

## **Attachment**

### **Avista Corporation's 2009 Electric Integrated Resource Plan UE-081613**

As an electric utility in Washington, Avista Corporation (Company) has a fundamental responsibility to manage the risks and opportunities associated with acquiring and providing electric energy and service on behalf of its customers. This responsibility is particularly important in an era of changing load growth. The planning requirements specified in WAC 480-100-238 are intended to help each utility develop a strategic approach to navigate marketplace opportunities and risks based on that utility's unique attributes. Avista's 2009 Electric Integrated Resource Plan (Plan) represents such a strategic approach. As such, it is consistent with the Utilities and Transportation Commission's (Commission) planning regulations.

#### **Resource Needs**

Integrated resource plans (IRP) are for analyzing generic generation resource options, not for specific generation resource choices. The Company's IRP should model all the resource options taking into consideration its obligation to acquire renewable resources under R.C.W. 19.285, including any other resources necessary for the integration of renewable generation into the Company's resource portfolio. However, the Commission recognizes the difference between the modeling of data of a particular project site from the use of a particular project site to determine the viability of a geographic area's potential for wind development.

Avista projects a capacity deficit in 2015 of 45 MW and an energy deficit in 2018 by 85 aMW. By 2017, these deficits grow to a capacity deficit of 300 MW and an energy deficit of 272 aMW.

#### **Load Forecast**

The 10-year load forecast projects a 1.7 percent growth in capacity demand and in energy demand. This is in contrast to the 2.3 percent growth projected in the 2007 IRP. The lower demand forecast reflects economic conditions as well as the effect of increased spending on in conservation resources. Global Insight provides a good overview of the economic fundamentals nationally that may drive increased load, but we remain cautious about the precise manner in which this data can be used in Avista's service territory to derive calculations of price elasticity.

Avista's retail energy forecast produces a base case as well as high and low case. It is unclear from the text of the IRP what confidence levels were encompassed by the high and the low case. The IRP also lacks a discussion of the basis for why the Company selected the level of the high and low forecast. We expect the Company to expand its discussion of how the high and low forecast levels were selected in its next IRP.

The most useful outcome of an IRP may not be its “result” but the identification of drivers that have both the largest effect on the forecast and are identified as having the greatest likelihood of changing the most in the near term. The Company does a good job of identifying those drivers.

The IRP discusses, in brief, the current recession indicating Avista expects the recession to end by 2011 and population growth to increase at pre-2010 levels by the end of this year. The Company identifies employment as having the greatest effect on commercial demand and employment having the greatest probability of near term change as the economy emerges from the recession. The Company’s resource acquisition actions between IRPs will need to consider how actual population growth and employment rates may affect growth in the Company’s demand and energy needs.

Avista’s recognition of conservation response to retail price increases is informative. The Company should expand its analysis of this relationship in the next IRP as we believe such analysis would be useful in understanding the underlying drivers of load growth during times of increasing rates.

The adjustment of the load forecast to account for the decline in electric use in lumber and wood product industries is sensible but the actual mechanism for including such an adjustment is not well described.

In summary, Avista’s next IRP should,

- Expand the discussion of the selection process for determining the low and high forecast levels.
- Continue to review for any bias in the trend between its IRP load forecast and actual load.
- Expand the examination of the relationship between retail price increases and customer conservation response.
- Expand the explanation of the methodology used for incorporating region specific adjustments to the load forecast.

### **Demand Side Resources**

Avista expects to obtain a total of 10.4 aMW in 2010, including 7.5 aMW of utility based conservation and 2.9 aMW of regional conservation through Northwest Energy Efficiency Alliance. This is a 0.3 aMW (3.3 percent) increase over the 2007 IRP. Avista projected the low-income segment of the total conservation savings from a historic baseline of low-income conservation achievement. Avista adjusted the low-income baseline for load growth and retail price elasticity stating that, “there were not any known market or technology changes that would cause significant change in the ability to obtain efficiency resources from this segment.” While this may be true in the immediate case, the Commission expects the IRP to be part of the utility’s effort to expand low-income conservation.

- In Avista’s next IRP, Avista should investigate opportunities for low-income conservation, including regulatory changes that would make measures within its conservation program financially feasible and therefore available to its low-income customers.

The framework for developing the conservation target is sound. The Plan creates a supply curve for efficiency measures for both 2010 and 2011. Avista’s PRiSM selects energy efficiency resources from the conservation supply curve simultaneously with its selection of generation resources from the generation supply curve. However, the input parameters for determining the cost effectiveness of each energy efficiency measure is a continuing challenge. Avista noted this challenge in its previous IRP stating it needed to gain “detailed assumptions” about residential conservation programs for the purpose of improving the representation of their cost-effectiveness in the model. The inclusion of all measures with a benefit-to-cost ratio of 0.75 or higher in its IRP evaluation and in its business plan is an aggressive approach. The Commission recognizes the challenge of determining the detailed assumptions and recognizes Avista’s efforts in its IRP process to improve the details that inform assumptions.

Avista states that its last external study of its energy savings potential was done in 2005, including a broad examination of what is technical, economic, and achievable. As an action item, Avista commits to updating its estimates through another third-party savings-potential study *in time for use in its 2011 IRP*. The Company is expected to timely complete this new study, which will inform the Company’s next biennial filing obligations under WAC 480-109.

- Future IRP conservation analysis will need to keep in step with the utilities new obligations under WAC 480-109-010.

### **Hydroelectric Project Upgrades**

Avista provides a clear and thorough analysis of its large hydroelectric project upgrades at Cabinet Gorge, Long Lake, Post Falls, and Monroe Street, and provides the capital cost per MW of new capacity (with capacity factors) and nominal and constant dollar levelized cost per MWh for each prospective project. The Commission considers this type of IRP modeling and research to be vital to providing the utility’s management with the information and tools it needs for the consideration of its options for meeting electric supply and RPS requirements.

### **Transmission planning**

Avista’s load serving division has submitted several generation interconnection requests to Avista’s transmission division in connection to prospective wind sites and conventional generation resources. Such requests are the most accurate method of understanding the interconnection costs and are a sound and necessary step in developing options for compliance with the RPS standards.

### **Modeling Approach**

Avista continues to modify its modeling of transmission. Where interconnection study requests have not been done, Avista relies on estimates with a 50 percent margin of error. This is a reasonable margin in view of information available. Since its last IRP, Avista has submitted interconnection requests and has incorporated the cost estimates of those studies into its IRP analysis. The use of dollars derived from actual interconnection studies greatly improves the accuracy of specific portions of the transmission modeling. The completed interconnection studies may also be useful in refining the 50 percent error margins in the estimates Avista has done for transmission in other cutplanes on its system and in its model of the WECC system.

The resource options that were considered – both for modeling purposes and those ultimately included in the Preferred Resource Strategy (PRS) – are thoroughly developed. For example, the correlation of a wind resource specific to a geographic area to on-peak and off-peak demand is the type of detailed analysis necessary in an IRP as capacity pricing emerges in the Northwest’s historically energy constrained system.

In its modeling Avista limits the renewable resources constructed to the *mathematical minimum* under the Renewable Portfolio Standards (RPS) adopted by each state. In Washington, some utilities have already exceeded their RPS requirement, while others have committed to exceed their minimum requirement. Most utilities will have to exceed the mathematical minimum of the RPS due to the fact that the output of the resources coming on line will not match their RPS requirements. It is possible some utilities will fail to meet the standard. Considering all outcomes, it is not likely that the renewable resources constructed by utilities in the region will be limited to the *mathematical minimum* under the states’ RPS.

- Using as realistic information as possible, Avista should refine its modeling conditions under the states’ RPS to include renewable generation development conditions and REC availability and price.

### **Preferred Resource Strategy**

Again, as in the 2007 IRP, the discussion and analysis provided in the chapter on Preferred Resource Strategy (PRS) is useful. The future gas and carbon prices used in the 2009 IRP are only a snap-shot in time. Understanding the underlying drivers that favor one resource strategy over another allows an informed management to effectively respond to changing conditions in an effort to reduce rate impacts on customers.

Avista’s extensive discussions and critical consideration of the effects of I-937 elucidate the effect of resource choices on risk. For example, from the results of an RPS sensitivity study on the base case, Avista states, “...the Base Case study, without a Washington state RPS, [shows] the resource strategy would not change under any of the future market scenarios. This indicates that renewables were selected primarily to reduce risk and not to meet the RPS targets.”

The PRS includes the acquisition 100 MW of wind within two years. Since the filing of the Plan, Avista has re-evaluated the acquisition and postponed the acquisition timeline.

Though the discussion on the topic is extensive it is still unclear how realistic the opportunity for fixed price coal gas is. Clearly distinguishing between readily available resources choices and harder to achieve resource opportunities allows the reader of the IRP to better weigh the Avista's options.

Avista compares its preferred resource strategy with other portfolios strategies, which is a standard comparison in the methodology of IRPs. In addition, Avista considers how the PRS would change in response to different specific assumptions. This sensitivity analysis is very useful in highlighting the risk to the PRS and should be continued.

### **2009 IRP Action Plan**

The 2009 IRP calls for issuing an RFP for the Reardan wind site and up to 100 MW of wind or other renewable generation. Although intervening events have overtaken this specific component of the PRS, we expect the Company to continue its efforts to explore the potential for wind generation and meet its compliance with RCW 19.285. It also calls for the study of upgrades to four specific large hydro electric facilities owned by Avista. These recommendations are well explained and represent reasonable projections of the Company's actions for the next two years. The reasoning provided in the IRP should guide the Company's continuing evaluation of its actions during the two-year period between IRPs. The action plan also calls for studying potential locations for natural gas fired generation in the 2015 to 2020 time frame. Avista should consider adding to the Plan its analysis regarding potential providers of PPAs to satisfy future resource needs.

The energy efficiency action items include an external third party study of energy efficiency potential and achievable energy efficiency as well as an update of objectives and strategies for measurement, evaluation, and verification. The Commission considers these both to be critically needed items.

The action plan also makes recommendations in modeling and forecasting, such as refining cost driver relationships in the stochastic model and continuing to improve the PRiSM model. The Commission finds these improvements to be important.

On transmission, the action plan recommends continued involvement in BPA's planning and rate processes, and continued membership and participation in sub-regional bodies such as Columbia Grid. Due to the critical importance of integration of renewable resources, the Commission considers participation in transmission planning efforts and transmission-related modeling to be a high priority.

### **Conclusion**

Avista's 2009 electric IRP has met the requirements for IRPs set forth in WAC 480-100-238.