods of			
20	October, 2016 through September, 2017	<u>463,638,520</u> Therms		
21	PGDC Rate prior to Capacity Release Credit (Line 18 / Line 20)	0.13292	(0.00055)	0.13237
22	Off System Sales and Capacity Release Credit	<u>(0.01596)</u>	0.00000	<u>(0.01596)</u>
23	PGDC Rate	0.11696	(0.00055)	0.11641
24	<u>Demand (Over)/Under Collection</u>			
25	Demand E-Factor			
26	(Exhibit No. 1-E)	2,606,823	(173,036)	2,433,787
27	Projected sales for the twelve billing periods of			
28	October, 2016 through September, 2017	<u>463,638,520</u> Therms		<u>463,638,520</u>
29	Demand E-Factor (Line 26 / Line 28)	0.00562	(0.00037)	0.00525
30	<u>Total Purchased Gas Cost</u>			
31	PGCC Rate (Line 5)	0.28855	0.01536	0.30391
32	PGDC Rate (Line 23)	<u>0.11696</u>	<u>(0.00055)</u>	<u>0.11641</u>
33	PGC Rate	0.40551	0.01481	0.42032
34	Currently effective PGC	<u>0.44658</u>		<u>0.40551</u>
35	Increase (Decrease) in PGC	(0.04107)		0.01481
36	<u>Net (Over) Under Collection</u>			
37	Commodity E-Factor (Line 11)	(0.01917)	0.00266	(0.01651)
38	Demand E-Factor (Line 29)	<u>0.00562</u>	<u>(0.00037)</u>	<u>0.00525</u>
39	E-Factor	(0.01355)	0.00229	(0.01126)
40	Currently effective E-Factor	<u>(0.08233)</u>		<u>(0.01355)</u>
41	Increase (Decrease) in E-Factor	0.06878		0.00229
42	PGC Rate	0.40551	0.01481	0.42032
43	E-Factor	<u>(0.01355)</u>	<u>0.00229</u>	<u>(0.01126)</u>
44	Total Rate	0.39196	0.01710	0.40906
45	Currently effective Rate	<u>0.36425</u>		<u>0.39196</u>
46	Increase (Decrease) in Rate	0.02771		0.01710

1_/ Includes 131,162,423 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, 2016 THROUGH SEPTEMBER, 2017

Line No.	Description	Amount (1)	Change in Rate (2=3-1)	Effective 1-1-17 (3)	Change in Rate (4=5-3)	Effective 4-1-17 (5)
1	<u>Purchased Gas Commodity Cost</u>	\$				
2	Commodity Cost of Gas (Exhibit 1-B, Schedule 1)	95,937,270				
3	Projected tariff sales for the twelve billing periods of					
4	October, 2016 through September, 2017	332,476,097 Therms				
5	PGCC (Line 2/Line 4)	0.28855	0.01536	0.30391	(0.03698)	0.26693
6	<u>Commodity (Over)/Under Collection</u>					
7	Commodity E-Factor					
8	(Exhibit No. 1-E)	(6,372,700)	884,096	(5,488,604)	0	(5,488,604)
9	Projected sales for the twelve billing periods of					
10	October, 2016 through September, 2017	332,476,097 Therms		332,476,097		332,476,097
11	Commodity E-Factor (Line 8/ Line 10)	(0.01917)	0.00266	(0.01651)	0.00000	(0.01651)
12	<u>Purchased Gas Demand Cost</u>					
13	Demand cost of gas (Exhibit 1-B, Schedule 1)	62,156,240				
14	Less: Purchased Gas Demand recovered under Rate SS					
15	(Exhibit 1-A, Schedule 2, Sheet 2)	529,898				
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)	61,626,342				
19	Projected sales for the twelve billing periods of					
20	October, 2016 through September, 2017	1 / 463,638,520 Therms				
21	PGDC Rate prior to Capacity Release Credit (Line 18 / Line 20)	0.13292	(0.00055)	0.13237	0.01277	0.14514
22	Off System Sales and Capacity Release Credit	(0.01596)	0.00000	(0.01596)	0.00000	(0.01596)
23	PGDC Rate	0.11696	(0.00055)	0.11641	0.01277	0.12918
24	<u>Demand (Over)/Under Collection</u>					
25	Demand E-Factor					
26	(Exhibit No. 1-E)	2,606,823	(173,036)	2,433,787	0	2,433,787
27	Projected sales for the twelve billing periods of					
28	October, 2016 through September, 2017	1 / 463,638,520 Therms		463,638,520		463,638,520
29	Demand E-Factor (Line 26 / Line 28)	0.00562	(0.00037)	0.00525	0.00000	0.00525
30	<u>Total Purchased Gas Cost</u>					
31	PGCC Rate (Line 5)	0.28855	0.01536	0.30391	(0.03698)	0.26693
32	PGDC Rate (Line 23)	0.11696	(0.00055)	0.11641	0.01277	0.12918
33	PGC Rate	0.40551	0.01481	0.42032	(0.02421)	0.39611
34	Currently effective PGC	0.44658		0.40551		0.42032
35	Increase (Decrease) in PGC	(0.04107)		0.01481		(0.02421)
36	<u>Net (Over) Under Collection</u>					
37	Commodity E-Factor (Line 11)	(0.01917)	0.00266	(0.01651)	0.00000	(0.01651)
38	Demand E-Factor (Line 29)	0.00562	(0.00037)	0.00525	0.00000	0.00525
39	E-Factor	(0.01355)	0.00229	(0.01126)	0.00000	(0.01126)
40	Currently effective E-Factor	(0.08233)		(0.01355)		(0.01126)
41	Increase (Decrease) in E-Factor	0.06878		0.00229		0.00000
42	PGC Rate	0.40551	0.01481	0.42032	(0.02421)	0.39611
43	E-Factor	(0.01355)	0.00229	(0.01126)	0.00000	(0.01126)
44	Total Rate	0.39196	0.01710	0.40906	(0.02421)	0.38485
45	Currently effective Rate	0.36425		0.39196		0.40906
46	Increase (Decrease) in Rate	0.02771		0.01710		(0.02421)
				4.36%		-5.92%

1 / Includes 131,162,423 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, 2016 THROUGH SEPTEMBER, 2017

Line No.	Description	Amount (1)	Change in Rate (2=3-1)	Effective 1-1-17 (3)	Change in Rate (4=5-3)	Effective 4-1-17 (5)	Change in Rate (6=7-5)	Effective 7-1-17 (7)
1	<u>Purchased Gas Commodity Cost</u>	\$						
2	Commodity Cost of Gas (Exhibit 1-B, Schedule 1)	95,937,270						
3	Projected tariff sales for the twelve billing periods of							
4	October, 2016 through September, 2017	332,476,097	Therms					
5	PGCC (Line 2/Line 4)	0.28855	0.01536	0.30391	(0.03698)	0.26693	0.00428	0.27121
6	<u>Commodity (Over)/Under Collection</u>							
7	Commodity E-Factor							
8	(Exhibit No. 1-E)	(6,372,700)	884,096	(5,488,604)	0	(5,488,604)	0	(5,488,604)
9	Projected sales for the twelve billing periods of							
10	October, 2016 through September, 2017	332,476,097	Therms	332,476,097		332,476,097		332,476,097
11	Commodity E-Factor (Line 8/ Line 10)	(0.01917)	0.00266	(0.01651)	0.00000	(0.01651)	0.00000	(0.01651)
12	<u>Purchased Gas Demand Cost</u>							
13	Demand cost of gas (Exhibit 1-B, Schedule 1)	62,156,240						
14	Less: Purchased Gas Demand recovered under Rate SS							
15	(Exhibit 1-A, Schedule 2, Sheet 2)	529,898						
16	Less: Purchased Gas Demand Cost allocated to Rates LTS, STS,							
17	SGS-TS and MLS (Exh 1-A, Set 2, Page 3)	0						
18	Subtotal (Line 13 - Line 15 - Line 17)	61,626,342						
19	Projected sales for the twelve billing periods of							
20	October, 2016 through September, 2017	463,638,520	Therms					
21	PGDC Rate prior to Capacity Release Credit (Line 18 / Line 20)	0.13292	(0.00055)	0.13237	0.01277	0.14514	0.00954	0.15468
22	Off System Sales and Capacity Release Credit	(0.01596)	0.00000	(0.01596)	0.00000	(0.01596)	0.00000	(0.01596)
23	PGDC Rate	0.11696	(0.00055)	0.11641	0.01277	0.12918	0.00954	0.13872
24	<u>Demand (Over)/Under Collection</u>							
25	Demand E-Factor							
26	(Exhibit No. 1-E)	2,606,823	(173,036)	2,433,787	0	2,433,787	0	2,433,787
27	Projected sales for the twelve billing periods of							
28	October, 2016 through September, 2017	463,638,520	Therms	463,638,520		463,638,520		463,638,520
29	Demand E-Factor (Line 26 / Line 28)	0.00562	(0.00037)	0.00525	0.00000	0.00525	0.00000	0.00525
30	<u>Total Purchased Gas Cost</u>							
31	PGCC Rate (Line 5)	0.28855	0.01536	0.30391	(0.03698)	0.26693	0.00428	0.27121
32	PGDC Rate (Line 23)	0.11696	(0.00055)	0.11641	0.01277	0.12918	0.00954	0.13872
33	PGC Rate	0.40551	0.01481	0.42032	(0.02421)	0.39611	0.01382	0.40993
34	Currently effective PGC	0.44658		0.40551		0.42032		0.39611
35	Increase (Decrease) in PGC	(0.04107)		0.01481		(0.02421)		0.01382
36	<u>Net (Over) Under Collection</u>							
37	Commodity E-Factor (Line 11)	(0.01917)	0.00266	(0.01651)	0.00000	(0.01651)	0.00000	(0.01651)
38	Demand E-Factor (Line 29)	0.00562	(0.00037)	0.00525	0.00000	0.00525	0.00000	0.00525
39	E-Factor	(0.01355)	0.00229	(0.01126)	0.00000	(0.01126)	0.00000	(0.01126)
40	Currently effective E-Factor	(0.08233)		(0.01355)		(0.01126)		(0.01126)
41	Increase (Decrease) in E-Factor	0.06878		0.00229		0.00000		0.00000
42	PGC Rate	0.40551	0.01481	0.42032	(0.02421)	0.39611		0.40993
43	E-Factor	(0.01355)	0.00229	(0.01126)	0.00000	(0.01126)		(0.01126)
44	Total Rate	0.39196	0.01710	0.40906	(0.02421)	0.38485		0.39867
45	Currently effective Rate	0.36425		0.39196		0.40906		0.38485
46	Increase (Decrease) in Rate	0.02771		0.01710		(0.02421)		0.01382
				4.36%		-5.92%		3.59%

1_/ Includes 131,162,423 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, 2017 THROUGH SEPTEMBER, 2018

Line No.	Description	Amount
		(1)
1	<u>Purchased Gas Commodity Cost</u>	\$
2	Commodity Cost of Gas (Exhibit 1-B, Schedule 1)	112,883,429
3	Projected tariff sales for the twelve billing periods of	
4	October, 2017 through September, 2018	<u>364,579,469</u> Therms
5	PGCC (Line 2/Line 4)	0.30963
6	<u>Commodity (Over)/Under Collection</u>	
7	Commodity E-Factor	
8	(Exhibit No. 1-E)	(1,113,259)
9	Projected sales for the twelve billing periods of	
10	October, 2017 through September, 2018	<u>364,579,469</u> Therms
11	Commodity E-Factor (Line 8/ Line 10)	(0.00305)
12	<u>Purchased Gas Demand Cost</u>	
13	Demand cost of gas (Exhibit 1-B, Schedule 1)	63,339,821
14	Less: Purchased Gas Demand recovered under Rate SS	
15	(Exhibit 1-A, Schedule 2, Sheet 2)	466,066
16	Less: Purchased Gas Demand Cost allocated to Rates LTS, STS,	
17	SGS-TS and MLS (Exh 1-A, Sch 2, Sheet 3)	<u>0</u>
18	Subtotal (Line 13 - Line 15 - Line 17)	62,873,755
19	Projected sales for the twelve billing periods of	
20	October, 2017 through September, 2018	<u>1_ / 464,339,600</u> Therms
21	PGDC Rate prior to Capacity Release Credit (Line 18 / Line 20)	0.13540
22	Off System Sales and Capacity Release Credit	<u>(0.01856)</u>
23	PGDC Rate	0.11684
24	<u>Demand (Over)/Under Collection</u>	
25	Demand E- Factor	
26	(Exhibit No. 1-E)	4,410,579
27	Projected sales for the twelve billing periods of	
28	October, 2017 through September, 2018	<u>1_ / 464,339,600</u> Therms
29	Demand E-Factor (Line 26 / Line 28)	0.00950
30	<u>Total Purchased Gas Cost</u>	
31	PGCC Rate (Line 5)	0.30963
32	PGDC Rate (Line 23)	<u>0.11684</u>
33	PGC Rate	0.42647
34	Currently effective PGC	<u>0.40993</u>
35	Increase (Decrease) in PGC	0.01654
36	<u>Net (Over) Under Collection</u>	
37	Commodity E-Factor (Line 11)	(0.00305)
38	Demand E-Factor (Line 29)	<u>0.00950</u>
39	E-Factor	0.00645
40	Currently effective E-Factor	<u>(0.01126)</u>
41	Increase (Decrease) in E-Factor	0.01771
42	PGC Rate	0.42647
43	E-Factor	<u>0.00645</u>
44	Total Rate	0.43292
45	Currently effective Rate	<u>0.39867</u>
46	Increase (Decrease) in Rate	0.03425

1_ / Includes 99,760,131 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, 2013
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, 2017 was \$3,738,637. 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, 2017
 Adjustments to Purchased Gas Expense
 53.62

(1) Purchased Gas Costs \$
 Per Books for the Twelve Months Ended 162,850,774
 November 30, 2017

(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>
Gas Supply Expense			
1/ Residential Sales Service - RSS	4.1351	27,169,245	112,347,543
Small General Sales Service - SGSS	4.1351	8,229,688	34,030,584
Negotiated Sales Service- NSS	Varies	69,777	253,151
Large General Sales Service - LGSS	4.1351	740,299	3,061,209
Residential Distribution Service - RDS	0.9266	6,708,181	6,215,800
Small Commercial Distribution - SCD	0.9266	2,365,188	2,191,583
Small General Distribution Service - SGDS	1.2373	818,125	<u>1,012,267</u>
Total Gas Supply Expense			159,112,137
Gas Supply Expense Adjustment			3,738,637

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-2017-2591326 consisting of 15 exhibits filed on March 1, 2017. On April 1, 2017, the Company filed its testimony and additional exhibits. Rates are to be effective through October 1, 2017.

Copies of this filing can be provided upon request.

See Exhibit No. 12, Schedule No. 8, Pages 2-87 for the filing updates of purchased gas cost and revenues. The October 1, 2017 Quarterly PGC comprises Pages 2-44 with rates effective for October 1, 2017 through December 31, 2017. The January 1, 2018 Quarterly PGC comprises Pages 45-87 with rates effective for January 1, 2018 through March 31, 2018.

COLUMBIA GAS OF PENNSYLVANIA, INC.
COMPUTATION OF CHANGE IN RATE PURSUANT TO SECTION 1307(f)
APPLICATION PERIOD: OCTOBER, 2017 THROUGH SEPTEMBER, 2018

Line No.	Description	Amount
		(1)
1	<u>Purchased Gas Commodity Cost</u>	\$
2	Commodity Cost of Gas (Exhibit 1-B, Schedule 1)	112,883,429
3	Projected tariff sales for the twelve billing periods of	
4	October, 2017 through September, 2018	<u>364,579,469</u> Therms
5	PGCC (Line 2/Line 4)	0.30963
6	<u>Commodity (Over)/Under Collection</u>	
7	Commodity E-Factor	
8	(Exhibit No. 1-E)	(1,113,259)
9	Projected sales for the twelve billing periods of	
10	October, 2017 through September, 2018	<u>364,579,469</u> Therms
11	Commodity E-Factor (Line 8/ Line 10)	(0.00305)
12	<u>Purchased Gas Demand Cost</u>	
13	Demand cost of gas (Exhibit 1-B, Schedule 1)	63,339,821
14	Less: Purchased Gas Demand recovered under Rate SS	
15	(Exhibit 1-A, Schedule 2, Sheet 2)	466,066
16	Less: Purchased Gas Demand Cost allocated to Rates LTS, STS,	
17	SGS-TS and MLS (Exh 1-A, Sch 2, Sheet 3)	<u>0</u>
18	Subtotal (Line 13 - Line 15 - Line 17)	62,873,755
19	Projected sales for the twelve billing periods of	
20	October, 2017 through September, 2018	<u>1_ / 464,339,600</u> Therms
21	PGDC Rate prior to Capacity Release Credit (Line 18 / Line 20)	0.13540
22	Off System Sales and Capacity Release Credit	<u>(0.01856)</u>
23	PGDC Rate	0.11684
24	<u>Demand (Over)/Under Collection</u>	
25	Demand E- Factor	
26	(Exhibit No. 1-E)	4,410,579
27	Projected sales for the twelve billing periods of	
28	October, 2017 through September, 2018	<u>1_ / 464,339,600</u> Therms
29	Demand E-Factor (Line 26 / Line 28)	0.00950
30	<u>Total Purchased Gas Cost</u>	
31	PGCC Rate (Line 5)	0.30963
32	PGDC Rate (Line 23)	<u>0.11684</u>
33	PGC Rate	0.42647
34	Currently effective PGC	<u>0.40993</u>
35	Increase (Decrease) in PGC	0.01654
36	<u>Net (Over) Under Collection</u>	
37	Commodity E-Factor (Line 11)	(0.00305)
38	Demand E-Factor (Line 29)	<u>0.00950</u>
39	E-Factor	0.00645
40	Currently effective E-Factor	<u>(0.01126)</u>
41	Increase (Decrease) in E-Factor	0.01771
42	PGC Rate	0.42647
43	E-Factor	<u>0.00645</u>
44	Total Rate	0.43292
45	Currently effective Rate	<u>0.39867</u>
46	Increase (Decrease) in Rate	0.03425

1_ / Includes 99,760,131 Therm Transportation Quantities for the Company's Choice Program

Exhibit 1-A
 Schedule 1
 Sheet 2 of 2

COLUMBIA GAS OF PENNSYLVANIA, INC.
 PURCHASED GAS COST RECOVERED UNDER RATES SS
 AND COMPUTATION OF DAILY PURCHASED GAS DEMAND
 APPLICATION PERIOD: OCTOBER, 2017 THROUGH SEPTEMBER, 2018

<u>Line No.</u>	<u>Description</u>	<u>Detail</u> (1)	<u>Total</u> (2)
1	Total estimated demand charges for the period		
2	October, 2017 through September, 2018	63,339,821	
3	Estimated Demand Quantity (Therms) 1_ /	81,134,160	
4	Daily purchased gas demand rate (Line 2 / line 3)	<u>\$0.78068</u> per Therm	
5	Daily purchased gas demand (Therms)	597,000 Therms	
6	Daily purchased gas demand rate per Therm	<u>\$0.78068</u>	
7	Total rate SS Daily Demand Cost to be		
8	Recovered (Line 5 x Line 6)		<u>\$466,066</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, 2017 THROUGH SEPTEMBER, 2018

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 - 2017	8,969,877	0.30963	2,777,343	12,202,019	0.13540	1,652,153	4,429,496
2	November	23,418,997	0.30963	7,251,224	30,382,908	0.13540	4,113,846	11,365,070
3	December	49,779,943	0.30963	15,413,364	62,999,379	0.13540	8,530,116	23,943,480
4	January - 2018	73,399,970	0.30963	22,726,833	91,947,149	0.13540	12,449,644	35,176,477
5	February	71,443,945	0.30963	22,121,189	89,609,491	0.13540	12,133,125	34,254,314
6	March	58,663,932	0.30963	18,164,113	73,567,814	0.13540	9,961,082	28,125,195
7	April	38,688,940	0.30963	11,979,256	49,046,573	0.13540	6,640,906	18,620,162
8	May	16,872,800	0.30963	5,224,325	21,984,334	0.13540	2,976,679	8,201,004
9	June	8,511,878	0.30963	2,635,533	11,522,605	0.13540	1,560,161	4,195,694
10	July	5,082,720	0.30963	1,573,763	7,188,352	0.13540	973,303	2,547,066
11	August	4,769,398	0.30963	1,476,749	6,789,182	0.13540	919,255	2,396,004
12	September	<u>4,977,069</u>	0.30963	<u>1,541,050</u>	<u>7,099,794</u>	0.13540	<u>961,312</u>	<u>2,502,362</u>
13	Total	364,579,469		112,884,742	464,339,600		62,871,582	175,756,324

1 / Excludes refunds and experienced over/undercollections

Exhibit 1-A
Schedule 2
Sheet 2 of 4

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF PROJECTED SALES QUANTITIES AND REVENUES FOR THE PERIOD
SALES AT STANDBY RATE
OCTOBER, 2017 THROUGH SEPTEMBER, 2018

Line No.	Month	Daily Purchased Gas Demand Quantity	Daily Gas Demand Rate	Daily Purchased Gas Demand Revenue
		(1) Therms	(2) \$/Therm	(3=1x2) \$
1	October - 2017	49,750	0.78068	38,839
2	November	49,750	0.78068	38,839
3	December	49,750	0.78068	38,839
4	January - 2018	49,750	0.78068	38,839
5	February	49,750	0.78068	38,839
6	March	49,750	0.78068	38,839
7	April	49,750	0.78068	38,839
8	May	49,750	0.78068	38,839
9	June	49,750	0.78068	38,839
10	July	49,750	0.78068	38,839
11	August	49,750	0.78068	38,839
12	September	<u>49,750</u>	0.78068	<u>38,839</u>
13	Total	597,000		466,066

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF PROJECTED SALES QUANTITIES AND REVENUES FOR THE PERIOD
SALES AT BANKING AND BALANCING RATES
OCTOBER, 2017 THROUGH SEPTEMBER, 2018

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) \$	(7=3+6) \$
1	October 2017	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 2018	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 2017 1307(f) PERIOD
OCTOBER, 2017 THROUGH SEPTEMBER, 2018

Line No.	Month	Commodity Recoveries PGCC Revenue	Total Commodity Cost of Gas 1 /	Commodity Over/ (Under) Collection	Demand Recoveries PGDC Revenue	Total Demand Cost of Gas 1 /	Demand Over/ (Under) Collection	Total Over/ (Under) Collection
		(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	(7=3+6)
		\$	\$	\$	\$	\$	\$	\$
1	October 2017	2,777,343	4,679,424	(1,902,081)	1,690,992	5,951,879	(4,260,887)	(6,162,968)
2	November	7,251,224	11,729,602	(4,478,378)	4,152,685	6,019,974	(1,867,289)	(6,345,667)
3	December	15,413,364	20,309,493	(4,896,129)	8,568,955	6,069,444	2,499,511	(2,396,618)
4	January 2018	22,726,833	25,053,129	(2,326,296)	12,488,483	6,069,444	6,419,039	4,092,743
5	February	22,121,189	21,314,601	806,589	12,171,964	6,069,444	6,102,520	6,909,108
6	March	18,164,113	16,420,416	1,743,697	9,999,921	6,069,444	3,930,477	5,674,174
7	April	11,979,256	6,960,245	5,019,011	6,679,745	4,515,032	2,164,713	7,183,724
8	May	5,224,325	2,697,303	2,527,022	3,015,518	4,515,032	(1,499,514)	1,027,508
9	June	2,635,533	950,945	1,684,588	1,599,000	4,515,032	(2,916,032)	(1,231,444)
10	July	1,573,763	861,500	712,263	1,012,142	4,515,032	(3,502,890)	(2,790,627)
11	August	1,476,749	787,273	689,477	958,094	4,515,032	(3,556,938)	(2,867,462)
12	September	1,541,050	1,119,501	421,550	1,000,151	4,515,032	(3,514,881)	(3,093,332)
13	Total	112,884,742	112,883,429	1,313	63,337,648	63,339,821	(2,173)	(860)

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, 2018

\$63,339,821	1. Projected Demand Costs Oct. 2017 through Sept. 2018 (Exh. 1-B, Sch. 1 from Oct. 2017 PGC)
(466,066)	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
4,410,579	1c. Experienced Demand Net Under/(Over) Collection (Exhibit No. 1-E)
<u>\$67,284,334</u>	2. Total Adjusted Demand Costs per 1307(f) Filing (1) + (1a) + (1b) + (1c)
\$128.64 per Dth	3. Unit FT Demand Charge Per Dth of Gulf/TCO capacity the marketer would pay Gulf and TCO. (Exhibit 1-A, Schedule 3, Sheet 2)
46,434 MMDth	4. Projected Sales & Choice Requirements for 12 billing periods of October, 2017 through September, 2018
46,949 MMDth	5. Projected Sales & Choice Requirements 12 months ended September 2018, including Unaccounted For @ 1.1%
21,755 MMDth	6. Annual Injections and Withdrawals, Normal Weather
1 Dth	7a. Quantity Delivered to the Customer
<u>1.1%</u>	7b. Unaccounted-for & Co. Use Factor from Volume Balancing System
1.0111 Dth	7c. Quantity Delivered to the City Gate. (7a)/(1-7b)
\$1.4490 per Dth	8. Unit Demand Charge: (2) / (4)
(\$0.1856) per Dth	9. OSS and Capacity Release Credit
0.0028 Dth	10. Average Daily FT Delivery: (7c) / 365 days
\$0.3602 per Dth	11. Annual Demand Charge for the Assigned FT Capacity payable to the pipeline(s): (3) X (10)
\$1.0888 per Dth	12. Annual Demand Charge for other capacity that CPA retains (8) - (11)
0.4685 Dth	13. Quantity Injected and Withdrawn to Deliver 1 Dth to the Customer: (6) / (4)
\$0.0072	14a. Injection Charge @ \$0.0153/Dth
\$0.0020	14b. FSS Shrinkage @ 0.17 percent for gas at \$2.8427/Dth
\$0.0072	14c. Withdrawal Charge @ \$0.0153/Dth
\$0.0105	14d. SST Commodity Charge @ \$0.0224/Dth
\$0.0191	14e. SST retention @ 1.4320 percent for gas at \$2.8427/Dth
<u>\$0.0460</u> per Dth	14f. Total Annual Variable Storage Costs
\$0.3602 per Dth	15. Credit to Purchased Gas Demand Charge for the CHOICE Customer:
<u>(\$0.0460)</u> per Dth	15a. For Demand Cost Paid to Pipelines: = (11)
<u>\$0.3142</u> per Dth	15b. Less Storage Costs: = (14f)
<u>\$0.03142</u> per Therm	15c. Net Credit: (15a) + (15b)
	15d. Per Therm: (15c)/10 - Capacity Assignment Factor
<u>\$0.9492</u> per Dth	16. Purchased Gas Demand Charge Paid By the CHOICE Customer: (8)+(9) - (15c)
<u>\$0.09492</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 Gulf. Cost of the Capacity Allocated to Marketers.

	<u>TCO</u> FT Capacity	<u>CGT</u> FTS-1 Capacity	<u>Total:</u> TCO and Gulf
<u>1 CPA FT Capacity on TCO and Columbia Gulf</u>			
2 CPA Contract: Dth/d	122,373	43,632	
<u>3 Projected Demand Costs</u>			
4. Annual Demand Cost 1/	\$9,528,936	\$2,183,340	
4a. Monthly Billing Determinants	122,373	43,632	
4b. Annual Demand Charge (4/ 4a)	\$77.87	\$50.04	
4c. Monthly Demand Charge (4b / number of months)	\$6.489	\$4.170	
<u>Transportation Pilot: Allocation Capacity and Costs.</u>			
5. Capacity Allocation:	1.0000	1.0145 2/	
6. Number of Months	12	12	
7. Unit Annual Cost of City Gate Capacity: (4c) x (5) x (6) \$/Dth	\$77.87	\$50.77	<u><u>\$128.64</u></u>

Notes:

- 1/ Projected demand costs for the period 12 months ended September, 2018.
2/ $1.020 \text{ Dth/day} = 1.000 / (1 - \text{retention}) = 1.000 / (1 - 0.014320)$

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Costs
For the Period October 2017 Through September 2018

Line No.	Description	2017			2018									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
1	Total Quantity													
2	DTH	1,608,000	3,966,000	6,731,000	8,313,000	7,058,000	5,489,000	2,444,000	883,000	251,000	221,000	195,000	330,000	37,489,000
3	Total Demand Costs	5,951,879	6,019,974	6,069,444	6,069,444	6,069,444	6,069,444	4,515,032	4,515,032	4,515,032	4,515,032	4,515,032	4,515,032	63,339,821
4	Total Commodity Costs	<u>4,679,424</u>	<u>11,729,602</u>	<u>20,309,493</u>	<u>25,053,129</u>	<u>21,314,601</u>	<u>16,420,416</u>	<u>6,960,245</u>	<u>2,697,303</u>	<u>950,945</u>	<u>861,500</u>	<u>787,273</u>	<u>1,119,501</u>	<u>112,883,429</u>
5	Total Estimated Gas Costs (Line 5 = Line 3 + Line 4)	<u>10,631,303</u>	<u>17,749,576</u>	<u>26,378,937</u>	<u>31,122,573</u>	<u>27,384,045</u>	<u>22,489,860</u>	<u>11,475,277</u>	<u>7,212,335</u>	<u>5,465,977</u>	<u>5,376,532</u>	<u>5,302,305</u>	<u>5,634,533</u>	<u>176,223,250</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Costs
Commodity Costs

Line No.	Description	2017						2018						Total
		October	November	December	January	February	March	April	May	June	July	August	September	
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
1	Term	1,956,240	1,951,204	3,846,347	3,936,145	3,613,805	2,195,097	1,913,182	1,953,530	1,909,565	1,989,862	1,992,580	1,914,187	29,171,744
2	Spot	8,295,200	381,685	4,838,296	1,716,377	1,529,192	427,594	12,981,061	12,289,480	10,482,693	10,428,707	10,350,912	7,469,861	81,191,058
3	Local	57,015	58,380	64,636	66,990	60,980	66,198	56,091	58,146	56,070	59,312	59,400	56,217	719,435
4	Storage	(5,629,032)	9,338,333	11,560,214	19,333,617	16,110,624	13,731,527	(7,990,089)	(11,603,853)	(11,497,383)	(11,616,381)	(11,615,620)	(8,320,765)	1,801,192
5	Financial Hedges	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Total Commodity Cost	<u>4,679,424</u>	<u>11,729,602</u>	<u>20,309,493</u>	<u>25,053,129</u>	<u>21,314,601</u>	<u>16,420,416</u>	<u>6,960,245</u>	<u>2,697,303</u>	<u>950,945</u>	<u>861,500</u>	<u>787,273</u>	<u>1,119,501</u>	<u>112,883,429</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Costs
Commodity Quantities

Line No.	Description	2017			2018									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
	<u>Term</u>													
1	Total-DTH	660,000	641,000	1,204,000	1,191,000	1,092,000	667,000	643,000	663,000	642,000	663,000	663,000	642,000	9,371,000
	<u>Spot</u>													
2	Total-DTH	2,944,000	129,000	1,573,000	527,000	469,000	134,000	4,683,000	4,479,000	3,783,000	3,730,000	3,699,000	2,690,000	28,840,000
	<u>Local</u>													
3	Total-DTH	21,000	21,000	22,000	22,000	20,000	22,000	21,000	22,000	21,000	22,000	22,000	21,000	257,000
	<u>Storage</u>													
4	Total-DTH	<u>(2,017,000)</u>	<u>3,175,000</u>	<u>3,932,000</u>	<u>6,573,000</u>	<u>5,477,000</u>	<u>4,666,000</u>	<u>(2,903,000)</u>	<u>(4,281,000)</u>	<u>(4,195,000)</u>	<u>(4,194,000)</u>	<u>(4,189,000)</u>	<u>(3,023,000)</u>	<u>(979,000)</u>
	<u>Total - All Sources</u>													
5	Total-DTH	<u>1,608,000</u>	<u>3,966,000</u>	<u>6,731,000</u>	<u>8,313,000</u>	<u>7,058,000</u>	<u>5,489,000</u>	<u>2,444,000</u>	<u>883,000</u>	<u>251,000</u>	<u>221,000</u>	<u>195,000</u>	<u>330,000</u>	<u>37,489,000</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Demand Costs
Columbia Gas Transmission Corporation

Line No.	Description	2017			2018								Total	
		October	November	December	January	February	March	April	May	June	July	August		September
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
<u>Columbia Gas Transmission</u>														
<u>ETS</u>														
1	Billing Determinant-Dth	127,588	127,588	127,588	127,588	127,588	127,588	127,588	127,588	127,588	127,588	127,588	127,588	127,588
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	122,373	122,373	122,373	122,373	122,373	122,373	122,373	122,373	122,373	122,373	122,373	122,373	122,373
4	Demand Rate	6.4890	6.4890	6.4890	6.4890	6.4890	6.4890	6.4890	6.4890	6.4890	6.4890	6.4890	6.4890	6.4890
5	Demand Cost	794,078	794,078	794,078	794,078	794,078	794,078	794,078	794,078	794,078	794,078	794,078	794,078	9,528,936
<u>FSS-Reservation</u>														
6	Billing Determinant-Dth	456,876	456,876	456,876	456,876	456,876	456,876	456,876	456,876	456,876	456,876	456,876	456,876	456,876
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	685,771	685,771	685,771	685,771	685,771	685,771	685,771	685,771	685,771	685,771	685,771	685,771	8,229,252
<u>FSS-Capacity</u>														
9	Total-DTH	25,341,126	25,341,126	25,341,126	25,341,126	25,341,126	25,341,126	25,341,126	25,341,126	25,341,126	25,341,126	25,341,126	25,341,126	25,341,126
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	729,824	729,824	729,824	729,824	729,824	729,824	729,824	729,824	729,824	729,824	729,824	729,824	8,757,888
<u>SST</u>														
12	Billing Determinant-Dth	456,876	456,876	456,876	456,876	456,876	456,876	228,438	228,438	228,438	228,438	228,438	228,438	228,438
13	Demand Rate	6.3190	6.3190	6.3190	6.3190	6.3190	6.3190	6.3190	6.3190	6.3190	6.3190	6.3190	6.3190	6.3190
14	Demand Cost	2,886,999	2,886,999	2,886,999	2,886,999	2,886,999	2,886,999	1,443,500	1,443,500	1,443,500	1,443,500	1,443,500	1,443,500	25,982,994
15	Total TCO Demand Cost	5,096,672	5,096,672	5,096,672	5,096,672	5,096,672	5,096,672	3,653,173	3,653,173	3,653,173	3,653,173	3,653,173	3,653,173	52,499,070

(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 Commodity Costs
Term Contracts

Line No.	Description	2017			2018									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
<u>TERM</u>														
<u>COLUMBIA GULF - TCO</u>														
1	Quantity - DTH	0	0	0	0	0	0	0	0	0	0	0	0	0
2	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	0.0000
3	Cost-\$	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>COLUMBIA TRANSMISSION</u>														
4	Quantity - DTH	0	0	312,000	312,000	282,000	0	0	0	0	0	0	0	906,000
5	Rate-\$/DTH	0.0000	0.0000	3.0031	3.1116	3.1157	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	Cost-\$	0	0	936,967	970,819	878,627	0	0	0	0	0	0	0	2,786,413
<u>TEXAS EASTERN</u>														
7	Quantity - DTH	660,000	641,000	663,000	650,000	603,000	667,000	643,000	663,000	642,000	663,000	663,000	642,000	7,800,000
8	Rate-\$/DTH	2.9640	3.0440	3.2173	3.3284	3.3325	3.2910	2.9754	2.9465	2.9744	3.0013	3.0054	2.9816	3.0013
9	Cost-\$	1,956,240	1,951,204	2,133,070	2,163,460	2,009,498	2,195,097	1,913,182	1,953,530	1,909,565	1,989,862	1,992,580	1,914,187	24,081,475
<u>TENNESSEE GAS PIPELINE</u>														
10	Quantity - DTH	0	0	229,000	229,000	207,000	0	0	0	0	0	0	0	665,000
11	Rate-\$/DTH	0.0000	0.0000	3.3900	3.5016	3.5057	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12	Cost-\$	0	0	776,310	801,866	725,680	0	0	0	0	0	0	0	2,303,856
<u>CAP</u>														
13	Quantity - DTH	0	0	0	0	0	0	0	0	0	0	0	0	0
14	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	0.0000
15	Cost-\$	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>LESS CAP BILLING</u>														
16	Quantity - DTH	0	0	0	0	0	0	0	0	0	0	0	0	0
17	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	0.0000
18	Cost-\$	0	0	0	0	0	0	0	0	0	0	0	0	0
19	Total - DTH	660,000	641,000	1,204,000	1,191,000	1,092,000	667,000	643,000	663,000	642,000	663,000	663,000	642,000	9,371,000
20	Total Term Commodity													
21	Cost-\$	1,956,240	1,951,204	3,846,347	3,936,145	3,613,805	2,195,097	1,913,182	1,953,530	1,909,565	1,989,862	1,992,580	1,914,187	29,171,744

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Commodity Costs
Spot and Local Purchases

Line No.	Description	2017			2018								Total	
		October	November	December	January	February	March	April	May	June	July	August		September
<u>SPOT</u>														
<u>Base</u>														
1	Quantity - DTH	1,988,000	129,000	1,219,000	513,000	464,000	133,000	4,393,000	4,479,000	3,783,000	3,730,000	3,699,000	2,690,000	27,220,000
2	Rate-\$/DTH	2.8213	2.9588	3.0868	3.2568	3.2605	3.1916	2.7724	2.7438	2.7710	2.7959	2.7983	2.7769	
3	Cost-\$	5,608,744	381,685	3,762,809	1,670,738	1,512,872	424,483	12,179,153	12,289,480	10,482,693	10,428,707	10,350,912	7,469,861	76,562,137
<u>Swing</u>														
4	Quantity - DTH	956,000	0	354,000	14,000	5,000	1,000	290,000	0	0	0	0	0	1,620,000
5	Rate-\$/DTH	2.8101	0.0000	3.0381	3.2599	3.2640	3.1107	2.7652	0.0000	0.0000	0.0000	0.0000	0.0000	
6	Cost-\$	2,686,456	0	1,075,487	45,639	16,320	3,111	801,908	0	0	0	0	0	4,628,921
7	Total - DTH	2,944,000	129,000	1,573,000	527,000	469,000	134,000	4,683,000	4,479,000	3,783,000	3,730,000	3,699,000	2,690,000	28,840,000
8	Total Spot													
9	Commodity Cost - \$	8,295,200	381,685	4,838,296	1,716,377	1,529,192	427,594	12,981,061	12,289,480	10,482,693	10,428,707	10,350,912	7,469,861	81,191,058
<u>Local Direct</u>														
10	Quantity - DTH	21,000	21,000	22,000	22,000	20,000	22,000	21,000	22,000	21,000	22,000	22,000	21,000	257,000
11	Rate-\$/DTH	2.7150	2.7800	2.9380	3.0450	3.0490	3.0090	2.6710	2.6430	2.6700	2.6960	2.7000	2.6770	
12	Cost-\$	57,015	58,380	64,636	66,990	60,980	66,198	56,091	58,146	56,070	59,312	59,400	56,217	719,435
13	Total - DTH	21,000	21,000	22,000	22,000	20,000	22,000	21,000	22,000	21,000	22,000	22,000	21,000	257,000
14	Total Local													
15	Commodity Cost - \$	57,015	58,380	64,636	66,990	60,980	66,198	56,091	58,146	56,070	59,312	59,400	56,217	719,435

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Commodity Costs
Storage

Line No.	Description	2017			2018									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
<u>DOMINION TRANSMISSION - GSS</u>														
1	Injections - DTH	(200,000)	0	0	0	0	0	(192,000)	(342,000)	(211,000)	(211,000)	(211,000)	(211,000)	(1,578,000)
2	Injection Rate - \$/Dth	2.8437	3.0231	3.1259	3.2871	3.2916	3.2672	2.7960	2.7694	2.7999	2.8262	2.8291	2.8155	
3	Withdrawals - DTH	0	106,000	381,000	487,000	321,000	296,000	0	0	0	0	0	0	1,591,000
4	Withdrawl Rate - \$/Dth	2.9042	2.9042	2.9047	2.9047	2.9047	2.9052	2.8615	2.8237	2.8167	2.8189	2.8208	2.8201	
5	Cost-\$	(568,740)	307,845	1,106,691	1,414,589	932,409	859,939	(536,832)	(947,135)	(590,779)	(596,328)	(596,940)	(594,071)	190,648
6	Injection Rate \$/Dth	0.0274	0.0274	0.0274	0.0274	0.0274	0.0274	0.0274	0.0274	0.0274	0.0274	0.0274	0.0274	
7	Withdrawl Rate \$/Dth	0.0148	0.0148	0.0148	0.0148	0.0148	0.0148	0.0148	0.0148	0.0148	0.0148	0.0148	0.0148	
8	Cost - \$	5.480	1.569	5.639	7.208	4.751	4.381	5.261	9.371	5.781	5.781	5.781	5.781	66,784
<u>EQUITRANS - SS</u>														
9	Injections - DTH	(205,000)	0	0	0	0	0	(15,000)	(28,000)	(197,000)	(228,000)	(228,000)	(221,000)	(1,122,000)
10	Injection Rate - \$/Dth	2.8437	3.0231	3.1259	3.2871	3.2916	3.2672	2.7960	2.7694	2.7999	2.8262	2.8291	2.8155	
11	Withdrawals - DTH	0	75,000	375,000	375,000	300,000	15,000	0	0	0	0	0	0	1,140,000
12	Withdrawl Rate - \$/Dth	2.9042	2.9042	2.9047	2.9047	2.9047	2.9052	2.8615	2.8237	2.8167	2.8189	2.8208	2.8201	
13	Cost-\$	(582,959)	217,815	1,089,263	1,089,263	871,410	43,578	(41,940)	(77,543)	(551,580)	(644,374)	(645,035)	(622,226)	145,672
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	(1,901,000)	0	0	0	0	(8,000)	(2,786,000)	(4,351,000)	(4,351,000)	(4,351,000)	(4,351,000)	(3,130,000)	(25,229,000)
17	Injection Rate - \$/Dth	2.8437	3.0231	3.1259	3.2871	3.2916	3.2672	2.7960	2.7694	2.7999	2.8262	2.8291	2.8155	
18	Withdrawals - DTH	0	3,165,000	3,855,000	6,708,000	5,665,000	4,823,000	0	0	0	0	0	0	24,216,000
19	Withdrawl Rate - \$/Dth	2.9042	2.9042	2.9047	2.9047	2.9047	2.9052	2.8615	2.8237	2.8167	2.8189	2.8208	2.8201	
20	Cost-\$	(5,405,874)	9,191,793	11,197,619	19,484,728	16,455,126	13,985,642	(7,789,656)	(12,049,659)	(12,182,365)	(12,296,796)	(12,309,414)	(8,812,515)	(531,371)
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 - \$	29,085	48,425	58,982	102,632	86,675	73,914	42,626	66,570	66,570	66,570	66,570	47,889	756,508
23	Quantity - DTH	(2,306,000)	3,346,000	4,611,000	7,570,000	6,286,000	5,126,000	(2,993,000)	(4,721,000)	(4,759,000)	(4,790,000)	(4,790,000)	(3,562,000)	(982,000)
24	Total Purchase Cost	(6,557,573)	9,717,453	13,393,573	21,988,580	18,258,945	14,889,159	(8,368,428)	(13,074,337)	(13,324,724)	(13,537,498)	(13,551,389)	(10,028,812)	(195,051)
25	Total Inject/With. Cost	34,565	49,994	64,621	109,840	91,426	78,295	47,887	75,941	72,351	72,351	72,351	53,670	823,292

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Commodity Costs
Storage Transportation Charges

Line No.	Description	2017			2018									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
<u>TCO - SST</u>														
1	Injections - DTH	(1,901,000)	0	0	0	0	(8,000)	(2,786,000)	(4,351,000)	(4,351,000)	(4,351,000)	(4,351,000)	(3,130,000)	(25,229,000)
2	Withdrawals - DTH	0	3,165,000	3,855,000	6,708,000	5,665,000	4,823,000	0	0	0	0	0	0	24,216,000
3	Trans. Chrg. \$/Dth	0.0224	0.0222	0.0222	0.0222	0.0222	0.0222	0.0224	0.0224	0.0224	0.0224	0.0224	0.0224	0.0224
4	Cost-\$	42,582	70,263	85,581	148,918	125,763	107,249	62,406	97,462	97,462	97,462	97,462	70,112	1,102,722
<u>DOMINION TRANSMISSION - GSS</u>														
5	Injections - DTH	(200,000)	0	0	0	0	0	(192,000)	(342,000)	(211,000)	(211,000)	(211,000)	(211,000)	(1,578,000)
6	Withdrawals - DTH	0	106,000	381,000	487,000	321,000	296,000	0	0	0	0	0	0	1,591,000
7	Rate-\$/DTH	0.0224	0.0164	0.0164	0.0164	0.0164	0.0164	0.0224	0.0224	0.0224	0.0224	0.0224	0.0224	0.0224
8	Cost-\$	4,480	1,738	6,248	7,987	5,264	4,854	4,301	7,661	4,726	4,726	4,726	4,726	61,437
<u>EQUITRANS - SS</u>														
9	Injections - DTH	(205,000)	0	0	0	0	0	(15,000)	(28,000)	(197,000)	(228,000)	(228,000)	(221,000)	(1,122,000)
10	Withdrawals - DTH	0	75,000	375,000	375,000	300,000	15,000	0	0	0	0	0	0	1,140,000
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	0.0000
12	Cost-\$	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Total Storage - DTH	(2,306,000)	3,346,000	4,611,000	7,570,000	6,286,000	5,126,000	(2,993,000)	(4,721,000)	(4,759,000)	(4,790,000)	(4,790,000)	(3,562,000)	(982,000)
14	Total EUB - DTH	289,000	(171,000)	(679,000)	(997,000)	(809,000)	(460,000)	90,000	440,000	564,000	596,000	601,000	539,000	3,000
15	Total DTH	(2,017,000)	3,175,000	3,932,000	6,573,000	5,477,000	4,666,000	(2,903,000)	(4,281,000)	(4,195,000)	(4,194,000)	(4,189,000)	(3,023,000)	(979,000)
16	Total Purchase Cost	(6,557,573)	9,717,453	13,393,573	21,988,580	18,258,945	14,889,159	(8,368,428)	(13,074,337)	(13,324,724)	(13,537,498)	(13,551,389)	(10,028,812)	(195,051)
17	Total Choice Bank Cost	846,915	(501,116)	(1,989,810)	(2,921,709)	(2,370,775)	(1,348,030)	263,745	1,289,420	1,652,802	1,746,578	1,761,231	1,579,540	8,792
18	Total Inject/With. Cost	34,565	49,994	64,621	109,840	91,426	78,295	47,887	75,941	72,351	72,351	72,351	53,670	823,292
19	Total Transp. Charge	47,062	72,001	91,829	156,905	131,027	112,103	66,707	105,123	102,188	102,188	102,188	74,838	1,164,159
20	Total Storage Cost	(5,629,032)	9,338,333	11,560,214	19,333,617	16,110,624	13,731,527	(7,990,089)	(11,603,853)	(11,497,383)	(11,616,381)	(11,615,620)	(8,320,765)	1,801,192

Exhibit 1-E
Schedule 1

COLUMBIA GAS OF PENNSYLVANIA, INC.
STATEMENT OF EXPERIENCED NET OVER (UNDER) COLLECTION
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

<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 2016 - 1307(f)			
2	(See Schedule 2a and 2b)	(329,371)	20,186	(309,185)
3	Unified Credit for Off-system Sales and Capacity Release for the period			
4	October, 2016 through September, 2017 (See Schedule 3 herein)	1,107,525	0	1,107,525
5	Over (Under) Collection for the period October, 2016 through			
6	September 2017 (See Schedule 4 herein)	(5,128,015)	1,187,759	(3,940,256)
7	Interest on Over (Under) Collection for the period October, 2016 through			
8	September, 2017 (See Schedule 4 herein)	<u>(60,718)</u>	<u>(94,686)</u>	<u>(155,404)</u>
9	TOTAL EXPERIENCED NET OVER (UNDER) COLLECTION	<u><u>(4,410,579)</u></u>	<u><u>1,113,259</u></u>	<u><u>(3,297,319)</u></u>

Exhibit 1-E
Schedule 2a
Sheet 1 of 2

COLUMBIA GAS OF PENNSYLVANIA, INC.

RECONCILIATION OF COMMODITY COST OF GAS
FROM 2016 - 1307(f)
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

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 2016 1307(f):				5,488,604
2	Beginning Balance Adjustment				(251) 2_/
3	Beginning Balance Adjustment				30,228 3_/
4	October, 2016	3,353,510	(0.01917)	(64,287)	
5		4,055,550	(0.06811)	(276,224)	
6	November	18,277,560	(0.01917)	(350,381)	
7		162,130	(0.06811)	(11,043)	
8	December	46,256,840	(0.01917)	(886,744)	
9		(20,980)	(0.06811)	1,429	
10	January, 2017 1_/	29,511,210	(0.01651)	(487,230)	
11		34,730,690	(0.01917)	(665,787)	
12	February	52,083,838	(0.01651)	(859,904)	
13	March	44,214,702	(0.01651)	(729,985)	
14	April	31,616,215	(0.01651)	(521,984)	
15	May	13,270,627	(0.01651)	(219,098)	
16	June	8,568,704	(0.01651)	(141,469)	
17	July	6,523,009	(0.01651)	(107,695)	
18	August	5,884,743	(0.01651)	(97,157)	
19	September	4,896,165	(0.01651)	(80,836)	
20	Amount Collected/(Passed Back) during 2016 1307(f) Period				<u>(5,498,395)</u>
21	Remaining Balance to be passed back in the 2017 1307(f)				<u>20,186</u>

1_/ Rate in effect January 1, 2017.

2_/ Represents a commodity interest adjustment for the month of September 2016, increasing the interest rate from 3.50% to 3.75% to reflect the prime interest rate at 1/31/2017. Please refer to Exh. 1-E, Schedule 2a, Sheet 2 for a detailed calculation for this adjustment.

3_/ Interest credit relating to Audit Finding No. 1 found in Docket No. D-2016-2541311 from the Company's Purchased Gas Cost Audit for the period of February 2013 through January 2016.

COLUMBIA GAS OF PENNSYLVANIA, INC.
STATEMENT OF COMMODITY OVER/(UNDER) COLLECTIONS FROM GAS COST RATE
OCTOBER, 2015 THROUGH SEPTEMBER, 2016

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, 2016	17,245,069	15,883,932	1,361,137	14 / 12	8.00%	127,039	8.00%	127,039	0
2	March	12,696,997	9,892,492	2,804,505	13 / 12	8.00%	243,057	8.00%	243,057	0
3	April	8,055,403	2,523,553	5,531,850	12 / 12	8.00%	442,548	8.00%	442,548	0
4	May	4,317,267	1,987,150	2,330,118	11 / 12	8.00%	170,875	8.00%	170,875	0
5	June	2,446,752	635,135	1,811,617	10 / 12	8.00%	120,774	8.00%	120,774	0
6	July	1,699,015	1,569,413	129,601	9 / 12	8.00%	7,776	8.00%	7,776	0
7	August	1,586,391	1,972,212	(385,821)	8 / 12	8.00%	(20,577)	8.00%	(20,577)	0
8	September	<u>1,643,113</u>	<u>1,814,797</u>	<u>(171,683)</u>	7 / 12	3.50%	<u>(3,505)</u>	3.75%	<u>(3,756)</u>	<u>(251)</u>
9	TOTAL	<u>49,690,008</u>	<u>36,278,685</u>	<u>13,411,323</u>			<u>1,087,987</u>		<u>1,087,736</u>	<u>(251)</u>

Exhibit 1-E
Schedule 2b
Sheet 1 of 2

COLUMBIA GAS OF PENNSYLVANIA, INC.

RECONCILIATION OF DEMAND COST OF GAS
FROM 2016 - 1307(f)
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

DEMAND

Line No.	Month	Sales Subject to Demand	Rate	Amount	Net Demand Over (Under) Collection
		E-Factor Therm	\$/ Therm	\$	\$
1	True-up of Net Demand Costs Included in 2016 1307(f):				(2,433,787)
2	Beginning Balance Adjustment				(23,300) 2_
3	Beginning Balance Adjustment				6,487 3_
4	October, 2016	4,623,560	0.00562	25,984	
5		5,410,500	(0.01422)	(76,937)	
6	November	25,442,380	0.00562	142,985	
7		(25,210)	(0.01422)	358	
8	December	63,241,480	0.00562	355,417	
9	January, 2017 1_	39,085,600	0.00525	205,199	
10		48,087,660	0.00562	270,253	
11	February	71,010,742	0.00525	372,806	
12	March	60,608,602	0.00525	318,195	
13	April	43,125,369	0.00525	226,408	
14	May	18,657,658	0.00525	97,953	
15	June	11,832,101	0.00525	62,119	
16	July	8,388,285	0.00525	44,038	
17	August	7,568,887	0.00525	39,737	
18	September	6,993,048	0.00525	36,714	
19	Amount Collected/(Passed Back) in the 2016 1307(f) Period				<u>2,121,229</u>
20	Remaining Balance to be Collected in the 2017 1307(f)				<u>(329,371)</u>

1_ / Rate in effect January 1, 2017.

2_ / Represents a demand interest adjustment for the months February 2016 through August 2016, reducing the interest rate from 8% to 6% due to an under collection balance for the twelve months ended January 2017. Demand interest adjustment for the month of September 2016, increasing the interest rate from 3.50% to 3.75% to reflect the prime interest rate at 1/31/2017. Please refer to Exh. 1-E, Schedule 2b, Sheet 2b for a detailed calculation of these adjustments.

3_ / Interest credit relating to Audit Finding No. 2 found in Docket No. D-2016-2541311 from the Company's Purchased Gas Cost Audit for the period of February 2013 through January 2016.

COLUMBIA GAS OF PENNSYLVANIA, INC.
STATEMENT OF DEMAND OVER/(UNDER) COLLECTIONS FROM GAS COST RATE
OCTOBER, 2015 THROUGH SEPTEMBER, 2016

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, 2016	10,682,018	5,795,723	4,886,295	14 / 12	8.00%	456,054	6.00%	342,041	(114,013)
2	March	7,887,367	5,796,593	2,090,774	13 / 12	8.00%	181,200	6.00%	135,900	(45,300)
3	April	5,088,022	4,301,722	786,300	12 / 12	8.00%	62,904	6.00%	47,178	(15,726)
4	May	2,742,242	4,118,661	(1,376,419)	11 / 12	8.00%	(100,937)	6.00%	(75,703)	25,234
5	June	1,572,149	4,180,727	(2,608,578)	10 / 12	8.00%	(173,905)	6.00%	(130,429)	43,476
6	July	1,132,660	4,220,723	(3,088,063)	9 / 12	8.00%	(185,284)	6.00%	(138,963)	46,321
7	August	1,101,209	4,188,844	(3,087,635)	8 / 12	8.00%	(164,674)	6.00%	(123,505)	41,169
8	September	<u>1,129,558</u>	<u>4,188,914</u>	<u>(3,059,356)</u>	7 / 12	3.50%	<u>(62,462)</u>	3.75%	<u>(66,923)</u>	<u>(4,461)</u>
9	TOTAL	<u>31,335,225</u>	<u>36,791,908</u>	<u>(5,456,683)</u>			<u>12,896</u>		<u>(10,404)</u>	<u>(23,300)</u>

Exhibit 1-E
Schedule 3

COLUMBIA GAS OF PENNSYLVANIA, INC.

RECONCILIATION OF OFF SYSTEM SALES CREDIT
FROM 2016 - 1307(f)
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

DEMAND

Line No.	Month	Sales Subject to Off-System Sales Credit	Rate	Amount	Net Demand Over (Under) Collection
		Therm	\$/Therm	\$	\$
1	October, 2016	4,623,560	(0.01596)	(73,792)	
2		5,410,500	(0.01208)	(65,359)	
3	November	25,442,380	(0.01596)	(406,060)	
4		(25,210)	(0.01208)	305	
5	December	63,241,480	(0.01596)	(1,009,334)	
6	January, 2017 1_/	39,085,600	(0.01596)	(623,806)	
7		48,087,660	(0.01596)	(767,479)	
8	February	71,010,742	(0.01596)	(1,133,331)	
9	March	60,608,602	(0.01596)	(967,313)	
10	April	43,125,369	(0.01596)	(688,281)	
11	May	18,657,658	(0.01596)	(297,776)	
12	June	11,832,101	(0.01596)	(188,840)	
13	July	8,388,285	(0.01596)	(133,877)	
14	August	7,568,887	(0.01596)	(120,799)	
15	September	6,993,048	(0.01596)	(111,609)	
16	Amount Passed Back in the 2016 1307(f)				<u>(6,587,351)</u>
17	Unified Sharing Mechanism - \$7,694,876				7,694,876
18	Amount to be Passed Back in the 2017 1307(f)				<u><u>1,107,525</u></u>

1_/ Rate in effect January 1, 2017.

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, 2016 THROUGH SEPTEMBER, 2017

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 2017; Projections for September 2017</i>										
1	October, 2016	2,167,485	9,402	2,176,887	5,657,507	(3,480,620)	18 / 12	3.75%	(195,785)	(3,676,405)
2	November	5,304,751	13,409	5,318,160	9,257,828	(3,939,668)	17 / 12	3.75%	(209,295)	(4,148,963)
3	December	13,358,578	23,437	13,382,015	20,390,843	(7,008,829)	16 / 12	3.75%	(350,441)	(7,359,270)
4	January, 2017	18,979,838	36,218	19,016,056	17,639,153	1,376,902	15 / 12	3.75%	64,542	1,441,444
5	February	15,832,072	31,029	15,863,101	9,184,496	6,678,605	14 / 12	3.75%	292,189	6,970,794
6	March	13,437,660	21,300	13,458,960	13,178,477	280,482	13 / 12	3.75%	11,395	291,877
7	April	9,267,257	19,760	9,287,016	1,462,140	7,824,876	12 / 12	3.75%	293,433	8,118,309
8	May	3,537,021	13,446	3,550,466	3,200,178	350,288	11 / 12	3.75%	12,041	362,329
9	June	2,287,200	9,195	2,296,395	1,328,922	967,472	10 / 12	3.75%	30,234	997,706
10	July	1,753,841	7,682	1,761,523	1,831,272	(69,749)	9 / 12	3.75%	(1,962)	(71,711)
11	August	1,595,972	5,910	1,601,881	2,189,668	(587,787)	8 / 12	3.75%	(14,695)	(602,482)
12	September - Est.	<u>1,327,889</u>	<u>0</u>	<u>1,327,889</u>	<u>2,532,105</u>	<u>(1,204,216)</u>	7 / 12	3.75%	<u>(26,342)</u>	<u>(1,230,558)</u>
13	TOTAL	<u>88,849,562</u>	<u>190,786</u>	<u>89,040,348</u>	<u>87,852,588</u>	<u>1,187,759</u>			<u>(94,686)</u>	<u>1,093,073</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.
STATEMENT OF DEMAND OVER/(UNDER) COLLECTIONS FROM GAS COST RATE
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

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 2017; Projections for September 2017</i>											
1	October, 2016	1,369,125	74	44,345	31	1,413,575	5,566,447	(4,152,872)	18 / 12	3.75%	(233,599)	(4,386,471)
2	November	3,182,005	129	44,061	53	3,226,248	5,504,953	(2,278,705)	17 / 12	3.75%	(121,056)	(2,399,761)
3	December	7,919,522	164	44,061	633	7,964,380	5,558,856	2,405,523	16 / 12	3.75%	120,276	2,525,799
4	January, 2017	10,909,666	209	44,053	939	10,954,867	5,560,866	5,394,002	15 / 12	3.75%	252,844	5,646,846
5	February	8,867,990	209	38,150	926	8,907,275	5,719,026	3,188,250	14 / 12	3.75%	139,486	3,327,736
6	March	7,568,523	186	35,201	96	7,604,005	5,593,509	2,010,496	13 / 12	3.75%	81,676	2,092,172
7	April	5,542,647	147	35,770	60	5,578,624	4,092,378	1,486,246	12 / 12	3.75%	55,734	1,541,980
8	May	2,560,883	99	36,120	41	2,597,143	3,932,237	(1,335,094)	11 / 12	3.75%	(45,894)	(1,380,988)
9	June	1,624,801	67	36,120	28	1,661,016	4,122,213	(2,461,196)	10 / 12	3.75%	(76,912)	(2,538,108)
10	July	1,204,645	59	35,841	24	1,240,568	4,199,509	(2,958,941)	9 / 12	3.75%	(83,220)	(3,042,161)
11	August	1,124,917	48	38,200	19	1,163,184	4,200,016	(3,036,831)	8 / 12	3.75%	(75,921)	(3,112,752)
12	September - Est.	<u>1,081,685</u>	<u>0</u>	<u>38,200</u>	<u>0</u>	<u>1,119,885</u>	<u>4,508,776</u>	<u>(3,388,891)</u>	7 / 12	3.75%	<u>(74,132)</u>	<u>(3,463,023)</u>
13	TOTAL	<u>52,956,408</u>	<u>1,390</u>	<u>470,122</u>	<u>2,850</u>	<u>53,430,770</u>	<u>58,558,785</u>	<u>(5,128,015)</u>			<u>(60,718)</u>	<u>(5,188,733)</u>

Exhibit 1-E
Schedule 4
Sheet 2a of 6

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF COMMODITY GAS COST RECOVERY
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

LINE NO.	MONTH	SALES	COMMODITY	TOTAL
		SUBJECT TO COMMODITY COST OF GAS (1) THERM	COST OF GAS (2) \$/THERM	COMMODITY COST RECOVERY (3 = 1 x 2) \$
1	October, 2016 Est. Old	3,915,270	0.30513	1,194,666
2	October, 2016 Est. New	3,281,917	0.28855	946,997
3	September, 2016 Est.	(5,374,143)	0.30513	(1,639,812)
4	September, 2016 Act.	5,448,443	0.30513	1,662,483
5	September Act. Prior Period Adjustments		0.00000	3,150
6	Total	7,271,487		2,167,485
7	November, 2016 Est. New	18,329,350	0.28855	5,288,934
8	October, 2016 Est. Old	(3,915,270)	0.30513	(1,194,666)
9	October, 2016 Est. New	(3,281,917)	0.28855	(946,997)
10	October, 2016 Act. Old	3,944,586	0.30513	1,203,612
11	October, 2016 Act. New	3,306,491	0.28855	954,088
12	October Act. Prior Period Adjustments		0.00000	(219)
13	Total	18,383,240		5,304,751
14	December, 2016 Est.	46,343,039	0.28855	13,372,284
15	November, 2016 Est.	(18,329,350)	0.28855	(5,288,934)
16	November, 2016 Act.	18,255,080	0.28855	5,267,503
17	November Act. Prior Period Adjustments		0.00000	7,725
18	Total	46,268,769		13,358,578
19	January, 2017 Est. Old	35,470,748	0.28855	10,235,084
20	January, 2017 Est. New	28,787,853	0.30391	8,748,916
21	December, 2016 Est.	(46,343,039)	0.28855	(13,372,284)
22	December, 2016 Act.	46,327,819	0.28855	13,367,892
23	December Act. Prior Period Adjustments		0.00000	228
24	Total	64,243,381		18,979,838
25	February, 2017 Est. New	52,523,578	0.30391	15,962,441
26	January, 2017 Est. Old	(35,470,748)	0.28855	(10,235,084)
27	January, 2017 Est. New	(28,787,853)	0.30391	(8,748,916)
28	January, 2017 Act. Old	35,228,011	0.28855	10,165,043
29	January, 2017 Act. New	28,590,850	0.30391	8,689,045
30	January Act. Prior Period Adjustments		0.00000	(456)
31	Total	52,083,838		15,832,072
32	March, 2017 Est.	44,758,462	0.30391	13,602,544
33	February, 2017 Est.	(52,523,578)	0.30391	(15,962,441)
34	February, 2017 Act.	51,979,818	0.30391	15,797,186
35	February Act. Prior Period Adjustments		0.00000	370
36	Total	44,214,702		13,437,660

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COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF COMMODITY GAS COST RECOVERY
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

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	April, 2017 Est. New	9,272,015	0.26693	2,474,979
2	April, 2017 Est. Old	22,481,460	0.30391	6,832,341
3	March, 2017 Est. Old	(44,758,462)	0.30391	(13,602,544)
4	March, 2017 Act. Old	44,621,202	0.30391	13,560,830
5	March Act. Prior Period Adjustments		0.00000	1,652
6	Total	31,616,215		9,267,257
7	May, 2017 Estimate	13,430,867	0.26693	3,585,101
8	April, 2017 Est. New	(9,272,015)	0.26693	(2,474,979)
9	April, 2017 Est. Old	(22,481,460)	0.30391	(6,832,341)
10	April, 2017 Act. New	9,225,225	0.26693	2,462,489
11	April, 2017 Act. Old	22,368,010	0.30391	6,797,862
12	April Act. Prior Period Adjustments		0.00000	(1,113)
13	Total	13,270,627		3,537,021
14	June, 2017 Estimate	8,542,394	0.26693	2,280,221
15	May, 2017 Est.	(13,430,867)	0.26693	(3,585,101)
16	May, 2017 Act.	13,457,177	0.26693	3,592,124
17	May Act. Prior Period Adjustments		0.00000	(44)
18	Total	8,568,704		2,287,200
19	July, 2017 Est. Old	3,439,283	0.26693	918,048
20	July, 2017 Est. New	2,941,576	0.27121	797,785
21	June, 2017 Est.	(8,542,394)	0.26693	(2,280,221)
22	June, 2017 Act.	8,684,544	0.26693	2,318,165
23	June Act. Prior Period Adjustments		0.00000	64
24	Total	6,523,009		1,753,841
25	August, 2017 Estimate	5,739,784	0.27121	1,556,687
26	July, 2017 Est. Old	(3,439,283)	0.26693	(918,048)
27	July, 2017 Est. New	(2,941,576)	0.27121	(797,785)
28	July, 2017 Act. Old	3,517,416	0.26693	938,904
29	July, 2017 Act. New	3,008,403	0.27121	815,909
30	July Act. Prior Period Adjustments		0.00000	305
31	Total	5,884,744		1,595,972
32	September, 2017 Estimate	4,896,165	0.27121	1,327,889
33	Total	4,896,165		1,327,889
34	TOTAL	303,224,881		88,849,562

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COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF NSS COMMODITY COST RECOVERY
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

LINE NO.	MONTH	RATE SCHEDULE NSS		NSS GAS COST RECOVERY
		VOLUMES (1) THERM	RATE (2) \$/THERM	(3=1*2) \$
1	October, 2016 Est.	34,994	0.28595	10,007
2	September, 2016 Act.	22,840	0.27952	6,384
3	September, 2016 Est.	<u>(25,004)</u>	0.27952	<u>(6,989)</u>
4		32,830		9,402
5	November, 2016 Est.	60,001	0.23703	14,222
6	October, 2016 Act.	32,150	0.28595	9,193
7	October, 2016 Est.	<u>(34,994)</u>	0.28595	<u>(10,007)</u>
8		57,157		13,409
9	December, 2016 Est.	80,006	0.31504	25,205
10	November, 2016 Act.	52,540	0.23703	12,454
11	November, 2016 Est.	<u>(60,001)</u>	0.23703	<u>(14,222)</u>
12		72,545		23,437
13	January, 2017 Est.	100,002	0.38604	38,605
14	December, 2016 Act.	72,430	0.31504	22,818
15	December, 2016 Est.	<u>(80,006)</u>	0.31504	<u>(25,205)</u>
16		92,426		36,218
17	February, 2017 Est.	99,997	0.33880	33,879
18	January, 2017 Act.	92,620	0.38604	35,755
19	January, 2017 Est.	<u>(100,002)</u>	0.38604	<u>(38,605)</u>
20		92,615		31,029
21	March, 2017 Est.	79,995	0.25727	20,580
22	February, 2017 Act.	102,120	0.33880	34,598
23	February, 2017 Est.	<u>(99,997)</u>	0.33880	<u>(33,879)</u>
24		82,118		21,300
25	April, 2017 Est.	60,003	0.30901	18,542
26	March, 2017 Act.	84,730	0.25727	21,798
27	March, 2017 Est.	<u>(79,995)</u>	0.25727	<u>(20,580)</u>
28		64,738		19,760
29	May, 2017 Est.	34,999	0.30748	10,761
30	April, 2017 Act.	68,690	0.30901	21,226
31	April, 2017 Est.	<u>(60,003)</u>	0.30901	<u>(18,542)</u>
32		43,686		13,446
33	June, 2017 Est.	24,997	0.30621	7,654
34	May, 2017 Act.	40,010	0.30748	12,302
35	May, 2017 Est.	<u>(34,999)</u>	0.30748	<u>(10,761)</u>
36		30,008		9,195
37	July, 2017 Est.	25,001	0.29841	7,461
38	June, 2017 Act.	25,720	0.30621	7,876
39	June, 2017 Est.	<u>(24,997)</u>	0.30621	<u>(7,654)</u>
40		25,724		7,682
41	August, 2017 Est.	22,996	0.28126	6,468
42	July, 2017 Act.	23,130	0.29841	6,902
43	July, 2017 Est.	<u>(25,001)</u>	0.29841	<u>(7,461)</u>
44		21,125		5,910
45	September, 2017 Est.	<u>0</u>	0.00000	<u>0</u>
46		0		0
47	TOTAL	<u>614,972</u>		<u>190,786</u>

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COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF DEMAND GAS COST RECOVERY
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

LINE NO.	MONTH	VOLUMES SUBJ.	COST OF	DEMAND
		TO DEMAND	GAS	COST
		COST OF GAS		RECOVERY
		(1)	(2)	(3 = 1 x 2)
		THERM	\$/THERM	\$
1	October, 2016 Est. Old	3,915,270	0.15353	601,111
2	October, 2016 Est. New	3,281,917	0.13292	436,232
3	October Choice - Est. Old	1,327,879	0.12273	162,971
4	October Choice - Est. New	1,168,134	0.10275	120,026
5	October Est. Priority One Transportation Old	206,997	0.15353	31,780
6	October Est. Priority One Transportation New	173,513	0.13292	23,063
7	September, 2016 Est.	(5,374,143)	0.15353	(825,092)
8	September 2016 Act.	5,448,443	0.15353	836,499
9	September Choice - Est.	(1,802,954)	0.12273	(221,277)
10	September Choice - Act.	1,802,010	0.12273	221,161
11	September Est. Priority One Transportation	(331,870)	0.15353	(50,952)
12	September Act. Priority One Transportation	218,860	0.15353	33,602
13	Total	10,034,056		1,369,125
14	November, 2016 Est. New	18,329,350	0.13292	2,436,337
15	November Choice - Est. New	6,496,892	0.10275	667,556
16	November Est. Priority One Transportation New	637,270	0.13292	84,706
17	October Est. Old	(3,915,270)	0.15353	(601,111)
18	October Est. New	(3,281,917)	0.13292	(436,232)
19	October Act. Old	3,944,586	0.15353	605,612
20	October Act. New	3,306,491	0.13292	439,499
21	October Choice - Est. Old	(1,327,879)	0.12273	(162,971)
22	October Choice - Est. New	(1,168,134)	0.10275	(120,026)
23	October Choice - Act. Old	1,326,392	0.12273	162,788
24	October Choice - Act. New	1,166,827	0.10275	119,891
25	October Est. Priority One Transportation Old	(206,997)	0.15353	(31,780)
26	October Est. Priority One Transportation New	(173,513)	0.13292	(23,063)
27	October Act. Priority One Transportation Old	153,990	0.15353	23,642
28	October Act. Priority One Transportation New	129,080	0.13292	17,157
29	Total	25,417,168		3,182,005
30	December, 2016 Est.	46,343,039	0.13292	6,159,917
31	December Choice - Est.	16,133,035	0.10275	1,657,669
32	December Est. Priority One Transportation	968,740	0.13292	128,765
33	November Est.	(18,329,350)	0.13292	(2,436,337)
34	November Act.	18,255,080	0.13292	2,426,465
35	November Choice - Est.	(6,496,892)	0.10275	(667,556)
36	November Choice - Act.	6,490,366	0.10275	666,885
37	November Est. Priority One Transportation	(637,270)	0.13292	(84,706)
38	November Act. Priority One Transportation	514,740	0.13292	68,419
39	Total	63,241,488		7,919,522
40	January, 2017 Est. Old	35,470,748	0.13292	4,714,772
41	January, 2017 Est. New	28,787,853	0.13237	3,810,648
42	January Choice - Est. Old	12,033,812	0.10275	1,236,474
43	January Choice - Est. New	9,806,136	0.10251	1,005,227
44	January Est. Priority One Transportation Old	605,737	0.13292	80,515
45	January Est. Priority One Transportation New	491,613	0.13237	65,075
46	December 2016 Est.	(46,343,039)	0.13292	(6,159,917)
47	December 2016 Act.	46,327,819	0.13292	6,157,894
48	December Choice - Est.	(16,133,035)	0.10275	(1,657,669)
49	December Choice - Act.	16,134,203	0.10275	1,657,789
50	December Est. Priority One Transportation	(968,740)	0.13292	(128,765)
51	December Act. Priority One Transportation	960,150	0.13292	127,623
52	Total	87,173,257		10,909,666

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COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF DEMAND GAS COST RECOVERY
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

LINE NO.	MONTH	VOLUMES SUBJ.	COST OF	DEMAND
		TO DEMAND	GAS	COST
		COST OF GAS		RECOVERY
		(1)	(2)	(3 = 1 x 2)
		THERM	S/THERM	\$
1	February, 2017 Est. New	52,523,578	0.13237	6,952,546
2	February Choice - Est. New	17,810,311	0.10251	1,825,735
3	February Est. Priority One Transportation New	919,550	0.13237	121,721
4	January Est. Old	(35,470,748)	0.13292	(4,714,772)
5	January Est. New	(28,787,853)	0.13237	(3,810,648)
6	January Act. Old	35,228,011	0.13292	4,682,507
7	January Act. New	28,590,850	0.13237	3,784,571
8	January Choice - Est. Old	(12,033,812)	0.10275	(1,236,474)
9	January Choice - Est. New	(9,806,136)	0.10251	(1,005,227)
10	January Choice - Act. Old	12,030,375	0.10275	1,236,121
11	January Choice - Act. New	9,803,336	0.10251	1,004,940
12	January Est. Priority One Transportation Old	(605,737)	0.13292	(80,515)
13	January Est. Priority One Transportation New	(491,613)	0.13237	(65,075)
14	January Act. Priority One Transportation Old	717,948	0.13292	95,430
15	January Act. Priority One Transportation New	582,682	0.13237	77,130
16	Total	71,010,742		8,867,990
17	March, 2017 Est.	44,758,462	0.13237	5,924,678
18	March Choice - Est.	15,222,027	0.10251	1,560,410
19	March Est. Priority One Transportation	974,560	0.13237	129,003
20	February Est.	(52,523,578)	0.13237	(6,952,546)
21	February Act.	51,979,818	0.13237	6,880,569
22	February Choice - Est.	(17,810,311)	0.10251	(1,825,735)
23	February Choice - Act.	17,800,534	0.10251	1,824,733
24	February Est. Priority One Transportation	(919,550)	0.13237	(121,721)
25	February Act. Priority One Transportation	1,126,640	0.13237	149,133
26		60,608,602		7,568,523
27	April, 2017 Est. New	9,272,015	0.14514	1,345,740
28	April, 2017 Est. Old	22,481,460	0.13237	2,975,871
29	April Choice - Est. New	3,187,899	0.11413	363,835
30	April Choice - Est. Old	7,655,285	0.10251	784,743
31	April Est. Priority One Transportation New	193,914	0.14514	28,145
32	April Est. Priority One Transportation Old	470,176	0.13237	62,237
33	March Est.	(44,758,462)	0.13237	(5,924,678)
34	March Act.	44,621,202	0.13237	5,906,509
35	March Choice - Est.	(15,222,027)	0.10251	(1,560,410)
36	March Choice - Act.	15,222,157	0.10251	1,560,423
37	March Est. Priority One Transportation	(974,560)	0.13237	(129,003)
38	March Act. Priority One Transportation	976,310	0.13237	129,234
39		43,125,369		5,542,647
40	May, 2017 Est.	13,430,867	0.14514	1,949,356
41	May Choice - Est. New	4,774,651	0.11413	544,931
42	May Est. Priority One Transportation New	545,230	0.14514	79,135
43	April, 2017 Est. New	(9,272,015)	0.14514	(1,345,740)
44	April, 2017 Est. Old	(22,481,460)	0.13237	(2,975,871)
45	April, 2017 Act. New	9,225,225	0.14514	1,338,949
46	April, 2017 Act. Old	22,368,010	0.13237	2,960,853
47	April Choice - Est. New	(3,187,899)	0.11413	(363,835)
48	April Choice - Est. Old	(7,655,285)	0.10251	(784,743)
49	April Choice - Act. New	3,186,623	0.11413	363,689
50	April Choice - Act. Old	7,652,231	0.10251	784,430
51	April Est. Priority One Transportation New	(193,914)	0.14514	(28,145)
52	April Est. Priority One Transportation Old	(470,176)	0.13237	(62,237)
53	April Act. Priority One Transportation New	214,786	0.14514	31,174
54	April Act. Priority One Transportation Old	520,784	0.13237	68,936
55		18,657,658		2,560,883

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COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF DEMAND GAS COST RECOVERY
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

LINE NO.	MONTH	VOLUMES SUBJ. TO DEMAND	COST OF GAS	DEMAND COST RECOVERY
		(1) THERM	(2) \$/THERM	(3 = 1 x 2) \$
1	June, 2017 Est.	8,542,394	0.14514	1,239,843
2	June Choice - Est.	2,984,768	0.11413	340,652
3	June Est. Priority One Transportation	394,490	0.14514	57,256
4	May Est.	(13,430,867)	0.14514	(1,949,356)
5	May Act.	13,457,177	0.14514	1,953,175
6	May Choice - Est.	(4,774,651)	0.11413	(544,931)
7	May Choice - Act.	4,773,110	0.11413	544,755
8	May Est. Priority One Transportation	(545,230)	0.14514	(79,135)
9	May Act. Priority One Transportation	430,910	0.14514	62,542
		<u>11,832,101</u>		<u>1,624,801</u>
10	July, 2017 Est. Old	3,439,283	0.14514	499,178
11	July, 2017 Est. New	2,941,576	0.15468	455,003
12	July Choice - Est. Old	858,718	0.11413	98,005
13	July Choice - Est. New	737,411	0.12364	91,174
14	July Est. Priority One Transportation Old	188,736	0.14514	27,393
15	July Est. Priority One Transportation New	161,424	0.15468	24,969
16	June 2017 Est.	(8,542,394)	0.14514	(1,239,843)
17	June 2017 Act.	8,684,544	0.14514	1,260,475
18	June Choice - Est.	(2,984,768)	0.11413	(340,652)
19	June Choice - Act.	2,983,175	0.11413	340,470
20	June Est. Priority One Transportation	(394,490)	0.14514	(57,256)
21	June Act. Priority One Transportation	315,070	0.14514	45,729
22		<u>8,388,285</u>		<u>1,204,645</u>
23	August, 2017 Est.	5,739,784	0.15468	887,830
24	August Choice - Est. New	1,471,902	0.12364	181,986
25	August Est. Priority One Transportation New	321,910	0.15468	49,793
26	July 2017 Est. Old	(3,439,283)	0.14514	(499,178)
27	July, 2017 Est. New	(2,941,576)	0.15468	(455,003)
28	July 2017 Act. Old	3,517,416	0.14514	510,518
29	July 2017 Act. New	3,008,403	0.15468	465,340
30	July Choice - Est. Old	(858,718)	0.11413	(98,005)
31	July Choice - Est. New	(737,411)	0.12364	(91,174)
32	July Choice - Act. Old	858,180	0.11413	97,944
33	July Choice - Act. New	736,950	0.12364	91,117
34	July Est. Priority One Transportation Old	(188,736)	0.14514	(27,393)
35	July Est. Priority One Transportation New	(161,424)	0.15468	(24,969)
36	July Act. Priority One Transportation Old	130,163	0.14514	18,892
37	July Act. Priority One Transportation New	111,327	0.15468	17,220
38	July - Prior Period Choice GMB Adjustment			
39		<u>7,568,887</u>		<u>1,124,917</u>
40	September, 2017 Est.	6,993,048	0.15468	1,081,685
41		<u>6,993,048</u>		<u>1,081,685</u>
42	TOTAL	<u>414,050,661</u>		<u>52,956,408</u>

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COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF STANDBY DEMAND COST RECOVERY
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

LINE NO.	MONTH	STANDBY VOLUMES (1) THERM	STANDBY DEMAND RATE (2) \$/THERM	STANDBY GAS DEMAND RECOVERIES (3 = 1 x 2) \$
1	October, 2016 Est.	0	-	0
2	September, 2016 Act.	58,790	0.75430	44,345
3	September, 2016 Est.	0	-	0
4		<u>58,790</u>		<u>44,345</u>
5	November, 2016 Est.	0	-	0
6	October, 2016 Act.	58,790	0.74946	44,061
7	October, 2016 Est.	0	-	0
8		<u>58,790</u>		<u>44,061</u>
9	December, 2016 Est.	0	-	0
10	November, 2016 Act.	58,790	0.74946	44,061
11	November, 2016 Est.	0	-	0
12		<u>58,790</u>		<u>44,061</u>
13	January, 2017 Est.	0	-	0
14	December, 2016 Act.	58,780	0.74946	44,053
15	December, 2016 Est.	0	-	0
16		<u>58,780</u>		<u>44,053</u>
17	February, 2017 Est.	0	-	0
18	January, 2017 Act.	50,970	0.74848	38,150
19	January, 2017 Est.	0	-	0
20		<u>50,970</u>		<u>38,150</u>
21	March, 2017 Est.	0	-	0
22	February, 2017 Act.	47,030	0.74848	35,201
23	February, 2017 Est.	0	-	0
24		<u>47,030</u>		<u>35,201</u>
25	April, 2017	0	-	0
26	March, 2017 Act.	47,790	0.74848	35,770
27	March, 2017 Est.	0	-	0
28		<u>47,790</u>		<u>35,770</u>
29	May, 2017	0	-	0
30	April, 2017 Act.	47,790	0.75581	36,120
31	April, 2017 Est.	0	-	0
32		<u>47,790</u>		<u>36,120</u>
33	June, 2017	0	-	0
34	May, 2017 Act.	47,790	0.75581	36,120
35	May, 2017 Est.	0	-	0
36		<u>47,790</u>		<u>36,120</u>
37	July, 2017	0	-	0
38	June, 2017 Act.	47,420	0.75581	35,841
39	June, 2017 Est.	0	-	0
40		<u>47,420</u>		<u>35,841</u>
41	August, 2017	0	-	0
42	July, 2017 Act.	49,750	0.76784	38,200
43	July, 2017 Est.	0	-	0
44		<u>49,750</u>		<u>38,200</u>
45	September, 2017	0	-	0
46	August, 2017 Act.	49,750	0.76784	38,200
47	August, 2017 Est.	0	-	0
48		<u>49,750</u>		<u>38,200</u>
49	TOTAL	<u>623,440</u>		<u>470,122</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, 2016 THROUGH SEPTEMBER, 2017

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, 2016 Est.	34,994	0.00226	79	34,994	0.00093	33
2	September, 2016 Act.	22,840	0.00226	52	22,840	0.00093	21
3	September, 2016 Est.	(25,004)	0.00226	(57)	(25,004)	0.00093	(23)
4		32,830		74	32,830		31
5	November, 2016 Est.	60,001	0.00226	136	60,001	0.00093	56
6	October, 2016 Act.	32,150	0.00226	73	32,150	0.00093	30
7	October, 2016 Est.	(34,994)	0.00226	(79)	(34,994)	0.00093	(33)
8		57,157		129	57,157		53
9	December, 2016 Est.	80,006	0.00226	181	80,006	0.00800	640
10	November, 2016 Act.	52,540	0.00226	119	52,540	0.00093	49
11	November, 2016 Est.	(60,001)	0.00226	(136)	(60,001)	0.00093	(56)
12		72,545		164	72,545		633
13	January, 2017 Est.	100,002	0.00226	226	100,002	0.01000	1,000
14	December, 2016 Act.	72,430	0.00226	164	72,430	0.00800	579
15	December, 2016 Est.	(80,006)	0.00226	(181)	(80,006)	0.00800	(640)
16		92,426		209	92,426		939
17	February, 2017 Est.	99,997	0.00226	226	99,997	0.01000	1,000
18	January, 2017 Act.	92,620	0.00226	209	92,620	0.01000	926
19	January, 2017 Est.	(100,002)	0.00226	(226)	(100,002)	0.01000	(1,000)
20		92,615		209	92,615		926
21	March, 2017 Est.	79,995	0.00226	181	79,995	0.00093	74
22	February, 2017 Act.	102,120	0.00226	231	102,120	0.01000	1,021
23	February, 2017 Est.	(99,997)	0.00226	(226)	(99,997)	0.01000	(1,000)
24		82,118		186	82,118		96
25	April, 2017 Est.	60,003	0.00226	136	60,003	0.00093	56
26	March, 2017 Act.	84,730	0.00226	191	84,730	0.00093	79
27	March, 2017 Est.	(79,995)	0.00226	(181)	(79,995)	0.00093	(74)
28		64,738		147	64,738		60
29	May, 2017 Est.	34,999	0.00226	79	34,999	0.00093	33
30	April, 2017 Act.	68,690	0.00226	155	68,690	0.00093	64
31	April, 2017 Est.	(60,003)	0.00226	(136)	(60,003)	0.00093	(56)
32		43,686		99	43,686		41
33	June, 2017 Est.	24,997	0.00226	56	24,997	0.00093	23
34	May, 2017 Act.	40,010	0.00226	90	40,010	0.00093	37
35	May, 2017 Est.	(34,999)	0.00226	(79)	(34,999)	0.00093	(33)
36		30,008		67	30,008		28
37	July, 2017 Est.	25,001	0.00226	57	25,001	0.00093	23
38	June, 2017 Act.	25,720	0.00226	58	25,720	0.00093	24
39	June, 2017 Est.	(24,997)	0.00226	(56)	(24,997)	0.00093	(23)
40		25,724		59	25,724		24
41	August, 2017 Est.	22,996	0.00226	52	22,996	0.00093	21
42	July, 2017 Act.	23,130	0.00226	52	23,130	0.00093	22
43	July, 2017 Est.	(25,001)	0.00226	(57)	(25,001)	0.00093	(23)
44		21,125		48	21,125		19
45	September, 2017 Est.	0	0.00000	0	0	0.00000	0
46		0		0	0		0
47	TOTAL	614,972		1,390	614,972		2,850

ATTACHMENT A

Attachment A
Sheet 1 of 3

COLUMBIA GAS OF PENNSYLVANIA, INC.
PENALTY CREDITS/SUPPLIER REFUNDS RECEIVED DECEMBER 2016 - JULY 2017
PASSBACK OF NON-RESIDENTIAL PORTION
CALCULATED RATE EFFECTIVE OCTOBER 2017 - SEPTEMBER 2018

Line No.	Refund Type	Date Received	Amount	Non-Residential Allocation 1 /
1	Columbia Gulf Transmission, LLC: Compliance Filing, Docket No. RP16-302	December 2016	(21,394.55)	(6,005.44) 2_ /
2	Columbia Gas Transmission, LLC: Penalty Credit, Docket 17-312	December 2016	(22,211.87)	(5,772.87)
3	Columbia Gas Transmission, LLC: Revenue Sharing Docket RP13-584	June 2017	(434,522.21)	(118,579.32) 2_ /
4	Dominion Transmission, Inc.: Overrun / Penalty Credit, Docket RP17-891	July 2017	<u>(3,415.51)</u>	<u>(887.69)</u>
5	Total Refunds to Pass Back		\$ (481,544.14)	\$ (131,245.32)
6	SGSS, SGDS (Priority One Only), SCD, LGSS and MLSS Therms			123,319,600
7	Rate per Therm			<u>(0.00106) \$/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_ / Denotes Supplier Refund that includes applicable interest as shown on Attachment A Sheet 3 of 3.

Attachment A
Sheet 2 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 2016 - September 2017		
1	Residential	343,150,000	74.0%
2	Commercial & Industrial	120,488,520	26.0%
3	Total October 2016 - September 2017	463,638,520	100.0%

Attachment A
Sheet 3 of 3

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUPPLIER REFUNDS RECEIVED DECEMBER 2016 - JULY 2017
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	September, 2016	0	19 / 12	6.00%	0	0
2	October	0	18 / 12	6.00%	0	0
3	November	0	17 / 12	6.00%	0	0
4	December	(5,560)	16 / 12	6.00%	(445)	(6,005)
5	January, 2017	0	15 / 12	6.00%	0	0
6	February	0	14 / 12	6.00%	0	0
7	March	0	13 / 12	6.00%	0	0
8	April	0	12 / 12	6.00%	0	0
9	May	0	11 / 12	6.00%	0	0
10	June	(112,932)	10 / 12	6.00%	(5,647)	(118,579)
11	July	0	9 / 12	6.00%	0	0
12	August	0	8 / 12	6.00%	0	0
13	September	<u>0</u>	7 / 12	6.00%	<u>0</u>	<u>0</u>
14	TOTAL	<u>(118,493)</u>			<u>(6,092)</u>	<u>(124,585)</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.
COMPUTATION OF CHANGE IN RATE PURSUANT TO SECTION 1307(f)
APPLICATION PERIOD: OCTOBER, 2017 THROUGH SEPTEMBER, 2018

Line No.	Description	Amount (1)	Change in Rate (2=3-1)	Effective 1-1-18 (3)
1	<u>Purchased Gas Commodity Cost</u>	\$		
2	Commodity Cost of Gas (Exhibit 1-B, Schedule 1)	112,883,429		
3	Projected tariff sales for the twelve billing periods of			
4	October, 2017 through September, 2018	364,579,469 Therms		
5	PGCC (Line 2/Line 4)	0.30963	(0.01460)	0.29503
6	<u>Commodity (Over)/Under Collection</u>			
7	Commodity E-Factor			
8	(Exhibit No. 1-E)	(1,113,259)	(802,455)	(1,915,714)
9	Projected sales for the twelve billing periods of			
10	October, 2017 through September, 2018	364,579,469 Therms		364,579,469
11	Commodity E-Factor (Line 8/ Line 10)	(0.00305)	(0.00220)	(0.00525)
12	<u>Purchased Gas Demand Cost</u>			
13	Demand cost of gas (Exhibit 1-B, Schedule 1)	63,339,821		
14	Less: Purchased Gas Demand recovered under Rate SS			
15	(Exhibit 1-A, Schedule 2, Sheet 2)	466,066		
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)	62,873,755		
19	Projected sales for the twelve billing periods of			
20	October, 2017 through September, 2018	464,339,600 Therms		
21	PGDC Rate prior to Capacity Release Credit (Line 18 / Line 20)	0.13540	(0.00168)	0.13372
22	Off System Sales and Capacity Release Credit	(0.01856)	0.00000	(0.01856)
23	PGDC Rate	0.11684	(0.00168)	0.11516
24	<u>Demand (Over)/Under Collection</u>			
25	Demand E- Factor			
26	(Exhibit No. 1-E)	4,410,579	(429,893)	3,980,685
27	Projected sales for the twelve billing periods of			
28	October, 2017 through September, 2018	464,339,600 Therms		464,339,600
29	Demand E-Factor (Line 26 / Line 28)	0.00950	(0.00093)	0.00857
30	<u>Total Purchased Gas Cost</u>			
31	PGCC Rate (Line 5)	0.30963	(0.01460)	0.29503
32	PGDC Rate (Line 23)	0.11684	(0.00168)	0.11516
33	PGC Rate	0.42647	(0.01628)	0.41019
34	Currently effective PGC	0.40993		0.42647
35	Increase (Decrease) in PGC	0.01654		(0.01628)
36	<u>Net (Over) Under Collection</u>			
37	Commodity E-Factor (Line 11)	(0.00305)	(0.00220)	(0.00525)
38	Demand E-Factor (Line 29)	0.00950	(0.00093)	0.00857
39	E-Factor	0.00645	(0.00313)	0.00332
40	Currently effective E-Factor	(0.01126)		0.00645
41	Increase (Decrease) in E-Factor	0.01771		(0.00313)
42	PGC Rate	0.42647	(0.01628)	0.41019
43	E-Factor	0.00645	(0.00313)	0.00332
44	Total Rate	0.43292	(0.01941)	0.41351
45	Currently effective Rate	0.39867		0.43292
46	Increase (Decrease) in Rate	0.03425		(0.01941)
				-4.48%

1_/ Includes 99,760,131 Therm Transportation Quantities for the Company's Choice Program

COLUMBIA GAS OF PENNSYLVANIA, INC.
QUARTERLY PURCHASED GAS ADJUSTMENT
INCREMENTAL CHANGE EFFECTIVE JANUARY 1, 2018

	Projected Over/(Under) Collection	Actual Over/(Under) Collection	Difference	Projected Sales	Change In Rate
	(1)	(2)	(3)	(4)	(5=3/4)
	\$	\$	\$	(Therms)	(\$/Therm)
C-FACTOR					
<u>Commodity Cost of Gas</u>					
1	October , 2017	(1,902,081)	(1,614,289)		
2	November, 2017	<u>(4,478,378)</u>	<u>(2,905,685)</u>		
3	Change in PGCC -- January 1	(6,380,458)	(4,519,974)	364,579,469	(0.00510)
4	December, 2017	0	0		
5	January, 2018	0	0		
6	February, 2018	<u>0</u>	<u>0</u>		
7	Change in PGCC -- April 1	0	0	364,579,469	0.00000
8	March, 2018	0	0		
9	April, 2018	0	0		
10	May, 2018	<u>0</u>	<u>0</u>		
11	Change in PGCC -- July 1	0	0	364,579,469	0.00000
<u>Demand Cost of Gas</u>					
12	October , 2017	(4,260,887)	(4,210,236)		
13	November, 2017	<u>(1,867,289)</u>	<u>(1,766,801)</u>		
14	Change in PGDC -- January 1	(6,128,176)	(5,977,037)	464,339,600	(0.00033)
15	December, 2017	0	0		
16	January, 2018	0	0		
17	February, 2018	<u>0</u>	<u>0</u>		
18	Change in PGDC -- April 1	0	0	464,339,600	0.00000
19	March, 2018	0	0		
20	April, 2018	0	0		
21	May, 2018	<u>0</u>	<u>0</u>		
22	Change in PGDC -- July 1	0	0	464,339,600	0.00000
E-FACTOR					
23	Commodity E Factor	1,113,259	1,915,714	364,579,469	(0.00220)
24	Demand E Factor	(4,410,579)	(3,980,685)	464,339,600	(0.00093)
25	Change in PGCC (line 3 + line 7 + line 11 + line 23)				(0.00730)
26	Change in PGDC (line 14 + line 18 + line 22 + line 24)				(0.00126)

COLUMBIA GAS OF PENNSYLVANIA, INC.
QUARTERLY PURCHASED GAS ADJUSTMENT - COMMODITY
INCREMENTAL CHANGE EFFECTIVE JANUARY 1, 2018

	Original Projected Exhibit 1-B Schedule 1	Updated for 1/1/18 Exhibit 1-B Schedule 1	Difference Included in 1/1/18 GCR	Updated for 4/1/18 Exhibit 1-B Schedule 1	Difference Included in 4/1/18 GCR	Updated for 7/1/18 Exhibit 1-B Schedule 1	Difference Included in 7/1/18 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 December, 2017	20,309,493	20,309,493	0				
2 January, 2018	25,053,129	24,269,985	(783,143)				
3 February	21,314,601	20,622,702	(691,899)				
4 March	16,420,416	16,053,633	(366,783)				
5 April	6,960,245	6,439,036	(521,209)				
6 May	2,697,303	2,551,679	(145,624)				
7 June	950,945	907,835	(43,110)				
8 July	861,500	816,969	(44,531)				
9 August	787,273	748,437	(38,836)				
10 September	<u>1,119,501</u>	<u>1,072,916</u>	<u>(46,585)</u>				
11 Total	96,474,404	93,792,684	(2,681,719)				
12 Projected Sales			282,410,652				
13 Change in PGCC Rate per Therm			(0.00950)				

COLUMBIA GAS OF PENNSYLVANIA, INC.
QUARTERLY PURCHASED GAS ADJUSTMENT - DEMAND
INCREMENTAL CHANGE EFFECTIVE JANUARY 1, 2018

	Original Projected Exhibit 1-B Schedule 1	Updated for 1/1/18 Exhibit 1-B Schedule 1	Difference Included in 1/1/18 GCR	Updated for 4/1/18 Exhibit 1-B Schedule 1	Difference Included in 4/1/18 GCR	Updated for 7/1/18 Exhibit 1-B Schedule 1	Difference Included in 7/1/18 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	December, 2017	6,069,444	6,069,444	0			
2	January, 2018	6,069,444	5,995,797	(73,647)			
3	February	6,069,444	5,995,797	(73,647)			
4	March	6,069,444	5,995,797	(73,647)			
5	April	4,515,032	4,470,447	(44,585)			
6	May	4,515,032	4,470,447	(44,585)			
7	June	4,515,032	4,470,447	(44,585)			
8	July	4,515,032	4,470,447	(44,585)			
9	August	4,515,032	4,470,447	(44,585)			
10	September	4,515,032	4,470,447	(44,585)			
11	Total	51,367,968	50,879,517	(488,451)			
12	Projected Sales			358,755,294			
13	Change in PGDC Rate per Therm			(0.00136)			

COLUMBIA GAS OF PENNSYLVANIA, INC.
ACTUAL OVER/(UNDER)COLLECTION FOR THE PERIOD
OCTOBER, 2017 THROUGH SEPTEMBER, 2018

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 2017						
1	October, 2017	2,259,268	3,873,557	(1,614,289)	1,438,173	5,648,409	(4,210,236)
2	November	7,502,240	10,407,925	(2,905,685)	4,008,751	5,775,552	(1,766,801)
3	December			0			0
4	January, 2018			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	9,761,508	14,281,482	(4,519,974)	5,446,924	11,423,961	(5,977,037)

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, 2017 THROUGH SEPTEMBER, 2018

Line No.	<u>Description</u>	<u>Detail</u> (1)	<u>Total</u> (2)
1	Total estimated demand charges for the period		
2	October, 2017 through September, 2018	62,851,370	
3	Estimated Demand Quantity (Therms) 1_/	81,134,160	
4	Daily purchased gas demand rate (Line 2 / line 3)	<u>\$0.77466</u> per Therm	
5	Daily purchased gas demand (Therms)	597,000 Therms	
6	Daily purchased gas demand rate per Therm	<u>\$0.77466</u>	
7	Total rate SS Daily Demand Cost to be		
8	Recovered (Line 5 x Line 6)		<u>\$462,472</u>
9	Total Rate SS Daily Demand Cost to be		
10	Recovered (Effective October 1, 2017)		<u>\$466,066</u>
11	Difference (Line 8 minus Line 10)		(\$3,594)
12	Projected Sales for the Period October 2017 through September 2018		464,339,600
13	Rate Differential		\$ (0.00001)

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, 2017 THROUGH SEPTEMBER, 2018

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 - 2017	8,969,877	0.30963	2,777,343	12,202,019	0.13540	1,652,153	4,429,496
2	November	23,418,997	0.30963	7,251,224	30,382,908	0.13540	4,113,846	11,365,070
3	December	49,779,943	0.30963	15,413,364	62,999,379	0.13540	8,530,116	23,943,480
4	January - 2018	73,399,970	0.30233	22,191,013	91,947,149	0.13456	12,372,408	34,563,421
5	February	71,443,945	0.29503	21,078,107	89,609,491	0.13372	11,982,581	33,060,688
6	March	58,663,932	0.29503	17,307,620	73,567,814	0.13372	9,837,488	27,145,108
7	April	38,688,940	0.29503	11,414,398	49,046,573	0.13372	6,558,508	17,972,906
8	May	16,872,800	0.29503	4,977,982	21,984,334	0.13372	2,939,745	7,917,727
9	June	8,511,878	0.29503	2,511,259	11,522,605	0.13372	1,540,803	4,052,062
10	July	5,082,720	0.29503	1,499,555	7,188,352	0.13372	961,226	2,460,781
11	August	4,769,398	0.29503	1,407,115	6,789,182	0.13372	907,849	2,314,964
12	September	<u>4,977,069</u>	0.29503	<u>1,468,385</u>	<u>7,099,794</u>	0.13372	<u>949,384</u>	<u>2,417,769</u>
13	Total	364,579,469		109,297,365	464,339,600		62,346,107	171,643,472

1_/ Excludes refunds and experienced over/undercollections

Exhibit 1-A
Schedule 2
Sheet 2 of 4

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF PROJECTED SALES QUANTITIES AND REVENUES FOR THE PERIOD
SALES AT STANDBY RATE
OCTOBER, 2017 THROUGH SEPTEMBER, 2018

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 - 2017	49,750	0.78068	38,839
2	November	49,750	0.78068	38,839
3	December	49,750	0.78068	38,839
4	January - 2018	49,750	0.77466	38,539
5	February	49,750	0.77466	38,539
6	March	49,750	0.77466	38,539
7	April	49,750	0.77466	38,539
8	May	49,750	0.77466	38,539
9	June	49,750	0.77466	38,539
10	July	49,750	0.77466	38,539
11	August	49,750	0.77466	38,539
12	September	49,750	0.77466	38,539
13	Total	597,000		463,371

Exhibit 1-A
Schedule 2
Sheet 3 of 4

COLUMBIA GAS OF PENNSYLVANIA, INC.
SUMMARY OF PROJECTED SALES QUANTITIES AND REVENUES FOR THE PERIOD
SALES AT BANKING AND BALANCING RATES
OCTOBER, 2017 THROUGH SEPTEMBER, 2018

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) \$	(7=3+6) \$
1	October 2017	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 2018	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>	0.00226	<u>0</u>	<u>0</u>	0.00697	<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 2017 1307(f) PERIOD
OCTOBER, 2017 THROUGH SEPTEMBER, 2018

Line No.	Month	Commodity Recoveries PGCC Revenue	Total Commodity Cost of Gas 1 /	Commodity Over/ (Under) collection	Demand Recoveries PGDC Revenue	Total Demand Cost of Gas 1 /	Demand Over/ (Under) collection	Total Over/ (Under) collection
		(1)	(2)	(3=1-2)	(4)	(5)	(6=4-5)	(7=3+6)
		\$	\$	\$	\$	\$	\$	\$
1	October 2017	2,777,343	4,679,424	(1,902,081)	1,690,992	5,951,879	(4,260,887)	(6,162,968)
2	November	7,251,224	11,729,602	(4,478,378)	4,152,685	6,019,974	(1,867,289)	(6,345,667)
3	December	15,413,364	20,309,493	(4,896,129)	8,568,955	6,069,444	2,499,511	(2,396,618)
4	January 2018	22,191,013	24,269,985	(2,078,972)	12,410,947	5,995,797	6,415,150	4,336,178
5	February	21,078,107	20,622,702	455,405	12,021,120	5,995,797	6,025,323	6,480,728
6	March	17,307,620	16,053,633	1,253,987	9,876,027	5,995,797	3,880,230	5,134,218
7	April	11,414,398	6,439,036	4,975,362	6,597,047	4,470,447	2,126,600	7,101,963
8	May	4,977,982	2,551,679	2,426,303	2,978,284	4,470,447	(1,492,163)	934,141
9	June	2,511,259	907,835	1,603,424	1,579,342	4,470,447	(2,891,105)	(1,287,681)
10	July	1,499,555	816,969	682,586	999,765	4,470,447	(3,470,682)	(2,788,096)
11	August	1,407,115	748,437	658,678	946,388	4,470,447	(3,524,059)	(2,865,381)
12	September	1,468,385	1,072,916	395,469	987,923	4,470,447	(3,482,524)	(3,087,054)
13	Total	109,297,365	110,201,709	(904,345)	62,809,478	62,851,370	(41,892)	(946,237)

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, 2018

\$63,339,821	1. Projected Demand Costs Oct. 2017 through Sept. 2018 (Exh. 1-B, Sch. 1 from Oct. 2017 PGC)
(462,472)	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
3,980,685	1c. Experienced Demand Net Under/(Over) Collection (Exhibit No. 1-E)
<u>\$66,858,034</u>	2. Total Adjusted Demand Costs per 1307(f) Filing (1) + (1a) + (1b) + (1c)
\$127.49 per Dth	3. Unit FT Demand Charge Per Dth of Gulf/TCO capacity the marketer would pay Gulf and TCO. (Exhibit 1-A, Schedule 3, Sheet 2)
46,434 MMDth	4. Projected Sales & Choice Requirements for 12 billing periods of October, 2017 through September, 2018
46,949 MMDth	5. Projected Sales & Choice Requirements 12 months ended September 2018, including Unaccounted For @ 1.1%
21,755 MMDth	6. Annual Injections and Withdrawals, Normal Weather
1 Dth	7a. Quantity Delivered to the Customer
<u>1.1%</u>	7b. Unaccounted-for & Co. Use Factor from Volume Balancing System
1.0111 Dth	7c. Quantity Delivered to the City Gate. (7a)/(1-7b)
\$1.4398 per Dth	8. Unit Demand Charge: (2) / (4)
(\$0.0033)	9a. Quarterly Purchased Gas Demand Adjustment (Jan. 1, 2018 Filing, Schedule 1, Sheet 2)
(\$0.0136)	9b. Quarterly Purchased Gas Demand Adjustment (Jan. 1, 2018 Filing, Schedule 1, Sheet 4)
<u>\$1.4229</u>	10. Net Unit Demand Charge (8) + (9a) + (9b)
(\$0.1856) per Dth	11. OSS and Capacity Release Credit
0.0028 Dth	12. Average Daily FT Delivery: (7c) / 365 days
\$0.3570 per Dth	13. Annual Demand Charge for the Assigned FT Capacity payable to the pipeline(s): (3) X (12)
\$1.0828 per Dth	14. Annual Demand Charge for other capacity that CPA retains (8) - (13)
0.4685 Dth	15. Quantity Injected and Withdrawn to Deliver 1 Dth to the Customer: (6) / (4)
\$0.0072	16a. Injection Charge @ \$0.0153/Dth
\$0.0023	16b. FSS Shrinkage @ 0.17 percent for gas at \$2.8605/Dth
\$0.0072	16c. Withdrawal Charge @ \$0.0153/Dth
\$0.0104	16d. SST Commodity Charge @ \$0.0222/Dth
<u>\$0.0192</u>	16e. SST retention @ 1.4320% for gas at \$2.8605/Dth
<u>\$0.0463</u> per Dth	16f. Total Annual Variable Storage Costs
\$0.3570 per Dth	17. Credit to Purchased Gas Demand Charge for the CHOICE Customer:
(\$0.0463) per Dth	17a. For Demand Cost Paid to Pipelines: = (13)
<u>\$0.3107</u> per Dth	17b. Less Storage Costs: = (16f)
<u>\$0.03107</u> per Therm	17c. Net Credit: (17a) + (17b)
	17d. Per Therm: (17c)/10 - Capacity Assignment Factor
<u>\$0.9266</u> per Dth	18. Purchased Gas Demand Charge Paid By the CHOICE Customer: (10)+(11) - (17c)
<u>\$0.09266</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 Gulf. Cost of the Capacity Allocated to Marketers.

	<u>TCO</u> FT Capacity	<u>CGT</u> FTS-1 Capacity	<u>Total:</u> TCO and Gulf
<u>1 CPA FT Capacity on TCO and Columbia Gulf</u>			
2 CPA Contract: Dth/d	122,373	43,632	
<u>3 Projected Demand Costs</u>			
4. Annual Demand Cost 1/	\$9,387,969	\$2,183,340	
4a. Monthly Billing Determinants	122,373	43,632	
4b. Annual Demand Charge (4/ 4a)	\$76.72	\$50.04	
4c. Monthly Demand Charge (4b / number of months)	\$6.393	\$4.170	
<u>Transportation Pilot: Allocation Capacity and Costs.</u>			
5. Capacity Allocation:	1.0000	1.0145 2/	
6. Number of Months	12	12	
7. Unit Annual Cost of City Gate Capacity: (4c) x (5) x (6) \$/Dth	\$76.72	\$50.77	<u><u>\$127.49</u></u>

Notes:

1/ Projected demand costs for the period 12 months ended September, 2018.

2/ $1.020 \text{ Dth/day} = 1.000 / (1 - \text{retention}) = 1.000 / (1 - 0.014320)$

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Costs
For the Period October 2017 Through September 2018

Line No.	Description	2017			2018									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
1	Total Quantity													
2	DTH	1,608,000	3,966,000	6,731,000	8,314,000	7,056,000	5,489,000	2,450,000	888,000	249,000	218,000	193,000	328,000	37,490,000
3	Total Demand Costs	5,951,879	6,019,974	6,069,444	5,995,797	5,995,797	5,995,797	4,470,447	4,470,447	4,470,447	4,470,447	4,470,447	4,470,447	62,851,370
4	Total Commodity Costs	<u>4,679,424</u>	<u>11,729,602</u>	<u>20,309,493</u>	<u>24,269,985</u>	<u>20,622,702</u>	<u>16,053,633</u>	<u>6,439,036</u>	<u>2,551,679</u>	<u>907,835</u>	<u>816,969</u>	<u>748,437</u>	<u>1,072,916</u>	<u>110,201,709</u>
5	Total Estimated Gas Costs (Line 5 = Line 3 + Line 4)	<u>10,631,303</u>	<u>17,749,576</u>	<u>26,378,937</u>	<u>30,265,782</u>	<u>26,618,499</u>	<u>22,049,430</u>	<u>10,909,483</u>	<u>7,022,126</u>	<u>5,378,282</u>	<u>5,287,416</u>	<u>5,218,884</u>	<u>5,543,363</u>	<u>173,053,079</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Costs
Commodity Costs

Line No.	Description	2017			2018									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	Term	1,956,240	1,951,204	3,846,347	3,355,469	3,107,280	1,893,805	1,781,168	1,844,620	1,808,932	1,893,987	1,898,775	1,828,187	27,166,014
2	Spot	8,295,200	381,685	4,838,296	1,491,651	1,334,574	366,495	11,275,250	10,564,274	8,798,273	8,702,762	8,634,028	6,955,805	71,638,293
3	Local	57,015	58,380	64,636	56,540	51,840	56,562	51,555	54,186	52,521	55,858	56,012	53,130	668,235
4	Storage	(5,629,032)	9,338,333	11,560,214	19,366,325	16,129,008	13,736,771	(6,668,937)	(9,911,401)	(9,751,891)	(9,835,638)	(9,840,378)	(7,764,206)	10,729,167
5	Financial Hedges	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Total Commodity Cost	<u>4,679,424</u>	<u>11,729,602</u>	<u>20,309,493</u>	<u>24,269,985</u>	<u>20,622,702</u>	<u>16,053,633</u>	<u>6,439,036</u>	<u>2,551,679</u>	<u>907,835</u>	<u>816,969</u>	<u>748,437</u>	<u>1,072,916</u>	<u>110,201,709</u>

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Costs
Commodity Quantities

Line No.	Description	2017			2018									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
	<u>Term</u>													
1	Total-DTH	660,000	641,000	1,204,000	1,191,000	1,094,000	669,000	645,000	666,000	644,000	665,000	665,000	644,000	9,388,000
	<u>Spot</u>													
2	Total-DTH	2,944,000	129,000	1,573,000	534,000	474,000	133,000	4,415,000	4,122,000	3,382,000	3,299,000	3,267,000	2,646,000	26,918,000
	<u>Local</u>													
3	Total-DTH	21,000	21,000	22,000	22,000	20,000	22,000	21,000	22,000	21,000	22,000	22,000	21,000	257,000
	<u>Storage</u>													
4	Total-DTH	(2,017,000)	3,175,000	3,932,000	6,567,000	5,468,000	4,665,000	(2,631,000)	(3,922,000)	(3,798,000)	(3,768,000)	(3,761,000)	(2,983,000)	927,000
	<u>Total - All Sources</u>													
5	Total-DTH	1,608,000	3,966,000	6,731,000	8,314,000	7,056,000	5,489,000	2,450,000	888,000	249,000	218,000	193,000	328,000	37,490,000

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Demand Costs
Columbia Gas Transmission Corporation

Line No.	Description	2017			2018									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	127,588	127,588	127,588	127,588	127,588	127,588	127,588	127,588	127,588	127,588	127,588	127,588	
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	122,373	122,373	122,373	122,373	122,373	122,373	122,373	122,373	122,373	122,373	122,373	122,373	
4	Demand Rate	6.4890	6.4890	6.4890	6.3610	6.3610	6.3610	6.3610	6.3610	6.3610	6.3610	6.3610	6.3610	
5	Demand Cost	794,078	794,078	794,078	778,415	778,415	778,415	778,415	778,415	778,415	778,415	778,415	778,415	9,387,969
<u>FSS-Reservation</u>														
6	Billing Determinant-Dth	456,876	456,876	456,876	456,876	456,876	456,876	456,876	456,876	456,876	456,876	456,876	456,876	
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	
8	Demand Cost	685,771	685,771	685,771	685,771	685,771	685,771	685,771	685,771	685,771	685,771	685,771	685,771	8,229,252
<u>FSS-Capacity</u>														
9	Total-DTH	25,341,126	25,341,126	25,341,126	25,341,126	25,341,126	25,341,126	25,341,126	25,341,126	25,341,126	25,341,126	25,341,126	25,341,126	
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	
11	Demand Cost	729,824	729,824	729,824	729,824	729,824	729,824	729,824	729,824	729,824	729,824	729,824	729,824	8,757,888
<u>SST</u>														
12	Billing Determinant-Dth	456,876	456,876	456,876	456,876	456,876	456,876	228,438	228,438	228,438	228,438	228,438	228,438	
13	Demand Rate	6.3190	6.3190	6.3190	6.1910	6.1910	6.1910	6.1910	6.1910	6.1910	6.1910	6.1910	6.1910	
14	Demand Cost	2,886,999	2,886,999	2,886,999	2,828,519	2,828,519	2,828,519	1,414,260	1,414,260	1,414,260	1,414,260	1,414,260	1,414,260	25,632,114
15	Total TCO Demand Cost	5,096,672	5,096,672	5,096,672	5,022,529	5,022,529	5,022,529	3,608,270	3,608,270	3,608,270	3,608,270	3,608,270	3,608,270	52,007,223

(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 Commodity Costs
Term Contracts

Line No.	Description	2017			2018									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
<u>TERM</u>														
<u>COLUMBIA GULF - TCO</u>														
1	Quantity - DTH	0	0	0	0	0	0	0	0	0	0	0	0	0
2	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	0.0000
3	Cost-\$	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>COLUMBIA TRANSMISSION</u>														
4	Quantity - DTH	0	0	312,000	312,000	282,000	0	0	0	0	0	0	0	906,000
5	Rate-\$/DTH	0.0000	0.0000	3.0031	2.6297	2.6521	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	Cost-\$	0	0	936,967	820,466	747,892	0	0	0	0	0	0	0	2,505,325
<u>TEXAS EASTERN</u>														
7	Quantity - DTH	660,000	641,000	663,000	650,000	605,000	669,000	645,000	666,000	644,000	665,000	665,000	644,000	7,817,000
8	Rate-\$/DTH	2.9640	3.0440	3.2173	2.8298	2.8526	2.8308	2.7615	2.7697	2.8089	2.8481	2.8553	2.8388	2.8388
9	Cost-\$	1,956,240	1,951,204	2,133,070	1,839,370	1,725,823	1,893,805	1,781,168	1,844,620	1,808,932	1,893,987	1,898,775	1,828,187	22,555,181
<u>TENNESSEE GAS PIPELINE</u>														
10	Quantity - DTH	0	0	229,000	229,000	207,000	0	0	0	0	0	0	0	665,000
11	Rate-\$/DTH	0.0000	0.0000	3.3900	3.0377	3.0607	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12	Cost-\$	0	0	776,310	695,633	633,565	0	0	0	0	0	0	0	2,105,508
<u>CAP</u>														
13	Quantity - DTH	0	0	0	0	0	0	0	0	0	0	0	0	0
14	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	0.0000
15	Cost-\$	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>LESS CAP BILLING</u>														
16	Quantity - DTH	0	0	0	0	0	0	0	0	0	0	0	0	0
17	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	0.0000
18	Cost-\$	0	0	0	0	0	0	0	0	0	0	0	0	0
19	Total - DTH	660,000	641,000	1,204,000	1,191,000	1,094,000	669,000	645,000	666,000	644,000	665,000	665,000	644,000	9,388,000
20	Total Term Commodity													
21	Cost-\$	1,956,240	1,951,204	3,846,347	3,355,469	3,107,280	1,893,805	1,781,168	1,844,620	1,808,932	1,893,987	1,898,775	1,828,187	27,166,014

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Commodity Costs
Spot and Local Purchases

Line No.	Description	2017			2018									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
<u>SPOT</u>														
<u>Base</u>														
1	Quantity - DTH	1,988,000	129,000	1,219,000	514,000	464,000	133,000	4,392,000	4,122,000	3,382,000	3,299,000	3,267,000	2,646,000	25,555,000
2	Rate-\$/DTH	2.8213	2.9588	3.0868	2.7929	2.8153	2.7556	2.5539	2.5629	2.6015	2.6380	2.6428	2.6288	
3	Cost-\$	5,608,744	381,685	3,762,809	1,435,551	1,306,299	366,495	11,216,729	10,564,274	8,798,273	8,702,762	8,634,028	6,955,805	67,733,454
<u>Swing</u>														
4	Quantity - DTH	956,000	0	354,000	20,000	10,000	0	23,000	0	0	0	0	0	1,363,000
5	Rate-\$/DTH	2.8101	0.0000	3.0381	2.8050	2.8275	0.0000	2.5444	0.0000	0.0000	0.0000	0.0000	0.0000	
6	Cost-\$	2,686,456	0	1,075,487	56,100	28,275	0	58,521	0	0	0	0	0	3,904,839
7	Total - DTH	2,944,000	129,000	1,573,000	534,000	474,000	133,000	4,415,000	4,122,000	3,382,000	3,299,000	3,267,000	2,646,000	26,918,000
8	Total Spot													
9	Commodity Cost - \$	8,295,200	381,685	4,838,296	1,491,651	1,334,574	366,495	11,275,250	10,564,274	8,798,273	8,702,762	8,634,028	6,955,805	71,638,293
<u>Local Direct</u>														
10	Quantity - DTH	21,000	21,000	22,000	22,000	20,000	22,000	21,000	22,000	21,000	22,000	22,000	21,000	257,000
11	Rate-\$/DTH	2.7150	2.7800	2.9380	2.5700	2.5920	2.5710	2.4550	2.4630	2.5010	2.5390	2.5460	2.5300	
12	Cost-\$	57,015	58,380	64,636	56,540	51,840	56,562	51,555	54,186	52,521	55,858	56,012	53,130	668,235
13	Total - DTH	21,000	21,000	22,000	22,000	20,000	22,000	21,000	22,000	21,000	22,000	22,000	21,000	257,000
14	Total Local													
15	Commodity Cost - \$	57,015	58,380	64,636	56,540	51,840	56,562	51,555	54,186	52,521	55,858	56,012	53,130	668,235

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Commodity Costs

Storage

Line No.	Description	2017					2018					Total		
		October	November	December	January	February	March	April	May	June	July		August	September
DOMINION TRANSMISSION - GSS														
1	Injections - DTH	(200,000)	0	0	0	0	(229,000)	(229,000)	(228,000)	(231,000)	(229,000)	(229,000)	(1,575,000)	
2	Injection Rate - \$/Dth	2.8437	3.0231	3.1259	2.8069	2.8298	2.8117	2.5798	2.5911	2.6340	2.6725	2.6780	2.6690	
3	Withdrawals - DTH	0	106,000	381,000	487,000	324,000	312,000	0	0	0	0	0	1,610,000	
4	Withdrawl Rate - \$/Dth	2.9042	2.9042	2.9047	2.8938	2.8938	2.8937	2.7721	2.7001	2.6821	2.6800	2.6797	2.6783	
5	Cost-\$	(568,740)	307,845	1,106,691	1,409,283	937,593	902,845	(590,775)	(593,357)	(600,548)	(617,349)	(613,262)	(611,205)	469,021
6	Injection Rate \$/Dth	0.0274	0.0274	0.0274	0.0290	0.0290	0.0290	0.0290	0.0290	0.0290	0.0290	0.0290	0.0290	
7	Withdrawal Rate \$/Dth	0.0148	0.0148	0.0148	0.0154	0.0154	0.0154	0.0154	0.0154	0.0154	0.0154	0.0154	0.0154	
8	Cost - \$	5,480	1,569	5,639	7,500	4,990	4,805	6,641	6,641	6,612	6,699	6,641	6,641	69,858
EQUITRANS - SS														
9	Injections - DTH	(205,000)	0	0	0	0	(161,000)	(161,000)	(161,000)	(161,000)	(161,000)	(161,000)	(1,171,000)	
10	Injection Rate - \$/Dth	2.8437	3.0231	3.1259	2.8069	2.8298	2.8117	2.5798	2.5911	2.6340	2.6725	2.6780	2.6690	
11	Withdrawals - DTH	0	75,000	375,000	457,000	218,000	0	0	0	0	0	0	1,125,000	
12	Withdrawl Rate - \$/Dth	2.9042	2.9042	2.9047	2.8938	2.8938	2.8937	2.7721	2.7001	2.6821	2.6800	2.6797	2.6783	
13	Cost-\$	(582,959)	217,815	1,089,263	1,322,469	630,849	0	(415,348)	(417,163)	(424,071)	(430,273)	(431,158)	(429,712)	129,712
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
TCO - FSS														
16	Injections - DTH	(1,901,000)	0	0	0	0	(8,000)	(2,329,000)	(3,970,000)	(3,971,000)	(3,970,000)	(3,970,000)	(3,130,000)	(23,249,000)
17	Injection Rate - \$/Dth	2.8437	3.0231	3.1259	2.8069	2.8298	2.8117	2.5798	2.5911	2.6340	2.6725	2.6780	2.6690	
18	Withdrawals - DTH	0	3,165,000	3,855,000	6,622,000	5,737,000	4,823,000	0	0	0	0	0	0	24,202,000
19	Withdrawl Rate - \$/Dth	2.9042	2.9042	2.9047	2.8938	2.8938	2.8937	2.7721	2.7001	2.6821	2.6800	2.6797	2.6783	
20	Cost-\$	(5,405,874)	9,191,793	11,197,619	19,162,774	16,601,757	13,933,990	(6,008,358)	(10,286,575)	(10,459,543)	(10,609,847)	(10,631,663)	(8,354,030)	8,332,043
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 - \$	29,085	48,425	58,982	101,317	87,776	73,914	35,634	60,741	60,756	60,741	60,741	47,889	726,001
23	Quantity - DTH	(2,306,000)	3,346,000	4,611,000	7,566,000	6,279,000	5,127,000	(2,719,000)	(4,360,000)	(4,360,000)	(4,362,000)	(4,360,000)	(3,520,000)	942,000
24	Total Purchase Cost	(6,557,573)	9,717,453	13,393,573	21,894,526	18,170,199	14,836,835	(7,014,481)	(11,297,095)	(11,484,162)	(11,657,469)	(11,676,083)	(9,394,947)	8,930,776
25	Total Inject/With. Cost	34,565	49,994	64,621	108,817	92,766	78,719	42,275	67,382	67,368	67,440	67,382	54,530	795,859

COLUMBIA GAS OF PENNSYLVANIA, INC.

Summary of Total Estimated Purchased Gas Commodity Costs
Storage Transportation Charges

Line No.	Description	2017			2018									Total
		October	November	December	January	February	March	April	May	June	July	August	September	
<u>TCO - SST</u>														
1	Injections - DTH	(1,901,000)	0	0	0	0	(8,000)	(2,329,000)	(3,970,000)	(3,971,000)	(3,970,000)	(3,970,000)	(3,130,000)	(23,249,000)
2	Withdrawals - DTH	0	3,165,000	3,855,000	6,622,000	5,737,000	4,823,000	0	0	0	0	0	0	24,202,000
3	Trans. Chrg. \$/Dth	0.0224	0.0222	0.0222	0.0222	0.0222	0.0222	0.0224	0.0224	0.0224	0.0224	0.0224	0.0224	
4	Cost-\$	42,582	70,263	85,581	147,008	127,361	107,249	52,170	88,928	88,950	88,928	88,928	70,112	1,058,060
<u>DOMINION TRANSMISSION - GSS</u>														
5	Injections - DTH	(200,000)	0	0	0	0	0	(229,000)	(229,000)	(228,000)	(231,000)	(229,000)	(229,000)	(1,575,000)
6	Withdrawals - DTH	0	106,000	381,000	487,000	324,000	312,000	0	0	0	0	0	0	1,610,000
7	Rate-\$/DTH	0.0224	0.0164	0.0164	0.0170	0.0170	0.0170	0.0224	0.0224	0.0224	0.0224	0.0224	0.0224	
8	Cost-\$	4,480	1,738	6,248	8,279	5,508	5,304	5,130	5,130	5,107	5,174	5,130	5,130	62,358
<u>EQUITRANS - SS</u>														
9	Injections - DTH	(205,000)	0	0	0	0	0	(161,000)	(161,000)	(161,000)	(161,000)	(161,000)	(161,000)	(1,171,000)
10	Withdrawals - DTH	0	75,000	375,000	457,000	218,000	0	0	0	0	0	0	0	1,125,000
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	(2,306,000)	3,346,000	4,611,000	7,566,000	6,279,000	5,127,000	(2,719,000)	(4,360,000)	(4,360,000)	(4,362,000)	(4,360,000)	(3,520,000)	942,000
14	Total EUB - DTH	289,000	(171,000)	(679,000)	(999,000)	(811,000)	(462,000)	88,000	438,000	562,000	594,000	599,000	537,000	(15,000)
15	Total DTH	(2,017,000)	3,175,000	3,932,000	6,567,000	5,468,000	4,665,000	(2,631,000)	(3,922,000)	(3,798,000)	(3,768,000)	(3,761,000)	(2,983,000)	927,000
16	Total Purchase Cost	(6,557,573)	9,717,453	13,393,573	21,894,526	18,170,199	14,836,835	(7,014,481)	(11,297,095)	(11,484,162)	(11,657,469)	(11,676,083)	(9,394,947)	8,930,776
17	Total Choice Bank Cost	846,915	(501,116)	(1,989,810)	(2,792,305)	(2,266,826)	(1,291,336)	245,969	1,224,254	1,570,846	1,660,289	1,674,265	1,500,969	(117,886)
18	Total Inject/With. Cost	34,565	49,994	64,621	108,817	92,766	78,719	42,275	67,382	67,368	67,440	67,382	54,530	795,859
19	Total Transp. Charge	47,062	72,001	91,829	155,287	132,869	112,553	57,300	94,058	94,057	94,102	94,058	75,242	1,120,418
20	Total Storage Cost	(5,629,032)	9,338,333	11,560,214	19,366,325	16,129,008	13,736,771	(6,668,937)	(9,911,401)	(9,751,891)	(9,835,638)	(9,840,378)	(7,764,206)	10,729,167

Exhibit 1-E
Schedule I

COLUMBIA GAS OF PENNSYLVANIA, INC.
STATEMENT OF EXPERIENCED NET OVER (UNDER) COLLECTION
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

<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 2016 - 1307(f)			
2	(See Schedule 2a and 2b)	(320,031)	(12,268)	(332,299)
3	Unified Credit for Off-system Sales and Capacity Release for the period			
4	October, 2016 through September, 2017 (See Schedule 3 herein)	986,027	0	986,027
5	Over (Under) Collection for the period October, 2016 through			
6	September 2017 (See Schedule 4 herein)	(4,597,567)	2,004,796	(2,592,771)
7	Interest on Over (Under) Collection for the period October, 2016 through			
8	September, 2017 (See Schedule 4 herein)	<u>(49,114)</u>	<u>(76,814)</u>	<u>(125,928)</u>
9	TOTAL EXPERIENCED NET OVER (UNDER) COLLECTION	<u>(3,980,685)</u>	<u>1,915,714</u>	<u>(2,064,971)</u>

Exhibit 1-E
Schedule 2a
Sheet 1 of 2

COLUMBIA GAS OF PENNSYLVANIA, INC.
RECONCILIATION OF COMMODITY COST OF GAS
FROM 2016 - 1307(f)
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

COMMODITY

Line No.	Month	Sales Subject to Commodity E-Factor	Rate \$/ Therm	Amount Recovered \$	Net Commodity Over (Under) Collection \$
1	True-up of Net Commodity Costs Included in 2016 1307(f):				5,488,604
2	Beginning Balance Adjustment				(251) 2_/
3	Beginning Balance Adjustment				30,228 3_/
4	October, 2016	3,353,510	(0.01917)	(64,287)	
5		4,055,550	(0.06811)	(276,224)	
6	November	18,277,560	(0.01917)	(350,381)	
7		162,130	(0.06811)	(11,043)	
8	December	46,256,840	(0.01917)	(886,744)	
9		(20,980)	(0.06811)	1,429	
10	January, 2017 1_/	29,511,210	(0.01651)	(487,230)	
11		34,730,690	(0.01917)	(665,787)	
12	February	52,083,838	(0.01651)	(859,904)	
13	March	44,214,702	(0.01651)	(729,985)	
14	April	31,616,215	(0.01651)	(521,984)	
15	May	13,270,627	(0.01651)	(219,098)	
16	June	8,568,704	(0.01651)	(141,469)	
17	July	6,523,009	(0.01651)	(107,695)	
18	August	5,884,743	(0.01651)	(97,157)	
19	September	6,861,872	(0.01651)	(113,290)	
20	Amount Collected/(Passed Back) during 2016 1307(f) Period				<u>(5,530,849)</u>
21	Remaining Balance to be Collected in the 2017 1307(f)				<u><u>(12,268)</u></u>

1_/ Rate in effect January 1, 2017.

2_/ Represents a commodity interest adjustment for the month of September 2016, increasing the interest rate from 3.50% to 3.75% to reflect the prime interest rate at 1/31/2017. Please refer to Exh. 1-E, Schedule 2a, Sheet 2 for a detailed calculation fo this adjustment.

3_/ Interest credit relating to Audit Finding No. 1 found in Docket No. D-2016-2541311 from the Company's Purchased Gas Cost Audit for the period of February 2013 through January 2016.

COLUMBIA GAS OF PENNSYLVANIA, INC.
STATEMENT OF COMMODITY OVER/(UNDER) COLLECTIONS FROM GAS COST RATE
OCTOBER, 2015 THROUGH SEPTEMBER, 2016

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, 2016	17,245,069	15,883,932	1,361,137	14 / 12	8.00%	127,039	8.00%	127,039	0
2	March	12,696,997	9,892,492	2,804,505	13 / 12	8.00%	243,057	8.00%	243,057	0
3	April	8,055,403	2,523,553	5,531,850	12 / 12	8.00%	442,548	8.00%	442,548	0
4	May	4,317,267	1,987,150	2,330,118	11 / 12	8.00%	170,875	8.00%	170,875	0
5	June	2,446,752	635,135	1,811,617	10 / 12	8.00%	120,774	8.00%	120,774	0
6	July	1,699,015	1,569,413	129,601	9 / 12	8.00%	7,776	8.00%	7,776	0
7	August	1,586,391	1,972,212	(385,821)	8 / 12	8.00%	(20,577)	8.00%	(20,577)	0
8	September	<u>1,643,113</u>	<u>1,814,797</u>	<u>(171,683)</u>	7 / 12	3.50%	<u>(3,505)</u>	3.75%	<u>(3,756)</u>	<u>(251)</u>
9	TOTAL	<u>49,690,008</u>	<u>36,278,685</u>	<u>13,411,323</u>			<u>1,087,987</u>		<u>1,087,736</u>	<u>(251)</u>

Exhibit 1-E
Schedule 2b
Sheet 1 of 2

COLUMBIA GAS OF PENNSYLVANIA, INC.
RECONCILIATION OF DEMAND COST OF GAS
FROM 2016 - 1307(f)
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

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 2016 1307(f):				(2,433,787)
2	Beginning Balance Adjustment				(23,300) 2_/
3	Beginning Balance Adjustment				6,487 3_/
4	October, 2016	4,623,560	0.00562	25,984	
5		5,410,500	(0.01422)	(76,937)	
6	November	25,442,380	0.00562	142,985	
7		(25,210)	(0.01422)	358	
8	December	63,241,480	0.00562	355,417	
9	January, 2017 1_/	39,085,600	0.00525	205,199	
10		48,087,660	0.00562	270,253	
11	February	71,010,742	0.00525	372,806	
12	March	60,608,602	0.00525	318,195	
13	April	43,125,369	0.00525	226,408	
14	May	18,657,658	0.00525	97,953	
15	June	11,832,101	0.00525	62,119	
16	July	8,388,285	0.00525	44,038	
17	August	7,568,887	0.00525	39,737	
18	September	8,772,148	0.00525	46,054	
19	Amount Collected/(Passed Back) in the 2016 1307(f) Period				<u>2,130,569</u>
20	Remaining Balance to be Collected in the 2017 1307(f)				<u>(320,031)</u>

1_/ Rate in effect January 1, 2017.

2_/ Represents a demand interest adjustment for the months February 2016 through August 2016, reducing the interest rate from 8% to 6% due to an under collection balance for the twelve months ended January 2017. Demand interest adjustment for the month of September 2016, increasing the interest rate from 3.50% to 3.75% to reflect the prime interest rate at 1/31/2017. Please refer to Exh. 1-E, Schedule 2b, Sheet 2b for a detailed calculation of these adjustments.

3_/ Interest credit relating to Audit Finding No. 2 found in Docket No. D-2016-2541311 from the Company's Purchased Gas Cost Audit for the period of February 2013 through January 2016.

COLUMBIA GAS OF PENNSYLVANIA, INC.
STATEMENT OF DEMAND OVER/(UNDER) COLLECTIONS FROM GAS COST RATE
OCTOBER, 2015 THROUGH SEPTEMBER, 2016

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) (7)	Rate (7)	Over (Under) Collection Interest (8=3x4x7) (8=3x4x7)	Interest Difference (9=8-6) (9=8-6)
1	February, 2016	10,682,018	5,795,723	4,886,295	14 / 12	8.00%	456,054	6.00%	342,041	(114,013)
2	March	7,887,367	5,796,593	2,090,774	13 / 12	8.00%	181,200	6.00%	135,900	(45,300)
3	April	5,088,022	4,301,722	786,300	12 / 12	8.00%	62,904	6.00%	47,178	(15,726)
4	May	2,742,242	4,118,661	(1,376,419)	11 / 12	8.00%	(100,937)	6.00%	(75,703)	25,234
5	June	1,572,149	4,180,727	(2,608,578)	10 / 12	8.00%	(173,905)	6.00%	(130,429)	43,476
6	July	1,132,660	4,220,723	(3,088,063)	9 / 12	8.00%	(185,284)	6.00%	(138,963)	46,321
7	August	1,101,209	4,188,844	(3,087,635)	8 / 12	8.00%	(164,674)	6.00%	(123,505)	41,169
8	September	<u>1,129,558</u>	<u>4,188,914</u>	<u>(3,059,356)</u>	7 / 12	3.50%	<u>(62,462)</u>	3.75%	<u>(66,923)</u>	<u>(4,461)</u>
9	TOTAL	<u>31,335,225</u>	<u>36,791,908</u>	<u>(5,456,683)</u>			<u>12,896</u>		<u>(10,404)</u>	<u>(23,300)</u>

Exhibit 1-E
Schedule 3

COLUMBIA GAS OF PENNSYLVANIA, INC.

RECONCILIATION OF OFF SYSTEM SALES CREDIT
FROM 2016 - 1307(f)
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

DEMAND

Line No.	Month	Sales Subject to Off-System Sales Credit Therm	Rate \$/Therm	Amount \$	Net Demand Over (Under) Collection \$
1	October, 2016	4,623,560	(0.01596)	(73,792)	
2		5,410,500	(0.01208)	(65,359)	
3	November	25,442,380	(0.01596)	(406,060)	
4		(25,210)	(0.01208)	305	
5	December	63,241,480	(0.01596)	(1,009,334)	
6	January, 2017 1_ /	39,085,600	(0.01596)	(623,806)	
7		48,087,660	(0.01596)	(767,479)	
8	February	71,010,742	(0.01596)	(1,133,331)	
9	March	60,608,602	(0.01596)	(967,313)	
10	April	43,125,369	(0.01596)	(688,281)	
11	May	18,657,658	(0.01596)	(297,776)	
12	June	11,832,101	(0.01596)	(188,840)	
13	July	8,388,285	(0.01596)	(133,877)	
14	August	7,568,887	(0.01596)	(120,799)	
15	September	8,772,148	(0.01596)	(140,003)	
16	Amount Passed Back in the 2016 1307(f)				<u>(6,615,745)</u>
17	Unified Sharing Mechanism - \$7,601,772				7,601,772
18	Amount to be Passed Back in the 2017 1307(f)				<u>986,027</u>

1_ / Rate in effect January 1, 2017.

COLUMBIA GAS OF PENNSYLVANIA, INC.
STATEMENT OF COMMODITY OVER/(UNDER) COLLECTIONS FROM GAS COST RATE
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

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 2017</i>										
1	October, 2016	2,167,485	9,402	2,176,887	5,657,507	(3,480,620)	18 / 12	3.75%	(195,785)	(3,676,405)	
2	November	5,304,751	13,409	5,318,160	9,257,828	(3,939,668)	17 / 12	3.75%	(209,295)	(4,148,963)	
3	December	13,358,578	23,437	13,382,015	20,390,843	(7,008,829)	16 / 12	3.75%	(350,441)	(7,359,270)	
4	January, 2017	18,979,838	36,218	19,016,056	17,639,153	1,376,902	15 / 12	3.75%	64,542	1,441,444	
5	February	15,832,072	31,029	15,863,101	9,184,496	6,678,605	14 / 12	3.75%	292,189	6,970,794	
6	March	13,437,660	21,300	13,458,960	13,178,477	280,482	13 / 12	3.75%	11,395	291,877	
7	April	9,267,257	19,760	9,287,016	1,462,140	7,824,876	12 / 12	3.75%	293,433	8,118,309	
8	May	3,537,021	13,446	3,550,466	3,200,178	350,288	11 / 12	3.75%	12,041	362,329	
9	June	2,287,200	9,195	2,296,395	1,328,922	967,472	10 / 12	3.75%	30,234	997,706	
10	July	1,753,841	7,682	1,761,523	1,831,272	(69,749)	9 / 12	3.75%	(1,962)	(71,711)	
11	August	1,595,972	5,910	1,601,881	2,189,668	(587,787)	8 / 12	3.75%	(14,695)	(602,482)	
12	September	1,861,440	6,778	1,868,218	2,255,397	(387,179)	7 / 12	3.75%	(8,470)	(395,649)	
13	TOTAL	89,383,112	197,564	89,580,677	87,575,880	2,004,796			(76,814)	1,927,982	

COLUMBIA GAS OF PENNSYLVANIA, INC.
STATEMENT OF DEMAND OVER/(UNDER) COLLECTIONS FROM GAS COST RATE
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

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 2017</i>											
1	October, 2016	1,369,125	74	44,345	31	1,413,575	5,566,447	(4,152,872)	18 / 12	3.75%	(233,599)	(4,386,471)
2	November	3,182,005	129	44,061	53	3,226,248	5,504,953	(2,278,705)	17 / 12	3.75%	(121,056)	(2,399,761)
3	December	7,919,522	164	44,061	633	7,964,380	5,558,856	2,405,523	16 / 12	3.75%	120,276	2,525,799
4	January, 2017	10,909,666	209	44,053	939	10,954,867	5,560,866	5,394,002	15 / 12	3.75%	252,844	5,646,846
5	February	8,867,990	209	38,150	926	8,907,275	5,719,026	3,188,250	14 / 12	3.75%	139,486	3,327,736
6	March	7,568,523	186	35,201	96	7,604,005	5,593,509	2,010,496	13 / 12	3.75%	81,676	2,092,172
7	April	5,542,647	147	35,770	60	5,578,624	4,092,378	1,486,246	12 / 12	3.75%	55,734	1,541,980
8	May	2,560,883	99	36,120	41	2,597,143	3,932,237	(1,335,094)	11 / 12	3.75%	(45,894)	(1,380,988)
9	June	1,624,801	67	36,120	28	1,661,016	4,122,213	(2,461,196)	10 / 12	3.75%	(76,912)	(2,538,108)
10	July	1,204,645	59	35,841	24	1,240,568	4,199,509	(2,958,941)	9 / 12	3.75%	(83,220)	(3,042,161)
11	August	1,124,917	48	38,200	19	1,163,184	4,200,016	(3,036,831)	8 / 12	3.75%	(75,921)	(3,112,752)
12	September	<u>1,304,782</u>	<u>53</u>	<u>38,200</u>	<u>22</u>	<u>1,343,057</u>	<u>4,201,500</u>	<u>(2,858,444)</u>	7 / 12	3.75%	<u>(62,528)</u>	<u>(2,920,972)</u>
13	TOTAL	<u>53,179,505</u>	<u>1,443</u>	<u>470,122</u>	<u>2,872</u>	<u>53,653,942</u>	<u>58,251,509</u>	<u>(4,597,567)</u>			<u>(49,114)</u>	<u>(4,646,681)</u>

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COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF COMMODITY GAS COST RECOVERY
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

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, 2016 Est. Old	3,915,270	0.30513	1,194,666
2	October, 2016 Est. New	3,281,917	0.28855	946,997
3	September, 2016 Est.	(5,374,143)	0.30513	(1,639,812)
4	September, 2016 Act.	5,448,443	0.30513	1,662,483
5	September Act. Prior Period Adjustments		0.00000	3,150
6	Total	7,271,487		2,167,485
7	November, 2016 Est. New	18,329,350	0.28855	5,288,934
8	October, 2016 Est. Old	(3,915,270)	0.30513	(1,194,666)
9	October, 2016 Est. New	(3,281,917)	0.28855	(946,997)
10	October, 2016 Act. Old	3,944,586	0.30513	1,203,612
11	October, 2016 Act. New	3,306,491	0.28855	954,088
12	October Act. Prior Period Adjustments		0.00000	(219)
13	Total	18,383,240		5,304,751
14	December, 2016 Est.	46,343,039	0.28855	13,372,284
15	November, 2016 Est.	(18,329,350)	0.28855	(5,288,934)
16	November, 2016 Act.	18,255,080	0.28855	5,267,503
17	November Act. Prior Period Adjustments		0.00000	7,725
18	Total	46,268,769		13,358,578
19	January, 2017 Est. Old	35,470,748	0.28855	10,235,084
20	January, 2017 Est. New	28,787,853	0.30391	8,748,916
21	December, 2016 Est.	(46,343,039)	0.28855	(13,372,284)
22	December, 2016 Act.	46,327,819	0.28855	13,367,892
23	December Act. Prior Period Adjustments		0.00000	228
24	Total	64,243,381		18,979,838
25	February, 2017 Est. New	52,523,578	0.30391	15,962,441
26	January, 2017 Est. Old	(35,470,748)	0.28855	(10,235,084)
27	January, 2017 Est. New	(28,787,853)	0.30391	(8,748,916)
28	January, 2017 Act. Old	35,228,011	0.28855	10,165,043
29	January, 2017 Act. New	28,590,850	0.30391	8,689,045
30	January Act. Prior Period Adjustments		0.00000	(456)
31	Total	52,083,838		15,832,072
32	March, 2017 Est.	44,758,462	0.30391	13,602,544
33	February, 2017 Est.	(52,523,578)	0.30391	(15,962,441)
34	February, 2017 Act.	51,979,818	0.30391	15,797,186
35	February Act. Prior Period Adjustments		0.00000	370
36	Total	44,214,702		13,437,660

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COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF COMMODITY GAS COST RECOVERY
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

LINE NO.	MONTH	SALES	COMMODITY	TOTAL
		SUBJECT TO COMMODITY COST OF GAS (1) THERM	COST OF GAS (2) \$/THERM	COMMODITY COST RECOVERY (3 = 1 x 2) \$
1	April, 2017 Est. New	9,272,015	0.26693	2,474,979
2	April, 2017 Est. Old	22,481,460	0.30391	6,832,341
3	March, 2017 Est. Old	(44,758,462)	0.30391	(13,602,544)
4	March, 2017 Act. Old	44,621,202	0.30391	13,560,830
5	March Act. Prior Period Adjustments		0.00000	1,652
6	Total	31,616,215		9,267,257
7	May, 2017 Estimate	13,430,867	0.26693	3,585,101
8	April, 2017 Est. New	(9,272,015)	0.26693	(2,474,979)
9	April, 2017 Est. Old	(22,481,460)	0.30391	(6,832,341)
10	April, 2017 Act. New	9,225,225	0.26693	2,462,489
11	April, 2017 Act. Old	22,368,010	0.30391	6,797,862
12	April Act. Prior Period Adjustments		0.00000	(1,113)
13	Total	13,270,627		3,537,021
14	June, 2017 Estimate	8,542,394	0.26693	2,280,221
15	May, 2017 Est.	(13,430,867)	0.26693	(3,585,101)
16	May, 2017 Act.	13,457,177	0.26693	3,592,124
17	May Act. Prior Period Adjustments		0.00000	(44)
18	Total	8,568,704		2,287,200
19	July, 2017 Est. Old	3,439,283	0.26693	918,048
20	July, 2017 Est. New	2,941,576	0.27121	797,785
21	June, 2017 Est.	(8,542,394)	0.26693	(2,280,221)
22	June, 2017 Act.	8,684,544	0.26693	2,318,165
23	June Act. Prior Period Adjustments		0.00000	64
24	Total	6,523,009		1,753,841
25	August, 2017 Estimate	5,739,784	0.27121	1,556,687
26	July, 2017 Est. Old	(3,439,283)	0.26693	(918,048)
27	July, 2017 Est. New	(2,941,576)	0.27121	(797,785)
28	July, 2017 Act. Old	3,517,416	0.26693	938,904
29	July, 2017 Act. New	3,008,403	0.27121	815,909
30	July Act. Prior Period Adjustments		0.00000	305
31	Total	5,884,744		1,595,972
32	September, 2017 Estimate	6,757,932	0.27121	1,832,819
33	August, 2017 Est.	(5,739,784)	0.27121	(1,556,687)
34	August, 2017 Act.	5,843,724	0.27121	1,584,876
35	August Act. Prior Period Adjustments		0.00000	431
36	Total	6,861,872		1,861,440
37	TOTAL	305,190,588		89,383,112

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COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF NSS COMMODITY COST RECOVERY
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

LINE NO.	MONTH	RATE SCHEDULE NSS		NSS GAS COST RECOVERY
		VOLUMES (1)	RATE (2)	(3=1*2)
		THERM	\$/THERM	\$
1	October, 2016 Est.	34,994	0.28595	10,007
2	September, 2016 Act.	22,840	0.27952	6,384
3	September, 2016 Est.	<u>(25,004)</u>	0.27952	<u>(6,989)</u>
4		32,830		9,402
5	November, 2016 Est.	60,001	0.23703	14,222
6	October, 2016 Act.	32,150	0.28595	9,193
7	October, 2016 Est.	<u>(34,994)</u>	0.28595	<u>(10,007)</u>
8		57,157		13,409
9	December, 2016 Est.	80,006	0.31504	25,205
10	November, 2016 Act.	52,540	0.23703	12,454
11	November, 2016 Est.	<u>(60,001)</u>	0.23703	<u>(14,222)</u>
12		72,545		23,437
13	January, 2017 Est.	100,002	0.38604	38,605
14	December, 2016 Act.	72,430	0.31504	22,818
15	December, 2016 Est.	<u>(80,006)</u>	0.31504	<u>(25,205)</u>
16		92,426		36,218
17	February, 2017 Est.	99,997	0.33880	33,879
18	January, 2017 Act.	92,620	0.38604	35,755
19	January, 2017 Est.	<u>(100,002)</u>	0.38604	<u>(38,605)</u>
20		92,615		31,029
21	March, 2017 Est.	79,995	0.25727	20,580
22	February, 2017 Act.	102,120	0.33880	34,598
23	February, 2017 Est.	<u>(99,997)</u>	0.33880	<u>(33,879)</u>
24		82,118		21,300
25	April, 2017 Est.	60,003	0.30901	18,542
26	March, 2017 Act.	84,730	0.25727	21,798
27	March, 2017 Est.	<u>(79,995)</u>	0.25727	<u>(20,580)</u>
28		64,738		19,760
29	May, 2017 Est.	34,999	0.30748	10,761
30	April, 2017 Act.	68,690	0.30901	21,226
31	April, 2017 Est.	<u>(60,003)</u>	0.30901	<u>(18,542)</u>
32		43,686		13,446
33	June, 2017 Est.	24,997	0.30621	7,654
34	May, 2017 Act.	40,010	0.30748	12,302
35	May, 2017 Est.	<u>(34,999)</u>	0.30748	<u>(10,761)</u>
36		30,008		9,195
37	July, 2017 Est.	25,001	0.29841	7,461
38	June, 2017 Act.	25,720	0.30621	7,876
39	June, 2017 Est.	<u>(24,997)</u>	0.30621	<u>(7,654)</u>
40		25,724		7,682
41	August, 2017 Est.	22,996	0.28126	6,468
42	July, 2017 Act.	23,130	0.29841	6,902
43	July, 2017 Est.	<u>(25,001)</u>	0.29841	<u>(7,461)</u>
44		21,125		5,910
45	September, 2017 Est.	22,997	0.28650	6,589
46	August, 2017 Act.	23,670	0.28126	6,657
47	August, 2017 Est.	<u>(22,996)</u>	0.28126	<u>(6,468)</u>
48		23,671		6,778
49	TOTAL	<u>638,643</u>		<u>197,564</u>

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COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF DEMAND GAS COST RECOVERY
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

LINE NO.	MONTH	VOLUMES SUBJ.	COST OF	DEMAND
		TO DEMAND	GAS	COST
		COST OF GAS		RECOVERY
		(1)	(2)	(3 = 1 x 2)
		THERM	\$/THERM	\$
1	October, 2016 Est. Old	3,915,270	0.15353	601,111
2	October, 2016 Est. New	3,281,917	0.13292	436,232
3	October Choice - Est. Old	1,327,879	0.12273	162,971
4	October Choice - Est. New	1,168,134	0.10275	120,026
5	October Est. Priority One Transportation Old	206,997	0.15353	31,780
6	October Est. Priority One Transportation New	173,513	0.13292	23,063
7	September, 2016 Est.	(5,374,143)	0.15353	(825,092)
8	September 2016 Act.	5,448,443	0.15353	836,499
9	September Choice - Est.	(1,802,954)	0.12273	(221,277)
10	September Choice - Act.	1,802,010	0.12273	221,161
11	September Est. Priority One Transportation	(331,870)	0.15353	(50,952)
12	September Act. Priority One Transportation	218,860	0.15353	33,602
13	Total	10,034,056		1,369,125
14	November, 2016 Est. New	18,329,350	0.13292	2,436,337
15	November Choice - Est. New	6,496,892	0.10275	667,556
16	November Est. Priority One Transportation New	637,270	0.13292	84,706
17	October Est. Old	(3,915,270)	0.15353	(601,111)
18	October Est. New	(3,281,917)	0.13292	(436,232)
19	October Act. Old	3,944,586	0.15353	605,612
20	October Act. New	3,306,491	0.13292	439,499
21	October Choice - Est. Old	(1,327,879)	0.12273	(162,971)
22	October Choice - Est. New	(1,168,134)	0.10275	(120,026)
23	October Choice - Act. Old	1,326,392	0.12273	162,788
24	October Choice - Act. New	1,166,827	0.10275	119,891
25	October Est. Priority One Transportation Old	(206,997)	0.15353	(31,780)
26	October Est. Priority One Transportation New	(173,513)	0.13292	(23,063)
27	October Act. Priority One Transportation Old	153,990	0.15353	23,642
28	October Act. Priority One Transportation New	129,080	0.13292	17,157
29	Total	25,417,168		3,182,005
30	December, 2016 Est.	46,343,039	0.13292	6,159,917
31	December Choice - Est.	16,133,035	0.10275	1,657,669
32	December Est. Priority One Transportation	968,740	0.13292	128,765
33	November Est.	(18,329,350)	0.13292	(2,436,337)
34	November Act.	18,255,080	0.13292	2,426,465
35	November Choice - Est.	(6,496,892)	0.10275	(667,556)
36	November Choice - Act.	6,490,366	0.10275	666,885
37	November Est. Priority One Transportation	(637,270)	0.13292	(84,706)
38	November Act. Priority One Transportation	514,740	0.13292	68,419
39	Total	63,241,488		7,919,522
40	January, 2017 Est. Old	35,470,748	0.13292	4,714,772
41	January, 2017 Est. New	28,787,853	0.13237	3,810,648
42	January Choice - Est. Old	12,033,812	0.10275	1,236,474
43	January Choice - Est. New	9,806,136	0.10251	1,005,227
44	January Est. Priority One Transportation Old	605,737	0.13292	80,515
45	January Est. Priority One Transportation New	491,613	0.13237	65,075
46	December 2016 Est.	(46,343,039)	0.13292	(6,159,917)
47	December 2016 Act.	46,327,819	0.13292	6,157,894
48	December Choice - Est.	(16,133,035)	0.10275	(1,657,669)
49	December Choice - Act.	16,134,203	0.10275	1,657,789
50	December Est. Priority One Transportation	(968,740)	0.13292	(128,765)
51	December Act. Priority One Transportation	960,150	0.13292	127,623
52	Total	87,173,257		10,909,666

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COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF DEMAND GAS COST RECOVERY
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

LINE NO.	MONTH	VOLUMES SUBJ.	COST OF	DEMAND
		TO DEMAND	GAS	COST
		COST OF GAS	(1)	RECOVERY
		(1)	(2)	(3 = 1 x 2)
		THERM	\$/THERM	\$
1	February, 2017 Est. New	52,523,578	0.13237	6,952,546
2	February Choice - Est. New	17,810,311	0.10251	1,825,735
3	February Est. Priority One Transportation New	919,550	0.13237	121,721
4	January Est. Old	(35,470,748)	0.13292	(4,714,772)
5	January Est. New	(28,787,853)	0.13237	(3,810,648)
6	January Act. Old	35,228,011	0.13292	4,682,507
7	January Act. New	28,590,850	0.13237	3,784,571
8	January Choice - Est. Old	(12,033,812)	0.10275	(1,236,474)
9	January Choice - Est. New	(9,806,136)	0.10251	(1,005,227)
10	January Choice - Act. Old	12,030,375	0.10275	1,236,121
11	January Choice - Act. New	9,803,336	0.10251	1,004,940
12	January Est. Priority One Transportation Old	(605,737)	0.13292	(80,515)
13	January Est. Priority One Transportation New	(491,613)	0.13237	(65,075)
14	January Act. Priority One Transportation Old	717,948	0.13292	95,430
15	January Act. Priority One Transportation New	582,682	0.13237	77,130
16	Total	71,010,742		8,867,990
17	March, 2017 Est.	44,758,462	0.13237	5,924,678
18	March Choice - Est.	15,222,027	0.10251	1,560,410
19	March Est. Priority One Transportation	974,560	0.13237	129,003
20	February Est.	(52,523,578)	0.13237	(6,952,546)
21	February Act.	51,979,818	0.13237	6,880,569
22	February Choice - Est.	(17,810,311)	0.10251	(1,825,735)
23	February Choice - Act.	17,800,534	0.10251	1,824,733
24	February Est. Priority One Transportation	(919,550)	0.13237	(121,721)
25	February Act. Priority One Transportation	1,126,640	0.13237	149,133
26		60,608,602		7,568,523
27	April, 2017 Est. New	9,272,015	0.14514	1,345,740
28	April, 2017 Est. Old	22,481,460	0.13237	2,975,871
29	April Choice - Est. New	3,187,899	0.11413	363,835
30	April Choice - Est. Old	7,655,285	0.10251	784,743
31	April Est. Priority One Transportation New	193,914	0.14514	28,145
32	April Est. Priority One Transportation Old	470,176	0.13237	62,237
33	March Est.	(44,758,462)	0.13237	(5,924,678)
34	March Act.	44,621,202	0.13237	5,906,509
35	March Choice - Est.	(15,222,027)	0.10251	(1,560,410)
36	March Choice - Act.	15,222,157	0.10251	1,560,423
37	March Est. Priority One Transportation	(974,560)	0.13237	(129,003)
38	March Act. Priority One Transportation	976,310	0.13237	129,234
39		43,125,369		5,542,647
40	May, 2017 Est.	13,430,867	0.14514	1,949,356
41	May Choice - Est. New	4,774,651	0.11413	544,931
42	May Est. Priority One Transportation New	545,230	0.14514	79,135
43	April Est. New	(9,272,015)	0.14514	(1,345,740)
44	April Est. Old	(22,481,460)	0.13237	(2,975,871)
45	April Act. New	9,225,225	0.14514	1,338,949
46	April Act. Old	22,368,010	0.13237	2,960,853
47	April Choice - Est. New	(3,187,899)	0.11413	(363,835)
48	April Choice - Est. Old	(7,655,285)	0.10251	(784,743)
49	April Choice - Act. New	3,186,623	0.11413	363,689
50	April Choice - Act. Old	7,652,231	0.10251	784,430
51	April Est. Priority One Transportation New	(193,914)	0.14514	(28,145)
52	April Est. Priority One Transportation Old	(470,176)	0.13237	(62,237)
53	April Act. Priority One Transportation New	214,786	0.14514	31,174
54	April Act. Priority One Transportation Old	520,784	0.13237	68,936
55		18,657,658		2,560,883

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COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF DEMAND GAS COST RECOVERY
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

LINE NO.	MONTH	VOLUMES SUBJ.	COST OF	DEMAND
		TO DEMAND COST OF GAS	GAS	COST RECOVERY
		(1)	(2)	(3 = 1 x 2)
		THERM	\$/THERM	\$
1	June, 2017 Est.	8,542,394	0.14514	1,239,843
2	June Choice - Est.	2,984,768	0.11413	340,652
3	June Est. Priority One Transportation	394,490	0.14514	57,256
4	May Est.	(13,430,867)	0.14514	(1,949,356)
5	May Act.	13,457,177	0.14514	1,953,175
6	May Choice - Est.	(4,774,651)	0.11413	(544,931)
7	May Choice - Act.	4,773,110	0.11413	544,755
8	May Est. Priority One Transportation	(545,230)	0.14514	(79,135)
9	May Act. Priority One Transportation	430,910	0.14514	62,542
		<u>11,832,101</u>		<u>1,624,801</u>
10	July, 2017 Est. Old	3,439,283	0.14514	499,178
11	July, 2017 Est. New	2,941,576	0.15468	455,003
12	July Choice - Est. Old	858,718	0.11413	98,005
13	July Choice - Est. New	737,411	0.12364	91,174
14	July Est. Priority One Transportation Old	188,736	0.14514	27,393
15	July Est. Priority One Transportation New	161,424	0.15468	24,969
16	June Est.	(8,542,394)	0.14514	(1,239,843)
17	June Act.	8,684,544	0.14514	1,260,475
18	June Choice - Est.	(2,984,768)	0.11413	(340,652)
19	June Choice - Act.	2,983,175	0.11413	340,470
20	June Est. Priority One Transportation	(394,490)	0.14514	(57,256)
21	June Act. Priority One Transportation	315,070	0.14514	45,729
22		<u>8,388,285</u>		<u>1,204,645</u>
23	August, 2017 Est.	5,739,784	0.15468	887,830
24	August Choice - Est. New	1,471,902	0.12364	181,986
25	August Est. Priority One Transportation New	321,910	0.15468	49,793
26	July Est. Old	(3,439,283)	0.14514	(499,178)
27	July Est. New	(2,941,576)	0.15468	(455,003)
28	July Act. Old	3,517,416	0.14514	510,518
29	July Act. New	3,008,403	0.15468	465,340
30	July Choice - Est. Old	(858,718)	0.11413	(98,005)
31	July Choice - Est. New	(737,411)	0.12364	(91,174)
32	July Choice - Act. Old	858,180	0.11413	97,944
33	July Choice - Act. New	736,950	0.12364	91,117
34	July Est. Priority One Transportation Old	(188,736)	0.14514	(27,393)
35	July Est. Priority One Transportation New	(161,424)	0.15468	(24,969)
36	July Act. Priority One Transportation Old	130,163	0.14514	18,892
37	July Act. Priority One Transportation New	111,327	0.15468	17,220
38		<u>7,568,887</u>		<u>1,124,917</u>
39	Sept., 2017 Est.	6,757,932	0.15468	1,045,317
40	Sept. Choice - Est.	1,679,986	0.12364	207,713
41	Sept. Est. Priority One Transportation	326,060	0.15468	50,435
42	August Estimate	(5,739,784)	0.15468	(887,830)
43	August Actual	5,843,724	0.15468	903,907
44	August Choice - Est.	(1,471,902)	0.12364	(181,986)
45	August Choice - Act.	1,470,202	0.12364	181,776
46	August Est. Priority One Transportation	(321,910)	0.15468	(49,793)
47	August Act. Priority One Transportation	227,840	0.15468	35,242
		<u>8,772,148</u>		<u>1,304,782</u>
48	TOTAL	<u>415,829,761</u>		<u>53,179,505</u>

Exhibit I-E
Schedule 4
Sheet 5 of 6

COLUMBIA GAS OF PENNSYLVANIA, INC.
DETAIL OF STANDBY DEMAND COST RECOVERY
OCTOBER, 2016 THROUGH SEPTEMBER, 2017

LINE NO.	MONTH	STANDBY VOLUMES	STANDBY DEMAND RATE	STANDBY GAS DEMAND RECOVERIES
		(1) THERM	(2) \$/THERM	(3 = 1 x 2) \$
1	October, 2016 Est.	0	-	0
2	September, 2016 Act.	58,790	0.75430	44,345
3	September, 2016 Est.	0	-	0
4		<u>58,790</u>		<u>44,345</u>
5	November, 2016 Est.	0	-	0
6	October, 2016 Act.	58,790	0.74946	44,061
7	October, 2016 Est.	0	-	0
8		<u>58,790</u>		<u>44,061</u>
9	December, 2016 Est.	0	-	0
10	November, 2016 Act.	58,790	0.74946	44,061
11	November, 2016 Est.	0	-	0
12		<u>58,790</u>		<u>44,061</u>
13	January, 2017 Est.	0	-	0
14	December, 2016 Act.	58,780	0.74946	44,053
15	December, 2016 Est.	0	-	0
16		<u>58,780</u>		<u>44,053</u>
17	February, 2017 Est.	0	-	0
18	January, 2017 Act.	50,970	0.74848	38,150
19	January, 2017 Est.	0	-	0
20		<u>50,970</u>		<u>38,150</u>
21	March, 2017 Est.	0	-	0
22	February, 2017 Act.	47,030	0.74848	35,201
23	February, 2017 Est.	0	-	0
24		<u>47,030</u>		<u>35,201</u>
25	April, 2017	0	-	0
26	March, 2017 Act.	47,790	0.74848	35,770
27	March, 2017 Est.	0	-	0
28		<u>47,790</u>		<u>35,770</u>
29	May, 2017	0	-	0
30	April, 2017 Act.	47,790	0.75581	36,120
31	April, 2017 Est.	0	-	0
32		<u>47,790</u>		<u>36,120</u>
33	June, 2017	0	-	0
34	May, 2017 Act.	47,790	0.75581	36,120
35	May, 2017 Est.	0	-	0
36		<u>47,790</u>		<u>36,120</u>
37	July, 2017	0	-	0
38	June, 2017 Act.	47,420	0.75581	35,841
39	June, 2017 Est.	0	-	0
40		<u>47,420</u>		<u>35,841</u>
41	August, 2017	0	-	0
42	July, 2017 Act.	49,750	0.76784	38,200
43	July, 2017 Est.	0	-	0
44		<u>49,750</u>		<u>38,200</u>
45	September, 2017	0	-	0
46	August, 2017 Act.	49,750	0.76784	38,200
47	August, 2017 Est.	0	-	0
48		<u>49,750</u>		<u>38,200</u>
49	TOTAL	<u>623,440</u>		<u>470,122</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, 2016 THROUGH SEPTEMBER, 2017

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, 2016 Est.	34,994	0.00226	79	34,994	0.00093	33
2	September, 2016 Act.	22,840	0.00226	52	22,840	0.00093	21
3	September, 2016 Est.	<u>(25,004)</u>	0.00226	<u>(57)</u>	<u>(25,004)</u>	0.00093	<u>(23)</u>
4		32,830		74	32,830		31
5	November, 2016 Est.	60,001	0.00226	136	60,001	0.00093	56
6	October, 2016 Act.	32,150	0.00226	73	32,150	0.00093	30
7	October, 2016 Est.	<u>(34,994)</u>	0.00226	<u>(79)</u>	<u>(34,994)</u>	0.00093	<u>(33)</u>
8		57,157		129	57,157		53
9	December, 2016 Est.	80,006	0.00226	181	80,006	0.00800	640
10	November, 2016 Act.	52,540	0.00226	119	52,540	0.00093	49
11	November, 2016 Est.	<u>(60,001)</u>	0.00226	<u>(136)</u>	<u>(60,001)</u>	0.00093	<u>(56)</u>
12		72,545		164	72,545		633
13	January, 2017 Est.	100,002	0.00226	226	100,002	0.01000	1,000
14	December, 2016 Act.	72,430	0.00226	164	72,430	0.00800	579
15	December, 2016 Est.	<u>(80,006)</u>	0.00226	<u>(181)</u>	<u>(80,006)</u>	0.00800	<u>(640)</u>
16		92,426		209	92,426		939
17	February, 2017 Est.	99,997	0.00226	226	99,997	0.01000	1,000
18	January, 2017 Act.	92,620	0.00226	209	92,620	0.01000	926
19	January, 2017 Est.	<u>(100,002)</u>	0.00226	<u>(226)</u>	<u>(100,002)</u>	0.01000	<u>(1,000)</u>
20		92,615		209	92,615		926
21	March, 2017 Est.	79,995	0.00226	181	79,995	0.00093	74
22	February, 2017 Act.	102,120	0.00226	231	102,120	0.01000	1,021
23	February, 2017 Est.	<u>(99,997)</u>	0.00226	<u>(226)</u>	<u>(99,997)</u>	0.01000	<u>(1,000)</u>
24		82,118		186	82,118		96
25	April, 2017 Est.	60,003	0.00226	136	60,003	0.00093	56
26	March, 2017 Act.	84,730	0.00226	191	84,730	0.00093	79
27	March, 2017 Est.	<u>(79,995)</u>	0.00226	<u>(181)</u>	<u>(79,995)</u>	0.00093	<u>(74)</u>
28		64,738		147	64,738		60
29	May, 2017 Est.	34,999	0.00226	79	34,999	0.00093	33
30	April, 2017 Act.	68,690	0.00226	155	68,690	0.00093	64
31	April, 2017 Est.	<u>(60,003)</u>	0.00226	<u>(136)</u>	<u>(60,003)</u>	0.00093	<u>(56)</u>
32		43,686		99	43,686		41
33	June, 2017 Est.	24,997	0.00226	56	24,997	0.00093	23
34	May, 2017 Act.	40,010	0.00226	90	40,010	0.00093	37
35	May, 2017 Est.	<u>(34,999)</u>	0.00226	<u>(79)</u>	<u>(34,999)</u>	0.00093	<u>(33)</u>
36		30,008		67	30,008		28
37	July, 2017 Est.	25,001	0.00226	57	25,001	0.00093	23
38	June, 2017 Act.	25,720	0.00226	58	25,720	0.00093	24
39	June, 2017 Est.	<u>(24,997)</u>	0.00226	<u>(56)</u>	<u>(24,997)</u>	0.00093	<u>(23)</u>
40		25,724		59	25,724		24
41	August, 2017 Est.	22,996	0.00226	52	22,996	0.00093	21
42	July, 2017 Act.	23,130	0.00226	52	23,130	0.00093	22
43	July, 2017 Est.	<u>(25,001)</u>	0.00226	<u>(57)</u>	<u>(25,001)</u>	0.00093	<u>(23)</u>
44		21,125		48	21,125		19
45	September, 2017 Est.	22,997	0.00226	52	22,997	0.00093	21
46	August, 2017 Act.	23,670	0.00226	53	23,670	0.00093	22
47	August, 2017 Est.	<u>(22,996)</u>	0.00226	<u>(52)</u>	<u>(22,996)</u>	0.00093	<u>(21)</u>
48		23,671		53	23,671		22
49	TOTAL	<u>638,643</u>		<u>1,443</u>	<u>638,643</u>		<u>2,872</u>