


**PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: February 24, 2015**

REGULAR CONSENT _____ EFFECTIVE DATE _____ Upon Commission's Approval _____

DATE: February 10, 2015

TO: Public Utility Commission

FROM: Erik Colville 

THROUGH:  Jason Eisdorfer and  Aster Adams

SUBJECT: AVISTA UTILITIES: (Docket No. LC 61) Acknowledgement of the 2014 Integrated Resource Plan.

STAFF RECOMMENDATION:

Staff recommends the Commission acknowledge Avista Utilities' (Avista) 2014 Integrated Resource Plan along with certain recommendations.

DISCUSSION:

Procedural History

Avista filed its 2014 Integrated Resource Plan (IRP) on August 29, 2014. On October 31, 2014, Staff and Citizen's Utility Board of Oregon (CUB) filed initial comments regarding Avista's IRP. The Northwest Industrial Gas Users filed a letter October 31, 2014, advising it would not be submitting formal comments in the docket. Avista filed response comments on November 24, 2014. Final comments by Staff were filed on December 19, 2014, and reply comments were filed by CUB on January 26, 2015. Avista did not file comments in reply to Staff's final comments.

Prior to filing the IRP, Avista held four public stakeholder meetings. In addition, stakeholders were allowed and encouraged to provide comments to Avista throughout the IRP development process.

General Description of the IRP

Avista's 2014 IRP identifies a strategic natural gas resource portfolio to meet customer demand requirements over the next 20 years. While the primary focus of the IRP is meeting customers' needs under peak weather conditions, the IRP process also provides a methodology for evaluating customer needs under normal or average conditions. Thus the IRP brings together customer demand forecasts with comprehensive analyses of resource options, including supply-side resources and demand-side measures to provide a valuable planning tool for Avista, its customers, regulatory agencies, and other stakeholders.

Anticipated low customer growth has eliminated the need for Avista to acquire additional supply-side resources, therefore appropriate management of underutilized resources to reduce costs until resources are needed is an essential component of the IRP. Additionally, the lower cost of natural gas continues to challenge the cost-effectiveness of demand-side management (DSM) programs. While adoption of conservation is the best strategy for minimizing costs to customers and promoting a cleaner environment, this IRP shows a lower conservation potential than previous IRPs because of the relatively low avoided cost of natural gas which makes it very challenging for many DSM measures to pass the cost-effectiveness test.

Compliance with Commission IRP Guidelines

All parties agree that Avista is in compliance with the Commission's IRP Guidelines. Compliance with the required actions contained in Orders acknowledging Avista's previous IRPs was met with the information contained in Avista's November 24, 2014, response comments.

Action Item Discussion

Avista's 2014 IRP Action Plan does not include any Action Items, and specifically, no resource acquisitions. The objective of this plan is to retain existing resources and contracts, if they continue to prove economical.

Demand Side Actions

Notably, Avista's 2014 IRP Action Plan did not include any DSM Action Items. Staff noted this deficiency in its October 31, 2014, initial comments, as did CUB in its October 31, 2014, opening comments. In Avista's November 24, 2014, response comments it noted that the filed IRP did not include DSM Action Items, but that it had since identified two such Action Items, as follows:

- Avista commits to pursuing the achievement of the numeric demand-side management resource target as part of a portfolio composed of cost-effective or otherwise authorized measures. Avista will also continue to work towards the development of a demand-side management portfolio that is optimized for a lower avoided cost environment.
- Avista will work with the Northwest Energy Efficiency Alliance to develop an approach to pursuing regional market transformation activities that will bring value to its customers and feed a pipeline of efficiency opportunities suitable for future development through local programs.

Staff's December 19, 2014, final comments discuss Avista's proposed DSM Action Items and conclude they are not specific or actionable. As a result, Staff proposed two revised DSM Action Items, as follows:

1. By May 1, 2015, in addition to those items specified in Order No. 13-159, Avista shall file for Commission approval specific DSM targets for the next two to four years. As part of the filing Avista should:
 - a) Provide Total Resource Cost (TRC) benefit/cost ratios (TRC BCRs) and utility cost test (UCT) BCRs for each measure and program which has a TRC or UCT BCR of less than one.
 - b) Provide projected achievable savings for each measure and program identified in item a) above.
 - c) Recommend which, if any, measures it is requesting an exception for under Docket No. UM 551, Order No. 94-590.
2. Participate in Northwest Energy Efficiency Alliance's (NEEA's) new gas market transformation initiative and in the next IRP include and note specific gas market transformation savings potential that are part of the achievable resource potential.

Parties' Positions

CUB

CUB's January 26, 2015, reply comments express agreement with Staff's proposed revised DSM Action Items and finds them to be reasonable.

Avista's Position

Avista elected not to file comments in reply to Staff's final comments. As a result, Avista has not taken a position on Staff's proposed revised DSM Action Items as of the date of this memorandum.

Staff Position and Recommendation

Staff has reviewed Avista's energy efficiency projections and assumptions and finds that it should have done more to consider alternatives for DSM acquisition in this IRP, including potentials of various levels of cost effectiveness exceptions and various outcomes of Avista's ongoing evaluations. In addition, Staff finds that there is a need for Action Items specific to DSM acquisition over the first two to four years of the planning period. Lastly, Staff does not recommend the Commission acknowledge the DSM targets presented in Chapter 3 of this IRP, because of the incomplete nature of Avista's analysis.

Given the content of Avista's proposed DSM Action Items, that Staff's proposed revised DSM Action Items recognize Avista's ongoing DSM analysis, and that Avista has not taken the opportunity to file responsive comments addressing Staff's revised DSM Action Items, Staff anticipates Avista will be supportive of Staff's proposed revised DSM Action Items.

Staff recommends that the Commission request that Avista propose the following two DSM Action Items for acknowledgment:

- 1. By May 1, 2015, in addition to those items specified in Order No. 13-159, Avista shall file for Commission approval specific DSM targets for the next two to four years. As part of the filing Avista should:***
 - a) Provide TRC BCRs and utility cost test (UCT) BCRs for each measure and program which has a TRC or UCT BCR of less than one.***
 - b) Provide projected achievable savings for each measure and program identified in item a) above.***
 - c) Recommend which, if any, measures it is requesting an exception for under Docket No. UM 551, Order No. 94-590.***
- 2. Participate in NEEA's new gas market transformation initiative and in the next IRP include and note specific gas market transformation savings potential that are part of the achievable resource potential.***

Other Issues

Staff identified several issues related to the IRP that it would like to see examined in greater detail in future IRPs. These areas for improvement are discussed below. Staff notes that Avista generally considered these matters in the IRP, as required by the Guidelines, but did not consider them in sufficient detail. Staff notes also that Avista has stated a general willingness to work with stakeholders to improve the next IRP process.

Portfolio Analysis

Staff recognizes there is no resource deficiency during this IRP planning period in meeting Avista's demand forecast. Staff is concerned however that Avista's IRP is using a flawed portfolio analysis approach. To avoid difficulty in future IRPs when there may be a need to identify additional resources to meet forecasted demand, Staff offers the following clarifications and suggestions.

Staff contends that the portfolios evaluated are to be alternate combinations of resources that meet the forecasted demand under each of the scenarios, not alternate evaluation scenarios. Portfolio analysis that is intended to identify the best combination of cost and risk is not useful when analyzing only one alternate combination of resources that meet forecasted demand, i.e. when only one portfolio is analyzed. As Staff considers the portfolio evaluation presented in Avista's IRP, Staff concludes the evaluation is actually that of one portfolio of resources (the existing portfolio) under different possible scenarios (or sensitivity cases).

Avista's Response Comments argued that the methodology used in its analysis of portfolios is practical for the varying array of cases modeled in the IRP. Avista stated it welcomes input and looks forward to working with Staff to enhance the processes surrounding portfolio analysis and further discussion on the development of portfolio analysis will be included in the 2016 IRP Technical Advisory Committee (TAC) process.

Parties' Positions

CUB

CUB's January 26, 2015, reply comments express agreement with Staff's comments related to portfolio analysis.

Avista's Position

Avista stated it welcomes input and looks forward to working with Staff to enhance the processes surrounding portfolio analysis and further discussion on the development of portfolio analysis will be included in the 2016 IRP TAC process.

Staff Position and Recommendation

For future IRPs, Staff recommends that Avista perform the following analyses:

1. **Deterministic Analysis** – a process where various more or less “worst case” scenarios are defined, and the expected 20-year present value revenue requirement (PVRR) outcomes from the alternate portfolios of resources are compared. Combining these outcomes with the expected PVRR under “normal” conditions, the more attractive portfolios become the pool warranting further consideration – in stochastic and refined sensitivity analyses.
2. **Stochastic Analysis** – a process where various conditions (e.g. weather, gas prices) are “shocked/sampled” using defined probability distribution functions in order to create, in turn, and for each resource portfolio under consideration, a probability density function of discounted, twenty-year future PVRR. That density function enables stochastic mean and ninety-percentile PVRR estimates.

Also, as noted in Staff’s Initial Comments, there may be no need in an IRP to perform portfolio analysis to identify the best resource additions, but the IRP still must clearly state that conclusion, along with why the existing portfolio of resources offers the best combination of cost and risk for meeting the forecasted demand during the planning period.

For this IRP, Staff requested in a data request (DR 51) that Avista provide a discussion and analysis that documents why the existing portfolio of resources offers the best combination of cost and risk for meeting the forecasted demand during the planning period. Avista’s response to that data request stated that it is extremely unlikely a different portfolio of resources could be constructed with a better combination of cost and risk than offered by the existing portfolio of resources. Avista noted this is the case because the existing resources include legacy capacity contracts on existing interstate pipelines, and legacy storage capacity located on the Northwest Pipeline where Avista holds transportation capacity to its service territories. Avista stated, but without any analysis, that replacement of this transportation and storage capacity would likely lead to greater expense. In addition, Avista stated that its procurement plan is structured and updated regularly to obtain natural gas from the supply basins with the most advantage to ratepayers. Staff accepts Avista’s assessment for purposes of this IRP.

Staff recommends that the Commission direct Avista, in future IRPs where there is a need for additional resources, to perform and present both deterministic and stochastic analysis of alternate combinations of resources that meet the forecasted demand under each of the demand scenarios. In the case of future IRPs with no need for additional resources, direct Avista to perform and present a discussion and analysis that documents why the existing portfolio of resources offers the best combination of cost and risk for meeting the forecasted demand during the planning period.

Demand Forecast

Recognizing there is no identified need for additional resources in this IRP, Staff investigated the load forecasting methodology seeking to identify the most reliable methodology so that future resource needs may be clearly identified. In that investigation, Staff issued several data requests.

Parties' Positions

CUB

CUB's January 26, 2015, reply comments express agreement with Staff's comments related to demand forecasting.

Avista's Position

Avista elected not to file comments in reply to Staff's final comments. As a result, Avista has taken no position related to Staff's demand forecast recommendations as of the date of this memorandum.

Staff Position and Recommendation

Staff reviewed Avista's responses to Staff's data requests related to customer and usage per customer forecasts. Staff recommends that Staff and Avista work together during the period leading to the next IRP on the following issues:

1. Customer forecast model: Currently, for the Medford region, the average population growth rate is calculated as the average of population growth forecast generated by Avista and population growth forecast from Global Insight (GI). The average population growth rate is then used to adjust the base-line ARIMA customer forecasts developed by Avista, so that the annual growth rate of forecasted customers are in line with the average population growth rate. For the other three regions – Klamath Falls, Roseburg, and LaGrande, GI's population growth forecast is used to match with Avista's baseline ARIMA customer forecasts. Staff suggests that customer forecast models for the next IRP include population as an exogenous variable in the base-line ARIMA customer forecast model so that the effect of population can be directly estimated from the customer time-series model. The

ARIMA based model with error orders (identified by considering several candidate models with different order structures and comparing the diagnostic statistics), and population as one of the predicting variables will integrate population into the customer model and take account of autocorrelation in an effective way.

2. Time-period for analysis: Staff found that different time periods are used by Avista for forecasting customer or usage per customer. For instance, Medford residential use per customer forecast model considers actual data from January 2006 onwards, while commercial and industrial use per customer models for Medford consider actual data from January 2007 onwards and January 2008 onwards respectively. Staff suggests that all available data and not the subset of data be considered for future modeling purposes.

Analysis of residuals and regression estimates: Currently Avista does not save statistical tests performed for the residual analysis as well as regression estimates of the customer/use per customer models. Avista's response to Staff DR 9 Attachment A shows the regression output for Roseburg residential service schedule 410 usage per customer, which was developed for Avista's rate case filed in 2013, Docket No. UG 246. Staff suggests that Avista retain the residual diagnostics and parameter estimates for all forecast models in future.

Staff recommends the Commission direct Avista, for the next IRP, to work with Staff and parties to resolve forecasting methodology concerns, and seek to identify the most reliable methodology so that future resource needs may be clearly identified.

Natural Gas Procurement and Risk Management

Chapter 4 of Avista's IRP included a brief discussion of Avista's Procurement Plan and Market-Related Risks and Risk Management. This discussion, however, did not provide sufficient detail to allow Staff to do a thorough review of the purchasing, hedging and risk management plans/policies/strategies. As a result, Staff issued DR 5 and Avista responded by providing Avista's Gas Procurement Plan and Risk Management Policy for review and discussion in the context of this IRP. Avista's responses to Staff data requests DR 17 to DR 21 showed that overall, Avista's hedging strategy has resulted in substantial losses for its customers. Yet, Avista intends to continue its current hedging strategy. Avista has not included in its IRP an action item to modify the strategy or a description of any future changes in its hedging strategy.

Parties' Positions

CUB

In its January 26, 2015, reply comments, CUB states:

CUB understands that finding the “sweet spot” between mitigating risk against volatile gas prices while simultaneously protecting customers from losses can be difficult, but CUB agrees with Staff that Avista’s hedging strategy has resulted in losses to customers. Avista disagreed with this conclusion in its Reply Comments, but upon reviewing Avista’s responses to Staff’s data requests pertaining to hedging, CUB believes Staff’s conclusions to be reasonable.

(footnote omitted).

Avista’s Position

Avista does not agree with Staff’s representation that Avista’s hedging strategy has resulted in “substantial losses for its customers,” and that “Yet, Avista intends to continue its current hedging strategy.” The purpose of any hedging program is not to precisely predict the market or take a market position; rather it is to mitigate the risk of unanticipated pricing fluctuations by providing some level of price certainty for customers. Further, Avista, pursuant to Docket No. UM 1286, holds quarterly meetings with Staff and other parties where it discusses, among other things, the “bidding practices for gas supply and transportation”. Staff and interested parties also review the results of Avista’s procurement strategies in annual Purchased Gas Cost Adjustment filings.

Staff Position and Recommendation

Staff notes Avista’s disagreement with Staff’s conclusions regarding natural gas procurement and risk management. Like CUB, Staff wishes to encourage Avista to explore more long-term hedging strategies in future IRPs. However, Staff contends that all hedging strategies should minimize costs to Avista’s customers given that Avista does not share much in the losses from its hedging strategies even though it has a lot of discretion in the implementation of the strategies. Staff recognizes that there are risks associated with any hedging strategy and thus some level of risk premium must be embedded in hedge prices. However, Staff contends customers should not be exposed to higher losses without the prospect of receiving benefits that are associated with hedging strategies. Given that IRP Guideline 1.c requires gas utilities to provide a “discussion of the proposed use and impact on costs and risks of physical and financial hedging” Staff offers the following recommendation to the Commission.

Staff recommends the Commission direct Avista, in future IRPs, to provide a discussion of Avista's hedging strategies as to their impact on customer rates, how hedge prices compare with prevailing spot market prices, and any action taken by Avista to protect its customers from unnecessary losses associated with its hedging strategies. In addition, Staff recommends the Commission direct Avista, in future IRPs, to provide a discussion of procurement plans and risk management that is of sufficient detail to allow Staff to do a thorough review of the purchasing, hedging and risk management plans/policies/strategies.

Distribution Planning

Avista's IRP presents a discussion of distribution system planning. While the discussion is informative, Staff finds it is missing a clear presentation of how Avista decides which distribution system projects to include in the IRP, and a clear description of the included projects, along with a justification for recommending or proceeding with the projects.

Parties' Positions

CUB

CUB's January 26, 2015, reply comments express agreement with Staff's comments related to distribution planning.

Avista's Position

Avista states in its response comments that, in future IRPs, Avista will work to enhance the distribution planning discussion "to more clearly state the information" within the discussion, "and also to provide a more detailed description of the projects themselves."

Staff Position and Recommendation

Staff recommends the Commission direct Avista, in future IRPs, to include a clear presentation of how Avista decides which distribution system projects to include in the IRP, and a clear description of the included projects, along with a justification for recommending or proceeding with the projects.

Climate Change Regulation

Staff, in its comments, expressed concern that all of the climate change regulatory implications, beyond simply the immediate regulatory effects of the Environmental Protection Agency's proposed rules under Section 111 (d) of the federal Clean Air Act, are not currently accounted for in the planning period.

Parties' Positions

CUB

CUB's January 26, 2015, reply comments express agreement with Staff's comments related to climate change regulation.

Avista's Position

Avista offered no direct response to Staff's concerns. In its IRP filing, Avista recognizes the need to include climate change impacts on weather. However, Avista states that the Company was unable to find any definitive evidence to support a peak day trend and decided to discontinue global warming trend adjustments to the peak day weather events in its heating degree days forecasts. Regarding forecasting customer usage, Avista stated that "The forecasting process will continue to review research on climate change and the best way to incorporate the results of that research into the forecasting process" (p. 41).

Staff Position and Recommendation

Staff recognizes it is time to begin exploring how to better analyze regulations intended to address climate change.

Staff recommends the Commission direct Avista to convene climate change risk and opportunity analysis discussions with Staff and parties as part of its next IRP process.

PROPOSED COMMISSION MOTION:

Avista's 2014 IRP be acknowledged with the revised action items recommended by Staff and the additional directives to Avista contained in this report and summarized in Attachment A to this report.

ATTACHMENT A

AVISTA'S 2014 IRP ACTION PLAN WITH STAFF RECOMMENDATIONS AND MODIFICATIONS

1. **Supply Side Actions – Acknowledge with revision**
 - a. **No Major Resource Acquisition**
2. **Demand Side Actions – Acknowledge revised Action Items**
 - a. **By May 1, 2015, in addition to those items specified in Order No. 13-159, Avista shall file for Commission approval specific DSM targets for the next two to four years. As part of the filing Avista should:**
 - I. **Provide Total Resource Cost (TRC) benefit/cost ratios (TRC BCRs) and utility cost test (UCT) BCRs for each measure and program which has a TRC or UCT BCR of less than one.**
 - II. **Provide projected achievable savings for each measure and program identified in item a) above.**
 - III. **Recommend which, if any, measures it is requesting an exception for under Docket No. UM 551, Order No. 94-590.**
 - b. **Participate in NEEA's new gas market transformation initiative and in the next IRP include and note specific gas market transformation savings potential that are part of the achievable resource potential.**

Additional Commission Directives Recommended by Staff:

1. **Avista, in future IRPs where there is a need for additional resources, shall perform and present both deterministic and stochastic analysis of alternate combinations of resources that meet the forecasted demand under each of the demand scenarios. In the case of future IRPs with no need for additional resources, Avista shall perform and present a discussion and analysis that documents why the existing portfolio of resources offers the best combination of cost and risk for meeting the forecasted demand during the planning period.**

- 2. Avista, for the next IRP, shall work with Staff and parties to resolve forecasting methodology concerns, and seek to identify the most reliable methodology so that future resource needs may be clearly identified.**
- 3. In future IRPs, Avista shall provide a discussion of Avista's hedging strategies as to their impact on customer rates, how hedge prices compare with prevailing spot market prices, and any action taken by Avista to protect its customers from unnecessary losses associated with its hedging strategies. In addition, Staff recommends the Commission direct Avista, in future IRPs, to provide a discussion of procurement plans and risk management that is of sufficient detail to allow Staff to do a thorough review of the purchasing, hedging and risk management plans/policies/strategies.**
- 4. Avista, in future IRPs, shall include a clear presentation of how Avista decides which distribution system projects to include in the IRP, and a clear description of the included projects, along with a justification for recommending or proceeding with the projects.**
- 5. Avista shall convene climate change risk and opportunity analysis discussions with Staff and parties as part of its next IRP process.**