BEFORE THE WASHINGTON STATE UTILITIES AND TRANPORTATION COMMISSION

DOCKETS U-161024 and UE-151069

In the Matter of Notice of Opportunity to Comment on Draft Report and Policy Statement on Treatment of Energy Storage Technologies in Integrated Resource Planning and Resource Acquisition.	COLUMBIA BASIN HYDROPOWER COMMENTS

Columbia Basin Hydropower (CBHP) appreciates the opportunity to provide comments on U-161024 and UE-151069, Notice of Opportunity to Comment on Draft Report and Policy Statement on Treatment of Energy Storage Technologies in Integrated Resource Planning and Resource Acquisition (Draft Report and Policy Statement).

CBHP, which is headquartered in Ephrata, WA., provides administrative, operations, and maintenance functions for hydroelectric generating facilities owned by the three Irrigation Districts that make up the Columbia Basin Irrigation Project. The Districts currently own seven projects, ranging in size from 2 MW to 94 MW with a total generating capacity of approximately 150 MW. Clean, renewable energy from five of these projects is delivered to two Washington State utilities (Seattle City Light and Tacoma Public Utilities) under long-term purchase power agreements. CBHP has obtained preliminary FERC permits for the development of several additional small hydro projects, as well as the development of a 500 MW hydroelectric pumped storage facility to be located near Grand Coulee Dam (the Banks Lake Project, FERC License No. 14329).

CBHP is generally supportive of the Washington State Utilities and Transportation Commission's (Commission) Draft Report and Policy Statement as a mechanism to encourage the electric utilities under the Commission's jurisdiction (the IOUs) to more actively incorporate energy storage technologies into their respective Integrated Resource Plans (IRPs), Requests for Proposals (RFPs) and future resource acquisition decisions. Commercially available energy storage technologies have the capability of adding firm capacity and power system flexibility to the Pacific Northwest (PNW) bulk power grid in a cost-effective and environmentally friendly manner while also helping Washington State achieve its clean energy goals.

In particular, CBHP strongly supports the "stacked benefits" approach in evaluating the overall spectrum of value that energy storage devices can provide to the IOU's power systems. Although not specifically mentioned in the Draft Report and Policy Statement, firm capacity for meeting IOU peak loads is one of the key benefits that energy storage devices can provide; therefore the

stacked benefits approach should incorporate a capacity value component. CBHP agrees with the Commission's conclusion that incorporating the stacked value approach into the IOU's IRP, RFP, and resource acquisition processes (including the Commission's new resource prudency review process) will require the development of enhanced sub-hourly models such that the impacts and benefits of storage devices can be more fully evaluated. CBHP also supports the Commission's position that it should have flexibility to consider potential "non-tangible" benefits of energy storage resources (i.e. benefits that may not be fully quantifiable) as part of its new resource prudency reviews.

CBHP supports the Commission's proposal that the IOUs be required to evaluate multiple different energy storage technologies in their respective IRPs and RFPs. However, while some energy storage technologies are modular in natures (i.e. batteries), others (hydro pumped storage, compressed air) are not. Therefore, the Commission should require that the IOUs base their evaluations of storage technologies on a combination of generic cost data and on site-specific costs for storage facilities that are either currently sited, or can reasonably be sited, in the PNW region. Site-specific cost data could be provided from several different sources, including energy storage facility developers.

CBHP notes that different energy storage technologies can have significantly different operational characteristics that, in turn, need to be accurately incorporated into the IOUs IRP cost/benefit evaluations and in the Commission's new resource prudency reviews. Such operational characteristics include the maximum number of continuous hours that the device can deliver power to the grid, whether or not there is a decrease in the capacity that the device can deliver as it is discharged, the time required to re-charge the device, how rapidly the device can be switched between energy delivery and energy storage modes, charging and discharging ramp rate restrictions and/or impacts on the device's useful life, and the expected number of storage/discharge cycles that the device can be expected to deliver across its useful life.

It is also important for the Commission to recognize that energy storage facilities can have radically different estimated useful lifespans based upon the technology utilized. For example, batteries currently have an estimated useful lifespan in bulk electric grid operations of approximately 10 - 20 years while a hydro pumped storage facility can have a useful lifespan of 50 years or longer. Since the IOUs typically utilize 20 year planning periods in their IRPs, it is important that they properly reflect the realistic lifespans of the energy storage technologies that they are evaluating and include appropriate replacement costs and/or residual value impacts in their studies.

Finally, some energy storage technologies - hydro pumped storage and compressed air for example - have relatively long development lead times as compared to other conventional resource alternatives such as gas-fired combustion turbine plants or wind/solar plants. When reviewing the IOU's preferred new resource alternatives in their respective IRPs and RFPs, the Commission should recognize that the preferred alternative(s) might be energy storage facilities that have long development lead-times. CBHP encourages the Commission to work with the IOUs and other stakeholders to modify the timing aspects of the new resource prudency review process, if needed, so that energy storage technologies with relatively long lead-times are not placed at a competitive disadvantage to other potential new resources solely on this basis.

In conclusion, CBHP appreciates this opportunity to submit these comments and we look forward to working with the Commission, the IOUs and other interested stakeholders in removing barriers to the development and operation of new energy storage resources for the benefit of Washington State electricity customers.

Sincerely,

Tim Culbertson
Secretary Manager, Columbia Basin Hydropower

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