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September 15, 2016

Oregon Public Utility Commission  
 201 High Street SE, Suite 100  
 Salem, OR 97301-3612

**Re: Advice No. CNG/O16-07-01, UG 319**  
**SUPPLEMENTAL, UM 1558, Deferred Accounting for Purchased Gas**  
**Adjustment Schedule 177, Purchased Gas Cost Adjustment and Schedule No. 191**  
**Temporary Gas Cost Rate Adjustment**

Attention: Filing Center

Pursuant to OAR 860-022-0070, Docket UM 1286 Order Nos. 11-196 and 14-238, ORS 757.210 and ORS 757.259(5), Cascade hereby submits three copies of the following revisions to its Tariff P.U.C. OR No. 9, stated to become effective with service on and after November 1, 2016:

**Eleventh Revision No. 177-A**  
**Thirteenth Revision Sheet No. 191**

The purpose of this filing is to make the annual true up to Cascade's gas cost in accordance with the provisions established in Schedule No. 177, Purchased Gas Adjustment (PGA) Provision. The purchased gas cost is revised in this filing due to a change in the cost of commodity gas supply and transportation capacity, and a realignment of existing firm transportation capacity. In accordance with the PGA methodology, the outstanding deferred gas cost balance is also amortized in this filing.

Tables 1 through 3 below summarize the changes in the following: 1) Forward looking commodity costs included in Schedule 177-A; 2) Demand costs included in Schedule 177-A; and 3) The combined changes to Schedule 177-A (both commodity and demand).

**Table 1 - Schedule 177-A Commodity**

| <u>Rate Schedules</u>   | <u>Present</u> | <u>Proposed</u> | <u>Change</u>      |
|-------------------------|----------------|-----------------|--------------------|
| 101, 104, 105, 111, 170 | \$0.30655      | \$0.26292       | <b>(\$0.04363)</b> |

**Table 2 - Schedule 177-A Demand**

| <u>Rate Schedules</u>   | <u>Present</u> | <u>Proposed</u> | <u>Change</u>      |
|-------------------------|----------------|-----------------|--------------------|
| 101, 104, 105, 111, 170 | \$0.18978      | \$0.16874       | <b>(\$0.02104)</b> |

**Table 3 - Schedule 177-A Commodity + Demand**

| <u>Rate Schedules</u>   | <u>Present</u> | <u>Proposed</u> | <u>Change</u>      |
|-------------------------|----------------|-----------------|--------------------|
| 101, 104, 105, 111, 170 | \$0.49633      | \$0.43166       | <b>(\$0.06467)</b> |

**Commodity Costs (Schedule 177-A)**

As shown in Table 1 on the previous page, the weighted average cost of gas (WACOG) decreases \$0.04363 per therm. The proposed WACOG is \$0.26292 per therm compared to the present WACOG of \$0.30655 per therm. The winter of 2015-2016 was significantly warmer than normal, leading to lower customer demand and reduced wholesale natural gas prices in the winter and spring. The downward pressure on wholesale prices has continued even after the winter period due to the abundance of natural gas in storage and continued high natural gas production levels.

Cascade has been hedging natural gas both on a periodic and discretionary basis throughout 2016 for the forthcoming PGA year. Approximately 31% of estimated annual load requirements for the PGA year (November 2016 through October 2017) will be hedged with physical volumes purchased at a fixed price for a term of one year or less and with physical volumes from multi-year contracts entered into in prior years. Cascade will continue to execute fixed priced physical transactions throughout the remainder of calendar year 2016, consistent with its historical gas procurement practice.

The information contained in the Company’s responses to “Natural Gas Portfolio Development Guidelines” describes the Company’s Natural Gas Procurement Plan (Procurement Plan or Plan). The Company’s Procurement Plan uses a diversified approach to purchase natural gas for the upcoming year. While the Procurement Plan generally incorporates a structured approach hedging a portion of the portfolio, the Company exercises flexibility and discretion in all areas of the Plan based on changes in the wholesale market. The Company meets with the Commission Staff quarterly to discuss the state of the wholesale market and the status of the Company’s Procurement Plan, among other things. Should the Company deviate from the Procurement Plan due to a change in market dynamics etc., the Company documents the changes and communicates them with the Company’s internal Gas Supply Oversight Committee (GSOC) and with Commission Staff.

**Demand Costs (Schedule 177-A)**

Demand costs reflect the cost of pipeline transportation to the Company’s system, as well as fixed costs associated with natural gas storage. As shown in Table 2 on the previous page, demand costs are expected to be relatively stable, with the Company proposing only a slight decrease of 0.02104 cents per therm. Excluding upcoming rate settlement discussions with Northwest Pipeline, pipeline demand rates are either expected to remain the same or become somewhat lower due to recent rate settlements with several of our Canadian pipelines (Foothills, Westcoast and Nova pipelines). In addition, certain Northwest Pipeline capacity was realigned, resulting in lower demand costs.

**Amortization of Deferral Accounts (Schedule 191)**

Table 4 below summarizes the changes in both the commodity and demand amortization rates included in Schedule 191:

**Table 4**  
**Schedule 191 PGA Temporary Gas Cost Rate Adjustment Amortization**

| <u>Rate Schedule</u>    | <u>Present</u> | <u>Proposed</u> | <u>Change</u>      |
|-------------------------|----------------|-----------------|--------------------|
| 101, 104, 105, 111, 170 | (\$0.02361)    | (\$0.08611)     | <b>(\$0.06250)</b> |

As shown in the Table above, the current overall amortization amount approved in the Company’s 2015 PGA is a refund rate of approximately \$0.024 per therm. For reasons discussed earlier in this letter, actual wholesale natural gas prices were lower than expected in the Company’s 2015 PGA. As a result, commodity costs collected from customers exceeded actual costs resulting in a deferral balance of approximately (\$4.7) million or a credit of \$0.086 per therm.

**Three Percent Test**

Pursuant to ORS 757.259 and OAR 860-027-0300, the overall annual average rate impact of the amortized deferral balances may not exceed three percent of the natural gas utility’s gross revenues for the preceding calendar year, unless the Commission finds that allowing a higher amortization rate is reasonable under the circumstances. As shown on Attachment C of the Company’s PGA workpapers, total gross revenues for calendar year 2015 were \$67,650,226. The total amortization revenue requested for the “Prior Period Gas Cost Deferral” as shown in Attachment C is (\$6,451,986). The resulting annual average rate impact from PGA amortization is (9.54%), which falls below the maximum threshold established in the statute.

The combination of the “Prior Period Gas Cost Deferral” and the “Non-Gas Cost Amortization” for the Company’s Schedule 19, Conservation Alliance Plan filing also being submitted on September 15, 2016, is a total amortization revenue request of \$1,090,644. The net effect of combining the results of these two filings is an overall revenue change of (\$5,361,342), an average rate impact of (7.93%), which falls well below the maximum threshold established in the statute.

**Other Information**

In this filing, the Company is requesting a decrease in the Company’s annual operating revenues of \$9,528,931 or 14.09%. Table 5 below shows current and proposed gross annual revenues per customer class.

**Table 5**

| Rate Schedule | Description       | Current Revenues | Proposed Revenues | Revenue Incr (Decr) | Percent Incr (Decr) |
|---------------|-------------------|------------------|-------------------|---------------------|---------------------|
| 101           | Residential       | \$18,808,558     | \$13,748,725      | (\$5,059,833)       | (27)%               |
| 104           | Commerical        | \$13,032,434     | \$9,526,480       | (\$3,505,954)       | (27)%               |
| 105           | Industrial Firm   | \$1,217,713      | \$890,127         | (\$327,586)         | (27)%               |
| 111           | Com-Ind Dual      | \$1,035,217      | \$756,726         | (\$278,491)         | (27)%               |
| 170           | Industrial Interr | \$1,327,294      | \$970,228         | (\$357,066)         | (27)%               |

Table 6 below provides an estimated average bill for each rate schedule as well as the average bill impact of the revisions proposed in this filing.

**Table 6**

| Rate Schedule | Therms per Month | Current Avg Bill | Proposed Avg Bill | Monthly Change | Proposed Rates % Change |
|---------------|------------------|------------------|-------------------|----------------|-------------------------|
| 101           | 51               | \$46.50          | \$33.99           | (\$12.51)      | (27)%                   |
| 104           | 217              | \$164.82         | \$120.48          | (\$44.34)      | (27)%                   |
| 105           | 1,510            | \$1,015.09       | \$742.01          | (\$273.08)     | (27)%                   |
| 111           | 11,251           | \$7,062.48       | \$5,162.55        | (\$1,899.93)   | (27)%                   |
| 170           | 52,321           | \$31,176.51      | \$22,789.47       | (\$8,387.04)   | (27)%                   |

Pursuant to OAR 860-022-0025 and OAR 860-022-0030, the total number of customers affected by this filing, the annual revenue before and after the impact of the rate change, and the average monthly use and resulting bills under existing and proposed rates are as follows:

**Table 7**

| Rate Schedule | Number of Customers |
|---------------|---------------------|
| 101           | 59,633              |
| 104           | 9,737               |
| 105           | 134                 |
| 111           | 15                  |
| 170           | 4                   |
| 163           | 30                  |

In Advice Nos. O16-08-02, O16-08-03 and O16-08-04, Cascade has also filed its Non-Gas Cost Tracking Filings. The impact of all proposed changes is a net decrease. Table 8 below shows the net

impact to the Company's customers, by rate schedule, inclusive of all the Company's filings made on September 15, 2016:

**Table 8**

| <u>Rate Schedule</u> | <u>Proposed Rate Change</u> |
|----------------------|-----------------------------|
| Schedule 101         | (13.21%)                    |
| Schedule 104         | (15.97%)                    |
| Schedule 105         | (18.73%)                    |
| Schedule 111         | (20.06%)                    |
| Schedule 170         | (21.13%)                    |
| Schedule 163         | 1.16%                       |

Notice to customers will be made in accordance with OAR 860-022-0017.

The rate adjustments proposed in this filing are consistent with the Public Utility Commission of Oregon Staff's recommendations with regard to rate spread requirements and amortization procedures.

Attached in support of this filing are Exhibits 1, 2, and 3. Exhibit 1 contains schedules supporting the per therm gas cost change consistent with the procedure described in PGA Rate Schedule No. 177. Exhibit 2 contains summary information on the proposed impacts the filings will have on the Company's rates and revenues, and the various rate schedules. A proposed notice to the public is also included. Exhibit 3 contains a summary of the proposed changes to the Company's revenues.

The Company agrees to rate adjustments and refunds should the Commission determine that these rates have been inappropriately calculated. Any rate adjustments and refunds will be retroactive to November 1, 2016 provided that the Commission advises the Company of the necessity for such rate adjustments or refunds within 30 days after the effective date of these rates.

Please direct any questions regarding this filing to me at (509) 734-4593.

Sincerely,



Michael Parvinen  
Director, Regulatory Affairs

Enclosures

# Cascade Natural Gas Corporation

## CERTIFICATE OF SERVICE

I hereby certify that I have this day served by electronic mail the foregoing notice of Cascade's Purchase Gas Adjustment Filing upon all parties of record in UG-305, which is the Company's current general rate case.

|   |   |
|---|---|
| Citizens' Utility Board<br>dockets@oregoncub.org  | Michael Goetz<br>Citizens' Utility Board<br>mike@oregoncub.org                          |
| Tommy A Brooks<br>Cable Huston<br>Benedict Haagensen & Lloyd<br>tbrooks@cablehuston.com | Chad M Stokes<br>Cable Huston<br>Benedict Haagensen & Lloyd<br>cstokes@cablehuston.com  |
| Stephanie S Andrus<br>PUC Staff – Dept of Justice<br>stephanie.andrus@state.or.us       | Edward Finklea<br>NWIGU<br>efinklea@nwigu.org   |
| Robert Jenks<br>Citizens' Utility Board of Oregon<br>bob@oregoncub.org                  | Marianne Gardner<br>Public Utility Commission of Oregon<br>marianne.gardner@state.or.us |
| Kaylie Klein<br>Public Utility Commission of Oregon<br>kaylie.klein@state.or.us         | Lisa F Rackner<br>McDowell, Rackner & Gibson PC<br>dockets@mrg-law.com                  |

Dated this 15th day of September 2016.

  
Maryalice Rosales  
Department of Regulatory Affairs  
Cascade Natural Gas Corporation  
8113 W Grandridge Blvd  
Kennewick, WA 99336  
maryalice.rosales@cngc.com



CASCADE NATURAL GAS CORPORATION

PURCHASED GAS COST ADJUSTMENT PROVISION  
 SCHEDULE NO. 177  
 (Continued from Previous Page)

8. Estimated annual Non-Commodity gas costs shall be equal to estimated annual Demand Costs, less estimated annual Capacity Release Benefits, plus or minus estimated annual pipeline refunds or surcharges.
9. Estimated Non-Commodity Cost per Therm: The Estimated Non-Commodity cost per therm is calculated by the following formula: (Estimated annual Non-Commodity Cost divided by forecasted sales volumes). This estimate does not include any revenue-sensitive factors.

The Estimated Cost of Gas per therm is as follows:

|                    | <u>COST OF GAS<br/>PER<br/>THERM</u> | <u>REVENUE<br/>SENSITIVE<br/>COSTS</u> | <u>COST OF GAS<br/>PER<br/>THERM RATE</u> |     |
|--------------------|--------------------------------------|--|---|-----|
| WACOG              | \$.25604                             | 2.618%                                 | \$.26292                                  | (R) |
| Non-Commodity Cost | \$.16433                             | ↓                                      | \$.16874                                  | (R) |
| Total              | \$.42037                             | 2.618%                                 | \$.43166                                  | (R) |

10. Actual Monthly Calendar Sales Volumes: Actual billed sales therms, adjusted for estimated unbilled therms, for firm and interruptible sales schedules.
11. Embedded Commodity Cost: The Estimated WACOG multiplied by the Actual Monthly Calendar Sales Volumes.
12. Embedded Non-Commodity Cost: The Estimated Non-Commodity Cost per Therm multiplied by the Actual Calendar Sales Volumes less interruptible sales volumes.
13. Financial Transactions: Cost of Financial Transactions related to gas supply, including but not limited to, hedges, swaps, puts, calls, options and collars that are exercised to provide price stability/control or supply reliability for sales service customers.
14. Gas Storage Facilities: The cost of natural gas for injections shall be the actual cost of purchasing gas for storage and the cost of injection of the gas into the storage facility. Withdrawals of natural gas shall be valued at the weighted average cost of gas in the facility plus any variable withdrawal costs. Only the cost of natural gas withdrawn from Gas Storage Facilities will be included in the Actual Commodity Cost, as defined herein.

CNG/O16-07-01

Issued September 15, 2016

Effective with Service on and After November 1, 2016

ISSUED BY CASCADE NATURAL GAS CORPORATION

BY Mark A. Chiles

TITLE Vice President

Regulatory Affairs and Customer Service

CASCADE NATURAL GAS CORPORATION

TEMPORARY GAS COST RATE ADJUSTMENT  
SCHEDULE NO. 191

**APPLICABLE:**

The temporary rate addition applies to gas service rendered by the Company under the tariff of which this schedule is a part for service on and after the effective date hereof and shall be in addition to all rates and charges specified in this tariff.

**PURPOSE:**

The purpose of this provision is to adjust the rate schedules listed below to amortize the outstanding deferred gas cost account balances in accordance with Schedule No. 177, Purchased Gas Cost Adjustment.

**RATES:**

Each of the charges specified in the schedules for gas service hereinafter listed shall be adjusted by the following per therm increase or (decrease) or appropriate multiple thereof in determining annual minimum bill, if any:

| <u>Rate Schedule</u> | <u>Amount</u> |
|----------------------|---------------|
| Schedule 101         | (\$.08611)    |
| Schedule 104         | (\$.08611)    |
| Schedule 105         | (\$.08611)    |
| Schedule 111         | (\$.08611)    |
| Schedule 112         | (\$.08611)    |
| Schedule 126         | (\$.08611)    |
| Schedule 170         | (\$.08611)    |

(R)  
|  
(R)

**LIMITATION:**

This temporary rate addition shall remain in effect until cancelled pursuant to order of the Oregon Public Utility Commission.

**SPECIAL TERMS AND CONDITIONS:**

The rates named herein are subject to increases as set forth in Schedule No. 100 Municipal Exactions.

CNG/O16-07-01

Issued September 15, 2016

Effective with Service on and After November 1, 2016

ISSUED BY CASCADE NATURAL GAS CORPORATION

BY Mark A. Chiles

TITLE Vice President  
Regulatory Affairs and Customer Service



**Before the**  
**OREGON PUBLIC UTILITY COMMISSION**

**EXHIBIT 1**

**Gas Supply Portfolio and Related Transportation**

Oregon Summary of Gas Cost Deferrals (Schedule 1 of 10)  
Prior Commodity & Demand Amortization (Schedule 2 of 10)  
Development of Gas Cost Related PGA Temporary Rate Increments (Schedule 3 of 10)  
Core Market Commodity Cost Amortization Supporting 47OR.2530.01272 (Schedule 4 of 10)  
Gas Cost Consolidated Accounts Amortization Supporting 47OR.2530.01285 (Schedule 5 of 10)  
Consolidated Tech Adjustments 47OR.2540.20478 (Schedule 6 of 10)  
Core Market Demand Amortization Supporting 47OR.2530.01273 (Schedule 7 of 10)  
New WACOG Commodity (Schedule 8 of 10)  
Derivation of Oregon per Therm Non-Commodity Charges (Schedule 9 of 10)  
Summary of Rate and Revenue Impact (Schedule 10 of 10)

**Cascade Natural Gas Corporation**

**September 15, 2016**

**Cascade Natural Gas**  
**Oregon Summary of Gas Cost Deferrals**

| Line No. | REVISED | Aug. 2015 | Sep. 2015 | Oct. 2015 | Nov. 2015 | Dec. 2015 | Jan. 2016 | Feb. 2016 | Mar. 2016 | Apr. 2016 | May. 2016 | Jun. 2016 | SUM. (Est.) M |
|----------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|
| 1        | 8.7090% |           | 7.4680%   |           |           |           |           |           |           |           |           |           |               |
| 2        | 90%     |           |           |           |           |           |           |           |           |           |           |           |               |
| 3        | 90%     |           |           |           |           |           |           |           |           |           |           |           |               |
| 4        |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 5        |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 6        |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 7        |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 8        |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 9        |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 10       |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 11       |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 12       |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 13       |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 14       |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 15       |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 16       |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 17       |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 18       |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 19       |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 20       |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 21       |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 22       |         |           |           |           |           |           |           |           |           |           |           |           |               |
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| 31       |         |           |           |           |           |           |           |           |           |           |           |           |               |
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| 33       |         |           |           |           |           |           |           |           |           |           |           |           |               |
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| 41       |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 42       |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 43       |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 44       |         |           |           |           |           |           |           |           |           |           |           |           |               |
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| 49       |         |           |           |           |           |           |           |           |           |           |           |           |               |
| 50       |         |           |           |           |           |           |           |           |           |           |           |           |               |
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| 53       |         |           |           |           |           |           |           |           |           |           |           |           |               |

Current commodity (WACOG) without revenue sensitive, Order No.15-321  
 Current demand billing rate without revenue sensitive, Order No.15-321  
 Annual ROR (Interest rate), per Order No. 07-220/15-412  
 Deferral percentage July - October  
 Deferral percentage November - June  
 Oregon Calendar Month Sales  
 Sales volumes subject to WACOG  
 Sales volumes subject to Winter/Seasonal WACOG  
 Sales volumes subject to Monthly Incremental Costs  
 Total Sales  
 Commodity collections at WACOG  
 Commodity collections at Winter/Seasonal WACOG  
 Commodity collections at Monthly Incremental Costs  
**Total Commodity collections**  
 Demand collections at \$0.15993  
 Demand collections at other rates (interruptible rates & MDDV based)  
**Total Demand collections**  
**COMMODITY DEFERRAL CALCULATIONS**  
 Actual Commodity Cost (w/true ups, net of storage injections, bookouts, etc.)  
 Total Commodity billed (line 22)  
 Cost versus collection  
 Customer share (line 31 \* applicable deferral percentage)  
 Storage Adjustment  
 Other Adjustment  
 Total Commodity deferral  
 Commodity deferral Beginning Balance  
 Interest  
 Account adjustment (balance transfers and other)  
**Commodity deferral Ending Balance (June balance to rate calc sheet)**  
**DEMAND DEFERRAL CALCULATIONS**  
 Actual Demand Cost (w/true-ups) minus Storage Mitigation  
 Total Demand billed (line 26)  
 Cost versus collection  
 Other Adjustment  
 Total Demand deferral  
 Demand deferral Beginning Balance  
 Interest  
 Account adjustment (balance transfers and other)  
**Demand deferral Ending Balance (June balance to rate calc sheet)**

**Cascade Natural Gas  
Prior Commodity & Demand Amortization**

| Line No. | Jul-15<br>A | Aug-15<br>B | Sep-15<br>C | Oct-15<br>D | Nov-15<br>E   | Dec-15<br>F | Jan-16<br>G | Feb-16<br>H | Mar-16<br>I | Apr-16<br>J | May-16<br>K | Jun-16<br>L | SUM (A:L)<br>M |
|----------|-------------|-------------|-------------|-------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------|
| 1        |             |             |             |             | BLENDING RATE   | \$0.02294   | \$0.02294   | \$0.02294   | \$0.02294   | \$0.02294   | \$0.02294   | \$0.02294   |                |
| 2        |             |             |             |             | 1.930%  | 1.930%      | 1.930%      | 1.930%      | 1.930%      | 1.930%      | 1.930%      | 1.930%      |                |
| 3        |             |             |             |             | Current prior amortization rate, \$/therm (source: deferral sheets) |             |             |             |             |             |             |             | \$0.02294      |
| 4        |             |             |             |             | Interest Rate, %, Re: authorizing order                             |             |             |             |             |             |             |             | 1.930%         |
| 5        |             |             |             |             | Ending balance, 5/30/2010, \$ NA                                    |             |             |             |             |             |             |             |                |
| 6        |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 7        |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 8        |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 9        |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 10       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 11       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 12       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 13       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 14       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 15       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 16       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 17       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 18       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 19       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 20       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 21       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 22       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 23       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 24       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 25       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 26       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 27       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 28       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 29       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 30       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 31       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 32       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 33       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 34       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 35       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 36       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 37       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 38       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 39       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 40       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 41       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 42       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 43       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 44       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 45       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 46       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 47       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 48       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 49       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 50       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 51       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 52       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 53       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 54       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 55       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 56       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 57       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 58       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 59       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 60       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 61       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 62       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 63       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 64       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 65       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 66       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 67       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 68       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 69       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 70       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 71       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 72       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 73       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 74       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 75       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 76       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 77       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 78       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 79       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 80       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 81       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 82       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 83       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 84       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 85       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 86       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 87       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 88       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 89       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 90       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 91       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 92       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 93       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 94       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 95       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 96       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 97       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 98       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 99       |             |             |             |             |   |             |             |             |             |             |             |             |                |
| 100      |             |             |             |             |   |             |             |             |             |             |             |             |                |

Cascade Natural Gas  
Development of Gas Cost Related PGA Temporary Rate Increments  
State of Oregon

**REVISED**

| Ln No. | Account Description<br>(a)  | Class<br>(b) | New or Residual<br>(d) | Account Balance 6/30/2016<br>(e) | Estimated Thru 10/31/16 Interest Accruals<br>(f) | Estimated Thru 10/31/16 Amortizations & Deferrals<br>(g) | Interest Accruals Thru Amortization<br>(h) | Balance for Amortization<br>(i) | Forecasted Terms<br>(k) | Increment<br>(l) | TEMPORARY INCREMENT Firm<br>(m) | TEMPORARY INCREMENT Interruptible<br>(n) |
|--------|---|--------------|------------------------|----------------------------------|--|--|--|---------------------------------|-------------------------|------------------|---------------------------------|--|
| 1      | Commodity Cost Deferrals (47OR.2530.01272) (See Commodity Cost Deferral UG-189 -- Consolidated Technical Adjustment--All (47OR.2540.20478)) | Core         | NEW                    | (\$4,127,074)                    | (\$1,04,847)                                     |  | (\$33,099)                                 | \$ (4,265,019)                  |                         |                  |                                 |  |
| 2      | Prior gas cost amortization to be included in increment (47OR.2530.01283) (See GC Consolidated Deferral)                                    | All Core     | Residual               | 484.53                           | \$3  | \$275,832  | (\$377)                                    | \$ 488                          |                         |                  |                                 |  |
| 3      | Subtotal  | Core         | Residual               | (\$4,442,949)                    | (\$1,06,423)                                     | \$275,832  | (\$33,476)                                 | (\$4,307,016)                   | 74,930,646              | (0.05748)        | (\$0,05748)                     | (\$0,05748)                              |
| 4      | Demand Cost Deferrals (47OR.2530.01273) (See Demand Cost Deferral)  | Core         | NEW                    | (\$1,912,088)                    | (\$48,576)                                       |  | (\$15,394)                                 | \$ (1,976,058)                  | 74,930,646              | (0.02637)        | (\$0,02637)                     | (\$0,02637)                              |
| 5      |   |              |                        |                                  |  |  |  |                                 |                         |                  |                                 |  |
| 6      | SUBTOTAL AMORTIZATION RATES BEFORE REVENUE SENSITIVE COSTS  |              |                        |                                  |  |  |  |                                 |                         |                  |                                 |  |
| 7      | REVENUE REQUIREMENT BEFORE REVENUE SENSITIVE COSTS  |              |                        |                                  |  |  |  |                                 |                         |                  |                                 |  |
| 8      | REVENUE SENSITIVE COST PERCENTAGES:   |              |                        |                                  |  |  |  |                                 |                         |                  |                                 |  |
| 9      | REVENUE REQUIREMENT AFTER REVENUE SENSITIVE COSTS   |              |                        |                                  |  |  |  |                                 |                         |                  |                                 |  |
| 10     | PROPOSED AMORTIZATION RATE INCLUDING REVENUE SENSITIVE COSTS  |              |                        |                                  |  |  |  |                                 |                         |                  |                                 |  |
| 11     | NEW WACOG - Commodity (from sch. 4)   |              |                        |                                  |  |  |  |                                 |                         |                  |                                 |  |
| 12     | NEW Demand Rates (from sch. 5)  |              |                        |                                  |  |  |  |                                 |                         |                  |                                 |  |
| 13     | NEW Delivered WACOG (gas only) rate   |              |                        |                                  |  |  |  |                                 |                         |                  |                                 |  |
| 14     | Total Gas Cost Rate   |              |                        |                                  |  |  |  |                                 |                         |                  |                                 |  |
|        |   |              |                        | \$ (6,355,037)                   | \$ (154,999)                                     | \$ 275,832   | \$ (48,869)                                | \$ (6,283,073)                  |                         |                  | (\$0,08385)                     | 2.618%                                   |
|        |   |              |                        |                                  |  |  |  | \$ (6,451,986)                  |                         |                  |                                 | 2.618%                                   |
|        |   |              |                        |                                  |  |  |  |                                 |                         |                  | \$ (0,08611)                    | \$ (0,08611)                             |
|        |   |              |                        |                                  |  |  |  |                                 |                         |                  | \$0,26292                       | \$0,26292                                |
|        |   |              |                        |                                  |  |  |  |                                 |                         |                  | \$0,16874                       | \$0,16874                                |
|        |   |              |                        |                                  |  |  |  |                                 |                         |                  | \$0,43166                       | \$0,43166                                |
|        |   |              |                        |                                  |  |  |  |                                 |                         |                  | 0,33652                         | \$0,34555                                |



|                         |   |
|-------------------------|---|
| State:                  | Oregon  |
| Description:            | Core Market Commodity Costs   |
| Account number:         | 47OR.2530.01272   |
| Class of Customers:     | Core  |
| Deferral Period:        | 7/1/2015 to 6/30/2016   |
| Deferral Account Order: | N/A   |
| Amortization Period:    |   |
| Narrative:              | Deferral of 90% of the difference between core commodity gas costs actually incurred and the average monthly base commodity gas cost as defined in rate schedule 177-A. |

**REVISED**

| <i>Debit (Credit)</i> |      |            |              |              |               |             |              |                  |
|-----------------------|------|------------|--------------|--------------|---------------|-------------|--------------|------------------|
| Month/Year            | Rate | Therms     | Deferral     | Amortization | Interest Rate | Interest    | Adjustments  | Deferred Balance |
| Balance Forward       |      |            |              |              |               |             |              | (1,967,726.05)   |
| Jul-15                |      |            | (92,291.12)  |              | 0.08709       | (14,554.65) |              | (2,074,571.82)   |
| Aug-15                |      |            | (138,041.50) |              | 0.08709       | (15,344.95) |              | (2,227,958.27)   |
| Sep-15                |      |            | (150,900.96) |              | 0.08709       | (15,947.91) |              | (2,394,807.14)   |
| Oct-15                |      |            | (271,269.13) |              | 0.08709       | (17,713.63) | 2,026,113.78 | (657,676.13)     |
| Nov-15                |      |            | (509,406.23) |              | 0.08709       | (4,707.70)  |              | (1,171,790.05)   |
| Dec-15                |      |            | (379,570.88) |              | 0.08709       | (8,667.36)  |              | (1,560,028.29)   |
| Jan-16                |      |            | (492,265.36) |              | 0.08709       | (11,539.04) | (2,108.00)   | (2,065,940.69)   |
| Feb-16                |      |            | (443,025.44) |              | 0.07468       | (12,258.22) | (89.50)      | (2,521,313.85)   |
| Mar-16                |      |            | (589,888.30) |              | 0.07468       | (15,991.90) | (3,028.00)   | (3,130,222.06)   |
| Apr-16                |      |            | (402,815.18) |              | 0.07468       | (19,213.56) |              | (3,552,250.81)   |
| May-16                |      |            | (357,141.08) |              | 0.07468       | (22,530.81) |              | (3,931,922.69)   |
| Jun-16                |      |            | (171,016.67) |              | 0.07468       | (24,134.46) |              | (4,127,073.82)   |
| Jul-16 est.           |      |            | 0.00         |              | 0.07468       | (26,176.73) |              | (4,153,250.55)   |
| Aug-16 est.           |      |            | 0.00         |              | 0.07468       | (26,342.76) |              | (4,179,593.31)   |
| Sep-16 est.           |      |            | 0.00         |              | 0.07468       | (25,654.69) |              | (4,205,248.00)   |
| Oct-16 est.           |      |            |              |              | 0.07468       | (26,672.56) |              | (4,231,920.56)   |
| Nov-16 est.           |      | 8,827,122  |              | 502,436      | 0.01930       | (6,713.10)  |              | (3,736,197.76)   |
| Dec-16 est.           |      | 12,465,610 |              | 709,537      | 0.01930       | (6,124.29)  |              | (3,032,785.01)   |
| Jan-17 est.           |      | 11,202,726 |              | 637,654      | 0.01930       | (4,971.27)  |              | (2,400,102.05)   |
| Feb-17 est.           |      | 9,329,079  |              | 531,007      | 0.01930       | (3,553.47)  |              | (1,872,648.44)   |
| Mar-17 est.           |      | 7,980,257  |              | 454,233      | 0.01930       | (3,069.60)  |              | (1,421,485.33)   |
| Apr-17 est.           |      | 6,092,160  |              | 346,763      | 0.01930       | (2,254.90)  |              | (1,076,977.16)   |
| May-17 est.           |      | 4,130,417  |              | 235,102      | 0.01930       | (1,765.36)  |              | (843,641.00)     |
| Jun-17 est.           |      | 2,613,098  |              | 148,736      | 0.01930       | (1,338.27)  |              | (696,242.88)     |
| Jul-17 est.           |      | 2,096,178  |              | 119,314      | 0.01930       | (1,141.27)  |              | (578,070.62)     |
| Aug-17 est.           |      | 2,103,999  |              | 119,759      | 0.01930       | (947.56)    |              | (459,259.48)     |
| Sep-17 est.           |      | 2,816,125  |              | 160,293      | 0.01930       | (728.52)    |              | (299,695.40)     |
| Oct-17 est.           |      | 5,273,875  |              | 300,187      | 0.01930       | (491.25)    |              | (0.00)           |

|                                  |            |                                 |         |
|----------------------------------|------------|---------------------------------|---------|
| Therms Nov-Oct 2017              | 74,930,646 | Balance at end of Amort Period: | (0.00)  |
| Development of Amortization Rate |            | Amort Rate to Achieve This:     | 0.05692 |

|  |                |
|--|----------------|
| June 30, 2016 Balance  | (4,127,073.82) |
| Interest through Oct 31, 2016  | (104,846.74)   |
| Interest During Amortization Period (Nov 1, 2016 through Oct 31, 2017) | (33,098.88)    |
| Balance to Amortize  | (4,265,019.43) |
|  | 0.05692        |

|                         |  |
|-------------------------|--|
| State:                  | Oregon   |
| Description:            | OR 11/01/15 Consolidated Accounts: Gas Cost Related PGA Temporary Rate Increments  |
| Account number:         | 47OR.2530.01285  |
| Class of Customers:     | Core   |
| Deferral Period:        |  |
| Deferral Account Order: |  |
| Amortization Period:    | 11/1/2016 through 10/31/2016   |
| Narrative:              | This records the consolidated deferral accounts corresponding to the temporary technical adjustments included in the PGA tracker effective 11/1/2015 that are incorporated into the customers' per therm gas rates through schedule 191. |

| Month/Year  | Rate     | Therms     | Deferral | Amortization | Interest Rate | Interest   | Adjustments                     | Deferred Balance |
|---|----------|------------|----------|--------------|---------------|------------|---------------------------------|------------------|
| Balance Transferred from 2015 Core Market Commodity Costs 01272                         |          |            |          |              |               |            | (2,026,113.78)                  |                  |
| Balance Transferred from 2015 Core Market Demand & Gas Storage Mitigation Costs 01273   |          |            |          |              |               |            | 339,233.48                      |                  |
| OR 11/01/15 Consolidated Accounts: Gas Cost Related PGA Temporary Rate Increments 01283 |          |            |          |              |               |            | 1,069.17                        |                  |
|   |          |            |          |              |               |            |                                 | (1,685,811.13)   |
| Nov-15  | Prorated | 4,790,818  |          | 50,537.54    | 0.01930       | (2,674.20) |                                 | (1,637,947.79)   |
| Dec-15  | 0.02294  | 11,117,003 |          | 255,024.06   | 0.01930       | (2,684.89) |                                 | (1,385,608.63)   |
| Jan-16  | 0.02294  | 13,474,376 |          | 309,102.19   | 0.01930       | (2,271.26) |                                 | (1,078,777.71)   |
| Feb-16  | 0.02294  | 10,626,043 |          | 243,761.43   | 0.01930       | (1,654.22) |                                 | (836,670.51)     |
| Mar-16  | 0.02294  | 9,325,461  |          | 213,926.07   | 0.01930       | (1,371.45) |                                 | (624,115.87)     |
| Apr-16  | 0.02294  | 6,550,836  |          | 150,276.18   | 0.01930       | (990.04)   |                                 | (474,829.74)     |
| May-16  | 0.02294  | 3,680,423  |          | 84,428.90    | 0.01930       | (778.33)   |                                 | (391,179.17)     |
| Jun-16  | 0.02294  | 3,288,572  |          | 75,439.84    | 0.01930       | (620.53)   |                                 | (316,359.86)     |
| Jul-16 est.   | 0.02294  | 2,042,806  |          | 46,861.97    | 0.01930       | (518.57)   |                                 | (270,016.46)     |
| Aug-16 est.   | 0.02294  | 2,060,982  |          | 47,278.93    | 0.01930       | (442.61)   |                                 | (223,180.14)     |
| Sep-16 est.   | 0.02294  | 2,719,332  |          | 62,381.48    | 0.01930       | (354.03)   |                                 | (161,152.70)     |
| Oct-16 est.   | 0.02294  | 5,200,959  |          | 119,310.00   | 0.01930       | (264.16)   |                                 | (42,106.86)      |
| Nov-16 est.   | 0.00057  | 8,827,122  |          | 5,004.75     | 0.02200       | (76.14)    |                                 | (37,178.24)      |
| Dec-16 est.   | 0.00057  | 12,465,610 |          | 7,067.68     | 0.02200       | (69.47)    |                                 | (30,180.02)      |
| Jan-17 est.   | 0.00057  | 11,202,726 |          | 6,351.66     | 0.02200       | (56.39)    |                                 | (23,884.76)      |
| Feb-17 est.   | 0.00057  | 9,329,079  |          | 5,289.35     | 0.02200       | (41.75)    |                                 | (18,637.15)      |
| Mar-17 est.   | 0.00057  | 7,980,257  |          | 4,524.60     | 0.02200       | (34.82)    |                                 | (14,147.38)      |
| Apr-17 est.   | 0.00057  | 6,092,160  |          | 3,454.10     | 0.02200       | (25.58)    |                                 | (10,718.86)      |
| May-17 est.   | 0.00057  | 4,130,417  |          | 2,341.84     | 0.02200       | (20.03)    |                                 | (8,397.04)       |
| Jun-17 est.   | 0.00057  | 2,613,098  |          | 1,481.56     | 0.02200       | (15.18)    |                                 | (6,930.67)       |
| Jul-17 est.   | 0.00057  | 2,096,178  |          | 1,188.48     | 0.02200       | (12.95)    |                                 | (5,755.14)       |
| Aug-17 est.   | 0.00057  | 2,103,999  |          | 1,192.91     | 0.02200       | (10.75)    |                                 | (4,572.98)       |
| Sep-17 est.   | 0.00057  | 2,816,125  |          | 1,596.67     | 0.02200       | (8.27)     |                                 | (2,984.58)       |
| Oct-17 est.   | 0.00057  | 5,273,875  |          | 2,990.15     | 0.02200       | (5.58)     |                                 | (0.00)           |
| 2016/17 PGA Year Therms   |          | 74,930,646 |          |              |               |            | Balance at end of Amort Period: | (0.00)           |
|   |          |            |          |              |               |            | Amort Rate to Achieve This:     | 0.00057          |

**Development of Amortization Rate**

|  |                    |
|--|--------------------|
| June 30, 2016 Balance  | (316,359.86)       |
| Interest through Oct 31, 2016  | (1,579.36)         |
| Amortizations through Oct 31, 2016                                     | 275,832.37         |
| Interest During Amortization Period (Nov 1, 2016 through Oct 31, 2017) | (376.91)           |
| Balance to Amortize  | <u>(42,483.77)</u> |
|  | 0.00057            |

|                      |   |
|----------------------|---|
| State:               | Oregon  |
| Description:         | OR 11/01/13 Consolidated Tech Adjustments   |
| Account number:      | 47OR.2540.20478   |
| Class of customers:  | All   |
| Deferral period:     | N/A   |
| Amortization period: | November 1, 2014 through October 31, 2015   |
| Narrative:           | This account consolidates all the deferral accounts corresponding to the temporary technical adjustments included in the PGA tracker effective 11/1/14 for residual earnings sharing, Oregon Regulatory Fee and unrefunded temporary rate credits that are incorporated into all customers' per term rates through rate schedule 194-B. |

| Month/Year | Rate     | Therms     | Deferral | Debit (Credit) |          | Adjustments<br>Total | Deferred Balance |
|------------|----------|------------|----------|----------------|----------|----------------------|------------------|
|            |          |            |          | Amortization   | Interest |                      |                  |
|            |          |            |          |                |          |                      | 566.17           |
| Nov-15     | Prorated | 7,490,316  |          | (87.97)        | 0.90     |                      | 479.10           |
| Dec-15     | 0.00000  | 13,551,499 |          | 0.00           | 0.79     |                      | 479.89           |
| Jan-16     | 0.00000  | 16,278,554 |          | 0.00           | 0.79     |                      | 480.68           |
| Feb-16     | 0.00000  | 13,270,810 |          | 0.00           | 0.74     |                      | 481.42           |
| Mar-16     | 0.00000  | 12,037,823 |          | 0.00           | 0.79     |                      | 482.21           |
| Apr-16     | 0.00000  | 9,330,006  |          | 0.00           | 0.76     |                      | 482.97           |
| May-16     | 0.00000  | 6,392,476  |          | 0.00           | 0.79     |                      | 483.76           |
| Jun-16     | 0.00000  | 6,026,557  |          | 0.00           | 0.77     |                      | 484.53           |
| Jul-16 est | 0.00000  | 4,535,901  |          | 0.00           | 0.79     |                      | 485.32           |
| Aug-16 est | 0.00000  | 4,634,260  |          | 0.00           | 0.80     |                      | 486.12           |
| Sep-16 est | 0.00000  | 5,506,517  |          | 0.00           | 0.77     |                      | 486.89           |
| Oct-16 est | 0.00000  | 7,703,946  |          | 0.00           | 0.80     |                      | 487.69           |

Development of Amortization Rate

|  |               |
|--|---------------|
| June 30, 2016 Balance                                | 484.53        |
| Interest through Oct 31, 2016                        | 3.16          |
| Amortizations through Oct 31, 2016                   | 0.00          |
| <b>Remaining balance to transfer to Consolidated</b> | <b>487.69</b> |



|                         |   |
|-------------------------|---|
| State:                  | Oregon  |
| Description:            | Core Market Demand & Gas Storage Mitigation Costs   |
| Account number:         | 47OR.2530.01273   |
| Class of Customers:     | Core  |
| Deferral Period:        | 7/1/2015 to 6/30/2016   |
| Deferral Account Order: | N/A   |
| Amortization Period:    | N/A   |
| Narrative:              | This records the deferral of the differences between core demand costs actually incurred and the embedded demand costs collected in the tariffs as well as the Tenaska capacity reservation and gas storage mitigation costs based on therms. |

| Month/Year      | Rate | Therms     | Deferral     | Amortization | Interest Rate | Interest    | Adjustments  | REVISIED<br>Deferred Balance |
|-----------------|------|------------|--------------|--------------|---------------|-------------|--------------|------------------------------|
| Balance Forward |      |            |              |              |               |             |              | 329,457.59                   |
| Jul-15          |      |            | 350,302.96   |              | 0.08709       | 2,436.89    |              | 682,197.45                   |
| Aug-15          |      |            | 378,194.91   |              | 0.08709       | 5,046.00    |              | 1,065,438.36                 |
| Sep-15          |      |            | 210,972.05   |              | 0.08709       | 7,626.50    |              | 1,284,036.91                 |
| Oct-15          |      |            | 42,522.38    |              | 0.08709       | 9,497.62    | (339,233.48) | 996,823.43                   |
| Nov-15          |      |            | (925,811.21) |              | 0.08709       | 7,135.34    |              | 78,147.56                    |
| Dec-15          |      |            | (921,543.18) |              | 0.08709       | 578.03      |              | (842,817.60)                 |
| Jan-16          |      |            | (892,520.20) |              | 0.08709       | (6,234.06)  |              | (1,741,571.87)               |
| Feb-16          |      |            | (567,345.79) |              | 0.07468       | (10,333.58) |              | (2,319,251.22)               |
| Mar-16          |      |            | (216,852.74) |              | 0.07468       | (14,710.28) |              | (2,550,814.24)               |
| Apr-16          |      |            | 307,337.54   |              | 0.07468       | (15,657.11) |              | (2,259,133.81)               |
| May-16          |      |            | 182,066.02   |              | 0.07468       | (14,328.97) |              | (2,091,396.76)               |
| Jun-16          |      |            | 192,145.69   |              | 0.07468       | (12,837.17) |              | (1,912,088.25)               |
| Jul-16 est.     |      |            |              |              | 0.07468       | (12,127.77) |              | (1,924,216.03)               |
| Aug-16 est.     |      |            |              |              | 0.07468       | (12,204.70) |              | (1,936,420.72)               |
| Sep-16 est.     |      |            |              |              | 0.07468       | (11,885.91) |              | (1,948,306.63)               |
| Oct-16 est.     |      |            |              |              | 0.07468       | (12,357.50) |              | (1,960,664.13)               |
| Nov-16 est.     |      | 8,827,122  |              | 232,787.31   | 0.01930       | (3,110.20)  |              | (1,730,987.02)               |
| Dec-16 est.     |      | 12,465,610 |              | 328,740.88   | 0.01930       | (2,837.40)  |              | (1,405,083.54)               |
| Jan-17 est.     |      | 11,202,726 |              | 295,436.33   | 0.01930       | (2,303.18)  |              | (1,111,950.39)               |
| Feb-17 est.     |      | 9,329,079  |              | 246,024.83   | 0.01930       | (1,705.09)  |              | (867,630.64)                 |
| Mar-17 est.     |      | 7,980,257  |              | 210,453.94   | 0.01930       | (1,422.20)  |              | (658,598.90)                 |
| Apr-17 est.     |      | 6,092,160  |              | 160,661.37   | 0.01930       | (1,044.74)  |              | (498,982.27)                 |
| May-17 est.     |      | 4,130,417  |              | 108,926.63   | 0.01930       | (817.92)    |              | (390,873.55)                 |
| Jun-17 est.     |      | 2,613,098  |              | 68,912.16    | 0.01930       | (620.04)    |              | (322,581.43)                 |
| Jul-17 est.     |      | 2,096,178  |              | 55,280.04    | 0.01930       | (528.77)    |              | (267,830.18)                 |
| Aug-17 est.     |      | 2,103,999  |              | 55,486.29    | 0.01930       | (439.02)    |              | (212,782.91)                 |
| Sep-17 est.     |      | 2,816,125  |              | 74,266.35    | 0.01930       | (337.54)    |              | (138,854.11)                 |
| Oct-17 est.     |      | 5,273,875  |              | 139,081.71   | 0.01930       | (227.61)    |              | 0.00                         |

Therms Nov-Oct 2016      74,930,646      Balance at end of Amort Period:      0.00  
Amort Rate to Achieve This:      0.02637

|  |                |
|--|----------------|
| Development of Amortization Rate                                       |                |
| June 30, 2016 Balance  | (1,912,088.25) |
| Interest through Oct 31, 2015  | (48,575.87)    |
| Interest During Amortization Period (Nov 1, 2015 through Oct 31, 2016) | (15,393.71)    |
| Balance to Amortize  | (1,976,057.84) |
|  | 0.02637        |

Cascade Natural Gas Corporation  
 2016-2017 PGA  
 New WACOG Commodity

|              |   | REVISED      |              |              |              |              |              |             |             |             |             |             |             |               |
|--------------|---|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|
| SYSTEM COSTS |   |              |              |              |              |              |              |             |             |             |             |             |             |               |
| (a)          | (b)   | (c)          | (d)          | (e)          | (f)          | (g)          | (h)          | (i)         | (j)         | (k)         | (l)         | (m)         | (n)         | (o)           |
|              |   | November     | December     | January      | February     | March        | April        | May         | June        | July        | August      | September   | October     | TOTAL         |
|              |   | 1            | 2            | 3            | 4            | 5            | 6            | 7           | 8           | 9           | 10          | 11          | 12          |               |
| 4            | <b>COSTS</b>  |              |              |              |              |              |              |             |             |             |             |             |             |               |
| 5            | Supply Commodity Cost                                   | \$2,121,843  | \$3,190,616  | \$2,855,307  | \$2,392,635  | \$2,123,871  | \$1,470,897  | \$922,584   | \$580,941   | \$484,191   | \$487,564   | \$647,701   | \$1,237,487 | \$18,515,637  |
| 6            | tab Supply All Schedule & Cost, row 912, columns G to S |              |              |              |              |              |              |             |             |             |             |             |             |               |
| 7            | Volumetric Pipeline Chgs                                | \$ 58,869.41 | \$ 60,988.92 | \$ 60,519.66 | \$ 59,593.13 | \$ 57,882.50 | \$ 56,020.08 | \$ 3,012.76 | \$ 2,015.14 | \$ 1,851.22 | \$ 1,855.27 | \$ 2,062.57 | \$ 3,524.12 | \$ 368,194.77 |
| 8            | tab OR Pipeline Comm Costs by Month, row 30 D to O      |              |              |              |              |              |              |             |             |             |             |             |             |               |
| 9            | Commodity Cost from Storage                             | \$25,747     | \$72,488     | \$136,191    | \$66,821     | \$0          | \$0          | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         | \$301,247     |
| 10           | tab Storage Cost and Flow, row 88, column e through p   |              |              |              |              |              |              |             |             |             |             |             |             |               |
| 11           | Other Costs & Miscellaneous Changes                     |              |              |              |              |              |              |             |             |             |             |             |             |               |
| 12           |   |              |              |              |              |              |              |             |             |             |             |             |             |               |
| 13           | Total Commodity Cost                                    | \$2,206,460  | \$3,324,093  | \$3,052,017  | \$2,519,049  | \$2,181,754  | \$1,526,917  | \$925,597   | \$582,956   | \$486,042   | \$489,419   | \$649,764   | \$1,241,011 | \$19,185,079  |
| 14           |   |              |              |              |              |              |              |             |             |             |             |             |             |               |
| 15           | <b>VOLUMES</b>  |              |              |              |              |              |              |             |             |             |             |             |             |               |
| 16           | Pipeline Commodity at Receipt Points                    | 8,978,941    | 12,843,027   | 11,806,146   | 9,685,768    | 8,014,968    | 6,117,608    | 4,147,218   | 2,624,138   | 2,105,614   | 2,113,435   | 2,828,547   | 5,296,586   | 76,561,996    |
| 17           | Pipeline Fuel Use                                       | (27,187)     | (38,814)     | (36,065)     | (28,706)     | (23,940)     | (17,225)     | (11,225)    | (7,512)     | (6,607)     | (6,596)     | (8,621)     | (15,593)    | (228,091)     |
| 18           | Total Pipeline Gas Arriving at City Gate                | 8,951,754    | 12,804,213   | 11,770,081   | 9,657,062    | 7,991,028    | 6,100,383    | 4,135,993   | 2,616,626   | 2,099,007   | 2,106,839   | 2,819,926   | 5,280,993   | 76,333,905    |
| 19           | Storage Gas Deliveries                                  | 112,717      | 321,777      | 552,233      | 315,391      | 0            | 0            | 0           | 0           | 0           | 0           | 0           | 0           | 1,302,118     |
| 20           | Total Gas At Citygate (Storage and Pipeline)            | 8,839,037    | 12,482,436   | 11,217,848   | 9,341,671    | 7,991,028    | 6,100,383    | 4,135,993   | 2,616,626   | 2,099,007   | 2,106,839   | 2,819,926   | 5,280,993   | 75,031,787    |
| 21           |   |              |              |              |              |              |              |             |             |             |             |             |             |               |
| 22           | Unaccounted for Gas                                     | (11,915)     | (16,826)     | (15,122)     | (12,592)     | (10,771)     | (8,223)      | (5,576)     | (3,528)     | (2,829)     | (2,840)     | (3,801)     | (7,118)     | (101,141)     |
| 23           |   |              |              |              |              |              |              |             |             |             |             |             |             |               |
| 24           | Load Served   | 8,827,122    | 12,465,610   | 11,202,726   | 9,329,079    | 7,980,257    | 6,092,160    | 4,130,417   | 2,613,098   | 2,096,178   | 2,103,999   | 2,816,125   | 5,273,875   | 74,930,646    |
| 25           |   |              |              |              |              |              |              |             |             |             |             |             |             |               |
| 26           | Annual Sales WACOG                                      |              |              |              |              |              |              |             |             |             |             |             |             | \$0.25604     |
| 27           |   |              |              |              |              |              |              |             |             |             |             |             |             |               |
| 28           | OREGON Sales WACOG with Revenue Sensitive               |              |              |              |              |              |              |             |             |             |             |             |             | \$0.26292     |

Cascade Natural Gas Corporation  
 2016-2017 PGA - OREGON  
 Derivation of Oregon per Therm Non-Commodity Charges

|  |  | REVISED                      |                           |
|--|--|------------------------------|---------------------------|
| Oregon Derivation of Demand Increments |  |                              |                           |
|  |  | Without<br>Revenue Sensitive | With<br>Revenue Sensitive |
|  | (a) (b)  | (c)                          | (d)                       |
| 1                                      |  |                              |                           |
| 2                                      |  |                              |                           |
| 3                                      |  |                              |                           |
| 4                                      | System Demand for Allocation   | \$53,100,026                 |                           |
| 5                                      | Oregon Allocation Factor (Based on Peak Day)                         | 19.46%                       |                           |
| 6                                      | Oregon Allocated Demand Costs  | \$10,333,884                 |                           |
| 7                                      | Ruby Demand for Allocation   | \$2,025,000                  |                           |
| 8                                      | Oregon Allocation Factor (Based Non-NWP Allocation)                  | 87.96%                       |                           |
| 9                                      | Oregon Ruby Allocated System Demand                                  | \$1,781,274                  |                           |
| 10                                     | Plus Demand Costs -Central Oregon                                    | \$1,606,262                  |                           |
| 11                                     | Less Oregon Capacity Release Credits                                 | (\$1,408,370)                |                           |
| 12                                     | <b>OREGON DEMAND COSTS</b>   | <b>\$12,313,050</b>          | <b>\$ 12,644,072</b>      |
| 13                                     |  |                              |                           |
| 14                                     | Oregon Sales Forecasted Normal Volumes                               | 74,930,646                   | 74,930,646                |
| 15                                     |  |                              |                           |
| 16                                     | <b>Proposed Demand Increment Per Therm (line 12/line 14)</b>         | <b>\$0.16433</b>             | <b>\$0.16874</b>          |
| 17                                     |  |                              |                           |
| 18                                     | Current Firm Demand Per Therm  | \$0.18436                    | \$0.18978                 |
| 19                                     |  |                              |                           |
| 20                                     | Percent Change in Firm Demand  | -10.86%                      | -11.09%                   |
| 21                                     |  |                              |                           |
| 22                                     |  |                              |                           |
| 23                                     | 1/Allocation Factor: Forecasted Peak Volumes (excl. Central Oregon): |                              |                           |
| 24                                     |  | <u>Washington</u>            | <u>Oregon</u>             |
| 25                                     |  |                              | <u>System</u>             |
| 26                                     | Total Peak   | 2,184,730                    | 963,710                   |
| 27                                     | Less Central Oregon  |                              | 664,780                   |
| 28                                     | Peak Day Capacity  | 2,184,730                    | 298,930                   |
| 29                                     | Allocation Factor  | 87.96%                       | 12.04%                    |
|  |  |                              | 100.00%                   |



Cascade Natural Gas Corporation  
2016-2017 PGA - OREGON  
Summary of Rate and Revenue Impact

| <b>REVISED</b> |  |                                     |                                  |
|----------------|--|-------------------------------------|----------------------------------|
|                | (a)  | (b)                                 |                                  |
|                | <b>PROPOSED PER THERM RATE CHANGES</b>                 | Without<br>Revenue Sensitive<br>(c) | With<br>Revenue Sensitive<br>(d) |
| 1              | Proposed Commodity WACOG                               | 0.25604                             | 0.26292                          |
| 2              | Current Commodity WACOG                                | 0.29780                             | 0.30655                          |
| 3              | <b>Proposed Rate Change-Commodity WACOG</b>            | <b>(0.04176)</b>                    | <b>(0.04363)</b>                 |
| 4              |  |                                     |                                  |
| 5              | Proposed Firm Demand Per Therm                         | 0.16433                             | 0.16874                          |
| 6              | Current Firm Demand Per Therm                          | 0.18436                             | 0.18978                          |
| 7              | <b>Proposed Rate Change-Firm Demand WACOG</b>          | <b>(0.02003)</b>                    | <b>(0.02104)</b>                 |
| 8              |  |                                     |                                  |
| 9              | <b>Proposed Temporary Rate Increment</b>               | <b>(0.08385)</b>                    | <b>(0.08611)</b>                 |
|                | <b>Current Temporary Rate Increment</b>                | <b>(0.02294)</b>                    | <b>(0.02361)</b>                 |
|                | <b>Proposed Rate Change-Temporary Rate Increment</b>   | <b>(0.06091)</b>                    | <b>(0.06250)</b>                 |
| 10             |  |                                     |                                  |
| 11             | <b>TOTAL PROPOSED PGA RATE CHANGE</b>                  |                                     | <b>(0.12717)</b>                 |
| 12             |  |                                     |                                  |
| 13             | Oregon Forecasted Therm Sales                          | 74,930,646                          |                                  |
| 14             |  |                                     |                                  |
| 15             | <b>REVENUE IMPACT</b>                                  |                                     |                                  |
| 16             |  |                                     |                                  |
| 17             | Commodity Cost Change                                  |                                     | (3,269,224)                      |
| 18             | Demand Cost Change                                     |                                     | (1,576,541)                      |
| 19             |  |                                     |                                  |
| 20             | Amortization of Commodity and Demand Cost Differences  |                                     | (4,683,165.38)                   |
| 21             |  |                                     |                                  |
| 22             | <b>Total Revenue Impact Due to PGA Filing</b>          |                                     | <b>(9,528,930)</b>               |
| 23             |  |                                     |                                  |
| 24             | Operating Revenues for 12 Month Period Ending 12/31/15 |                                     | 67,650,226                       |
| 25             |  |                                     |                                  |
| 26             | PERCENTAGE CHANGE IN REVENUES DUE TO PGA FILING        |                                     | -14.09%                          |

Before the  
OREGON PUBLIC UTILITY COMMISSION

**EXHIBIT 2**

**Summary of Proposed Changes**

Summary of Total Proposed Rates (Schedule 1 of 3)  
Total Proposed Rates Impact on Average Bill by Rate Schedule (Schedule 2 of 3)  
Notice to the Public (Schedule 3 of 3)

**Cascade Natural Gas Corporation**

**September 15, 2016**

Cascade Natural Gas Corporation  
SUMMARY OF TOTAL PROPOSED RATES  
STATE OF OREGON

**REVISED**

| Ln No.                        | Customer Class (a)          | Schedule (b) | Block (c)    | Current 2/1/2016 Rate (d) | Total Proposed Changes |                      |                                  |                          | Total Change (i) = e thru h | Proposed 11/1/2016 Rate (j) = d + i |
|-------------------------------|-----------------------------|--------------|--------------|---------------------------|------------------------|----------------------|----------------------------------|--------------------------|-----------------------------|-------------------------------------|
|                               |                             |              |              |                           | PGA Base Gas Cost (e)  | CAP Baseline Adj (f) | Remove 15 Temporary Rate Adj (g) | Non Gas Cost Add New (h) |                             |                                     |
| <b>CORE MARKET SERVICE</b>    |                             |              |              |                           |                        |                      |                                  |                          |                             |                                     |
| 1                             | Residential                 | 101          |              | \$0.85293                 | (\$0.12717)            |                      | (\$0.01137)                      | \$0.01810                | (\$0.12044)                 | \$0.73249                           |
| 2                             | Commercial                  | 104          |              | \$0.74570                 | (\$0.12717)            |                      | (\$0.01035)                      | \$0.01619                | (\$0.12133)                 | \$0.62437                           |
| 3                             | Com-Ind Dual                | 111          |              | \$0.62772                 | (\$0.12717)            |                      | (\$0.00006)                      | \$0.00131                | (\$0.12592)                 | \$0.50180                           |
| 4                             | Industrial Firm             | 105          |              | \$0.66430                 | (\$0.12717)            |                      | (\$0.00006)                      | \$0.00131                | (\$0.12592)                 | \$0.53838                           |
| 5                             | Industrial Interruptible    | 170          |              | \$0.59587                 | (\$0.12717)            |                      | (\$0.00006)                      | \$0.00131                | (\$0.12592)                 | \$0.46995                           |
| <b>NONCORE MARKET SERVICE</b> |                             |              |              |                           |                        |                      |                                  |                          |                             |                                     |
| 6                             | Distribution Transportation | 163          | First 10,000 | \$0.12408                 | \$0.00000              |                      | (\$0.00006)                      | \$0.00131                | \$0.00125                   | \$0.12533                           |
| 7                             | Distribution Transportation | 163          | Next 10,000  | \$0.11194                 | \$0.00000              |                      | (\$0.00006)                      | \$0.00131                | \$0.00125                   | \$0.11319                           |
| 8                             | Distribution Transportation | 163          | Next 30,000  | \$0.10518                 | \$0.00000              |                      | (\$0.00006)                      | \$0.00131                | \$0.00125                   | \$0.10643                           |
| 9                             | Distribution Transportation | 163          | Next 50,000  | \$0.06462                 | \$0.00000              |                      | (\$0.00006)                      | \$0.00131                | \$0.00125                   | \$0.06587                           |
| 10                            | Distribution Transportation | 163          | Next 400,000 | \$0.03281                 | \$0.00000              |                      | (\$0.00006)                      | \$0.00131                | \$0.00125                   | \$0.03406                           |
| 11                            | Distribution Transportation | 163          | Over 500,000 | \$0.01761                 | \$0.00000              |                      | (\$0.00006)                      | \$0.00131                | \$0.00125                   | \$0.01886                           |

Cascade Natural Gas Corporation  
**TOTAL PROPOSED RATES IMPACT ON AVERAGE BILL BY RATE SCHEDULE**  
 STATE OF OREGON

| Ln No.                        | Customer Class (a)          | Schedule (b) | Terms in Block (c) | Normalized Volumes (d) | Average Customers (e) | Therms Per Month (f) | Monthly Charge (g) | Current 2/1/2016 Rate (h) | Current Avg Bill (i) | Total Proposed 11/1/2016 Rate (j) | Total Proposed Avg Bill (k) | Monthly Change in Avg Bill (l) | Proposed Rates % Change (m) |  |
|-------------------------------|-----------------------------|--------------|--------------------|------------------------|-----------------------|----------------------|--------------------|---------------------------|----------------------|-----------------------------------|-----------------------------|--------------------------------|-----------------------------|--|
|                               |                             |              |                    |                        |                       |                      |                    |                           | = g + (f * h)        | = g + (f * j)                     |                             |                                |                             |  |
|                               |                             |              |                    |                        |                       |                      |                    |                           | = d / e              |                                   |                             |                                |                             |  |
| <b>CORE MARKET SERVICE</b>    |                             |              |                    |                        |                       |                      |                    |                           |                      |                                   |                             |                                |                             |  |
| 1                             | Residential                 | 101          |                    | 36,255,164             | 59,633                | 51                   | \$3.00             | \$0.85293                 | \$46.50              | \$0.73249                         | \$40.36                     | (\$6.14)                       | -13.21%                     |  |
| 2                             | Commercial                  | 104          |                    | 25,356,977             | 9,737                 | 217                  | \$3.00             | \$0.74570                 | \$164.82             | \$0.62437                         | \$138.49                    | (\$26.33)                      | -15.97%                     |  |
| 3                             | Com-Ind Dual                | 111          |                    | 2,025,236              | 15                    | 11,251               | \$0.00             | \$0.62772                 | \$7,062.48           | \$0.50180                         | \$5,645.75                  | (\$1,416.73)                   | -20.06%                     |  |
| 4                             | Industrial Firm             | 105          |                    | 2,427,832              | 134                   | 1,510                | \$12.00            | \$0.66430                 | \$1,015.09           | \$0.53838                         | \$824.95                    | (\$190.14)                     | -18.73%                     |  |
| 5                             | Industrial Interruptible    | 170          |                    | 2,511,398              | 4                     | 52,321               | \$0.00             | \$0.59587                 | \$31,176.51          | \$0.46995                         | \$24,588.25                 | (\$6,588.26)                   | -21.13%                     |  |
| <b>NONCORE MARKET SERVICE</b> |                             |              |                    |                        |                       |                      |                    |                           |                      |                                   |                             |                                |                             |  |
| 6                             | Distribution Transportation | 163          | 10,000             | 3,133,235              | 30                    |                      | \$500.00           | \$0.12408                 | \$1,740.80           | \$0.12533                         | \$1,753.30                  |                                |                             |  |
| 7                             | Distribution Transportation | 163          | 10,000             | 2,368,737              |                       |                      |                    | \$0.11194                 | \$1,119.40           | \$0.11319                         | \$1,131.90                  |                                |                             |  |
| 8                             | Distribution Transportation | 163          | 30,000             | 3,924,736              |                       |                      |                    | \$0.10518                 | \$3,155.40           | \$0.10643                         | \$3,192.90                  |                                |                             |  |
| 9                             | Distribution Transportation | 163          | 50,000             | 3,554,490              |                       |                      |                    | \$0.06462                 | \$946.39             | \$0.06587                         | \$964.70                    |                                |                             |  |
|                               | Distribution Transportation | 163          | 400,000            | 9,586,180              |                       |                      |                    | \$0.03281                 |                      |                                   |                             |                                |                             |  |
|                               | Distribution Transportation | 163          | Over 500,000       | 705,000                |                       |                      |                    | \$0.01761                 |                      |                                   |                             |                                |                             |  |
| 11                            | Total                       |              |                    | 23,272,378             |                       | 64,645               |                    |                           | \$6,961.99           |                                   | \$7,042.80                  | \$80.81                        | 1.16%                       |  |



**Cascade Natural Gas Corporation**

**NOTICE TO THE PUBLIC**

**Oregon Service Area**

Cascade Natural Gas Corporation is on this date filing with the Oregon Public Utility Commission (OPUC) at Salem, Oregon, revisions to Rate Schedule Nos. 177, 191, 192, and 193, which upon approval by the Commission will become effective November 1, 2016.

The rate adjustments proposed in this filing are designed to pass on 1.) changes in the cost of gas and transportation services paid by Cascade to gas suppliers and interstate natural gas pipelines, temporary differences in purchased gas costs, that occur over time, as a result of differences between the actual cost of gas paid by the Company and the amount allowed for in Core customer rates, and removal of certain technical deferral refunds that have expired; and 2.) changes resulting from the Company's Conservation Alliance Plan.

The overall effect of the proposed rate adjustments on the monthly bill of a residential customer with consumption of 51 therms will be a net decrease of (\$6.14) or (13.21%). For small commercial customers, the decrease in the monthly bill for consumption of 217 therms will be (\$26.33) or (15.97%). Large volume core customers will experience an average decrease of (18.73%) depending on monthly volumes consumed. Large volume interruptible customers will experience an average decrease of (21.13%). Large volume non-core customers will experience an average increase of 1.16% for distribution service from Cascade depending on the monthly volumes consumed.

By: Michael Parvinen  
Director, Regulatory Affairs

Date: September 15, 2016

**Before the**  
**OREGON PUBLIC UTILITY COMMISSION**

**EXHIBIT 3**

**Attachments to Staff's Public Meeting Memos**

Attachment A - Incremental Change to Revenue by Rate Schedule

Attachment B - Incremental Change to Revenue by Adjustment

Attachment C - Three Percent Test

Attachment D - Bill Impacts

**Cascade Natural Gas Corporation**

**September 15, 2016**

**Cascade Natural Gas  
2016 PGA  
Incremental Revenue Change by Customer Rate Schedule  
Attachment A**

| REVISED                |                        |  |  |                                     |  |  |
|------------------------|------------------------|--|--|-------------------------------------|--|--|
| Customer Rate Schedule | Description            | Gas Cost & Adjustment Schedule Total Revenue at Current <sup>1</sup> | Gas Cost & Adjustment Schedule Total Revenue at Proposed | Total Incremental Change in Revenue | Incremental Percentage Change by Rate Schedule | Percent Contribution to Total Incremental Change |
| 101                    | Residential            | 33,936,333   | 29,144,273   | (4,792,060)                         | -14.12%  | 52.95%   |
| 104                    | Commercial             | 20,558,229   | 17,213,278   | (3,344,951)                         | -16.27%  | 36.96%   |
| 105                    | Industrial             | 1,711,218  | 1,386,852  | (324,366)                           | -18.96%  | 3.58%  |
| 111                    | Large Volume           | 1,374,653  | 1,098,899  | (275,754)                           | -20.06%  | 3.05%  |
| 112                    | Compressed Natural Gas |  |  |                                     |  | 0.00%  |
| 126                    | Emergency Institution  |  |  |                                     |  | 0.00%  |
| 170                    | Interruptible          | 1,673,072  | 1,319,517  | (353,556)                           | -21.13%  | 3.91%  |
| 163                    | Transportation         | 1,980,680  | 2,021,763  | 41,083                              | 2.07%  | -0.45%   |
|                        |                        | 61,234,186   | 52,184,582   | (9,049,605)                         | -14.78%  | 100.00%  |

**Notes:**

<sup>1</sup> Revenue at "Current" does not reflect current revenues, but rather what the revenues would be if existing rates continued to be in effect during the upcoming year (i.e. current rates times forecasted therms). There will be small differences with the Advice filings.

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| Customer Schedule No. | Rate Class Type        | Block | 177-A PGA Gas Costs WACOG                     |                             | 191 Temporary Gas |               | 192 Intervenor |               | 193 Conservation |               | 2016-2017       |                    | Change in Revenue | % Change      |                     |
|-----------------------|------------------------|-------|---|-----------------------------|-------------------|---------------|----------------|---------------|------------------|---------------|-----------------|--------------------|-------------------|---------------|---------------------|
|                       |                        |       | Adjustment Tariff No. 101/104/105/111/112/126 | Margin (Base Rate) /170/163 | Current Rate      | Proposed Rate | Current Rate   | Proposed Rate | Current Rate     | Proposed Rate | Forecast Therms | Revenue at Current |                   |               | Revenue at Proposed |
| 101                   | Residential            |       | \$ 0.49633                                    | 0.43166                     | \$ (0.02361)      | (0.08611)     | \$0.00102      | 0.00191       | \$ 0.01035       | 0.01619       | 39,787,946      | \$33,936,333       | \$29,144,273      | (\$4,792,060) | -14.12%             |
| 104                   | Commercial             |       | \$ 0.49633                                    | 0.43166                     | \$ (0.02361)      | (0.08611)     | \$ -           | 0.00000       | \$ 0.01035       | 0.01619       | 27,569,035      | \$20,538,229       | \$17,213,278      | (\$3,344,951) | -16.27%             |
| 105                   | Industrial             |       | \$ 0.49633                                    | 0.43166                     | \$ (0.02361)      | (0.08611)     | \$0.00006      | 0.00131       | \$ -             | 0.00000       | 2,575,972       | \$1,711,218        | \$1,386,852       | (\$324,366)   | -18.96%             |
| 111                   | Large Volume           |       | \$ 0.49633                                    | 0.43166                     | \$ (0.02361)      | (0.08611)     | \$0.00006      | 0.00131       | \$ -             | 0.00000       | 2,189,915       | \$1,374,653        | \$1,098,899       | (\$275,754)   | -20.06%             |
| 112                   | Compressed Natural Gas |       | \$ 0.49633                                    | 0.43166                     | \$ (0.02361)      | (0.08611)     | \$ -           | 0.00000       | \$ -             | 0.00000       | 0               | \$0                | \$0               | \$0           | 0.00%               |
| 126                   | Emergency Institution  |       | \$ 0.49633                                    | 0.43166                     | \$ (0.02361)      | (0.08611)     | \$ -           | 0.00000       | \$ -             | 0.00000       | 0               | \$0                | \$0               | \$0           | 0.00%               |
| 170                   | Interruptible          |       | \$ 0.49633                                    | 0.43166                     | \$ (0.02361)      | (0.08611)     | \$0.00006      | 0.00131       | \$ -             | 0.00000       | 2,807,781       | \$1,673,072        | \$1,319,517       | (\$353,556)   | -21.13%             |
| 163                   | Transportation         |       | \$ -  | 0.00000                     | \$ 0.12402        | 0.12402       | \$0.00006      | 0.00131       | \$ -             | 0.00000       | 3,222,353       | \$399,830          | \$403,858         | \$4,028       | 1.01%               |
|                       | Block 2                |       | \$ -  | 0.00000                     | \$ 0.11188        | 0.11188       | \$0.00006      | 0.00131       | \$ -             | 0.00000       | 2,505,654       | \$280,483          | \$283,615         | \$3,132       | 1.12%               |
|                       | Block 3                |       | \$ -  | 0.00000                     | \$ 0.10512        | 0.10512       | \$0.00006      | 0.00131       | \$ -             | 0.00000       | 4,426,676       | \$465,598          | \$471,131         | \$5,533       | 1.19%               |
|                       | Block 4                |       | \$ -  | 0.00000                     | \$ 0.06456        | 0.06456       | \$0.00006      | 0.00131       | \$ -             | 0.00000       | 4,011,819       | \$259,244          | \$264,259         | \$5,015       | 1.93%               |
|                       | Block 5                |       | \$ -  | 0.00000                     | \$ 0.03275        | 0.03275       | \$0.00006      | 0.00131       | \$ -             | 0.00000       | 16,198,875      | \$31,483           | \$31,734          | \$251         | 0.81%               |
|                       | Block 6                |       | \$ -  | 0.00000                     | \$ 0.01755        | 0.01755       | \$0.00006      | 0.00131       | \$ -             | 0.00000       | 2,500,910       | \$44,041           | \$47,167          | \$3,126       | 7.10%               |

**Cascade Natural Gas  
2016 PGA  
Incremental Revenue Change by Adjustment Schedule  
Attachment B**

|                                       |                        | REVISED  |   |                                     |  |
|---------------------------------------|------------------------|--|---|-------------------------------------|--|
| Adjustment Schedule No. & Description |                        | Gas Cost & Adjustment Schedule Revenue at Current <sup>1</sup> | Gas Cost & Adjustment Revenue at Proposed | Total Incremental Change in Revenue | % Contribution to Total Incremental Change |
| 177-A                                 | PGA                    | \$37,190,329   | \$32,344,565                              | (\$4,845,764)                       | 53.55%                                     |
| 191                                   | Temporary Gas Cost Adj | (\$1,769,113)  | (\$6,452,279)                             | (\$4,683,166)                       | 51.75%                                     |
| 192                                   | Intervenor Funding     | \$43,010   | \$128,971                                 | \$85,961                            | -0.95%                                     |
| 193                                   | CAP                    | \$697,145  | \$1,090,510                               | \$393,365                           | -4.35%                                     |
| 194-B                                 | Other Residual         | \$0  | \$0                                       | \$0                                 | 0.00%                                      |
|                                       | Margin                 | \$25,072,815   | \$25,072,815                              | \$0                                 | 0.00%                                      |
|                                       |                        |  |   | \$0                                 | 0.00%                                      |
|                                       |                        |  |   | \$0                                 | 0.00%                                      |
|                                       | Total                  | \$61,234,186   | \$52,184,582                              | (\$9,049,604)                       | 100.00%                                    |

**Note:**

<sup>1</sup> Revenue at "Current" does not reflect current revenues, but rather what the revenues would be if existing rates continued to be in effect during the upcoming year (i.e. current rates times forecasted therms). There will be small differences with the Advice filings.



Adjustment  
Schedule No.

REVISED

2016-2017

| Advice No. | Schedule Description | Schedule No. | Rate Class Type        | Block      | Current      |                 | Proposed             |                      | Revenue at           |               | Revenue at |  | Change in Revenue |
|------------|----------------------|--------------|------------------------|------------|--------------|-----------------|----------------------|----------------------|----------------------|---------------|------------|--|-------------------|
|            |                      |              |                        |            | Rate         | Rate            | Proposed Therms      | Current              | Proposed             | Current       | Proposed   |  |                   |
| 177-A      |                      | 101          | Residential            |            | \$ 0.49633   | 0.43166         | 39,787,946           | \$19,747,951         | \$17,174,865         | (\$2,573,086) |            |  |                   |
|            |                      | 104          | Commerical             |            | \$ 0.49633   | 0.43166         | 27,569,035           | \$13,683,339         | \$11,900,450         | (\$1,782,889) |            |  |                   |
|            |                      | 105          | Industrial             | Revised    | \$ 0.49633   | 0.43166         | 2,575,972            | \$1,278,532          | \$1,111,944          | (\$166,588)   |            |  |                   |
|            |                      | 111          | Large Volume           |            | \$ 0.49633   | 0.43166         | 2,189,915            | \$1,086,921          | \$945,299            | (\$141,622)   |            |  |                   |
|            |                      | 112          | Compressed Natural Gas |            | \$ 0.49633   | 0.43166         | 0                    | \$0                  | \$0                  | \$0           |            |  |                   |
|            |                      | 126          | Emergency Institution  |            | \$ 0.49633   | 0.43166         | 0                    | \$0                  | \$0                  | \$0           |            |  |                   |
|            |                      | 170          | Interruptible          |            | \$ 0.49633   | 0.43166         | 2,807,781            | \$1,393,586          | \$1,212,007          | (\$181,579)   |            |  |                   |
|            |                      |              |                        |            |              | <b>Total</b>    | <b>\$37,190,329</b>  | <b>\$32,344,565</b>  | <b>(\$4,845,764)</b> |               |            |  |                   |
| 191        |                      | 101          | Residential            |            | \$ (0.02361) | (0.08611)       | 39,787,946           | (\$939,393)          | (\$3,426,140)        | (\$2,486,747) |            |  |                   |
|            |                      | 104          | Commerical             |            | \$ (0.02361) | (0.08611)       | 27,569,035           | (\$650,905)          | (\$2,373,970)        | (\$1,723,065) |            |  |                   |
|            |                      | 105          | Industrial             |            | \$ (0.02361) | (0.08611)       | 2,575,972            | (\$60,819)           | (\$221,817)          | (\$160,998)   |            |  |                   |
|            |                      | 111          | Large Volume           |            | \$ (0.02361) | (0.08611)       | 2,189,915            | (\$51,704)           | (\$188,574)          | (\$136,870)   |            |  |                   |
|            |                      | 112          | Compressed Natural Gas |            | \$ (0.02361) | (0.08611)       | 0                    | \$0                  | \$0                  | \$0           |            |  |                   |
|            |                      | 126          | Emergency Institution  |            | \$ (0.02361) | (0.08611)       | 0                    | \$0                  | \$0                  | \$0           |            |  |                   |
|            |                      | 170          | Interruptible          |            | \$ (0.02361) | (0.08611)       | 2,807,781            | (\$66,292)           | (\$241,778)          | (\$175,486)   |            |  |                   |
|            |                      |              |                        |            |              | <b>Total</b>    | <b>(\$1,769,113)</b> | <b>(\$6,452,279)</b> | <b>(\$4,683,166)</b> |               |            |  |                   |
| 192        |                      | 101          | Residential            |            | \$ 0.00102   | 0.00191         | 39,787,946           | \$40,584             | \$75,995             | \$35,411      |            |  |                   |
|            |                      | 104          | Commerical             |            | \$ -         | 0.00000         | 27,569,035           | \$0                  | \$0                  | \$0           |            |  |                   |
|            |                      | 105          | Industrial             |            | \$ 0.00006   | 0.00131         | 2,575,972            | \$155                | \$3,375              | \$3,220       |            |  |                   |
|            |                      | 111          | Large Volume           |            | \$ 0.00006   | 0.00131         | 2,189,915            | \$131                | \$2,869              | \$2,738       |            |  |                   |
|            |                      | 112          | Compressed Natural Gas |            | \$ -         | 0.00000         | 0                    | \$0                  | \$0                  | \$0           |            |  |                   |
|            |                      | 126          | Emergency Institution  |            | \$ -         | 0.00000         | 0                    | \$0                  | \$0                  | \$0           |            |  |                   |
|            |                      | 170          | Interruptible          |            | \$ 0.00006   | 0.00131         | 2,807,781            | \$168                | \$3,678              | \$3,510       |            |  |                   |
| 163        | Distribution         | Block 1      |                        | \$ 0.00006 | 0.00131      | 3,222,353       | \$193                | \$4,221              | \$4,028              |               |            |  |                   |
|            |                      | Block 2      |                        | \$ 0.00006 | 0.00131      | 2,505,654       | \$150                | \$3,282              | \$3,132              |               |            |  |                   |
|            |                      | Block 3      |                        | \$ 0.00006 | 0.00131      | 4,426,676       | \$266                | \$5,799              | \$5,533              |               |            |  |                   |
|            |                      | Block 4      |                        | \$ 0.00006 | 0.00131      | 4,011,819       | \$241                | \$5,255              | \$5,014              |               |            |  |                   |
|            |                      | Block 5      |                        | \$ 0.00006 | 0.00131      | 16,198,875      | \$972                | \$21,221             | \$20,249             |               |            |  |                   |
|            |                      | Block 6      |                        | \$ 0.00006 | 0.00131      | 2,500,910       | \$150                | \$3,276              | \$3,126              |               |            |  |                   |
|            |                      |              |                        |            | <b>Total</b> | <b>\$43,010</b> | <b>\$128,971</b>     | <b>\$85,961</b>      |                      |               |            |  |                   |
| 193        | CAP                  | 101          | Residential            |            | \$ 0.01035   | 0.01619         | 39,787,946           | \$411,805            | \$644,167            | \$232,362     |            |  |                   |
|            |                      | 104          | Commerical             |            | \$ 0.01035   | 0.01619         | 27,569,035           | \$285,340            | \$446,343            | \$161,003     |            |  |                   |
|            |                      |              |                        |            |              | <b>Total</b>    | <b>\$697,145</b>     | <b>\$1,090,510</b>   | <b>\$393,365</b>     |               |            |  |                   |

Adjustment  
Schedule No.

REVISED

2016-2017

| Advice No. | Description            | Schedule No. | Rate Class Type | Block   | Current Rate | Proposed Rate | Proposed Therms | Revenue at Current  | Revenue at Proposed | Change in Revenue |
|------------|------------------------|--------------|-----------------|---------|--------------|---------------|-----------------|---------------------|---------------------|-------------------|
| 101        | Residential            |              |                 |         | \$ 0.36884   | 0.36884       | 39,787,946      | \$14,675,386        | \$14,675,386        | \$0               |
| 104        | Commercial             |              |                 |         | \$ 0.26263   | 0.26263       | 27,569,035      | \$7,240,456         | \$7,240,456         | \$0               |
| 105        | Industrial             |              |                 |         | \$ 0.19152   | 0.19152       | 2,575,972       | \$493,350           | \$493,350           | \$0               |
| 111        | Large Volume           |              |                 |         | \$ 0.15494   | 0.15494       | 2,189,915       | \$339,305           | \$339,305           | \$0               |
| 112        | Compressed Natural Gas |              |                 |         | \$ 0.22600   | 0.22600       | 0               | \$0                 | \$0                 | \$0               |
| 126        | Emergency Institution  |              |                 |         | \$ 0.26670   | 0.26670       | 0               | \$0                 | \$0                 | \$0               |
| 170        | Interruptible          |              |                 |         | \$ 0.12309   | 0.12309       | 2,807,781       | \$345,610           | \$345,610           | \$0               |
| 163        | Distribution           |              |                 | Block 1 | \$ 0.12402   | 0.12402       | 3,222,353       | \$399,636           | \$399,636           | \$0               |
|            |                        |              |                 | Block 2 | \$ 0.11188   | 0.11188       | 2,505,654       | \$280,333           | \$280,333           | \$0               |
|            |                        |              |                 | Block 3 | \$ 0.10512   | 0.10512       | 4,426,676       | \$465,332           | \$465,332           | \$0               |
|            |                        |              |                 | Block 4 | \$ 0.06456   | 0.06456       | 4,011,819       | \$259,003           | \$259,003           | \$0               |
|            |                        |              |                 | Block 5 | \$ 0.03275   | 0.03275       | 16,198,875      | \$530,513           | \$530,513           | \$0               |
|            |                        |              |                 | Block 6 | \$ 0.01755   | 0.01755       | 2,500,910       | \$43,891            | \$43,891            | \$0               |
| Advice No. | Margin                 |              |                 |         |              |               | <b>Total</b>    | <b>\$25,072,815</b> | <b>\$25,072,815</b> | <b>\$0</b>        |



**Cascade Natural Gas  
2016-2017 PGA  
Three Percent Test  
Attachment C**

|  | <b>REVISED</b>     | <b>Credit</b>        |
|--|--------------------|----------------------|
|  | Surcharge          |                      |
| <b>Prior Period Gas Cost Deferral True-Up</b>              | <b>(6,451,986)</b> |                      |
| <br><b><u>Non-Gas Cost Amortizations</u></b>               |                    |                      |
| Intervenor Funding   | \$128,999          |                      |
| Other Residuals  |                    |                      |
| Decoupling   |                    | 1,090,644            |
|  |                    | \$0                  |
|  |                    | \$0                  |
|  |                    | 0                    |
| Subtotal   | 128,999            | 1,090,644            |
| Total  | (6,322,987)        | 1,090,644            |
| <b>Total Proposed Amortization</b>                         |                    | <b>(\$5,232,343)</b> |
| Less: Intervenor Funding <sup>1</sup>                      |                    | \$128,999            |
| <b>Net Proposed Amortizations (subject to the 3% test)</b> |                    | <b>(\$5,361,342)</b> |
| <b>Utility Gross Revenues (2015)</b>                       |                    | <b>\$67,650,226</b>  |
| <b>3% of Utility Gross Revenues<sup>2</sup></b>            |                    | <b>\$2,029,507</b>   |
| <b>Allowed Amortization</b>                                |                    | <b>(\$5,361,342)</b> |
| <b>Allowed Amortization as % of Gross Revenues</b>         |                    | <b>-7.93%</b>        |

<sup>1</sup> Intervenor Funding is excluded from the result of the 3% test pursuant to ORS 757.259(4)

<sup>2</sup> Unadusted general revenues as shown in the most recent Results of Operation.

**Proposed Rate & Bill Increases for ALL Oregon Local Distribution Companies by Class of Service  
2016-2017 PGA  
Attachment D**

| Class of Service     | Rate Schedule | RATE IMPACTS*          |                         |                       |                         |
|----------------------|---------------|------------------------|-------------------------|-----------------------|-------------------------|
|                      |               | Current Rate per Therm | Proposed Rate per Therm | Change Rate per Therm | %-Change Rate per Therm |
| <b>Residential</b>   |               |                        |                         |                       |                         |
| Avista               | 410           | \$0.00000              | \$0.00000               | 0.00000               | #DIV/0!                 |
| Cascade              | 101           | \$0.85293              | \$0.73249               | -0.12044              | -14.12%                 |
| NW Natural           | 2             | \$0.00000              | \$0.00000               | 0.00000               | #DIV/0!                 |
| <b>Commercial</b>    |               |                        |                         |                       |                         |
| Avista               | 420           | \$0.00000              | \$0.00000               | 0.00000               | #DIV/0!                 |
| Cascade              | 104           | \$0.74570              | \$0.62437               | -0.12133              | -16.27%                 |
| NW Natural           | 3             | \$0.00000              | \$0.00000               | 0.00000               | #DIV/0!                 |
| <b>Industrial</b>    |               |                        |                         |                       |                         |
| Avista               | 424           | \$0.00000              | \$0.00000               | 0.00000               | #DIV/0!                 |
| Cascade              | 105           | \$0.66430              | \$0.53838               | -0.12592              | -19.0%                  |
| NW Natural           | 311SF         | \$0.00000              | \$0.00000               | 0.00000               | #DIV/0!                 |
| <b>Interruptible</b> |               |                        |                         |                       |                         |
| Avista               | 440           | \$0.00000              | \$0.00000               | 0.00000               | #DIV/0!                 |
| Cascade              | 170           | \$0.59587              | \$0.46995               | -0.12592              | -21.1%                  |
| NW Natural           | 32ISI         | \$0.00000              | \$0.00000               | 0.00000               | #DIV/0!                 |

| RESIDENTIAL BILL IMPACTS |               |                        |                 |              |              |                 |              |              |                      |                     |                        |         |
|--------------------------|---------------|------------------------|-----------------|--------------|--------------|-----------------|--------------|--------------|----------------------|---------------------|------------------------|---------|
| Class of Service         | Rate Schedule | Average January Therms | Current         |              |              | Proposed        |              |              | % -Change            |                     |                        |         |
|                          |               |                        | Customer Charge | January Bill | January Bill | Customer Charge | January Bill | January Bill | Annual Therms/ Month | Change Monthly Bill | % -Change Monthly Bill |         |
| Avista                   | 410           | 0                      | \$0.00          | \$0.00       | \$0.00       | \$0.00          | \$0.00       | \$0.00       | 0                    | \$0.00              | \$0.00                 | #DIV/0! |
| Cascade                  | 101           | 106                    | \$3.00          | \$93.41      | \$80.64      | \$3.00          | \$93.41      | \$80.64      | 51                   | \$3.00              | -\$6.14                | -13.2%  |
| NW Natural               | 2             | 0                      | \$0.00          | \$0.00       | \$0.00       | \$0.00          | \$0.00       | \$0.00       | 0                    | \$0.00              | \$0.00                 | #DIV/0! |

\* The residential rates illustrated above do not include pass-through charges included on customer bills that utilities are required to collect and distribute to the appropriate third parties, such as for franchise fees or the Public Purposes Charge.