April 3, 2017

Mr. Steven V. King,
Executive Director and Secretary
Washington Utilities and Transportation Commission
PO Box 47250
Olympia, WA 98504-7250

RE: Renewable Northwest and the NW Energy Coalition Comments on Draft Report and Policy Statement on Treatment of Energy Storage Technologies in Integrated Resource Planning and Resource Acquisition
Dockets U-161024 and UE-151069

I. Introduction

Renewable Northwest and the NW Energy Coalition appreciate this opportunity to comment on the Draft Report and Policy Statement on Treatment of Energy Storage Technologies in Integrated Resource Planning and Resource Acquisition ("Draft Statement") that the Washington Utilities and Transportation Commission ("Commission") issued on March 6, 2017. We congratulate and thank the Commission and Commission Staff for a Draft Statement that would provide clear guidance in helping Washington investor-owned utilities ("IOUs") transition to planning and procurement processes that recognize the broad benefits of energy storage technologies. This Draft Statement would also make Washington a leader on the fair evaluation of storage technologies, setting a national example on best practices for assessing the costs and benefits of energy storage. As discussed in the comments below, Renewable Northwest and the NW Energy Coalition are pleased to support the finalization of this important policy statement.

Renewable Northwest is a nonprofit advocacy organization that brings together its business and nonprofit members to promote the expansion of environmentally responsible renewable energy resources in the Northwest. For over 20 years, Renewable Northwest has advocated for the deployment of environmentally responsible and cost effective renewable energy resources that help reduce emissions, support local economies, and improve energy security and resilience. The NW Energy Coalition is a non-profit organization whose primary purpose is to promote an energy future that is clean, reliable, affordable, and equitable. The NW Energy Coalition provides technical and policy leadership on energy issues in this region, and seeks to promote the development of renewable energy, energy conservation, and affordable energy services, working with utility companies and others to achieve these goals.

Energy storage technologies are the next pillar of a cleaner, more efficient, and more reliable electric grid. Accurately modeling energy storage is an important component of least-cost, least-risk planning for a utility's capacity, flexibility, distribution, and transmission requirements. Storage projects can provide all of these services.

Furthermore, storage technologies can cost-effectively facilitate additional renewable energy development without increasing carbon dioxide emissions.

These comments supporting the policies and guidance in the Commission's Draft Statement are informed by our active participation in resource planning, procurement, and storage-specific discussions and proceedings in Washington and throughout the Northwest. Of particular importance to this proceeding, both organizations have actively participated in several integrated resource planning cycles for Washington, and have actively participated in Docket No. UE 151069 and Docket No. U-161024. Outside of Washington, Renewable Northwest and NW Energy Coalition participate in the resource planning processes of multiple utilities and have been actively engaged in the Oregon Public Utility Commission Docket No. UM 1751, dealing with the implementation of Oregon's first energy storage program. Based on our experience from these proceedings, we strongly support this Draft Statement as well as the Commission's proposed policy that IOUs should be diligently working to identify and pursue cost-effective opportunities to incorporate energy storage into their system.

These comments follow the structure of the Draft Statement, highlighting our support for specific items in each section and including recommendations to further strengthen the Commission's proposed policies. In Section II, we express our support for the Commission's proposed changes to the current prudency standard, and suggest modifications to the proposed treatment of some transmission projects. In Section III, we welcome the Commission's guidance to IOUs as they transition to sub-hourly modeling, and support the interim adoption of the "net cost" approach as well as the language about resource assumptions. We then suggest that the final policy statement highlights the importance of using up-to-date resource assumptions. Finally, in Section IV we express our general support for the Commission's language on behind-the-meter energy storage, suggesting that the final statement clarifies that resource planning and procurement processes should treat aggregated behind-the-meter storage like other storage resources.

II. Changing Planning Paradigms

In the Draft Statement, the Commission rightly highlights the need for updating the traditional resource planning framework due to the inability of the existing framework to effectively evaluate hybrid resources like energy storage. The policies outlined in the Draft Statement would help address that need by guiding Washington IOUs as they continue to improve their planning practices, thereby minimizing the IOUs' risk of making suboptimal resource procurement decisions. Additionally, the policies in the Draft Statement would help position Washington IOUs to comply with the state's energy policies and respond to a rapidly changing energy landscape.

Renewable Northwest and the NW Energy Coalition strongly support the Commission's proposed requirement that IOUs seeking a prudence determination for generation, distribution, and transmission projects demonstrate that they have fairly considered a storage alternative. Such a requirement is appropriate given the multiple functions that an

energy storage project can have, and given the Commission's proposed policy that IOUs diligently identify and pursue cost-effective storage opportunities. Below, we offer some recommendations to further strengthen the Commission's policy for prudence determinations.

The question of whether the proposed requirement for a prudence determination should apply to all transmission projects deserves further discussion. Renewable Northwest and the NW Energy Coalition appreciate the boundary between state and federal jurisdiction over different transmission facilities and uses. Our comments here seek to explore how the requirement to include storage options in transmission planning would work in practice, and ensure that, prior to the Commission approving cost recovery for a transmission project, the project undergo the same obligation to study storage alternatives.

The Draft Statement proposes to exclude transmission projects *selected* in a regional transmission planning process. However, it is our understanding that the current starting point for regional transmission planning is the development of a transmission plan by each individual utility. The regional transmission plan includes putting all of the individual utility transmission plans into one coordinated plan. If the intent of this policy statement is to include storage alternatives in the development of local transmission plans, the fact that a local transmission project may also be included in a regional transmission plan should not excuse the project proponent from the obligation to study storage alternatives.

An alternative threshold could be to exclude transmission projects that are selected for *Order 1000 cost allocation* within a regional transmission planning process. Other participating utilities and the Federal Energy Regulatory Commission undertake extensive analysis of the net benefits to each utility before cost allocation is granted. Even with these projects, however, it is our understanding that Order 1000 does not authorize cost recovery at the state level;[1] each state commission would still have to approve any of the project costs proposed for inclusion in retail rates. Based on our current understanding of these questions, Renewable Northwest and the NW Energy Coalition would also be comfortable with the Commission simply removing the exception for transmission projects identified in a regional transmission plan and making the prudency requirement apply to all transmission investments.

III. Modeling Guidelines

Renewable Northwest and the NW Energy Coalition thank the Commission for outlining a path for Washington IOUs to continue transitioning to sub-hourly integrated resource plan ("IRP") modeling. As the Commission highlights in the Draft Statement, the need for utilities to be able to model sub-hourly system flexibility increases as generation portfolios become increasingly diverse. It also increases as as utilities participate in sub-hourly energy markets. Therefore, we applaud the Commission for encouraging

[1] See e.g. FERC Order No. 1000-A, paragraphs 186, 187, and 190.

Washington IOUs to continue moving to resource planning models that can capture sub-hourly benefits.

Both organizations also support the Commission's proposed "net cost" method as an interim approach to modeling energy storage within the traditional construct of hourly IRP models. Currently, the region is experiencing important shifts in its generation mix, with resources retiring and IOUs contemplating significant procurement decisions. As a result, we agree with the Commission regarding the need for a method to fairly assess energy storage technologies while the IOUs complete their transition to sub-hourly modeling. We also support the additional guidance giving advisory groups the opportunity to review modeling assumptions.

Renewable Northwest and the NW Energy Coalition agree with the Commission's guidance on ensuring a technology-agnostic resource planning analysis of storage that relies on up-to-date resource assumptions. The Commission's guidance that IOUs should analyze a range of storage options and use cost data in their modeling assumptions provided by reliable, independent third parties will be important to a fair evaluation of storage and to the ultimate selection of an optimal portfolio. We recommend that in its final policy statement, the Commission also require the use of performance data that is similarly verifiable. We also recommend that the Commission clarify that the storage assumptions used in an IRP be as up-to-date as possible, and that it encourages IOUs to continue updating their storage assumptions throughout the planning process based on feedback from industry experts and stakeholders participating in the IRP process.

Renewable Northwest and the NW Energy Coalition also strongly support requiring the application of reasonable learning curves to storage costs, as well as the requirement that storage resources be modeled at a size sufficient to allow the IRP model to capture their impact. Finally, both organizations support the application of the same modeling principles to the evaluation of distribution system projects.

IV. Regulatory Treatment

Renewable Northwest and the NW Energy Coalition agree with the Commission's guidance regarding competitive procurement of energy storage resources. We strongly support the language in the Draft Statement regarding technology-neutral requests for proposals ("RFPs") that identify the services that IOUs expect a resource to provide and the value of those services. We agree with the Commission that providing additional cost data regarding the value of ancillary services would allow bidders to better tailor their bids to fit the IOU's needs, and strongly support the requirement that specific and granular modeling is also pursued in the RFP. Both organizations recommend that the Commission's final statement also require IOUs to make system data available to select storage developers, under appropriate confidentiality mechanisms, so that developers can use their expertise and experience to propose system configurations that would most cost-effectively serve the IOU's needs.

Both organizations agree with the Commission's acknowledgment that storage is quickly emerging as a valuable component of a clean, affordable, and secure energy future, and that some benefits of storage are hard to quantify. Therefore, we support the Commission's statement regarding the ability of an IOU to invest in competitively sourced storage projects even if, from a traditional perspective, they might not be the absolute lowest-cost option. Given the importance of meeting Washington's climate goals and gaining real experience with the capabilities storage technologies offer, competitively priced projects that can be shown to be in the public interest should be given serious consideration.

We recommend that the Commission specify in its final policy statement that any assessment of the benefits of energy storage include the consideration of the risk-management value associated with the procurement of energy storage systems. For example, some types of projects could potentially be physically moved or expanded in a manner that could well match an IOU's slowly growing need. Also, given the several services that energy storage could provide, the resource could be adaptable over time as the system need for particular services varies. For these reasons, energy storage projects can have a lower risk of eventually becoming stranded assets.

Renewable Northwest and the NW Energy Coalition also recommend that the final policy statement include guidance regarding what storage applications and services IOUs should value when evaluating energy storage in their resource planning and procurement processes. As the Draft Statement acknowledges, energy storage can provide a variety of services. Currently recognized services include capacity, voltage support, transmission and distribution upgrade deferral, etc.[2] The type and number of services valued will have a large impact on how storage solutions compare to more conventional investments.

As a result, we recommend that the final policy statement require IOUs to: 1) consider all of the currently recognized services that storage provides, 2) value and evaluate each of the services that are applicable to a given storage project, and 3) provide justification of any services that are not included in the valuation. The Commission, Commission Staff, and stakeholders participating in resource planning and procurement processes should have the opportunity to know which storage applications and services an IOU is including in its analysis and which services it is not including. The methodology should

[2] For example, the Oregon Public Utility Commission (OPUC) recently adopted a list of services that energy storage can currently provide. OPUC Staff prepared the list after a collaborative process that involved the Pacific Northwest National Laboratory stakeholders, utilities, and storage developers. That collaborative process was part of Docket UM 1751, the proceeding dealing with the implementation of as part of the Commission's efforts to implement Oregon's first energy storage program. The complete list can be found in pages 15-17 of the report that the Commission adopted with Order 17-118 (http://apps.puc.state.or.us/orders/2017ords/17-118.pdf). The Northwest Planning and Conservation Council is currently working on a White Paper on the Value of Energy Storage to the Future Power System. Its first draft includes a list of energy storage services in page 8 (https://nwcouncil.app.box.com/s/8fua9h9k4k3na3cra628vym69klrkvdz).

be transparent and verifiable and justification should be provided for any of the applications and services that are not analyzed for a given storage project.

VI. Behind the Meter

Renewable Northwest and the NW Energy Coalition generally support the Draft Statement language on behind-the-meter energy storage, particularly the encouragement that IOUs work with Staff and stakeholders to propose programs to facilitate the deployment and aggregation of behind-the-meter storage to reduce peak demand usage. We also recommend that the Commission include in its final policy statement that such programs could also help facilitate the deployment and aggregation of behind-the-meter storage to provide flexible capacity to the utility. Finally, we recommend that the Commission clarify that aggregated behind-the-meter systems be analyzed in an IOU's IRP, and be allowed to bid into RFPs, just like any other resource.

VII. Conclusion

Renewable Northwest and the NW Energy Coalition again thank the Commission and Commission Staff for a Draft Statement that sets a national example on the treatment of energy storage in utility resource planning. We strongly support finalizing the Commission's Draft Statement into a final policy statement, and hope that the suggestions that we offered can help further strengthen the Commission's policies on storage. Given the lengthy nature of the IRP rulemaking docket moving forward, we respectfully encourage the Commission to clarify that nothing in this policy statement is intended to signal that utilities should wait to begin analyzing and considering cost-effective storage projects prior to the conclusion of this docket. We look forward to working with the Commission, Commission Staff, IOUs, and other stakeholders to assist as Washington IOUs transition to resource planning and procurement practices that thoroughly and accurately evaluate storage technologies.

Thank you for the opportunity to comment.

Respectfully submitted this 3rd day of April, 2017

/s/ Silvia Tanner
Silvia Tanner
Staff Counsel
Renewable Northwest

/s/ Joni Bosch
Joni Bosch
Senior Policy Associate
NW Energy Coalition

/s/ Cameron Yourkowski
Cameron Yourkski
Senior Policy Manager
Renewable Northwest

/s/ Wendy Gerlitz
Wendy Gerlitz
Policy Director
NW Energy Coalition