BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

LC 65

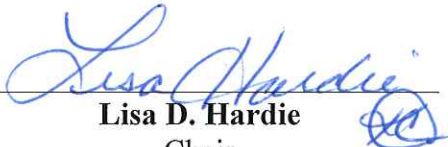|	
In the Matter of AVISTA CORPORATION, dba AVISTA UTILITIES, 2016 Integrated Resource Plan.	ORDER

DISPOSITION: STAFF'S RECOMMENDATION ADOPTED

This order memorializes our decision, made and effective at our March 21, 2017 Regular Public Meeting, to adopt Staff's recommendation in this matter. The Staff Report with the recommendation is attached as Appendix A.
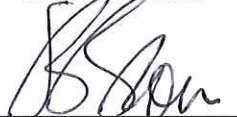
Dated this _21_ day of March, 2017, at Salem, Oregon.

_____
Lisa D. Hardie
Chair

COMMISSIONER SAVAGE WAS
UNAVAILABLE FOR SIGNATURE

_____
John Savage
Commissioner

_____
Stephen M. Bloom
Commissioner

A party may request rehearing or reconsideration of this order under ORS 756.561. A request for rehearing or reconsideration must be filed with the Commission within 60 days of the date of service of this order. The request must comply with the requirements in OAR 860-001-0720. A copy of the request must also be served on each party to the proceedings as provided in OAR 860-001-0180(2). A party may appeal this order by filing a petition for review with the Circuit Court for Marion County in compliance with ORS 183.484.

PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: March 21, 2017

				Upon Commission's
REGULAR	X	CONSENT	EFFECTIVE DATE	Approval

DATE: February 24, 2017

TO: Public Utility Commission

FROM: Lisa Gorsuch

THROUGH: Jason Eisdorfer and John Crider

SUBJECT: AVISTA UTILITIES: (Docket No. LC 65) Acknowledgement of the 2016 Integrated Resource Plan.

STAFF RECOMMENDATION:

Staff recommends that the Commission acknowledge, with exceptions and revisions, Avista Utilities' (Avista or Company) 2016 Integrated Resource Plan.

DISCUSSION:

Issue

Whether the Commission should acknowledge Avista's 2016 IRP.

Applicable Law

OAR 860-027-0400 requires energy utilities to file an IRP within two years of its previous IRP acknowledgement order. As used in this rule, "Integrated Resource Plan" or "IRP" means both the energy utility's written plan satisfying the requirements of Commission Order Nos. 07-002, 07-047 and 08-339, detailing its determination of future long-term resource needs and its analysis of the expected costs and associated risks of the alternatives to meet those needs, and the energy utility's Action Plan to select the best portfolio of resources to meet those needs.

Analysis

General Description of the IRP
Avista's 2016 IRP is a plan for meeting customer natural gas needs 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 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.

Procedural History
Avista filed its 2016 Integrated Resource Plan (IRP or Plan) on September 1, 2016, which has been docketed as LC 65. On November 8, 2016, the Public Utility Commission of Oregon Staff (Staff) filed initial comments. Avista filed reply comments on December 15, 2016. Staff filed final comments on January 9, 2017. Finally, Avista filed final comments on February 6, 2017.

Prior to the filing of the IRP, a series of informal technical working group meetings which initiate the IRP process began in January of 2016. The informal process included four technical meetings between January and April of 2016. Many participants attended and participated in these technical meetings, including Staff, Washington Utilities and Transportation Commission, Idaho Public Utilities Commission, Cascade Natural Gas, Northwest Natural Gas, Puget Sound Energy, Citizens' Utility Board of Oregon, Northwest Industrial Gas Users, Northwest Gas Association, Fortis, Northwest Pipeline Corporation, and TransCanada.

Following the technical working group meetings, Avista circulated a draft IRP, in May of 2016, for informal stakeholder comment.

Compliance with Commission IRP Guidelines
Staff concludes that Avista has complied with the Commission's IRP Guidelines and previous orders. However, Staff identifies in its recommendations below, additional analysis that should be completed as part of Avista's next IRP. In addition, Staff supports replacement of the Company's 2016 Action Plan[1] as filed on September 1, 2016, with the revised Action Plan[2] as filed on February 6, 2017. See the 2017-2018 Action Plan, as filed by Avista, on pages 8-10 of this memorandum.

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[1] Avista's 2016 Action Plan: http://edocs.puc.state.or.us/efdocs/HAA/haa83059.pdf on pages 144-146 of the IRP as filed on September 1, 2016.
[2] Avista's revised 2016 Action Plan: http://edocs.puc.state.or.us/efdocs/HAC/lc65hac101819.pdf on pages 9-11 of the Company's Final Comments as filed on February 6, 2017.

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Staff Recommendations

In its Recommendations, Staff identified additional analyses related to the IRP that it would like to see the Company perform in greater depth in future IRPs. Staff's Recommendations are set forth below along with Staff's proposed revisions to Avista's 2016 Action Plan. In response to Staff's Final Comments, Avista indicated that while the Company does not agree with all of Staff's recommendations for the next IRP, it does not object to the recommendations. Avista stated that it would work with Staff on the recommendations described below as part of the 2018 IRP process.

1. Staff Recommendation No. 1.

Demand Forecasts
Staff noted in its initial comments that the use of Monte Carlo simulations to produce high and low price curves fails to produce scenarios with symmetric risk profiles through the IRP time horizon. Avista responded with an explanation of methodology of the three curves (low, high, and expected) and how they differ. The Company also stated that no comments were made regarding the use of Monte Carlo simulation during the February 18, 2016 TAC meeting. Additionally, the Company stated that in nominal terms, the high/low curves do increase over time.

Following Avista's Reply Comments, Staff still viewed the high/low scenario methodology as requiring additional analysis and discussion, even when considering nominal terms because this approach potentially did not fully assess risk. In Final Comments, Staff stated that although the use of historical values in a Monte Carlo simulation has the advantage of producing curves which do not rely on external estimates of future prices, the resulting curves do not achieve the goal of examining resource portfolio adequacy in a high and low price scenario compared to the expected case. In the near-term, the current "low-price" scenario is similar to the expected price scenario, and in the long-term the current "high-price" scenario utilizes values very close to the expected price. In order to adequately capture risk of price deviations and perform high/low analysis, the methodology must produce curves which are reasonable adaptations of high (low) prices in every incidence of the time horizon.

Staff Recommendation No. 1
Staff recommends in Avista's 2018 IRP that Avista pursue an updated methodology, wherein the low/high gas price curves continue to be based on low (high) historic prices in a Monte Carlo setting, but are inflated to match the growth rate (yr/yr) of the expected price curve. The resulting curves would be based on historic prices and also produce symmetric risk profiles throughout the time horizon.

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Avista indicated in its Final Comments that it did not object to Staff's recommendation.

2. Staff Recommendation No. 2.

Staff stated in its Final Comments that "In contrast to Avista, Northwest Natural in its 2016 IRP segments its number of customers forecast into two separate components. The first component is "new construction additions" and the second component is "conversion customers". This approach leads to a more detailed analysis of what is causing changes in the number of customers. Conversely, Avista attributes changes in both of those components to population growth; whereas, for example, construction starts might be a better dataset to predict new construction additions. Despite this potential theoretical improvement, in practice, Avista's approach will tend to produce reasonable results because the population and construction starts datasets are positively correlated. At this time, Staff believes more analysis by the Company is required in order to determine which approach has higher forecast accuracy (between forecasting the number of customers directly or by forecasting two separate components). If additional analysis by the local distribution companies (LCDs) indicates that one approach is more accurate than the other, Staff intends to recommend a uniform approach among Oregon LDCs for future IRPs."

Staff Recommendation No. 2

Staff recommends that Avista forecast its number of customers using at least two different methods and to compare the accuracy of the different methods using actual data as a future task in its next IRP.

Avista indicated in its Final Comments that it did not object to Staff's recommendation.

3. Staff Recommendation No. 3.

Demand Side Resources
Staff recommended in its Initial Comments that Avista should work along with ETO now to develop a process which will incorporate ETO's independent analysis of DSM potential and conservation supply curves into Avista's 2018 IRP. Staff also asked for an explanation regarding the Company's "Achievable Potential" from industrial customers.

Avista provided further explanation on page three of its Reply Comments. In Avista's Reply Comments, the Company stated that it would work with Staff to revise its 2016 Action Plan to include an updated DSM methodology including the integration of the ETO.

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Staff recommended in its Final Comments that Avista revise its proposed 2016 Action Item regarding DSM as described below:

Replace:

> Avista's 2018 IRP will contain a dynamic DSM program structure in its analytics. In prior IRP's, it was a deterministic method based on Expected Case assumptions. In the 2018 IRP, each portfolio will have the ability to select conservation to meet unserved customer demand. Avista will explore methods to enable a dynamic analytical process for the evaluation of conservation potential within individual portfolios.

With the following:

> Avista's 2018 IRP will contain a dynamic DSM program structure in its analytics. In prior IRPs, it was a deterministic method based on Expected Case assumptions. In the 2018 IRP, each portfolio will have the ability to select conservation to meet unserved customer demand. Avista will explore methods to enable a dynamic analytical process for the evaluation of conservation potential within individual portfolios and will work with Energy Trust of Oregon in the development of this process and in producing any final results for its 2018 IRP for Oregon customers.

Avista made this revision to its 2016 Action Plan, which is reflected in the Final Comments and amended 2016 Action Plan filed by the Company on February 6, 2017.

4. Staff Recommendation No. 4.

Supply Side Resources
Staff stated in its Initial Comments that Avista currently has no resource deficiencies and its analysis results demonstrate that there is no need to acquire incremental supply-side resources to meet peak day demands over the next 20 years. However, the Company indicates in its Plan that it will focus on the following normal activities in the near term:

- Continue to monitor supply resource trends including the availability and price of natural gas to the region, LNG exports, supply dynamics and marketplace, and pipeline and storage infrastructure availability.
- Monitor availability of resource options and assess new resource lead-time requirements relative to resource need to preserve flexibility.

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- Appropriate management of existing resources including optimizing underutilized resources to help reduce costs to customers. Avista utilizes storage at the Jackson Prairie facility in its current resource stack. Avista is a one-third owner of the facility with Northwest Pipeline and Puget Sound Energy. The total working gas volume of Jackson Prairie is approximately 25 Bcf, with 398,667 Dth of daily deliverability rights.

Staff agrees with Avista's assessment that there is currently no need to acquire incremental supply-side resources to meet peak day demands over the next 20 years, and supports the Company's proposed near-term focus on the bulleted items above.

Staff Recommendation No. 4
Staff recommends that Avista provide Staff and stakeholders with updates regarding its discussions and analysis regarding possible regional pipeline projects that may move forward.

Avista indicated in its Final Comments that it did not object to Staff's recommendation.

5. Staff Recommendation No. 5.

Integrated Resource Portfolio
Staff finds Avista's chosen Expected Case for peak operational planning activities, described in detail in Chapter 5 of its Plan, reasonable for planning purposes.

As stated in Staff's Initial and Final Comments, the Company provides graphic summaries of Average Case demand as compared to existing resources on a peak day in Figures 5.8 through 5.11 on pages 94 and 95 of its Plan. Figures 5.12 through 5.15 on pages 96 through 98 summarize Expected Case peak day demand compared to existing resources, as well as demand comparisons to its 2014 IRP.

Alternate Scenarios, Portfolios, and Stochastic Analysis
Staff stated in its Final Comments that "given the Company's confidence in its resource adequacy well into the future, it is understandable that Avista did not apply stochastic analysis in its traditional role as assisting a utility to select among alternative supply/resource portfolios to the one which manifests the "best" cost/risk profile. Instead the stochastics were dedicated to a) obtaining a measure of the number of peak day occurrences at its various service areas, and b) a statistical distribution of the 20-year revenue requirements as a function of weather and gas price Monte Carlo simulations.

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In its Reply Comments and in its Final Comments, Avista states that it "welcomes further discussion on the development of its use of stochastic analysis within the context of the 2018 Natural Gas IRP Process."

Staff Recommendation No. 5
Staff recommends that in its 2018 IRP process Avista work with Staff and stakeholders to establish and complete stochastic analysis that considers a range of alternative portfolios for comparison and consideration of both cost and risk.

Avista indicated in its Final Comments that it did not object to Staff's recommendation.

6. Staff Recommendation No. 6.

Environmental Considerations
Staff recommended, in its Final Comments, Acknowledgement of Avista's 2016 Action Plan only with the completion of the following revisions to the Action Plan, which should include:
1. Carbon Policy including federal and state regulations, specifically those surrounding the Washington Clean Air Rule and federal Clean Power Plan;
2. Weather analysis specific to Avista's service territories;
3. Stochastic Modeling and supply resources; and
4. Updated DSM methodology including the integration of ETO.

Avista made these revisions to its 2016 Action Plan, which are reflected in the Final Comments and amended 2016 Action Plan filed by the Company on February 6, 2017.

Conclusion

Avista has made revisions to its 2016 Action Plan consistent with two of the recommendations above, Staff Recommendations 3 and 6. Accordingly, Staff recommends Commission acknowledgement of Avista's 2016 IRP, along with the following 4 recommendations, and with the replacement of the 2016 Action Plan filed by Avista on September 1, 2016, with the revised 2016 Action Plan filed with the Company's Final Comments on February 6, 2017.

In conclusion, Staff makes the following four recommendations:

Staff Recommendation No. 1

Staff recommends in Avista's 2018 IRP update that Avista pursue an updated methodology, wherein the low/high gas price curves continue to be based on low (high)

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historic prices in a Monte Carlo setting, but are inflated to match the growth rate (yr/yr) of the expected price curve. The resulting curves would be based on historic prices and also produce symmetric risk profiles throughout the time horizon.

Staff Recommendation No. 2

Staff recommends that Avista forecast its number of customers using at least two different methods and to compare the accuracy of the different methods using actual data as a future task.

Staff Recommendation No. 3

Staff recommends that Avista provide Staff and stakeholders with updates regarding its discussions and analysis regarding possible regional pipeline projects that may move forward.

Staff Recommendation No. 4

Staff recommends that in its 2018 IRP process Avista work with Staff and stakeholders to establish and complete stochastic analysis that considers a range of alternative portfolios for comparison and consideration of both cost and risk.

Avista's 2017-2018 Action Plan[3]

Avista's 2017-2018 Action Plan outlines activities for study, development and preparation for the 2018 IRP.

New Activities for the 2018 IRP

- *The price of natural gas has dropped significantly since the 2014 IRP. This is primarily due to the amount of economically extractable natural gas in shale formations, more efficient drilling techniques, and warmer than normal weather. Wells have been drilled, but left uncompleted due to the poor market economics. This is depressing natural gas prices and forcing many oil and natural gas companies into bankruptcy. Due to historically low prices Avista will research market opportunities including procuring a derivative based contract, 10-year forward strip, and natural gas reserves.*

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[3] 2017-2018 Revised Action Plan, as filed by Avista on February 6, 2017.

- *Avista's 2018 IRP will contain a dynamic DSM program structure in its analytics. In prior IRP's, it was a deterministic method based on Expected Case assumptions. In the 2018 IRP, each portfolio will have the ability to select conservation to meet unserved customer demand. Avista will explore methods to enable a dynamic analytical process for the evaluation of conservation potential within individual portfolios.*

- *Monitor actual demand for accelerated growth to address resource deficiencies arising from exposure to "flat demand" risk. This will include providing Commission Staff with IRP demand forecast-to-actual variance analysis on customer growth and use-per-customer at least bi-annually.*

- *In the 2018 IRP, include a section in the IRP that discusses the specific impacts of the new Clean Air Rule in Washington (WAC 173-441 and 173-442).*

- *In the 2018 IRP, provide more detail on Avista's natural gas hedging strategy, including information on upper and lower pricing points, transactions with counterparties, and how diversification of the portfolio is achieved.*

- *Carbon Policy including federal and state regulations specifically those surrounding the clean air rule and clean power plan.*

- *Weather analysis specific to Avista's service territories.*

- *Stochastic Modeling and supply resources.*

- *Updated DSM methodology including the integration of ETO.*

- *In the 2018 IRP, ensure that the entity performing the Conservation Potential Assessment (CPA) evaluates and includes the following information:*

  o *All conservation measures excluded from the CPA, including those excluded prior to technical potential determination;*

  o *Rationale for excluding any measure;*

  o *Description of Unit Energy Savings (UES) for each measure included in the CPA; specify how it was derived and the source of the data; and*

  o *Explain the efforts to create a fully-balanced TRC cost effectiveness metric within the planning horizon. Additionally, while evaluating the effort to eventually revert back to the TRC, Avista should consult the DSM*

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> *Advisory Group and discuss appropriate non-energy benefits to include in the CPA.*
>
> • *In developing the 2018 IRP, discuss with the TAC:*
>
>   o *Results of Northwest Energy Efficiency Alliance (NEEA) coordination, including non-energy benefits to include in the CPA.*
>
>   o *The appropriateness of listing and mapping all prospective distribution system enhancement projects planned on the 20 year horizon, and comparing actual projects completed to prospective projects listed in previous IRPs.*
>
>   o *Discuss the barriers surrounding the uptake of DSM and how Avista can improve an increased level of achievable potential. (percentage of baseline dropped from 1.2 (economic) to 0.3 (achievable))*

Ongoing Activities

• *Continue to monitor supply resource trends including the availability and price of natural gas to the region, LNG exports, methanol plants, supply and market dynamics and pipeline and storage infrastructure availability.*

• *Monitor availability of resource options and assess new resource lead-time requirements relative to resource need to preserve flexibility.*

• *Meet regularly with Commission Staff to provide information on market activities and significant changes in assumptions and/or status of Avista activities related to the IRP or natural gas procurement practices.*

• *Appropriate management of existing resources including optimizing underutilized resources to help reduce costs to customers.*

PROPOSED COMMISSION MOTION:

Acknowledge Avista's 2016 IRP along with Staff's four recommendations described above, and replacement of the Company's 2016 Action Plan filed on September 1, 2016, with the revised Action Plan filed on February 6, 2017, all shown in Staff's conclusion above.

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