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October 15, 2019

Ms. Gwen Pinson
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
P. O. Box 615
Frankfort, KY 40602

RECEIVED

OCT 15 2019

PUBLIC SERVICE
COMMISSION

**Re: Columbia Gas of Kentucky, Inc. Case No. 2019 -00383
2020 Safety Modification and Replacement Program Filing**

Dear Ms. Pinson:

Pursuant to the Commission's Order dated December 22, 2016 in Case No. 2016-00162, please find enclosed an original and eleven (11) copies for filing of Columbia Gas of Kentucky, Inc.'s ("Columbia's") 2020 annual forecasted data submitted pursuant to the requirements of the Accelerated Main Replacement Program ("AMRP"). Columbia has also included forecasted costs for its low pressure gas distribution system safety enhancement program ("LP Program") as proposed in Case No. 2019-00257, currently pending in front of the Kentucky Public Service Commission ("Commission"). The combined programs make up Columbia's Safety Modification and Replacement Program Rider ("SMRP"). By updating the SMRP Rider, Columbia proposes to increase its current rates per bill to tariff customers effective January 2, 2020 (the beginning of Columbia's January 2020 billing cycle) as follows:

Rate GSR, Rate SVGTS — Residential Service	\$5.16
Rate GSO, Rate GDS, Rate SVGTS — Commercial or Industrial	\$19.38
Rate IUS, Rate IU DS	\$161.50
Rate IS, Rate DS ¹ , Rate SAS	\$1,014.94

1 Excluding customers subject to Flex Provisions of Rate Schedule DS

Please feel free to contact me if there are any questions.

Sincerely,

A handwritten signature in cursive script that reads "Brooke E. Wancheck (gmc)".

Brooke E. Wancheck

Attorney for

COLUMBIA GAS OF KENTUCKY, INC.

Columbia Gas of Kentucky, Inc.
Annual Adjustment to the Safety Modification and Replacement Program ("SMRP")
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Columbia Gas of Kentucky, Inc.
Annual Adjustment to the Safety Modification and Replacement Program ("SMRP")
SMRP Rider by Rate Schedule

Line No.	Rate Schedule (1)	Base Revenue as Approved PSC Case No. 2016-00162 (2)	Allocation Percent ⁽¹⁾ (3)	Revenue Requirement (4)	Billing Determinant # of Bills ⁽²⁾ (5)	Monthly SMRP Rider (6)	Balancing Adjustment AMRP Rider ⁽⁴⁾ (7)	Total Monthly SMRP Rider (8)
1	Rate GSR, Rate SVGTS - Residential Service	\$51,773,587	64.996%	\$7,931,448	1,456,752	\$5.44	(\$0.28)	\$5.16
2	Rate GSO, Rate GDS, Rate SVGTS - Com. or Ind. Service	\$22,237,376	27.917%	\$3,406,652	166,634	\$20.44	(\$1.06)	\$19.38
3	Rate IUS, Rate IUDS	\$26,686	0.034%	\$4,088	24	\$170.33	(\$8.83)	\$161.50
4	Rate IS, Rate DS ⁽³⁾ , Rate SAS	\$5,618,358	7.053%	\$860,704	804	\$1,070.53	(\$55.59)	\$1,014.94
5	TOTAL	<u>\$79,656,007</u>	<u>100.000%</u>	<u>\$12,202,892</u>	<u>1,624,214</u>			

Notes:

(1) Allocation percent is based on the overall base revenue distribution approved in PSC Case No. 2016-00162

(2) Billing Determinants based on projected twelve months ending December 31, 2020 bills

(3) Excluding customers subject to the Flex Provisions of Rate Schedule DS.

(4) Per Case No. 2019-00097.

Columbia Gas of Kentucky, Inc.
Annual Adjustment to the Safety Modification and Replacement Program ("SMRP")
Forecasted SMRP Revenue Requirement for 2020

<u>Line No.</u>		<u>SMRP Investment December 31, 2020</u> (1)	<u>Reference</u> (2)
Return on Investment			
<u>Rate Base</u>			
1	Net SMRP Investment-Property, Plant and Equipment	97,460,103	Form 2.0
2	Cost of Removal	6,483,184	Form 2.0
3	Accumulated Reserve for Depreciation	<u>7,378,363</u>	Form 2.0 + Form 2.2
4	Net PP&E	111,321,650	
5	Deferred Taxes on Liberalized Depreciation	<u>(10,906,760)</u>	Form 2.1
6	Net Rate Base	100,414,890	Line 4 + Line 5
7	Authorized Rate of Return, Adjusted for Income Taxes	9.28%	Form 1.2
8	Required Return on SMRP Related Investment	<u>9,317,889</u>	Line 6 * Line 7
<u>Operating Expenses</u>			
9	Depreciation	1,765,545	Form 2.0
10	Property Tax ⁽¹⁾	1,325,457	Line 1 * 1.360%
11	O&M Savings FERC Account 887	(229,197)	Form 3.0
12	PSC Assessment ⁽²⁾	<u>23,198</u>	(Sum Line 8 to 11) * (.1901%/(1-.1901%))
13	Total Operating Expenses	2,885,003	Sum Lines 9 to 12
14	Total Annual Revenue Requirement	<u>12,202,892</u>	Line 8 + Line 13

Notes:

⁽¹⁾ Property taxes estimated using an effective rate of 1.360%

⁽²⁾ PSC Assessment estimated using a rate of .1901%

Columbia Gas of Kentucky, Inc.
Annual Adjustment to the Safety Modification and Replacement Program
Cost of Capital

<u>Line No.</u>	<u>Capital Structure</u> (1)	<u>Ratio</u> (2)	<u>Cost</u> (3)	<u>Weighted Cost</u> (4)	<u>Pre-Tax @ Effect tax of 24.95%</u> (5)
1	Short term Debt	1.26%	2.500%	0.03%	0.03%
2	Long term Debt	46.32%	5.640%	2.61%	2.61%
3	Equity	<u>52.42%</u>	9.500%	<u>4.98%</u>	<u>6.64%</u>
4	Total	100.00%		7.62%	9.28%

**Columbia Gas of Kentucky, Inc.
Annual Adjustment to the Safety Modification and Replacement Program
2020 Plant Additions and Depreciation**

<u>Line No.</u>	<u>Description</u> (1)	<u>Account Number</u> (2)	<u>2020 Beginning Plant Balance</u> (3)	<u>Depr Rates</u> (4)	<u>Depr on Beginning Balance</u> (5)=(3)*(4)	<u>2020 Additions & Retirements</u> (6)	<u>Current Year Depr on Addds/(Ret)</u> (7)=(4)*(6)*50%	<u>2020 Ending Plant Balance</u> (8)=(6)+(3)
<u>Additions</u>								
1	Mains	376	44,954,436	1.65%	741,748	25,221,767	208,080	70,176,203
2	Plant Regulators	378	302,449	2.20%	6,654	857,600	9,434	1,160,049
3	Plant Regulators - LP Program ⁽¹⁾	378	-	2.20%	-	6,377,638	70,154	6,377,638
4	Service Lines	380	22,006,588	3.80%	836,250	7,832,029	148,809	29,838,617
5	Meter Installations	382	166,658	2.08%	3,466	50,472	525	217,130
6	House Regulators	383	206,356	2.25%	4,643	67,223	756	273,579
7	GPS Devices	387	213,381	3.13%	6,679	-	-	213,381
8	Total Additions		67,849,868		1,599,440	40,406,729	437,758	108,256,598
<u>Retirements</u>								
9	Mains	376	(2,704,251)	1.65%	(44,620)	(1,427,552)	(11,777)	(4,131,803)
10	Plant Regulators	378	(4,277)	2.20%	(94)	(28,215)	(310)	(32,492)
11	Plant Regulators - LP Program ⁽¹⁾	378	-	2.20%	-	(209,824)	(2,308)	(209,824)
12	Service Lines	380	(4,766,033)	3.80%	(181,109)	(1,597,734)	(30,357)	(6,363,767)
13	Meter Installations	382	(40,392)	2.08%	(840)	(12,169)	(127)	(52,561)
14	House Regulators	383	(3,843)	2.25%	(86)	(2,205)	(25)	(6,048)
15	GPS Devices	387	-	3.13%	-	-	-	-
16	Total Retirements		(7,518,796)		(226,749)	(3,277,699)	(44,904)	(10,796,495)
17	<u>Total Plant</u>		60,331,073		1,372,691	37,129,030	392,854	97,460,103
<u>Cost of Removal</u>								
18	Mains	376	1,397,650			285,510		1,683,161
19	Plant Regulators	378	4,035			4,232		8,267
20	Plant Regulators - LP Program ⁽¹⁾	378	-			31,474		31,474
21	Service Lines	380	3,721,037			1,038,527		4,759,564
22	Meter Installations	382	-			608		608
23	House Regulators	383	-			110		110
24	GPS Devices	387	-			-		-
25	Total Cost of Removal		5,122,722			1,360,462		6,483,184

Notes:

⁽¹⁾ Includes forecasted costs for low pressure gas distribution system safety enhancement program ("LP Program") currently pending in Case No. 2019-00257.

Columbia Gas of Kentucky, Inc.
Annual Adjustment to the Safety Modification and Replacement Program
2019 Plant Additions and Depreciation

<u>Line No.</u>	<u>Description</u> (1)	<u>Account Number</u> (2)	<u>2019 Beginning Plant Balance</u> (3)	<u>Depr Rates</u> (4)	<u>Depr on Beginning Balance</u> (5)=(3)*(4)	<u>2019 Additions & Retirements</u> (6)	<u>Current Year Depr on Adds/(Ret)</u> (7)=(4)*(6)*50%	<u>2019 Ending Plant Balance</u> (8)=(6)+(3)
<u>Additions</u>								
1	Mains	376	24,991,378	1.65%	412,358	19,963,058	164,695	44,954,436
2	Plant Regulators	378	227,813	2.20%	5,012	74,636	821	302,449
3	Service Lines	380	11,779,616	3.80%	447,625	10,226,972	194,312	22,006,588
4	Meter Installations	382	143,423	2.08%	2,983	23,234	242	166,658
5	House Regulators	383	120,946	2.25%	2,721	85,410	961	206,356
6	GPS Devices	387	<u>213,381</u>	3.13%	<u>6,679</u>	<u>-</u>	<u>-</u>	<u>213,381</u>
7	Total Additions		37,476,557		877,378	30,373,311	361,031	67,849,868
<u>Retirements</u>								
8	Mains	376	(1,312,591)	1.65%	(21,658)	(1,391,660)	(11,481)	(2,704,251)
9	Plant Regulators	378	(4,277)	2.20%	(94)	-	-	(4,277)
10	Service Lines	380	(2,592,188)	3.80%	(98,503)	(2,173,844)	(41,303)	(4,766,033)
11	Meter Installations	382	(30,363)	2.08%	(632)	(10,029)	(104)	(40,392)
12	House Regulators	383	(2,758)	2.25%	(62)	(1,085)	(12)	(3,843)
13	GPS Devices	387	<u>-</u>	3.13%	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
14	Total Retirements		(3,942,177)		(120,949)	(3,576,619)	(52,900)	(7,518,796)
15	Total Plant		<u>33,534,380</u>		<u>756,429</u>	<u>26,796,693</u>	<u>308,131</u>	<u>60,331,073</u>
<u>Cost of Removal</u>								
16	Mains	376	731,421			666,229		1,397,650
17	Plant Regulators	378	4,035			-		4,035
18	Service Lines	380	2,188,776			1,532,261		3,721,037
19	Meter Installations	382	-			-		-
20	House Regulators	383	-			-		-
21	GPS Devices	387	<u>-</u>			<u>-</u>		<u>-</u>
22	Total Cost of Removal		2,924,232			2,198,490		5,122,722

Columbia Gas of Kentucky, Inc.
Annual Adjustment to the Safety Modification and Replacement Program
2018 Plant Additions and Depreciation

Line No.	Description (1)	Account Number (2)	2018 Beginning Plant Balance (3)	Depr Rates (4)	Depr on Beginning Balance (5)=(3)*(4)	2018 Additions & Retirements (6)	Current Year Depr on Adds/(Ret) (7)=(4)*(6)*50%	2018 Ending Plant Balance (8)=(6)+(3)
<u>Additions</u>								
1	Mains	376	10,446,894	1.65%	172,374	14,544,484	119,992	24,991,378
2	Plant Regulators	378	98,242	2.20%	2,161	129,571	1,425	227,813
3	Service Lines	380	4,164,307	3.80%	158,244	7,615,309	144,691	11,779,616
4	Meter Installations	382	32,675	2.08%	680	110,748	1,152	143,423
5	House Regulators	383	65,220	2.25%	1,467	55,726	627	120,946
6	GPS Devices	387	<u>213,381</u>	3.13%	<u>6,679</u>	<u>-</u>	<u>-</u>	<u>213,381</u>
7	Total Additions		15,020,719		341,605	22,455,838	267,887	37,476,557
<u>Retirements</u>								
8	Mains	376	(92,176)	1.65%	(1,521)	(1,220,415)	(10,068)	(1,312,591)
9	Plant Regulators	378	(4,128)	2.20%	(91)	(149)	(2)	(4,277)
10	Service Lines	380	(997,218)	3.80%	(37,894)	(1,594,970)	(30,304)	(2,592,188)
11	Meter Installations	382	(12,084)	2.08%	(251)	(18,279)	(190)	(30,363)
12	House Regulators	383	(1,152)	2.25%	(26)	(1,606)	(18)	(2,758)
13	GPS Devices	387	<u>-</u>	3.13%	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
14	Total Retirements		(1,106,758)		(39,783)	(2,835,419)	(40,582)	(3,942,177)
15	<u>Total Plant</u>		<u>13,913,961</u>		<u>301,822</u>	<u>19,620,419</u>	<u>227,305</u>	<u>33,534,380</u>
<u>Cost of Removal</u>								
16	Mains	376	145,583			585,838		731,421
17	Plant Regulators	378	4,035			-		4,035
18	Service Lines	380	1,031,624			1,157,152		2,188,776
19	Meter Installations	382	-			-		-
20	House Regulators	383	-			-		-
21	GPS Devices	387	<u>-</u>			<u>-</u>		<u>-</u>
22	Total Cost of Removal		1,181,242			1,742,990		2,924,232

Notes:

(1) See Form 2.2 for detail of 2017 AMRP eligible capital additions.

Columbia Gas of Kentucky, Inc.
Calculation of Accumulated Deferred Income Tax
Annual Adjustment to the Safety Modification and Replacement Program

Ln. No.	MACRS 20 Year		2017 Jan-Sept Additions	2017 Oct-Dec Additions	2018 Additions	2019 Additions	2020 Additions	Annual Tax Depreciation	Cost of Removal	Book Depreciation	Difference	Deferred Tax @ [1] [2] 24.95%	Accumulated Deferred Income Taxes-Fed NOL	ADIT Normalization Adjustment	Accumulated Deferred Inc. Taxes
	Tax Depr Rates	Year													
	(1)	(2)	(3) (\$)	(4) (\$)	(4) (\$)	(5) (\$)	(6) (\$)	(7) (\$)	(8) (\$)	(9) (\$)	(10) (\$)	(11) (\$)	(12) (\$)	(13) (\$)	(14) (\$)
1	Total Plant Additions		2,770,290	12,250,429	22,455,838	30,373,311	40,406,729								
2	<hr/>														
3	0.03750	1	1,659,688	12,250,429				13,910,117	1,181,242	58,900	15,032,459	5,327,100	(1,063,610)	-	4,263,490
4	0.07219	2	83,298	-	6,999,162			7,082,460	1,742,990	529,127	8,296,323	2,109,473	-	-	6,372,963
5	0.06677	3	77,044	-	1,159,291	9,518,764		10,755,099	2,198,490	1,064,560	11,889,029	3,002,886	-	-	9,375,849
6	0.06177	4	71,274	-	1,072,251	1,564,145	10,965,956	13,673,626	1,360,462	1,765,545	13,268,543	3,344,335	-	(1,813,424)	10,906,760
7	0.05713	5	65,921	-	991,957	1,446,710	2,208,135	4,712,723		1,765,545	2,947,178	766,612	-	-	11,673,372
8	0.05285	6	60,982	-	917,444	1,338,374	2,042,348	4,359,148		1,765,545	2,593,603	676,052	-	-	12,349,425
9	0.04888	7	56,401	-	848,712	1,237,839	1,889,410	4,032,362		1,765,545	2,266,817	592,344	-	-	12,941,768
10	0.04522	8	52,178	-	784,958	1,145,104	1,747,482	3,729,722		1,765,545	1,964,177	514,831	-	-	13,456,599
11	0.04462	9	51,486	-	726,182	1,059,086	1,616,567	3,453,321		1,765,545	1,687,776	445,540	-	-	13,902,139
12	0.04461	10	51,474	-	716,548	979,785	1,495,132	3,242,939		1,765,545	1,477,394	393,044	-	-	14,295,183
13	0.04462	11	51,486	-	716,387	966,784	1,383,181	3,117,838		1,765,545	1,352,293	361,837	-	-	14,657,020
14	0.04461	12	51,474	-	716,548	966,567	1,364,829	3,099,418		1,765,545	1,333,873	357,237	-	-	15,014,257
15	0.04462	13	51,486	-	716,387	966,784	1,364,523	3,099,180		1,765,545	1,333,635	357,182	-	-	15,371,439
16	0.04461	14	51,474	-	716,548	966,567	1,364,829	3,099,418		1,765,545	1,333,873	357,237	-	-	15,728,676
17	0.04462	15	51,486	-	716,387	966,784	1,364,523	3,099,180		1,765,545	1,333,635	357,182	-	-	16,085,858
18	0.04461	16	51,474	-	716,548	966,567	1,364,829	3,099,418		1,765,545	1,333,873	357,237	-	-	16,443,094
19	0.04462	17	51,486	-	716,387	966,784	1,364,523	3,099,180		1,765,545	1,333,635	357,182	-	-	16,800,277
20	0.04461	18	51,474	-	716,548	966,567	1,364,829	3,099,418		1,765,545	1,333,873	357,237	-	-	17,157,513
21	0.04462	19	51,486	-	716,387	966,784	1,364,523	3,099,180		1,765,545	1,333,635	357,182	-	-	17,514,695
22	0.04461	20	51,474	-	716,548	966,567	1,364,829	3,099,418		1,765,545	1,333,873	357,237	-	-	17,871,932
23	0.02231	21	25,743	-	716,387	966,784	1,364,523	3,073,437		1,765,545	1,307,892	338,539	-	-	18,210,471
24		22		-	358,274	966,567	1,364,829	2,689,670		1,765,545	924,125	237,242	-	-	18,447,714
25						483,392	1,364,523	1,847,915		1,765,545	82,370	20,551	-	-	18,468,265
26							682,414	682,414		1,765,545	-	-	-	-	18,468,265
27			2,770,289	12,250,429	22,455,841	30,373,305	40,406,737	108,256,601	6,483,184	38,729,032					

Notes:

[1] Includes adjustment for state disallowance on 2017 bonus tax depreciation as calculated on Form 2.1 pages 4 through 7.

[2] Deferred Taxes calculated beginning 1/1/2018 using 21% Corporate Tax Rate and 5% State Tax Rate.

Columbia Gas of Kentucky, Inc.
Calculation of Accumulated Deferred Income Tax
Annual Adjustment to the Safety Modification and Replacement Program

Ln. No.	MACRS 20 Year Tax Depr Rates	Year	2017 Jan-Sept Additions	2017 Oct-Dec Additions	2018 Additions	2019 Additions	2020 Additions	Annual Tax Depreciation	Cost of Removal	Book Depreciation	Difference	Deferred Tax @ 24.95% [3]	Accumulated Deferred Income Taxes-Fed NOL	ADIT Normalization Adjustment	Accumulated Deferred Inc. Taxes
	(1)	(2)	(3) (\$)	(4) (\$)	(4) (\$)	(5) (\$)	(6) (\$)	(7) (\$)	(8) (\$)	(9) (\$)	(10) (\$)	(11) (\$)	(12) (\$)	(13) (\$)	(14) (\$)
1	AMRP Plant Additions [1]		2,374,447	12,236,754	22,159,793	30,190,031	33,053,796								
2	Composite Tax Rate [2]		59.406%	100.000%	28.814%	28.814%	28.814%								
3	0.03750	1	1,446,706	12,236,754				13,683,460	1,177,207	55,213	14,805,454	5,759,322	(1,034,612)	-	4,724,710
4	0.07219	2	69,583	-	6,976,634			7,046,217	1,742,990	515,514	8,273,693	2,064,286	-	-	6,788,996
5	0.06677	3	64,359	-	1,138,776	9,504,817		10,707,952	2,198,490	1,046,045	11,860,397	2,959,169	-	-	9,748,165
6	0.06177	4	59,539	-	1,053,277	1,551,445	10,406,425	13,070,686	1,324,037	1,667,024	12,727,699	3,175,561	-	(1,483,430)	11,440,296
7	0.05713	5	55,067	-	974,404	1,434,963	1,698,612	4,163,046		1,667,024	2,496,022	622,757	-	-	12,063,053
8	0.05285	6	50,941	-	901,209	1,327,507	1,571,080	3,850,737		1,667,024	2,183,713	544,836	-	-	12,607,889
9	0.04888	7	47,115	-	833,693	1,227,788	1,453,432	3,562,028		1,667,024	1,895,004	472,803	-	-	13,080,692
10	0.04522	8	43,587	-	771,068	1,135,806	1,344,254	3,294,715		1,667,024	1,627,691	406,109	-	-	13,486,801
11	0.04462	9	43,009	-	713,332	1,050,486	1,243,547	3,050,374		1,667,024	1,383,350	345,146	-	-	13,831,947
12	0.04461	10	42,999	-	703,868	971,829	1,150,133	2,868,829		1,667,024	1,201,805	299,850	-	-	14,131,797
13	0.04462	11	43,009	-	703,710	958,934	1,064,015	2,769,668		1,667,024	1,102,644	275,110	-	-	14,406,907
14	0.04461	12	42,999	-	703,868	958,719	1,049,897	2,755,483		1,667,024	1,088,459	271,571	-	-	14,678,478
15	0.04462	13	43,009	-	703,710	958,934	1,049,662	2,755,315		1,667,024	1,088,291	271,529	-	-	14,950,007
16	0.04461	14	42,999	-	703,868	958,719	1,049,897	2,755,483		1,667,024	1,088,459	271,571	-	-	15,221,578
17	0.04462	15	43,009	-	703,710	958,934	1,049,662	2,755,315		1,667,024	1,088,291	271,529	-	-	15,493,107
18	0.04461	16	42,999	-	703,868	958,719	1,049,897	2,755,483		1,667,024	1,088,459	271,571	-	-	15,764,678
19	0.04462	17	43,009	-	703,710	958,934	1,049,662	2,755,315		1,667,024	1,088,291	271,529	-	-	16,036,207
20	0.04461	18	42,999	-	703,868	958,719	1,049,897	2,755,483		1,667,024	1,088,459	271,571	-	-	16,307,778
21	0.04462	19	43,009	-	703,710	958,934	1,049,662	2,755,315		1,667,024	1,088,291	271,529	-	-	16,579,307
22	0.04461	20	42,999	-	703,868	958,719	1,049,897	2,755,483		1,667,024	1,088,459	271,571	-	-	16,850,878
23	0.02231	21	21,504	-	703,710	958,934	1,049,662	2,733,810		1,667,024	1,066,786	266,163	-	-	17,117,041
24		22			351,934	958,719	1,049,897	2,360,550		1,667,024	693,526	173,035	-	-	17,290,076
25						479,467	1,049,662	1,529,129		1,667,024	(137,895)	(34,405)	-	-	17,255,671
26							524,948	524,948		1,667,024		(284,948)	-	-	16,970,723
27			2,374,447	12,236,752	22,159,791	30,190,026	33,053,800	100,014,824	6,442,725	36,624,276					

Notes:

[1] Plant additions eligible for repairs tax deduction.

[2] Composite rate including repairs (15.42% for 2017 and 25.84% for 2018-2020) and mixed services 263A (4.01%) and bonus tax (50% for January-September 2017 and 100% for October-December 2017) deductions.

[3] Deferred Taxes calculated beginning 1/1/2018 using 21% Corporate Tax Rate and 5% State Tax Rate.

Columbia Gas of Kentucky, Inc.
Calculation of Accumulated Deferred Income Tax
Annual Adjustment to the Safety Modification and Replacement Program

Ln.	MACRS 20 Year No.	MACRS 20 Year Tax Depr Rates	Year	2017 Jan-Sept Additions	2017 Oct-Dec Additions	2018 Additions	2019 Additions	2020 Additions	Annual Tax Depreciation	Cost of Removal	Book Depreciation	Difference	Deferred Tax @ 24.95% [2]	Accumulated Deferred Income Taxes-Fed NOL	ADIT Normalization Adjustment	Accumulated Deferred Inc. Taxes
	(1)	(2)	(3)	(4)	(4)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
			(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
1	Plant Additions [1]		395,843	13,675	296,045	183,281	7,352,933									
2	Tax MSC 263A %		52.005%	100.000%	4.010%	4.010%	4.010%									
3	0.03750	1	212,982	13,675					226,657	4,035	3,687	227,005	88,305	(28,998)	-	59,307
4	0.07219	2	13,715	-	22,528				36,243	-	13,613	22,630	5,646	-	-	64,953
5	0.06677	3	12,685	-	20,515	13,947			47,147	-	18,515	28,632	7,144	-	-	72,097
6	0.06177	4	11,735	-	18,974	12,700	559,531		602,940	36,425	98,521	540,844	134,940	-	(329,994)	(122,957)
7	0.05713	5	10,854	-	17,553	11,747	509,523		549,677		98,521	451,156	112,563	-	-	(10,394)
8	0.05285	6	10,041	-	16,235	10,867	471,268		508,411		98,521	409,890	102,268	-	-	91,874
9	0.04888	7	9,286	-	15,019	10,051	435,978		470,334		98,521	371,813	92,767	-	-	184,641
10	0.04522	8	8,591	-	13,890	9,298	403,228		435,007		98,521	336,486	83,953	-	-	268,594
11	0.04462	9	8,477	-	12,850	8,600	373,020		402,947		98,521	304,426	75,954	-	-	344,548
12	0.04461	10	8,475	-	12,680	7,956	344,999		374,110		98,521	275,589	68,759	-	-	413,307
13	0.04462	11	8,477	-	12,677	7,850	319,166		348,170		98,521	249,649	62,287	-	-	475,594
14	0.04461	12	8,475	-	12,680	7,848	314,932		343,935		98,521	245,414	61,231	-	-	536,825
15	0.04462	13	8,477	-	12,677	7,850	314,861		343,865		98,521	245,344	61,213	-	-	598,038
16	0.04461	14	8,475	-	12,680	7,848	314,932		343,935		98,521	245,414	61,231	-	-	659,269
17	0.04462	15	8,477	-	12,677	7,850	314,861		343,865		98,521	245,344	61,213	-	-	720,482
18	0.04461	16	8,475	-	12,680	7,848	314,932		343,935		98,521	245,414	61,231	-	-	781,713
19	0.04462	17	8,477	-	12,677	7,850	314,861		343,865		98,521	245,344	61,213	-	-	842,926
20	0.04461	18	8,475	-	12,680	7,848	314,932		343,935		98,521	245,414	61,231	-	-	904,157
21	0.04462	19	8,477	-	12,677	7,850	314,861		343,865		98,521	245,344	61,213	-	-	965,370
22	0.04461	20	8,475	-	12,680	7,848	314,932		343,935		98,521	245,414	61,231	-	-	1,026,601
23	0.02231	21	4,239	-	12,677	7,850	314,861		339,627		98,521	241,106	60,156	-	-	1,086,757
24		22			6,340	7,848	314,932		329,120		98,521	230,599	57,534	-	-	1,144,291
25						3,925	314,861		318,786		98,521	220,265	54,956	-	-	1,199,247
26							157,466		157,466		98,521	58,945	14,707	-	-	1,213,954
27			395,840	13,675	296,046	183,279	7,352,937	8,241,777	40,460	2,104,756						

Notes:

[1] Plant additions not eligible for repairs tax deduction.

[2] Deferred Taxes calculated beginning 1/1/2018 using 21% Corporate Tax Rate and 5% State Tax Rate.

Columbia Gas of Kentucky, Inc.
Calculation of State Disallowance on Bonus Tax Depreciation for 2017 Additions

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<u>Ln.</u>	<u>Year</u>	<u>State Tax Depr</u>	<u>State ADIT</u>			<u>Total ADIT Adj</u>	<u>Cumulative ADIT Adj</u>
			<u>State vs. Fed Tax Depr</u>	<u>on Disallowed Bonus</u>	<u>Fed Benefit ADIT</u>		
	<u>(1)</u>	<u>(2)</u>	<u>(3)</u>	<u>(4)</u>	<u>(5)</u>	<u>(6)</u>	<u>(7)</u>
1	2017	563,277	13,346,840	800,810	(280,284)	520,527	520,527
2	2018	1,084,346	(1,001,048)	(50,052)	10,511	(39,541)	480,985
3	2019	1,002,933	(925,889)	(46,294)	9,722	(36,573)	444,413
4	2020	927,830	(856,556)	(42,828)	8,994	(33,834)	410,579
5	2021	858,134	(792,213)	(39,611)	8,318	(31,292)	379,286
6	2022	793,845	(732,863)	(36,643)	7,695	(28,948)	350,338
7	2023	734,213	(677,812)	(33,891)	7,117	(26,774)	323,565
8	2024	679,237	(627,059)	(31,353)	6,584	(24,769)	298,796
9	2025	670,224	(618,738)	(30,937)	6,497	(24,440)	274,356
10	2026	670,074	(618,600)	(30,930)	6,495	(24,435)	249,921
11	2027	670,224	(618,738)	(30,937)	6,497	(24,440)	225,481
12	2028	670,074	(618,600)	(30,930)	6,495	(24,435)	201,046
13	2029	670,224	(618,738)	(30,937)	6,497	(24,440)	176,606
14	2030	670,074	(618,600)	(30,930)	6,495	(24,435)	152,171
15	2031	670,224	(618,738)	(30,937)	6,497	(24,440)	127,731
16	2032	670,074	(618,600)	(30,930)	6,495	(24,435)	103,296
17	2033	670,224	(618,738)	(30,937)	6,497	(24,440)	78,856
18	2034	670,074	(618,600)	(30,930)	6,495	(24,435)	54,422
19	2035	670,224	(618,738)	(30,937)	6,497	(24,440)	29,981
20	2036	670,074	(618,600)	(30,930)	6,495	(24,435)	5,547
21	2037	335,112	(309,369)	(15,468)	3,248	(12,220)	(6,673)
22	Total	15,020,719	(1)	133,468	(140,142)	(6,673)	-

Columbia Gas of Kentucky, Inc.
 Calculation of State Disallowance on Bonus Tax Depreciation for 2018 Additions

<u>Ln.</u>	<u>Year</u>	<u>State Tax Depr</u>	<u>State vs. Fed</u>		<u>Fed Benefit</u>	<u>Total</u>	<u>Cumulative</u>
			<u>Tax Depr</u>	<u>on Disallowed</u>			
	(1)	(2)	(3)	Bonus (4)	(5)	(6)	(7)
1	2018	-	-	-	-	-	-
2	2019	-	-	-	-	-	-
3	2020	-	-	-	-	-	-
4	2021	-	-	-	-	-	-
5	2022	-	-	-	-	-	-
6	2023	-	-	-	-	-	-
7	2024	-	-	-	-	-	-
8	2025	-	-	-	-	-	-
9	2026	-	-	-	-	-	-
10	2027	-	-	-	-	-	-
11	2028	-	-	-	-	-	-
12	2029	-	-	-	-	-	-
13	2030	-	-	-	-	-	-
14	2031	-	-	-	-	-	-
15	2032	-	-	-	-	-	-
16	2033	-	-	-	-	-	-
17	2034	-	-	-	-	-	-
18	2035	-	-	-	-	-	-
19	2036	-	-	-	-	-	-
20	2037	-	-	-	-	-	-
21	2038	-	-	-	-	-	-
22	Total	-	-	-	-	-	-

Columbia Gas of Kentucky, Inc.
Calculation of State Disallowance on Bonus Tax Depreciation for 2019 Additions

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<u>Ln.</u>	<u>Year</u>	<u>State Tax Depr</u>	<u>State vs. Fed</u>	<u>State ADIT</u>	<u>Fed Benefit</u>	<u>Total</u>	<u>Cumulative</u>
	<u>(1)</u>	<u>(2)</u>	<u>Tax Depr</u>	<u>on Disallowed</u>	<u>ADIT</u>	<u>ADIT Adj</u>	<u>ADIT Adj</u>
			<u>(3)</u>	<u>Bonus</u>	<u>(5)</u>	<u>(6)</u>	<u>(7)</u>
				<u>(4)</u>			
1	2019	-	-	-	-	-	-
2	2020	-	-	-	-	-	-
3	2021	-	-	-	-	-	-
4	2022	-	-	-	-	-	-
5	2023	-	-	-	-	-	-
6	2024	-	-	-	-	-	-
7	2025	-	-	-	-	-	-
8	2026	-	-	-	-	-	-
9	2027	-	-	-	-	-	-
10	2028	-	-	-	-	-	-
11	2029	-	-	-	-	-	-
12	2030	-	-	-	-	-	-
13	2031	-	-	-	-	-	-
14	2032	-	-	-	-	-	-
15	2033	-	-	-	-	-	-
16	2034	-	-	-	-	-	-
17	2035	-	-	-	-	-	-
18	2036	-	-	-	-	-	-
19	2037	-	-	-	-	-	-
20	2038	-	-	-	-	-	-
21	2039	-	-	-	-	-	-
22	Total	-	-	-	-	-	-

Columbia Gas of Kentucky, Inc.
 Calculation of State Disallowance on Bonus Tax Depreciation for 2020 Additions

<u>Ln.</u>	<u>Year</u>	<u>State Tax Depr</u>	<u>State vs. Fed</u>	<u>State ADIT</u>		<u>Total</u>	<u>Cumulative</u>
				<u>Tax Depr</u>	<u>on Disallowed</u>		
	<u>(1)</u>	<u>(2)</u>	<u>(3)</u>	<u>Bonus</u>	<u>ADIT</u>	<u>(6)</u>	<u>(7)</u>
				<u>(4)</u>	<u>(5)</u>		
1	2020	-	-	-	-	-	-
2	2021	-	-	-	-	-	-
3	2022	-	-	-	-	-	-
4	2023	-	-	-	-	-	-
5	2024	-	-	-	-	-	-
6	2025	-	-	-	-	-	-
7	2026	-	-	-	-	-	-
8	2027	-	-	-	-	-	-
9	2028	-	-	-	-	-	-
10	2029	-	-	-	-	-	-
11	2030	-	-	-	-	-	-
12	2031	-	-	-	-	-	-
13	2032	-	-	-	-	-	-
14	2033	-	-	-	-	-	-
15	2034	-	-	-	-	-	-
16	2035	-	-	-	-	-	-
17	2036	-	-	-	-	-	-
18	2037	-	-	-	-	-	-
19	2038	-	-	-	-	-	-
20	2039	-	-	-	-	-	-
21	2040	-	-	-	-	-	-
22	Total	-	-	-	-	-	-

Columbia Gas of Kentucky, Inc.
Annual Adjustment to the Safety Modification and Replacement Program
Development of AMRP Plant Excluded From Base Rates

Test Year 12/31/17 AMRP Investment Summary

Line No.	Month	Number of Months	AMRP CapEx	Rate Case Projected CapEx	13 Mo. Avg Rate Case Projections (1)	Actual Retirements	Rate Case Projected Retirements	13 Mo. Avg Rate Case Projections (1)	Actual Cost of Removal	Rate Case Projected Cost of Removal	13 Mo. Avg Rate Case Projections (1)	Depreciation Difference (2)
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
1	Jan-17	12	203,041	787,036	726,495	(205,883)	(94,444)	(87,179)	(30,462)	(28,611)	(26,410)	(745)
2	Feb-17	11	922,620	420,451	355,766	(186,937)	(50,454)	(42,692)	(242,178)	(15,243)	(12,898)	(811)
3	Mar-17	10	607,894	512,097	393,921	(85,345)	(61,451)	(47,270)	(102,824)	(18,585)	(14,296)	243
4	Apr-17	9	775,824	741,213	513,147	(116,998)	(88,945)	(61,577)	(107,563)	(26,940)	(18,651)	943
5	May-17	8	876,331	1,199,444	738,119	(123,416)	(143,933)	(88,574)	(86,050)	(43,650)	(26,862)	1,462
6	Jun-17	7	1,602,481	1,657,675	892,594	(99,874)	(198,921)	(107,111)	(152,240)	(60,361)	(32,502)	2,449
7	Jul-17	6	823,855	1,657,675	765,081	(147,310)	(198,921)	(91,810)	(258,600)	(60,361)	(27,859)	3,319
8	Aug-17	5	2,151,785	2,917,811	1,122,235	(271,819)	(350,138)	(134,668)	(126,063)	(106,314)	(40,890)	4,040
9	Sep-17	4	1,190,456	2,849,075	876,638	(222,726)	(341,889)	(105,197)	(162,635)	(103,808)	(31,941)	5,142
10	Oct-17	3	2,371,548	2,917,811	673,341	(228,831)	(350,138)	(80,801)	(46,556)	(106,314)	(24,534)	7,141
11	Nov-17	2	6,490,489	1,772,233	272,651	(176,567)	(212,668)	(32,718)	(41,336)	(64,538)	(9,929)	13,741
12	Dec-17	1	4,470,710	1,772,233	136,326	(137,009)	(212,668)	(16,359)	(96,471)	(64,538)	(4,964)	21,976
13			22,487,034	19,204,754	7,466,315	(2,002,715)	(2,304,570)	(895,957)	(1,452,978)	(699,263)	(271,736)	58,900

Line No.	Month	Number of Months	Actual Net Plant Additions	Rate Case 13-Month Average Net Plant Additions	Net Plant Additions Not Included in Base Rates - Jan 2017 - Dec 2017 (2)	Actual Depreciation Reserve - Retirements and Cost of Removal	Rate Case 13-Mo. Avg Depreciation Reserve - Retirements and Cost of Removal	Depreciation Reserve Not Included in Base Rates - Jan 2017 - Dec 2017 (2)
14	Rate Year Summary		20,484,319	6,570,358	13,913,961	(3,455,693)	(1,167,693)	(2,288,000)

Test Year 12/31/17 AMRP - Mains Gas Plant Account 376

Line No.	Month	Number of Months	Actual AMRP CapEx	Rate Case Projected CapEx	13 Mo. Avg Rate Case Projections (1)	Actual Retirements	Rate Case Projected Retirements	13 Mo. Avg Rate Case Projections (1)	Actual Cost of Removal	Rate Case Projected Cost of Removal	13 Mo. Avg Rate Case Projections (1)	Depreciation Difference (2)
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
1	Jan-17	12	202,765	443,119	409,033	(144,500)	(53,174)	(49,084)	(28,920)	(7,976)	(7,362)	(207)
2	Feb-17	11	265,790	237,719	201,147	(115,673)	(28,526)	(24,137)	(76,799)	(4,279)	(3,621)	(433)
3	Mar-17	10	91,930	289,069	222,361	(3,618)	(34,688)	(26,683)	(1,566)	(5,203)	(4,002)	(526)
4	Apr-17	9	250,848	417,444	289,000	(2,295)	(50,093)	(34,680)	(1,836)	(7,514)	(5,202)	(603)
5	May-17	8	327,909	674,194	414,889	(12,563)	(80,903)	(49,786)	(4,486)	(12,135)	(7,468)	(642)
6	Jun-17	7	825,284	930,943	501,277	(3,713)	(111,713)	(60,153)	(3,277)	(16,757)	(9,023)	(414)
7	Jul-17	6	301,451	930,943	429,666	(8,665)	(111,713)	(51,560)	(1,665)	(16,757)	(7,734)	(211)
8	Aug-17	5	1,439,639	1,637,005	629,617	(53,989)	(196,441)	(75,554)	(39,460)	(29,466)	(11,333)	302
9	Sep-17	4	190,029	1,598,492	491,844	(43,650)	(191,819)	(59,021)	(33,461)	(28,773)	(8,853)	677
10	Oct-17	3	1,447,194	1,637,005	377,770	(97,804)	(196,441)	(45,333)	(16,495)	(29,466)	(6,800)	1,179
11	Nov-17	2	5,232,912	995,131	153,097	(12,782)	(119,416)	(18,372)	(6,996)	(17,912)	(2,756)	5,374
12	Dec-17	1	4,067,392	995,131	76,549	(96,473)	(119,416)	(9,186)	(6,154)	(17,912)	(1,378)	11,554
13			14,643,143	10,786,195	4,196,249	(595,725)	(1,294,343)	(503,549)	(221,115)	(194,150)	(75,532)	16,048

Line No.	Month	Number of Months	Actual Net Plant Additions	Rate Case 13-Month Average Net Plant Additions	Net Plant Additions Not Included in Base Rates - Jan 2017 - Dec 2017 (2)	Actual Depreciation Reserve - Retirements and Cost of Removal	Rate Case 13-Mo. Avg Depreciation Reserve - Retirements and Cost of Removal	Depreciation Reserve Not Included in Base Rates - Jan 2017 - Dec 2017 (2)
14	Rate Year GPA 376 Summary		14,047,418	3,692,700	10,354,718	(816,840)	(579,081)	(237,759)

Notes:

(1) Recovered through base rates in Case No. 2016-00162

(2) AMRP spend not recovered through base rates and eligible for recovery through 2017 AMRP

Columbia Gas of Kentucky, Inc.
Annual Adjustment to the Safety Modification and Replacement Program
Development of AMRP Plant Excluded From Base Rates

Test Year 12/31/17 AMRP - Services Gas Plant Account 380

Line No.	Month	Number of Months	Actual AMRP CapEx	Rate Case Projected CapEx	13 Mo. Avg Rate Case Projections (1)	Actual Retirements	Rate Case Projected Retirements	13 Mo. Avg Rate Case Projections (1)	Actual Cost of Removal	Rate Case Projected Cost of Removal	13 Mo. Avg Rate Case Projections (1)	Depreciation Difference (2)
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	
1	Jan-17	12	-	343,917	317,462	(59,289)	(41,270)	(38,095)	-	(20,635)	(19,048)	(536)
2	Feb-17	11	635,163	182,732	154,619	(70,166)	(21,928)	(18,554)	(165,125)	(10,964)	(9,277)	(393)
3	Mar-17	10	514,412	223,028	171,560	(80,460)	(26,763)	(20,587)	(101,258)	(13,382)	(10,294)	734
4	Apr-17	9	512,040	323,769	224,148	(113,703)	(38,852)	(26,898)	(105,727)	(19,426)	(13,449)	1,500
5	May-17	8	526,252	525,250	323,231	(109,791)	(63,030)	(38,788)	(81,564)	(31,515)	(19,394)	2,028
6	Jun-17	7	773,120	726,732	391,317	(95,580)	(87,208)	(46,958)	(148,963)	(43,604)	(23,479)	2,764
7	Jul-17	6	516,148	726,732	335,415	(136,811)	(87,208)	(40,250)	(256,856)	(43,604)	(20,125)	3,425
8	Aug-17	5	671,925	1,280,806	492,618	(217,062)	(153,697)	(59,114)	(86,603)	(76,848)	(29,557)	3,592
9	Sep-17	4	713,739	1,250,583	384,795	(177,531)	(150,070)	(46,175)	(129,174)	(75,035)	(23,088)	3,939
10	Oct-17	3	918,342	1,280,806	295,571	(129,326)	(153,697)	(35,469)	(30,061)	(76,848)	(17,734)	5,089
11	Nov-17	2	1,249,901	777,102	119,554	(160,212)	(93,252)	(14,346)	(32,180)	(46,626)	(7,173)	7,485
12	Dec-17	1	403,331	777,102	59,777	(39,695)	(93,252)	(7,173)	(90,317)	(46,626)	(3,587)	9,537
13			7,434,373	8,418,559	3,270,066	(1,389,626)	(1,010,227)	(392,408)	(1,227,828)	(505,113)	(196,204)	39,165

Line No.	Month	Number of Months	Actual AMRP CapEx	Rate Case Projected CapEx	13 Mo. Avg Rate Case Projections (1)	Actual Retirements	Rate Case Projected Retirements	13 Mo. Avg Rate Case Projections (1)	Actual Cost of Removal	Rate Case Projected Cost of Removal	13 Mo. Avg Rate Case Projections (1)	Depreciation Difference (2)
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	
14	Rate Year GPA 380 Summary		6,044,747	2,877,658	3,167,089				(2,617,454)	(588,612)	(2,028,842)	

Test Year 12/31/17 AMRP - Plant Regulators Plant Account 378

Line No.	Month	Number of Months	Actual AMRP CapEx	Rate Case Projected CapEx	13 Mo. Avg Rate Case Projections (1)	Actual Retirements	Rate Case Projected Retirements	13 Mo. Avg Rate Case Projections (1)	Actual Cost of Removal	Rate Case Projected Cost of Removal	13 Mo. Avg Rate Case Projections (1)	Depreciation Difference (2)
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	
1	Jan-17	12	276	-	-	(1,595)	-	-	(1,542)	-	-	(1)
2	Feb-17	11	9,775	-	-	(254)	-	-	(254)	-	-	6
3	Mar-17	10	(2,414)	-	-	-	-	-	-	-	-	13
4	Apr-17	9	551	-	-	-	-	-	-	-	-	11
5	May-17	8	15,722	-	-	-	-	-	-	-	-	26
6	Jun-17	7	-	-	-	-	-	-	-	-	-	40
7	Jul-17	6	-	-	-	(79)	-	-	(79)	-	-	40
8	Aug-17	5	-	-	-	-	-	-	-	-	-	40
9	Sep-17	4	71,679	-	-	-	-	-	-	-	-	106
10	Oct-17	3	2,653	-	-	-	-	-	-	-	-	174
11	Nov-17	2	-	-	-	(2,200)	-	-	(2,160)	-	-	175
12	Dec-17	1	-	-	-	-	-	-	-	-	-	173
13			98,242	0	0	(4,128)	0	0	(4,035)	0	0	803

Line No.	Month	Number of Months	Actual AMRP CapEx	Rate Case Projected CapEx	13 Mo. Avg Rate Case Projections (1)	Actual Retirements	Rate Case Projected Retirements	13 Mo. Avg Rate Case Projections (1)	Actual Cost of Removal	Rate Case Projected Cost of Removal	13 Mo. Avg Rate Case Projections (1)	Depreciation Difference (2)
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	
14	Rate Year GPA 378 Summary		94,114	0	94,114				(8,163)	0	(8,163)	

Notes:
⁽¹⁾ Recovered through base rates in Case No. 2016-00162
⁽²⁾ AMRP spend not recovered through base rates and eligible for recovery through 2017 AMRP

Columbia Gas of Kentucky, Inc.
Annual Adjustment to the Safety Modification and Replacement Program
Development of AMRP Plant Excluded From Base Rates

Test Year 12/31/17 AMRP - Meter Installations Plant Account 382

Line No.	Month	Number of Months	Actual AMRP CapEx	Rate Case Projected CapEx	13 Mo. Avg Rate Case Projections (1)	Actual Retirements	Rate Case Projected Retirements	13 Mo. Avg Rate Case Projections (1)	Actual Cost of Removal	Rate Case Projected Cost of Removal	13 Mo. Avg Rate Case Projections (1)	Depreciation Difference (2)
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
1	Jan-17	12	-	-	-	(376)	-	-	-	-	-	(0)
2	Feb-17	11	4,788	-	-	(782)	-	-	-	-	-	3
3	Mar-17	10	3,883	-	-	(1,120)	-	-	-	-	-	9
4	Apr-17	9	1,149	-	-	(973)	-	-	-	-	-	11
5	May-17	8	4,974	-	-	(954)	-	-	-	-	-	15
6	Jun-17	7	2,114	-	-	(546)	-	-	-	-	-	20
7	Jul-17	6	5,345	-	-	(1,674)	-	-	-	-	-	24
8	Aug-17	5	1,464	-	-	(721)	-	-	-	-	-	28
9	Sep-17	4	3,093	-	-	(1,337)	-	-	-	-	-	30
10	Oct-17	3	1,317	-	-	(1,565)	-	-	-	-	-	32
11	Nov-17	2	4,763	-	-	(1,255)	-	-	-	-	-	34
12	Dec-17	1	(215)	-	-	(781)	-	-	-	-	-	37
13			32,675	0	0	(12,084)	0	0	0	0	0	242

Line No.	Description	Actual Net Plant Additions	Rate Case 13-Month Average Net Plant Additions	Net Plant Additions Not Included in Base Rates - Jan 2017 - Dec 2017 (2)	Actual Depreciation Reserve - Retirements and Cost of Removal	Rate Case 13-Mo. Avg Depreciation Reserve - Retirements and Cost of Removal	Depreciation Reserve Not Included in Base Rates - Jan 2017 - Dec 2017 (2)
14	Rate Year GPA 382 Summary	20,591	0	20,591	(12,084)	0	(12,084)

Test Year 12/31/17 AMRP - House Regulators Plant Account 383

Line No.	Month	Number of Months	Actual AMRP CapEx	Rate Case Projected CapEx	13 Mo. Avg Rate Case Projections (1)	Actual Retirements	Rate Case Projected Retirements	13 Mo. Avg Rate Case Projections (1)	Actual Cost of Removal	Rate Case Projected Cost of Removal	13 Mo. Avg Rate Case Projections (1)	Depreciation Difference (2)
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
1	Jan-17	12	-	-	-	(123)	-	-	-	-	-	(0)
2	Feb-17	11	7,104	-	-	(62)	-	-	-	-	-	6
3	Mar-17	10	83	-	-	(147)	-	-	-	-	-	13
4	Apr-17	9	11,236	-	-	(27)	-	-	-	-	-	23
5	May-17	8	1,474	-	-	(108)	-	-	-	-	-	35
6	Jun-17	7	1,963	-	-	(35)	-	-	-	-	-	38
7	Jul-17	6	911	-	-	(81)	-	-	-	-	-	41
8	Aug-17	5	38,757	-	-	(47)	-	-	-	-	-	78
9	Sep-17	4	995	-	-	(208)	-	-	-	-	-	115
10	Oct-17	3	2,042	-	-	(136)	-	-	-	-	-	117
11	Nov-17	2	453	-	-	(118)	-	-	-	-	-	120
12	Dec-17	1	202	-	-	(60)	-	-	-	-	-	120
13			65,220	0	0	(1,152)	0	0	0	0	0	707

Line No.	Description	Actual Net Plant Additions	Rate Case 13-Month Average Net Plant Additions	Net Plant Additions Not Included in Base Rates - Jan 2017 - Dec 2017 (2)	Actual Depreciation Reserve - Retirements and Cost of Removal	Rate Case 13-Mo. Avg Depreciation Reserve - Retirements and Cost of Removal	Depreciation Reserve Not Included in Base Rates - Jan 2017 - Dec 2017 (2)
14	Rate Year GPA 383 Summary	64,068	0	64,068	(1,152)	0	(1,152)

Notes:

(1) Recovered through base rates in Case No. 2016-00162

(2) AMRP spend not recovered through base rates and eligible for recovery through 2017 AMRP

Columbia Gas of Kentucky, Inc.
Annual Adjustment to the Safety Modification and Replacement Program
Development of AMRP Plant Excluded From Base Rates

Test Year 12/31/17 AMRP - GPS Devices Plant Account 387

Line No.	Month	Number of Months	Actual AMRP CapEx	Rate Case Projected CapEx	13 Mo. Avg Rate Case Projections (1)	Actual Retirements	Rate Case Projected Retirements	13 Mo. Avg Rate Case Projections (1)	Actual Cost of Removal	Rate Case Projected Cost of Removal	13 Mo. Avg Rate Case Projections (1)	Depreciation Difference (2)
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
1	Jan-17	12	-	-	-	-	-	-	-	-	-	-
2	Feb-17	11	-	-	-	-	-	-	-	-	-	-
3	Mar-17	10	-	-	-	-	-	-	-	-	-	-
4	Apr-17	9	-	-	-	-	-	-	-	-	-	-
5	May-17	8	-	-	-	-	-	-	-	-	-	-
6	Jun-17	7	-	-	-	-	-	-	-	-	-	-
7	Jul-17	6	-	-	-	-	-	-	-	-	-	-
8	Aug-17	5	-	-	-	-	-	-	-	-	-	-
9	Sep-17	4	210,921	-	-	-	-	-	-	-	-	275
10	Oct-17	3	-	-	-	-	-	-	-	-	-	550
11	Nov-17	2	2,460	-	-	-	-	-	-	-	-	553
12	Dec-17	1	-	-	-	-	-	-	-	-	-	557
13			213,381	0	0	-	0	0	0	0	0	1,935

	Actual Net Plant Additions	Rate Case 13-Month Average Net Plant Additions	Net Plant Additions Not Included in Base Rates - Jan 2017 - Dec 2017 (2)	Actual Depreciation Reserve - Retirements and Cost of Removal	Rate Case 13-Mo. Avg Depreciation Reserve - Retirements and Cost of Removal	Depreciation Reserve Not Included in Base Rates - Jan 2017 - Dec 2017 (2)
14 Rate Year GPA 387 Summary	213,381	0	213,381	0	0	0

Notes:

(1) Recovered through base rates in Case No. 2016-00162

(2) AMRP spend not recovered through base rates and eligible for recovery through 2017 AMRP

Columbia Gas of Kentucky, Inc.
Annual Adjustment to the Safety Modification and Replacement Program
Calculation of O&M Savings

	<u>FERC Account 887</u>
	(\$)
Projected 2020 O&M Account 887 Costs	2,657,509
2017 O&M Account 887 per Case No. 2016-00162	<u>2,886,706</u>
Projected O&M Savings	(229,197)

Columbia Gas of Kentucky
SMRP Rider Billing Determinants by Rate Schedule
For the Twelve Months Ending December 31, 2020

Form 4.0

<u>Rate Schedule</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Total</u>
GSR - Residential	103,843	104,042	104,017	103,583	103,014	102,299	101,824	101,553	101,396	101,594	102,702	103,795	1,233,662
SVGTS - Residential	18,778	18,815	18,810	18,731	18,629	18,499	18,414	18,364	18,336	18,372	18,572	18,770	223,090
GSO - Commercial or Industrial	10,731	10,756	10,742	10,689	10,624	10,560	10,510	10,468	10,447	10,451	10,550	10,676	127,204
GDS - Commercial or Industrial	23	23	23	23	23	23	23	23	23	23	23	23	276
SVGTS - Commercial or Industrial	3,262	3,262	3,263	3,262	3,262	3,267	3,267	3,261	3,262	3,262	3,262	3,262	39,154
IUS, IU DS	2	2	2	2	2	2	2	2	2	2	2	2	24
IS, DS	67	67	67	67	67	67	67	67	67	67	67	67	804
SAS	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	136,706	136,967	136,924	136,357	135,621	134,717	134,107	133,738	133,533	133,771	135,178	136,595	1,624,214

~~AMRP-SMRP RIDER~~
~~ACCELERATED SAFETY MAIN-MODIFICATION AND REPLACEMENT PROGRAM RIDER~~

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APPLICABILITY

Applicable to all customers receiving service under the Company's Rate Schedules GS, IS, IUS, SVGTS, DS and SAS.

CALCULATION OF ACCELERATED SAFETY MAIN-MODIFICATION AND REPLACEMENT RIDER REVENUE REQUIREMENT

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The ~~AMRP-SMRP~~ Rider Revenue Requirement includes the following:

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- a. ~~AMRPSMRP~~-related Plant In-Service not included in base gas rates minus the associated ~~AMRPSMRP~~-related accumulated depreciation and accumulated deferred income taxes;
- b. Retirement and removal of plant related to ~~AMRP-SMRP~~ construction;
- c. The rate of return on the net rate base is the overall rate of return on capital authorized in the Company's latest base gas rate case, grossed up for federal and state income taxes;
- d. Depreciation expense on the ~~AMRP-SMRP~~ = related Plant In-Service less retirement and removals;
- e. Property taxes related to the ~~AMRPSMRP~~; and
- f. Reduction for savings in Account No. 887 – Maintenance of Mains,

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ACCELERATED SAFETY MAIN-MODIFICATION AND REPLACEMENT PROGRAM FACTORS

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All customers receiving service under Rate Schedules GSR, GSO, IS, IUS, SVGTS, DS, GDS and SAS shall be assessed a monthly charge in addition to the Customer Charge component of their applicable rate schedule that will enable the Company to complete the accelerated-safety main-modification and replacement program.

I

Rider ~~AMRP-SMRP~~ will be updated annually in order to reflect the expected impact on the Company's revenue requirements of forecasted net plant additions and subsequently adjusted to true up the actual costs with the projected costs.- A filing to update the projected costs for the upcoming calendar year will be submitted annually by October 15 to become effective with meter readings on and after the first billing cycle of January. The allocation of the program costs shall be based on the revenue distribution approved by the Commission. Company will submit a balancing adjustment annually by March 31 to true-up the actual costs, as offset by operations and maintenance expense reductions, during the most recent twelve months ended December with the projected program costs for the same period. The balancing adjustment true-up to the rider will become effective with meter readings on and after the first billing cycle of June.

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The charges for the respective gas service schedules effective January 2, 2020~~May 31, 2019~~ are:

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Rate GSR, Rate SVGTS - Residential Service	\$5.163.32	IR
Rate GSO, Rate GDS, Rate SVGTS - Commercial or Industrial Service	\$19.3842.40	IR
Rate IUS, Rate IUDS	\$161.50403.34	IR
Rate IS, Rate DS ^{1/} , Rate SAS	\$1,014.94649.39	IR
^{1/} - Excluding customers subject to Flex Provisions of Rate Schedule DS		

DATE OF ISSUE:- October~~May~~ 15, 2019

DATE EFFECTIVE: January 2, 2020~~May 31, 2019~~ (Unit 1 January~~June~~ Billing)

ISSUED BY: /s/ Herbert A. Miller, Jr. *Kimmett Cole*

TITLE:- President & Chief Operating Officer

**SMRP RIDER
 SAFETY MODIFICATION AND REPLACEMENT PROGRAM RIDER**

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APPLICABILITY

Applicable to all customers receiving service under the Company's Rate Schedules GS, IS, IUS, SVGTS, DS and SAS.

CALCULATION OF SAFETY MODIFICATION AND REPLACEMENT RIDER REVENUE REQUIREMENT

T

The SMRP Rider Revenue Requirement includes the following:

- a. SMRP-related Plant In-Service not included in base gas rates minus the associated SMRP-related accumulated depreciation and accumulated deferred income taxes;
- b. Retirement and removal of plant related to SMRP construction;
- c. The rate of return on the net rate base is the overall rate of return on capital authorized in the Company's latest base gas rate case, grossed up for federal and state income taxes;
- d. Depreciation expense on the SMRP = related Plant In-Service less retirement and removals;
- e. Property taxes related to the SMRP; and
- f. Reduction for savings in Account No. 887 – Maintenance of Mains,

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SAFETY MODIFICATION AND REPLACEMENT PROGRAM FACTORS

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All customers receiving service under Rate Schedules GSR, GSO, IS, IUS, SVGTS, DS, GDS and SAS shall be assessed a monthly charge in addition to the Customer Charge component of their applicable rate schedule that will enable the Company to complete the safety modification and replacement program.

T

Rider SMRP will be updated annually in order to reflect the expected impact on the Company's revenue requirements of forecasted net plant additions and subsequently adjusted to true up the actual costs with the projected costs. A filing to update the projected costs for the upcoming calendar year will be submitted annually by October 15 to become effective with meter readings on and after the first billing cycle of January. The allocation of the program costs shall be based on the revenue distribution approved by the Commission. Company will submit a balancing adjustment annually by March 31 to true-up the actual costs, as offset by operations and maintenance expense reductions, during the most recent twelve months ended December with the projected program costs for the same period. The balancing adjustment true-up to the rider will become effective with meter readings on and after the first billing cycle of June.

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The charges for the respective gas service schedules effective January 2, 2020 are:

Rate GSR, Rate SVGTS - Residential Service	\$5.16	
Rate GSO, Rate GDS, Rate SVGTS - Commercial or Industrial Service	\$19.38	
Rate IUS, Rate IUDS	\$161.50	
Rate IS, Rate DS ^{1/} , Rate SAS	\$1,014.94	

^{1/} - Excluding customers subject to Flex Provisions of Rate Schedule DS

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DATE OF ISSUE: October 15, 2019

DATE EFFECTIVE: January 2, 2020 (Unit 1 January Billing)

ISSUED BY: *Kimma H. Cole*

TITLE: President & Chief Operating Officer