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## Attorney for the Commission Staff

## **BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION**

**IN THE MATTER OF THE FILING BY AVISTA CORPORATION DBA AVISTA UTILITIES OF ITS 2007 NATURAL GAS INTEGRATED RESOURCE PLAN (IRP). ) CASE NO. AVU-G-07-4 ) ) COMMENTS OF THE ) COMMISSION STAFF )**

**COMES NOW** the Staff of the Idaho Public Utilities Commission, by and through its Attorney of record, Scott Woodbury, Deputy Attorney General, and in response to the Notice of Filing and Notice of Comment Deadline issued on January 23, 2008, submits the following comments.

## BACKGROUND

On December 28, 2007, Avista Corporation dba Avista Utilities (Avista) filed its 2007 Natural Gas Integrated Resource Plan (IRP) with the Idaho Public Utilities Commission (Commission). The Company's filing complies with the Commission's direction in Order No. 25342, Case No. GNR-G-93-2 (reference PURPA § 303(b)(3), Energy Policy Act of 1992). Pursuant to the Commission's Order, the Company is required to file every two years.

Avista notes that it has a statutory obligation to provide reliable natural gas service to customers at rates, terms and conditions that are fair, just and reasonable and sufficient. Avista

regards its IRP as a methodology for identifying and evaluating various resource options and as a process by which to establish a plan of action for resource decisions. Avista's 2007 Natural Gas IRP identifies a strategic gas-supply portfolio that meets the Company's future demand requirements. Resource options include both supply-side and demand-side measures.

To facilitate stakeholder involvement in the 2007 IRP, the Company sponsored four Technical Advisory Committee (TAC) meetings. A broad spectrum of people were invited to each meeting. The meetings focused on specific planning topics, reviewed the status and progress of planning activities and solicited ongoing input on the IRP development. Most of Staff's questions and comments were addressed during the TAC meetings, many of which were incorporated into the final version of the IRP. Staff believes the resulting document comports to the directives of the Commission, and that the assumptions incorporated into the analyses are generally reasonable for planning purposes.

### **IRP Requirements**

In accordance with PURPA as amended by the 1992 Energy Policy Act, Commission Order No. 25342 requires that the Company submit an Integrated Resource Plan (IRP) to the Commission every two years that addresses the following topics:

- Demand Forecasting for each customer class for one, five and twenty years
- Assessment of Efficiency Improvements (DSM Actions) and Avoided Costs
- Natural Gas Supply Options
- Natural Gas Purchasing Options and Cost Effectiveness
- Integration of Demand and Resources
- Two Year Action Plan
- Relationship Between the Plans (2005 Plan to 2007 Plan)
- Rate Case Consideration
- Public Participation

Avista's 2007 Natural Gas IRP addresses the above topics and is separated into the following sections:

- Demand Forecast
- Demand Side Management
- Distribution Planning
- Supply-Side Resources
- Integrated Resource Portfolio
- Avoided Costs
- Action Plan

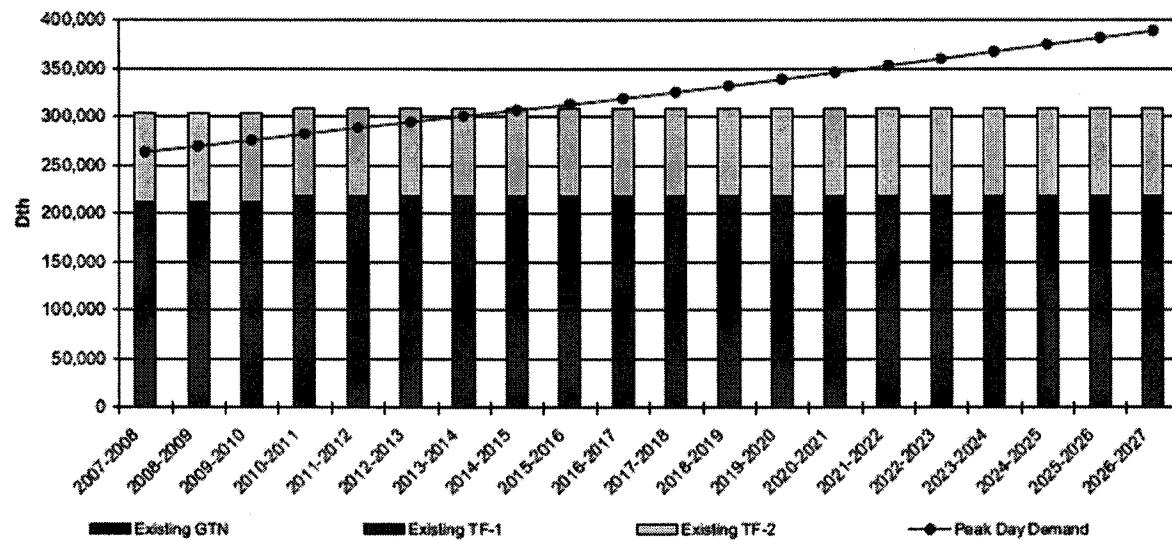
The Company's submittal complies with the requirements of the Commission Order No. 25342 as further outlined in detail below.

### **Natural Gas Demand Forecasting**

The Company's approach to demand forecasting focuses on customer growth and use per customer as the base components of demand. The Company considers various factors that influence these components, including population and employment trends, age and income demographics, natural gas prices, price elasticity, and use per customer trends. For planning purposes, Avista divides its service territory into five major regions: Washington/Idaho, Medford (Or), Roseburg (Or), Klamath Falls (Or), and La Grande (Or). Each territory is further divided between residential, commercial, and firm industrial customers prior to determining region/customer class specific heating degree-day coefficients. Per customer coefficients are estimated for four categories: base usage, shoulder months (April-June, September-October), winter months (December-February), and for March/November (due to usage being more sensitive to weather than in the shoulder months but less so than winter months). Peak demand is calculated based on the coldest day of record for each of the five regions.

The Company evaluated three cases with respect to demand: Expected (assuming static use per customer over the 20-year planning horizon), High Demand (50% increase in customer growth and a price elasticity of -0.13), and Low Demand (50% decrease in demand growth and price elasticity of -0.13). Staff believes it is appropriate to take price elasticity into consideration when deviating from the Expected Case. In this instance, a 10% increase in the price of natural gas would result in a reduction of consumption by 1.3%, and vice versa should natural gas prices fall. The figure below represents the Expected Case for peak day demand and existing resources for the Washington/Idaho region.

**Figure 1.3 - WA/ID Existing Resources vs. Peak Day Demand  
(Net of DSM Savings) Expected Case - November through October**



In its Expected Case, Avista has sufficient natural gas resources in Washington and Idaho until 2014-2015. Peak day resource deficits begin in these years and are driven primarily by projected average demand growth of 2% per year and average natural gas customer growth of 2.4% in the residential sector. Avista faces capacity deficiencies in its Klamath Falls region as early as 2011-2012, prompting the Company to take immediate action, such as acquiring the Klamath Falls Lateral from Northwest Pipeline.

It should be noted that the above figure depicts peak day demand net of DSM savings. This includes current programs and programs either mandated or selected as cost effective during the portfolio selection process. Should the Company not reach its targeted DSM savings, capacity deficiencies for the Washington/Idaho area may occur prior to 2014-2015. Currently the Company has implemented successful DSM programs in Washington/Idaho in recent years, but myriad conditions may arise that would erode DSM savings. Staff points to this as a minor flaw in the IRP process, and would prefer that DSM savings be included in a similar fashion to supply side resources in future IRP filings. Further discussion of DSM valuation methodology can be found below.

In response to an action item from the 2005 IRP, the Company has incorporated 119 subdivisions within its service territory to enhance customer forecasting and improve distribution planning. These sub-areas (town codes) provide a more granular look at the Company's

distribution system and facilitate analyses to determine where improvements to the distribution system may be necessary in the coming years. For Idaho, the analysis determined that two capital reinforcement projects, one in Post Falls and one in Bonners Ferry, may be necessary within the next 5 years. Staff recognizes that the Company has taken a step forward in distribution planning by utilizing these smaller sub regions in the demand forecast.

### **Natural Gas Price Forecast**

Avista utilizes a number of resources, including three consulting firms, to create its natural gas price forecasts used for planning. Staff maintains that gas price forecasts should be viewed with some skepticism, but acknowledges that the Company has put forth its best effort to attain a reasonable outlook on future prices. The natural gas market, the Company contends, has dramatically changed over the last several years as it has transitioned from a regional to a national or perhaps global market. Regional and national natural gas supplies since 2005 have experienced increased volatility, much of which is due to the increased demand for natural gas for electricity production. Staff contends that this phenomenon will continue due to reliance on natural gas for new generation capacity regionally and nationally in the near term. Should that be the case, it is quite possible that the gas price forecasts used by the Company may grossly underestimate the future cost of the commodity.

A second rationale for higher long-term gas prices is pipeline expansion projects that will connect Western suppliers with Eastern markets. Traditionally, the Northwest has experienced favorable price differentials when comparing regional hubs to national hubs. Interconnecting pipelines have the potential of eroding these differentials as Western producers are exposed to high demand Eastern markets. To date, liquefied natural gas imports have not stabilized natural gas prices as many predicted.

The elevated prices and increased volatility have influenced the way the Company plans in the short term and in the long term. Staff appreciates the efforts by the Company to keep the Commission abreast of its gas procurement strategies. The Company's natural gas procurement plan seeks to competitively acquire natural gas supplies while reducing exposure to short-term price volatility, using a number of tools such as financial hedging and storage. The procurement plan is reviewed, at a minimum, annually, with input from stakeholders throughout its service territory. Two significant actions that will greatly increase Avista's storage capacity are the

expansion of its Jackson Prairie facility (over 3 MDth) and the Terasen capacity recall effective in April of 2008.

### **Demand-Side Management**

Avista actively promotes and offers energy-efficiency programs to its natural gas customers. These demand-side management (DSM) programs are one component of a comprehensive strategy to provide customers with a best cost/risk energy resource.

Demand-side management efforts include a review and implementation of customer programs, including residential space and water heating efficiency; wall, floor and window audits and replacement programs; and commercial and industrial gas efficiency programs, among others. Avista has implemented an energy efficiency initiative called the "Heritage Project." It builds on the Company's long-time commitment to energy conservation and efficiency, introducing new products and services to increase customers' energy savings.

Staff believes that the IRP meets the requirements for evaluation of Efficiency Improvements (demand-side management or DSM) and avoided costs.

Avista has an active, existing DSM portfolio that receives advice from an External Energy Efficiency Board (EEE/Triple E) that meets twice annually. The Company's Idaho and Washington natural gas DSM portfolio is coordinated with its electricity utility DSM program. This adds a positive aspect to the program in that it eliminates a potential conflict of interest and allows opportunities that may not be available to a natural gas only utility. A tariff rider applied to all natural gas bills paid by Avista's non-transport gas customers funds the program.

For the IRP, Avista is using a multiphase process to evaluate all possible DSM methods that could be used in its territory. A list of the selected DSM programs is included in Appendix 6.9 of the IRP. The phases of the program used to select potential DSM resources consist of:

- Identification and Characterization of the Measures
- Preliminary Evaluation
- SENDOUT® Testing
- Acquisition Goal Development

The SENDOUT® program identifies the cost-effectiveness of each DSM measure to be used in tandem with other supply-side options and the program treats each DSM measure as an optional resource necessary to meet forecasted loads. The forecasted savings achieved from the selected DSM programs are listed in Appendix 6.8 of the filing. Staff believes there is a great

potential for reduced natural gas use if a greater number of high efficiency furnaces were installed. Staff encourages the Company to continue to develop a cost effective program to transform the market and increase the availability of and the demand for high efficiency furnaces which will ultimately reduce the Company's peak load. Avista states that it is committed to pursuing all cost-effective programs regardless of findings and goals stated in the IRP. Between IRP filings, Avista will continue to search for new DSM opportunities and to re-evaluate cost-effectiveness of utility intervention, and it will make human and financial resources available to achieve all cost-effective DSM programs identified. The IRP states that "the delivery of natural gas efficiency programs is anticipated to represent an increasing portion of the optimal natural gas portfolio." (pp. 3-18) This acknowledgement recognizes the growing concerns of limits to our natural resources and complies with the intent of the 2007 Idaho Energy Plan.

Avoided costs of the natural gas saved by the DSM programs are an input for determining the economic viability or success of a given DSM measure and are used to calculate the Net Present Value (NPV) of the marginal therm(s) not used due to the success of the measure or program over its life cycle. The SENDOUT® model analyses performed for the IRP produced two twenty-year avoided cost streams; one for full-year annual application (water heaters, clothes dryers and stoves for example) and one for winter-only application (space heating).

These NPVs are used to evaluate DSM measures by determining the lifetime value of a measure based on the annual therms saved in each year and comparing that value to the total cost of the program over its life. The "annual" and "winter-only" avoided costs of the marginal therm saved by DSM are shown in Appendix 7.1 of the IRP.

In addition to its own administrated DSM programs, Avista believes that there is value in pursuing gas efficiency market transformation through a regional effort (similar to that of the Northwest Energy Efficiency Alliance) and that it will participate in discussions with other entities to pursue this opportunity.

### **Supply-Side Resources**

Avista has a diversified portfolio of natural gas supply resources, including owned and contracted storage, firm capacity rights on five pipelines and commodity purchase contracts from several different supply basins. The Company's philosophy is to reliably provide natural gas to customers with an appropriate balance of price stability and prudent costs, while building a

diversified supply portfolio to manage risk and achieve cost-effectiveness. Avista plans to meet the identified resource deficits with demand-side management measures and firm resources, including distribution, system enhancements and pipeline transportation capacity.

Avista is in the process of increasing its storage capacity and deliverability. Storage is a strategic resource for gas utilities because of the numerous benefits including the following:

- Invaluable peaking capability;
- Reduces the need for higher cost annual firm transportation;
- Storage injections increase the load factor of the existing firm transportation; and
- Provides access to normally lower-cost summer supplies.

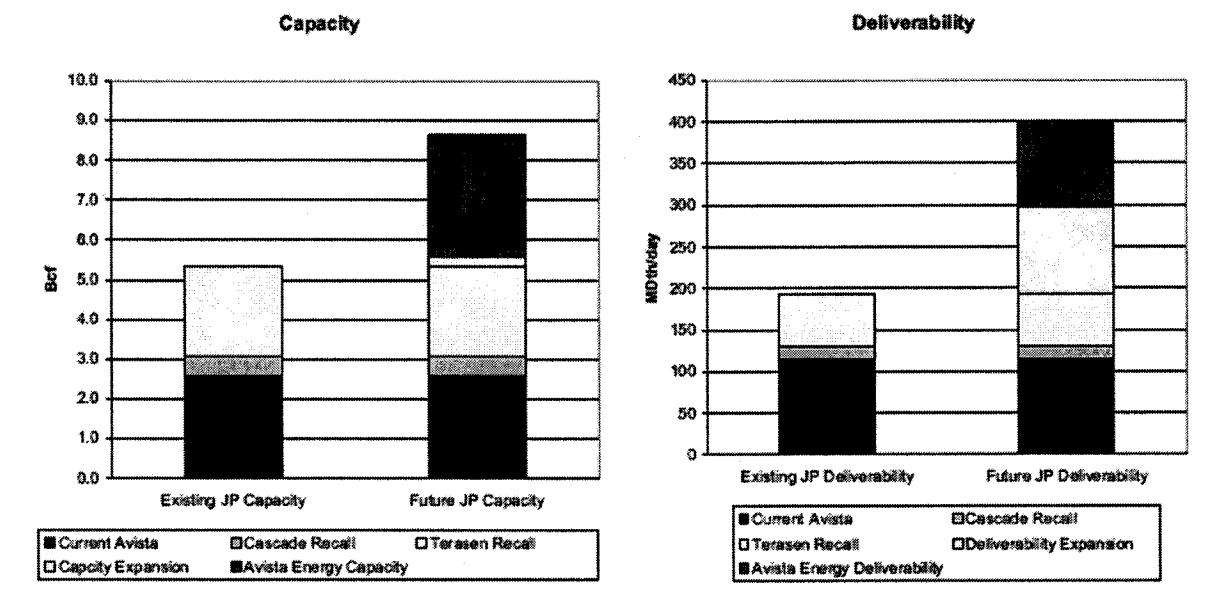
In Comments filed for the Company's previous Purchased Gas Adjustment (PGA) cases, Staff has lauded natural gas storage as a substantial benefit to customers and has encouraged the increase of storage capacity for gas utilities.

The Company is one-third owner, with NWP and Puget Sound Energy (PSE), in the Jackson Prairie Storage Project (Jackson Prairie), which benefits Avista's customers in all three states. Jackson Prairie is an underground reservoir located near Chehalis, Washington with easy access to NWP's main line.

Avista had previously contracted with BC Hydro (now Terasen) to release one half of its capacity and deliverability. In April 2006, Avista notified Terasen of its intent to recall its capacity releases and terminate the contract effective April 30, 2008.

Earlier this decade, Avista participated in the expansion of Jackson Prairie with PSE and NWP. At the time, Avista determined that the additional capacity was not needed to meet requirements of its core utility customers and the expansion went under the management of Avista Energy, a non-regulated energy marketing and trading affiliate of Avista Utilities. In June 2007, Avista Energy sold all of its energy contracts to Shell Energy North America. The sale included Avista Energy's contractual rights to Jackson Prairie through April 30, 2011. Avista anticipates recalling the storage rights from Shell Energy after that date to serve its core customers. The expansion and recall of the storage rights has been included in the SENDOUT® model as an incremental storage resource at that time. To illustrate the effects of the Jackson Prairie expansions and recalls, the Company included the following chart in the IRP:

**Figure 5.2 - Jackson Prairie Storage Capacity and Deliverability  
Existing and Future Volumes**

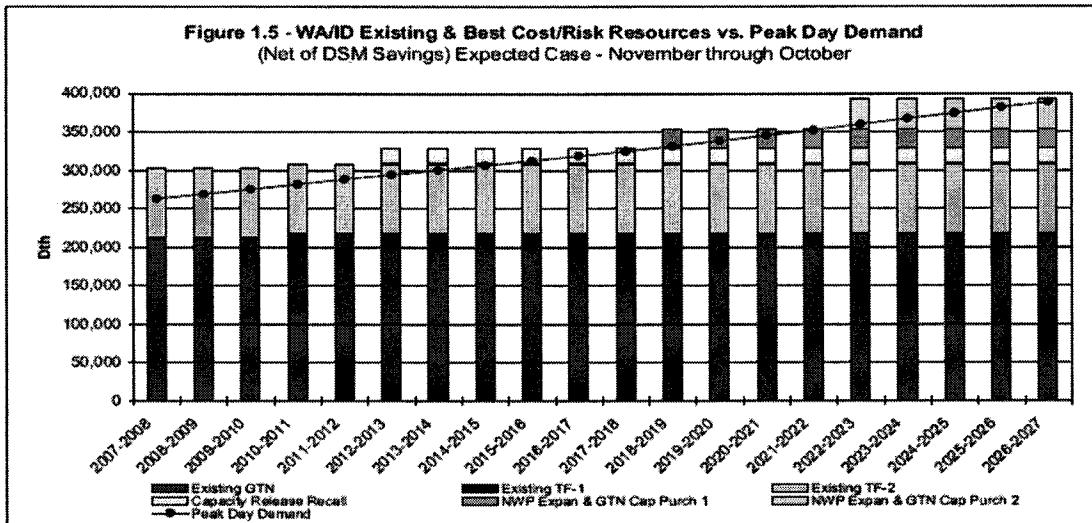


The Company's procurement plan addressed in the IRP is a diversified and structured plan for natural gas purchases that does not attempt to predict the market outcomes. The plan calls for significant financial hedging over periods of time with windows and targets used to initiate transactions. The Company also uses spot market acquisitions and short-term index purchases for both summer filling of storage and during the heating season. In recognition of the volatility present in current markets, the Company is presently working to add longer-term purchases and other measures to diversify its procurement portfolio with the aim of reducing that volatility while also securing low cost supplies.

The Company has several gas purchasing methods available. These include daily and monthly spot market indices, short and long-term purchases, fixed price vs. indexed pricing, price floors, ceilings and other collars, physical price hedging and financial price hedging. The Company recognized that a diverse portfolio of supply options will reduce price and volatility risks and utilizes most of these purchasing tools.

In the Expected Case for Washington and Idaho, the first deficiency is in 2014-2015. Given this timing, the Company contends that it has sufficient time to carefully monitor, plan and take action on potential resource additions. The Company also plans to define and analyze sub-regions within this broad region for potential resource needs that may materialize earlier

than 2014-2015. The chart below depicts the result of the Company's extensive planning and modeling efforts.



All of the elements of the Company's supply portfolio, procurement options and planning, taken together, satisfy the requirements of PURPA and provide a cost effective supply for all classes of customers.

### Integration of Demand and Resources

The Company applied its SENDOUT® model (a linear programming model widely used to solve natural gas supply and transportation optimization questions) to develop the least-cost resource mix for the 20-year planning period. The model performs least-cost optimization based on daily, monthly, seasonal and annual assumptions related to:

- Customer growth and customer natural gas usage to form demand forecasts;
- Existing and potential transportation and storage options;
- Existing and potential natural gas supply availability and pricing;
- Revenue requirements on all new asset additions;
- Weather assumptions; and
- Demand-side management.

As mentioned above, DSM programs go through an initial screening process prior to being inputted into the SENDOUT® model. Through the process, the Company identifies mandated and clearly cost effective measures ("green" measures) that were loaded into SENDOUT® as must take options. Conversely, options that are clearly non-cost-effective ("red" measures) are

excluded from the selection process. The remaining options (“yellow” measures) are included in the SENDOUT® model for comparison against supply side resources.

Additionally, the Company is in the midst of incorporating VectorGas™, a module within SENDOUT®, to simulate weather and price uncertainty via Monte Carlo analysis of these variables. Some examples of the analyses VectorGas™ provides include:

- Probability distributions of price and weather;
- Probability distributions of costs (i.e., system costs, storage costs, and commodity costs);
- Resource mix (optimally sizing a contract or asset level for various and competing resources); and
- Hedging percentages.

The Company was limited in its ability to incorporate VectorGas™ into its 2007 IRP due to delays in receiving the software. It is anticipated that future IRPs will utilize VectorGas™ in a manner that will provide an array of potential portfolios under varying price and weather conditions.

### **2008-2009 Action Plan**

The Company’s IRP identifies and establishes an action plan that will steer the Company toward the risk-adjusted, least-cost method of providing service to its natural gas customers. Included in this Action Plan are efforts to improve modeling, evaluation of its planning standard, further research into supply-side resource options and goals for demand-side management. The action plan includes efforts to:

- Refine specific resource acquisition action plans for Klamath Falls and Medford service areas.
- Research and refine the evaluation of resource alternatives, including implementation risk factors and timelines, updated cost estimates, and feasibility assessments, targeting options of the service territories with nearer term unserved demand exposure.
- Explore non-traditional resources to address the Company’s needle-peaking requirements. This review will emphasize potential structured transactions with neighboring utilities and other market participants that leverage existing regional infrastructure as an alternative to incremental infrastructure additions.
- Reevaluate the Company’s peak day weather planning standard to ascertain if it still provides the best risk-adjusted methodology for resource planning.

- Continue pursuit of cost-effective demand-side solutions to reduce demand. In Oregon demand-side measures are targeted to reduce demand by 350,000 therms in the first year. In Washington and Idaho, demand-side measures are targeted to reduce demand by more than 1,425,000 therms in the first year.
- Define and analyze sub-regions within the Washington/Idaho region for potential resource needs that may materialize earlier than the broader region indicates.
- Integrate the VectorGas™ module in the Company's SENDOUT® modeling software to strengthen its ability to analyze demand impacts under varying weather and price scenarios as well as conduct sensitivity analysis to identify, quantify and manage risk around these demand influencing components.
- Continue to assess methods for capturing additional value related to existing storage assets, including methods of optimizing recently recalled capacity.

Staff generally supports the actions identified in the Company's Action Plan; however this support should not be interpreted by the Company as approval or judgment on any of the actions. As additional steps are taken in the Company's Action Plan, the Company will need to evaluate all facts and circumstances available at that time to determine if the action is still necessary, reasonable and prudent.

## **ADDITIONAL COMMENTS**

### **Relationship between the Plans (2005 Plan to 2007 Plan)**

Commission Order No. 25342 states that "all plans following the initial integrated resource plan shall include a progress report that relates the new plan to the previously filed plan." Staff believes that the IRP satisfies this requirement. In Section 8, "Action Plan", the IRP references the previous Action Plan and the results of following the plan. Those results are reflected in the new Action Plan for the 2007-2009 period. The IRP makes frequent references to the previous plan and the subsequent actions that have affected the current IRP. These include DSM, distribution, forecasting, supply side resources and the use of SENDOUT® software which was substantially upgraded and relied upon for the current IRP.

## **Rate Case Consideration**

On January 17, 2008, Avista filed with the Commission a Letter of Intent to file a general rate case on or around April 1, 2008. This IRP along with other available information will be part of Staff's considerations and testimony in the upcoming rate proceeding.

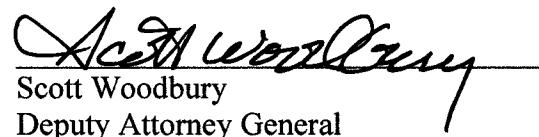
## **Public Participation**

The Company is required by Order to provide an opportunity for public participation and comment while formulating its plan. Furthermore it must provide methods that will be available to the public of validating predicted performance. The Company met the requirement for public participation during the IRP process. Public involvement in the IRP process took place in three ways. First, there was the Technical Advisory Committee (TAC) consisting of staff from the three states' Commissions, several Non-government Organizations (NGOs) and members of the public. There were several meetings of this group in which IRP inputs were reviewed, discussed in detail and modified. Secondly, there was frequent communication between the TAC and the Company via e-mail, conference calls, and individual phone calls and meetings. Finally, there was a draft copy of the IRP circulated for comment to all the interested parties.

## **STAFF RECOMMENDATION**

Staff believes that Avista's 2007 Natural Gas IRP satisfies the requirements of Commission Order No. 25342. Staff recommends that the Company's filing of its 2007 IRP be acknowledged and accepted. This recommendation should not be interpreted as approval nor as a judgment of any prudence that may or may not have been demonstrated by the Company in preparing the IRP or the prudence of not following the plan.

Dated at Boise, Idaho, this 14<sup>th</sup> day of March 2008.

  
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Scott Woodbury  
Deputy Attorney General

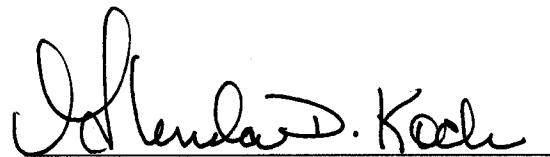
Technical Staff: Bryan Lanspery  
Donn English

## CERTIFICATE OF SERVICE

I HEREBY CERTIFY THAT I HAVE THIS 14TH DAY OF MARCH 2008,  
SERVED THE FOREGOING **COMMENTS OF THE COMMISSION STAFF**, IN CASE  
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