**Avista Corporation 2016 Natural Gas Integrated Resource Plan**

**Work Plan**

**IRP Work Plan Requirements**

Section 480-90-238 (4), of the natural gas Integrated Resource Plan (“IRP”) rules, specify requirements for the IRP Work Plan:

Not later than twelve months prior to the due date of a plan, the utility must provide a work plan for informal commission review. The work plan must outline the content of the integrated resource plan to be developed by the utility and the method for assessing potential resources.

Additionally, Section 480-90-238 (5) of the WAC states:

The work plan must outline the timing and extent of public participation.

**Overview**

This Work Plan outlines the process Avista will follow to complete its 2016 Natural Gas IRP by August 31, 2016. Avista uses a public process to obtain technical expertise and guidance throughout the planning period via Technical Advisory Committee (TAC) meetings. The TAC will be providing input into assumptions, scenarios, and modeling techniques.

**Process**

The 2016 IRP process will be similar to that used to produce the previously published plan. Avista will use SENDOUT® (a PC based linear programming model widely used to solve natural gas supply and transportation optimization questions) to develop the risk adjusted least-cost resource mix for the 20 year planning period.

This plan will continue to include demand analysis, demand side management and avoided cost determination, existing and potential supply-side resource analysis, resource integration and alternative sensitivities and scenario analysis.

Additionally, Avista intends to incorporate action plan items identified in the 2014 Natural Gas IRP including more detailed demand analysis regarding use per customer, demand side management results and possible price elastic responses to evolving economic conditions, an updated assessment of conservation potential in our service territories, consideration of alternate forecasting methodologies, and the changing landscape of natural gas supply (i.e. shale gas, Canadian exports, and US LNG exports) and its implications to the planning process. Further details about Avista’s process for determining the risk adjusted least-cost resource mix is shown in Exhibit 1.

**Timeline**

The following is Avista’s TENTATIVE 2016 Natural Gas IRP timeline:

* **August 31, 2015** – Work Plan filed with WUTC
* **January through April 2016** – Technical Advisory Committee meetings (exact meeting dates ***subject to change***). Meeting topics will include:
  + Demand Forecast & Demand-Side Management – January 20
  + Distribution Planning & Supply/Infrastructure and Potential Case Discussion– February 24
  + SENDOUT® Preliminary Output Results and Further Case Discussion – March 23
  + SENDOUT® results – April 20
* **May 11, 2016 –** Draft of IRP document to TAC
* **June 29, 2016 –** Comments on draft due back to Avista
* **July 20, 2016 –** TAC final review meeting (if necessary)
* **August 31, 2016 –** File finalized IRP document

**Exhibit 1: Avista’s 2016 Natural Gas IRP Modeling Process**

Compile Data and write the IRP document.

Planning standard review

Price curve analysis

Gate station analysis

Avoided Cost

Determination

**Demand Forecast by area and class**

* Customer counts
* Use per customer
* Elasticity

**Gas Prices**

* Basis differential
* Volatility
* Seasonal Spreads

**Existing Supply-Side Resources**

* Costs
* Operational Characteristics

**Demand-Side Resources**

* Assess DSM resource options
* Integrate DSM in resource portfolio

**Weather**

* 30 year NOAA average by area plus Peak Day weather

SENDOUT®

Optimization

Run

Identify when and where deficiencies occur in the 20 year planning period.

**Enter all future resource options:**

* Demand-Side
* Supply-Side

SENDOUT®

Optimization

Run

Solve for deficiencies and incorporate those into the least costs resource mix for the 20 year period.

Determine Base Case Scenario

**Key Considerations**

* Resource Cost
* Peak vs. Base Load
* Lead Time Requirements
* Resource Usefulness
* “Lumpiness” of Resource Options

**Sensitivity/Scenario Analysis**

* Customer Counts
* Use per customer
* DSM
* Monte Carlo
* Etc.