Columbia River Treaty Power Group

Repatriate American Hydropower to Meet Carbon, Clean Energy Goals

BRIEFING PAPER

The U.S. needs to revamp how we treat hydropower in the Northwest. This is critical to meeting our nation's clean energy goals while maintaining a reliable and affordable electric system. Hydropower capacity and flexibility can facilitate the clean energy transition by integrating wind and solar and electrifying other sectors of the economy, such as transportation and buildings. Returning hundreds of megawatts of hydropower energy and capacity to the United States instead of exporting it to Canada would be a powerful step in the right direction.

Actual Power Benefits Are A Fraction of Treaty Expectations

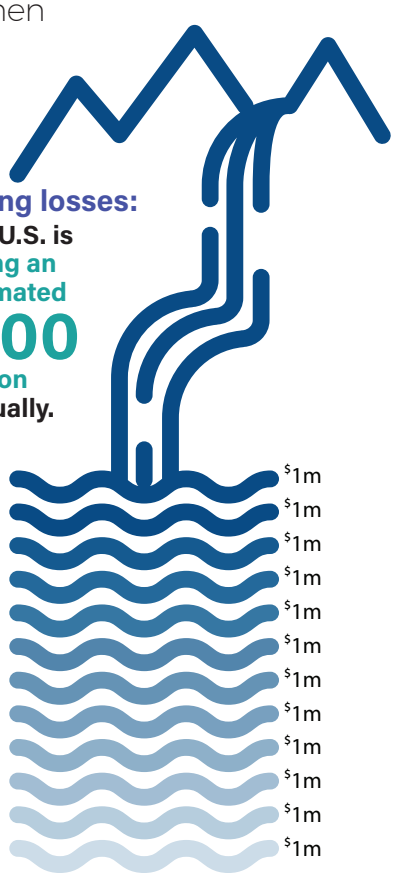
The world looks very different today than in 1964, when the United States and Canada agreed to the Columbia River Treaty for the mutual development of the Columbia River power and flood control systems. Under the Treaty, the U.S. provides payments to Canada, called the Canadian Entitlement (or CE), in the form of returned power generation. The CE amount is calculated using a formula from 1961, which was based on the expected improvement to U.S. hydropower generation capability due to Canadian storage.

Today, these calculations exceed the actual benefits of coordinated operations by 90 percent. The Treaty was based on predictions about the future electric grid that did not come true. Fifty years ago, there was an expectation the United States would build thermal generation to meet increasing electricity needs. Instead, we have relied more heavily than anticipated on energy efficiency and wind power. The U.S. also modified river operations to meet high survival standards for fish and other environmental needs that were not anticipated when the Treaty was negotiated. Importantly, the U.S. added several hydropower storage projects since the treaty was ratified, further reducing the significance of Canadian storage.

All these factors combine to reduce the value of coordinated operations with Canada.

Today, the U.S. is not getting what we pay for from Canada's storage projects.

Rising losses: **The U.S. is losing an estimated $300 million annually.**



Inaction has cost U.S. electrical customers more than a billion dollars. Rectifying this problem can stop overpayments and can reduce the risk of reliability challenges in the US.

Domestic hydropower capacity is more valuable than ever

The burden of the CE return costs an estimated $300 million a year in lost hydropower value in today's markets that do not have enough carbon free electricity. That missing hydropower also limits the region's ability to protect against reliability events, especially as the grid transitions to a goal of 100 percent carbon-free resources.

The Northwest is facing capacity deficits as coal-fired generation retires and the region uses less natural gas. Wind and solar can replace lost energy, but not the ability to produce electricity on demand. The region needs this capacity to reliably operate across a wide range of operating and weather conditions. **Hydropower is becoming increasingly valuable in this environment.**

By 2025, the Bonneville Power Administration forecasts that 450 average megawatts of energy and 1,300 megawatts of capacity will be delivered to Canada. The Canadians can take the hydropower for their own use or choose to sell it back to the U.S. (meaning U.S. customers end up paying once to generate the power and again to buy it for their customers). Compounding the issue, the Treaty gives Canada tremendous flexibility to decide when the U.S. must send power benefits north. The Canadians use this flexibility to their economic advantage, taking returns when power prices are high, when the CE is most valuable, and when the US system has the greatest reliability risk.

This loss of flexibility has not been considered when defining the full cost of the Canadian Entitlement. Reducing the Canadian Entitlement and keeping more hydropower for domestic use is the single most important action that can be taken to help electric customers as the Northwest pursues carbon goals.

A Change is 7 Years and $1.2 Billion Overdue

Inaction has cost ratepayers in the Northwest upwards of $1 billion since 2014, the earliest date under the Treaty that the U.S. could have issued a notice of termination. It is in the best interests of Pacific Northwest electric ratepayers to rebalance the power provisions of the Treaty. Without a significant reduction, ratepayers are simply subsidizing other considerations under the Treaty (such as flood control). But flood control is a national interest, and the costs should not be borne by electric ratepayers.

The United States needs to take action to protect electric consumers from paying twice for the clean, renewable capacity generated from U.S. dams. **It's a step that's long overdue.**

Actions

- **The U.S. State Department should be more transparent with utilities about how power issues are being considered in Treaty negotiations.**
- **BPA customers and non-federal downstream hydropower operators should have the opportunity to provide technical expertise to negotiators and have an opportunity to analyze data and assumptions relating to river and power operations.**
- **Until the Canadian Entitlement provisions of the Columbia River Treaty are renegotiated, the U.S. should consider actions to protect electric consumers from overpayments.**