



Avista Corp.

1411 East Mission P.O. Box 3727
Spokane, Washington 99220-0500
Telephone 509-489-0500
Toll Free 800-727-9170

November 2, 2016

Via Electronic Mail

Steven V. King
Executive Director and Secretary
Washington Utilities & Transportation Commission
1300 S. Evergreen Park Drive S. W.
P.O. Box 47250
Olympia, Washington 98504-7250

Re: Docket No. UE-161024 - Comments of Avista Utilities: Rulemaking for Integrated Resource Planning, WAC 480-100-238, WAC 480-90-238, and WAC 480-107

Dear Mr. King,

Avista Corporation, dba Avista Utilities (Avista or Company), submits the following comments in accordance with the Washington Utilities and Transportation Commission's (Commission) Notice of Opportunity to Submit Written Comments (Notice) in Docket UE-161024 issued September 6, 2016.

The Commission established Docket UE-161024 "to examine whether the Commission's rules related to the integrated resource plan (IRP) process require an update to keep up with recent trends in the energy industry." Additionally, the Commission will consider whether a revision is necessary for its rule in WAC 480-107, which outlines utility bidding process responsibilities that are closely tied to the IRP rules.

In reviewing its rules, the Commission identified two potential types of changes that may be needed: changes related to the Commission's experience in administering the IRP rule (process changes), and changes related to accommodating new types of resources (technology changes). Generally, the Commission anticipates that its inquiry will be loosely divided into the following topical areas:

- Energy Storage;
- Requests for Proposal;
- Avoided costs;
- Transmission and distribution planning;
- Flexible resource modeling; and
- General procedural improvements.

The following are the Company's responses to the questions posed in the Notice:

A. General:

- 1. The Commission has identified a broad scope of issues to evaluate in its inquiry. Are there other issues or topics that should be addressed? What type of schedule would best lend itself to a proceeding of this scope?**

Avista Response:

Most of the ideas brought forth in this inquiry are already being addressed at some level in the Company's IRPs and through its Technical Advisory Committee (TAC) processes. Avista has not identified additional issues or topics to be addressed at this time.

B. Energy storage:

- 1. The Commission has already engaged in an investigation regarding energy storage technologies and their treatment in IRP documents (Docket UE-151069). The Commission is considering merging that investigation with this proceeding, then issuing a straw proposal and soliciting one more round of comments before issuing a policy statement on the topic. Do the parties have any concerns with this approach? Is there any information relative to modeling energy storage that has not been presented in the existing docket?**

Avista Response:

Avista does have a concern with the proposed approach. The Company would recommend the Commission issue a straw proposal and solicit another round of comments within Docket UE-

151069, rather than merge with Docket UE-161024. A Policy Statement on the energy storage issue would provide direction and therefore allow time for the completion and reporting of projects being undertaken by the utilities. By keeping this effort within the energy storage docket, the Company believes that a conclusion on the topic would be reached much quicker than if the dockets were merged together.

C. Requests for proposals

- 1. WAC 480-107-015 requires any utility that files an IRP identifying a generation capacity shortfall within the next three years to issue a request for proposals (RFP) within 135 days of filing its IRP. In recent IRP cycles, utilities have frequently requested waivers of this rule, generally citing the cost and complexity of the RFP process and stating that the IRP selected market purchases as the low-cost, preferred approach to meeting short-term capacity needs. Given the frequent requests for waivers of this rule, should the Commission change it? What type of changes would parties recommend to make the rule more broadly applicable and reduce the need for waiver requests?**

Avista Response:

To ensure resource sufficiency, the Company believes that only long-term and sustained deficits should be subject to the rule. Short-term deficiencies should be exempt from the RFP rule. For example, Avista's last RFP waiver requirement was for a short term capacity shortfall that was rectified when a long term capacity sale ended less than two years later.

IRP reliance on market purchases to meet long-term deficiencies should only be permitted where the utility shows an overall marketplace surplus (i.e., generation sufficient to meet all utility and non-utility electricity requirements of energy and capacity) of a large enough magnitude to meet its requirements.

- 2. Utilities state that the RFP process is time-consuming and complex, and does not lend itself to a biennial cycle. Are there alternative means of meeting the rule's requirement? Would narrowly crafted solicitations that are tailored to the specific resource needs identified in the IRP be an effective way of reducing administrative burden and costs, while still encouraging bidders to provide the utility with a range of resource options?**

Avista Response:

The elimination of the generic biennial RFP requirement and a move towards narrowly crafted solicitations might provide a more efficient solution for larger and longer term resource needs.

The RFPs should not be prescriptive in the nature of the resources desired, only the attributes needed to serve utility loads. Prescriptive RFPs could risk the likelihood that resource options outside of the IRP would be excluded from providing low-cost service.

- 3. In considering the waiver requests to this rule, Commission staff and utilities have been at odds whether the IRP actually identified a resource shortfall in the following three years. Staff has generally held that if the IRP model relies on market purchases for capacity needs, then the utility is short on capacity; utilities have generally held that if the model selected market purchases, then the resource need has been cost-effectively met. Is there a potential compromise on this issue? Could improved modeling of market risk in the IRP increase confidence in the model's determination? How might market risk be modeled?**

Avista Response:

A Policy Statement from the Commission that sets a consistent standard will probably be necessary to rectify this issue since there is no quick and universal answer to the problem of identifying a resource shortfall. However, the Commission should be cautious about simply adopting the results and recommendations of the Northwest Power and Conservation Council's Power Plans because the models and assumptions used in that analysis can be quite different. As long as there is no universal standard for the identification of what constitutes a resource deficiency, this issue will continue. Tools and data necessary to model market risk are not available in the marketplace today, so attempting to better model market risk could be a challenge. That said, a more robust evaluation of the overall market itself would be useful.

- 4. Conservation is currently included in WAC 480-107-015. Should the commission require utilities to issue RFPs for conservation measures and programs on a regular basis? If so, should RFPs be issued in conjunction with the IRP cycle or the biennial conservation planning cycle described in WAC 480-109-120?**

Avista Response:

The Commission should not require utilities to issue RFPs for conservation measures and programs on a regular basis. The IRP identifies an estimated amount of cost-effective conservation resources, however there is a separate process already established under WAC 480-109 where utilities are required to develop conservation acquisition targets and achieve all cost-effective conservation. Beyond the target, there is a defined process for utilities to develop

and submit business plans and request a prudence determination of conservation acquisition and expenditures. An additional RFP requirement would provide no added value beyond the current process, which is working well.

D. Avoided costs:

- 1. Avoided costs are used by utilities in multiple applications. They are used for determining rates for qualifying facilities in compliance with the Public Utility Regulatory Policy Act (PURPA), they are used for identifying cost-effective conservation measures, and they are used in determining the incremental cost of resources used for complying with the state's renewable portfolio standard. Despite their ubiquitous use, however, avoided costs can be difficult, if not impossible, to identify in current utility planning. Would it be feasible and beneficial for the utilities to transparently report their avoided costs in the IRP document? What obstacles exist that would complicate such a report? Would it be possible to create a generic avoided cost calculator that could be used to generate avoided costs for various applications? Should the included elements of avoided costs be different for different applications? Is the avoided cost methodology different for natural gas distribution utilities?**

Avista Response:

Avista publishes its avoided costs in its IRP. For example, Table 11.8 on page 11-21 of its 2015 Electric IRP shows the updated annual avoided costs in \$/MWh from 2016 through 2035 on a flat, on-peak and off-peak basis. The annual capacity value in \$/kw-year is also included in the same table. This is an area that may benefit from working directly with Commission Staff to develop a uniform and consistent understanding of how the avoided cost information should be developed and reported within the IRP. This type of process could be similar to that used in conjunction with the 2016 Renewable Portfolio Standard (RPS) report under I-937 to develop a consistent methodology for all of the utilities to identify and report the various types of incremental costs for qualifying resources. A generic cost calculator is not needed, however a consistent understanding and policy of how to develop the avoided cost as described above is necessary. There will probably need to be some differences among the various uses of avoided costs. For example, the avoided cost when determining the value to pay a PURPA resource will be somewhat different than the avoided cost for a conservation measure depending on the ability of either resource to provide capacity and to show the 10 percent preference for conservation measures.

In Avista's 2016 Natural Gas IRP, the avoided costs can be found in Figure 5.16 starting at page 103, and we currently report our avoided costs throughout the document as well as detailed costs in Appendix 5.4 of the IRP.

E. Transmission and distribution modeling

- 1. The IRP rule requires utilities to conduct “an assessment of transmission system capability and reliability” and “a comparative evaluation of energy supply resources (including transmission and distribution)” How are utilities currently meeting these requirements in their IRPs? Has modeling software advanced in a way that might allow for a more detailed analysis of transmission and distribution systems?**

Avista Response:

Avista includes this transmission and distribution system assessment in its IRP as required, this assessment provides an overview of the Company's electric transmission system, a description of the various federal and regional entities that influence or govern various aspects of our transmission planning and operations, as well as a list of recent transmission system studies and investments that support new generation, increased reliability, and system voltage support. Beyond transmission system information, the IRP also includes a summary of distribution system programs that are designed to reduce the energy required to provide our customers with electric service. In addition to the transmission and distribution system assessment Avista performs for its IRP, the Company maintains a 10-year transmission plan showing the costs and benefits of the various transmission projects that have been considered. This is not currently highlighted in the IRP since it is a different planning process, however, it could be summarized in an IRP.

The Company also develops annual asset management plans for its transmission, substation, and distribution systems. Avista conducts some distribution system planning each year to promote energy conservation, penetration of electric vehicles, and support for distributed generation resources. These areas are described in the IRPs, as well as in advisory committee presentations. Avista's current deployment of advanced metering infrastructure (AMI) in its Washington service territory will substantially improve the energy conservation that can be achieved on its distribution system, as well as promote more cost-effective integration of

customer-owned generation. The Company expects to include additional descriptive information on these benefits of AMI in its IRP as the deployment progresses.

- 2. To what degree are utilities currently planning for distribution system impacts such as electric vehicles, changes in end uses, and distributed generation? Are there opportunities for utilities to improve their modeling related to these issues without overly burdening the planning process?**

Avista Response:

Avista includes the expected impact of electric vehicles in its load forecast and has done some initial scenario work on the implications of residential rooftop solar. As mentioned in the prior section above, the Company is currently deploying AMI throughout its Washington service area. Among the many customer benefits enabled by this system, advanced metering will make it easier for Avista to document and effectively respond to the distribution system impacts resulting from increasing adoption of electric vehicles and distributed generation, as well as other changes that might result from changing end uses and resulting loads. This is an area that we plan to continue on our current trajectory of adding more details in the IRP as these topics mature. More information will be known, and shared through the IRP advisory groups, as the various utility-scale pilot projects mature.

- 3. The Commission’s rule requiring smart grid reports, 480-100-505, is scheduled to sunset this year absent an order from the Commission requiring utilities to consider filing the reports. What has the experience of utilities been in filing these reports? Would there be value in extending this requirement? Is there a way to address the Commission’s desire for information on this topic through the IRP?**

Avista Response:

The intent of the Commission’s rule requiring smart grid technology reports beginning in 2010 was to establish requirements for each utility to submit periodic (biennial) reports of the utility’s evaluation of smart grid technologies that were available or likely to be available and any plans for implementing such technology. In the past six years, the technology that may have been labeled “smart” has now become utility standard. The Company believes the reports have served their intended purpose and that going forward, technology is and will be part the utilities operating business. Therefore, Avista does not believe the reports should be extended.

As noted above, the Company's current deployment of advanced metering in Washington will enable Avista to save substantial energy on its distribution system through enhanced conservation voltage reduction, and to more-effectively respond to changing customer loads and to integrate customer-owned generation. Avista has proposed that it will annually report to the Commission on the costs and benefits of AMI, through the period of deployment (through year 2021), and that it will also file a final summary report within 18 months of the completion of deployment. Information related to advanced metering and other applicable grid technologies will continue to be factored into the IRP, as well as through periodic general rate cases.

- 4. The natural gas IRP rule requires plans to include “an assessment of pipeline transmission capability and reliability and opportunities for additional pipeline transmission resources,” but is silent on distribution system modeling. To what degree are gas utilities currently engaged in modeling their distribution system? Would it be beneficial for utilities to further engage in distribution system modeling? If so, is there commercially available software that is capable of meeting these modeling needs?**

Avista Response:

Avista's Natural Gas IRP includes a Distribution Planning Chapter. The Company conducts two primary types of evaluations in its distribution system planning efforts: capacity requirements and integrity assessments. DNV-GL, the parent company of SynerGi, provides software tools to analyze both natural gas transmission and distribution systems. Avista currently uses the SynerGi gas application to analyze the gas distribution system, but does not have any transmission modeling software.

- 5. In recent years, other states have required or considered requiring utilities to engage in full-scale distribution system planning. What are the costs and obstacles associated with such a requirement? What are the benefits? Is detailed distribution planning feasible now, and if not, what is needed for it to become so?**

Avista Response:

Full-scale distribution planning is technically feasible, however, the costs to undertake such a planning requirement should be evaluated in relation to the value that can be obtained from the

results. Other states are adopting this type of planning to better understand how to best integrate the underlying values associated with distributed energy resources (DERs).

Avista is proceeding in this space by performing analysis to identify locational economics for the placement of DER assets as well as implementing demonstration projects to determine economic valuations for deployed DER assets. As noted above, the Company's current deployment of advanced metering in Washington will improve its ability to effectively integrate distributed generation, as well as to understand and respond to the potential system impacts associated with increasing penetration of electric vehicles and other changes in customer loads. Overall, the availability of additional distribution system data from AMI will improve the Company's ability to efficiently and effectively manage this asset.

F. Flexible resource modeling

- 1. Current IRP models balance load and resources on an hourly basis over a 20-year period, generating more than 175,000 data points for the model to solve. Many of the new resource alternatives that utilities consider, however, operate on a sub-hourly basis and therefore generate benefits that cannot be captured in the IRP's hourly modeling. These benefits promise to increase over time as the penetration of variable generation increases and the need for flexibility from fast-moving resources grows. Prime examples of this type of resource are energy storage, reciprocating engines and the Energy Imbalance Market. How are utilities accounting for sub-hourly resources in current IRP models?**

Avista Response:

To assist with sub-hourly analyses necessary to reflect the changing planning environment, Avista uses its ADSS modeling technology. Results from this technology are included in the IRP analyses and help quantify existing system capabilities and differentiate between the capabilities of new resource options including demand-side management, and battery storage.

- 2. Are there readily available means of using sub-hourly IRP models? For example, if the model ran in 15-minute increments over 20 years, it would generate more than 700,000 data points – four times as many as current models. But if it ran in 15-minute increments for just 10 years, it would only double the number of data points, to about 350,000. Would it be possible to adapt current IRP models to operate in that way? Are there commercially available alternatives for sub-hourly modeling? Do utilities or other parties have experience in operating those models?**

Avista Response:

Yes, the technology exists to run sub-hourly dispatch IRP models, however there is not adequate data available to populate a database to run a Western Interconnect wide model. Given the simplicity of current models, adding this level of detail would not provide accurate representations of the value until the models can more accurately model ancillary service markets on a balancing area basis, and property re-dispatch hydro resources given changes in load/renewables. Further, sub-hourly dispatch models do not have the mathematical algorithms to correctly account for the precision necessary to properly reflect sub-hourly dispatch. As explained in the Company's response to F.1. above, Avista uses its ADSS technology to account for these impacts.

G. Procedural improvements

1. Should the commission clarify its treatment of confidential information in IRP and RFP dockets? If so, how?

Avista Response:

This has not been an issue for Avista, therefore we see no need to clarify the treatment of confidential information at this time. We would work with the Commission on any issues related to confidentiality if they develop.

2. Should the commission outline more specific requirements for public involvement, like identification of meeting time and location on the work plan, and the identification of the date a draft will be available for public review?

Avista Response:

No, it is very difficult, if not impossible, to identify meeting times and locations a year in advance when developing the work plan. The work plan is provided to the advisory groups and filed with the Commission. The electric and natural gas IRP web pages also maintain up-to - date times and locations of meetings. Email invitations and meeting agendas are also sent well in advance to advisory group members posted on the Company's website.

- 3. How can the commission increase the transparency of IRP models? Is there a way to allow commission staff and other stakeholders to independently access company modeling software and test assumptions, without violating proprietary agreements or confidentiality, as is done with power cost models?**

Avista Response:

In order for Commission Staff and other stakeholders to independently access Company modeling software and to test assumptions would be for them to purchase their own software licenses. We can supply results and assumptions, but without access to the software, they would not be able to replicate any of the work. This is true for both the electric and natural gas planning tools used for developing the IRPs. Another solution would be for stakeholders to come to the utility to view a demonstration of the model by Avista personnel.

- 4. Are there any improvements that could be made in the IRP reporting or review process? Staff will ensure rule language is simplified and written in terminology that promotes clarity and understanding for all stakeholders. Rules that are written in Plain Talk are easier to understand and implement consistently.**

Avista Response:

Clarification of the rules will be good for all stakeholders. One addition that Avista would like the Commission to consider is for the rule to allow a limited-scope update to the previously filed IRP if no resource need is identified during the first 10 years of the 20-year planning horizon.

In the last several natural gas IRPs, the Company has not identified any resource need in the 20-year planning horizon. If a provision like this is considered, the utility could update its demand scenarios and provide an update to its previous IRP showing that its resource needs have not changed.

Avista appreciates the opportunity to provide these comments, and we look forward to participating in the workshop scheduled for December 7, 2016. If you have any questions regarding these comments, please contact Clint Kalich at 509-495-4532 or John Lyons at 509-495-8515.

Sincerely,

/s/Linda Gervais

Linda Gervais
Senior Manager, Regulatory Policy
Avista Utilities
linda.gervais@avistacorp.com
509-495-4975