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September 28, 2015

NWN OPUC Advice No. 15-12 / UG 298  
SUPPLEMENT B  
(UM 1496)

**VIA ELECTRONIC FILING**

Public Utility Commission of Oregon  
Attention: Filing Center  
201 High Street SE, Suite 100  
Post Office Box 1088  
Salem, Oregon 97301-1088

**Re: Second Replacement Filing: UG 298  
Annual Purchased Gas Cost and Technical Rate Adjustments**

**UM 1496: Request for Amortization of Certain Deferred Accounts  
Relating to Gas Costs**

Northwest Natural Gas Company, dba NW Natural (“NW Natural” or the “Company”), files herewith revisions to its Tariff, P.U.C. Or. 25, stated to become effective with service on and after November 1, 2015, as follows:

Third Revision of Sheet P-2,  
Schedule P,  
“Purchased Gas Cost Adjustments (continued)”

Third Revision of Sheet P-3,  
Schedule P,  
“Purchased Gas Cost Adjustments (continued);”

Third Revision of Sheet P-5,  
Schedule P,  
“Purchased Gas Cost Adjustments (continued);”

Fifth Revision of Sheet 162-1,  
Schedule 162,  
“Temporary (Technical) Adjustments to Rates;”

Fifth Revision of Sheet 162-2,  
Schedule 162,  
“Temporary (Technical) Adjustments to Rates (continued);”

Fourth Revision of Sheet 164-1,  
Schedule 164,  
“Purchased Gas Cost Adjustments to Rates;” and

First Revision of Sheet 187-1,  
Schedule 187,  
“Special Rate Adjustment for Mist Capacity Recall.”

This filing replaces, in the entirety, Exhibit A, Exhibit B, and all tariff sheets filed under NWN OPUC Advice No. 15-12A dated September 15, 2015. The advice letter and Exhibit C as filed in NWN OPUC Advice No. 15-12A are incorporated herein by reference, except that Pages 8 and 9 of Exhibit C are revised and submitted with this filing.

The purpose of this second replacement filing is to include the effects of the rate treatment of the post-carry wells as stipulated between the parties in Docket UM 1717, and approved by the Commission in OPUC Order No. 15-297 entered September 28, 2015, in that docket.

The effect of this supplemental filing is to decrease the Company’s annual revenues by about \$68,434,566, or about 10.1%; the change in commodity cost is a decrease of \$66,754,904 and the change in demand cost is a decrease of \$1,679,662.

The proposed Annual Sales WACOG including the Post Carry Wells is \$0.32684 per therm, and the proposed Winter Sales WACOG is \$0.33795. Revenue sensitive effects are applied for billing purposes, resulting in a proposed Annual Sales Billing WACOG of \$0.33602 and a proposed Winter Sales Billing WACOG of \$0.34744.

The Post Carry Wells has no effect on demand charges.

The combined effects of this filing, including Post Carry Wells, is to decrease the Company’s annual revenues by about \$87,662,832, or about 12.9%; the change in purchased gas costs is a decrease of \$68,434,566 and the change in temporary adjustments to rates is a decrease of \$19,463,019.

The average monthly bill impact of the changes proposed in this filing is shown in the table below:

<b>Class</b>	<b>Rate Schedule</b>	<b>Average Monthly Bill Change (\$)</b>	<b>Average Monthly Bill Change (%)</b>
Residential	Schedule 2	-\$6.79	-11.0%
Commercial	Schedule 3	-\$29.92	-12.6%
Commercial Firm Sales	Schedule 31	-\$414.09	-15.9%
Industrial Firm Sales	Schedule 32	-\$2,652.95	-21.1%
Industrial Interruptible Sales	Schedule 32	-\$6,169.53	-25.2%

The monthly bill effects for all other rate classes can be found in the separately provided workpapers.

Please note that the monthly bill effects for Rate Schedule 31 and Rate Schedule 32 do not include the effect of changes in the pipeline capacity charge due to the customer option to elect either an MDDV-based capacity charge or a volumetric-based capacity charge. If a customer served under Rate Schedule 32 Industrial Firm Sales Service elected the volumetric pipeline capacity option, the change in the monthly bill effective November 1, 2015, would be \$82.96, or 3.19%.

Commission Staff's Attachment A through Attachment D, required by Section 5 of the PGA Filing Guidelines, are included in the Company's work papers, incorporated herein by reference, which will be submitted under separate cover.

The Company requests that the tariff sheets filed herewith be permitted to become effective with service on and after November 1, 2015.

Copies of this letter and the filing made herewith are available in the Company's main office in Oregon and on its website at [www.nwnatural.com](http://www.nwnatural.com).

The Company waives paper service in this proceeding. Please address correspondence on this matter to Kyle Walker at [Kyle.Walker@nwnatural.com](mailto:Kyle.Walker@nwnatural.com), with copies to the following:

eFiling  
Rates & Regulatory Affairs  
NW Natural  
220 NW Second Avenue  
Portland, Oregon 97209  
Telecopier: (503) 721-2516  
Telephone: (503) 226-4211, x3589  
[eFiling@nwnatural.com](mailto:eFiling@nwnatural.com) and

Sincerely,

NW NATURAL

*/s/ Onita R. King*

Onita R. King  
Rates & Regulatory Affairs

Attachments: Exhibit A – Supporting Materials  
Exhibit B – Supporting Materials  
Exhibit C – Pages 8 and 9 of 114

# NORTHWEST NATURAL GAS COMPANY

P.U.C. Or. 25

Third Revision of Sheet P-2  
Cancels Second Revision of Sheet P-2

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## SCHEDULE P PURCHASED GAS COST ADJUSTMENTS (continued)

### DEFINITIONS (continued):

7. Estimated Annual Sales Weighted Average Cost of Gas (Annual Sales WACOG):  
The estimated Annual Sales WACOG is the default Commodity Component for billing purposes, and is used for purposes of calculating the monthly gas cost deferral costs for entry into the Account 191 sub-accounts calculated by the following formula: (Forecasted Purchases at Adjusted Contract Prices) divided by forecasted sales volumes.
- a. "Forecasted Purchases" means November 1 – October 31 forecasted sales volumes, "weather-normalized", plus a percentage for distribution system LUFG.
  - b. "Distribution system embedded LUFG" means the 5-year average of actual distribution system LUFG, not to exceed 2%.
  - c. "Adjusted contract prices" means actual and projected contract prices that are adjusted by each associated Canadian pipeline's published (closest to August 1) fuel use and line loss amount provided for by tariff, and by each associated U.S. pipeline's tariffed rate.

Effective: November 1, 2015: (T)  
Estimated Annual Sales WACOG per therm (w/ revenue sensitive): **\$0.33602** (R)  
Estimated Annual Sales WACOG per therm (w/o revenue sensitive): **\$0.32684** (R)

8. Estimated Winter Sales WACOG: The Company's weighted average Commodity Cost of Gas for the five-month period November through March.

Effective: November 1, 2015: (T)  
Estimated Winter Sales WACOG per therm (w/ revenue sensitive): **\$0.34744** (R)  
Estimated Winter Sales WACOG per therm (w/o revenue sensitive): **\$0.33795** (R)

9. Estimated Non-Commodity Cost: 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.

10. Estimated Non-Commodity Cost per Therm – Firm Sales: The portion of the Estimated annual Non-Commodity Cost applicable to Firm Sales Service divided by November 1 – October 31 forecasted Firm Sales Service volumes.

Effective: November 1, 2015: (T)  
Estimated Non-Commodity Cost per therm-Firm Sales (w/revenue sensitive): **\$0.11849** (R)  
Estimated Non-Commodity Cost per therm-Firm Sales (w/o revenue sensitive): **\$0.11525** (R)

(continue to Sheet P-3)

Issued September 28, 2015  
NWN OPUC Advice No. 15-12B

Effective with service on  
and after November 1, 2015

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**SCHEDULE P**  
**PURCHASED GAS COST ADJUSTMENTS**  
(continued)

**DEFINITIONS (continued):**

11. Estimated Non-Commodity Cost per Therm – Interruptible Sales: The portion of the Estimated annual Non-Commodity Cost applicable to Interruptible Sales Service divided by November 1 – October 31 forecasted Interruptible Sales Service volumes.
- Effective: November 1, 2015: (T)
- |   |                  |     |
|---|------------------|-----|
| Estimated Non-Commodity Cost per therm-Interruptible Sales (w/revenue sensitive):   | <b>\$0.01410</b> | (R) |
| Estimated Non-Commodity Cost per therm-Interruptible Sales (w/o revenue sensitive): | <b>\$0.01371</b> | (R) |
12. Estimated Non-Commodity Cost per Therm – MDDV Based Sales: The portion of the Estimated annual Non-Commodity Cost applicable to MDDV Based Sales Service.
- Effective: November 1, 2015: (T)
- |  |               |     |
|--|---------------|-----|
| Estimated Non-Commodity Cost per therm-MDDV Based Sales (w/revenue sensitive):   | <b>\$1.76</b> | (R) |
| Estimated Non-Commodity Cost per therm-MDDV Based Sales (w/o revenue sensitive): | <b>\$1.71</b> | (R) |
13. Actual Monthly Firm Sales Service Volumes: The total actual monthly billed Firm Sales Service therms, excluding MDDV based volumes, adjusted for estimated unbilled Firm Sales Service therms.
14. Actual Monthly Interruptible Sales Service Volumes: The total actual monthly billed Interruptible Sales Service therms, adjusted for estimated unbilled Interruptible Sales Service therms.
15. Actual Monthly MDDV Based Firm Sales Service Volumes: The total actual monthly billed Firm Sales Service Volumes for Rate Schedule 31 and Rate Schedule 32 customers billed under the Firm Pipeline Capacity Charge - Peak Demand option, adjusted for estimated unbilled MDDV Firm Sales Service Volumes.
16. Embedded Commodity Cost: The Estimated Annual Sales WACOG, updated for October 31 storage inventory prices, multiplied by the Total of the Actual Monthly Firm and Interruptible Sales Service Volumes.
17. Embedded Non-Commodity Cost per Therm – Firm Sales Service: The Estimated Non-Commodity Cost per Therm - Firm Sales Service multiplied by the Actual Monthly Firm Sales Service Volumes.
18. Embedded Non-Commodity Cost per Therm – Interruptible Sales Service: The Estimated Non-Commodity Cost per Therm – Interruptible Sales Service multiplied by the Actual Monthly Interruptible Sales Service Volumes.

(continue to Sheet P-4)

Issued September 28, 2015  
NWN OPUC Advice No. 15-12B

Effective with service on  
and after November 1, 2015



# NORTHWEST NATURAL GAS COMPANY

P.U.C. Or. 25

Fifth Revision of Sheet 162-1  
Cancels Fourth Revision of Sheet 162-1

## SCHEDULE 162 TEMPORARY (TECHNICAL) ADJUSTMENTS TO RATES

### PURPOSE:

To identify adjustments to rates in the Rate Schedules listed below that relate to the amortization of balances in the Company's Account 191 deferred revenue and gas cost accounts.

### APPLICABLE:

To the following Rate Schedules of this Tariff:

Rate Schedule 2    Rate Schedule 27    Rate Schedule 32  
Rate Schedule 3    Rate Schedule 31    Rate Schedule 33

### APPLICATION TO RATE SCHEDULES:

Effective: November 1, 2015

(T)

The Total Adjustment amount shown below is included in the Temporary Adjustments reflected in the above-listed Rate Schedules. NO ADDITIONAL ADJUSTMENT TO RATES IS REQUIRED.

Schedule	Block	Account 191 Commodity Adjustment	Account 191 Pipeline Capacity Adjustment	Total Adjustment
2		(\$0.01762)	\$0.01484	<b>(\$0.00278)</b>
3 CSF		(\$0.01762)	\$0.01484	<b>(\$0.00278)</b>
3 ISF		(\$0.01762)	\$0.01484	<b>(\$0.00278)</b>
27		(\$0.01762)	\$0.01484	<b>(\$0.00278)</b>
31 CSF	Block 1	(\$0.01762)	\$0.01484	<b>(\$0.00278)</b>
	Block 2	(\$0.01762)	\$0.01484	<b>(\$0.00278)</b>
31 CTF	Block 1	N/A	N/A	<b>\$0.00000</b>
	Block 2	N/A	N/A	<b>\$0.00000</b>
31 ISF	Block 1	(\$0.01762)	\$0.01484	<b>(\$0.00278)</b>
	Block 2	(\$0.01762)	\$0.01484	<b>(\$0.00278)</b>
31 ITF	Block 1	N/A	N/A	<b>\$0.00000</b>
	Block 2	N/A	N/A	<b>\$0.00000</b>

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(D)

(continue to Sheet 162-2)

Issued September 28, 2015  
NWN OPUC Advice No. 15-12B

Effective with service on  
and after November 1, 2015

# NORTHWEST NATURAL GAS COMPANY

P.U.C. Or. 25

Fifth Revision of Sheet 162-2  
Cancels Fourth Revision of Sheet 162-2

## SCHEDULE 162 TEMPORARY (TECHNICAL) ADJUSTMENTS TO RATES (continued)

**APPLICATION TO RATE SCHEDULES (continued):**

Effective: November 1, 2015

(T)

Schedule	Block	Account 191 Commodity Adjustment [1]	Account 191 Pipeline Capacity Adjustment	Total Adjustment
32 CSF	Block 1	(\$0.01762)	\$0.01484	(\$0.00278)
	Block 2	(\$0.01762)	\$0.01484	(\$0.00278)
	Block 3	(\$0.01762)	\$0.01484	(\$0.00278)
	Block 4	(\$0.01762)	\$0.01484	(\$0.00278)
	Block 5	(\$0.01762)	\$0.01484	(\$0.00278)
	Block 6	(\$0.01762)	\$0.01484	(\$0.00278)
32 ISF	Block 1	(\$0.01762)	\$0.01484	(\$0.00278)
	Block 2	(\$0.01762)	\$0.01484	(\$0.00278)
	Block 3	(\$0.01762)	\$0.01484	(\$0.00278)
	Block 4	(\$0.01762)	\$0.01484	(\$0.00278)
	Block 5	(\$0.01762)	\$0.01484	(\$0.00278)
	Block 6	(\$0.01762)	\$0.01484	(\$0.00278)
32 CTF/ITF	Block 1	N/A	N/A	\$0.00000
	Block 2	N/A	N/A	\$0.00000
	Block 3	N/A	N/A	\$0.00000
	Block 4	N/A	N/A	\$0.00000
	Block 5	N/A	N/A	\$0.00000
	Block 6	N/A	N/A	\$0.00000
32 CSI	Block 1	(\$0.01762)	\$0.00189	(\$0.01573)
	Block 2	(\$0.01762)	\$0.00189	(\$0.01573)
	Block 3	(\$0.01762)	\$0.00189	(\$0.01573)
	Block 4	(\$0.01762)	\$0.00189	(\$0.01573)
	Block 5	(\$0.01762)	\$0.00189	(\$0.01573)
	Block 6	(\$0.01762)	\$0.00189	(\$0.01573)
32 ISI	Block 1	(\$0.01762)	\$0.00189	(\$0.01573)
	Block 2	(\$0.01762)	\$0.00189	(\$0.01573)
	Block 3	(\$0.01762)	\$0.00189	(\$0.01573)
	Block 4	(\$0.01762)	\$0.00189	(\$0.01573)
	Block 5	(\$0.01762)	\$0.00189	(\$0.01573)
	Block 6	(\$0.01762)	\$0.00189	(\$0.01573)
32 CTI/ITI	Block 1	N/A	N/A	\$0.00000
	Block 2	N/A	N/A	\$0.00000
	Block 3	N/A	N/A	\$0.00000
	Block 4	N/A	N/A	\$0.00000
	Block 5	N/A	N/A	\$0.00000
	Block 6	N/A	N/A	\$0.00000
33 TI		N/A	N/A	\$0.00000
33 TF		N/A	N/A	\$0.00000

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**GENERAL TERMS:**

This Schedule is governed by the terms of this Schedule, the General Rules and Regulations contained in this Tariff, any other schedules that by their terms or by the terms of this Schedule apply to service under this Schedule, and by all rules and regulations prescribed by regulatory authorities, as amended from time to time.

Issued September 28, 2015  
NWN OPUC Advice No. 15-12B

Effective with service on  
and after November 1, 2015



# NORTHWEST NATURAL GAS COMPANY

P.U.C. Or. 25

Fourth Revision of Sheet 164-1  
Cancels Third Revision of Sheet 164-1

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## SCHEDULE 164 PURCHASED GAS COST ADJUSTMENT TO RATES

### **PURPOSE:**

To identify the Commodity and Pipeline Capacity Components applicable to the Rate Schedules listed below.

### **APPLICABLE:**

To the following Rate Schedules of this Tariff:

Rate Schedule 2    Rate Schedule 3    Rate Schedule 27  
Rate Schedule 31    Rate Schedule 32

### **APPLICATION TO RATE SCHEDULES:**

Effective: November 1, 2015

(T)

Annual Sales WACOG [1]	\$0.33602
Winter Sales WACOG [2]	\$0.34744
Firm Sales Service Pipeline Capacity Component [3]	\$0.11849
Firm Sales Service Pipeline Capacity Component [4]	\$1.76000
Interruptible Sales Service Pipeline Capacity Component [5]	\$0.01410

(R)

(R)

- [1] Applies to all Sales Service Rate Schedules (per therm) except where Winter Sales WACOG or Monthly Incremental Cost of Gas applies.
- [2] Applies to Sales Customers that request Winter Sales WACOG at the September 15 Annual Service Election.
- [3] Applies to Rate Schedules 2, 3, and Schedule 31 and Schedule 32 Firm Sales Service Volumetric Pipeline Capacity option (per therm).
- [4] Applies to Rate Schedules 31 and 32 Firm Sales Service Peak Demand Pipeline Capacity option (per therm of MDDV per month).
- [5] Applies to Rate Schedule 32 Interruptible Sales Service (per therm).

### **GENERAL TERMS:**

This schedule is governed by the terms of this Schedule, the General Rules and Regulations contained in this Tariff, any other schedules that by their terms or by the terms of this Rate Schedule apply to service under the Rate Schedule, and by all rules and regulations prescribed by regulatory authorities, as amended from time to time.

Issued September 28, 2015  
NWN OPUC Advice No. 15-12B

Effective with service on  
and after November 1, 2015

# NORTHWEST NATURAL GAS COMPANY

P.U.C. Or. 25

First Revision of Sheet 187-1

Cancels Original Sheet 187-1

## SCHEDULE 187 SPECIAL RATE ADJUSTMENT FOR MIST CAPACITY RECALL

**PURPOSE:**

The purpose of this Schedule is to reflect the rate effects of the Company's recall of Mist storage capacity for use by the Company's core Sales Service Customers.

**APPLICABLE:**

To the following Rate Schedules of this Tariff:

Rate Schedule 2

Rate Schedule 3  
Rate Schedule 27

Rate Schedule 31  
Rate Schedule 32

**APPLICATION TO RATE SCHEDULES:**

Effective: November 1, 2015

(T)

The Total Adjustment amounts shown below are included in the Base Adjustments reflected in the above-listed Rate Schedules. NO ADDITIONAL ADJUSTMENT TO RATES IS REQUIRED.

Rate Schedule/Class	Block	Mist Recall Base Adjustment		Schedule	Block	Mist Recall Base Adjustment
2		\$0.00045		31 CSF	Block 1	\$0.00024
03 CSF		\$0.00032			Block 2	\$0.00022
03 ISF		\$0.00027		31 ISF	Block 1	\$0.00017
27		\$0.00037			Block 2	\$0.00016
32 CSF	Block 1	\$0.00014		32 CSI	Block 1	\$0.00010
	Block 2	\$0.00012			Block 2	\$0.00008
	Block 3	\$0.00008			Block 3	\$0.00006
	Block 4	\$0.00005			Block 4	\$0.00003
	Block 5	\$0.00003			Block 5	\$0.00002
	Block 6	\$0.00001			Block 6	\$0.00001
32 ISF	Block 1	\$0.00010		32 ISI	Block 1	\$0.00009
	Block 2	\$0.00009			Block 2	\$0.00008
	Block 3	\$0.00006			Block 3	\$0.00006
	Block 4	\$0.00004			Block 4	\$0.00003
	Block 5	\$0.00002			Block 5	\$0.00002
	Block 6	\$0.00001			Block 6	\$0.00001

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**GENERAL TERMS:**

Service under this Schedule is governed by the terms of this Schedule, the General Rules and Regulations contained in this, any other schedules that by their terms or by the terms of this Schedule apply to service under this Schedule, and by all rules and regulations prescribed by regulatory authorities, as amended from time to time.

Issued September 28, 2015  
NWN OPUC Advice No. 15-12B

Effective with service on  
and after November 1, 2015

EXHIBIT A

BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON

NW NATURAL SUPPORTING MATERIALS

Purchased Gas Cost Deferral Amortizations  
UM 1496

NWN OPUC Advice No. 15-12B/UG 298

September 28, 2015

# NW NATURAL

## EXHIBIT A

### Supporting Material

Purchased Gas Cost Deferral Amortizations – UM 1496

NWN OPUC ADVICE NO. 15-12B/UG 298

<b>Description</b>	<b>Page</b>
Summary of Temporary Increments	1
Calculation of Increments Allocated on the Equal Cent per Therm Basis	2
Basis for Revenue Related Costs	3
Summary of Deferred Accounts Included in the PGA	4
191400 Core Market Commodity Gas Cost Deferral	5
191401 Amortization of Oregon WACOG Deferral	6
191405 Post-Carry Well Deferral	7
191410 Core Market Demand Cost Deferral	8
191411 Amortization of Oregon Demand Deferral	9
191417 Coos County Demand	10
191450 Core Market Demand Collection Deferral	11
Calculation of Increments Allocated on the Equal Percentage of Margin Basis	12
Recall of Mist Storage for Core	13

1  
 2  
 3

		Current	WACOG	Demand	Demand	Total Proposed	Net Effect of
		Temporaries	Deferral	Deferral -	Deferral -	Temps	Temps
				FIRM	INTERRUPTIB		(N = M - A)
		A	B	C	LE	M	N
Schedule	Block						
2R		0.02381	(0.01762)	0.01484	0.00000	0.03592	0.01211
3C Sales Firm		0.05288	(0.01762)	0.01484	0.00000	0.07100	0.01812
3I Sales Firm		0.03900	(0.01762)	0.01484	0.00000	0.03309	(0.00591)
27 Dry Out		0.02332	(0.01762)	0.01484	0.00000	0.01021	(0.01311)
31C Sales Firm	Block 1	0.05295	(0.01762)	0.01484	0.00000	0.06829	0.01534
	Block 2	0.05298	(0.01762)	0.01484	0.00000	0.06757	0.01459
31C Trans Firm	Block 1	(0.00072)	0.00000	0.00000	0.00000	0.00996	0.01068
	Block 2	(0.00071)	0.00000	0.00000	0.00000	0.00910	0.00981
31I Sales Firm	Block 1	0.03909	(0.01762)	0.01484	0.00000	0.02976	(0.00933)
	Block 2	0.03911	(0.01762)	0.01484	0.00000	0.02918	(0.00993)
31I Trans Firm	Block 1	(0.00002)	0.00000	0.00000	0.00000	0.00628	0.00630
	Block 2	(0.00001)	0.00000	0.00000	0.00000	0.00569	0.00570
32C Sales Firm	Block 1	0.03903	(0.01762)	0.01484	0.00000	0.02837	(0.01066)
	Block 2	0.03906	(0.01762)	0.01484	0.00000	0.02766	(0.01140)
	Block 3	0.03907	(0.01762)	0.01484	0.00000	0.02646	(0.01261)
	Block 4	0.03911	(0.01762)	0.01484	0.00000	0.02526	(0.01385)
	Block 5	0.03912	(0.01762)	0.01484	0.00000	0.02454	(0.01458)
	Block 6	0.03915	(0.01762)	0.01484	0.00000	0.02406	(0.01509)
32I Sales Firm	Block 1	0.03916	(0.01762)	0.01484	0.00000	0.02728	(0.01188)
	Block 2	0.03918	(0.01762)	0.01484	0.00000	0.02675	(0.01243)
	Block 3	0.03921	(0.01762)	0.01484	0.00000	0.02586	(0.01335)
	Block 4	0.03922	(0.01762)	0.01484	0.00000	0.02497	(0.01425)
	Block 5	0.03925	(0.01762)	0.01484	0.00000	0.02444	(0.01481)
	Block 6	0.03924	(0.01762)	0.01484	0.00000	0.02409	(0.01515)
32 Trans Firm	Block 1	0.00004	0.00000	0.00000	0.00000	0.00351	0.00347
	Block 2	0.00004	0.00000	0.00000	0.00000	0.00301	0.00297
	Block 3	0.00006	0.00000	0.00000	0.00000	0.00216	0.00210
	Block 4	0.00007	0.00000	0.00000	0.00000	0.00133	0.00126
	Block 5	0.00009	0.00000	0.00000	0.00000	0.00082	0.00073
	Block 6	0.00008	0.00000	0.00000	0.00000	0.00049	0.00041
32C Sales Interr	Block 1	0.04615	(0.01762)	0.00000	0.00189	0.01408	(0.03207)
	Block 2	0.04615	(0.01762)	0.00000	0.00189	0.01356	(0.03259)
	Block 3	0.04619	(0.01762)	0.00000	0.00189	0.01270	(0.03349)
	Block 4	0.04620	(0.01762)	0.00000	0.00189	0.01184	(0.03436)
	Block 5	0.04623	(0.01762)	0.00000	0.00189	0.01131	(0.03492)
	Block 6	0.04622	(0.01762)	0.00000	0.00189	0.01098	(0.03524)
32I Sales Interr	Block 1	0.04626	(0.01762)	0.00000	0.00189	0.01408	(0.03218)
	Block 2	0.04626	(0.01762)	0.00000	0.00189	0.01359	(0.03267)
	Block 3	0.04629	(0.01762)	0.00000	0.00189	0.01276	(0.03353)
	Block 4	0.04630	(0.01762)	0.00000	0.00189	0.01194	(0.03436)
	Block 5	0.04633	(0.01762)	0.00000	0.00189	0.01144	(0.03489)
	Block 6	0.04632	(0.01762)	0.00000	0.00189	0.01111	(0.03521)
32 Trans Interr	Block 1	0.00004	0.00000	0.00000	0.00000	0.00316	0.00312
	Block 2	0.00005	0.00000	0.00000	0.00000	0.00271	0.00266
	Block 3	0.00006	0.00000	0.00000	0.00000	0.00196	0.00190
	Block 4	0.00007	0.00000	0.00000	0.00000	0.00120	0.00113
	Block 5	0.00009	0.00000	0.00000	0.00000	0.00076	0.00067
	Block 6	0.00010	0.00000	0.00000	0.00000	0.00045	0.00035
33		0.00000	0.00000	0.00000	0.00000	0.00020	0.00020

**NW Natural**  
**Rates & Regulatory Affairs**  
**2015-16 PGA - Oregon: September Filing**  
**Calculation of Increments Allocated on the EQUAL CENT PER THERM BASIS**  
**ALL VOLUMES IN THERMS**

Line	Description	Oregon PGA Volumes page, Column F	WACOG Deferral			Demand Deferral - FIRM			Demand Deferral - INTERRUPTIBLE					
			Proposed Amount:	Revenue Sensitive Multiplier:	Amount to Amortize:	Multiplier	Volumes	Increment	Multiplier	Volumes	Increment	Multiplier	Volumes	Increment
			(11,719,291)	(12,048,455)	(12,048,455)	9,037,065	2,732%	9,290,892	2,732%	106,502	2,732%	109,493	2,732%	106,502
6	Schedule 2R	Block	365,285,306	1.0	365,285,306	0.01762	1.0	365,285,306	0.01484	0.0	0.00000	0.0	0.00000	
7	3C Firm Sales	Block 1	158,936,755	1.0	158,936,755	0.01762	1.0	158,936,755	0.01484	0.0	0.00000	0.0	0.00000	
8	31 Firm Sales	Block 2	3,811,735	1.0	3,811,735	0.01762	1.0	3,811,735	0.01484	0.0	0.00000	0.0	0.00000	
9	27 Dry Out	Block 1	700,552	1.0	700,552	0.01762	1.0	700,552	0.01484	0.0	0.00000	0.0	0.00000	
10	31C Firm Sales	Block 2	20,701,736	1.0	20,701,736	0.01762	1.0	20,701,736	0.01484	0.0	0.00000	0.0	0.00000	
11	31C Firm Sales	Block 1	15,317,497	1.0	15,317,497	0.01762	1.0	15,317,497	0.01484	0.0	0.00000	0.0	0.00000	
12	31C Firm Trans	Block 2	1,022,480	0.0	0	0.00000	0.0	0	0.00000	0.0	0.00000	0.0	0.00000	
13	31C Firm Sales	Block 1	1,238,213	0.0	0	0.00000	0.0	0	0.00000	0.0	0.00000	0.0	0.00000	
14	31I Firm Sales	Block 2	4,178,853	1.0	4,178,853	0.01762	1.0	4,178,853	0.01484	0.0	0.00000	0.0	0.00000	
15	31I Firm Sales	Block 1	9,536,789	1.0	9,536,789	0.01762	1.0	9,536,789	0.01484	0.0	0.00000	0.0	0.00000	
16	31I Firm Trans	Block 2	181,494	0.0	0	0.00000	0.0	0	0.00000	0.0	0.00000	0.0	0.00000	
17	31I Firm Trans	Block 1	680,650	0.0	0	0.00000	0.0	0	0.00000	0.0	0.00000	0.0	0.00000	
18	32C Firm Sales	Block 2	26,567,626	1.0	26,567,626	0.01762	1.0	26,567,626	0.01484	0.0	0.00000	0.0	0.00000	
19	32C Firm Sales	Block 1	7,804,067	1.0	7,804,067	0.01762	1.0	7,804,067	0.01484	0.0	0.00000	0.0	0.00000	
20	32C Firm Sales	Block 2	829,092	1.0	829,092	0.01762	1.0	829,092	0.01484	0.0	0.00000	0.0	0.00000	
21	32C Firm Sales	Block 3	20,793	1.0	20,793	0.01762	1.0	20,793	0.01484	0.0	0.00000	0.0	0.00000	
22	32C Firm Sales	Block 4	0	1.0	0	0.01762	1.0	0	0.01484	0.0	0.00000	0.0	0.00000	
23	32C Firm Sales	Block 5	0	1.0	0	0.01762	1.0	0	0.01484	0.0	0.00000	0.0	0.00000	
24	32C Firm Sales	Block 6	0	1.0	0	0.01762	1.0	0	0.01484	0.0	0.00000	0.0	0.00000	
25	32I Firm Sales	Block 1	4,645,409	1.0	4,645,409	0.01762	1.0	4,645,409	0.01484	0.0	0.00000	0.0	0.00000	
26	32I Firm Sales	Block 2	5,152,955	1.0	5,152,955	0.01762	1.0	5,152,955	0.01484	0.0	0.00000	0.0	0.00000	
27	32I Firm Sales	Block 3	1,826,257	1.0	1,826,257	0.01762	1.0	1,826,257	0.01484	0.0	0.00000	0.0	0.00000	
28	32I Firm Sales	Block 4	627,963	1.0	627,963	0.01762	1.0	627,963	0.01484	0.0	0.00000	0.0	0.00000	
29	32I Firm Sales	Block 5	(0)	1.0	(0)	0.01762	1.0	(0)	0.01484	0.0	0.00000	0.0	0.00000	
30	32I Firm Sales	Block 6	0	1.0	0	0.01762	1.0	0	0.01484	0.0	0.00000	0.0	0.00000	
31	32 Firm Trans	Block 1	12,006,597	0.0	0	0.00000	0.0	0	0.00000	0.0	0.00000	0.0	0.00000	
32	32 Firm Trans	Block 2	16,315,496	0.0	0	0.00000	0.0	0	0.00000	0.0	0.00000	0.0	0.00000	
33	32 Firm Trans	Block 3	9,641,378	0.0	0	0.00000	0.0	0	0.00000	0.0	0.00000	0.0	0.00000	
34	32 Firm Trans	Block 4	16,134,178	0.0	0	0.00000	0.0	0	0.00000	0.0	0.00000	0.0	0.00000	
35	32 Firm Trans	Block 5	21,282,059	0.0	0	0.00000	0.0	0	0.00000	0.0	0.00000	0.0	0.00000	
36	32 Firm Trans	Block 6	1,920,752	0.0	0	0.00000	0.0	0	0.00000	0.0	0.00000	0.0	0.00000	
37	32C Interr Sales	Block 1	5,686,222	1.0	5,686,222	0.01762	1.0	5,686,222	0.00000	1.0	5,686,222	0.00189	0.00189	
38	32C Interr Sales	Block 2	7,563,208	1.0	7,563,208	0.01762	1.0	7,563,208	0.00000	1.0	7,563,208	0.00189	0.00189	
39	32C Interr Sales	Block 3	3,897,038	1.0	3,897,038	0.01762	1.0	3,897,038	0.00000	1.0	3,897,038	0.00189	0.00189	
40	32C Interr Sales	Block 4	4,445,365	1.0	4,445,365	0.01762	1.0	4,445,365	0.00000	1.0	4,445,365	0.00189	0.00189	
41	32C Interr Sales	Block 5	71,870	1.0	71,870	0.01762	1.0	71,870	0.00000	1.0	71,870	0.00189	0.00189	
42	32C Interr Sales	Block 6	0	1.0	0	0.01762	1.0	0	0.00000	1.0	0	0.00189	0.00189	
43	32I Interr Sales	Block 1	7,186,289	1.0	7,186,289	0.01762	1.0	7,186,289	0.00000	1.0	7,186,289	0.00189	0.00189	
44	32I Interr Sales	Block 2	8,946,142	1.0	8,946,142	0.01762	1.0	8,946,142	0.00000	1.0	8,946,142	0.00189	0.00189	
45	32I Interr Sales	Block 3	5,135,755	1.0	5,135,755	0.01762	1.0	5,135,755	0.00000	1.0	5,135,755	0.00189	0.00189	
46	32I Interr Sales	Block 4	10,445,179	1.0	10,445,179	0.01762	1.0	10,445,179	0.00000	1.0	10,445,179	0.00189	0.00189	
47	32I Interr Sales	Block 5	4,597,392	1.0	4,597,392	0.01762	1.0	4,597,392	0.00000	1.0	4,597,392	0.00189	0.00189	
48	32I Interr Sales	Block 6	1	1.0	1	0.01762	1.0	1	0.00000	1.0	1	0.00189	0.00189	
49	32 Interr Trans	Block 1	8,779,332	0.0	0	0.00000	0.0	0	0.00000	0.0	0	0.00000	0.00000	
50	32 Interr Trans	Block 2	15,689,249	0.0	0	0.00000	0.0	0	0.00000	0.0	0	0.00000	0.00000	
51	32 Interr Trans	Block 3	11,306,695	0.0	0	0.00000	0.0	0	0.00000	0.0	0	0.00000	0.00000	
52	32 Interr Trans	Block 4	28,429,084	0.0	0	0.00000	0.0	0	0.00000	0.0	0	0.00000	0.00000	
53	32 Interr Trans	Block 5	56,035,539	0.0	0	0.00000	0.0	0	0.00000	0.0	0	0.00000	0.00000	
54	32 Interr Trans	Block 6	78,278,646	0.0	0	0.00000	0.0	0	0.00000	0.0	0	0.00000	0.00000	
55			0	0.0	0	0.00000	0.0	0	0.00000	0.0	0	0.00000	0.00000	

**NW Natural**  
**Rates and Regulatory Affairs**  
**2015-2016 PGA Filing - OREGON**  
**Basis for Revenue Related Costs**

	Twelve Months Ended 06/30/15	
1		
2		
3	Total Billed Gas Sales Revenues	635,125,404
4	Total Oregon Revenues	657,765,960
5		
6	Regulatory Commission Fees [1]	1,697,120
7	City License and Franchise Fees	15,291,561
8	Net Uncollectible Expense [2]	1,032,745
9		
10	Total	18,021,426
11		
12		
13		
14		0.250% Statutory rate
15		2.325% Line 7 ÷ Line 4
		0.157% Line 8 ÷ Line 4
		<b>2.732%</b> Sum lines 8-9

**Note:**

[1] Dollar figure is set at statutory level of 0.25% times Total Oregon Revenues (line 4)

[2] Represents the normalized net write-offs based on a three-year average.

**NW Natural  
 Rates & Regulatory Affairs  
 2015-2016 PGA Filing - August Filing  
 Summary of Deferred Accounts Included in the PGA**

Account	A	B	C	D	E	F	G1	G2	H	I	J	
	Balance 6/30/2015	Adjustment	Jul-Oct Estimated Activity	Jul-Oct Interest	Estimated Balance 10/31/2015	Interest Rate During Amortization	Estimated Interest During Amortization	Estimated Amount for (Refund) or Collection	Amounts Excluded from PGA Filing	Amounts Included in PGA Filing		
<b>Miscellaneous Amortizations</b>												
23												
24	254309 AMORT SIP COS RESERVE	(173,741)	88,397	(819)	(86,163)	1.93%	(903)	(87,066)	include in 186XXX Sch 178 Adj		0	
25												
26	186232 DEFER INDUSTRIAL DSM (Mar 14 - Feb 15 activity only)	3,226,086	0	0	3,226,086							
27	186233 AMOR INDUSTRIAL DSM	384,097	(490,299)	938	(105,264)							
28	Subtotal	3,610,183	(490,299)	938	3,120,822	1.93%	32,722	3,153,544			3,153,544	
29												
30	254315 PROPERTY SALES AMORT	(6,405)	(15,404)	(75)	(21,883)	1.93%	(229)	(22,112)	include in 186XXX Sch 178 Adj		0	
31												
32	186307 AMR AMORT	5,263	1,366	34	6,663	1.93%	70	6,733	include in 186XXX Sch 178 Adj		0	
33												
34	191031 WORKING GAS DEFERRAL AMORT	31,103	7,376	202	38,681	1.93%	406	39,087	include in 186XXX Sch 178 Adj		0	
35												
36	186XXX Schedule 178 Residual Adjustments								residual balances for 254315, 186307, 191031, and 254309		(63,358)	
37												
38	<b>Gas Cost Deferrals and Amortizations</b>											
39	191401 AMORTIZE OREGON WACOG	6,097,889	(3,678,927)	27,060	2,446,021							
40	191405 POST-CARRY WELL DEFERRAL	525,592	0	13,763	539,356							
41	191400 WACOG - ACCRUE OREGON	(14,210,931)	0	(372,136)	(14,583,067)							
42	Subtotal	(7,587,450)	0	(3,678,927)	(11,597,690)	1.93%	(121,601)	(11,719,291)			(11,719,291)	
43												
44												
45												
46	191411 AMORTIZE DEMAND OREGON	(1,464,448)	763,679	(6,844)	(707,612)							
47	191410 DEMAND - ACCRUE OREGON	(4,302,008)	0	(112,655)	(4,414,663)							
48	191417 DEMAND - ACCRUE COOS BAY	101,600	0	0	101,600							
49	191450 OREGON DEMAND ACCRUE VOLUME	13,710,339	0	359,028	14,069,367							
50	Subtotal	8,045,484	0	763,679	9,048,692	1.93%	94,875	9,143,567			9,143,567	



Company: Northwest Natural Gas Company  
 State: Oregon  
 Description: Core Market Commodity gas cost deferral  
 Account Number: 191400  
 Docket UM 1496  
 Current reauthorization to defer was granted in Order No. 13-365

Narrative: Deferral of customer's share of the difference between actual core commodity cost incurred and the Annual Sales WACOG embedded as defined in the related annual PGA. From Nov 09 forward the deferral election is 90%.

1	2	3	4	5	6	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	114	115	116	117	118	119										
Debit	(Credit)	Month/Year	Note	Commodity	Interest	Interest Rate	Storage	Hedge	Transfer	Activity	Deferral	Plus Int.	GL Balance																												
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)																															
Beginning Bal																																									
Nov-13	<b>1</b>		(1,018,327)	(3,307)	7.78%	(1,778)	0	2,453,528	1,430,116	(1,023,412)																															
Dec-13			2,370,209	1,040	7.78%	(2,701)	0		2,368,548	1,345,136																															
Jan-14			111,637	9,075	7.78%	(2,527)	0		118,185	1,463,320																															
Feb-14			8,008,055	35,439	7.78%	(2,275)	0		8,041,219	9,504,540																															
Mar-14			7,058,076	84,496	7.78%	(1,481)	0		7,141,091	16,645,631																															
Apr-14			25,070	107,997	7.78%	(1,175)	0		131,892	16,777,522																															
May-14			1,344,869	113,132	7.78%	(639)	0		1,457,362	18,234,884																															
Jun-14			1,214,886	122,159	7.78%	(579)	0		1,336,466	19,571,351																															
Jul-14			840,727	129,611	7.78%	(455)	0		969,883	20,541,234																															
Aug-14			1,274,849	137,307	7.78%	(446)	0		1,411,710	21,952,944																															
Sep-14			195,303	142,960	7.78%	(477)	0		337,786	22,290,729																															
Oct-14			277,661	145,416	7.78%	(757)	0		422,283	22,713,012																															
Nov-14	<b>1</b>		941,419	19,994	7.78%	(7,383)	(21,218)	(20,085,459)	(19,152,646)	3,560,366																															
Dec-14			(1,096,163)	19,345	7.78%	(8,370)	(48,635)		(1,133,823)	2,426,543																															
Jan-15			(3,864,444)	3,058	7.78%	(8,464)	(36,749)		(3,906,599)	(1,480,056)																															
Feb-15			(2,693,034)	(18,417)	7.78%	(5,905)	(22,227)		(2,739,583)	(4,219,638)																															
Mar-15			(3,753,477)	(39,548)	7.78%	(5,138)	(2,063)		(3,800,226)	(8,019,864)																															
Apr-15			(3,322,626)	(62,800)	7.78%	(4,806)	(5,519)		(3,395,750)	(11,415,614)																															
May-15			(1,154,540)	(77,770)	7.78%	(2,946)	(1,941)		(1,237,195)	(12,652,809)																															
Jun-15	<b>2</b>		(1,466,735)	(86,808)	7.78%	(1,912)	(648)		(1,558,122)	(14,210,931)																															

**History truncated for ease of viewing**

**NOTES:**

**1** -Transfer June balance plus July-October interest on June balance to account 191401 for amortization

**2** -Transfer includes one-time adjustment for true-up to ending GL balance

Company: Northwest Natural Gas Company  
 State: Oregon  
 Description: Amortization of Oregon WACOG Deferral  
 Account Number: 191401  
 Dockets UM 1496 and UG 278  
 Amortization of 2013-14 deferral approved in Order No. 14-383

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Debit	(Credit)	Month/Year	Note	Amortization	Transfers	Interest	Interest	rate	Activity	Balance	(a)	(b)	(c)	(d)	(e)	(e2)	(f)	(g)	
Beginning Balance																			
Nov-13	old rates			289,436		(2,446)		1.47%	286,991	(1,854,323)									
Nov-13	new rates (1)			208,502	(2,453,528)	(2,702)		1.38%	(2,247,728)	(4,102,051)									
Dec-13				838,830		(4,235)		1.38%	834,595	(3,267,455)									
Jan-14				909,111		(3,235)		1.38%	905,876	(2,361,579)									
Feb-14				822,889		(2,243)		1.38%	820,646	(1,540,933)									
Mar-14				602,877		(1,425)		1.38%	601,452	(939,481)									
Apr-14				441,435		(827)		1.38%	440,609	(498,872)									
May-14				311,224		(395)		1.38%	310,829	(188,043)									
Jun-14				215,425		(92)		1.38%	215,333	27,291									
Jul-14				183,943		137		1.38%	184,080	211,370									
Aug-14				156,199		333		1.38%	156,532	367,902									
Sep-14				163,354		517		1.38%	163,871	531,773									
Oct-14				194,343		723		1.38%	195,067	726,840									
Nov-14	old rates			142,460		918		1.38%	143,378	870,217									
Nov-14	new rates (1)			(956,938)	20,085,396	28,920		1.77%	19,157,378	20,027,596									
Dec-14				(2,868,241)		27,425		1.77%	(2,840,816)	17,186,780									
Jan-15				(3,138,278)	0	23,036		1.77%	(3,115,241)	14,071,538									
Feb-15				(2,304,492)		19,056		1.77%	(2,285,436)	11,786,102									
Mar-15				(1,955,025)		15,943		1.77%	(1,939,082)	9,847,020									
Apr-15				(1,666,258)		13,295		1.77%	(1,652,963)	8,194,057									
May-15				(1,268,133)	(0)	11,151		1.77%	(1,256,982)	6,937,074									
Jun-15				(848,792)		9,606		1.77%	(839,186)	6,097,889									

**History truncated for ease of viewing**

**NOTES:**

1 - Transfer in authorized balance from account 191400. Starting November 2015, transfer in authorized balance will be from account 191400 and 191405.

Company: Northwest Natural Gas Company  
 State: Oregon  
 Description: Post Carry Wells Deferral  
 Account Number: 191405  
 Info: Deferral authorized in docket UM 1703, Order 15-124

**Note:**  
**The deferral below assumes the post-carry well volumes displaced spot in the PGA. The amount represents difference between the average Rockies forward strip in the PGA and actual post-carry well costs.**

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Debit (Credit)	Month/Year	Note	Deferral	Transfers	Interest Rate	Interest	Activity	Total Balance					
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)					
	<b>Total</b>	<b>191405</b>	<b>Deferral</b>										
48	Beginning Balance												
49	Aug-14		62,359.45		7.78%	202.15	62,561.60	62,561.60					
50	Sep-14		131,895.00		7.78%	427.56	132,322.64	194,884.24					
51	Oct-14		37,893.03		7.78%	122.84	38,015.95	232,900.19					
52	Nov-14		(352.18)		7.78%	(1.14)	(353.24)	232,546.94					
53	Dec-14		55,614.87		7.78%	1,687.96	57,302.91	289,849.85					
54	Jan-15		29,511.71		7.78%	1,974.86	31,486.65	321,336.50					
55	Feb-15		31,494.33		7.78%	2,185.43	33,679.84	355,016.33					
56	Mar-15		37,171.92		7.78%	2,422.19	39,594.19	394,610.52					
57	Apr-15		37,211.06		7.78%	2,679.02	39,890.16	434,500.68					
58	May-15		40,900.94		7.78%	2,949.60	43,850.61	478,351.29					
59	Jun-15		43,996.98		7.78%	3,243.93	47,240.99	525,592.28					

**History truncated for ease of viewing**

**NOTES**

- 1 - Deferral balance included in the 2015-2016 PGA filing for post-carry wells include the agreed upon balances from the UM 1717 settlement conference dated July 16, 2015.
- 2 - NWN is working with Jonah Energy to finalize activity related to the period through June 2015 and related amounts will be recorded in August 2015. If adjustments are material we will update this deferral in the September final PGA filing.

Company: Northwest Natural Gas Company  
 State: Oregon  
 Description: Core Market Demand cost deferral  
 Account Number: 191410  
 Docket UM 1496  
 Current reauthorization to defer was granted in Order No. 14-365

Narrative: Deferral of 100% of the Difference between actual demand cost incurred and the demand cost embedded as defined in the related state's annual PGA.

1	2	3	4	5	6	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	
Debit	(Credit)	Month/Year	Note	Demand	Interest	Interest Rate	Adjustment	Transfer	Activity	Deferral	Plus Int.	GL Balance														
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)																		
Beginning Bal																										
Nov-13	<b>1,4</b>	293,813	952	7.78%		2,067,411	2,362,176	294,766																		
Dec-13		(162,444)	1,384	7.78%			(161,060)	133,706																		
Jan-14		(192,372)	243	7.78%			(192,128)	(58,423)																		
Feb-14		(399,481)	(1,674)	7.78%			(401,155)	(459,577)																		
Mar-14		(233,370)	(3,736)	7.78%			(237,106)	(696,683)																		
Apr-14		(368,450)	(5,711)	7.78%			(374,161)	(1,070,844)																		
May-14		(475,075)	(8,483)	7.78%			(483,557)	(1,554,401)																		
Jun-14		(510,221)	(11,732)	7.78%			(521,953)	(2,076,354)																		
Jul-14		(374,325)	(14,675)	7.78%			(389,000)	(2,465,354)																		
Aug-14		(521,150)	(17,673)	7.78%			(538,823)	(3,004,178)																		
Sep-14		(506,271)	(21,118)	7.78%			(527,389)	(3,531,567)																		
Oct-14		(551,151)	(24,683)	7.78%			(575,836)	(4,107,403)																		
Nov-14	<b>1</b>	(1,152,318)	(16,682)	7.78%		1,850,024	681,024	(3,165,976)																		
Dec-14		(108,541)	(20,878)	7.78%			(129,418)	(3,295,394)																		
Jan-15		(137,525)	(21,811)	7.78%			(159,336)	(3,454,730)																		
Feb-15		(144,116)	(22,865)	7.78%			(166,981)	(3,621,712)																		
Mar-15		(98,578)	(23,800)	7.78%			(122,379)	(3,744,090)																		
Apr-15		(142,781)	(24,737)	7.78%			(167,518)	(3,911,608)																		
May-15		(174,769)	(25,927)	7.78%		0	(200,695)	(4,112,304)																		
Jun-15		(162,516)	(27,188)	7.78%			(189,704)	(4,302,008)																		

**History truncated for ease of viewing**

**NOTES**

**1** - Transfer June balance plus July-October interest on June balance to account 191411 for amortization

Company: Northwest Natural Gas Company  
 State: Oregon  
 Description: Amortization of Oregon Demand Deferral  
 Account Number: 191411  
 Dockets UM 1496 and UG 278  
 Amortization of 2013-14 deferral approved in Order No. 14-383

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Debit	(Credit)	Month/Year	Note	Amortization	Transfers	Interest	Interest Rate	Activity	Balance											
(a)	(b)	(c)	(d)	(e)	(f)	(g)														
Beginning Balance																				
Nov-13	old rates	70,168		394		1.47%	70,563	357,264												
Nov-13	new rates (1)	28,927		(1,967)	(1,724,491)	1.38%	(1,697,531)	(1,340,267)												
Dec-13	2	130,511		(1,466)	(2)	1.38%	129,042	(1,211,225)												
Jan-14		142,193		(1,311)		1.38%	140,882	(1,070,343)												
Feb-14		128,465		(1,157)		1.38%	127,308	(943,035)												
Mar-14		92,549		(1,031)		1.38%	91,518	(851,517)												
Apr-14		66,365		(941)		1.38%	65,424	(786,094)												
May-14		45,726		(878)		1.38%	44,848	(741,246)												
Jun-14		30,392		(835)		1.38%	29,557	(711,688)												
Jul-14		25,684		(804)		1.38%	24,880	(686,808)												
Aug-14		21,298		(778)		1.38%	20,521	(666,288)												
Sep-14		22,359		(753)		1.38%	21,605	(644,682)												
Oct-14		26,696		(726)		1.38%	25,970	(618,713)												
Nov-14	old rates	28,119		(695)		1.38%	27,424	(591,289)												
Nov-14	new rates (1)	198,030		(6,093)	(4,229,742)	1.77%	(4,037,804)	(4,629,093)												
Dec-14		665,846		(6,337)		1.77%	659,509	(3,969,584)												
Jan-15		732,357		(5,315)		1.77%	727,042	(3,242,542)												
Feb-15		529,731		(4,392)		1.77%	525,339	(2,717,203)												
Mar-15		441,604		(3,682)		1.77%	437,922	(2,279,282)												
Apr-15		369,891		(3,089)		1.77%	366,802	(1,912,480)												
May-15		277,168		(2,617)	0	1.77%	274,552	(1,637,928)												
Jun-15		175,767		(2,286)		1.77%	173,480	(1,464,448)												

**History truncated for ease of viewing**

**NOTES:**

1 - Transfer in authorized balances from accounts 191410, 191450, 191417

Company: Northwest Natural Gas Company  
 State: Oregon  
 Description: Coos County Demand  
 Account Number: 191417  
 Class of Customers: Core  
 Docket UM 1179 Order 04-702

Narrative: Deferral of transportation charge payable by NW Natural for use of the natural gas transmission pipeline owned by Coos County.

Debit (Credit)	Month/Year	Note	Deferral	Adjustment	Transfer	Interest	Activity	Balance
	Beginning Bal							
	Nov-13	<b>1</b>	21,683	(6,644)	(146,831)		(131,792)	15,039
	Dec-13		21,683	(11,702)			9,981	25,020
	Jan-14		21,683	(9,456)			12,227	37,246
	Feb-14		17,048	(8,723)			8,325	45,571
	Mar-14	<b>2</b>	17,048	(129,796)			(112,748)	(67,177)
	Apr-14		17,048	(5,827)			11,221	(55,956)
	May-14		17,048	(8,780)			8,268	(47,688)
	Jun-14		17,048	(5,984)			11,064	(36,624)
	Jul-14		17,048	(5,725)			11,323	(25,302)
	Aug-14		17,048	(5,410)			11,638	(13,664)
	Sep-14		17,049	(5,300)			11,750	(1,914)
	Oct-14		17,048	(5,283)			11,765	9,851
	Nov-14	<b>1</b>	17,048	(7,823)	36,624		45,849	55,700
	Dec-14		17,048	(9,081)			7,968	63,667
	Jan-15		17,048	(7,452)			9,596	73,263
	Feb-15		16,636	(24,493)			(7,857)	65,406
	Mar-15		16,636	(9,112)			7,524	72,930
	Apr-15		16,636	(8,128)			8,508	81,438
	May-15		16,636	(6,941)			9,695	91,133
	Jun-15		16,636	(6,169)			10,467	101,600

**History truncated for ease of viewing**

**NOTES**

**1** - Transfer June balance to account 191411 for amortization

Company: Northwest Natural Gas Company  
 State: Oregon  
 Description: Core Market Demand Collection Deferral  
 Account Number: 191450  
 Docket UJ 1496  
 Current reauthorization to defer was granted in Order No. 14-365

Narrative: Deferral of 100% of the difference between actual demand costs collected and the seasonalized imbedded demand costs as defined in the state's annual PGA.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Debit	(Credit)	Month/Year	Note	Demand Deferral	Interest	Interest Rate	Transfer	Activity	Deferral Plus Int. GL Balance										
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)										
Beginning Bal																			
Nov-13		<b>1</b>	(328,275)	(1,064)	7.78%	(196,089)	(525,427)	(329,339)											
Dec-13			(1,282,369)	(6,292)	7.78%		(1,288,661)	(1,618,000)											
Jan-14			(864,778)	(13,293)	7.78%		(878,071)	(2,496,071)											
Feb-14			(1,999,668)	(22,665)	7.78%		(2,022,333)	(4,518,404)											
Mar-14			1,311,653	(25,042)	7.78%		1,286,611	(3,231,793)											
Apr-14			369,268	(19,756)	7.78%		349,512	(2,882,281)											
May-14			1,002,149	(15,438)	7.78%		986,711	(1,895,570)											
Jun-14			(374,228)	(13,503)	7.78%		(387,731)	(2,283,301)											
Jul-14			58,809	(14,613)	7.78%		44,197	(2,239,104)											
Aug-14			47,709	(14,362)	7.78%		33,347	(2,205,757)											
Sep-14			107,662	(13,952)	7.78%		93,710	(2,112,047)											
Oct-14			1,648,665	(8,349)	7.78%	(1)	1,640,315	(471,732)											
Nov-14		<b>1</b>	1,232,252	16,127	7.78%	2,343,093	3,591,472	3,119,740											
Dec-14			2,325,178	27,764	7.78%		2,352,941	5,472,682											
Jan-15			1,638,415	40,792	7.78%		1,679,208	7,151,889											
Feb-15			2,512,045	54,511	7.78%		2,566,556	9,718,446											
Mar-15			2,355,018	70,642	7.78%		2,425,660	12,144,106											
Apr-15			463,254	80,236	7.78%		543,490	12,687,596											
May-15			587,343	84,162	7.78%	(1)	671,503	13,359,099											
Jun-15			263,774	87,467	7.78%		351,240	13,710,339											

**History truncated for ease of viewing**

**1** -Transfer June balance plus July-October interest on June balance to account 191411 for amortization





**NW Natural**  
**2015-2016 PGA Filing**  
**Recall of Mist Storage for Core**  
**Allocation Between States**

1					
2					
3			<b>Total</b>		
4	<b>Net Investment recalled for core</b>		<b>Investment</b>		
5			<u>\$1,801,429</u>		<i>From recall memo</i>
6	Allocation based on Actual Firm Sales volumes (12 mos ended 06/30/15):				
7			<b>Allocated</b>	<b>Revenue</b>	
8			<b>Investment</b>	<b>Requirement</b>	
9	Oregon	528,944,984	88.04%	\$1,585,978	\$234,753
10	Washington	71,846,975	11.96%	\$215,451	TBD
11		<u>600,791,959</u>	<u>100.0%</u>	<u>\$1,801,429</u>	<u>\$234,753</u>

*Amount included in PGA*

EXHIBIT B

BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON

NW NATURAL SUPPORTING MATERIALS

Purchased Gas Cost

NWN OPUC Advice No. 15-12B/UG 298

September 28, 2015

# NW NATURAL

## EXHIBIT B

### Supporting Material

### Purchased Gas Cost

NWN OPUC ADVICE NO. 15-12B/ UG 298

<b>Commodity and Non-Commodity Costs</b>	<b>Page</b>
Summary of Total Commodity Cost	1
Summary of Total Demand Charges	3
Derivation of Oregon Per Therm Non-Commodity Charges	4
Calculation of Winter WACOG	5
Derivation of Oregon Seasonalized Fixed Charges	6
Encana Gas Reserves Deal	7
Effects on Average Bill by Rate Schedule	8
Basis for Revenue Related Costs	9
PGA Effects on Revenue	10

**SYSTEM COSTS**

	(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	
<b>COSTS</b>													
<b>Commodity Cost from Supply</b>	\$22,231,481	\$22,071,975	\$20,025,507	\$16,292,779	\$15,893,736	\$13,686,646	\$8,719,705	\$5,270,398	\$4,483,980	\$4,462,223	\$4,943,100	\$12,003,223	\$150,084,754
tab commodity cost from supply, column c), lines 93-105 plus													
tab commodity cost from gas reserve, column q), lines 59-70													
<b>Volumetric Pipeline Chgs</b>	\$281,822	\$307,742	\$283,753	\$229,083	\$210,049	\$193,859	\$130,323	\$83,613	\$72,581	\$71,704	\$77,079	\$163,166	\$2,104,774
tab volumetric cost from pipeline, column e), line 78-90													
<b>Commodity Cost from Storage</b>	\$1,706,960	\$16,506,928	\$16,564,544	\$14,144,715	\$9,507,010	\$467,215	\$110,343	\$106,784	\$110,343	\$110,343	\$106,784	\$110,343	\$59,552,312
tab Commodity Cost from Storage, column k), line 61-73													
<b>Commodity Cost from Gas Reserves</b>	\$3,006,823	\$3,047,210	\$3,012,670	\$2,847,394	\$2,979,638	\$2,821,446	\$2,846,855	\$2,756,320	\$2,787,533	\$2,754,346	\$2,714,793	\$2,694,011	\$34,269,038
tab Commodity Cost from Gas Reserve, column p), line 59-70													
<b>Total Commodity Cost</b>	\$27,227,086	\$41,933,855	\$39,886,475	\$33,513,971	\$28,590,432	\$17,169,166	\$11,807,226	\$8,217,116	\$7,454,437	\$7,398,616	\$7,841,755	\$14,970,743	\$246,010,878
<b>VOLUMES</b>													
<b>Commodity Volumes at Receipt Points</b>	85,463,372	78,957,507	71,635,594	58,756,696	59,230,103	63,577,019	42,722,321	27,414,590	23,804,109	23,516,745	25,275,221	53,508,733	613,862,010
Pipeline Fuel Use	2,171,541	1,881,748	1,681,713	1,368,720	1,424,769	1,727,448	1,103,163	675,095	573,995	566,144	616,648	1,429,887	15,220,870
Gas Arriving at City Gate	83,291,831	77,075,759	69,953,881	57,387,976	57,805,334	61,849,571	41,619,158	26,739,495	23,230,114	22,950,601	24,658,573	52,078,846	598,641,139
Storage Gas Withdrawals	3,954,946	45,574,296	45,940,093	39,987,556	25,487,896	1,194,429	248,000	240,000	248,000	248,000	240,000	248,000	163,611,216
Pipeline Fuel Use for Alberta-sourced Storage	113,306	439,484	448,287	278,008	95,088	0	0	0	0	0	0	0	1,374,172
Storage Gas Deliveries at City Gate	3,841,640	45,134,811	45,491,806	39,709,548	25,392,809	1,194,429	248,000	240,000	248,000	248,000	240,000	248,000	162,237,044
Total Gas At City Gate (Storage and Commodity)	87,133,471	122,210,571	115,445,687	97,097,524	83,198,142	63,044,000	41,867,158	26,979,495	23,478,114	23,198,601	24,898,573	52,326,846	760,878,183
Unaccounted for Gas	538,851	498,637	452,562	371,268	373,968	400,132	269,252	172,989	150,286	148,477	159,527	336,921	3,872,870
Load Served	86,594,620	121,711,934	114,993,125	96,726,257	82,824,175	62,643,868	41,597,906	26,806,505	23,327,828	23,050,124	24,739,046	51,989,926	757,005,313



NW Natural  
 2015-2016 PGA - SYSTEM: August Filing  
 Summary of Total Demand Charges

**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		
	30	31	31	29	31	30	31	30	31	31	30	31	30	31	366
<b>Transport charges by transporter:</b>															
1															
2															
3															
4															
5															
6	\$4,252,026	\$4,393,760	\$4,393,760	\$4,110,290	\$4,393,760	\$4,152,211	\$4,290,618	\$4,152,211	\$4,290,618	\$4,290,618	\$4,152,211	\$4,290,618	\$4,152,211	\$4,290,618	\$51,162,700
7															
8	67,586	67,586	67,586	67,586	67,586	0	0	0	0	0	0	0	0	0	337,928
9															
10	658,173	658,173	658,173	658,173	658,173	658,173	658,173	658,173	658,173	658,173	658,173	658,173	658,173	658,173	7,898,079
11															
12	351,318	351,318	351,318	351,318	351,318	313,580	313,580	313,580	313,580	313,580	313,580	313,580	313,580	351,318	3,989,385
13															
14	540,136	558,141	501,145	468,813	501,145	408,140	421,745	408,140	421,745	421,745	408,140	421,745	408,140	501,145	5,560,180
15															
16	626,539	646,524	646,524	606,555	646,524	626,539	646,524	626,539	646,524	646,524	626,539	646,524	626,539	646,524	7,638,379
17															
18	369,000	381,300	381,300	356,700	381,300	369,000	381,300	369,000	381,300	381,300	369,000	381,300	369,000	381,300	4,501,800
19															
20	18,688	18,688	18,688	18,688	18,688	18,688	18,688	18,688	18,688	18,688	18,688	18,688	18,688	18,688	224,258
21															
22	\$6,883,465	\$7,075,489	\$7,018,494	\$6,638,123	\$7,018,494	\$6,546,331	\$6,730,628	\$6,546,331	\$6,730,628	\$6,730,628	\$6,546,331	\$6,730,628	\$6,546,331	\$6,847,766	\$81,312,709
23															
24															
25															

Detail in file "Capacity Contract Monthly Summary for Tracker 2015-16.xls"

NW Natural  
 2015-2016 PGA - SYSTEM: August Filing  
 Derivation of Oregon per therm Non-Commodity Charges  
 ALL VOLUMES IN THERMS

**Oregon Derivation of Demand Increments**

	(a)	(b)	Without Revenue Sensitive (c)	WITH Revenue Sensitive (d)
1				
2				
3				
4	System Demand		\$81,312,709	
5	Oregon Allocation Factor 1/		89.70%	
6	Oregon Demand		\$72,937,500	
7				
8	Oregon Firm Sales Forecasted Normal Volumes		625,943,383	
9	Oregon Interruptible Sales Forecasted Normal Volumes		57,974,461	
10				
11				
12	Proposed Firm Demand Per Therm 2/		\$0.11525	\$0.11849
13	Proposed Interruptible Demand 2/		\$0.01371	\$0.01410
14	Proposed MDDV Demand Charge		\$1.71	\$1.76
15				
16	Current Firm Demand Per Therm		\$0.11899	\$0.12239
17	Current Interruptible Demand		\$0.01415	\$0.01455
18	Current MDDV Demand Charge		\$1.77	\$1.82
19				
20	Percent Change in Firm Demand		-3.14%	
21				
22				
23	1/Allocation Factor: 2015-16 PGA forecast firm sales volumes:			
24		<u>Washington</u>	<u>Oregon</u>	<u>System</u>
25	Firm Sales	71,896,148	625,943,383	697,839,531
26		10.30%	89.70%	100.00%
27				
28	2/Calculation of Proposed Demand Rates:			
29				
30	Demand change factor		0.969	
31				
32	Firm Demand (line 8 * line 34)		\$0.11525	\$72,142,913
33	Interruptible Demand (line 9 * line 35)		\$0.01371	\$794,587
34				\$72,937,500
35				\$0

NW Natural  
 2015-2016 PGA - SYSTEM: September Filing  
 Calculation of Winter WACOG  
 Prices are per therm

1	Forecast price for AECO gas:		
2			
3		<u>AECO/NIT</u>	
4			
5	November	\$0.23306	
6	December	\$0.23984	
7	January	\$0.24536	
8	February	\$0.24604	
9	March	\$0.24193	
10	April	\$0.22696	
11	May	\$0.22431	
12	June	\$0.22495	
13	July	\$0.22543	
14	August	\$0.22783	
15	September	\$0.22845	
16	October	\$0.23567	
17			
18			
19	Average price, November-March	\$0.24125	average lines 5-9
20			
21	Annual average price, November-October	\$0.23332	average lines 5-16
22			
23	Ratio of winter to annual	1.03399	line 19 ÷ line 21
24			
25		Without Rev	WITH Rev
26		<u>Sensitive</u>	<u>Sensitive</u>
OR	Oregon Annual WACOG	\$0.32684	\$0.33602
OR	Oregon Winter WACOG	\$0.33795	\$0.34744
		line 23 * \$0.32684	
WA	Washington Annual WACOG	\$0.30754	\$0.32160
WA	Washington Winter WACOG	\$0.31799	\$0.33253
		line 23 * \$0.30754	



**NW Natural**  
**2015-2016 PGA - OREGON: October Filing**  
**Derivation of Oregon Seasonalized Fixed Charges**

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
			Normalized Residential Volumes	Normalized Commercial Volumes	Firm Industrial Volumes	Interruptible Volumes	Total	Firm Demand Increment Eff. 11/01/15	Interr. Demand Increment Eff. 11/01/15	Seasonalized Fixed Charges
1										
2										
3										
4										
5										
6	November	2015	44,299,737	26,054,779	2,478,751	5,366,265	78,199,532	\$0.11609	\$0.01381	\$8,530,506
7	December	2015	64,804,593	36,307,524	2,931,461	5,575,561	109,619,139	\$0.11609	\$0.01381	\$12,155,128
8	January	2016	60,606,861	34,275,583	3,035,403	5,686,429	103,604,276	\$0.11609	\$0.01381	\$11,445,540
9	February	2016	50,295,028	28,869,220	2,765,044	5,219,495	87,148,787	\$0.11609	\$0.01381	\$9,583,025
10	March	2016	41,979,347	24,985,230	2,554,610	5,325,725	74,844,912	\$0.11609	\$0.01381	\$8,143,837
11	April	2016	30,062,225	18,896,816	2,461,683	5,303,960	56,724,684	\$0.11609	\$0.01381	\$6,042,536
12	May	2016	17,918,894	12,980,024	2,262,994	4,541,932	37,703,844	\$0.11609	\$0.01381	\$3,912,397
13	June	2016	9,326,736	8,492,706	2,105,764	4,436,257	24,361,463	\$0.11609	\$0.01381	\$2,374,325
14	July	2016	7,289,851	7,755,038	2,251,606	4,023,927	21,320,422	\$0.11609	\$0.01381	\$2,063,471
15	August	2016	7,298,639	7,754,336	2,133,440	3,870,499	21,056,914	\$0.11609	\$0.01381	\$2,048,574
16	September	2016	8,164,120	7,878,368	2,402,350	3,980,255	22,425,093	\$0.11609	\$0.01381	\$2,196,176
17	October	2016	23,939,828	15,927,942	2,396,853	4,644,156	46,908,779	\$0.11609	\$0.01381	\$4,970,518
18										
19										
20										
21			<u>365,985,857</u>	<u>230,177,565</u>	<u>29,779,961</u>	<u>57,974,461</u>	<u>683,917,844</u>			<u>\$73,466,033</u>

Encana Gas Reserves Deal	Projected November 2015	Projected December 2015	Projected January 2016	Projected February 2016	Projected March 2016	Projected April 2016	Projected May 2016	Projected June 2016	Projected July 2016	Projected August 2016	Projected September 2016	Projected October 2016	Projected PGA Totals
1 Thermo Delivered (000s)													
2 Total Thermo	5,436.88	5,564.26	5,490.29	5,069.06	5,349.18	5,111.36	5,216.20	4,986.35	5,090.42	5,030.09	4,811.03	4,914.05	62,069.14
3 Rate per Therm (Depletion Rate)	0.2604	0.2604	0.2604	0.2604	0.2604	0.2604	0.2604	0.2604	0.2604	0.2604	0.2604	0.2604	0.2604
4 Delivery Value	1,415.96	1,449.14	1,429.87	1,320.17	1,393.12	1,331.19	1,358.49	1,298.63	1,325.73	1,310.02	1,252.97	1,279.80	16,165.09
5													0.2604
6 Opex / Severance / Ad Valorem													
7 Operating Cost	589.25	595.52	592.95	575.01	636.21	574.99	579.34	569.88	574.79	572.12	612.69	567.33	7,040.06
8 Severance and Ad Valorem Taxes	183.28	198.94	202.84	184.56	187.83	164.39	167.57	161.60	171.87	168.11	157.34	164.82	2,113.15
9 Total	772.52	794.45	795.79	759.57	824.03	739.37	746.91	731.48	746.66	740.23	770.03	732.15	9,153.21
10 Average Rate Base	77,004.18	76,059.49	75,145.70	74,298.33	73,406.79	72,552.75	71,682.18	70,847.85	69,997.11	69,155.88	68,349.19	67,526.26	0.1475
11													
12													
13 Carrying Cost													
14 Equity	304.81	301.07	297.45	294.10	290.57	287.19	283.74	280.44	277.07	273.74	270.55	267.29	
15 Equity % of Cap Struct	9.5000%												
16 Equity Pretax	454.57	443.70	435.93	434.72	427.31	427.71	420.51	416.20	407.04	402.06	399.44	391.22	
17 Debt	194.31	191.92	189.62	187.48	185.23	183.07	180.88	178.77	176.63	174.50	172.47	170.39	
18 Total Carrying Cost	648.87	635.62	625.55	622.20	612.54	610.78	601.39	594.98	583.67	576.56	571.91	564.61	7,245.68
19													0.1167
20 Total Cost	2,837.36	2,879.21	2,851.22	2,701.94	2,829.70	2,681.34	2,706.79	2,625.08	2,656.06	2,626.81	2,594.90	2,573.56	32,563.97
21 Total Volume	5,436.88	5,564.26	5,490.29	5,069.06	5,349.18	5,111.36	5,216.20	4,986.35	5,090.42	5,030.09	4,811.03	4,914.05	62,069.14
22 Total Rate Per Therm	0.522	0.517	0.519	0.533	0.529	0.525	0.519	0.526	0.522	0.522	0.539	0.524	0.525

**NW Natural**  
**Rates & Regulatory Affairs**  
**2015-16 PGA - Oregon: September Filing**  
**Effects on Average Bill by Rate Schedule**  
 ALL VOLUMES IN THERMS

**Calculation of Effect on Customer Average Bill by Rate Schedule [1]**

Advice 15-12

See note [8]

1		Oregon PGA	Normal	Minimum	11/1/2014	11/1/2014	Proposed	Proposed	Proposed		
2		Normalized	Therms	Monthly	Billing	Current	11/1/2015	11/1/2015	11/1/2015		
3		Volumes page,	in	Average use	Rates	Average Bill	PGA	PGA	PGA		
4		Column D	Block				Rates	Average Bill			
5											
6	Schedule	Block	A	B	C	D	E	F=D+(C * E)	Y	Z=D+(C * Y)	AA = (Z - F)/F
7	2R		365,285,306	N/A	53.0	8.00	1.01330	61.70	0.88504	54.91	-11.0%
8	3C Firm Sales		158,936,755	N/A	233.0	15.00	0.95518	237.56	0.82679	207.64	-12.6%
9	3I Firm Sales		3,811,735	N/A	1,143.0	15.00	0.93199	1,080.26	0.80355	933.46	-13.6%
10	27 Dry Out		700,552	N/A	38.0	6.00	0.91	40.55	0.78093	35.68	-12.0%
11	31C Firm Sales	Block 1	20,701,736	2,000	3,324.0	325.00	0.69453		0.56996		
12		Block 2	15,317,497	all additional			0.67662		0.55203		
13		Total						<b>2,609.90</b>		<b>2,195.81</b>	-15.9%
14	31C Firm Trans	Block 1	1,022,480	2,000	1,374.0	575.00	0.17309		0.17309		
15		Block 2	1,238,213	all additional			0.15815		0.15815		
16		Total						<b>812.83</b>		<b>812.83</b>	0.0%
17	31I Firm Sales	Block 1	4,178,853	2,000	5,744.0	325.00	0.63779		0.51315		
18		Block 2	9,536,789	all additional			0.62191		0.49726		
19		Total						<b>3,929.01</b>		<b>3,213.04</b>	-18.2%
20	31I Firm Trans	Block 1	181,494	2,000	8,981.0	575.00	0.15988		0.15988		
21		Block 2	680,650	all additional			0.14450		0.14450		
22		Total						<b>1,903.51</b>		<b>1,903.51</b>	0.0%
23	32C Firm Sales	Block 1	26,567,626	10,000	8,483.0	675.00	0.56907		0.44440		
24		Block 2	7,804,067	20,000			0.55465		0.42996		
25		Block 3	829,092	20,000			0.53064		0.40591		
26		Block 4	20,793	100,000			0.50663		0.38187		
27		Block 5	0	600,000			0.49221		0.36743		
28		Block 6	0	all additional			0.48261		0.35781		
29		Total						<b>5,502.42</b>		<b>4,444.85</b>	-19.2%
30	32I Firm Sales	Block 1	4,645,409	10,000	21,272.0	675.00	0.56814		0.44343		
31		Block 2	5,152,955	20,000			0.55389		0.42917		
32		Block 3	1,826,257	20,000			0.53013		0.40538		
33		Block 4	627,963	100,000			0.50636		0.38159		
34		Block 5	(0)	600,000			0.49210		0.36731		
35		Block 6	0	all additional			0.48263		0.35783		
36		Total						<b>12,599.85</b>		<b>9,946.90</b>	-21.1%
37	32 Firm Trans	Block 1	12,006,597	10,000	55,532.0	925.00	0.09488		0.09488		
38		Block 2	16,315,496	20,000			0.08064		0.08064		
39		Block 3	9,641,378	20,000			0.05697		0.05697		
40		Block 4	16,134,178	100,000			0.03327		0.03327		
41		Block 5	21,282,059	600,000			0.01906		0.01906		
42		Block 6	1,920,752	all additional			0.00959		0.00959		
43		Total						<b>4,810.05</b>		<b>4,810.05</b>	0.0%
44	32C Interr Sales	Block 1	5,686,222	10,000	29,595.0	675.00	0.57809		0.43335		
45		Block 2	7,563,208	20,000			0.56339		0.41863		
46		Block 3	3,897,038	20,000			0.53889		0.39411		
47		Block 4	4,445,365	100,000			0.51438		0.36957		
48		Block 5	71,870	600,000			0.49967		0.35485		
49		Block 6	0	all additional			0.48989		0.34506		
50		Total						<b>17,495.53</b>		<b>13,211.55</b>	-24.5%
51	32I Interr Sales	Block 1	7,186,289	10,000	42,618.0	675.00	0.57815		0.43340		
52		Block 2	8,946,142	20,000			0.56345		0.41869		
53		Block 3	5,135,755	20,000			0.53895		0.39417		
54		Block 4	10,445,179	100,000			0.51445		0.36964		
55		Block 5	4,597,392	600,000			0.49977		0.35495		
56		Block 6	1	all additional			0.48997		0.34514		
57		Total						<b>24,525.97</b>		<b>18,356.44</b>	-25.2%
58	32 Interr Trans	Block 1	8,779,332	10,000	194,626.0	925.00	0.09620		0.09620		
59		Block 2	15,689,249	20,000			0.08179		0.08179		
60		Block 3	11,306,695	20,000			0.05777		0.05777		
61		Block 4	28,429,084	100,000			0.03373		0.03373		
62		Block 5	56,035,539	600,000			0.01933		0.01933		
63		Block 6	78,278,646	all additional			0.00975		0.00975		
64		Total						<b>8,913.82</b>		<b>8,913.82</b>	0.0%
65	33		0	N/A	0.0	38,000.00	0.00554	38,000.00	0.00554	38,000.00	0.0%
66	Totals		962,859,686								
67			0								

**Sources:**

Direct Inputs	per Tariff	per Tariff
Rates in summary	Column A	Column A
Permanents		
Temporaries		Add: Cols B+ C
PRIOR YEAR Temporaries		Add: Cols B+ C

[1] For convenience of presentation, the cent per therm demand charge is used, rather than the available MDDV demand option for Rate Schedules 31 and 32.  
 [2] Tariff Advice Notice 15-06: Non-Gas Cost Deferral Amortizations - Intervenor Funding  
 [3] Tariff Advice Notice 15-07: Non-Gas Cost Deferral Amortizations - Industrial DSM  
 [4] Tariff Advice Notice 15-08: Non-Gas Cost Deferral Amortizations - Residual  
 [5] Tariff Advice Notice 15-09: Non-Gas Cost Deferral Amortizations - Decoupling  
 [6] Tariff Advice Notice 15-10: Non-Gas Cost Deferral Amortizations - SIP  
 [7] Tariff Advice Notice 15-11: Non-Gas Cost Deferral Amortizations - SRRM  
 [8] Tariff Advice Notice 15-12: PGA

**NW Natural**  
**Rates and Regulatory Affairs**  
**2015-2016 PGA Filing - OREGON**  
**Basis for Revenue Related Costs**

	Twelve Months Ended 06/30/15		
1			
2			
3	Total Billed Gas Sales Revenues	635,125,404	
4	Total Oregon Revenues	657,765,960	
5			
6	Regulatory Commission Fees [1]	1,697,120	0.250% Statutory rate
7	City License and Franchise Fees	15,291,561	2.325% Line 7 ÷ Line 4
8	Net Uncollectible Expense [2]	<u>1,032,745</u>	<u>0.157%</u> Line 8 ÷ Line 4
9			
10	Total	<u><u>18,021,426</u></u>	<u><u>2.732%</u></u> Sum lines 8-9
11			
12			

13 **Note:**

14 [1] Dollar figure is set at statutory level of 0.25% times Total Oregon Revenues (line 4)

15 [2] Represents the normalized net write-offs based on a three-year average.

**NW Natural**  
**Rates & Regulatory Affairs**  
**2015-2016 PGA Filing - Oregon: September Filing**  
**PGA Effects on Revenue**  
**Tariff Advice 15--: PGA Gas Costs and Gas Cost Deferrals**

	<u>Including Revenue Sensitive Amount</u>
1	
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29	
30	
31	
32	

**Purchased Gas Cost Adjustment (PGA)**

Commodity Cost Change (\$66,754,904)

Demand Capacity Cost Change (1,679,662)

**Total Gas Cost Change (68,434,566)**

**Temporary Increments**

Removal of Current Temporary Increments Amortization of 191.xxx Account Gas Costs (16,814,949)

Addition of Proposed Temporary Increments Amortization of 191.xxx Account Gas Costs (2,648,070)

**Net Temporary Rate Adjustment (19,463,019)**

**Permanent Rate Adjustments**

Storage Recall for Core 234,753

**TOTAL OF ALL COMPONENTS OF ALL RATE CHANGES (\$87,662,832)**

2014 Oregon Earnings Test Normalized Total Revenues \$678,848,000

Effect of this filing, as a percentage change (line 26 ÷ line 30) -12.91%

EXHIBIT C

BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON

NW NATURAL SUPPORTING MATERIALS

Purchased Gas Cost

NWN OPUC Advice No. 15-12B/UG 298

September 28, 2015

NW Natural  
 PGA Portfolio Guidelines  
 OPUC Order No. 11-196, Docket UM 1286

	Amount	Location in Company Filing (cite)
<b>1) Change in Annual Revenues</b>		
(Per OAR 860-022-0017(3)(a))		
A) Dollars ( <i>To .1 million</i> )	(\$57,000,000)	Refer to workpaper "PGA filing Summary Effects"
B) Percent ( <i>To .1 percent</i> )	-8.36%	"
<b>2) Annual Revenues Calculation (Whole Dollars)</b>		
A) PGA Cost Change ( <i>Commodity &amp; Transportation</i> )	(68,434,566)	Refer to workpaper "PGA filing Summary Effects"
B) Remove Last Year's Temporary Increment Total	(24,227,752)	"
C) Add New Temporary Increment <i>necessary</i> )	29,851,086	"
1) Net Safety Programs	687,020	Refer to workpaper "PGA filing Summary Effects"
2) Mist Recall	234,753	"
3) Schedule 182	5,140,437	
4)	0	
5)	0	
6)	0	
E) Total Proposed Change	(56,749,021)	"
<b>3) Residential Bill Effects Summary</b>		
A) Residential Schedule 2 Rate Impacts		
1) Current Billing Rate per Therm	\$1.01330	Refer to workpaper "2015-16 Rate Development"
2) Proposed Billing Rate per Therm	\$0.93513	"
3) Rate Change Per Therm	(\$0.07817)	"
4) Percent Change per Therm ( <i>to .1%</i> )	-7.7%	"
B) Average Residential Bill Impact (forecasted weather-normalized annual)		
1) Average Residential Monthly Use	53.0	Refer to workpaper "2015-16 Rate Development"
2) Customer Charge	\$8.00	"
3) Current Average Monthly Bill	\$61.70	"
4) Proposed Average Monthly Bill	\$57.56	"
5) Change in Average Monthly Bill	(\$4.14)	"
6) Percent change in Average Monthly Bill ( <i>to .1%</i> )	-6.7%	"
C) Average January Residential Bill Impact		
1) Average January Residential Use ( <i>forecasted weather-normalized</i> )	96.0	N/A
2) Customer Charge	\$8.00	N/A
3) Current Average January Bill	\$105.05	N/A
4) Proposed Average January Bill	\$97.57	N/A
5) Change in Average January Bill	(\$7.48)	N/A
6) Percent change in Average January Bill ( <i>to .1%</i> )	-7.1%	N/A
	<b>Amount</b>	<b>Location in Company Filing (cite)</b>
<b>4) Breakdown of Costs</b>		
<b>A) Embedded in Rates</b>		
1) Total Commodity Cost	316,918,813	2014-15 PGA filing
a) Total Demand Cost (assoc. w/ supply)	0	
b) Total Peaking Cost (assoc. w/ supply)	0	
c) Total Reservation Cost (assoc. w/ supply)	0	
d) Total Volumetric Cost (assoc. w/ supply)	\$2,095,245	2014-15 PGA filing
e) Total Storage Cost (assoc. w/ supply)	68,887,280	2014-15 PGA filing
f) Other	\$37,776,597	2014-15 PGA filing
2) Total Transportation Cost ( <i>Pipeline related</i> )	83,208,295	2014-15 PGA filing
a) Total Upstream Canadian Toll	0	
i. Total Demand, Capacity, or Reservation Cost	0	
ii. Total Volumetric Cost	0	
b) Total Domestic Cost	0	
i. Total Demand, Capacity, or Reservation Cost	0	
ii. Total Volumetric Cost	0	
3) Total Storage Costs	\$0	
4) Capacity Release Credits	0	
5) Total Gas Costs	\$400,127,108	
<b>B) Projected For New Rates</b>		
1) Total Commodity Cost	246,010,878	Exhibit B, Page 1
a) Total Demand Cost (assoc. w/ supply)	0	
b) Total Peaking Cost (assoc. w/ supply)	0	
c) Total Reservation Cost (assoc. w/ supply)	0	
d) Total Vaporization Cost (assoc. w/ supply)	2,104,774	Exhibit B, Page 1
e) Total Volumetric Cost (assoc. w/ supply)	\$59,552,312	Exhibit B, Page 1
f) Total Storage Cost (assoc. w/ supply)	34,269,038	Exhibit B, Page 1
g) Other (A&G Benchmark Savings)	\$81,312,709	Exhibit B, Page 3
2) Total Transportation Cost ( <i>Pipeline related</i> )	0	
a) Total Upstream Canadian Toll	0	
i. Total Demand, Capacity, or Reservation Cost	0	
ii. Total Volumetric Cost	0	
b) Total Domestic Cost	0	
i. Total Demand, Capacity, or Reservation Cost	0	
ii. Total Volumetric Cost	0	
3) Total Storage Costs	\$0	
4) Capacity Release Credits	0	
5) Total Gas Costs	\$327,323,587.30	

	Amount	Location in Company Filing (cite)
<b>5) WACOG (Weighted Average Cost of Gas)</b>		
<b>A) Embedded in Rates</b>		
1) WACOG (Commodity Only)		
a. With revenue sensitive	\$0.43383	N/A
b. Without revenue sensitive	\$0.42178	N/A
2) WACOG (Non-Commodity)		
a. With revenue sensitive	\$0.12239	N/A
b. Without revenue sensitive	\$0.11899	N/A
<b>B) Proposed for New Rates</b>		
1) WACOG (Commodity Only)		
a. With revenue sensitive	\$0.33602	Exhibit B, Page 6 and Page 9
b. Without revenue sensitive	\$0.32684	"
2) WACOG (Non-Commodity)		
a. With revenue sensitive	\$0.11849	Exhibit B, Page 8
b. Without revenue sensitive	\$0.11525	"
<b>6) Therms Sold</b>	757,005,313	Exhibit B, Page 1

<b>7) Purchasing/ Hedging Strategies</b> Prepare 1-2 page summary of gas cost situation to include resources, purchasing strategy, hedging, and pipeline issues. Within the summary include:		
<b>A) Resources embedded in current rates and an explanation of proposed resources.</b>		
1) Firm Pipeline Capacity		
a) Year-round supply contracts	N/A	Exhibit A, IV.2.b 1-7
b) Winter-only contracts	N/A	"
c) Reliance on Spot Gas/Other Short Term Contracts	N/A	"
d) Other - e.g. Supply area storage	N/A	"
2) Market Area Storage		
a) Underground-owned	N/A	"
b) Underground- contracted	N/A	"
c) LNG-owned	N/A	"
d) LNG-contracted	N/A	"
3) Other Resources		
a) Recallable Supply	N/A	"
b) City gate Deliveries	N/A	"
c) Owned-Production	N/A	"
d) Propane/Air	N/A	"