ORDER NO. 14 385

ENTERED OCT 29 2014

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UG 278, UG 285

In the Matter of NORTHWEST NATURAL GAS COMPANY dba NW NATURAL, Updates to Schedules P, 162, 164, and 165, Purchased Gas Costs (UG 278), and Updates to Schedules 2, 3, 27, 31, 32, 33, 162, 190, and 195 (UG 285).	ORDER

DISPOSITION: STAFF'S RECOMMENDATION ADOPTED AS AMENDED

This order memorializes our decision, made and effective at the special public meeting on October 28, 2014, to adopt an amended Staff recommendation that reads as follows:

> Northwest Natural's request for base gas cost changes for commodity and transportation, as proposed in Docket No. UG 278/Advice No. 14-16, be allowed to go into effect on and after November 1, 2014, along with the associated tariff sheets relating in Docket No. UG 285/Advice No. 14-19. In addition, Northwest Natural is directed to work with Staff and parties to address issues related to gas storage inventory valuation and report back to the Commission in three months.

The Staff Report is attached as Appendix A.

Dated this 29th day of Oct., 2014, at Salem, Oregon.

COMMISSIONER ACKERMAN WAS UNAVAILABLE FOR SIGNATURE

Susan K. Ackerman
Chair

John Savage
Commissioner

Stephen M. Bloom
Commissioner

A party may request rehearing or reconsideration of this order under ORS 756.561. A request for rehearing or reconsideration must be filed with the Commission within 60 days of the date of service of this order. The request must comply with the requirements in OAR 860-001-0720. A copy of the request must also be served on each party to the proceedings as provided in OAR 860-001-0180(2). A party may appeal this order by filing a petition for review with the Court of Appeals in compliance with ORS 183.480 through 183.484.

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ITEM NO. 2 & 3

PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: October 28, 2014

REGULAR X **CONSENT** ____ **EFFECTIVE DATE** November 1, 2014

DATE: October 16, 2014

TO: Public Utility Commission

FROM: Erik Colville and Linnea Wittekind

THROUGH: Jason Eisdorfer, Aster Adams, and Marc Hellman

SUBJECT: NORTHWEST NATURAL: (Docket No. UG 278/Advice No. 14-16) Reflects changes in the cost of purchased gas, amortization of deferred gas costs, storage recall and the combined changes associated with the annual Purchased Gas Adjustment (PGA) filing.

NORTHWEST NATURAL: (Docket No. UG 285/Advice No. 14-19) Revises tariff rate schedules to reflect the combined effects of changes to rates.

STAFF RECOMMENDATION:

Staff recommends that the Commission approve Northwest Natural's (NWN) proposed tariff sheets in Docket No. UG 278 / Advice No. 14-16 and Docket No. UG 285/Advice No. 14-19, with an effective date of November 1, 2014.

DISCUSSION:

On August 1, 2014, NWN filed its annual Purchased Gas Adjustment (PGA) and a technical adjustment filing requesting rate changes related to natural gas commodity purchases and the costs to deliver this gas to NWN's system for the upcoming gas year (a "gas year" runs from November 1 to October 31 of the following calendar year). The PGA is filed to adjust rates yearly based upon:

(1) **A Forward Looking Portion**: An estimate of the commodity, pipeline, and storage costs-- collectively referred to as the purchased cost of gas-- for the upcoming gas year using projections for the price of natural gas and customer usage; and

(2) **A Backward Looking Portion:** A true-up of balances in deferral accounts due to the inevitable imperfect projection of costs and usage in last year's PGA filing that resulted in over/under-collection relative to those projections.

On September 15, 2014, NWN submitted its updated and revised PGA filing as well as its request to waive statutory notice.

This Staff Report discusses: (1) the forward looking portion; (2) the backward looking portion; and (3) the overall revenue and rate impacts of combining these two segments with non-gas cost components for the 2014-15 gas year.

Forward Looking - Projected Purchased Gas Costs 2014-2015 PGA Year

There are two main components that together make up the purchased cost of gas: (a) commodity costs; and (b) demand costs. *Commodity costs* are the cost of the natural gas itself for delivery at specified trading hubs at specific times and *demand costs* are the cost of pipeline capacity and per unit of gas pipeline transport rates that allow NWN to transport its gas purchases to its own system (city-gate) at the time it is needed.

NWN's 2014 PGA proposes an increase of approximately 6 percent in gas commodity cost compared to that in its 2013 PGA. The increase is in the gas cost per therm (WACOG or weighted average cost of gas) because the percent calculation uses the 2014 PGA load forecast with the 2013 cost per therm and the 2014 WACOG to derive the change in total purchased gas cost. Based on the 2014 PGA load forecast, this increase in gas commodity is approximately $17,917,324 at $0.43383 per therm. A decrease in demand cost from that in the 2013 PGA of approximately 14 percent ($12,948,724) is proposed. The total gas commodity and demand cost change compared to the 2013 PGA is an increase of approximately one percent ($4,968,600 or $0.54655 per therm). These changes are approximate due to the use of forecasted loads and gas costs.

Natural Gas Portfolio Development Guidelines

Accepted "best practices" for purchasing natural gas supply by local distribution companies (LDC) is portfolio construction that balances the objectives of reliability, cost, and price volatility using the tools of diversity, flexibility, and balance. The "Natural Gas Portfolio Development Guidelines"[1] (Portfolio Guidelines) implement these "best

[1] The "Natural Gas Portfolio Development Guidelines" and "PGA Filing Guidelines" were initially acknowledged by the Commission in Order No. 09-248 and initially corrected in Order No. 09-263. The current Guidelines were acknowledged by the Commission in Order No.11-196.

practices" for Oregon LDCs. The Portfolio Guidelines also require each gas utility to include certain information related to its gas supply portfolio with its annual PGA filing. This information assists the Commission in determining the prudence of the LDC's costs.

NWN's portfolio preparation and planning process meets the standards in Section III of the Portfolio Guidelines related to portfolio planning, as do NWN's physical gas contracts and financial transactions relating to natural gas pricing. NWN has also demonstrated its adherence to the guidelines with regard to natural gas supplies and financial hedges. In addition, NWN has provided all the information called for in Section IV (Information and Workpapers), and Section V (Supporting Data and Analysis) of the Portfolio Guidelines. NWN's planned supply portfolio, both physical and financial, is presented in Table 1.

Table 1: NW Natural Gas Supply Portfolio for 2014-2015 PGA Year

Resource	Percentage in Portfolio
Pipeline deliveries of natural gas	78.7%
Storage deliveries of natural gas	21.3%
Encana Gas Reserves	0.0%

NWN's gas purchasing strategy for the 2014-2015 period is to hedge the prices of approximately 75 percent of the expected purchases. The 75 percent hedging target is planned to include 23 percent from storage, ten percent from gas reserves, one percent from native gas production at Mist, and 41 percent from financial hedges. The remaining 25 percent of expected purchases will come from spot market purchases.

Spring Earnings Review

Each year, Oregon LDC's make an annual election for the upcoming PGA Year beginning November 1st whether to choose 90/10[2] sharing or 80/20 sharing with a corresponding earnings review threshold. For the 2014-2015 PGA year, NWN elected a 90/10 sharing on September 22, 2014.[3]

Backward Looking - True Up of Gas Commodity Costs for 2013-2014 PGA Year

Just as natural gas prices and demand are projected for the 2014-15 gas year in this year's PGA to determine rates, they were projected in previous year's PGAs to

[2] Sharing of the variance between the LDC's WACOG included in its rates and its actual WACOG. For example, 90/10 designates 90 percent of the variance will be deferred for subsequent charge or credit to customers, and 10 percent is absorbed or retained by the LDC. See Order 08-504 at 17.
[3] The election is filed annually in UM 1286 in compliance with Order No. 11-196 and Order No. 08-504.

determine rates in those gas years as well. Due to a number of factors, including natural gas price volatility, weather, and the overall economy, these projections did not match exactly actual experience so that actual revenues collected did not equal those that were estimated.

NWN's application proposes to true-up its commodity and non-commodity deferred account amortization in effect since November 1, 2013, and that projected for the 2014-2015 PGA period. The commodity gas cost portion of the true-up is an increase of $22,952,580 to customers. The removal of the prior year amortization is an increase to customers of $6,137,631 and application of the proposed year amortization is an increase to customers of $16,814,949. The prior year amortization was projected and included in the 2013 PGA. The proposed year amortization is the sum of the actual balances of the gas cost deferral, firm demand deferral, and interruptible demand deferral accounts as of October 31, 2014.

Staff has reviewed NWN's proposed gas cost deferral and determined that the proposed amortization is appropriate. The resulting revised rate increment is incorporated in the energy charge component of NWN's primary rate schedules.

After last year's PGA, NWN discovered three errors in deferral calculations. Although the PGA was complete, NWN brought these errors to the attention of Staff and offered to correct these errors along with a commitment that they would put processes in place to prevent them from occurring in the future. From those discussions, NWN proposes to correct those previous deferral errors within this year's PGA.

The three separate accounting errors that NWN discovered have the combined effect of returning more than one million dollars to customers. The first error, discussed in the Staff Report for Docket No. UG 273/Advice No. 14-13, involved a decoupling deferral calculation error that returns $812,292 to customers. A second error, discussed in the Staff Report for Docket No UG 272/Advice No. 14-14, involved an error related to the rate adjustment associated with the System Integrity Program (Schedule 177) and returns $575,841 to customers.

A third error, discussed in this Staff Report, involves an error related to the calculation of the demand charges for the purposes of calculating its deferral of differences between demand charges embedded in the PGA and its actual demand charges. Instead of updating the relevant demand charges in December 2013, it was updated beginning in November 2013. As a result, NWN under-deferred $260,403 in account 191.

In typical circumstances, Staff would not recommend that NWN be allowed to collect the under-deferral of $260,403 based upon its error. However, in these unique circumstances where NWN self-reported two other errors that benefit customers and based upon NWN's commitment to prevent these types of errors in the future, Staff recommends that all three errors be corrected in this PGA year. Specifically, Staff recognizes that NWN voluntarily brought these errors to Staff's attention and that the sum of the errors benefits customers by more than a million dollars. Staff, however, wants to be clear that its support for correcting all three errors in this PGA is unique to the circumstances surrounding these errors and should not create an expectation that Staff would support such corrections in the future.

Overall Rate and Revenue Impact

A summary of the proposed tariff changes for NWN's major rate schedules is shown in Attachment A. Table 2 shows the rates the Commission has approved for NWN's residential customers on Rate Schedule 2 between 2007 and 2013, and the current proposal.

Table 2: Residential Rates 2007 – 2014 (Proposed)

Date	Customer Charge	Rate Per Therm[4]	Percentage Change[5]
November 2007	$6.00	$1.22449	-8.7%
November 2008	$6.00	$1.39742	14.12%
January 2009	$6.00	$1.39384	-0.26%
November 2009	$6.00	$1.14047	-18.18%
November 2010	$6.00	$1.10644	-2.98%
November 2011	$6.00	$1.08786	-1.68%
November 2012	$8.00	$0.97306	-10.55%
November 2013	$8.00	$0.99317	2.07%
November 2014	$8.00	$1.03069	3.78%

With these changes, the monthly bill of a typical residential customer using 53 therms per month will increase by $1.99, or 3.3 percent, from $60.64 to $62.63. In January, a typical residential customer's consumption of 105.6 therms will result in a billing increase of $2.12, or 1.9 percent, from $112.88 to $115.00.

[4] This rate does not include pass-through charges included on customer bills that utilities are required to collect and distribute such as franchise fees or the Public Purposes Charge.
[5] The percentage change reflects only the change in the rate per therm, and does not include the effect of the monthly customer charge on the bill.

The change in annual revenues is summarized in Table 3 below:

Table 3: Change in Annual Revenues

PGA Gas Cost Change	$2,826,928
Gas Cost-related Amortizations	$24,327,446
Non Gas Cost-related Amortizations	$(364,340)
Permanent Base Rate Increment	$(5,263,490)
Total Proposed Change[6]	$21,526,544

Three Percent Test

The gas cost related amortizations in this filing are included in the calculation of the three percent test pursuant to ORS 757.259(6) which restricts the overall annual average rate impact of amortizations authorized under the statute to three percent of the natural gas utility's gross revenues for the preceding calendar year. For the upcoming gas year, NWN is requesting to amortize $16,855,497. During the last calendar year NWN gross revenues were $672,195,000. Therefore, NWN is seeking to amortize amounts equal to 2.5 percent of the previous year's gross revenues and it does not exceed the three percent threshold. See Attachment C for a more detailed accounting of amortizations and the three percent test.

Inventory Valuation

Staff's Proposal

Based on Staff's report titled "WACOG Best Practices," included as Attachment D, Staff proposes that NWN implement a Lower of Cost or Market Analysis (LCM analysis)[7] on an annual basis that will be included as an adjustment within the PGA filing. If the market or replacement value of the gas, or both, held in storage is below the WACOG of storage gas at the end of the period then NWN should make an adjustment marking its storage gas to market. The delta or the amount of the impairment will be recovered through a deferral under FAS 71, *Accounting for the Effect of Certain Types of Regulation*, until burned or sold. Alternatively, if the market value is above the WACOG for gas held in storage no action need be taken. This action avoids having "high-cost" natural gas remain in rate base and earn NWN's authorized rate of return. A lower cost option for customers is to pay NWN the excess cost of gas over market and not pay a rate of return with the hope that someday the market price of gas will equal or exceed the WACOG.

[6] See Attachment B and CA1, CA2, CA3, CA4, CA5, CA6, and CA7 for details.

[7] International Accounting Standards (IAS) No. 2, *Inventories*, prescribes accounting for inventory using the first in first out or the weighted average cost methods and measurement of that inventory should be at the lower of cost and net realizable value.

History

Staff conducted a study of the WACOG for all utilities serving Oregon customers during the June 2012 through December 2012 timeframe. The genesis of the study was the differences in WACOG among the utilities as well as awareness that utilities applied different accounting approaches. Staff determined through the study that all of the companies utilizing natural gas storage, with the exception of NWN, have a mechanism in place that allows for the WACOG of gas held in storage to closely reflect the current market price. These mechanisms include, physical cycling of gas, First in First out (FIFO) accounting of gas and impairment testing through LCM analysis. Some companies utilize multiple mechanisms.

Upon discovering that NWN was the only Oregon LDC not practicing any of the mechanisms, Staff began discussions with NWN in early 2013 urging them to adopt one of the practices. Most recently, Staff met with NWN on July 21, 2014 explaining the Staff's concern that if they do not adopt one of the practices they could end up in a similar situation in which they were in a couple years ago where the delta between the value of gas held in storage and the current market price of gas was several dollars. By implementing one of these mechanisms customers would benefit from storage WACOG prices reflective of actual market prices. These discussions have not yet resulted in an agreement on a mechanism to address this issue within the PGA.

PROPOSED COMMISSION MOTION:

Northwest Natural's request for base gas cost changes for commodity and transportation, as proposed in Docket No. UG 278/Advice No. 14-16, be allowed to go into effect on and after November 1, 2014, along with the associated tariff sheets relating in Docket No. UG 285/Advice No. 14-19. In addition, Northwest Natural is directed to work with parties to design and implement a Lower of Cost or Market Analysis (LCM analysis) mechanism for gas storage inventory valuation on an annual basis to be included as an adjustment in the 2015 PGA filing.

NWN Docket No. 278/Advice No. 14-16 and Docket No. UG 285 / Advice No. 14-19

Attachment A-1
NWN Docket No. UG 262/Advice No. 13-18 and Docket No. 264/Advice No. 13-22

NW Natural
Rates & Regulatory Affairs
2014-15 PGA - Oregon: September Filing
Attachment A: Incremental Revenue Change by Rate Schedule

Rate Schedule	Description	Total Revenue at Current (1)	Total Revenue at Proposed	Total Change in Revenue	% Change by Rate Schedule	% Contribution to Total Change
2	Residential Sales	$ 204,160,519	$ 211,412,595	$ 7,252,076	3.6%	33.69%
3C	Small Commercial Firm Sales	$ 90,888,287	$ 97,367,637	$ 6,479,350	7.1%	30.10%
3I	Small Industrial Firm Sales	$ 2,629,707	$ 2,782,947	$ 153,239	5.8%	0.71%
27	Residential Heating Dry Out	$ 438,381	$ 466,469	$ 28,088	6.4%	0.13%
31CFS	Mid-size Commercial Firm Sales	$ 25,376,986	$ 27,214,707	$ 1,837,721	7.2%	8.54%
31CFT	Commercial Firm Transportation	$ (600)	$ 3,951	$ 4,551	-758.8%	0.02%
31IFS	Mid-size Industrial Firm Sales	$ 8,178,833	$ 8,693,412	$ 514,579	6.3%	2.39%
31IFT	Industrial Firm Transportation	$ (1,472)	$ 1,275	$ 2,747	-186.7%	0.01%
32CFS	Large Commercial Firm Sales	$ 13,830,422	$ 14,719,937	$ 889,515	6.4%	4.13%
32IFS	Large Industrial Firm Sales	$ 6,611,940	$ 7,035,831	$ 423,892	6.4%	1.97%
32FT	Large Comm/Indus Firm Transportation	$ (22,624)	$ 37,857	$ 60,481	-267.3%	0.28%
32CIS	Commercial Interruptible Sales	$ 10,525,765	$ 12,053,364	$ 1,527,600	14.5%	7.10%
32IIS	Industrial Interruptible Sales	$ 15,852,397	$ 18,146,198	$ 2,293,802	14.5%	10.66%
32IT	Interruptible Transportation	$ 1,055	$ 59,959	$ 58,903	5581.5%	0.27%
33	High Volume Non-Residential	$ -	$ -	$ -	0.0%	0.00%
		$ 378,469,596	$ 399,996,140	$ 21,526,544	5.69%	100.00%

Note:

[1] 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 are small differences with the Advice filings.

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NW Natural
Rates & Regulatory Affairs
2014-15 PGA - Oregon: September Filing
Attachment B: Incremental Revenue Change by Adjustment Schedule

Tariff	Revenue at Current(1)	Revenue at Proposed	Change in Revenue	% Contribution to Total Incremental Change	Advice Filing
Schedule P - PGA Forecast	$ 369,081,080	$ 371,908,008	$ 2,826,928	13.13%	14-16A
Schedule 162 - Gas Cost True-up	$ (6,203,698)	$ 16,912,531	$ 23,116,229	107.38%	14-16A
Schedule 179 - Automated Meter Reading	$ 626,930	$ (9,440)	$ (636,371)	-2.96%	14-9
Schedule 172 - Intervenor Funding	$ 208,957	$ 114,043	$ (94,914)	-0.44%	14-10
Schedule 188 - Industrial DSM	$ 1,890,583	$ 1,743,538	$ (147,045)	-0.68%	14-11
Schedule 178 - Regulatory Rate Adjustment	$ (3,865,398)	$ 97,825	$ 3,963,223	18.41%	14-12
Schedule 190 - Decoupling	$ 10,913,840	$ 6,107,711	$ (4,806,129)	-22.33%	14-13
Schedule 177 - System Integrity Program	$ 2,258,372	$ 3,615,268	$ 1,356,895	6.30%	14-14A
Schedule 180 - Working Gas Deferral	$ 4,770,147	$ (48,060)	$ (4,818,207)	-22.38%	14-15
Schedule 184 - Gasco Pumping Station	$ -	$ (445,283)	$ (445,283)	-2.07%	14-17
Schedule 165 - Gas Reserves Credit	$ (1,211,218)	$ -	$ 1,211,218	5.63%	14-16
Total	$ 378,469,596	$ 399,996,140	$ 21,526,544	100.00%	

Note:
[1] 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 are small differences with the Advice filings.

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NW Natural
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2014-15 PGA - Oregon: September Filing
Attachment C: 3% Test

	Surcharge	Credit	
2013-2014 PGA Gas Cost True-Up	16,814,949		
Non-Gas Cost Amortizations			
AMR		(9,265)	
Intervenor Funding	115,468		
Industrial DSM	1,742,355		
Property Sales Amortization	98,110		
Decoupling	6,090,273		
SIP	3,618,865		
Working Gas		(48,297)	
Gasco		(442,992)	
Subtotal	11,665,071	(500,554)	
Total	28,480,020	(500,554)	
Total Proposed Amortization			27,979,466
Less: (1)			
Intervenor Funding (1)			(115,468)
Industrial DSM (1)			(1,742,355)
Decoupling (1)			(6,090,273)
SIP (2)			(3,618,865)
Gasco (2)			442,992
Net Proposed Amortizations (subject to the 3% test)			16,855,497
Utility Gross Revenues (2013)			672,195,000
3% of Utility Gross Revenues			20,165,850
Allowed Amortization			16,855,497
Allowed Amortization as % of Gross Revenues			2.5%

Notes:
(1) Amortizations of the deferral are not subject to the 3% test pursuant to ORS 757.259 as they are automatic adjustment clauses.
(2) Inclusion in rates not subject to the 3% test as they are not deferrals, but rather capital projects to be included in rate base.

Docket No. UG 278/Advice No. 14-16

Attachment D

Staff Audit Report of WACOG Best Practices

Audit Number: 14-001

Staff Audit Report of

WACOG Best Practices

Audit Number: 14-001

Auditor: Linnea Wittekind

Prepared by: Linnea Wittekind

Staff Audit Report of WACOG Best Practices

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Executive Summary

Audit staff conducted an audit of the Weighted Average Cost of Gas (WACOG) for all utilities serving Oregon customers during the June 2012 through December 2012 timeframe.

Staff focused on actual data from January 2012 to June 2012 from each Company; however, Staff examined additional data for consistency in context of historical information that could be referenced in future regulatory proceedings.

Audit Objectives and Scope

1. To review the WACOG calculation used by each Company.

2. Provide a baseline in regards to WACOG for future regulatory proceedings and other inquiries.

Other Comments

As part of the audit, Staff visited each Company and conducted on site meetings as well as tours and observations of procedures. Staff appreciated each Company's cooperation and hospitality during these site visits. Weighted Average Cost of Gas or WACOG is the average cost of gas purchased during a given time period. WACOG includes gas injected or withdrawn from storage.

In this audit, Staff focused on the WACOG of gas injected and withdrawn from storage as well as the gas stored in storage.

The genesis of the audit was the differences in average storage WACOG among the utilities as well as awareness that utilities applied different accounting approaches. Through the audit, Staff was able to better understand the WACOG calculation for each company as well as the factors that affect price.

Staff found that each company with the exception of Northwest Natural was utilizing a mechanism which kept the storage WACOG prices reflective of current market prices. Some companies utilized more than one method. The mechanisms Staff found most commonly used were physical cycling of gas held in storage, First in First out accounting of storage gas and asset impairment testing through a lower of cost or market (LCM) analysis with accompanying adjustment if necessary.

Local Distribution Companies

Avista

Company Background and Organization

Avista Corporation headquartered in Spokane Washington, incorporated in the state of Washington in 1889. Avista Utilities generate, transmits and distributes electricity and distributes natural gas. The Company also engages in wholesale purchases and sales of electricity and natural gas.

In regards to natural gas operations, Avista provides natural gas distribution services to retail customers in parts of eastern Washington, northern Idaho, and parts of northeast and southwest Oregon. At the end of 2011, Avista supplied retail natural gas service to 321,000 customers across its entire service territory.

Natural Gas Supply and Storage

Avista purchases all of its natural gas in wholesale markets. The Company is connected to multiple supply basins in the western United States and western Canada through firm capacity delivery rights on six pipeline networks. Avista has interstate pipeline capacity to serve approximately 25 percent of the natural gas supplies from domestic sources, with the remaining 75 percent from Canadian sources.

Avista owns a one-third interest in the Jackson Prairie Natural Gas Storage Project (Jackson Prairie), an underground natural gas storage field located near Chehalis, Washington. Jackson Prairie has a total peak day deliverability of 11.5 million therms, with a total working natural gas capacity of 253 million therms.

Storage Pricing Methodology

According to the Company, to provide reliable supply and to manage the impact of volatile prices to its customers, Avista procures natural gas through a diversified mix of spot market purchases and forward fixed price purchases from various supply basins and over various time periods. Avista also uses natural gas storage capacity to support high demand periods and to procure natural gas when prices may be seasonally lower. Avista believes securing prices throughout the year and even into subsequent years mitigates potential adverse impacts of significant purchase requirements in a volatile price environment.

On a daily basis, all supply is optimized to be sourced from the lowest priced supply basins. Daily optimization may include selling existing contracted supply in higher priced basins and acquiring daily replacement supply in lower priced basins. This optimization process will continue until all pipeline transportation is utilized from the lower priced supply region. If additional supply is needed for system demand or storage, the next lower priced basin's transportation is utilized. This basin/transport optimization will then continue until transport is filled or system demand, including storage is satisfied. Avista cycles its storage facility annually.

Cascade Natural Gas

Company Background and Organization

Cascade is a local distribution company (LDC) serving more than 260,500 customers in 98 towns and cities in Washington and Oregon. Cascade's headquarters are in Kennewick, Washington. Its service area consists primarily of relatively small cities and rural communities rather than larger urban areas. Cascade serves a diverse service territory covering more than 3,000 square miles and 700 highway miles from one end of the system to the other.

The Company's primary source of revenue and operating margin is the distribution of natural gas to end-use residential, commercial, industrial, and institutional customers. Revenues are also derived from providing gas management and other services to some of its large industrial and commercial customers.

Cascade serves customers in the following four operational regions:

- Western – The Kitsap Peninsula, the Grays Harbor area, and Kelso/Longview.
- Northwest – Bellingham, Mt. Vernon, and Oak Harbor/Anacortes.
- Central – Sunnyside, Wenatchee/Moses Lake, Kennewick, Walla Walla, and Yakima areas.
- Southern – Bend and surrounding communities, Ontario, Baker, and the Pendleton/Hermiston areas.

MDU Resources Group, Inc. (MDU) is the parent company of Cascade and provides management, consulting, and legal services to the Company. The Intercompany Administrative Services Agreement included in Cascade's 2010 Affiliated Interest Report filing specifies the allocation of resources and costs for administrative services provided between MDU and Cascade.

Natural Gas Supply and Storage

Williston Basin Interstate Pipeline Company (WBI) is an indirect, wholly-owned subsidiary of MDU and provides 24/7 gas control monitoring of Cascade's distribution system and provides notification to the appropriate personnel. Additionally, WBI entered into a software licensing arrangement whereby

Cascade can utilize WBI's FLOWCAL measurement accounting software.[1] WBI employs roughly 247 employees.[2]

Cascade utilizes its leased storage facilities to make the best physical and financial use of storage to meet the needs of core ratepayers. Its storage facilities are Jackson Prairie and Plymouth LNG. The Company operates under a philosophy that storage is principally to be utilized to meet cold weather events. However, Cascade's distribution system is geographically wide and non-contiguous; as a result the system is uniquely exposed to upstream pipeline constraints due to both operational and basin pricing (Sumas vs. Rockies). Due to these constraints, the Company has had to rely on a portion of its storage to deal with operational flow orders and sudden upstream pipeline constraints that the Company has little, if any, control over. Consequently, from time to time these outside events require Cascade to utilize its storage to either store and/or withdraw gas supplies, regardless of the actual load condition of the distribution system.

According to Cascade, it has been fortunate over the past few years to have negotiated with third parties who utilize its Jackson Prairie storage accounts for arbitrage purposes. In turn, Cascade has been able to collect a reasonable fee on behalf of rate payers to mitigate the costs of storage contracts.

Storage Pricing Methodology

Cascade uses the FIFO (first in first out) accounting method for its storage accounts. Storage withdrawals are calculated as an average of gas purchases for the month to determine unit cost. Like with withdrawals, storage injections are also calculated as an average of gas purchases for the month to determine unit cost. Cascade does not cycle its storage facilities annually.

Northwest Natural Gas

Company Background and Organization

Founded in 1859, Northwest Natural Gas Company, dba NW Natural, is a local gas distribution company based in Oregon and Washington. NW Natural is headquartered in Portland, Oregon.

At year-end 2010, NW Natural had approximately 674,000 utility customers in Oregon and southwest Washington, including the Portland-Vancouver metropolitan area, the Willamette Valley, the Oregon coast, and the Columbia River Gorge. NW Natural serves a wide array of industries, some of which are:

[1] See Commission Order No. 10-253.
[2] *Ibid.*

pulp, paper, and other forest products; the processing of farm and food products; government and educational institutions; and electric generation.

NW Natural meets the expected needs of its core utility customers through natural gas purchases from a variety of suppliers in the western United States and Canada.

Natural Gas Supply and Storage

NW Natural purchases natural gas for its core utility customers from a variety of supplies located in western Canada and the U.S. Rocky Mountain areas. Currently, about 60 percent of its supply comes from Canada, with the balance coming primarily from the U.S. Rocky Mountain region.

The Company also operates an underground storage facility and contracts for additional gas storage outside its service territory. NW Natural operates two liquefied natural gas plants in its service area. The Company also provides gas storage services to other energy companies in the Northwest interstate market. In addition, NW Natural has contracts with an electric generator and two industrial customers that provide recallable capacity transportation.

Northwest Natural provides daily and seasonal peaking gas supplies to its core utility customers from its underground storage facility in the Mist gas storage field. Mist storage field has a daily deliverability of 5.2 million therms and a total working gas capacity of about 16 Bcf. Core utility currently has 2.5 million therms per day of deliverability and approximately 9.4 Bcf of working gas capacity committed from the Mist storage facility. Under its regulatory agreement with the Oregon Public Utility Commission, non-utility gas storage at Mist was developed in advance of core utility customer needs but can be recalled by the utility to serve utility customers as utility demand increases.

Northwest Natural also has contracts with the Williams Companies' Northwest Pipeline (Northwest Pipeline) for firm gas storage from Jackson Prairie and from a liquefied natural gas (LNG) facility in Plymouth, Washington. Together these two facilities provide NW Natural with daily deliverability of about 1.1 million therms and total seasonal capacity of about 16 million therms.

NW Natural owns and operates two LNG storage facilities in its Oregon service territory that liquefy gas for storage during the summer months so that it is available for withdrawal during periods of peak demand in the winter heating season. These two LNG facilities provide a maximum combined daily deliverability of 1.8 million therms and a total seasonal capacity of 16 million therms.

Storage Pricing Methodology

NW Natural uses an independent energy marketing company to provide asset optimization services for utility and non-utility storage and transportation capacity under a contractual arrangement.

On a system-wide basis, natural gas is typically injected into storage between April and October when natural gas prices are generally lower and withdrawn during the winter months of November through March when gas prices are typically higher. With the exception of Jackson Prairie which is used for balancing, Northwest Natural does not cycle its storage facilities annually.

Northwest Natural values its inventory using average inventory method, a tiered approach. If the total injection volumes do not exceed unhedged spot purchases, the unhedged spot purchases are used to calculate an average price.

Staff Recommendation

Staff recommends that Northwest Natural work with Staff and interveners to design and implement a Lower of Cost or Market Analysis (LCM analysis) mechanism for gas storage inventory valuation on an annual basis to be included as an adjustment in the 2015 PGA filing.

Electric Utility Companies

Idaho Power Company

Company Background and Organization

Idaho Power's service territory covers approximately 24,000 square miles in southern Idaho and eastern Oregon. Idaho Power holds franchises, typically in the form of right-of-way arrangements, in 71 cities in Idaho and nine cities in Oregon and holds certificates from the respective public utility regulatory authorities to serve all or a portion of 25 counties in Idaho and three counties in Oregon. Idaho Power primarily relies on company-owned hydroelectric, coal, and gas-fired generation facilities and long-term power purchase agreements to supply the energy needed to serve customers.

Natural Gas Supply and Storage

Idaho Power owns and operates the Danskin and Bennett Mountain combustion turbines as well as Langley Gulch a natural gas-fired combined-cycle power plant. The natural gas is supplied through Williams-Northwest Pipeline under Idaho Power's 55,584 million British thermal units (MMBtu) per day long-term gas transportation service agreements. In addition to the long-term gas transportation service agreements, Idaho Power has entered into a long-term storage service agreement with Northwest Pipeline for 131,453 MMBtu of total storage capacity at the Jackson Prairie Storage Project.

Storage Pricing Methodology

Idaho Power has in place an Energy Risk Managing Policy (ERMP), the policy is a framework for its Energy Risk Managing Standards (ERMS). Both ERMP and ERMS define an 18 month gas hedging strategy based on three tiers. According to the Company, when any of the natural gas plants are not required to meet system load, and the plant is deemed in the money, natural gas is bought and electricity is sold. The electricity sales offset power costs. Flexible and/or peaking gas supply deals are used to supplement storage at Jackson Prairie.

Idaho Power cycles its storage gas annually. In calculating WACOG, Idaho Power uses the average of injections. Storage injections are based on a per unit cost. Storage withdrawals are valued at the WACOG on the day the gas comes out of storage.

PacifiCorp

Company Background and Organization

PacifiCorp, which includes PacifiCorp and its subsidiaries, serves 1.7 million retail customers across 136,000 square miles in portions of the states of California, Idaho, Oregon, Utah, Washington, and Wyoming. In its western portion of its service territory, mainly consisting of Oregon, southern Washington, and northern California, the principal industries are agriculture and manufacturing, with forest product, food processing, technology, primary metals being the largest industrial sectors.

PacifiCorp uses natural gas as fuel for its combined- and simple-cycle natural gas fired generating facilities. Oil and natural gas are also used for igniter fuel and to fuel generation for transmission support and standby purposes. Natural gas is used by PacifiCorp to balance water and wind generation uncertainty.

Natural Gas Supply and Storage

PacifiCorp enters into forward natural gas purchases at fixed or floating market prices for physical delivery to fuel its natural gas-fired generating facilities. PacifiCorp utilizes swap contracts to mitigate its price risk and lock in the costs of its forecasted fuel requirements. PacifiCorp also purchases natural gas in the spot market for physical delivery to fulfill any fuel requirements not already satisfied through forward purchases of natural gas and sells natural gas in the spot market for the disposition of any excess supply if the forecasted requirements of its natural gas-fired generating facilities decrease.

PacifiCorp has one firm storage contract with Questar Pipeline Company at Clay Basin storage field.

Storage Pricing Methodology

PacifiCorp's storage inventory is valued at weighted average cost less impairments if necessary. PacifiCorp cycles its storage at Clay Basin annually. Clay Basin inventory injections are valued on a daily basis using the weighted average price of physical gas purchases made on the day of injection in the Clay Basin region. Withdrawals are valued on daily basis using the weighted average price of the inventory after injections for the day are made.

Portland General Electric

Company Background and Organization

Portland General Electric or PGE's state approved service area allocation of approximately 4,000 square miles is located entirely within Oregon and includes 52 incorporated cities, of which Portland and Salem are the largest. The Company estimates that at the end of 2010 its service area population was 1.7 million or approximately 44 percent of the state's population.

Natural Gas Supply and Storage

PGE has firm gas supplies from Port Westward and Beaver, which are purchased up to 60 months in advance, based on anticipated operation of the plants. PGE owns 79 percent of the Kelso-Beaver Pipeline, which directly connects both generating plants to the Northwest Pipeline. Currently, PGE transports gas on the Kelso-Beaver Pipeline for its own use under a firm transportation service agreement, with capacity offered to others on an interruptible basis to the extent not utilized by the Company. PGE has access to 103,305 Dth per day of firm gas transportation to serve the two plants.

PGE also utilizes gas storage at Mist storage facility, from which it can draw in the event that gas supplies are interrupted or if economic factors require its use. This storage can be used to fuel both Port Westward and Beaver.

Coyote Springs a PGE generation station utilizes 41,000 Dth/day of natural gas when operating at full capacity, with firm transportation capacity on three pipeline systems accessing gas fields in Alberta, Canada.

Storage Pricing Methodology

PGE's storage inventory is valued at weighted average cost less impairments if necessary. On a quarterly basis PGE conducts a lower of cost or market analysis (LCM), the results of the analysis determine if any impairment adjustment is needed. PGE cycles its storage at Mist storage facility annually.

Storage injections are valued at cost of the natural gas per that injection plus any transportation costs and applicable taxes. Storage withdrawals are valued at the weighted average cost of gas. In calculating WACOG, PGE considers all injections first then withdrawals.

Staff Summary Recommendation

Staff recommends that in future Purchase Gas Adjustments filings one of the Commission Staff Auditors is assigned to assist in the review of the filing and more specifically to review WACOG prices and pricing methodology used by each company. In adopting this recommendation, Staff would be able to identify any issues or concerns regarding WACOG and pricing methodology in a timely manner.

Conclusion

Staff appreciates the cooperation received from the companies during the audit process.

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