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BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION)
OF AVISTA CORPORATION FOR THE)
AUTHORITY TO INCREASE ITS RATES)
AND CHARGES FOR ELECTRIC AND)
NATURAL GAS SERVICE TO ELECTRIC)
AND NATURAL GAS CUSTOMERS IN THE)
STATE OF IDAHO)
_____)

CASE NO. AVU-E-21-01
CASE NO. AVU-G-21-01

DIRECT TESTIMONY
OF
JODY MOREHOUSE

FOR AVISTA CORPORATION

(NATURAL GAS ONLY)

1 **I. INTRODUCTION**

2 **Q. Please state your name, business address, and present position with Avista**
3 **Corp.**

4 A. My name is Jody Morehouse and I am employed as Director of Gas Supply for
5 Avista Utilities (Avista or Company). In my current role, I am responsible for Avista’s natural
6 gas supply and upstream pipeline transportation resources. My business address is 1411 East
7 Mission Avenue, Spokane, Washington.

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

9 A. Yes. I graduated from Montana State University with a Bachelor of Science
10 Degree in Mechanical Engineering and hold a professional engineering license in the State of
11 Washington. I joined the Company in 1989 and have held staff and management positions in
12 our natural gas engineering, natural gas operations, natural gas planning, and natural gas
13 measurement departments. Additionally, I held the position of Manager of Pipeline Integrity
14 and Compliance prior to my current role.

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

16 A. The purpose of my testimony is to describe Avista’s natural gas resource
17 planning and procurement process, as well as provide an overview of the Company’s 2018
18 Natural Gas Integrated Resource Plan. A table of contents for my testimony is as follows:

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

2 A. Yes. I am sponsoring Exhibit 14 - Schedule 1 which is a copy of the
3 Company's 2018 Natural Gas Integrated Resource Plan, which was filed on August 31, 2018
4 and acknowledged by the Commission on January 16, 2019.¹

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

7 A. No, Avista is not proposing changes in this filing related to the commodity cost
8 of natural gas or upstream pipeline transportation resource costs. Changes in the commodity
9 cost of natural gas and the cost of natural gas pipeline transportation included in customers'
10 rates are addressed in the Company's annual Purchased Gas Cost Adjustment (PGA) filing.

11

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

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

16 A. Avista manages natural gas procurement and related activities on a system-
17 wide basis with several regional supply options available to serve LDC customers. The
18 Company purchases natural gas for its LDC customers in wholesale markets at multiple
19 supply basins in the western United States and western Canada. Purchased natural gas is
20 transported from these various US or Canadian-sourced supply basins through six inter-
21 connected pipelines within the region and delivered to city gates or put into the Jackson Prairie

¹ Case No. AVU-G-18-05. The Company has also provided an electronic .pdf file "Exhibit 14 - Schedule 1 Appendices" which is the appendix to the Natural Gas IRP.

1 Natural Gas Storage Facility (“JP”) for future use. Avista holds firm contractual transportation
2 rights on all six pipelines, as well as firm withdrawal capability from JP, helping diversify
3 where supply can be received in order to meet customers’ needs among the three jurisdictions.

4 JP is an underground aquifer natural gas storage facility located in Chehalis,
5 Washington. Through a joint ownership agreement, Avista, Puget Sound Energy, and
6 Williams Northwest Pipeline each hold one-third equal, undivided interest of JP. At the
7 present time, Avista owns a total of 8,528,013 dekatherms (Dth) of working gas capacity. This
8 capacity comes with a withdrawal capability (deliverability) of 398,667 Dth per day.
9 Jurisdictionally, this amount is broken out as follows:

Jurisdiction	Working Capacity (Dth/Day)	Withdrawal Capacity (Dth/Day)
Washington/Idaho	7,704,676	346,667
Oregon	823,337	52,000
Total Owned	8,528,013	398,667

13 Access to regionally located storage provides several benefits to Avista customers,
14 including improving reliability and flexibility of supply, mitigating daily price volatility and
15 peak demand price spikes, capturing price spreads between time periods, and numerous other
16 economic benefits.

17 Illustration No. 1 below is a map showing our service territory, natural gas trading
18 hubs, interstate pipelines, and the Jackson Prairie Natural Gas Storage Facility.

1 **Illustration No. 1**



13 Wholesale natural gas prices are a fundamental component of both procurement and

14 integrated resource planning. Pacific Northwest natural gas prices can be affected not only by

15 regional factors, but by global energy markets, and supply and demand factors from other

16 regions within the United States and Canada. Price volatility and delivery constraints can have

17 an impact on where our natural gas is sourced. Avista’s diverse portfolio of natural gas supply

18 resources allows the Company to make natural gas procurement decisions based on the

19 reliability and economics that provide the most benefit to our customers.

20 Being that future natural gas prices cannot be accurately predicted, the Company has

21 developed a Natural Gas Procurement Plan (“Plan”) to ensure reliable supply and a level of

22 price certainty in volatile markets. Market conditions, analysis, and experience shape the

23 Plan’s overall strategy, which includes hedging, storage utilization, and index purchases. This

1 approach is diversified by transaction time, term, counterparty, and supply basin.

2 The Plan provides general guidelines regarding the use, procurement, and execution
3 of transactions as authorized in Avista’s Energy Resources Risk Policy. Although the specific
4 provisions of the Plan will change based on ongoing analyses and experience, this Plan utilizes
5 a combination of strategies to reduce the impacts of fluctuating commodity prices. A portion
6 of the hedges are focused on concentration risk by utilizing Dynamic Hedge Windows
7 (“Hedge Windows”), while another portion of hedges target reducing risk in a volatile
8 commodity price environment by utilizing Risk Responsive Hedging methods.

9 Hedge Windows allow the Company to capture, or fix, future natural gas prices for a
10 targeted portion of the portfolio. A Hedge Window is bounded by dates and market
11 parameters, defined as a set-rate, an upper control limit (“UCL”), a lower control limit
12 (“LCL”), and an expiration date. Quantitative mathematics and statistical calculations are used
13 to determine these boundaries. Hedge Windows remain “open” as long as the current
14 commodity price remains between the UCL and the LCL, and the window has not reached its
15 time expiration. Once the current commodity price goes beyond the UCL or the LCL, or the
16 window has reached time expiration, the Hedge Window has been triggered and may be
17 procured. The Plan allows discretion for decision making as market conditions warrant.
18 Management may determine that it is appropriate to take other action, partial action, or no
19 action, with respect to transaction execution and will document accordingly.

20 In addition to the Hedge Windows described above, which guide execution of hedges
21 up to a predetermined minimum hedge ratio, a Risk Responsive Hedging approach was
22 introduced at the beginning of the 2018-2019 natural gas year. Risk Responsive Hedging is
23 utilized to help manage the Value at Risk (“VaR”) of the Company’s LDC natural gas

1 portfolio's open position on a daily basis. Regional forward natural gas prices are the basis
2 for the VaR analysis. The analysis utilizes a confidence level and historic volatility to calculate
3 a portfolio VaR, and combines it with the current mark-to-market portfolio price to develop a
4 price risk metric. This price risk metric is compared to a predetermined threshold, known as
5 the Operative Boundary, on a daily basis. If the price risk metric exceeds the Operative
6 Boundary, then one or more suggested hedges may be executed to bring the price risk metric
7 back within the Operative Boundary. In any case, hedge volumes should not exceed the
8 predetermined maximum hedge ratio. Similar to the Hedge Windows, the Company always
9 maintains some level of discretion and may choose to take other action, partial action, or no
10 action, with respect to transaction execution and will document accordingly.

11 The Natural Gas Supply Department continuously monitors the results of the Plan,
12 evolving market conditions, variation in demand profiles, new supply opportunities, and
13 regulatory conditions. Although the initial windows and targets are established in the initial
14 design phase, the Plan allows discretion for ultimate decision making as market conditions
15 warrant. Material changes to the Plan are communicated to Avista's Senior Management and
16 Commission Staff.

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

18 A. The target delivery periods for the Procurement Plan include five to eleven
19 bullet (individual) months depending on the current month, as well as seasonal strips
20 (November-March or April-October) for a period of up to 36 months from the current month.

21 **Q. Please describe the components of the Natural Gas Procurement Plan.**

22 A. Each year a comprehensive review of the previous year's Plan is performed.
23 The review includes analysis of historical and forecasted market trends, fundamental market

1 analysis, demand forecasting, and transportation, storage and other resource considerations,
2 with the load forecast being the basis of the Plan. In order to serve load and optimize resources
3 for the benefit of customers, the Company secures/purchases natural gas supply through the
4 transactions and procedures described below:

- 5 1. **Fixed-Price Purchases:** To provide a level of price certainty in volatile
6 natural gas commodity markets, Gas Supply will hedge some of its load with
7 fixed-price transactions, either with fixed-price physical purchases or with
8 financial swaps or financial futures, which will be matched to purchases of
9 index-priced physical products prior to the products settlement. These hedges
10 will be structured to diversify procurement in terms of timing of the transaction
11 and duration of committed supplies.

12
13 The fixed-price purchases portion of the Plan, or hedges, are comprised of the
14 following two components as previously described:

- 15
16 • Dynamic Window Hedges
17 • Risk Responsive Hedge Tool
18

- 19 2. **Storage Injections and Withdrawals:** Avista owns and contracts for storage
20 services at Jackson Prairie. Avista has a contractual operational requirement
21 to have its share of Jackson Prairie full by September 30 of each year. Gas
22 Supply retains flexibility in terms of the timing and volume of the injection
23 and withdrawal schedules. Actual storage injections and withdrawals will be
24 executed to optimize the economic value of storage within the reliability
25 constraints of the project and the ability to serve retail customers' peak day
26 needs.

- 27
28 3. **Index-Based Physical Purchases:** Gas Supply generally purchases physical
29 index-based natural gas for up to the difference between the average daily load
30 forecast for each month and the sum of the fixed-price purchases and projected
31 storage withdrawals. Gas Supply retains flexibility to modify the components
32 of its purchases in a month due to operational or other reasons. The selected
33 indices may be first-of-month indices or daily-based indices.

- 34
35 4. **Daily Adjustments Due to Load Variability:** To the extent actual loads
36 differ from the average daily load forecast for the month, the difference will be
37 managed through a combination of: a) daily purchases or sales of natural gas,
38 or b) withdrawals from, or injections into, natural gas storage facilities.

- 39
40 5. **Use of Derivative Contracts:** Subject to limitations in the Energy Resources
41 Risk Policy, Gas Supply may enter into derivative-based contracts intended to

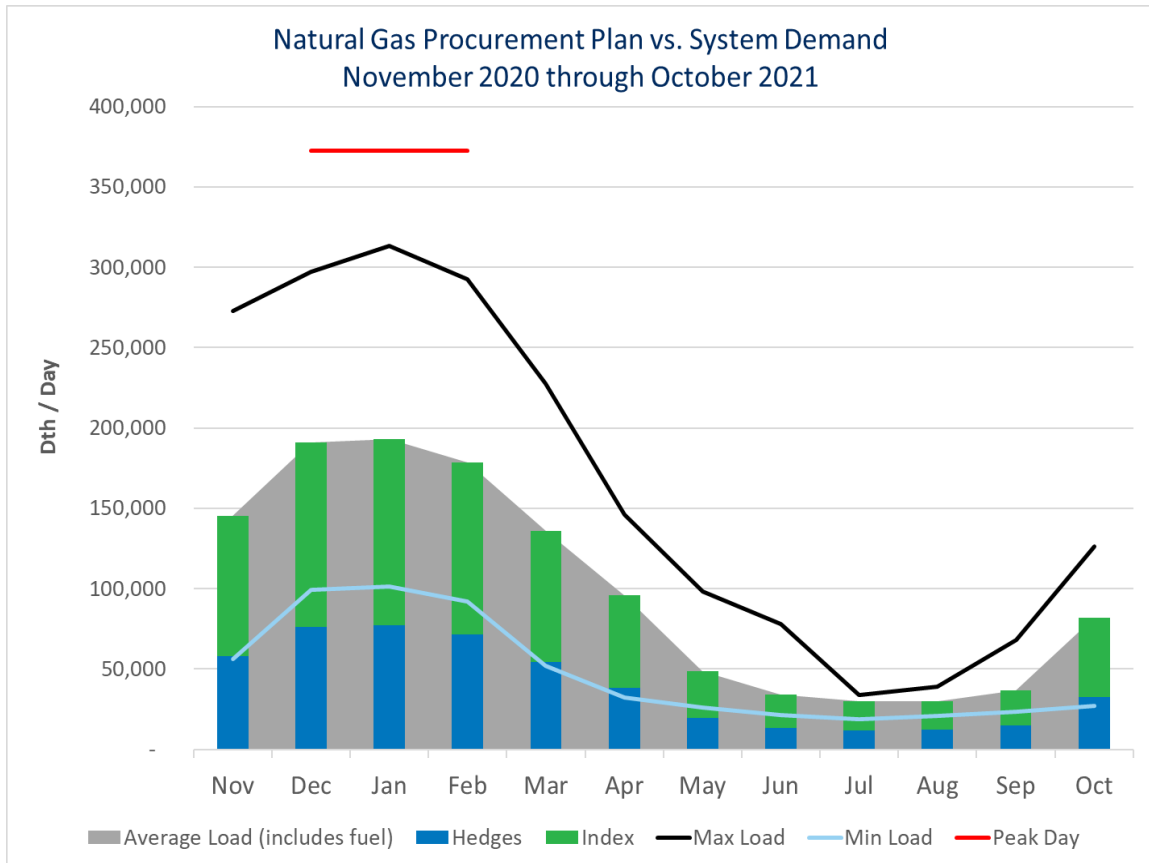
1 reduce or manage exposure to rising prices or fluctuating loads.
2

3 **6. Resource Optimization:** Gas Supply may enter into transactions that create
4 value for customers using unutilized supply, transportation, or storage assets.
5 Utilization of these resources reduces fixed costs and lowers overall costs to
6 customers.
7

8 **Q. Please describe how the Procurement Plan manages volatility.**

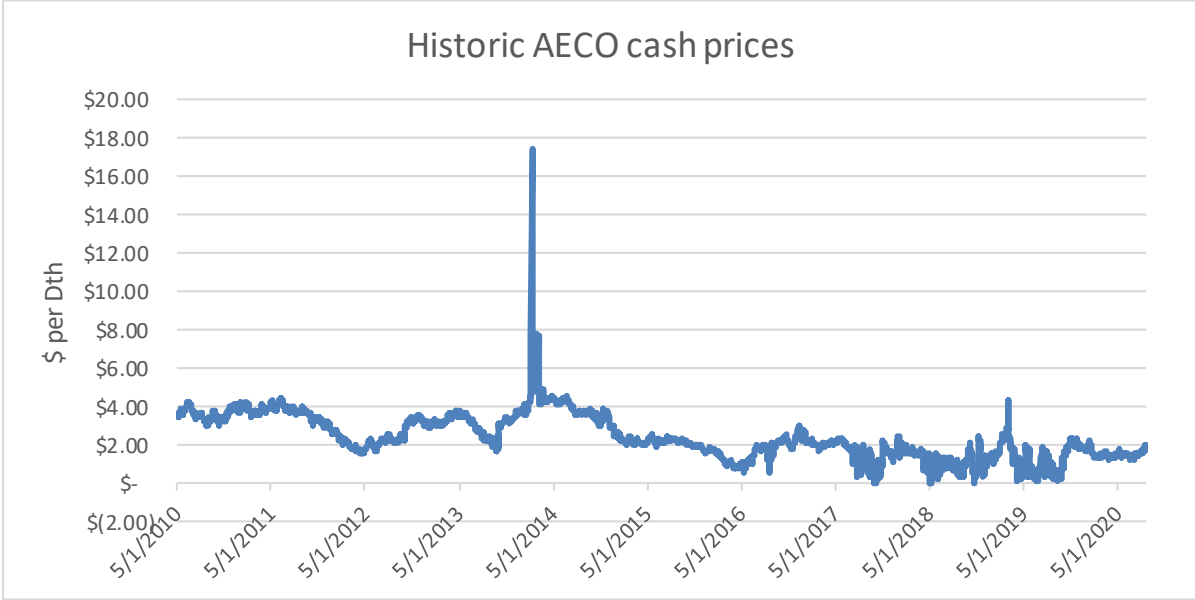
9 A. The Plan focuses on managing the costs associated with serving varying retail
10 load with supply from a wholesale market with price volatility. In order to manage these
11 seasonal, monthly, and daily volume swings, Avista shapes the components of the Plan by
12 month (i.e., more natural gas is hedged for the winter months than for the summer).
13 Illustration No. 2 below includes a chart that shows the demand volatility.

14 **Illustration No. 2**



1 Price volatility can also vary widely by season, month and day. Illustration No. 3
2 below includes a chart depicting the natural gas price volatility over time.

3 **Illustration No. 3**



13 Avista cannot predict with accuracy what natural gas prices may be. Our experience
14 and intelligence related to market fundamentals guide our procurement decisions. By layering
15 in fixed price purchases over time, setting upper and lower pricing levels on the Hedge
16 Windows, managing the VaR of our LDC natural gas portfolio’s open position on a daily
17 basis, and actively managing storage resources, Avista is able to meet our goal of providing a
18 meaningful measure of price stability and certainty, and competitive prices for our customers.

19

20 **III. 2018 NATURAL GAS INTEGRATED RESOURCE PLAN**

21 **Q. Please provide an overview of the Company’s development of its 2018**
22 **Natural Gas Integrated Resource Plan.**

23 **A.** The 2018 Integrated Resource Plan (“IRP”) was filed with the Commission on

1 August 31, 2018. The IRP includes forecasts of natural gas demand and any supply-side
2 transportation resources and demand-side measures needed for the coming 20-years, which
3 will help Avista continue to reliably provide natural gas to our customers. A copy of the
4 Avista's 2018 Natural Gas Integrated Resource Plan is included as Exhibit 14 - Schedule 1.

5 **Q. What are the summary highlights from the 2018 IRP?**

6 A. Highlights from the 2018 IRP are as follows:

- 7 • Marginally higher firm system-wide expected customer growth rates,
8 combined with use per customer continuing to trend lower, kept the long term
9 natural gas demand forecast relatively flat and helped eliminate the need to
10 acquire new resources within the 20-year planning horizon in Washington,
11 Idaho, or Oregon for the Expected Case.
- 12 • With evolving state and federal environmental regulation, the Company broke
13 out carbon costs by jurisdiction and thus, separated Washington and Idaho
14 (previously combined) in the SENDOUT model; and
- 15 • Higher carbon price adders for Washington and Oregon relative to the 2016
16 IRP, coupled with the expected price curve, resulted in higher avoided costs
17 increasing overall potential for energy efficiency.

18
19
20 **Q. Has the Company's 2018 Natural Gas IRP been acknowledged by this**
21 **Commission?**

22 A. Yes. On January 16, 2019, the Company's 2018 IRP was acknowledged by the
23 Commission in Case No. AVU-G-18-05.

24 **Q. When will the Company file its next natural gas IRP?**

25 A. Traditionally, the Company would have filed next IRP on or before August 31,
26 2020, based on a work plan which was filed August 30, 2019. The work plan detailed Avista's
27 IRP planning process, as well as tentative dates and content for meetings with the Technical
28 Advisory Group (TAC). However, Avista filed a request for delay to the Commission which

1 was submitted January 16, 2020 in Case No. AVU-G-20-01. The Commission approved the
2 Company's request (Order No. 34697), allowing Avista until April 1, 2021 to file its next
3 natural gas IRP.

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

5 **A. Yes, it does.**