

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UG-15\_\_\_\_

DIRECT TESTIMONY OF

JODY MOREHOUSE

REPRESENTING AVISTA CORPORATION

1

**I. INTRODUCTION**

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**Q. Please state your name, business address, and present position with**

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**Avista Corp.**

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A. My name is Jody Morehouse and I am employed as Director of Gas Supply

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for Avista Utilities (Avista or Company). In my current role I am responsible for Avista's

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natural gas supply and upstream pipeline transportation resources. My business address is

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1411 East Mission Avenue, Spokane, Washington.

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**Q. Would you please describe your education and business experience?**

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A. Yes. I graduated from Montana State University with a Bachelor of Science

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Degree in Mechanical Engineering and hold a professional engineering license in the State

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of Washington. I joined the Company in 1989 and have held staff and management

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positions in our natural gas engineering, natural gas operations, natural gas planning, and

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natural gas measurement departments. Additionally, I held the position of Manager of

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Pipeline Integrity and Compliance prior to my current role.

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**Q. What is the purpose of your testimony in this proceeding?**

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A. The purpose of my testimony is to describe Avista's natural gas resource

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planning process, provide an overview of the Jackson Prairie storage facility, and provide an

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update on the Company's 2014 Natural Gas Integrated Resource Plan. A table of contents

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for my testimony is as follows:

20

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Avista Corporation

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1           **Q.     Are you sponsoring exhibits in this proceeding?**

2           A.     Yes. I am sponsoring Exhibit No.\_\_(JM-2) which is a copy of the  
3 Company's 2014 Natural Gas Integrated Resource Plan filed with this Commission on  
4 August 29, 2014.

5           **Q.     Is the Company proposing any changes to the cost of natural gas for its**  
6 **retail natural gas customers in this case?**

7           A.     No, Avista is not proposing changes in this filing related to the commodity  
8 cost of natural gas or upstream pipeline transportation resource costs. Changes in the  
9 commodity cost of natural gas, and the cost of natural gas pipeline transportation included in  
10 customers' rates are addressed in the Company's annual Purchased Gas Cost Adjustment  
11 (PGA) filing. The Company filed its annual PGA on September 12, 2014, with new rates  
12 effective November 1, 2014.

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14           **II. PLANNING FOR COMMODITY RESOURCE PROCUREMENT**

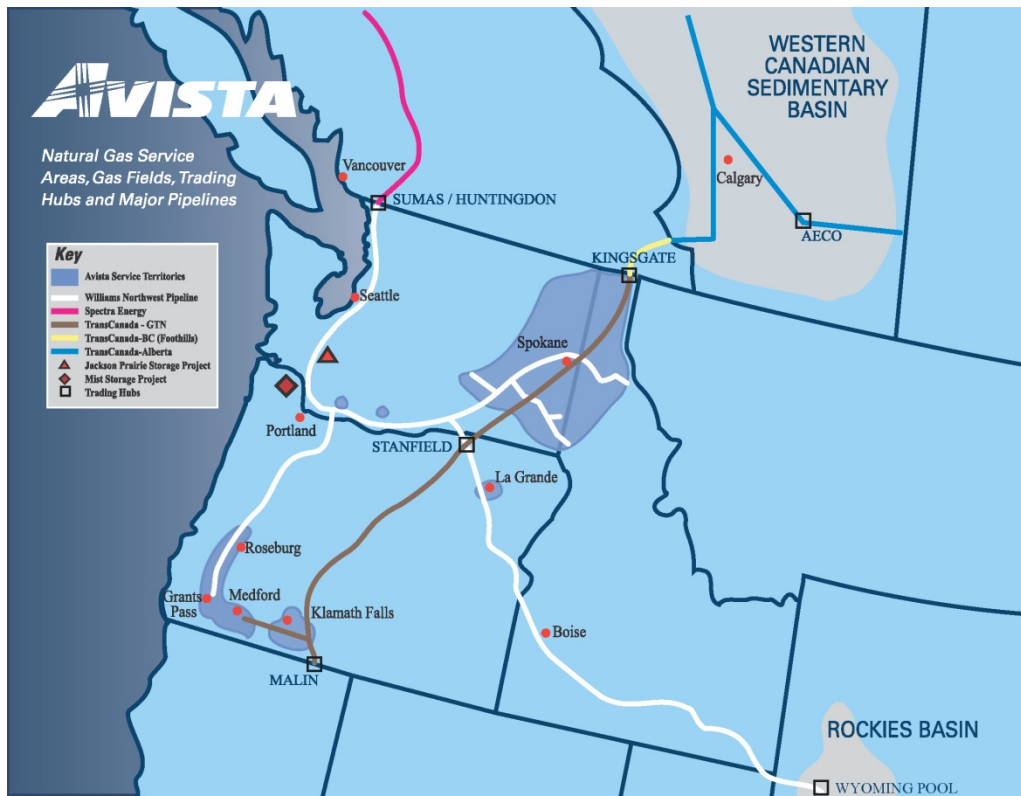
15           **Q.     Please describe Avista's natural gas portfolio as it relates to the**  
16 **procurement of the natural gas commodity for its local distribution company ("LDC")**  
17 **customers?**

18           A.     Avista purchases natural gas for its distribution customers in wholesale  
19 markets at multiple supply basins in the western United States and western Canada.  
20 Purchased natural gas can be transported through six connected pipelines on which Avista  
21 holds firm contractual transportation rights. These contracts provide access to both US and  
22 Canadian-sourced supply. The US-sourced gas represents 25% of the contractual rights and  
23 provides transportation from the Rocky Mountains. The remaining 75% provides access to

1 Alberta and British Columbia supply basins. This diverse portfolio of natural gas resources  
 2 allows the Company to make natural gas procurement decisions based on the reliability and  
 3 economics that provide the most benefit to our customers. As natural gas prices in the  
 4 Pacific Northwest can be affected by global energy markets, as well as supply and demand  
 5 factors in other regions of the United States and Canada, future prices and delivery  
 6 constraints may cause the source mix to vary.

7 Illustration No. 1 below is a map showing our service territory, natural gas trading  
 8 hubs, interstate pipelines, and natural gas storage facilities:

9 **Illustration No. 1**



21 Future natural gas prices cannot be accurately predicted; however, market  
 22 conditions, analysis, and experience shape our overall procurement approach. The  
 23 Company's goal is to provide reliable supply at competitive prices, with a level of price

1 certainty, in a volatile commodity market. To that end, the Company utilizes a Procurement  
2 Plan which includes hedging (on both a short-term and long-term basis), storage utilization,  
3 and index purchases. This approach is diversified by transaction time, term, counterparty,  
4 and supply basin. The Procurement Plan is disciplined, yet flexible, and layers in fixed-  
5 price purchases over time and term to provide a level of price certainty to customers. A  
6 copy of the Company's Natural Gas Procurement Plan is included as an exhibit to Avista's  
7 Energy Resources Risk Policy (see Confidential Exhibit No.\_\_(SJK-4C)).

8         The Procurement Plan provides a process that fixes future gas prices for a targeted  
9 portion of the portfolio through the use of hedge windows. The hedge windows are "open"  
10 for a predetermined time period and have upper and lower pricing levels which are  
11 determined by the market at the time the window becomes effective. In a rising market, this  
12 reduces exposure to extreme price spikes. In a declining market, it can facilitate locking in  
13 lower prices. These windows can be executed, or "closed" if certain pricing levels are met,  
14 or upon time expiration if no pricing events occur. The Company always maintains some  
15 level of discretion and may choose not to execute within a window or to change some aspect  
16 of a window given market conditions.

17         In addition, a portion of the portfolio that is separate from the defined hedge  
18 windows is designated as discretionary. This opportunistic portion of the portfolio allows  
19 the Company to hedge additional, targeted volumes in gas years beyond the prompt year at  
20 potentially favorable pricing levels. In the event those pricing levels are not reached, the  
21 unexecuted volumes designated as discretionary hedges will then become a part of the  
22 prompt year hedging program.

23         The Gas Supply Department continuously monitors the results of the Procurement

1 Plan, evolving market conditions, variation in demand profiles, new supply opportunities,  
2 and regulatory conditions. Although various windows and targets are established in the  
3 initial design phase of the portfolio, the plan provides flexibility to exercise judgment to  
4 revise and/or adjust the Procurement Plan in response to changing conditions. Material  
5 changes to the Procurement Plan are communicated to Avista's Senior Management and  
6 periodically to Commission Staff.

7 **Q. What delivery period does the natural gas Procurement Plan include?**

8 A. The Procurement Plan includes four complete natural gas operating years  
9 (November through October) and whole months remaining from the current month until the  
10 next October 31 period (the current natural gas operating year). The four complete  
11 upcoming natural gas operating years are designated "Prompt", "Second", "Third", and  
12 "Fourth" years.

13 **Q. Please describe the components of the natural gas Procurement Plan.**

14 A. Each year a comprehensive review of the previous year's plan is performed.  
15 The review includes analysis of historical and forecasted market trends, fundamental market  
16 analysis, demand forecasting, and transportation, storage and other resource considerations.  
17 The plan includes the following components:

- 18 1. **Previous Year(s) Hedges** – longer-term fixed-price purchases executed as a  
19 part of a previous year's Procurement Plan.
- 20 2. **Prompt Year Hedges** – the portion of the portfolio addressed through the  
21 utilization of hedge windows. In each window, fixed price purchases are  
22 made for various prompt year delivery periods. Prior to the execution of each

1 window, market conditions, fundamental market knowledge, and other  
2 information are considered to determine if execution will occur.

3 3. **Storage Withdrawals** – utilizing the capacity and deliverability from the  
4 Jackson Prairie storage facility, Avista is able to inject natural gas during the  
5 summer months and withdraw it to serve customers during the higher demand  
6 winter months.

7 4. **Discretionary Long-term Hedges** – opportunistic purchases based on a set  
8 of price levels, or targets, which trigger possible execution. At the time the  
9 triggers are reached, evaluation of market conditions, fundamental market  
10 knowledge, and other information are considered. These hedges will  
11 generally be executed when they can be done at or below the established  
12 targets.

13 5. **Index Purchases** – physical index-based natural gas purchases are procured  
14 prior to or throughout the delivery month. These purchases are usually  
15 associated with daily pricing. The amount of index purchases planned is the  
16 difference between the forecasted demand less the sum of the previous year  
17 hedges, prompt year hedges, and storage withdrawals.

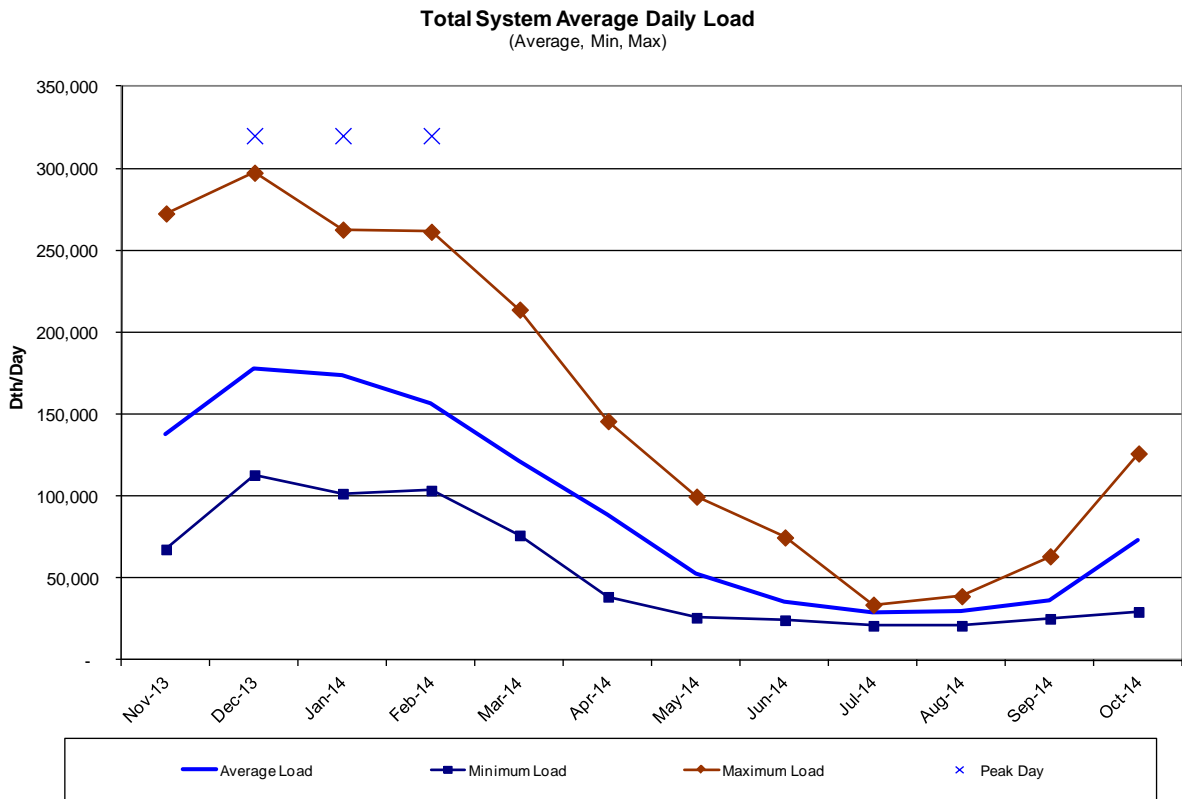
18 **Q. Please describe how the Procurement Plan manages supply to meet the**  
19 **volatility in customer demand, as well as manages the impact to customers from**  
20 **volatility in market prices.**

21 A. The Procurement Plan focuses on managing demand and price volatility. For  
22 example, system-wide average daily demand can fluctuate between 27,000 dekatherms  
23 (Dth) per day during a summer month and 180,000 Dth/day during a winter month. Further,

1 December’s system-wide daily demand volatility has ranged from a low of 99,000 Dth/day  
 2 to a high of 300,000 Dth/Day. Finally, from Avista’s 2014 IRP, system-wide peak day  
 3 demand for the 2014-2015 heating season is forecasted to be approximately 336,000 Dth per  
 4 day.

5 In order to manage these seasonal, monthly and daily volume swings, Avista shapes  
 6 the components of the Procurement Plan by month (i.e. more natural gas is hedged for the  
 7 winter months than for the summer). Illustration No. 2 below includes a chart that shows  
 8 the demand volatility:

9 **Illustration No. 2**

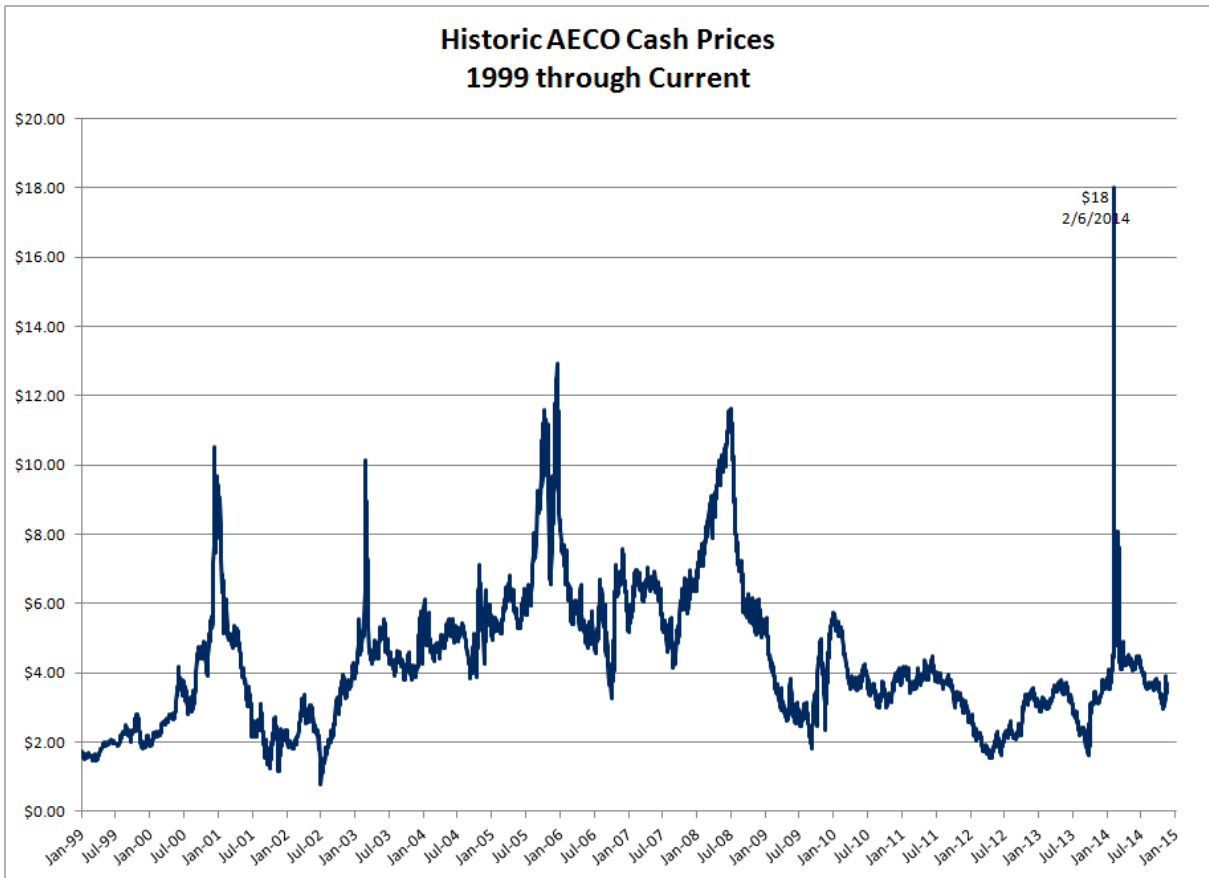


21 Price volatility can also vary widely by season, month and day. Illustration No. 3  
 22 below includes a chart depicting the natural gas price volatility over time. Avista cannot  
 23 predict with accuracy what natural gas prices may be, however, our experience and



1 intelligence related to market fundamentals guide our procurement decisions. By layering in  
 2 fixed price purchases over time, setting upper and lower pricing levels on the hedge  
 3 windows, opportunistically hedging at favorable pricing levels through the discretionary  
 4 hedge program, and actively managing storage resources, Avista is able to meet our goal of  
 5 providing a meaningful measure of price stability and certainty, and competitive prices for  
 6 our customers.

7 **Illustration No. 3**



21 **III. JACKSON PRAIRIE STORAGE**

22 **Q. Please describe Avista’s involvement with the Jackson Prairie natural**  
 23 **gas storage facility.**

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1           A.     Avista is one of the three original developers of the underground storage  
2 facility at Jackson Prairie, which is located near Chehalis, Washington. Although there have  
3 been corporate changes due to mergers, acquisitions and name changes, Avista, Puget Sound  
4 Energy (PSE) and Williams Northwest Pipeline each hold a one-third share (equal,  
5 undivided interest) of this underground gas storage facility through a joint ownership  
6 agreement. The facility was certified for commercial service in 1970. Puget Sound Energy  
7 is the operator of the facility.

8           **Q.     What type of storage facility is Jackson Prairie?**

9           A.     Jackson Prairie is an underground aquifer storage facility. Storage and the  
10 associated withdrawal and injection capability has been created by a combination of wells,  
11 gathering pipelines, compression and dehydration equipment, and the removal and disposal  
12 of aquifer water.

13           **Q.     Please describe the present level of storage that Avista owns at Jackson**  
14 **Prairie.**

15           A.     At the present time, Avista Utilities owns a total of 8,528,013 dekatherms  
16 (Dth) of capacity. This capacity comes with a withdrawal capability of 398,667 Dth per day  
17 (deliverability). Washington/Idaho's current share of that capacity is 7,704,676 Dth and  
18 346,667 Dth per day of deliverability. The remaining amount is allocated to our customers  
19 in the Oregon jurisdiction.

20           **Q.     What are the benefits of storage to Avista's customers?**

21           A.     Access to regionally located storage provides several benefits to Avista's  
22 customers. It enables the Company to capture seasonal price spreads (differentials) between  
23 summer and winter, improves reliability of supply, increases operational flexibility,

1 mitigates peak demand price spikes and provides numerous other economic benefits.

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**IV. 2014 NATURAL GAS INTEGRATED RESOURCE PLAN**

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**Q. Please provide an overview of the Company's development of its 2014 Natural Gas Integrated Resource Plan.**

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A. The 2014 Integrated Resource Plan ("IRP") was filed with the Commission on August 29, 2014. The IRP includes forecasts of natural gas demand and any supply-side transportation resources and demand-side measures needed for the coming 20 years, which will help Avista continue to reliably provide natural gas to our customers. A copy of the Company's 2014 Natural Gas Integrated Resource Plan is included as Exhibit No.\_\_(JM-2).

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**Q. What are the summary highlights from the 2014 IRP?**

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A. Highlights from the 2014 IRP are as follows:

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- The Company has sufficient natural gas transportation resources well into the future with resource needs not occurring during the 20 year planning horizon in Oregon, Idaho or Washington;
- Natural Gas commodity prices continue to be relatively stable due to robust North American supplies led by shale gas development; and
- As forecasted demand is relatively flat, the Company will monitor actual demand for signs of increased growth which could accelerate resource requirements.

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**Q. Has the Company's 2014 Natural Gas IRP been acknowledged by this Commission?**

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A. Yes, on January 23, 2015, the Commission acknowledged the 2014 Natural Gas IRP (Docket UG-131621), finding that the IRP met the requirements of Washington

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1 Administrative Code (WAC) 480-90-238.

2 **Q. When will the Company file its next IRP?**

3 A. The Company will file its next IRP on or before August 31, 2016. A courtesy  
4 work plan will be filed on August 31, 2015 detailing Avista's IRP planning process as well  
5 as tentative dates and content for meetings with the Technical Advisory Group (TAC). TAC  
6 meetings will begin in the first quarter of 2016.

7 **Q. Does this complete your pre-filed direct testimony?**

8 A. Yes, it does.