

**BHUH**  
**Article 5 of the Cost of Service Gas Agreement**

Line  
 No.

1 Per Section 5.1(i) the Hedge Formula is as follows:

2

3 Hedge Credit =  $-(\text{Net Income} - ((\text{Allowed ROE} + 100 \text{ basis points}) * \text{Invested Equity})) * 1 / (1 - T)$

4

5 For illustrative Purposes Only the following is how this formula would work.

6		3,250,000	Revenue from sales of Hydrocarbon
7			<b>COSGCO OpEx</b>
8		2,324,000	Operating Expenses
9		111,075	Interest Exp (40% of Investment Base)
10		<u>814,925</u>	Income Before Taxes
11		309,672	Ln 10 * 38% (Federal and State Taxes)
12	Net Income =	<u>505,254</u>	
13		1.61	Tax Gross up (1/(1-.38))
14	Hedge Credit	(166,366)	$-(\text{Ln}12 - ((\text{Ln}23 + \text{Ln}29) * \text{Ln}27)) * \text{Ln}13$

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16 Assumptions for the above calculation

17	Equity %		60.00%
18	Allowed Return on Equity (ROE)		9.86%
19	Debt %		40.00%
20	Allowed Cost of Debt		4.50%
21	Return on Investment Base		7.72%
22	Allowed Return % (monthly)	Ln 21 ÷ 12	0.6433%
23	Allowed ROE % (monthly)	Ln 18 ÷ 12	0.8217%
24	Allowed Cost of Debt % (monthly)	Ln 20 ÷ 12	0.3750%
25	Monthly Debt Expense	Ln 26 * Ln 19 * Ln 24	111,075
26	Investment Base	Ln 25 Jul-Dec Forecast	74,050,000
27	Invested Equity	Ln 26 * Ln 17	44,430,000
28	100 Basis Points		1.00%
29	100 Basis Points (monthly)	Ln 28 ÷ 12	0.083%

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31 All of the above information is from the Example Utility Hedge Forecast and the  
 32 month of December 2016. Line 14 above is calculated in accordance with the Agreement  
 33 and reconciles to Line 18 in the Example Utility Hedge Forecast that is developed in more  
 34 of the traditional rate making process. There may be slight differences due to rounding  
 35 but the overall calculations prove out the formula in the Agreement.

**BHUH**  
**Article 5 of the Cost of Service Gas Agreement**

Line  
 No.

1 Per Section 5.1(ii) the Hedge Formula is as follows:

2

3 Hedge Cost =  $-(\text{Net Income} - ((\text{Allowed ROE} - 100 \text{ basis points}) * \text{Invested Equity})) * 1/(1-T)$

4

5 For illustrative Purposes Only the following is how this formula would work.

		2,450,000	Revenue from sales of Hydrocarbon
			<b>COSGCO OpEx</b>
		2,054,000	Operating Expenses
		86,075	Interest Exp (40% of Investment Base)
		309,925	Income Before Taxes
		117,772	Ln 10 * 38% (Federal and State Taxes)
	Net Income =	192,154	
		1.61	Tax Gross up (1/(1-.38))
	Hedge Cost	100,107	$-(\text{Ln}12 - ((\text{Ln}23 - \text{Ln}29) * \text{Ln}27)) * \text{Ln}13$

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16 Assumptions for the above calculation

	Equity %		60.00%
	Allowed Return on Equity (ROE)		9.86%
	Debt %		40.00%
	Allowed Cost of Debt		4.50%
	Return on Investment Base		7.72%
	Allowed Return % (monthly)	Ln 21 ÷ 12	0.6433%
	Allowed ROE % (monthly)	Ln 18 ÷ 12	0.8217%
	Allowed Cost of Debt % (monthly)	Ln 20 ÷ 12	0.3750%
	Monthly Debt Expense	Ln 26 * Ln 19 * Ln 24	86,075
	Investment Base	Ln 25 Jan-Jun Forecast	57,383,333
	Invested Equity	Ln 26 * Ln 17	34,430,000
	100 Basis Points		1.00%
	100 Basis Points (monthly)	Ln 28 ÷ 12	0.083%

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31 All of the above information is from the Example Utility Hedge Forecast and the  
 32 month of April 2016. Line 14 above is calculated in accordance with the Agreement  
 33 and reconciles to Line 18 in the Example Utility Hedge Forecast that is developed in more  
 34 of the traditional rate making process. There may be slight differences due to rounding  
 35 but the overall calculations prove out the formula in the Agreement.

**BHUH**

**Example Utility Hedge Forecast (Section 5.2 of the Agreement)**

Line No.	FORECAST	Reference	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
1	<b>Production and Revenues: (All at COSGCO)</b>							
2	Natural Gas Sales (\$4.00)		1,800,000	1,800,000	1,800,000	2,050,000	2,050,000	2,300,000
3	Liquids Sales (Oil & NGL)		350,000	350,000	350,000	400,000	400,000	450,000
4	Total Market Sales		2,150,000	2,150,000	2,150,000	2,450,000	2,450,000	2,750,000
5	<b>Expense Recovery (All at COSGCO)</b>							
6	Depr, Depl & Amort		850,000	850,000	850,000	925,000	925,000	1,000,000
7	Lease Operating Exp		50,000	50,000	50,000	55,000	55,000	60,000
8	Production Taxes		85,000	85,000	85,000	90,000	90,000	95,000
9	Gathering & Processing		830,000	830,000	830,000	830,000	830,000	830,000
10	Marketing/Scheduling Fees		45,000	45,000	45,000	50,000	50,000	55,000
11	General & Admin & Program Fees		104,000	104,000	104,000	104,000	104,000	104,000
12	<b>Total Expense Recovery</b>	sum (lns 6-11)	1,964,000	1,964,000	1,964,000	2,054,000	2,054,000	2,144,000
13	Income Taxes @ 38%	(ln 35/(1-.38))-ln 35	173,397	173,397	173,397	173,397	173,397	173,397
14	Monthly Return Amount	ln 34	369,147	369,147	369,147	369,147	369,147	369,147
15	<b>Total Revenue Requirement</b>	sum (lns 12-14)	2,506,544	2,506,544	2,506,544	2,596,544	2,596,544	2,686,544
16	<b>Over/(Under) Allowed ROE</b>	ln 4 - ln 15	(356,544)	(356,544)	(356,544)	(146,544)	(146,544)	63,456
17	<b>Risk Sharing deadband (+/-)</b>	ln 37	(46,277)	(46,277)	(46,277)	(46,277)	(46,277)	46,277
18	<b>Forecasted Hedge Cost/(Credit)</b>	<b>ln 17 - ln 16</b>	<b>310,267</b>	<b>310,267</b>	<b>310,267</b>	<b>100,267</b>	<b>100,267</b>	<b>(17,179)</b>
19	<b>Forecasted Investment Base:</b>							
20	Beginning Balance		50,000,000	49,000,000	48,000,000	58,000,000	56,900,000	66,800,000
21	Plus: New Gas Wells				11,000,000		11,000,000	
22	Less: Depr, Depl & Amort		(850,000)	(850,000)	(850,000)	(925,000)	(925,000)	(1,000,000)
23	+/- Deferred Taxes		(150,000)	(150,000)	(150,000)	(175,000)	(175,000)	(200,000)
24	Ending Balance	sum (lns 20-23)	49,000,000	48,000,000	58,000,000	56,900,000	66,800,000	65,600,000
25	Six Month Investment Base Average							57,383,333
26	<b>Return on Investment Base</b>							
27	Equity %		60.00%					
28	Allowed Return on Equity (ROE)		9.86%					
29	Debt %		40.00%					
30	Interest Rate		4.50%					
31	Return on Investment Base		7.72%					
32	Monthly Return %	ln 31 ÷ 12	0.6433%					
33	Monthly ROE %	ln 28 ÷ 12	0.8217%					
34	Monthly Authorized Return	ln 25 * ln 32	369,147	369,147	369,147	369,147	369,147	369,147
35	Monthly Equity Amount	ln 25 * ln 27 * ln 33	282,911	282,911	282,911	282,911	282,911	282,911
36	Monthly Risk Sharing Amount	ln 25 * ln 27 * (1% ÷ 12)	28,692	28,692	28,692	28,692	28,692	28,692
37	Total Risk Sharing including Tax	ln 36 * (1/(1-.38))	46,277	46,277	46,277	46,277	46,277	46,277

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**Example Utility Hedge Forecast (Section 5.2 of the Agreement)**

Line No.	FORECAST	Reference	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16
1	<b>Production and Revenues: (All at COSGCO)</b>							
2	Natural Gas Sales (\$4.00)		2,300,000	2,300,000	2,550,000	2,550,000	2,550,000	2,800,000
3	Liquids Sales (Oil & NGL)		450,000	450,000	450,000	450,000	450,000	450,000
4	Total Market Sales		2,750,000	2,750,000	3,000,000	3,000,000	3,000,000	3,250,000
5	<b>Expense Recovery (All at COSGCO)</b>							
6	Depr, Depl & Amort		1,000,000	1,000,000	1,075,000	1,075,000	1,075,000	1,150,000
7	Lease Operating Exp		60,000	60,000	65,000	65,000	65,000	70,000
8	Production Taxes		95,000	95,000	100,000	100,000	100,000	105,000
9	Gathering & Processing		830,000	830,000	830,000	830,000	830,000	830,000
10	Marketing/Scheduling Fees		55,000	55,000	60,000	60,000	60,000	65,000
11	General & Admin & Program Fees		104,000	104,000	104,000	104,000	104,000	104,000
12	<b>Total Expense Recovery</b>	sum (lns 6-11)	2,144,000	2,144,000	2,234,000	2,234,000	2,234,000	2,324,000
13	Income Taxes @ 38%	(ln 35/(1-.38))-ln 35	223,760	223,760	223,760	223,760	223,760	223,760
14	Monthly Return Amount	ln 34	476,364	476,364	476,364	476,364	476,364	476,364
15	<b>Total Revenue Requirement</b>	sum (lns 12-14)	2,844,123	2,844,123	2,934,123	2,934,123	2,934,123	3,024,123
16	<b>Over/(Under) Allowed ROE</b>	ln 4 - ln 15	(94,123)	(94,123)	65,877	65,877	65,877	225,877
17	<b>Risk Sharing deadband (+/-)</b>	ln 37	(59,718)	(59,718)	59,718	59,718	59,718	59,718
18	<b>Forecasted Hedge Cost/(Credit)</b>	<b>ln 17 - ln 16</b>	<b>34,405</b>	<b>34,405</b>	<b>(6,159)</b>	<b>(6,159)</b>	<b>(6,159)</b>	<b>(166,159)</b>
19	<b>Forecasted Investment Base:</b>							
20	Beginning Balance		65,600,000	64,400,000	74,200,000	72,900,000	71,600,000	81,300,000
21	Plus: New Gas Wells			11,000,000			11,000,000	
22	Less: Depr, Depl & Amort		(1,000,000)	(1,000,000)	(1,075,000)	(1,075,000)	(1,075,000)	(1,150,000)
23	+/- Deferred Taxes		(200,000)	(200,000)	(225,000)	(225,000)	(225,000)	(250,000)
24	Ending Balance	sum (lns 20-23)	64,400,000	74,200,000	72,900,000	71,600,000	81,300,000	79,900,000
25	Six Month Investment Base Average							74,050,000
26	<b>Return on Investment Base</b>							
27	Equity %		60.00%					
28	Allowed Return on Equity (ROE)		9.86%					
29	Debt %		40.00%					
30	Interest Rate		4.50%					
31	Return on Investment Base		7.72%					
32	Monthly Return %	ln 31 ÷ 12	0.6433%					
33	Monthly ROE %	ln 28 ÷ 12	0.8217%					
34	Monthly Authorized Return	ln 25 * ln 32	476,364	476,364	476,364	476,364	476,364	476,364
35	Monthly Equity Amount	ln 25 * ln 27 * ln 33	365,081	365,081	365,081	365,081	365,081	365,081
36	Monthly Risk Sharing Amount	ln 25 * ln 27 * (1% ÷ 12)	37,025	37,025	37,025	37,025	37,025	37,025
37	Total Risk Sharing including Tax	ln 36 * (1/(1-.38))	59,718	59,718	59,718	59,718	59,718	59,718

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**Hedge Year-End Calculation (Section 5.3 of the Agreement)**

Line No.	Actual Performance	Reference	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16
1	<b>Production and Revenues: (All at COSGCO)</b>								
2	Natural Gas Sales (\$4.15)		1,867,500	1,867,500	1,867,500	2,117,500	2,117,500	2,367,500	2,367,500
3	Liquids Sales (Oil & NGL)		300,000	300,000	300,000	350,000	350,000	400,000	400,000
4	Total Market Sales		2,167,500	2,167,500	2,167,500	2,467,500	2,467,500	2,767,500	2,767,500
5	<b>Expense Recovery (All at COSGCO)</b>								
6	Depr, Depl & Amort		851,235	851,235	851,235	926,235	926,235	1,001,235	1,001,235
7	Lease Operating Exp		52,358	52,358	52,358	57,358	57,358	62,358	62,358
8	Production Taxes		86,851	86,851	86,851	91,851	91,851	96,851	96,851
9	Gathering & Processing		865,651	865,651	865,651	865,651	865,651	865,651	865,651
10	Marketing/Scheduling Fees		45,365	45,365	45,365	50,365	50,365	55,365	55,365
11	General & Admin & Program Fees		106,891	106,891	106,891	106,891	106,891	106,891	106,891
12	<b>Total Expense Recovery</b>	sum (lns 6-11)	2,008,351	2,008,351	2,008,351	2,098,351	2,098,351	2,188,351	2,188,351
13	Income Taxes @ 38%	(ln 30/(1-.38))-ln 30							
14	Return Amount	ln 33							
15	<b>Total Revenue Requirement</b>	sum (lns 12-14)	2,008,351	2,008,351	2,008,351	2,098,351	2,098,351	2,188,351	2,188,351
16	<b>Over/(Under) Allowed ROE</b>	ln 4 - ln 15							
17	<b>Risk Sharing Deadband (+/-)</b>	ln 35							
18	<b>Actual Hedge Cost/(Credit)</b>	ln 17 - ln 16							
19	<b>Forecasted Hedge Cost/(Credit) Calendar Year</b>								
20	<b>Customer (Refund)/Collection</b>	ln 18 - ln 19							
21	<b>Investment Base:</b>								
22	Beginning Balance		50,000,000	48,983,530	47,967,060	57,626,540	56,510,070	66,744,465	65,527,995
23	Plus: New Gas Wells				10,675,950		11,350,865		
24	Less: Depr, Depl & Amort		(851,235)	(851,235)	(851,235)	(926,235)	(926,235)	(1,001,235)	(1,001,235)
25	+/- Deferred Taxes		(165,235)	(165,235)	(165,235)	(190,235)	(190,235)	(215,235)	(215,235)
26	Ending Balance	sum (lns 22-25)	48,983,530	47,967,060	57,626,540	56,510,070	66,744,465	65,527,995	64,311,525
27	13 Month Average for Investment Base								
28	<b>Return on Investment Base</b>								
29	Equity %		60.00%						
30	Allowed Return on Equity (ROE)		9.95%						
31	Debt %		40.00%						
32	Interest Rate		4.50%						
33	Return on Investment Base		7.77%						
34	100 Basis Point Risk Sharing		1.00%						
35	Total Risk Sharing Amount including taxes								

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**Hedge Year-End Calculation (Section 5.3 of the Agreement)**

Line No.	Actual Performance	Reference	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Calendar Yr Actual
1	<b>Production and Revenues: (All at COSGCO)</b>							
2	Natural Gas Sales (\$4.15)		2,367,500	2,617,500	2,617,500	2,617,500	2,867,500	27,660,000
3	Liquids Sales (Oil & NGL)		400,000	400,000	400,000	400,000	400,000	4,400,000
4	Total Market Sales		2,767,500	3,017,500	3,017,500	3,017,500	3,267,500	32,060,000
5	<b>Expense Recovery (All at COSGCO)</b>							
6	Depr, Depl & Amort		1,001,235	1,076,235	1,076,235	1,076,235	1,151,235	11,789,820
7	Lease Operating Exp		62,358	67,358	67,358	67,358	72,358	733,296
8	Production Taxes		96,851	101,851	101,851	101,851	106,851	1,147,212
9	Gathering & Processing		865,651	865,651	865,651	865,651	865,651	10,387,812
10	Marketing/Scheduling Fees		55,365	60,365	60,365	60,365	65,365	649,380
11	General & Admin & Program Fees		106,891	106,891	106,891	106,891	106,891	1,282,692
12	<b>Total Expense Recovery</b>	sum (lns 6-11)	2,188,351	2,278,351	2,278,351	2,278,351	2,368,351	25,990,212
13	Income Taxes @ 38%	(ln 30/(1-.38))-ln 30						2,343,211
14	Return Amount	ln 33						4,975,837
15	<b>Total Revenue Requirement</b>	sum (lns 12-14)	2,188,351	2,278,351	2,278,351	2,278,351	2,368,351	33,309,260
16	<b>Over/(Under) Allowed ROE</b>	ln 4 - ln 15						<b>(1,249,260)</b>
17	<b>Risk Sharing Deadband (+/-)</b>	ln 35						<b>(619,733)</b>
18	<b>Actual Hedge Cost/(Credit)</b>	ln 17 - ln 16					<b>Amount outside of the Deadband</b>	<b>629,527</b>
19	<b>Forecasted Hedge Cost/(Credit) Calendar Year</b>							<b>998,332</b>
20	<b>Customer (Refund)/Collection</b>	ln 18 - ln 19						<b>(368,806)</b>
21	<b>Investment Base:</b>							
22	Beginning Balance		64,311,525	73,660,905	72,344,435	71,027,965	79,610,045	
23	Plus: New Gas Wells		10,565,850			9,898,550		
24	Less: Depr, Depl & Amort		(1,001,235)	(1,076,235)	(1,076,235)	(1,076,235)	(1,151,235)	
25	+/- Deferred Taxes		(215,235)	(240,235)	(240,235)	(240,235)	(265,235)	
26	Ending Balance	sum (lns 22-25)	73,660,905	72,344,435	71,027,965	79,610,045	78,193,575	
27	13 Month Average for Investment Base							64,039,085
28	<b>Return on Investment Base</b>							
29	Equity %							
30	Allowed Return on Equity (ROE)					ln 27 * ln 29 * ln 30		3,823,133
31	Debt %							
32	Interest Rate							
33	Return on Investment Base						ln 27 * ln 33	4,975,837
34	100 Basis Point Risk Sharing					ln 27 * ln 29 * ln 34		384,235
35	Total Risk Sharing Amount including taxes					ln 34 * (1/(1-.38))		619,733

**BHUH**  
**Hedge Cost/(Credit) Allocation to Each State**

Line No.	State:	Current Annual Demand	Hedge Target	Percentage Share	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
1	Iowa	17,300,000	8,650,000	23.83%						
2	Kansas	13,000,000	6,500,000	17.91%						
3	Nebraska	16,200,000	8,100,000	22.31%						
4	Colorado	19,000,000	9,500,000	26.17%						
5	Wyoming	6,500,000	3,250,000	8.95%						
6	South Dakota	600,000	300,000	0.83%						
7		<u>72,600,000</u>	<u>36,300,000</u>							
8										
9	Hedge Forecast Amount - Total				310,267	310,267	310,267	100,267	100,267	(17,179)
10	<b>Each State's Percentage Share to be Included in the Monthly Adjustment Clause Calculation</b>									
11	Iowa				73,934	73,934	73,934	23,893	23,893	(4,094)
12	Kansas				55,558	55,558	55,558	17,954	17,954	(3,076)
13	Nebraska				69,233	69,233	69,233	22,374	22,374	(3,833)
14	Colorado				81,199	81,199	81,199	26,241	26,241	(4,496)
15	Wyoming				27,779	27,779	27,779	8,977	8,977	(1,538)
16	South Dakota				2,564	2,564	2,564	829	829	(142)
17					<u>310,267</u>	<u>310,267</u>	<u>310,267</u>	<u>100,267</u>	<u>100,267</u>	<u>(17,179)</u>
18										
19										
20	Hedge Forecast Amount - Total				34,405	34,405	(6,159)	(6,159)	(6,159)	(166,159)
21	<b>Each State's Percentage Share to be Included in the Monthly Adjustment Clause Calculation</b>									
22	Iowa				8,199	8,199	(1,468)	(1,468)	(1,468)	(39,594)
23	Kansas				6,161	6,161	(1,103)	(1,103)	(1,103)	(29,753)
24	Nebraska				7,677	7,677	(1,374)	(1,374)	(1,374)	(37,077)
25	Colorado				9,004	9,004	(1,612)	(1,612)	(1,612)	(43,485)
26	Wyoming				3,080	3,080	(551)	(551)	(551)	(14,877)
27	South Dakota				284	284	(51)	(51)	(51)	(1,373)
28					<u>34,405</u>	<u>34,405</u>	<u>(6,159)</u>	<u>(6,159)</u>	<u>(6,159)</u>	<u>(166,159)</u>
29										
30	<b>Hedge Year-End Calculation - Customer (Refund)/Collection</b>								(368,806)	
31	Iowa				(87,883)					
32	Kansas				(66,040)					
33	Nebraska				(82,295)					
34	Colorado				(96,519)					
35	Wyoming				(33,020)					
36	South Dakota				(3,048)					

The Hedge Year-End amounts will be included in the 6 month forecast for customer rates going into effect in July.