



COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION

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Richard Devlin
Chair
Northwest Power and Conservation Council
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Dear Chair Devlin:

The Columbia River Inter-Tribal Fish Commission is updating its *Energy Vision for the Columbia River Basin*. We are requesting your review of the draft and would appreciate any comments or additional information by August 31, 2021. Additionally, we hope the draft and final Energy Vision will help inform the Council's development of its 8th Power Plan and this letter seeks to draw your attention to three major areas of concern: siting renewable resources, planning for sufficient energy efficiency, and assumed hydro flexibility.

CRITFC developed the first Energy Vision in 2003 to reduce the pressures of the Pacific Northwest's electricity needs on the Columbia River and its ecosystem, particularly salmon. The Vision was prepared following the West Coast energy crisis of 2001 when many salmon protection measures on the Columbia River were curtailed.

A major theme of the 2021 Energy Vision is to ensure that renewable resources in combination with storage, reductions in peak demand, on-site solar, and increased energy efficiency can provide clean, adequate, reliable, affordable electricity and make things better for fish and wildlife and other tribal resources. Without proper integration and siting, we are concerned the future will be worse for Columbia River salmon and other tribal resources.

We have appreciated the opportunities to engage with the Council as it develops its 8th Power Plan. Among other things, we would like to call your attention to sections 3.4 and 3.5 of the Energy Vision that address renewable resources siting issues. Recent forecasts of renewable resources development foreshadow risks on tribal First Foods and cultural resources. The Energy Vision draft proposes a planning process analogous to solar planning that has gone on in the desert Southwest and the Protected Area policies adopted by the Council. We encourage the Council to consider and support this concept.

I am also writing to express the Columbia River Inter-Tribal Fish Commission's concerns about assumptions in the Council's current modeling for the next Pacific Northwest Electric Power and Conservation Plan as well as the potential for energy efficiency measures to alleviate these concerns.

First, let me say that we appreciate the work the Council staff is doing on the new plan. They have been generous with their time, briefing our staff as your plan is being developed. There has been good progress on coordinating the work of our technical staffs on river modeling.

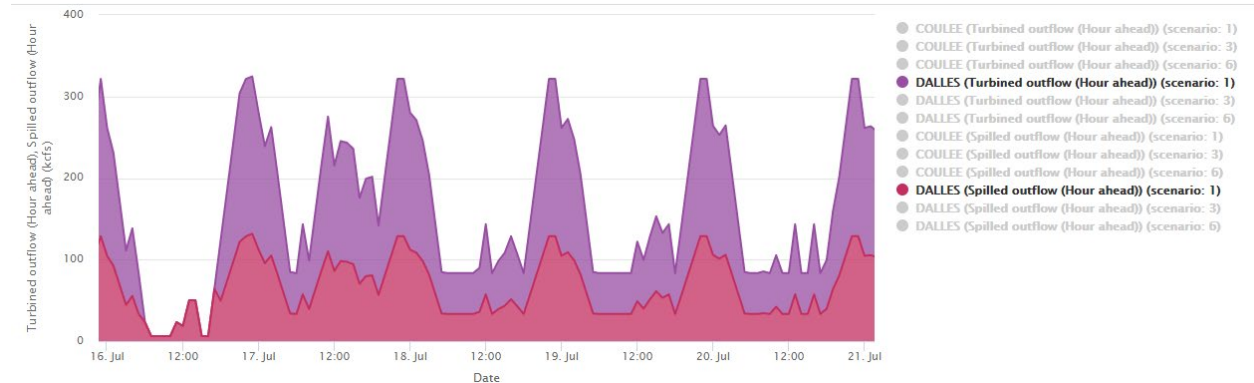
We are also pleased that the costs of renewable resources have come down dramatically. Those resources in combination with energy efficiency can help the Northwest address the climate crisis that is already damaging salmon, steelhead, and other natural resources. It is critical to reduce greenhouse gas pollution to try to avoid the devastating effects of a drastically changed hydrograph and higher water temperatures. Renewable resources in combination with storage and reductions in peak demand can make things better for fish and wildlife and other natural resources. Proper integration and siting are key to prevent these new energy resources making things worse for Columbia River salmon.

Our concern stems from the assumption that the intermittent renewable resources coming online will be integrated with the power system assuming only current fish requirements and the otherwise unconstrained flexibility of the hydroelectric dams and reservoirs. Stated another way, the analyses undertaken by the NPCC assume static fish constraints for the 20-year planning horizon of the Power Plan. At no time in the history of the Northwest Power Act have fish constraints remained static for a 20-year period. Moreover, given the dire condition of many salmon populations, it is highly likely that fish constraints will be modified within this upcoming 20-year period. We ask that the Council consider a range of fish constraints in its analysis of the region's energy future and make a fully informed decision in adopting the Plans requirements. Some explanation follows.

In July 2015, low flows and high water-temperatures combined to kill several hundred thousand adult sockeye migrating upstream through the Columbia and Snake River mainstem dams. The event was highly publicized. <https://www.nwcouncil.org/news/warm-water-blamed-huge-columbia-river-sockeye-die>. And the event was considered in the scientific literature (NOAA Fisheries 2015 Adult Sockeye Salmon Report). At present, summer hydro operations are relatively unconstrained to address flow amounts or to temperature needed by salmon. The Council's current planning assumption presumes that no additional hydro system constraints will be instituted to prevent or mitigate these mortalities in the future. Unanswered is whether the regional portfolio of energy resources adopted by the Council would affect Columbia River operations?

Preliminary analysis for the next NPCC Plan indicates that wholesale market prices are forecast to be low in the winter and spring, reflecting the impact of the Northwest's reliance on hydropower and increased renewables throughout the Western United States. Even now with a larger water run-off, the Northwest experienced short periods of *negative* wholesale market prices during the spring when both hydropower and wind output created conditions of oversupply. In the future, longer and more frequent periods of negative wholesale market prices are forecasted for not only the spring, but many hours during the winter, summer, and fall seasons. These summer prices become lower over time on an average basis because vast amounts of solar generation are being added throughout the west.

One of the consequences we see in the Council’s preliminary analyses is that flows projected at The Dalles Dam for a one-week period in July 2031 approach zero kcfs during daylight hours.¹



This would be a radical operational change compared to current conditions, with implications for water temperature increases, delayed adult salmon migration, treaty fisheries, and spill operations at other lower Columbia River dams.

Fish and wildlife managers have been calling for higher flows in the spring and summer to help young salmon migrate from their natal streams to the ocean for more than 40 years. Imagine the challenges to a salmon if the Columbia and Snake rivers only flow for a few hours in the morning and evening while the rest of the day the river slows to provide “flexibility” for lower-cost electricity generation. Delay of adult salmon and steelhead is also an ongoing issue that current in season management must deal with and rapid increases and decreases in flow have been shown to stop or delay adult migration. The changes in flow outlined in the NPCC analysis could make these migration problems much worse in future years.

Moreover, it appears to us that the cost to salmon of this “flexibility” is being valued at zero. That is clearly not the right assumption. CRITFC staff analyze problems facing salmon and steelhead populations and continually consider options for near-term and longer-term changes in the operation and configuration of the dams to improve salmon and steelhead survival—we shared a working summary with your staff. We have also identified several actions to reduce peak demand for electricity that would reduce adverse effects on migrating salmon and steelhead and reduce the costs of expanding the region’s electrical transmission and distribution system.

Our third issue comes from our understanding that the energy efficiency targets in the next plan are likely to be significantly reduced because of the low cost of solar and wind energy. We are concerned that the region will regret any reduction in this valuable resource that has proven to be compatible with the River’s ecosystems.

Energy efficiency programs reduce both peak demands and year-round energy needs. Energy efficiency has been proven as a reliable resource in the Northwest and has saved consumers over \$70 billion. These programs help reduce the emissions of pollutants that cause climate change by an estimated 29 million metric tons. Energy efficiency also reduces the region’s seasonal storage needs because the energy savings closely track energy demand. The “flexibility” of energy

¹ NPCC Genesys run in May 7, 2021 email.

efficiency is extremely valuable. Energy efficiency programs have no adverse effects on fisheries or other tribal resources.

We know Council staff members are working very hard on a tight schedule for the next power plan. We are hoping they will be able to address additional alternatives for river operations and dam configuration during the development of the next plan. It is not realistic to assume the current operations and configuration will be the same over the next 20 years. At a minimum for the draft plan, we would like the Council staff to consider a hydro operation scenario based on spilling 24 hours a day, seven days a week, at the 125% gas cap while salmon and steelhead are migrating to ascertain whether such an operation would affect the resource mix outputs in the planning models. Would these assumptions be likely to increase the amount of energy efficiency resources that are cost effective?

We would be pleased to assist Council staff in refining this and other scenarios that could be considered with the Council's suite of analytical tools.

We raise these important issues because the salmon and steelhead populations in the Columbia and Snake rivers are in a dire condition.

- Thirteen species are listed as either threatened or endangered under the Endangered Species Act.
- Currently, 42% of Snake River spring/summer chinook populations have fewer than 50 fish.
- By 2025, 77% of these Snake River chinook populations are predicted to hit their quasi-extinction risk threshold² of less than 50 fish.
- Three stocks have recently triggered their NOAA early warning and significant decline indicators: Upper Columbia Spring Chinook, Upper Columbia Steelhead, and Snake River Steelhead.
- The total abundance of salmon and steelhead in the Columbia River is at or near the abundance when the first ESA listings were registered in the mid 1990s.

Recently, NOAA Fisheries and its Marine Fisheries Advisory Committee (MAFAC) convened the Columbia Basin Partnership Task Force to bring together diverse representatives from across the Columbia Basin to establish a common vision and goals for salmon and steelhead. The message from the group was that a strong sense of urgency was needed to implement immediate action if declines in salmon and steelhead were to be addressed.

We also note, with a strong emphasis, that the Council's interim goal for the Columbia River Basin Fish and Wildlife Program is "Increase total adult salmon and steelhead runs of Columbia River origin to a 10-year rolling average of five million annually by 2025, in a manner that emphasizes increases in the abundance of the populations that originate above Bonneville Dam." We are nowhere close to achieving this goal. Assuming extant river operations in the new power plan that leave the survival needs of salmon and steelhead unaddressed may make matters worse, while more foresight and realistic assumptions could result in better outcomes for conservation of both salmon and energy.

² Quasi-extinction is defined as 1) a population that is uncertain to persist; 2) there are not enough parents to successfully reproduce and perpetuate the population; and 3) the probability of recovery is low without substantial intervention.

Request for Comments on the draft 2021 *Energy Vision*

Thank you again for the Council's planning efforts and staff engagement. We understand that the Council is very busy with its own processes, but time permitting we would welcome any comments on CRITFC's draft *Energy Vision*. We are particularly interested in your thoughts or additional information on:

- The analysis in Section 2.
- The recommendations in Section 3.
- The costs and schedules for transmission and distribution projects being developed by northwest utilities and other organizations and the potential to reduce the need for expanding and updating these lines (see Section 3.10 and Appendix E).
- Information on how much energy efficiency, on-site solar, and other distributed generation technologies reduce the need for transmission and distribution expansions and upgrades. We also welcome comments on how that information should be incorporated in cost-effectiveness methodologies.
- Studies on time-of-use rates and their effects on shifting loads from peak to off-peak time periods in Section 3.1.4.
- Updates or additions regarding the analysis of the costs of meeting peak electricity loads in Appendix E.
- Criteria and process for developing a regional siting plan for renewable resources and new transmission lines (see Section 3.4 and Appendix F).

Please provide any comments to Ed Sheets at ed@edsheets.com, Chris Golightly at golc@critfc.org, and Rob Lothrop, lotr@critfc.org by August 31, 2021.

Sincerely,



Aja K. DeCoteau
Interim Executive Director

Cc: NPCC Members