

# CouncilQuarterly

Northwest Power and Conservation Council > Summer 2013

STRIKING A BALANCE BETWEEN ENERGY AND THE ENVIRONMENT IN THE COLUMBIA RIVER BASIN



In a recently released analysis, the Bonneville Power Administration set out to answer a simple question:

■ *How much would the agency have paid on the spot power market for the same amount of energy it saved from FY 2001 through FY 2011?*

According to the report, “BPA’s analysis demonstrates that, in the absence of the energy efficiency efforts...the agency’s costs would be higher by approximately \$750 million to \$1.7 billion\* over a 20-year period.” The range takes into account different assumptions, but if you assumed flat Mid-Columbia trading hub prices

and flat annual energy savings, the net benefit is about \$1.2 billion.

That’s a significant financial savings for the agency and its customers. And there are other benefits, too. The analysis found that efficiency provides long-term value through the avoided costs of developing new resources or having to purchase

## > In this issue

- 
- 03 **Notes from the Chair** > by Council Chair Bill Bradbury
- 
- 04 **Yakama Nation’s Innovative Techniques to Rebuild Salmon Runs In the Yakima River Basin**
- 
- 06 **Northwest Q & A** > with Robert Kahn
- 
- 08 **Council Majority Approves Fish Tagging Forum Recommendations**
- 
- 11 **Council Decisions** > Updates on Council progress in May through September 2013

EVERY KILOWATT-HOUR  
OF ENERGY EFFICIENCY  
ACQUIRED TODAY IS  
A KILOWATT-HOUR  
THAT DOES NOT NEED  
TO BE PURCHASED  
OR GENERATED  
TOMORROW, THE NEXT  
DAY, AND ANY DAY  
THROUGHOUT THE LIFE  
OF THE MEASURE . . .



*(Continued from page 1.)*

power in the market where prices can be volatile. “Every kilowatt-hour of energy efficiency acquired today is a kilowatt-hour that does not need to be purchased or generated tomorrow, the next day, and any day throughout the life of the measure...and creates long-term cost savings for BPA’s customers.”

In a presentation to the Council in August, Richard Génée, vice president of energy efficiency at BPA, noted that the analysis was a year-long, collaborative project that included the participation of several utility stakeholders, as well as consultation with the Council’s energy analysts.

“It’s sometimes a struggle to define an economic basis for investing in energy efficiency,” said Génée. “We wanted to see what it looks like at both a regional and utility level.”



The analysis, which is something that the Council and others in the region have encouraged the agency to do, consists of two parts. One is the analysis covering the financial impact of energy efficiency for BPA. The second part is a model developed for utilities to use for their own evaluation of energy efficiency cost savings. It's designed for the agency's load-following customers only, and is meant to be used with BPA's assistance.

"This model can be a tool for general managers and boards to look objectively at energy efficiency at a utility level," said Génèce.

Elaborating on the analysis, Josh Warner, manager of planning and evaluation for energy efficiency at BPA,

noted that it was a tool that can help a utility examine its overall service territory to determine how much is saved. He emphasized that it was not a rate analysis, but a revenue requirement analysis.

For now, says Génèce, BPA intends to test the analysis to get feedback on how helpful it is and what could be changed to improve it. General roll-out of the financial impact model is scheduled for early autumn.

"We see this as a tool to aid decisionmaking for utilities, decrease the debate around the economic basis for energy efficiency, and hopefully move that discussion forward." ■

*\*net present value in 2011*

## Notes From the Chair



Bill Bradbury

Getting more for less is my idea of a good buy. In the case of energy efficiency, that's exactly what happens.

The Bonneville Power Administration wanted to know how much money it saved by investing in efficiency from FY 2001 to 2011. According to its analysis, it saved between \$750 million to \$1.7 billion over a 20-year period. It's a compelling business case, and it's our cover story for this edition of the CQ.

The Yakama Nation's work to restore three extirpated salmon runs—summer Chinook, coho, and sockeye—in the Yakima River Basin includes using experimental techniques to test their supplementation program for coho. If effective, it will go a long way toward recapturing a lost heritage for the tribe.

We asked Bob Kahn, executive director of the Northwest & Intermountain Power Producers Coalition, about the role of independent power producers in the region. He gives a candid assessment of the value that IPPs bring to the system, and shares what he sees ahead for the energy sector.

A handwritten signature in black ink that reads "Bill Bradbury". The signature is stylized and fluid.

Council Chair Bill Bradbury

# Yakama Nation's Innovative Techniques to Rebuild Salmon Runs In the Yakima River Basin

---

The Yakama Nation is working to restore extirpated runs of summer Chinook, coho, and sockeye salmon to the Yakima River and experiencing what the tribe's senior fisheries research scientist, Dave Fast, calls "pretty good success."

"Reintroducing species of salmon to the Yakima River Basin is very important spiritually, culturally, and economically to the Yakama Nation members," Fast told the Northwest Power and Conservation Council in July.

The Yakima River Basin is one of the premier agricultural areas in the nation, and also historically a great salmon river. Large-scale, commercial agriculture in the basin dates to the early 1900s. Over time, dam construction, habitat loss, and overfishing took a toll on the fish.

"Initially, it was apples, but today a number of crops are raised, including tree fruits, grapes, hops, and many others. These are made possible by the rich volcanic soil in the basin, but also

by irrigation from the Yakima River, and this has come at some cost to the salmon," Fast said.

"We've been working on coho the longest in the basin," Fast said. "The goal is to re-establish a self-sustaining, naturally spawning population."

From annual historic runs of 44,000 to more than 150,000 fish, coho returns steadily dropped to zero by the 1980s. Today, the tribe is experimenting with three innovative techniques to rebuild the population. First, adult fish are captured and transported to tributaries that once supported coho, then studied to determine whether and where they spawn, and whether their offspring interact with other species, such as

trout. Second, the tribe uses mobile acclimation ponds—small raceways that can be moved from one tributary to another—to release juvenile coho into tributaries. And third, juvenile fish at the parr stage are planted in tributaries to determine whether release at that life stage is preferable to releasing fish as smolts when they are older.

Fast said the mobile acclimation ponds will help answer one of the persistent questions about using supplementation to rebuild naturally spawning populations.

"The question is, if you stop supplementation, will the population continue or will it plummet back?" Fast said.

"It's a really neat system where we can move these in and out quickly, and we will eventually get to all of the tributaries as we remove barriers," he said.

A hatchery at Prosser Dam is the main coho production facility at the moment, but the tribe plans to add a small hatchery at the Holmes Ranch upstream of Rosa Dam. The tribe currently operates an acclimation site there. In August, the Council's fish and wildlife committee received a positive review of

the project from its independent science panel. The facility would produce 500,000 coho parr and 200,000 smolts for release in the upper Yakima and Naches rivers using broodstock collected at Roza and Sunnyside dams.

“We’ve gone from well under 1,000 coho adults returning per year to where we had a total of more than 10,000 fish in 2009, hatchery and natural combined,” Fast said.

The tribe is also working to restore summer Chinook salmon, extirpated in the basin in the 1970s.

“This isn’t really a hatchery program,” Fast said. “The adult fish spend the summer in the lake and then migrate up into the Cle Elum River to spawn in the fall.” The tribe is working on a new design for a juvenile fish bypass system to improve sockeye passage out of the lake and into the river.

From 1,000 sockeye captured at Priest Rapids in 2009 when the restoration effort began, the number of adults transported to Cle Elum Lake has increased steadily to the allowed maximum of 10,000 in 2012. From the 1,000 adult fish released into the lake in 2009, the first smolts—the



*Portable acclimation ponds like this one on Rattlesnake Creek, a tributary of the Naches River, are used to release juvenile coho salmon in areas where they have been extirpated.*

“We’ve made tremendous progress to improve the mainstem river for spawning,” Fast said. “The objective is to see if we can restore early-run fall Chinook between Sunnyside Dam and Roza Dam, and also in the lower Naches River. We also hope to increase the number of natural-origin summer Chinook for harvest.”

But sockeye restoration may be the biggest success story. From historical runs of more than 200,000 adult fish, the number dropped to zero by the early 1990s, largely because the river was impounded behind dams and fish passage for both juveniles and returning adults was impossible.

Using two donor stocks, sockeye from Lake Wenatchee and Lake Osoyoos on the Okanogan River in British Columbia, the tribe has been trapping adult fish at Priest Rapids Dam and transporting them by truck to Cle Elum Lake.

tribe estimated there were 80,000—passed over Prosser Dam on their way to the ocean in 2011. This year, the first adults from those smolts were collected at Rosa Dam and transported with other sockeye trapped at Priest Rapids to Cle Elum Lake.

It was cause for celebration, and on July 10 the tribe held its first “Return of the Sockeye” celebration at the lake. By the first week of August, 575 adults had returned to Prosser Dam in the lower Yakima.

“Hopefully, we’ll get to the point where we don’t have to use out-of-basin stock,” said Fast. “We can take all the fish that were naturally produced in the basin and release them back into the lake.” ■



# Northwest Q & A: Robert D. Kahn, Ed.D.



Robert Kahn has served as executive director for the Northwest & Intermountain Power Producers Coalition since its formation in 2002. He began his career working for the late architect and philosopher R. Buckminster Fuller, and has worked with independent power producers since the industry's earliest days in California.

Beginning in the early 1980s, Kahn helped permit thermal and renewable power plants throughout the West. In the 1990s he served as a special assistant to the chair of the Comprehensive Review of the Northwest Energy System and helped found the Renewable Northwest Project.

Over the last 10 years, Kahn has managed all aspects of NIPPC's advocacy and operations. The coalition has grown from a fledgling start-up into a forceful advocate for independent power generators, regardless of technology.

**Q.** What was it like working for R. Buckminster Fuller?

I consider him an inspiration and mentor. He's been described as the Leonardo da Vinci of the 20th century. He was also a true gentleman in the classic sense of the

term. The aspect of his thinking that has resonated with me throughout my career was his belief in the role of technology to effect social change.

**Q.** How does that ethos translate into what you do today?

Looking backward, it makes total sense when you consider what I do today, but I didn't plan my career. My dissertation at the School of Education at the University of Massachusetts/Amherst was based on a community education project that I ran with National Science Foundation funding in the late 1970s. Our task was to inform citizens in three adjacent rural counties in three New England states about how to use local wood resources for energy on a sustainable basis.

**Q.** What role do you see for independent power producers in the Northwest, and how should this inform the Council's Seventh Power Plan?

I would ask staff and Council members to keep three things in mind:

- There is a difference between spending your own money and someone else's. It takes time to develop and build a power plant, and a lot can happen between the time you start and when a project is completed. Risk is always part of the equation. An IPP developer assumes those risks instead of the ratepayers.
- With the accelerated pace of change and unpredictability in our industry, it's advisable to "rent" as much as it is to "own" resources. Both the utility and the ratepayer benefit from renting a power plant through a power purchase agreement with an IPP rather than the utility owning it. This kind of agreement is a hedge against

unforeseen changes, including technological obsolescence, outages, and changes in environmental policies, to name only a few.

- The third value IPPs bring to the system is innovation. Combined-cycle generation, solar, wind, all these technologies were commercialized by independent power producers. We add value by being the experienced risk takers in the sector.

**Q.** Is this a challenging time to be an independent power producer?

It's always been challenging. Since 1978, when PURPA was enacted, it's been a challenging time. Competitive sources of power production can threaten incumbent utilities. Investor-owned utilities have different approaches for how they deal with IPPs. Utility regulators will confirm that by competing with incumbent utilities our industry helps keep prices down. But even the most optimistic

IPPs won't remain in inhospitable territory indefinitely. The Northwest is trending toward inhospitable.

**Q.** Where do you see the power industry headed? Do you have a personal vision of what to expect?

At the moment, changes in technology are beginning to drive the power sector, and I think we'll see increasing action from the customer side of the substation. We'll see more distributed generation, whether it's solar, battery storage, micro turbines, and other cutting-edge technology installed by customers. What's happening out there is an expression of All-American self-reliance that will challenge utilities and many IPPs. But independent power producers nimbly respond to change in a way that utilities can't, since innovation is in our DNA. I expect IPPs to figure out how to serve consumers reliably, cleanly, and cost-effectively, in whatever way they prefer to be served. ■

We add value

by being the

experienced risk

takers in the sector.

# Council Majority Approves Fish Tagging Forum Recommendations

---

Tagging salmon and steelhead, implanting a wire or electronic device in the fish or otherwise marking the fish, is one of the most effective techniques available to researchers to monitor fish as they migrate to and from the Pacific Ocean.

But it's also expensive—about \$60 million in the Columbia River Basin in 2012—and difficult to coordinate because of river conditions, run returns, the wide distribution of spawning grounds, release sites, migration routes, and the many agencies, tribes, and other entities doing the tagging, which varies significantly every year.

To better understand how they're used and how much it costs, the Council chartered the Fish Tagging Forum. The forum, which included experts from state, federal, and tribal fish and wildlife agencies, electric utilities, and others, reviewed many types of tagging technologies and assessed fish-tagging in light of 19 key management questions and 117 related indicators.

Overall, the forum found that while there are few gaps and many overlaps in the tagging systems now in place, tagging coordination is generally well developed and successful throughout the basin. It identified more than 157 projects to carry out tagging, marking, detection, or analysis of tag-related data. The Bonneville Power Administration paid more than \$60 million in 2012 to fund these projects, using about 200 million tags of various types. Tagging for projects in the Council's fish and wildlife program was about \$36 million of that total. Bonneville funds most of the fish-tagging in the basin either directly or indirectly, but others contribute, too, including the three Mid Columbia

public utility districts, federal and state agencies, Indian tribes, and investor-owned utilities such as Idaho Power and Portland General Electric.

One question to address was whether Bonneville should continue funding coded-wire tag efforts, currently about \$7.5 million annually. Coded-wire tags are tiny pieces of stainless steel wire etched with data that identify a fish's release group. At the request of the Council's fish and wildlife committee, the Council's legal staff reviewed Bonneville's funding requirements under the Northwest Power Act and determined that the agency is neither required nor prohibited by law to fund coded-wire tags. To be consistent with the Power Act, Bonneville's expenditures must relate to Columbia River salmon and steelhead adversely affected by the basin's hydrosystem. The legal staff reported it seems clear that is the case. In the end, then, it's a policy issue and a question for Bonneville to decide.

Ultimately the forum agreed on 17 recommendations to the Council, but could not agree on the funding responsibility for all coded-wire tag uses, offering four alternative recommendations instead.





*Sockeye fish in a pit-tagging room at Redfish Lake. Photo: Tony Grover.*

In August, the Council voted to approve the 17 consensus recommendations and the alternative recommendation that maintains status-quo funding. The coded-wire tags recommendation was consistent with nine principles stated in a decision memorandum prepared by Council staff. The vote was 6-2, with Idaho members Bill Booth and Jim Yost dissenting because of the status-quo recommendation.

Washington Council member Phil Rockefeller, who chairs the fish and wildlife committee, said the committee supported the recommendations, including the alternative to maintain the status-quo annual expenditure for coded-wire tagging efforts.

“For 32 years, coded-wire tagging has been a collaborative effort supporting the implementation of the Council’s fish and wildlife program,” Rockefeller said. “It’s been a core element of that program, and it serves not only the Council’s needs and interests but also the management needs of an array of other organizations and entities, including tribal, state, and federal.”

Rockefeller said the committee determined that Bonneville’s financial support of fish tagging falls within the terms of the Power Act. “That is to say, there is a nexus to the Council’s program,” he said, adding that the committee saw no evidence that Bonneville is supporting tagging in lieu of funding that should be provided by others. He said the committee’s recommendation that Bonneville continue to provide \$7.5 million annually for coded-wire tagging “is not necessarily the ultimate answer or the desirable outcome,” but “only until or unless we can develop a better system, following the ideas presented to us by the Independent Economic Analysis Board [in a report on fish tagging earlier this year].”

Washington member Tom Karier said he supported the motion and hoped that in the future more information would be available from coded-wire tags to show where fish are being harvested.

“We’re paying millions of dollars for that information, and somewhere between Bonneville and the managers the ball gets dropped and we don’t get the



*(Continued from page 9.)*

information,” Karier said. “I tend to think that if we had that information right now, and we could see what the hatcheries are contributing to the program, we’d have a different debate about this.”

Council Vice Chair Jennifer Anders also agreed to support the continued funding.

“We heard from the scientists that coded-wire tagging is an important and valid scientific tool for a variety of reasons, and as a matter of policy this committee has concluded that those reasons have a sufficient nexus to the work we do to justify their funding, at least until there is some way to get that information from another source or in a more efficient manner.”

Idaho members Bill Booth and Jim Yost, however, disagreed.

“Member Yost and I were not able to

support the Council’s motion today due to the status-quo decision on coded-wire tagging in the region,” Booth said.

“We appreciate the diligent efforts of the Fish Tagging Forum and thank its members for the many hours dedicated to this difficult task,” he said. “Because of their methodical and detailed work, the Council, the region, and the Bonneville Power Administration now have a much clearer picture of both the diverse functions served by a multitude of coded-wire tagging projects, and the costs associated with the Columbia Basin’s \$35,700,000 fish tagging effort.

“It is our opinion that Bonneville should carefully review the record and findings of the Fish Tagging Forum, determine where any of the tagging efforts are inconsistent with the provisions of the Northwest Power Act, and phase out funding for projects that

lack a nexus with the Federal Columbia River Power System or are in lieu of funds that should have been provided by other entities, such as Mitchell Act hatchery fish-tagging and other harvest management tagging,” Booth said.

Among its consensus recommendations, the forum said any reduction in funding that might result from implementing its proposals should be redirected to other projects in the fish and wildlife program. The forum recommended that NOAA Fisheries, the federal agency that implements the Endangered Species Act for salmon and steelhead, should help coordinate state, tribal, and other researchers on the best practices for tagging ESA-listed fish. It also recommended that additional review be conducted to find cost and efficiency savings. ■



# Council Decisions

---

## May 2013

### Council approves charter for Natural Gas Advisory Committee

The Council approved a revised, two-year charter for its Natural Gas Advisory Committee. The committee has played an important advisory role in preparing past natural gas price forecasts used in its power plan. The Council will start work this fall on the natural gas forecast for its Seventh Power Plan. ■

## June 2013

### Council approves wildlife advisory committee

The Council approved a charter for a Wildlife Mitigation Advisory Committee to: 1) recommend a commonly accepted ledger of habitat units acquired; 2) recommend to the Council ways to resolve issues about accounting for habitat units; and 3) develop a common database for tracking, assigning, and recording habitat units. ■

## August 2013

### Council approves charter for ocean science forum

The Council approved a charter for its Ocean and Plume Science and Management Forum. The forum will identify key questions for future research; identify and provide opportunities for information sharing among ocean researchers and freshwater managers; and make recommendations to the Council on ways to improve ocean and freshwater plume research conducted under the Council's fish and wildlife program. ■

## September 2013

### Council recommends Lake Roosevelt kokanee production

The Council approved a proposal by the Spokane Tribe of Indians to continue producing kokanee — freshwater sockeye salmon — and releasing the fish into Lake Roosevelt behind Grand Coulee Dam. Kokanee provide a culturally important fishery for tribal members. The tribe plans to work with its co-managers, the Washington Department of Fish and Wildlife, and the Confederated Colville Tribes to respond to concerns raised by the Council's Independent Scientific Review Panel. ■





851 S.W. Sixth Avenue  
Suite 1100  
Portland, Oregon 97204

Telephone: 503-222-5161  
Toll free: 800-452-5161  
www.nwcouncil.org

PRST STD  
U.S. POSTAGE PAID  
PERMIT NO. 11  
PORTLAND, OR

## Northwest Power and Conservation Council Members

### Central Office

**Northwest Power and Conservation Council**  
851 SW Sixth Ave., Ste. 1100  
Portland, OR 97204  
Telephone: 503-222-5161  
Toll Free: 1-800-452-5161

### Idaho

**Boise**  
450 West State  
Boise, Idaho 83720  
Telephone: 208-334-6970  
Council Member:  
James A. Yost

**Hayden Lake**  
East 1677 Miles Ave., Ste. 103  
Hayden Lake, ID 83835  
(208) 334-6970

Council Member:  
W. Bill Booth

### Montana

**Helena**  
Capitol Station  
1301 Lockey  
Helena, MT 59620  
Council Members:  
Jennifer Anders,  
Council Vice Chair  
Pat Smith

### Oregon

**Portland**  
851 SW Sixth Ave., Ste. 1020  
Portland, OR 97204  
Telephone: 503-229-5171  
Council Members:  
Bill Bradbury,  
Council Chair  
Henry Lorenzen

### Washington

**Spokane**  
N. 501 Riverpoint Blvd., Ste. 425  
Spokane, WA 99202  
Telephone: 509-359-2438

Council Member:  
Tom Karier

**Olympia**  
924 Capitol Way S., Ste. 105  
Olympia, WA 98501  
Telephone: 360-943-1439

Council Member:  
Phil Rockefeller

## Council Quarterly

is produced four times a year by the Public Affairs Division of the Northwest Power and Conservation Council

©1996 Forest Stewardship Council

This newsletter was printed on paper that features high recycled content compared to both foreign and domestic grades. (50% overall / 25% post-consumer)



Printed on recycled paper  
50% total  
15% post-consumer

[nwcouncil.org](http://nwcouncil.org)