### e-FILING REPORT COVER SHEET



COMPANY NAME:

DOES REPORT CONTAIN CONFIDENTIAL INFORMATION? No Yes If yes, submit a redacted public version (or a cover letter) by email. Submit the confidential information as directed in OAR 860-001-0070 or the terms of an applicable protective order.

Select report type: RE (Electric) RG (Gas) RW (Water) RT (Telecommunications)
RO (Other, for example, industry safety information)
Did you previously file a similar report? No Second Yes, report docket number: RG 36
Report is required by: OAR 860-022-0070 Statute
Order 98-543/04-203
Note: A one-time submission required by an order is a compliance filing and not a report (file compliance in the applicable docket)
Other
(For example, federal regulations, or requested by Staff)
Is this report associated with a specific docket/case?

List Key Words for this report. We use these to improve search results.

Send the completed Cover Sheet and the Report in an email addressed to <u>PUC.FilingCenter@state.or.us</u>

Send confidential information, voluminous reports, or energy utility Results of Operations Reports to PUC Filing Center, PO Box 1088, Salem, OR 97308-1088 or by delivery service to 201 High Street SE Suite 100, Salem, OR 97301.



8113 W. GRANDRIDGE BLVD., KENNEWICK, WASHINGTON 99336-7166 TELEPHONE 509-734-4500 FACSIMILE 509-737-9803 www.cngc.com

April 21, 2017

Oregon Public Utility Commission P.O. Box 1088 Salem, OR 97308-1088

Subject: RG-36(5) Spring Earnings Review and Statement of Operations and Rate of Return - Twelve Months Ended December 31, 2016

Enclosed for filing is Cascade Natural Gas Corporation's Spring Earnings Review and Statement of Operations and Rate of Return Report for the Twelve Months Ended December 31, 2016 for the State of Oregon.

The Spring Earnings Review has been prepared pursuant to the Earnings Sharing Stipulation approved in OPUC Order No. 98-543, as amended in Order No. 04-203 and in accordance with OAR 860-022-0070. A list of Type 1 adjustments that should be included in the earnings review were attached to Order No. 99-272 as appendix B. Based upon that list, this report contains normalizing adjustments (Type I Adjustments) to normalize Cascade's earnings. The resulting normalized earnings are compared to the Earnings Threshold for the reporting period. For Cascade, the normalized earnings result in an implied return on equity of 9.13%, which is below the current earnings threshold of 10.60%.

Additionally, the remaining portion of the report shows that Cascade's implied return on equity would be 6.65% after "Type II" or annualizing adjustments.

If there are any questions regarding these documents or the filing in general, please contact me at (509) 734-4593.

Sincerely,

Michael Parvinen Director, Regulatory Affairs

Attachments

In the Community to Serve\*

### CASCADE NATURAL GAS CORPORATION

**Statement of Operations and Rate of Return** 

**Twelve Months Ended** 

December 31, 2016

**State of Oregon Operations** 

### CASCADE NATURAL GAS CORPORATION State of Oregon Twelve Months Ending December 31, 2016 Description of Adjustments

### **Type I Adjustments**

### (a) Removal of Promotional Advertising Expense

Removes all promotional advertising for the test period

#### (b) Removal of 25% of Membership Fees

Removes 25% of Membership Fees paid in the test period

#### (c) Normalize Uncollectible Expense

Restates uncollectible expense to the 3 year average of actual net write-offs

#### (d) Interest Coordination Adjustment

Adjusts interest expense to the level associated with the current weighted average cost of debt

### CASCADE NATURAL GAS CORPORATION State of Oregon Twelve Months Ending December 31, 2016 Description of Adjustments

### **Type II Adjustments**

### (a) Annualized Wage Rate

Adjusts the reporting period operating expenses to reflect the effects of the general wage increase as if it had been in effect for the entire period.

### (b) PGA Commodity Sharing Adjustment

Adjusts test period revenue to add the revenues associated with the sharing of commodity costs through the PGA mechanism.

Cascade Natural Gas Corporation

## **Earnings Deferral**

### State of Oregon 12 months ended December 31, 2016

Adjusted overall rate of return Less return required for: Long term debt	6.87% -2.80%
Preferred stock	0.00%
Return available for common	4.07%
Capitalization ratio for common	 46.98%
Implied ROE (common return / ratio)	8.66%
Threshold per OPUC order	 10.60%
Return on Equity in excess of threshold	-1.94%
Capitalization ratio for common	 46.98%
Overall Return in excess of threshold	-0.91%
Average rate base	\$ 78,897,061
Excess earnings	\$ (717,963)
Net to Gross Conversion Factor	0.58294
Pre-Tax over the threshold Earnings	\$ (1,231,624)
Earnings sharing percentage	33.00%
Earnings Sharing for CY 16	\$ (406,436)

				Natural Gas Co	-					
	ADJUSTED STATI								ΓU	RN
FOR THE TWELVE MONTHS ENDED 12/31/16 State of Oregon										
		Actual	,	Order 99-272	ı I	Total		Total		Total
		Statement of		Appendix B		Adjusted		Annualizing		Adjusted
Line		Operations per		Adjustments		Actuals at		Adjustments		Results at
No.	Description	Books 12/31/16		(Type I)		12/31/16		(Type II)		12/31/16
110.	(a)	(b)	)	(1ype 1) (c)		(d)		(1ype II) (e)		(f)
	(a)	(0)		(0)		(u)		(0)		(1)
	OPERATING REVENUES									
1	Natural Gas Sales	\$ 59,573,715	\$	0	\$	59,573,715	\$	0	\$	59,573,715
2	Gas Transportation Revenue	4,044,720	Ψ	0	Ψ	4,044,720	Ψ	0	Ψ	4,044,720
3	Other Operating Revenues	262,969		0		262,969		(280,510)		(17,541)
4	SUBTOTAL	\$ 63,881,403	¢	0	¢	,	\$	(280,510)	¢	63,600,893
	LESS: Nat. Gas/Production Costs	31,523,645	φ	0	φ	31,523,645	φ	(280,510)	φ	31,523,645
6	Revenue Taxes	2,888,571		0		2,888,571		0		2,888,571
0 7	OPERATING MARGIN	\$ 29,469,187	¢	0	\$	29,469,187	\$	(280,510)	\$	2,888,571 29,188,677
/	OF ERATING MARGIN	φ 29,409,18/	φ	0	Ф	29,409,18/	Φ	(280,510)	φ	29,188,077
	OPERATING EXPENSES									
8	Production	170,587		0	\$	170,587		0		170,587
0 9	Distribution	\$ 5,750,157		0	Ψ	5,750,157	\$	0	\$	5,750,157
10	Customer Accounts	1,945,630		4,182		1,949,812	φ	0	φ	1,949,812
10	Customer Service	1,945,030		4,182		1,949,812		0		1,949,812
11	Sales	2,059		0		<i>,</i>		0		100,558
		· · · ·		(2,059)		(0)		9		0
13	Administrative & General	5,941,070		(20,204)		5,920,866		25,840		5,946,705
14	Depreciation & Amortization	6,020,017		0		6,020,017		0		6,020,017
15	Regulatory Debits	0		0		0		0		0
16	Taxes Other Than Income	1,996,088		0		1,996,088		(8,247)		1,987,841
17	State & Federal Income Taxes	1,943,246	<b>A</b>	188,633	<b>A</b>	2,131,879	<b></b>	(119,062)	<b>•</b>	2,012,817
18	TOTAL OPERATING EXPENSES	\$ 23,875,393	\$	170,552	\$	24,045,945	\$	(101,469)	\$	23,944,476
19	NET OPERATING INCOME	\$ 5,593,794	\$	(170,552)	\$	5,423,242	\$	(179,041)	\$	5,244,201
• •	RATE BASE	*	٠		<b>.</b>				<b>.</b>	
20	Total Plant in Service	\$ 197,221,697	\$		\$	197,221,697	\$	0	\$	197,221,697
21	Total Accumulated Depreciation	(93,866,532)		0		(93,866,532)		0		(93,866,532)
22	Contributions in Aid of Construct.	0		0		0		0		0
23	Customer Advances for Construction	(511,110)		0		(511,110)		0		(511,110)
24	Deferred Accumulated Income Taxes	(26,471,195)		0		(26,471,195)		0		(26,471,195)
25	Deferred Debits	0		0		0		0		0
26	Working Capital Allowance	2,524,201		0		2,524,201		0		2,524,201
27	TOTAL RATE BASE	\$ 78,897,061	\$	0	\$	78,897,061	\$	0	\$	78,897,061
28	RATE OF RETURN	7.09%				6.87%				6.65%
	IMPLIED RETURN ON EQUITY									
20										
29	LESS: Return Required for Long					÷				- 00 ·
•	Term Debt	2.80%				2.80%				2.80%
30	LESS: Return Required for					0.05				0.05
	Preferred Stock	0.00%				0.00%				0.00%
31	Adjusted Return Available for									
	Common Stock	4.29%				4.07%				3.85%
32	IMPLIED RETURN (Divide by Ratio of									
	Common to Total: 46.98%	9.13%				8.66%				8.19%

		Cascade Na	atural Gas Co	rporation			
<b>E</b> R	8 99-272 APPENDIX B	B (TYPE I	) ADJUST	MENTS	FOR RAT	Έ	OF RET
	FOR THE	TWELVE	E MONTHS	S ENDED	12/31/16		
		Sta	ate of Oregon				
		Promotional		Normalize	Interest		Total
Line		-	25% Membershij		Coordination		Type I
No.	Description	Adjustment	Fees	Expense	Adjustment		Adjustments
		(a)	(b)	(c)	(d)		
	OPERATING REVENUES						
1	Natural Gas Sales	\$ 0	0	0	0	\$	0
2	Gas Transportation Revenue	0	0	0	0	Ľ	0
3	Other Operating Revenues	0	0	0	0		0
4	TOTAL OPERATING REVENUE	\$ 0	0	0	0	\$	0
	OPERATING EXPENSES						
5	Natural Gas Purchased	\$				\$	0
6	Manufactured Gas Production						0
7	Distribution						0
8	Customer Accounting			4,182	0		4,182
9	Customer Service						0
10	Sales	(2,059)					(2,059)
11	Administrative & General		(20,204)		0		(20,204)
12	Depreciation & Amortization						0
13	Regulatory Debits						0
14	Taxes Other Than Income	0	0	0	0		0
15	State & Federal Income Tax	822	8,069	(1,670)	181,412		188,633
16	TOTAL OPERATING EXPENSE				181,412		170,552
17	NET OPERATING INCOME	\$ 1,237	12,135	(2,512)	(181,412)	\$	(170,552)
	RATE BASE						
18	Total Plant in Service	\$				\$	0
19	Total Accumulated Depreciation						0
20	Customer Advances for Construct					1	0
21	Contributions in Aid of Construct	t.				1	0
22	Deferred Income Taxes - ACRS					1	0
23	Deferred Income Taxes - Other					1	0
24	Deferred Debits-Oregon Water					1	0
25	Heater Program					1	0
26	Deferred Debits-Astoria Cleanup					1	0
27	Working Capital Allowance					1	0
28	TOTAL RATE BASE	\$				\$	0

	Cascade N	atural	Gas Corpora	tion				
	<b>TYPE II ADJUSTMEN</b>	TS ]	FOR RA	TE OF RE	T	URN		
FOR THE TWELVE MONTHS ENDED 12/31/16								
			Oregon		_/ _			
			0					
			Annualizing	PGA Commodity		Total		
Line	Description		Wage Rate	Sharing		Type II		
No.	Description		Adjustment (a)	Adjustment (b)		Adjustments		
	ODED ATING DEVENIUE							
1	<u>OPERATING REVENUE</u> Natural Gas Sales	\$	0	0	\$	0		
2	Gas Transportation Revenue	Ψ	0	0	Ψ	0		
3	Other Operating Revenue		0	(280,510)		(280,510)		
4	Total Operating Revenue	\$	0	(280,510)	\$	(280,510)		
	OPERATING EXPENSES							
5	Natural Gas Purchased	\$	0	0	\$	0		
6	Manufactured Gas Production	Ψ	0	0	Ψ	0		
7	Distribution					0		
8	Customer Accounting		0	0		0		
9	Customer Service					0		
10	Sales					0		
11	Administrative & General		25,840	0		25,840		
12	Depreciation & Amortization					0		
13	Regulatory Debits		0			0		
14	Taxes Other Than Income			(8,247)		(8,247)		
15	State & Federal Income Tax	<b></b>	(10,320)	(108,742)	<b>.</b>	(119,062)		
16	Total Operating Expenses	\$	15,520	(116,989)		(101,469)		
17	NET OPERATING INCOME	\$	(15,520)	(163,521)	\$	(179,041)		
	RATE BASE							
18	Total Plant in Service	\$			\$	0		
19	Total Accumulated Depreciation	Ψ			Ψ	0		
20	Customer Advances for Construct.					0		
21	Contributions Aiding Construct.					0		
22	Deferred Income Taxes - ACRS					0		
23	Deferred Income Taxes - Other					0		
24	Deferred Debits-Oregon Water					0		
25	Heater Program					0		
26	Deferred Debits-Astoria Cleanup					0		
27	Working Capital Allowance				<b>.</b>	0		
28	TOTAL RATE BASE	\$	0	0	\$	0		

# TYPE I ADJUSTMENTS

# Cascade Natural Gas Corporation PROMOTIONAL ADVERTISING EXPENSE ADJUSTMENT

State of Oregon

FERC 913 Advertising Expense

CY 2016

Removal

\$ (2,059)

\$ 2,059

## Cascade Natural Gas Corporation MEMBERSHIP & DUES EXPENSE ADJUSTMENT

CY 2016 Membership Fees	\$ 80,816
Removal of 25% of Total	\$ (20,204)

# Cascade Natural Gas Corporation NORMALIZE UNCOLLECTIBLE EXPENSE

Net Write Offs	
Calendar Year 2014	303,729
Calendar Year 2015	169,224
Calendar Year 2016	197,056
	670,009
3 years of Net Write Offs: 2013 - 2015	670,009
Calendar Year 2014 Natural Gas Sales	65,785,175
Calendar Year 2015 Natural Gas Sales	63,397,033
Calendar Year 2016 Natural Gas Sales	59,573,715
	188,755,923
Uncollectible Expenses (Bad Debt Provision) for the 12 months ended 12/31/16	207,281
3 Year Average Net Write Off as a percentage of 2013-2015 Gross Revenues	0.355%
2016 Sales	59,573,715
Proforma Expense	211,463
Adjustment to normalize Uncollectible Expenses	4,182

## Cascade Natural Gas Corporation Interest Coordination Adjustment

1-16 to 12-16

OREGON:

	Avg of Avgs	Ratio	Weighted Cost	Overall Cost of Capital		
Long Term Debt Preferred Stock Common Equity	214,507,250 0 190,098,573	53.02% 0.00% 46.98%		0.00%		
	404,605,823	100.00%		7.29%		
Rate Base 12/31/2016	Avg Cost of Debt	Subtotal	Test period Interest Expense	Adjustment	State and F.I.T.	Total Adjust
78,897,061	2.80%	2,209,118	2,663,328	(454,210)	0.39940	181,412

# TYPE I ADJUSTMENT WORKPAPERS

### Cascade Natural Gas Corporation Oregon Type 1 Adjustment Memberships & Dues CY 2016

Location	Professional/ Organization Dues (5811 & 5912)	Total OR
Oregon Direct General Office Total Removal of 25% of Total	1,091 79,725	1,091 79,725 80,816 (20,204)

						Overall Cost of									
		Average o		Ratio	Weighted Co										
ong-Ter			214,507,250	53.02%	5.28%	2.80%	_								
'referred			-	0.00%		0.00%									
Common	Equity-excl Accum OCI		190,098,573	46.98%	9.55%	4.49%	_								
			404,605,823	100.00%		7.29%	-								
ate base	e as of		December 31, 20	16		78,897,061									
verage	cost of debt					2.80%									
-	Subtotal					2,209,118	-								
1	Period Int Exp: Interest on long-te	rm debt 427.0		2,613	402										
1	Period Int Exp: Amort. Of debt dis	count & exp 428	.0	40	318										
1	Period Int. Exp: Amort. Of loss on	reacq debt 428.1		9	608	2,663,328									
Adjustme	ent					(454,210)									
otal adj	ustment @ State & F.I.T of 39.949	%				(181,412									
							-								
			5.25% IQN Due	5.21% N		4.11% Snr Nt	4.36% Snr Nt	4.09% Snr Nt	4.24% Snr Nt	4.09% Snr Nt				COMMON	BALAN
	7.48% MTN Due 9/15/2027	7.098% MTN Due 3/16/2029	2/1/2035	5.21% N Due 9/1/		4.11% Snr Nt	-	4.09% Snr Nt Due	4.24% Snr Nt Due		4.24% Snr Nt DUE 1/15/2055	LOC	TOTAL DEBT	COMMON EQUITY	BALAI SHEET E
Jan-16	7.48% MTN Due 9/15/2027 20,000,000				2020 Due 3/8/203	4.11% Snr Nt Due 8/23/2025	4.36% Snr Nt					LOC	TOTAL DEBT 214,589,000		
	20,000,000 20,000,000	Due 3/16/2029	2/1/2035 24,589,000 24,539,000	Due 9/1/	2020 Due 3/8/203	4.11% Snr Nt Due 8/23/2025	4.36% Snr Nt Due 8/23/2028	Due	Due	DUE 1/15/2045	DUE 1/15/2055	LOC	-	EQUITY	SHEET E
Feb-16	20,000,000 20,000,000 20,000,000	Due 3/16/2029	2/1/2035 24,589,000 24,539,000 24,539,000	Due 9/1/ 15,000	2020         Due 3/8/203           000         40,000,00           000         40,000,00	4.11% Snr Nt Due 8/23/2025 0 25,000,000 0 25,000,000	4.36% Snr Nt Due 8/23/2028 25,000,000	Due 12,500,000	Due 12,500,000	DUE 1/15/2045 12,500,000	DUE 1/15/2055 12,500,000 12,500,000 12,500,000	LOC	214,589,000	EQUITY 195,780,257	SHEET E 195,78 194,46 196,69
Feb-16 Mar-16	20,000,000 20,000,000 20,000,000 20,000,00	Due 3/16/2029 15,000,000 15,000,000	2/1/2035 24,589,000 24,539,000 24,539,000 24,539,000	Due 9/1/ 15,000 15,000	2020         Due 3/8/203           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00	4.11% Snr Nt Due 8/23/2025 0 25,000,000 0 25,000,000 0 25,000,000	4.36% Snr Nt Due 8/23/2028 25,000,000 25,000,000	Due 12,500,000 12,500,000	Due 12,500,000 12,500,000	DUE 1/15/2045 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2055 12,500,000 12,500,000	LOC	214,589,000 214,539,000	EQUITY 195,780,257 194,462,372	SHEET E 195,7 194,4 196,6 196,6
Feb-16 Mar-16 Apr-16	20,000,000 20,000,000 20,000,000 20,000,00	Due 3/16/2029 15,000,000 15,000,000 15,000,000	2/1/2035 24,589,000 24,539,000 24,539,000 24,539,000 24,489,000	Due 9/1/ 15,000 15,000 15,000	Due 3/8/203           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00	4.11% Snr Nt Due 8/23/2025 25,000,000 25,000,000 25,000,000 25,000,000	4.36% Snr Nt Due 8/23/2028 25,000,000 25,000,000 25,000,000	Due 12,500,000 12,500,000 12,500,000	Due 12,500,000 12,500,000 12,500,000	DUE 1/15/2045 12,500,000 12,500,000 12,500,000	DUE 1/15/2055 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	LOC	214,589,000 214,539,000 214,539,000	EQUITY 195,780,257 194,462,372 196,696,972	SHEET E
Feb-16 Var-16 Apr-16 Vay-16	20,000,000 20,000,000 20,000,000 20,000,00	Due 3/16/2029 15,000,000 15,000,000 15,000,000 15,000,000	2/1/2035 24,589,000 24,539,000 24,539,000 24,539,000 24,489,000 24,489,000	Due 9/1/ 15,000 15,000 15,000 15,000	2020         Due 3/8/203           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00	4.11% Snr Nt Due 8/23/2025 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000	4.36% Snr Nt Due 8/23/2028 25,000,000 25,000,000 25,000,000 25,000,000	Due 12,500,000 12,500,000 12,500,000 12,500,000	Due 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2045 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2055 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	LOC	214,589,000 214,539,000 214,539,000 214,539,000 214,539,000	EQUITY 195,780,257 194,462,372 196,696,972 196,632,901	SHEET E 195,7 194,4 196,6 196,6 196,6
Feb-16 Mar-16 Apr-16 Vlay-16 Jun-16	20,000,000 20,000,000 20,000,000 20,000,00	Due 3/16/2029 15,000,000 15,000,000 15,000,000 15,000,000	2/1/2035 24,589,000 24,539,000 24,539,000 24,539,000 24,489,000	Due 9/1/ 15,000 15,000 15,000 15,000 15,000	Due 3/8/203           Due 3/8/203           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00	4.11% Snr Nt Due 8/23/2025 0 25,000,000 0 25,000,000 0 25,000,000 0 25,000,000 0 25,000,000	4.36% Snr Nt Due 8/23/2028 25,000,000 25,000,000 25,000,000 25,000,000	Due 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	Due 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2045 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2055 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	LOC	214,589,000 214,539,000 214,539,000 214,539,000 214,489,000	EQUITY 195,780,257 194,462,372 196,696,972 196,632,901 190,958,709	SHEET E 195,78 194,40 196,69 196,69
Feb-16 Mar-16 Apr-16 May-16 Jun-16 Jul-16	20,000,000 20,000,000 20,000,000 20,000,00	Due 3/16/2029 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000	2/1/2035 24,589,000 24,539,000 24,539,000 24,539,000 24,489,000 24,489,000 24,489,000 24,489,000 24,489,000 24,471,000	Due 9/1/ 15,000 15,000 15,000 15,000 15,000 15,000	Due 3/8/203           Due 3/8/203           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00	4.11% Snr Nt           Due 8/23/2025           0         25,000,000           0         25,000,000           0         25,000,000           0         25,000,000           0         25,000,000           0         25,000,000           0         25,000,000           0         25,000,000           0         25,000,000           0         25,000,000	4.36% Snr Nt Due 8/23/2028 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000	Due 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	Due 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2045 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2055 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	LOC	214,589,000 214,539,000 214,539,000 214,539,000 214,489,000 214,489,000	EQUITY 195,780,257 194,462,372 196,696,972 196,632,901 190,958,709 189,244,676	SHEET E 195,7 194,4 196,6 196,6 190,9 189,2 187,8
Feb-16 Mar-16 Apr-16 Vay-16 Jun-16 Jul-16 Aug-16	20,000,000 20,000,000 20,000,000 20,000,00	Due 3/16/2029 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000	2/1/2035 24,589,000 24,539,000 24,539,000 24,539,000 24,489,000 24,489,000 24,489,000	Due 9/1/ 15,000 15,000 15,000 15,000 15,000 15,000	2020         Due 3/8/203           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00	4.11% Snr Nt           Due 8/23/2025           0         25,000,000           0         25,000,000           0         25,000,000           0         25,000,000           0         25,000,000           0         25,000,000           0         25,000,000           0         25,000,000           0         25,000,000           0         25,000,000           0         25,000,000	4.36% Snr Nt Due 8/23/2028 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000	Due 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	Due 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2045 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2055 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	LOC	214,589,000 214,539,000 214,539,000 214,539,000 214,489,000 214,489,000 214,489,000	EQUITY 195,780,257 194,462,372 196,696,972 196,632,901 190,958,709 189,244,676 187,845,153	SHEET E 195,7 194,4 196,6 196,6 190,9 189,2 187,8 187,8 181,5
Feb-16 Mar-16 Apr-16 Jun-16 Jul-16 Aug-16 Sep-16	20,000,000 20,000,000 20,000,000 20,000,00	Due 3/16/2029 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000	2/1/2035 24,589,000 24,539,000 24,539,000 24,539,000 24,489,000 24,489,000 24,489,000 24,489,000 24,489,000 24,471,000	Due 9/1/ 15,000 15,000 15,000 15,000 15,000 15,000 15,000	Due 3/8/203           Due 3/8/203           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00	4.11% Snr Nt Due 8/23/2025 0 25,000,000 0 25,000,000 0 25,000,000 0 25,000,000 0 25,000,000 0 25,000,000 0 25,000,000 0 25,000,000	4.36% Snr Nt Due 8/23/2028 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000	Due 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	Due 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2045 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2055 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	LOC	214,589,000 214,539,000 214,539,000 214,539,000 214,489,000 214,489,000 214,489,000 214,489,000 214,471,000	EQUITY 195,780,257 194,462,372 196,696,972 196,632,901 190,958,709 189,244,676 187,845,153 181,595,762	SHEET E 195,7 194,4 196,6 196,6 190,9 189,2 187,8 181,5 180,3
Feb-16 Mar-16 Apr-16 Jun-16 Jul-16 Aug-16 Sep-16 Oct-16	20,000,000 20,000,000 20,000,000 20,000,00	Due 3/16/2029 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000	2/1/2035 24,589,000 24,539,000 24,539,000 24,539,000 24,489,000 24,489,000 24,489,000 24,489,000 24,489,000 24,471,000	Due 9/1/ 15,000 15,000 15,000 15,000 15,000 15,000 15,000 15,000	Due 3/8/203           Due 3/8/203           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00	4.11% Snr Nt Due 8/23/2025 0 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 0 25,000,000 0 25,000,000 0 25,000,000 0 25,000,000 0 25,000,000	4.36% Snr Nt Due 8/23/2028 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000	Due 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	Due 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2045 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2055 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	LOC	214,589,000 214,539,000 214,539,000 214,539,000 214,489,000 214,489,000 214,489,000 214,471,000 214,471,000	EQUITY 195,780,257 194,462,372 196,696,972 196,632,901 190,958,709 189,244,676 187,845,153 181,595,762 180,336,637	SHEET E 195,72 194,40 196,63 196,63 190,99 189,24
Feb-16 Mar-16 Apr-16 Jun-16 Jul-16 Aug-16 Sep-16 Oct-16 Nov-16	20,000,000 20,000,000 20,000,000 20,000,00	Due 3/16/2029 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000	2/1/2035 24,539,000 24,539,000 24,539,000 24,539,000 24,489,000 24,489,000 24,489,000 24,471,000 24,471,000	Due 9/1/ 15,000 15,000 15,000 15,000 15,000 15,000 15,000 15,000 15,000 15,000	bue         3/8/203           Due         3/8/203           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00	4.11% Snr Nt Due 8/23/2025 Due 8/23/2025 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000	4.36% Snr Nt Due 8/23/2028 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000	Due 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	Due 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2045 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2055 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	LOC	214,589,000 214,539,000 214,539,000 214,539,000 214,489,000 214,489,000 214,489,000 214,471,000 214,471,000	EQUITY 195,780,257 194,462,372 196,696,972 196,632,901 190,958,709 189,244,676 187,845,153 181,595,762 180,336,637 188,466,678	SHEET E 195,7 194,4 196,6 196,6 190,9 189,2 187,8 187,8 181,5 180,3 188,4
Feb-16 Mar-16 Apr-16 May-16 Jun-16 Jul-16 Aug-16 Sep-16 Dct-16 Nov-16 Dec-16	20,000,000 20,000,000 20,000,000 20,000,00	Due 3/16/2029 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000	2/1/2035 24,539,000 24,539,000 24,539,000 24,439,000 24,489,000 24,489,000 24,489,000 24,471,000 24,471,000	Due 9/1/ 15,000 15,000 15,000 15,000 15,000 15,000 15,000 15,000	Due 3/8/203           Due 3/8/203           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00	4.11% Snr Nt Due 8/23/2025 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000	4.36% Snr Nt Due 8/23/2028 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000	Due 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	Due 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2045 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2055 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	LOC	214,589,000 214,539,000 214,539,000 214,539,000 214,489,000 214,489,000 214,489,000 214,471,000 214,471,000 214,471,000	EQUITY 195,780,257 194,462,372 196,696,972 196,632,901 190,958,709 189,244,676 187,845,153 181,595,762 180,336,637 188,466,678 187,431,734	SHEET 1 195,7 194,4 196,6 190,9 189,2 187,8 181,5 180,3 188,4 187,4 192,5
Feb-16 Mar-16 Apr-16 Jun-16 Jul-16 Aug-16 Sep-16 Oct-16 Nov-16 Dec-16 Dec-15	20,000,000 20,000,000 20,000,000 20,000,00	Due 3/16/2029 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000	2/1/2035 24,589,000 24,539,000 24,539,000 24,539,000 24,489,000 24,489,000 24,489,000 24,471,000 24,471,000 24,471,000 24,471,000	Due 9/1/ 15,000 15,000 15,000 15,000 15,000 15,000 15,000 15,000 15,000 15,000	2020         Due 3/8/203           0000         40,000,00           0000         40,000,00           0000         40,000,00           0000         40,000,00           0000         40,000,00           0000         40,000,00           0000         40,000,00           0000         40,000,00           0000         40,000,00           0000         40,000,00           0000         40,000,00           0000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00	4.11% Snr Nt Due 8/23/2025 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000	4.36% Snr Nt Due 8/23/2028 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000	Due 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	Due 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2045 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2055 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	LOC	214,589,000 214,539,000 214,539,000 214,539,000 214,489,000 214,489,000 214,471,000 214,471,000 214,471,000 214,471,000 214,471,000 214,471,000	EQUITY 195,780,257 194,462,372 196,696,972 196,696,972 196,632,901 190,958,709 189,244,676 187,845,153 181,595,762 180,336,637 188,466,678 187,431,734 192,552,179	SHEET E 195,7 194,4 196,6 196,6 190,9 189,2 187,8 181,5 180,3 188,4 187,4
Jan-16 Feb-16 Mar-16 May-16 Jun-16 Jun-16 Jul-16 Aug-16 Sep-16 Oct-16 Nov-16 Dec-16 Dec-15 of Avgs al Rate	20,000,000 20,000,000 20,000,000 20,000,00	Due 3/16/2029 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000 15,000,000	2/1/2035 24,589,000 24,539,000 24,539,000 24,489,000 24,489,000 24,489,000 24,489,000 24,471,000 24,471,000 24,471,000 24,471,000 24,471,000	Due 9/1/ 15,000 15,000 15,000 15,000 15,000 15,000 15,000 15,000 15,000 15,000 <b># 15,000</b>	2020         Due 3/8/203           0000         40,000,00           0000         40,000,00           0000         40,000,00           0000         40,000,00           0000         40,000,00           0000         40,000,00           0000         40,000,00           0000         40,000,00           0000         40,000,00           0000         40,000,00           0000         40,000,00           0000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00           000         40,000,00	4.11% Snr Nt Due 8/23/2025 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000	4.36% Snr Nt Due 8/23/2028 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000 25,000,000	Due 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	Due 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2045 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000	DUE 1/15/2055 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000 12,500,000		214,589,000 214,539,000 214,539,000 214,539,000 214,489,000 214,489,000 214,489,000 214,471,000 214,471,000 214,471,000 214,471,000 214,471,000 214,589,000	EQUITY 195,780,257 194,462,372 196,696,972 196,632,901 190,958,709 189,244,676 187,845,153 181,595,762 180,336,637 188,466,678 187,431,734 192,552,179 190,909,865	SHEET 1 195,7 194,4 196,6 196,6 190,9 189,2 187,8 181,5 180,3 188,4 187,4 192,5 190,9

# TYPE II ADJUSTMENTS

# Cascade Natural Gas Corporation CY16 WAGE ADJUSTMENT

Wage Annualization Adjustment	\$ 25,840
Adjustment to Annualize & Restate	\$ 25,840

## Cascade Natural Gas Corporation PGA COMMODITY SHARING ADJUSTMENT

CY 2016 PGA Commodity Sharing Revenue	\$ 280,510
Adjustment	\$(280,510)

### Cascade Natural Gas Corporation Oregon Wage Adjustment Adjustment to Restate CY 2016

2016	Gross Salaries/Wages		% Salary/Wage Increase	Adjustment		Social Security Tax @		Medicare Tax @ 1.45%		Total Taxes		Adjustment to Restate CY16 Salaries/Wages	
January	\$	887,224											
, February	\$	881,510											
March	\$	1,362,306											
CY16 Hourly	\$	3,131,040	3.10%	\$	97,062	\$	6,018	\$	1,407	\$	7,425	\$	104,487
OR 3-Factor Allocation %													24.7%
												\$	25,840

Note: Salaried increase effective 1/1/16 Hourly increase effective 4/1/16

# TYPE II ADJUSTMENT WORKPAPERS

### CASCADE NATURAL GAS STATE OF OREGON CY16

### PGA Commodity Sharing (I.e. () loss)

Jan-16	\$ 54,696
Feb-16	\$ 49,225
Mar-16	\$ 65,543
Apr-16	\$ 44,757
May-16	\$ 39,682
Jun-16	\$ 19,002
Jul-16	\$ 16,683
Aug-16	\$ 12,568
Sep-16	\$ 19,808
Oct-16	\$ 30,568
Nov-16	\$ (10,912)
Dec-16	\$ (61,110)
Total	\$ 280,510

### Cascade Natural Gas Corporation Revenue Sensitive Cost Conversion Factor State of Oregon FOR THE TWELVE MONTHS ENDED 12/31/16

Lin No.	e Description		Amount	
1	Gross Revenue		1.00000	
2	Less Uncollectibles		(0.00355)	
3	Net Revenue		0.99645	
	Less Revenue Sensitive Costs			
4	Gross Revenue Fee	0.00275		
5	City Franchise Fees	0.02310	0.02585	
6	Net Before State & Federal Income Taxes		0.97060	2.94%
7	Oregon Income Tax @7.6%		0.07377	
8	Net Before Federal Income Tax		0.89683	
9	Federal Income Tax @ 35%		0.31389	
10	Net to Gross Conversion Factor		0.58294	