

# CouncilQuarterly

Northwest Power and Conservation Council > Summer 2011

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



## Idaho Power's Plan to Meet Summer Peak-Energy Needs

One of the trends the Council's Sixth Power Plan identified was the growing demand for power in the summer months. Historically, electricity load peaks in the winter in the Pacific Northwest. According to the plan, summer peak-electricity use is expected to grow more rapidly than annual energy, making capacity a new focus for planners.

Idaho Power, a public utility serving most

of Southern Idaho and a portion of eastern Oregon, offers a good example of this new priority.

"It's not an operational issue as much as a planning issue," says Mark Stokes, manager of power supply planning for Idaho Power. "For at least the last 20 years, our summer load has been growing faster than our average energy needs."

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“Based on the 2011 integrated resource plan load forecasts, peak-hour load is expected to grow 69 megawatts annually for the next 20 years, while average load growth is only expected to grow 29 megawatts annually—so peak load is expected to grow twice as fast,” he adds.

The reasons for this are a combination of irrigation load and air conditioning load for residential and commercial customers. “Thirty years ago, most homes in our service area didn’t have air conditioning; today, it’s much more common,” notes Stokes. As a result, the system experiences the greatest stress during the summer months.

Idaho Power has always been a summer-peaking utility because of the amount of irrigation load on its system. Because it plans for its summer-peaking needs while most of the Northwest is winter peaking, it enables the utility to “lean” on the region a little in the summer

purchasing energy to meet its summer load. And in the winter, it can provide energy and capacity to the Northwest in the winter when it is surplus.

The utility’s 2011 IRP emphasizes capacity and expects to address the peaking issue with two major resources: Construction of the Langley Gulch natural gas combined-cycle combustion turbine, a 300 megawatt facility that should be on line the summer of 2012; and completion of the Boardman to Hemingway transmission line to access market resources. Idaho Power’s share of the west-to-east transfer capacity is expected to be 450 megawatts.

Along with Langley Gulch and market purchases made possible by the new transmission line, the IRP includes a solar demonstration project. The utility plans to issue a request for proposal before the end of the year to design and construct a 500 kilowatt to 1 megawatt

solar photovoltaic resource located in its service area.

Part of the facility would be devoted to testing new PV panel technologies, inverters, and other mounting and tracking systems. If all goes according to plan, it could be on line as early as the end of 2012.

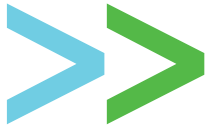
“We’d like to build a small project to get some experience running and operating these kinds of resources,” he explains. “The costs of solar PV have been dropping the past few years as technology has improved, and there’s a lot more competition, so it’s becoming more competitive with other resource options.”

And the fact that solar resources typically provide generation at times when the utility’s load is peaking makes it a good fit.



*Snake River, near Lewiston, ID.*





# Upgrading the Grid, One Step at a Time

Most of us have heard of the smart grid and have some sort of hazy understanding of it as moving the power grid into the digital age. Technologies that automatically communicate usage data to power providers make it possible to diagnose system problems quickly, provide better customer services, and improve the efficiency and reliability of the grid.

On a trip last spring to Lane Electric Co-op in Eugene, Oregon we were able to hear about their experience on the frontline of progress.

In 2006, the small electric cooperative began deploying an automated meter reading system for its 12,500 meters and 12 substations. Since then, according to Dave D'Avanzo, manager of member services, the system has paid for itself and then some.

"Going with the advanced metering infrastructure (AMI) system meant we could replace all of our aging meters," says D'Avanzo.

Lane's contracted meter readers weren't always consistent in their data gathering. And the 40-year old electromechanical meters had accuracy problems, too. For a fair percentage of the meters, the accuracy rate was only about 80 percent, and in a few cases, as low as 17 percent.

Since deploying the new system, revenue is up thanks to more accurate readings and billing. Also, their service crew no longer has to do a lot of follow-up work, re-readings, accuracy checks, and the like. "You don't want to use trained servicemen as back-up meter readers and collection personnel," notes D'Avanzo. "With the AMI system, they're doing the work they trained for; we're able to know right away what's going on with the system and deploy resources to the affected area."

Another advantage of the system has been greater transparency about energy usage for Lane's mostly residential customers. Members can monitor their daily energy use and adjust their habits accordingly. They can also get daily usage alerts via email, text message, and phone calls. The prepaid metering or pay-as-you-go program allows customers to pay for their electricity before they use it, so participants can customize

their payment schedule.

"We've really just scratched the surface in terms of what the system can do," says D'Avanzo. "In the future, we hope to offer even more options for members to participate in energy efficiency and demand response programs; tools for people to control their energy use and help the system work as efficiently as possible."



## Notes From the Chair

One of the trends across the region, and in Idaho in particular, has been increasing peaks in energy use in the summer. According to Mike Stokes, manager of power planning for Idaho

Power, "For at least the last 20 years, our summer load has been growing faster than our average energy needs." In this issue, we hear how the utility plans to address this new reality.

Also of note, the Council recently completed its review of research and monitoring projects for the fish and wildlife program. Areas of research include ocean survival, hatchery management, and habitat monitoring. Over a hundred projects were recommended for funding based on scientific soundness and efficiency.

And sometimes, progress is a personal story. We interview Bud Hover, an Okanogan County commissioner and hay farmer who also chairs the Washington state Salmon Recovery Funding Board. He gives some advice on working together: "...a tough skin, a lot of patience, and an open mind."

Council Chair Bruce Measure

# Pumped Storage: Hydro Generation on Demand

With increasing amounts of wind generation now part of the region's energy supply, balancing load with demand has become trickier, making system flexibility—the ability to quickly adjust generation up or down—a new priority.

One way to produce energy when we need it is with pumped storage hydroelectric projects. Water is pumped from a lower reservoir to an upper reservoir where it's stored and released to generate electricity when demand is high.

The Council's Sixth Power Plan identified it as a way to meet peak periods of consumption. It's been used in other

parts of the country where the difference between peak and off-peak electricity prices make it profitable. In the Pacific Northwest, where the cost difference has been smaller, it hasn't been as economically attractive—but that might be changing.

The Bonneville Power Administration and the Bureau of Reclamation are exploring the possibility of using a facility originally built for irrigation in 1948 for generation. The John W. Keys III Pump-Generating Plant pumps water uphill 280 feet from Franklin D. Roosevelt Lake to Banks Lake for distribution to crops and for recreational use.

Some of the pumps used in this process can be run backwards—water can be directed from Banks Lake back to the reservoir behind Grand Coulee and the pumps used as electricity generators. Upgrades to the system could generate 300 megawatts, costing between \$85 million to \$145 million.

Questions about the economic benefits, technical requirements, and environmental impacts still need to be answered. But it could be a tool to add flexibility to the system and help integrate renewable resources to the grid.



Banks Lake



Bud Hover

## Northwest Q & A: Bud Hover, Salmon Recovery Funding Board

Donald “Bud” Hover of Winthrop, Washington, is an Okanogan County commissioner and hay farmer who also serves as chair of the Washington state Salmon Recovery Funding Board. The board was established by the state Legislature in 1999 to provide grants to protect or restore salmon habitat and assist related activities in those areas of the state where salmon are present.

There are seven regional salmon recovery boards that produce recovery plans and recommend projects to the state board for funding. Hover also chairs the board for the upper Columbia River area.

Traditionally, the agriculture industry and government agencies working on salmon recovery have been at odds in the Northwest, particularly regarding water in the rivers where salmon spawn. In north-central Washington, however, the two sides have come to terms and agreed on a recovery plan for endangered species that is a model of cooperation.

**Q.** You played defense for a long time, as a college and professional football linebacker and as a rancher defending your water right and your business. Then you intentionally decided to give a little ground. Why?

It helps first to understand that the Upper Columbia Salmon Recovery Board, which

formed following the creation of the state board, has five members representing Chelan, Douglas, and Okanogan counties, and the Yakama and Colville tribes. The three county representatives are all farmers—cherries, wheat, and in my case hay. Folks in our area are every bit as conservative as the most conservative places anywhere. Agriculture is the main economic driver in our area, and without water agriculture is dead.

When I started out, collaborators were the guys who were lined up against the wall and shot during the war. They were not good guys. A collaborator in my opinion was some guy who doesn't really have any skin in the game and has nothing to lose who wants me to give something up for him.

The farm I own has water rights that date back to the 1880s. For 35 years, I worked to protect the water rights. When I started, it was flood irrigation, very inefficient, but we had tons of water. We had claims to over 60 cubic feet per second of water from three sources. But when that was protected, I was

down to about five cubic feet per second, and so we had to change our methods or we were not going to survive.

In the mid-90s, after selling and leasing some of my land, I finally started to make some money. Then in '97 and '98 the ESA hit—we had ditches that had no screens, and one of our main irrigation districts had a ditch that crossed Forest Service property. The National Marine Fisheries Service deliberately shut us down for two years while an old screen on that ditch was replaced. As that went on, I lost over \$100,000 in revenue.

That stirred my anger a bit so I started looking at ways to change things. I ran for country commissioner, won the first time around, and as a result I got put on the Upper Columbia Salmon Recovery Board, which was kind of ironic—but in a good way, as it turned out—and from that point on I figured the ESA is a law we have to deal with, and I chose to be part of the solution.

**Q.** Today, the Upper Columbia Salmon Recovery Plan, which the board created and implements, is viewed by many as a showpiece of how to do things right for the fish and the economy. What happened to bring about the transition from confrontation to collaboration?

It was clear that the top-down approach employed by the Fisheries Service in 1997 and 1998 was not going to work. You didn't drive around in the Entiat or the Methow [river basins] in cars with state or federal markings because you were not very welcome there.

So several state legislators and county commissioners got together and said, "we're going to take this on." The Fisheries Service knew that they could create any document they wanted, and it would never be implemented here. If they really wanted to see it implemented, it had to be created from a grass-roots approach because you had to get buy-in from the local people, the people who own land along the rivers, the habitat.

I'm a long-time member of the Farm Bureau and the Cattlemen's Association. When I ran for office, these folks formed my main constituent base. As a new member of the Upper Columbia Salmon Recovery Board, the first people to approach me voicing their opposition to the recovery plan were my own constituents. They all piled on because of the way we had been treated.

At that time, the board was within a year of having its recovery plan completed, and I basically put the brakes on it because I had people chewing on me saying it wasn't a

good thing for Okanogan County. I got a lot of support from Paul Ward, who represented the Yakamas on the board; Bill Towey who represents the Colvilles, was supportive, too, but also very impatient—he really wanted to get the thing done. The other members were very patient with me. We hired our executive director, Julie Morgan, and she started communicating and got that grass-roots approach going with the people in Chelan, Douglas, and Okanogan counties, kept the state and federal agencies at bay, and pulled all this stuff together.

Fortunately, we had the Governor's Salmon Recovery Office help coordinate the effort, but basically it started here and worked up. The success that we have had is because we took a grass-roots, bottom-up approach. Today, I believe in the collaboration process. It really, really has worked.

In order to do it, though, you've got to have a tough skin, a lot of patience, and an open mind. Here's a personal example: When I first came into this, I didn't give a damn about what the tribes cared about. In my opinion, they were saying the fish were endangered, but they had nets in the river. I didn't know anything about their issues. Since then I've learned that it's not just an economic issue with the tribes. It's a real deep, cultural,

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religious issue with the tribes. I have gotten a much better understanding of their desires and needs. And I'm really happy to report, we're seeing improved fish returns.

**Q.** Besides the improved fish runs, what other benefits have you seen from the cooperation among landowners and government?

The things that are being done with public dollars are creating an economy in rural areas like ours. We have contractors who are gearing up for these types of projects. That's number one. Number two, we've established a multi-million-dollar sport fishing industry along the Columbia River. In the city of Pateros, there's a guy who just invested in a brand new hotel simply because of the sport-fishing industry that's developed on the Columbia and the steelhead fishing in the Methow. This industry is bringing millions of dollars into our county. It's moving us closer to meeting our goal of eventually getting these fish delisted, which is what we all want to do. It's protecting irrigation for agriculture. And it's helping the federal

government meet its obligation to provide harvest opportunities for the tribes.

That being said, up here, we're at the end of the line. We've got nine dams the fish have to come through, we've got hatchery issues that are still being resolved, we've got harvest issues that impact us that are out of our area. The big thing we have control over is habitat, and we're addressing that with the plan we have.

**Q.** Based on your experiences over the last 10 years, what would you recommend to others who face similar challenges of protecting fish while also protecting local economies?

First, we have a good model here in Washington. The salmon recovery boards collectively look at these issues for the whole state. We're all working together to decide how best to use these [salmon and steelhead recovery] funds. It's amazing when you think about it, you can get all these people going in the same direction. And our political leadership played a critically

important role by lending their support to our efforts, particularly [U.S. Rep.] Norm Dicks and [U.S. Sen.] Patty Murray.

Second, what we strive to do is to coordinate. One of the things we've stressed with our staff is to coordinate projects so we can direct funding and also monitor and begin to get our data back and adapt the plans as we go, and provide Congress and the state Legislature with what is basically a report card to show the progress we're making, what the money is buying.

And third, the Washington way—that's what I'll call it, and this is not an arrogant statement—the Washington way of collaboration and cooperation is a way that has actually worked. I'm living proof of it. The plan that's been developed is something I can live with. The Upper Columbia Salmon Recovery Board really has been the most gratifying and fulfilling board that I've been able to sit on as a county commissioner over the last six—going on seven—years. Our experience shows what can be done with an open mind—and also a thick skin.





# Council Recommends Funding for Projects to Improve Scientific Knowledge About Fish and Wildlife

This spring and summer the Council recommended 143 projects, potentially directing more than \$100 million in annual funding to improve scientific knowledge about fish and wildlife throughout the Columbia River Basin.

Funding will be provided by the federal Bonneville Power Administration as part of its requirement to mitigate the impacts of hydropower dams on fish and wildlife. Project budgets will be decided by Bonneville in consultation with project proponents.

“These projects were reviewed and approved by the Council’s Independent Scientific Review Panel to ensure they’re based on sound science and are consistent with the goals and objectives of the Council’s Fish

and Wildlife Program,” Council Chair Bruce Measure said.

The recommended projects address survival of salmon in the near-shore ocean and the Columbia River estuary, plus research on sturgeon and Pacific lamprey in the lower Columbia River, fish-tagging for research and harvest-enumeration purposes, and monitoring the effectiveness of projects designed to improve fish habitat. The Council approved 100 of the projects in



Adult Chinook Salmon





April, and the remaining 43 in July. The projects will be implemented by Indian tribes, state fish and wildlife agencies, independent researchers, and others.

The review of project proposals was managed for the Council by its fish and wildlife committee, chaired by Council Member Bill Booth.

“Collectively, these projects represent more than half of the roughly \$220 million annual budget of our fish and wildlife program, which is why we have been so careful,” Booth said. “Future funding for these projects is

not guaranteed. We achieved about \$4.5 million in savings from the requested project budgets, and I expect that over the next two years we will identify further efficiencies.”

“Projects in this category have been significantly improved through reviews by the Council and the Independent Scientific Review Panel. We have better-focused projects, the project sponsors were asked to answer the ‘what-for’ and ‘so-what’ questions, and as a result we have better coordination and better efficiencies.”

With the review of research and monitoring projects completed, the Council now moves on to review projects that address resident fish (those that do not go to the ocean), regional coordination of fish and wildlife projects and project management, and data management. That review will begin in the fall. A list of all projects included in the upcoming review is available at [www.cbfish.org/Portfolio.mvc/Display/989](http://www.cbfish.org/Portfolio.mvc/Display/989).

*Left to Right: Jeff Allen (Policy Analyst); John Harrison (Information Officer); and Bill Booth (Idaho Council Member and Fish And Wildlife Chair)*



# NW Energy Coalition Honors Council with Conservation Award

The NW Energy Coalition honored the Northwest Power and Conservation Council, its staff, and advisory committees with the annual Bob Olson Memorial Conservation Eagle Award for 2010.

*Bruce Measure; Montana Council member (Chair); and Sara Patton, NW Energy Coalition (Executive Director)*



NW Energy Coalition executive director Sara Patton presented the award at the Council's July meeting in Portland.

Patton said the Council members, staff, and advisory committee members were selected for creating the Sixth Northwest Power Plan, which the coalition described as "a road map for reaching a clean energy future that benefits all Northwest families and businesses."

The plan, which found that the region could meet 85 percent of its future load growth through energy efficiency, directs the

energy acquisitions of the Bonneville Power Administration and provides guidance to utilities in their resource planning.

Patton told the Council the Conservation Eagle Award is presented annually to recognize "outstanding commitment to a clean and affordable energy future."

The NW Energy Coalition, based in Seattle, is an alliance of more than 110 environmental,

civic and human-service organizations, progressive utilities, and businesses in Oregon, Washington, Idaho, Montana, and British Columbia. The Coalition promotes development of renewable energy and energy efficiency, consumer protection, low-income energy assistance, and fish and wildlife restoration on the Columbia and Snake rivers.

# Council Decisions

## May 2011

### Retrospective report on fish and wildlife program cost-effectiveness

The Council directed its Independent Economic Analysis Board to provide a retrospective report on changes to the management of the fish and wildlife program over the last 15 years that have improved the cost-effectiveness of the program. The board will present the report to the Council at a future meeting.

### Natural Gas Advisory Committee

The Council renewed the charter of its Natural Gas Advisory Committee for two years. The committee advises the Council during the development of its Northwest Power Plan about changing conditions in natural gas markets and their implications for the Council's plan.



## July 2011

### Annual report on Bonneville Power Administration fish and wildlife expenditures

The Council approved release of the 10th annual report to the Northwest governors on fish and wildlife expenditures of the Bonneville Power Administration. The report is posted on the Council's website, [www.nwcouncil.org](http://www.nwcouncil.org).

### Fish Tagging Forum charter is approved

The Council approved a charter for the Fish Tagging Forum. The workgroup will address cost-effectiveness issues for all fish-tagging efforts under the Council's Fish and Wildlife Program, with an emphasis on coded-wire tag programs.

### Ocean research projects approved

The Council approved three projects for funding by the Bonneville Power Administration: research into the ocean survival of salmonids by NOAA Fisheries; a similar project conducted by Canada's Department of Fisheries and Oceans; and the Coastal Ocean Acoustic Salmon Tracking project by Kintama Research.

# Joan Dukes Elected Vice Chair



The Council unanimously elected Joan Dukes, an Oregon member of the Council, vice chair for the remainder of 2011. Dukes replaces Dick Wallace, a Washington member, who resigned from the Council in June.

This is Dukes' third term as vice chair of the Council. She also served in that capacity in 2006 and 2007. Currently she is a member of the Council's fish and wildlife and executive committees.

Dukes has been a member of the Council since January 2005 after being appointed by then-Governor Ted Kulongoski. Dukes resigned her seat in the Oregon Senate, where she had served since 1987, to join the Council. She is a resident of Svensen, a community near Astoria.

Dukes, who served a four-year term as a Clatsop County commissioner before being elected to the Senate, has a broad base of experience in budget, education, transportation, forestry, and fisheries issues at the local, county, and state levels, including having served as chair of the Pacific Fisheries Legislative Task Force, an association of Western legislators that works on regional fish issues. She is a graduate of the Evergreen State College.



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