



Avista notes that it has a statutory obligation to provide reliable natural gas service to customers. 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 2006 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.

Avista's 2006 natural gas IRP addresses the following subject areas: natural gas demand forecast, demand-side management (DSM), distribution planning, supply-side resources, integrated resource portfolio, avoided cost determination, and action plan.

### **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, addressing the following elements:

- Demand Forecasting
- Assessment of Efficiency Improvements (DSM Actions) & 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 (2003 Plan to 2005 Plan)
- Rate Case Consideration
- Public Participation

The Company's submittal complies with the Order for each element as follows:

#### **Demand Forecasting**

The Company's 2005 IRP satisfies the requirement for demand forecasting. Section 2 of the IRP along with Appendix 2 provides a summary and the details of 20 years of annual demand forecasts for natural gas for the Avista Gas Utility service area customers from 2006 through 2025. The forecasts are based on analysis of technologic, demographic and economic forecasts and their effect on consumption of natural gas. The eastern Washington and northern Idaho service territories are treated as a single economic area with the Idaho data broken out in accordance with the number of Idaho customers.

Avista used Global Insights, Inc. services for its economic forecasts at both the national, regional and county levels. In this plan, Global Insights was able to provide, for eight counties, county by county demographic and economic forecasting for use in Avista's demand forecast procedure. In its next IRP, Avista intends to increase to thirteen the number of counties where individual county data is used.

Forecast data is weather normalized and based on National Weather Service data for heating degree-days. For the northern Idaho and eastern Washington service area, weather data for the Spokane International Airport is used. A multiple regression analysis based on heating-degree days is used to predict per customer consumption.

The Company used customer growth, natural gas pricing and customer price elasticity of demand to define a matrix of nine possible demand scenarios (Table 2.3 of the IRP) so that a range of possible forecast demand outcomes could be available for the IRP. From that matrix the Technical Advisory Committee and the Company selected three scenarios as representative of the range from high to low for demand forecasts used in the IRP.

Avista Utilities has used the same linear programming model since 1992 (updated several times) to integrate the demand forecast and supply options when preparing the IRP. The gas resource optimization model used by Avista Utilities is the SENDOUT® Gas Planning System from New Energy Associates, a subsidiary of the Siemens Westinghouse Power Corporation. SENDOUT® is a PC-based linear programming model used to solve natural gas supply and transportation optimization questions. Linear programming is the technique used to solve minimization/maximization problems. SENDOUT® looks at the complete problem at one time within the study horizon, taking into account physical limitations and contractual constraints. The software looks at thousands of variables and evaluates thousands of possible solutions in order to generate the least-cost solution.

#### **Assessment of Efficiency Improvements (DSM Options) & Avoided Costs**

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 program 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 program 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 single-fuel utility. A tariff rider applied to all natural gas bills paid by Avista's non-transport gas customers funds the program.

At the center of the DSM program is a tiered rate incentive schedule that provides payment to participants for their DSM efforts on the basis of first year therms saved and the economic payback of the specific DSM action. This is shown in Table 3.7 of the IRP and Tariff Schedule 190.

The results of the DSM program for the five years ending in 2005 are compared to the annual goal of 240,000 first-year therms in Figure 3.2 of the IRP. The Company has far exceeded that goal by averaging 800,000 first-year therms per year during that period.

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

- Characterization of the Measures
- Preliminary Evaluation
- Packaging and Optimization
- Packaged Program Characterization
- Identification of Technical and Acquirable Potential

All DSM programs that reach the final stage are input to the SENDOUT® program as a resource for the IRP. Appendix 3 to the IRP discusses the DSM programs and measures that were evaluated and those deemed cost effective through use of this process. However, Avista has committed to pursue 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 identified. The IRP also states, "The delivery of natural gas efficiency programs is anticipated to represent an increasing portion of the optimal natural gas resource portfolio." (pp. 3-19)

Avoided costs of the natural gas saved by a DSM program 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 that 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 and washing machines 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. The NPVs of those avoided cost streams for the period ending in each year of the plan are shown below:

<b>Net Present Value of Avoided Cost of One Dekatherm per Year Through End of Each Plan Year</b>				
<b>Gas Year</b>	<b>Plan Year</b>	<b>Annual DSM Applications</b>		<b>Winter Only DSM Applications</b>
2006-2007	1	\$ 6.29		\$ 7.25
2007-2008	2	\$ 11.63		\$ 13.08
2008-2009	3	\$ 16.25		\$ 18.13
2009-2010	4	\$ 20.42		\$ 22.64
2010-2011	5	\$ 24.34		\$ 26.85
2011-2012	6	\$ 28.16		\$ 30.96
2012-2013	7	\$ 31.85		\$ 34.91
2013-2014	8	\$ 35.45		\$ 38.75
2014-2015	9	\$ 38.93		\$ 42.49
2015-2016	10	<b>\$ 42.41</b>		<b>\$ 46.22</b>
2016-2017	11	\$ 45.91		\$ 49.92
2017-2018	12	\$ 49.39		\$ 53.63
2018-2019	13	\$ 52.85		\$ 57.32
2019-2020	14	\$ 56.28		\$ 61.00
2020-2021	15	\$ 59.59		\$ 64.55
2021-2022	16	\$ 62.78		\$ 67.98
2022-2023	17	\$ 65.85		\$ 71.27
2023-2024	18	\$ 68.82		\$ 74.46
2024-2025	19	\$ 71.68		\$ 77.53
2025-2026	20	\$ 74.37		\$ 80.42

As an example, using the above table, a winter-only DSM measure that will save 100 dekatherms per year for a life of ten (10) years would, in order to be considered economic, need to have a ten-year life cycle cost in 2006 dollars less than \$4,622.00 (100 X \$46.22). This type of analysis represents the avoided cost valuation from the Utility’s perspective. A customer that is a DSM

participant would see a similarly calculated, but different valuation based on the avoided costs of the applicable retail tariff.

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

### **Natural Gas Supply Options**

In Staff's opinion the Company has adequately addressed supply-side options in the IRP. The Company purchases 100 percent of the natural gas it sells from producers and/or marketers. Avista's service territory is located where it can take advantage of several North American natural gas supply basins. There are six interstate pipelines, two storage sources and supply from two US gas producing basins and two Canadian basins available for physical delivery of natural gas to the Avista service territory.

The Company uses the SENDOUT® computer model to analyze and project the adequacy of available supplies for the planning period. In this process the model considers all supply options including Company-owned underground storage and LNG storage for needle-peak shaving. The inputs and results of the SENDOUT® analyses are in IRP Appendix 6.

Utilizing the Expected Case (Case #2 in the IRP) for demand, SENDOUT® model output indicates there are no shortfalls in supply to Avista's WA/ID service territory until the 2011 timeframe. This five-year lead time, the Company feels and Staff agrees, is adequate to plan for and provide new supplies and transportation before the forecast shortage occurs.

### **Natural Gas Purchasing Options and Cost Effectiveness**

The Company's procurement plan addressed in the IRP is a time diversified and structured plan for natural gas purchases that does not try to guess market outcomes. The plan calls for significant financial hedging with some use of 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.

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 collars, physical price hedging and financial price hedging. The Company recognizes that a diverse portfolio of supply will reduce price and volatility risks and makes use of most of these purchasing tools.

In the past 18 months, the Company has developed its own procurement staff and no longer relies on its parent company for those services. The purchasing expertise developed was used to procure supplies that met all demand adequately during the 2005-2006 heating season. This included active participation in natural gas markets on both the physical and the financial sides. Prior to this change in 2004, Avista Utilities paid a fee to Avista Energy for procurement of natural gas under the "Benchmark" methodology. The Company and Staff are currently performing an evaluation of the first full year to compare the Company's direct purchasing program to the benchmark mechanism used in prior years.

All of the elements of the Company's procurement options and plan, 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 met the integration requirements for the IRP through use of the SENDOUT® computer based gas-planning system obtained from New Energy Associates. Using linear programming, this software, in each set of calculations, takes into account variables from the demand forecast, DSM resource availability, supply side resource availability, transportation and storage resources, weather assumptions, consumption parameters and the Avista distribution system capabilities and requirements (as defined by the network load studies performed in support of the IRP process using Advantica Stoner's SynerGEE software).

The outputs of the integration and analysis performed by SENDOUT® are many and include the following:

- Evaluation of the DSM Programs proposed by the Company
- Setting of goals for Each Accepted DSM Program
- Analysis of the Nine Demand Scenarios and Resources Available to:
  - Determine Ability to Meet Peak Demand
  - Determine Where and When The Company Will Have Insufficient Resources

- Determine the Amounts of all Deficiencies
- Determine Which New Resources Can Best Eliminate Deficiencies

“Avista chose to use the mid-demand case (Case #2 in the IRP) as the most likely or Expected Case for its planning activities.” Based on the results of the SENDOUT® analysis of that case, a total of 27 cost effective DSM programs with a total first year therm acquisition level of 1,062,000 therms were selected for inclusion in the plan for eastern Washington and northern Idaho. These are listed in Table 6.7 of the IRP. Also, there are 7 least cost supply side resources selected by SENDOUT® for the Washington/Idaho service territory to satisfy demand during the planning period. These are listed in Table 6.12 of the IRP and consist of 144,000 Dth/day of transportation and 15,000 Dth/day of Satellite LNG.

### **Two-Year Plan**

The Company’s two-year action plan includes performance of action items in five broad areas for the 2006 and 2007 time frame. In Summary these areas and action items are:

- Sales Forecasting
  - Update forecasting models to improve information on price elasticity and weather sensitivity.
  - Add detail information on 5 additional counties to the forecasting process to improve the ability to identify consumption variation by locale.
  - Develop the ability to forecast by “City Gate” receipt points to facilitate commodity delivery planning.
- Supply/Capacity
  - Conduct regular meetings with the Commission Staff to better communicate Company activities regarding the IRP.
  - Seek low cost peaking resources.
  - Investigate emerging LNG opportunities.
  - Seek to capture more economic value from storage assets.
  - Further develop its storage strategy
- Demand Forecasting
  - Complete evaluation of VectorGas software for potential use in the planning process.
- Demand Side Management
  - Launch the new programs identified in the 2005 IRP process.
  - Seek new or enhanced DSM resource acquisition through cooperative regional programs.

- Distribution Planning
  - Continue to use computer modeling to improve distribution planning
  - Determine the benefit and feasibility of using city gate forecasts to improve distribution planning.

### **Relationship Between the Plans (2003 Plan to 2005 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 2005-2007 period. The IRP makes frequent reference to the previous plan and the subsequent actions that have affected the current IRP. These include DSM, distribution, forecasting, supply side resources and use of the SENDOUT® software with plans for upgrades.

### **Rate Case Consideration**

The Company currently has no rate case before the Commission. In the event that the Company brings a rate case forward during the next two years, this IRP will be made a part of Staff's considerations and comments.

### **Public Participation**

The Company met the requirement for public participation in the IRP process. Public involvement in the IRP process took place in three ways. First, there was a Tactical Advisory Committee (TAC) consisting of the three states Commissions, several Non government organizations (NGOs) and members of the public. There were six 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. Finally there was a draft copy of the IRP circulated for comment to all the interested parties.

## **ADDITIONALCOMMENTS**

### **Benchmark Mechanism**

As of March 31, 2006, Avista has, for a full twelve months, been purchasing 100 % of the natural gas it sells directly rather than through a related company and has done so without use of the Benchmark Mechanism. In Commission Order No. 29902 Avista was required to prepare

a report using a back-cast methodology to evaluate the present acquisition results against the prior benchmark program for the twelve-month period ending March 31, 2006. Avista has proposed to submit to Staff for review a proposed methodology for making the evaluation and to have the report ready by the end of June of 2006.

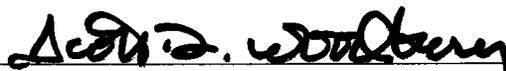
### **Natural Gas Procurement**

Working in cooperation with Staff, the Company is taking steps to diversify its natural gas procurement and risk management activities with regard to the risk and volatility of natural gas prices. Most notably, the Company has determined that it is currently practical to procure a portion of its natural gas supply as much as three years in advance. This is a significant departure from recent practices of most natural gas utilities to procure no more than one year in advance and/or mostly at indexed pricing. The Company plans to purchase 33% of its supply on this basis with rolling 3-year contracts that will require replacement of 11 % of its supply with new three-year contracts every year. Staff believes that this and other changes to the procurement plan provide better management of supply and price risks to protect customers from some of the volatility in the natural gas markets.

### **RECOMMENDATION**

Staff believes that Avista's 2005 Natural Gas IRP satisfies the requirements of Commission Order No. 25342. Staff recommends that the Company's filing of their 2005 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 following or not following the plan.

Dated at Boise, Idaho, this 9<sup>th</sup> day of June 2006.

  
Scott Woodbury  
Deputy Attorney General

Technical Staff: Harry Hall  
Lynn Anderson

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## CERTIFICATE OF SERVICE

I HEREBY CERTIFY THAT I HAVE THIS 9TH DAY OF JUNE 2006,  
SERVED THE FOREGOING **COMMENTS OF THE COMMISSION STAFF**, IN CASE  
NO. AVU-G-06-2, BY MAILING A COPY THEREOF, POSTAGE PREPAID, TO THE  
FOLLOWING:

KEVIN CHRISTIE  
MGR – NATURAL GAS PLANNING  
AVISTA CORPORATION  
PO BOX 3727  
SPOKANE WA 99220-3727

  
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SECRETARY