

Exh. JM-1T

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EXHIBIT: JMT-1T

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BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UG-20\_\_\_\_\_

DIRECT TESTIMONY OF

JODY MOREHOUSE

REPRESENTING AVISTA CORPORATION

**I. INTRODUCTION**

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

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

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

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

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

A. The purpose of my testimony is to describe Avista’s natural gas resource planning and procurement process, as well as provide an overview of the Company’s 2018 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 Exh. JM-2 which is a copy of the Company's 2018  
3 Natural Gas Integrated Resource Plan, which was filed on August 31, 2018 and acknowledged  
4 by the Commission on February 20, 2019.<sup>1</sup>

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 The Company filed its annual PGA on July 31, 2020, with new rates proposed to become  
12 effective November 1, 2020.

13

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 manages natural gas procurement and related activities on a system-  
19 wide basis with several regional supply options available to serve LDC customers. The  
20 Company purchases natural gas for its LDC customers in wholesale markets at multiple  
21 supply basins in the western United States and western Canada. Purchased natural gas is

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<sup>1</sup> The Company has also provided an electronic .pdf file "NEW-AVA-Exh-JM-2a" which is the appendix to the Natural Gas IRP.

1 transported from these various US or Canadian-sourced supply basins through six inter-  
 2 connected pipelines within the region and delivered to city gates or put into the Jackson Prairie  
 3 Natural Gas Storage Facility (“JP”) for future use. Avista holds firm contractual transportation  
 4 rights on all six pipelines, as well as firm withdrawal capability from JP, helping diversify  
 5 where supply can be received in order to meet customers’ needs among the three jurisdictions.

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

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

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

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

**Illustration No. 1**



Wholesale natural gas prices are a fundamental component of both procurement and integrated resource planning. Pacific Northwest natural gas prices can be affected not only by regional factors, but by global energy markets, and supply and demand factors from other regions within the United States and Canada. Price volatility and delivery constraints can have an impact on where our natural gas is sourced. Avista’s diverse portfolio of natural gas supply resources allows the Company to make natural gas procurement decisions based on the reliability and economics that provide the most benefit to our customers.

Being that future natural gas prices cannot be accurately predicted, the Company has developed a Natural Gas Procurement Plan (“Plan”) to ensure reliable supply and a level of price certainty in volatile markets. Market conditions, analysis, and experience shape the Plan’s overall strategy, which includes hedging, storage utilization, and index purchases. This approach is diversified by transaction time, term, counterparty, and supply basin.

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

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

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

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

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

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

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

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

21 A. Each year a comprehensive review of the previous year's Plan is performed.  
22 The review includes analysis of historical and forecasted market trends, fundamental market  
23 analysis, demand forecasting, and transportation, storage and other resource considerations,

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

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

11  
12           The fixed-price purchases portion of the Plan, or hedges, are comprised of the  
13 following two components as previously described:

- 14  
15                   • Dynamic Window Hedges  
16                   • Risk Responsive Hedge Tool

- 17  
18           2. **Storage Injections and Withdrawals:** Avista owns and contracts for storage  
19 services at Jackson Prairie. Avista has a contractual operational requirement  
20 to have its share of Jackson Prairie full by September 30 of each year. Gas  
21 Supply retains flexibility in terms of the timing and volume of the injection  
22 and withdrawal schedules. Actual storage injections and withdrawals will be  
23 executed to optimize the economic value of storage within the reliability  
24 constraints of the project and the ability to serve retail customers' peak day  
25 needs.

- 26  
27           3. **Index-Based Physical Purchases:** Gas Supply generally purchases physical  
28 index-based natural gas for up to the difference between the average daily load  
29 forecast for each month and the sum of the fixed-price purchases and projected  
30 storage withdrawals. Gas Supply retains flexibility to modify the components  
31 of its purchases in a month due to operational or other reasons. The selected  
32 indices may be first-of-month indices or daily-based indices.

- 33  
34           4. **Daily Adjustments Due to Load Variability:** To the extent actual loads  
35 differ from the average daily load forecast for the month, the difference will be  
36 managed through a combination of: a) daily purchases or sales of natural gas,  
37 or b) withdrawals from, or injections into, natural gas storage facilities.

- 38  
39           5. **Use of Derivative Contracts:** Subject to limitations in the Energy Resources  
40 Risk Policy, Gas Supply may enter into derivative-based contracts intended to  
41 reduce or manage exposure to rising prices or fluctuating loads.  
42

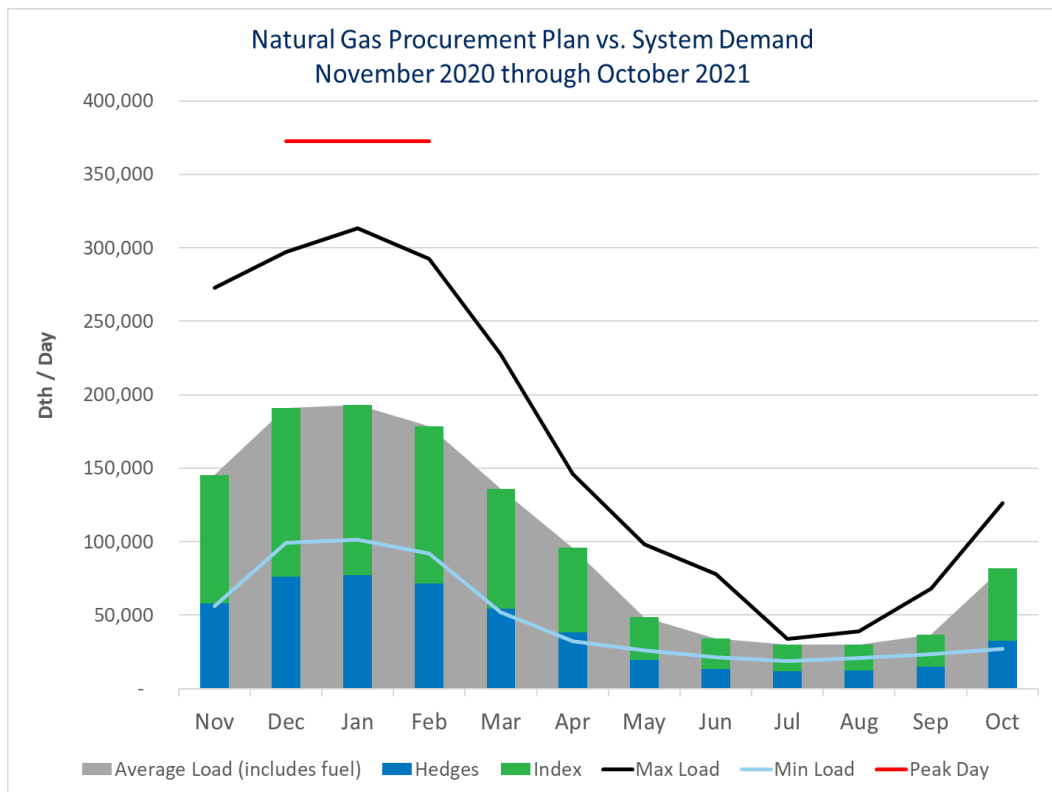


1                    6. **Resource Optimization:** Gas Supply may enter into transactions that create  
 2 value for customers using unutilized supply, transportation, or storage assets.  
 3 Utilization of these resources reduces fixed costs and lowers overall costs to  
 4 customers.  
 5

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

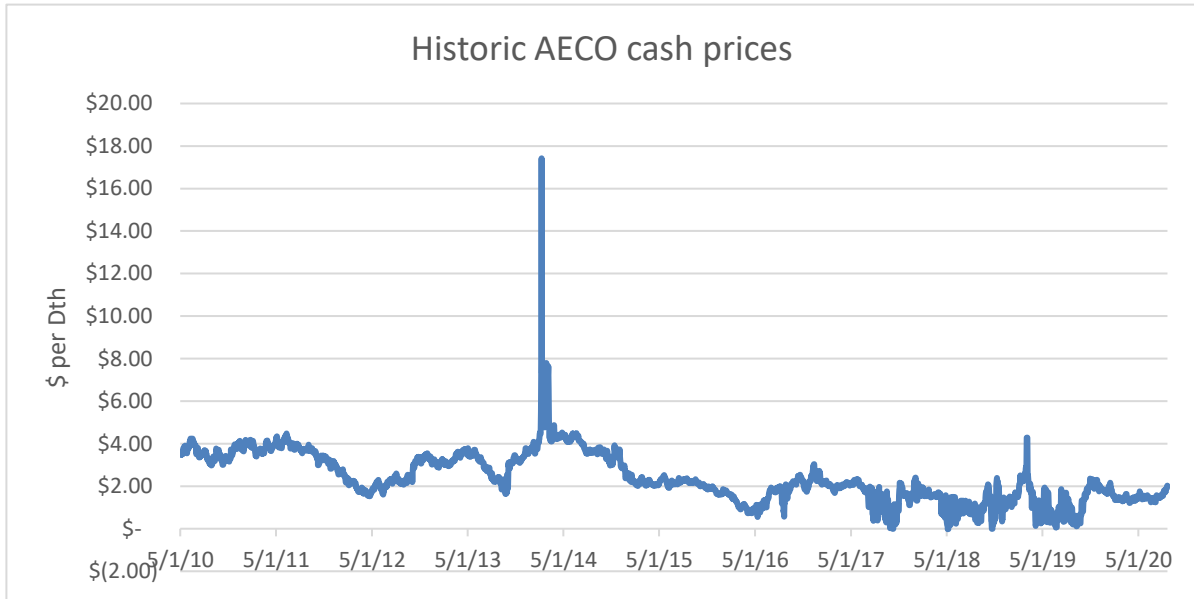
7                    A. The Plan focuses on managing the costs associated with serving varying retail  
 8 load with supply from a wholesale market with price volatility. In order to manage these  
 9 seasonal, monthly, and daily volume swings, Avista shapes the components of the Plan by  
 10 month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

12 **Illustration No. 2**



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

1 **Illustration No. 3**



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

17

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

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

21 **A.** The 2018 Integrated Resource Plan (“IRP”) was filed with the Commission on  
 22 August 31, 2018. The IRP includes forecasts of natural gas demand and any supply-side  
 23 transportation resources and demand-side measures needed for the coming 20-years, which

1 will help Avista continue to reliably provide natural gas to our customers. A copy of the  
2 Company's 2018 Natural Gas Integrated Resource Plan is included as Exh. JM-2.

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

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

- 5 • Marginally higher firm system-wide expected customer growth rates,  
6 combined with use per customer continuing to trend lower, kept the long term  
7 natural gas demand forecast relatively flat and helped eliminate the need to  
8 acquire new resources within the 20-year planning horizon in Washington,  
9 Idaho, or Oregon for the Expected Case.
- 10
- 11 • With evolving state and federal environmental regulation, the Company broke  
12 out carbon costs by jurisdiction and thus, separated Washington and Idaho  
13 (previously combined) in the SENDOUT model; and
- 14
- 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 **Q. Has the Company's 2018 Natural Gas IRP been acknowledged by this**  
19 **Commission?**

20 A. Yes. On February 20, 2019, the Company's 2018 IRP was acknowledged by  
21 the Commission.

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

23 A. Traditionally, the Company would have filed next IRP on or before August 31,  
24 2020, based on a work plan which was filed August 30, 2019. The work plan detailed Avista's  
25 IRP planning process, as well as tentative dates and content for meetings with the Technical  
26 Advisory Group (TAC). However, Avista filed a request for delay to the Commission which  
27 was submitted January 15, 2020 in Docket UG-190724. The Commission approved the  
28 Company's request, allowing Avista until April 1, 2021 to file its next natural gas IRP.

- 1           **Q.    Does this complete your pre-filed direct testimony?**
- 2           A.    Yes, it does.