

2015 Electric Integrated Resource Plan

Appendix B – 2015 Electric IRP Work Plan





Avista Corporation's
2015 Electric Integrated Resource Plan (IRP)
Work Plan

For the
Washington Utilities and Transportation Commission

August 29, 2014

2015 Electric Integrated Resource Planning Work Plan

This Work Plan is submitted in compliance with the Washington Utilities and Transportation Commission's Integrated Resource Planning (IRP) rules (WAC 480-100-238). It outlines the process Avista will follow to develop its 2015 IRP for filing with Washington and Idaho Commissions by August 31, 2015. Avista uses a public process to solicit technical expertise and feedback throughout the development of the IRP through a series of public Technical Advisory Committee (TAC) meetings. Avista held the first TAC meeting for the 2015 IRP on May 29, 2014.

The 2015 IRP process will be similar to those used to produce the previous IRP. Avista will use AURORA^{xmp} for electric market price forecasting, resource valuation and for conducting Monte-Carlo style risk analyses. AURORA^{xmp} modeling results will be used to select the Preferred Resource Strategy (PRS) using Avista's proprietary PRiSM model. This tool fills future capacity and energy (physical/renewable) deficits using an efficient frontier approach to evaluate quantitative portfolio risk versus portfolio cost while accounting for environmental laws and regulations. Qualitative risk evaluations are in separate analyses. Exhibit 1 shows the process timeline and the process to identify the PRS is in Exhibit 2.

Avista intends to use both detailed site-specific and generic resource assumptions in development of the 2015 IRP. The assumptions combine Avista's research of similar generating technologies, engineering studies, and the development of the Northwest Power and Conservation Council's Seventh Power Plan. This IRP will study renewable portfolio standards, environmental costs, sustained peaking requirements and resource adequacy, energy efficiency programs and demand response. The IRP will develop a strategy that meets or exceeds both the renewable portfolio standards and greenhouse gas emissions regulations.

Avista intends to test the PRS against a range of scenarios and potential futures. The TAC meetings will help to determine the underlying assumptions used in the scenarios and futures. The IRP process is very technical and data intensive; public comments are welcome but timely



input and participation will be necessary for inclusion into the process so the plan can be submitted according to the tentative schedule in this Work Plan.

The following topics and meeting times may change depending on the availability of presenters and requests for additional topics from the TAC members. The tentative timeline and agenda items for TAC meetings follows:

- **TAC 1 – May 29, 2014:** Setting Expectations, review of 2013 IRP acknowledgement letters and Action Plan, Energy Independence Act compliance, Pullman Energy Storage Project update, demand response study discussion and review the 2015 IRP draft Work Plan.
- **TAC 2 – September 23, 2014:** Review conservation selection methodology, update on the Company's demand response study, load and economic forecasts, generation options and Clean Power Plan proposal discussion.
- **TAC 3 – November 2014:** Planning margin, Colstrip discussion, cost of carbon, modeling overview and conservation potential assessment methodology.
- **TAC 4 – February 2015:** Electric and natural gas price forecasts, transmission planning, resource needs assessment, market and portfolio scenario development, energy storage and ancillary service evaluation
- **TAC 5 – March 2015:** Completed conservation potential assessment, draft PRS, review of scenarios and futures and portfolio analysis
- **TAC 6 – June 2015:** Review of final PRS and action items.



2015 Electric IRP Draft Outline

The following is a draft outline of the major sections envisioned for the 2015 Electric IRP. This outline may change with the input from the Company's TAC, and as IRP studies are completed and have been received:

- 1. Executive Summary**
- 2. Introduction and Stakeholder Involvement**
- 3. Economic and Load Forecast**
 - a. Economic Conditions
 - b. Avista Energy & Peak Load Forecast
 - c. Load Forecast Scenarios
- 4. Existing Resources**
 - a. Avista Resources
 - b. Contractual Resources and Obligations
- 5. Energy Efficiency and Demand Response**
 - a. Conservation Potential Assessment
 - b. Demand Response Opportunities
- 6. Long-Term Position**
 - a. Reliability Planning and Reserve Margins
 - b. Resource Requirements
 - c. Reserves and Flexibility Assessment
- 7. Policy Considerations**
 - a. Environmental Concerns
 - b. State and Federal Policies
- 8. Transmission & Distribution Planning**
 - a. Avista's Transmission System
 - b. Future Upgrades and Interconnections
 - c. Transmission Construction Costs and Integration
 - d. Efficiencies
- 9. Generation Resource Options**
 - a. New Resource Options
 - b. Avista Plant Upgrades
- 10. Market Analysis**
 - a. Marketplace
 - b. Fuel Price Forecasts
 - c. Market Price Forecast
 - d. Scenario Analysis
- 11. Preferred Resource Strategy**
 - a. Resource Selection Process
 - b. Preferred Resource Strategy
 - c. Efficient Frontier Analysis
 - d. Avoided Cost



12. Portfolio Scenarios

- a. Portfolio Scenarios
- b. Tipping Point Analysis

13. Action Plan

- a. 2013 Action Plan Summary
- b. 2015 Action Plan



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Exhibit 1
2015 Electric IRP Timeline



Exhibit 1: 2015 Electric IRP Timeline

Task	Target Date
Preferred Resource Strategy (PRS)	
Finalize energy demand forecast	July 2014
Identify Avista's supply & conservation resource options	September 2014
Finalize peak load forecast	September 2014
Update AURORA ^{xmp} database for market price forecast	October 2014
Energy efficiency load shapes input into AURORA ^{xmp}	October 2014
Finalize datasets/statistics variables for risk studies	November 2014
Transmission study due	December 2014
Finalize distribution feeder forecast	December 2014
Select natural gas price forecast	December 2014
Finalize deterministic base case	January 2015
Due date for study requests	Jan. 15, 2015
Base case stochastic study complete	January 2015
Develop efficient frontier and PRS	January 2015
Finalize PRiSM model	February 2015
Simulation of risk studies "futures" complete	February 2015
Simulate market scenarios in AURORA ^{xmp}	February 2015
Evaluate resource strategies against market futures and scenarios	March 2015
Present preliminary study and PRS to TAC	March 2015
Writing Tasks	
File 2015 IRP work plan	August 2014
Prepare report and appendix outline	October 2014
Prepare text drafts	April 2015
Prepare charts and tables	April 2015
Internal draft released at Avista	May 2015
External draft released to the TAC & filed with Commissions	June 2015
Final editing and printing	August 2015
Final IRP submission and TAC	August 31, 2015



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Exhibit 2
2015 Electric IRP Modeling Process



Exhibit 2: 2015 Electric IRP Modeling Process

