

**REPORT OF COMMISSION STAFF**

**REGARDING THE NATURAL GAS HEDGING POLICIES AND PRACTICES OF:**

**AVISTA CORPORATION, DOCKET UG-121501**

**PUGET SOUND ENERGY, INC., DOCKET UG-121569**

**CASCADE NATURAL GAS CORPORATION, DOCKETS UG-121592 and UG-121623**

**AND NORTHWEST NATURAL GAS COMPANY, DOCKET UG-121434**

**MARCH 1, 2013**

## I. SUMMARY OF RECOMMENDATION

Dismiss the Complaint and Order Suspending the Tariff Revisions; Allowing Rates on a Temporary Basis, Subject to Revision, for Avista Corporation in Docket UG-121501, Puget Sound Energy, Inc. in Docket UG-121569, Cascade Natural Gas Corporation in Dockets UG-121592 and UG-121623, and Northwest Natural Gas Company in Docket 121434, and allow the tariff revisions in all dockets to become effective on a permanent basis.

Issue a CR 101 and commence workshops to examine whether a rulemaking, policy statement or other procedure should be pursued with respect to the natural gas hedging practices and policies of commission-regulated natural gas.

Staff will present these recommendations to the commission at the March 14, 2013 Open Public Meeting.

## II. ATTACHMENTS

The following documents are attached to this Report:

- Attachment A, Hedge Data Summary
- Attachment B, 10 Year Hedge History
- Avista Hedge Analysis
- Cascade Hedge Analysis
- NWNG Hedge Analysis
- PSE Hedge Analysis

Please note that the individual hedge analysis for each company contains confidential material. While all of those analyses are listed here, only the analysis related to a particular company is filed in that company's particular docket. This is being done to prohibit the disclosure of confidential information beyond the docket relevant to a particular company.

## III. BACKGROUND

### A. The Purchased Gas Adjustment Mechanism Described

The Purchased Gas Adjustment (PGA) mechanism is designed to pass through to customers the utility's actual cost of natural gas on a periodic basis. The PGA establishes for the upcoming year a projection of the utility's gas costs. The difference between the projected cost from the previous PGA filing, and the actual cost incurred for the period, is deferred and ultimately amortized back to customers with interest, as a refund or a surcharge.

In arriving at an estimated commodity cost for the coming year, a company uses a variety of known and estimated inputs. Known inputs include volumes of gas to be delivered within the PGA year hedged at a fixed price, actual cost and volume of gas in storage, and to some extent the remaining expected load transacted at spot market prices or hedged at a fixed price. Estimated inputs include load for the PGA year, future spot/index market prices and fixed prices for hedges that will be transacted in, and for, the PGA year.

Historically, staff has had approximately 30 to 45 days (initial filing date to tariff effective date) to review PGA filings. Staff's review has generally centered on an audit of the deferred balances and a reasonableness test of the projection of future gas costs; both of which are used to determine rates charged to customers. Staff has not performed an in-depth prudence review of the gas costs a natural gas company seeks to recover through its PGA tariffs.

## **B. Procedural History**

During the months of August, September and October of 2012, Northwest Natural Gas Company (Northwest Natural), Avista Corporation (Avista), Puget Sound Energy, Inc. (PSE) and Cascade Natural Gas Corporation (Cascade) (collectively, the companies) filed revisions to their Purchased Gas Adjustment (PGA) tariffs. All of these tariff revisions bore an effective date of November 1, 2012.

After a review of the filings, staff had concerns regarding the variety of reporting, procurement and hedging strategies employed by the companies. In addition, staff was troubled by the seemingly large financial hedging losses reported in the PGA period of November 1, 2011 through October 31, 2012 (survey period) and the recurring financial hedging losses recorded and passed onto ratepayers in previous years. Therefore, at the commission's Open Public Meeting on October 25, 2012, staff recommended that the commission issue a complaint and order suspending the tariff revisions in all dockets and allowing the tariff revisions to become effective on November 1, 2012 on a temporary basis, subject to revision. This would allow staff additional time to investigate hedging transactions, potential implications of procurement/hedging guidelines, and uniformity of PGA reporting.

Staff also noted that potential areas of its review while the tariffs were under suspension would include, but would not be limited to:

1. Guidelines for implementing portfolio purchases of natural gas.
2. Guidelines for the level and type of financial hedging of natural gas prices.
3. Guidelines for documentation of financial hedging decisions.
4. Guidelines for the sources and methodology for forecasting long-term natural gas prices.
5. Guidelines for the source and methodology for the forecasts of spot (cash) natural gas prices included in the PGA.
6. Guidelines for the use of storage as part of the company portfolio of natural gas.
7. Guidelines for documentation of natural gas market reviewed by the company in making purchasing decisions.
8. Sharing of gas financial hedging costs between the company and its customers and the percentage for such sharing.
9. A common format for PGA filings with the commission.
10. Common formats for PGA work papers that support the filing with the commission.

The commission adopted staff's recommendation and, on October 31, 2012, issued for all companies the appropriate complaints and orders of suspension; allowing rates on a temporary basis, subject to revision, in all dockets for all companies.

The commission also ordered staff to “report to the Commission on the status of Staff’s investigation no later than March 1, 2013, and that report shall include recommendations on the disposition of this tariff filing or the need for further process to make the appropriate determination.”<sup>1</sup> This memo serves as staff’s report on the status of its investigation and provides its recommendation for disposition of the tariff filings.

#### **IV. STATUS OF STAFF INVESTIGATION AND RECOMMENDATION**

Due to the size and complexity of the investigation, it was determined that an expert consultant would be beneficial in assisting staff. Staff retained Schneider Electric, formerly known as Summit Energy (Schneider or consultant) due to their expertise in the subject matter. The consultant worked with staff to analyze the policies, procurement strategies and execution of all companies’ hedging programs.

Staff issued approximately 30 detailed data requests to each company. Schneider issued further data requests as well. Data requested by staff included:

- Monthly load served for each of the months during the survey period
- Location(s) of gas purchases during the survey period
- Percentage of total purchases at each location for all months during the survey period.
- Average price per therm of spot/index gas purchased during the survey period
- Explanation of company policy on hedging natural gas prices using financial instruments
- Objective of natural gas hedging
- Financial hedge loss tolerances
- Available financial instruments for hedging natural gas prices
- Percentage of load financially hedged during the survey period
- Percentage of load financially hedged for each survey period starting in 2003 to present
- Detail on all financial hedges that settled during the current survey period (type of hedge, location, counter-party, start date, settlement date, gain or loss, volume, collateral costs)
- All financial hedge transactions entered into during the survey period regardless of settlement date with same detail noted above
- Credit facility/collateral costs for hedging
- Net gain or loss from settled financial hedges during the survey period
- Net gain or loss on settled financial hedges during the survey period for the years 2003 through 2011
- Net gains or losses from arbitrage/optimization
- Sources and methodology used to forecast future natural gas prices
- Documentation of decision making for financial hedges during the survey period
- Company policy on natural gas storage
- Date company first started hedging practices
- Cumulative net gain or loss from settled financial hedges since inception to date
- Current mark to market net gain or loss on open positions of financial hedges

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<sup>1</sup> Order 01, Dockets UG-121501, UG-121569, UG-121434, UG-121623 and UG-121592.

Based on non-confidential information provided by the companies in their responses to staff data requests, staff prepared Attachment A to this Report. Gains or losses for all companies strictly from fixed price “financial” hedges<sup>2</sup> are shown on lines 34 and 36. As seen in Attachment A, the net losses on a system basis from financial hedges during the survey period range from a low of approximately \$680,000 to a high of \$157 million. The net losses over a 10 year period range from a low of approximately \$18 million to a high of \$695 million. 100 percent of Washington’s share of these net losses has been passed onto ratepayers in prior PGA filings. The additional cost per dekatherm during the survey period to Washington ratepayers from financial hedging losses is shown on line 40 of the attachment.

It should be noted that the companies also use, to varying degrees, fixed price “physical” hedges,<sup>3</sup> which can theoretically have gains or losses if they were able or required to be marked to market based on current spot/index prices. Some companies may use more or less fixed price physical hedges than financial hedges, which if accounted for could increase the gains or losses on hedges shown in Attachment A.

Attachment B to this Report is another chart using non-confidential data derived from the companies’ responses to staff’s data requests. This chart shows the percentage of load financially hedged over a 10 year period and the corresponding gains or losses from those financial hedges. The Attachment also shows a chart of natural gas spot prices (each bar shows the monthly price range) over approximately the same time period. Even during periods of rapid price escalation, the hedging gains appear fairly muted relative to the losses seen in other periods, bringing into question the effectiveness of either hedging in general or the hedging programs employed by certain companies in particular.

The magnitude of the losses and their apparent persistence over the years is significant and not lost on staff. However, the issues implicated by the companies’ hedging practices and policies are also significant, highly complex, and universal in their application. They have also proven difficult to examine fully and resolve in the time frame allowed for tariff revisions.

Therefore, Staff sees further need to address very basic policies concerning hedging and the PGAs. For example, based on responses to staff data requests and direct communications, the companies regard the main hedging objective to be “price stability.” However, staff considers the annual PGA mechanism currently in place as already providing that stability to ratepayers. If the goal of hedging is not price stability, what is it?

Whether or not price stability should be the objective, staff identified other areas in the hedging policies/programs that need further investigation. Other areas of concern for some or all of the companies include the lack of using other available hedging instruments; the lack of hedging tolerance provisions or any attempt at mitigating hedge losses; the percentage of load hedged on

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<sup>2</sup> A fixed price financial hedge generally entails conversion of a future supply contract at market prices to a fixed price through the use of financial instruments. The counter-party to the fixed price conversion through a financial instrument is often a financial institution and not the supplier of the natural gas.

<sup>3</sup> A fixed price physical hedge occurs when the supplier of the natural gas will sell a future supply contract at a fixed price to the utility.

a programmatic basis versus the degree of discretion in the volumes hedged; the duration of the hedges (*i.e.* how far in advance prices are locked in), and the lack of hedging performance review from a gain/loss perspective.

Finally, based upon its review of the hedging practices and policies for all companies, staff contemplated seeking ratemaking disallowances of some or all of the survey period hedging losses for one or more companies. However, several factors weighed against such a recommendation. First, the commission has not previously issued a policy statement or order setting forth guidelines regarding the hedging policies and practices of natural gas companies. The establishment of such guidelines would greatly assist staff in its consideration of a proper ratemaking adjustment. Second, the commission has addressed mark to market adjustments related to the hedging practices for the electric operations of PSE, and the commission has rejected staff-recommended adjustments regarding related costs.<sup>4</sup> Third, the companies' historical losses have been recovered through the PGA tariffs without prior dispute by staff or disallowance by the commission. The commission should not diverge from that practice without careful consideration of all relevant factors.

Therefore, taking into account all of these issues and factors, staff recommends that the commission issue a CR 101 to determine whether it should engage in a rulemaking, policy statement or other action regarding the companies' hedging policies and practices. This recommended process would commence with workshops in which all companies and interested parties would participate.

Topics and questions staff recommends should be addressed in the workshop include but are not limited to the following:

- Why hedge?
- What is or should be the objective of hedging?
- Should there be a sharing of risk?
- What is the term covered by the hedge program and why?
- If the hedge program is initiated against a forecast of expected load, how is that forecast derived? What is the forecast history and why did it change? What is the programs track record on load forecast accuracy?
- What are the goals of the hedge program and what numeric indicators / measures will be used to assess the performance of the hedge program?
- What is the range of foreseeable conditions over the hedge program term (can be divided into smaller management periods) and what strategy(s) will be deployed under this range of possibilities? What numeric indicators / measures will determine where within that range of possibilities the entity resides?
- What is the criteria by which approved hedged instruments will be selected and utilized – *i.e.*, which tool do we choose out of the box?
- What information and situations leads to an actionable hedge condition? What are the mandatory parameters to establish thorough deal capture for hedge performance traceability at hedge inception?

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<sup>4</sup> Docket UE-090704, Order 11 at ¶¶ 142-155 and Docket UE-111048, Order 08 at ¶¶ 222-227

Finally, staff's consultant provided the attached power points for each company. The information included in the power points was derived from staff data requests and consultant data requests. The documents cover a policy review, best practice risk management methodologies, best and worst case scenarios and recommendations. This information was also considered by staff in developing its recommendation and would be utilized in the workshops along with the input from other participants.

**Hedge Data Summary**

Line No.		Avista	PSE	NWN	Cascade
1	<b>System 2012 PGA Load (Dth)</b>	24,786,068	92,885,439	76,273,346	29,853,668
2					
3	<b>Percentage of load per location</b>				
4	AECO	74.66%	16.00%	40.03%	20.00%
5	SUMAS	11.75%	16.00%	0.00%	39.00%
6	ROCKIES	13.58%	34.00%	37.23%	41.00%
7	INTERCOMPANY	0%	0.00%	0.00%	0.00%
8	Mist			0.79%	
9	Huntington			3.26%	
10	Station 2, BC		34.00%	18.69%	
11	Storage				
12	Other				
13	<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
14					
15	<b>Monthly Weighted Avg Price per Dth (spot/index)</b>				
16	Nov-11	\$ 3.30	\$ 3.39	\$ 3.30	\$ 3.50
17	Dec-11	\$ 3.09	\$ 3.40	\$ 3.25	\$ 3.56
18	Jan-12	\$ 2.72	\$ 3.04	\$ 2.81	\$ 3.13
19	Feb-12	\$ 2.34	\$ 2.49	\$ 2.39	\$ 2.52
20	Mar-12	\$ 1.97	\$ 2.19	\$ 2.06	\$ 2.28
21	Apr-12	\$ 1.76	\$ 1.97	\$ 1.74	\$ 1.86
22	May-12	\$ 2.09	\$ 1.56	\$ 1.86	\$ 1.76
23	Jun-12	\$ 2.01	\$ 2.36	\$ 1.96	\$ 2.14
24	Jul-12	\$ 2.41	\$ 2.36	\$ 2.11	\$ 2.32
25	Aug-12	\$ 2.38	\$ 2.75	\$ 2.43	\$ 2.61
26	Sep-12	\$ 2.45	\$ 2.44	\$ 2.27	\$ 2.50
27	Oct-12	\$ 3.14	\$ 2.79	\$ 2.96	\$ 3.19
28					
29	<b>Weighted Avg Price of gas (spot/index)</b>	\$ 2.47 *	\$ 2.72	\$ 2.65	\$ 2.89
30					
31					
32	<b>Percentage of load financially hedged</b>	21%	67.01%	51%	1.23%
33					
34	<b>Net Financial Hedge gains (losses) Nov-11 thru Oct-12</b>	\$ (9,057,028)	\$ (156,834,589)	\$ (84,715,911)	\$ (679,980)
35					
36	<b>Net Financial Hedge gains (losses) 10 years</b>	\$ (18,028,034) **	\$ (694,927,723)	\$ (299,400,000)	\$ (141,395,422)
37					
38	<b>Current mark to market gains (losses)</b>	\$ (4,266,714)	\$ (76,958,505)	\$ (4,323,000)	n/a
39					
40	<b>2012 System PGA Cost per Dth of financial hedges</b>	\$ 0.37	\$ 1.69	\$ 1.11	\$ 0.02
41	<b>Weighted Avg Price of gas (spot/index)</b>	\$ 2.47 *	\$ 2.72	\$ 2.65	\$ 2.89
42	<b>Total Cost per Dth (avg spot/index + financial hedges)</b>	\$ 2.84	\$ 4.40	\$ 3.76	\$ 2.92
43	<b>Financial Hedge percentage of total cost</b>	13%	38%	30%	1%
44					
45					
46	<b>Actual PGA Tariff rates charged to customers for the survey period (includes prior-period true-ups and estimated future gas prices)</b>				
47					
48	<b>2012 PGA Tariff Commodity Cost (Dth)***</b>	\$ 3.59	\$ 5.08	\$ 4.74	\$ 4.74
49	<b>2012 PGA Tariff Demand Cost (Dth)****</b>	\$ 1.09	\$ 1.41	\$ 1.30	\$ 1.24
50	<b>Total</b>	\$ 4.68	\$ 6.49	\$ 6.04	\$ 5.98
51					
52	<b>Proposed PGA Tariff rates for 2013 PGA year</b>				
53					
54	<b>2013 PGA Tariff Commodity Cost (Dth)***</b>	\$ 3.31	\$ 4.38	\$ 3.70	\$ 4.03
55	<b>2013 PGA Tariff Demand Cost (Dth)****</b>	\$ 1.04	\$ 1.42	\$ 1.34	\$ 1.52
56	<b>Total</b>	\$ 4.35	\$ 5.80	\$ 5.04	\$ 5.55

\* Not an exact weighted average. DR response didn't supply weighted average per basin for the year

\*\* Avista started using financial hedges in 2005

\*\*\* Commodity cost includes items other than just spot/index purchases and financial hedge costs.

\*\*\*\* Mostly transportation costs (pipeline capacity)



10 Year Hedge History

	AVA*	PSE**	NWN***	Cascade
<b>11/1/2002 - 10/31/2003</b>				
Percentage of Load Financially Hedged	0%		71%	0%
Gain (Loss) on Financial Hedges	\$0	\$7,568,322	\$36,600,000	\$0
<b>11/1/2003 - 10/31/2004</b>				
Percentage of Load Financially Hedged	0%	18.41%	88%	1%
Gain (Loss) on Financial Hedges	\$0	\$4,131,299	\$25,100,000	(\$366,203)
<b>11/1/2004 - 10/31/2005</b>				
Percentage of Load Financially Hedged	0%	53.87%	88%	77%
Gain (Loss) on Financial Hedges	\$0	\$7,012,609	\$62,900,000	\$14,906,106
<b>11/1/2005 - 10/31/2006</b>				
Percentage of Load Financially Hedged	4%	54.41%	75%	63%
Gain (Loss) on Financial Hedges	(\$245,908)	(\$12,204,785)	\$23,600,000	\$17,596,975
<b>11/1/2006 - 10/31/2007</b>				
Percentage of Load Financially Hedged	1%	54.61%	61%	40%
Gain (Loss) on Financial Hedges	(\$50,998)	(\$81,607,244)	(\$35,500,000)	(\$26,756,599)
<b>11/1/2007 - 10/31/2008</b>				
Percentage of Load Financially Hedged	4%	50.87%	62%	21%
Gain (Loss) on Financial Hedges	(\$435,608)	(\$6,414,037)	\$4,000,000	\$1,039,636
<b>11/1/2008 - 10/31/2009</b>				
Percentage of Load Financially Hedged	4%	60.51%	58%	68%
Gain (Loss) on Financial Hedges	(\$4,263,731)	(\$204,319,517)	(\$219,200,000)	(\$91,004,888)
<b>11/1/2009 - 10/31/2010</b>				
Percentage of Load Financially Hedged	6%	60.26%	56%	39%
Gain (Loss) on Financial Hedges	(\$3,893,787)	(\$119,221,178)	(\$50,800,000)	(\$41,624,466)
<b>11/1/2010 - 10/31/2011</b>				
Percentage of Load Financially Hedged	1%	58.47%	59%	10%
Gain (Loss) on Financial Hedges	(\$90,964)	(\$133,038,603)	(\$61,400,000)	(\$14,506,003)
<b>11/1/2011 - 10/31/2012</b>				
Percentage of Load Financially Hedged	21%	66%	51%	1%
Gain (Loss) on Financial Hedges	(\$9,057,028)	(\$156,834,589)	(\$84,700,000)	(\$679,980)
<b>Total System gains (losses) financial hedges only</b>	<b>(\$18,038,024)</b>	<b>(\$694,927,723)</b>	<b>(\$299,400,000)</b>	<b>(\$141,395,422)</b>

\* Avista did not start financial hedging until 2005 or had no records prior to 2005  
 \*\* PSE provided physical fixed price and financial hedges in their percentage of load financially hedged. However, the gain or loss are from financial hedges only  
 \*\*\* From 1999-2001 NWN had cumulative net gains on financial hedges of \$117.6 million

NATURAL GAS Monthly - 1/1/02 - 2/1/13  
 Monthly candlestick chart with 20 months between X axis date ticks

