



**NORTHWEST POWER AND CONSERVATION  
 COUNCIL**

**February 12-13, 2008**

The Council, meeting in Portland, released an adequacy standard for energy and capacity and will take comment through March 7. Staff said provisions in the 2007 energy bill signal the end of the incandescent light bulb. NOAA Fisheries proposes to get deadly with California sea lions that eat over 4 percent of the salmon run at Bonneville Dam, and the Council learned that the feasibility of carbon sequestration depends on aggressive climate change policy. The Council gave Larry Cassidy a musical sendoff to retirement, and PNUCC presented him with a plaque honoring his Council service as “a reasonable voice in a sometimes unreasonable world.” Next meeting: March 11-13 in Boise, ID.

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**FOR OPENERS**

Larry Cassidy, who is retiring from the Council, introduced his replacement, Dick Wallace, formerly assistant director of the Washington Department of Ecology. Cassidy said Wallace has worked with fish and water issues for many years in Washington state and that his knowledge will make for a seamless transition.

Staffer Mark Walker reported on a trip to Washington, D.C., with new Council chairman Bill Booth. He and Booth made

calls on 15 Congressional and agency offices and briefed them on the Council’s 2008 activities. Booth emphasized the Council’s institutional knowledge, and he encouraged the offices to call on us, Walker said. We raised the issue of having a Congressional staff trip to Portland later this year to give folks a better idea of the region, the issues, and how the Council operates, he added.

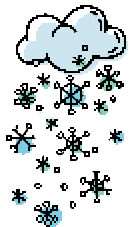
Walker reported that sea lions were among the topics discussed. We encouraged the offices to open a dialogue with NOAA Fisheries and to work with Congressmen

Baird's and Hastings' offices, he said. Walker noted that Senator Smith's office flagged for the Council an item in the recently publicized Klamath Basin agreement that would give irrigators in that area access to BPA power at firm rates. Senator Cantwell's office asked us to take a look at the national Renewable Energy Zones legislation, which we are doing, he stated.

Booth said he and Walker got a good reception in Washington, D.C. There is interest in what we're doing, particularly with power, he commented.

## **THE AGENDA**

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### **Big Snow Portends Good Water Year**

If the trend in the final February runoff forecast holds, the region is on its way to an above-average water year, according to staffer Jim Ruff. In an average year, the peak snowpack occurs in April, and this year, we were trending slightly above average as we headed into February, he said. Ruff noted that the Northwest River Forecast Center's February 7 water-supply forecast came out ahead of a storm that dumped another three to four feet of snow in the Cascades. Below-normal temperatures and above-average precipitation have meant a lot of snow, he stated. Many low-elevation sites have reported record high snow levels, Ruff said.

Avalanche danger in the Cascades has been very high as a result of all the snow, he continued. There was 15 feet of snow on Mt. Hood February 1 and more snow has fallen since then, Ruff said. Snow levels are above normal in most parts of the basin, he reported, with some areas extremely high – 254 percent of normal in the Illinois River watershed; 200

percent in the Clackamas; and 189 percent in the Sandy.

But there are also areas that are dry, Ruff said. The Okanogan in the upper basin is below normal, and while they are looking better than last year, some Snake River tributaries are still relatively dry, he reported. Overall, the water-supply forecast in the basin has increased by 6 to 7 percent since January, but it has decreased in the upper Columbia, where the Okanogan saw the largest drop, Ruff said.

He detailed the April-July runoff forecast for five key sites in the Snake River basin. The lowest is at Brownlee Reservoir, which is 83 percent of normal, Ruff said. At the other four sites, forecasts are above normal, he reported, with the highest on the Grande Ronde River at Troy, which is 115 percent.

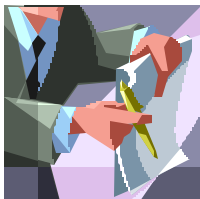
On the Columbia, the forecasts range from a low of 95 percent at Libby reservoir to a high of 119 percent on the Umatilla River near Pendleton, Ruff went on. The forecast for the John Day River at Service Creek is 118 percent of normal, he pointed out. From April to August, the fish-migration period, the forecast at The Dalles is 99 percent of normal, Ruff added.

He called the outlook from the NOAA Climate Center “good news, if it holds up.” Based on the La Niña conditions that have been prevailing this winter, there is a greater than 40 percent chance of above-average precipitation for parts of the interior Northwest and a 33 percent chance for above-average precipitation in the rest of the region, Ruff said.

The only concern is that there will be a “warm rain on snow event,” especially in the lower elevations, which would bring off the snow early, he stated. But Ruff added that

none of the weather forecasts are predicting that will happen.

Booth commented that Coeur d'Alene, Idaho, where he lives, has broken the all-time record for snow. We have had over 140 inches of snow this winter, he said.



### **Adequacy Out the Door**

With release of a proposed resource adequacy standard developed by the Pacific Northwest Resource Adequacy Forum, the Council could be close to wrapping up a big item from the Fifth Power Plan, according to staffer Terry Morlan. The current proposal combines an energy and capacity standard into one document.

Staffer John Fazio said the Resource Adequacy Forum has worked on the standard since 2006 and has now finalized a proposal. According to the proposal:

- The energy metric for the Northwest regional energy standard is the average annual load/resource balance, which is the available average annual energy minus the average annual firm load, in average megawatts.
- The capacity metric is the planning reserve margin, which is the surplus generating capability over the expected peak load averaged over the sustained-peak period for summer and winter, in units of percent.

Eden said the Power Committee voted unanimously to release the standard, and the Council followed suit, voting unanimously to release the proposed standard and take comment until March 7.



### **An Efficiency Banquet at the H.R. 6 CAFÉ**

Walker briefed the Council on the Energy Independence and Security Act of 2007 passed in the closing days of the 110<sup>th</sup> Congress. The House and Senate passed differing versions of the legislation, and in December 2007, they got together on provisions and passed a major bill, he said. President Bush signed H.R. 6 December 19, Walker noted.

Corporate Average Fuel Economy (CAFÉ) Standards and Renewable Portfolio Standards (RPS) were the issues that received the most media attention in negotiations over the bill, he reported. The final bill has CAFÉ standards that call for 35 miles per gallon for cars and light trucks, and it directs that standards be developed for medium and heavy-duty trucks, according to Walker. But the bill did not have RPS or provisions for tax credits and incentives, he said. Congress is still working on the tax provisions, Walker added.

While the CAFÉ standards and RPS garnered most of the attention, this was a major piece of legislation with significant provisions in other areas, he said. There is a requirement that federal buildings decrease energy consumption 30 percent by 2015, and there are other provisions for energy efficiency, including directives to gas and electric utilities to make energy efficiency a prime resource, Walker pointed out. In addition, there are calls for Department of Energy (DOE) research and development efforts, and carbon capture and sequestration provisions, including research into storing carbon on public lands, he said.

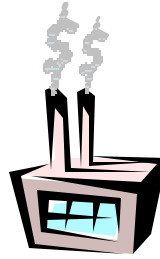
Staffer Tom Eckman provided additional details on the appliance and lighting

efficiency standards in the bill. He said the bill set efficiency standards for broad categories of lighting, adding that one-quarter of the total conservation called for in the Council's Fifth Power Plan could be captured with lighting efficiency.

The bill calls for improving the efficiency of light bulbs 30 percent by 2014, Eckman reported. To achieve the efficiency, the lighting industry will move to compact fluorescent (CFL) or LED technology, and the incandescent bulb will disappear, he added. Because of DOE's history with slow rulemaking, Eckman said Congress included a provision in the bill that says if DOE does not pursue rulemaking standards speedily, CFL or LED technology will be required by 2020. The LED is a computer chip, and the cost today – about \$130 per light – is a barrier, he explained.

Eckman said at the pace the region is going, "by 2020, we'll have lighting taken care of." Utilities have been meeting their conservation targets with lighting – "it's a good thing to do cheaply," he added.

Tom Karier asked about provisions in the bill for disposal of CFLs, which contain mercury. Part of the transition to the new technology in lighting is for the Environmental Protection Agency to deal with the waste stream it creates, Eckman responded. He also noted that Wal-Mart, which expects to sell many of the new light bulbs, has taken a lead in dealing with the problem of disposal.



## Carbon Capture Will Sequester Many Dollars

Dr. Mark Trexler, whose company Trexler Climate + Energy Services has been acquired by EcoSecurities of Oxford, England, briefed the Council on carbon capture and storage (CCS). He said his presentation would give an idea of how to think about the idea in terms of power planning. "It isn't simple," and the economic aspects are very important to the future of the technology, Trexler added.

CCS is the process of taking CO<sub>2</sub> emitted by power plants and disposing of it in some fashion, he explained. A limited amount of CCS is now taking place in the enhanced oil recovery industry, where CO<sub>2</sub> is being used in lieu of flashing steam to free oil, Trexler said. But this is a very small application compared to what could happen, he stated. Trexler also noted that because it has a stiff carbon tax, Norway is pumping CO<sub>2</sub> under the North Sea.

There are three types of sequestration, he went on: geologic, where the gas could be piped into coal fields, oil and gas fields, or deep aquifers; ocean, where the gas could be pumped deep into the ocean – an idea that "gives lots of people a lot of heartburn"; and mineral, where the gas is formed into solids, something "we now have no way to do." But before sequestration, CO<sub>2</sub> must first be captured and converted into a pure stream, Trexler said. The CO<sub>2</sub> in flue gases is very dilute so it takes considerable processing to get a pure stream, which is an expensive step, he explained. The pure stream of CO<sub>2</sub> is transported through a pipeline for sequestration, Trexler said.

"There are lots of places to stick this stuff" in the western United States and Alberta – the United States is in a favorable position for

geologic sequestration, he stated. People are hoping to see the processing costs, which now range from \$37 to \$74 per ton for a gas-fired plant and \$30 to \$50 per ton for a coal plant, come down, Trexler said. The transport costs aren't great, and the storage costs would be from \$.50 to \$8 per ton, he said, noting that the expense of ocean or mineral sequestration would be much greater.

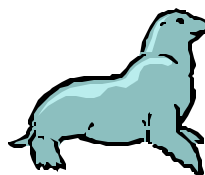
The stream of gas from Integrated Gasification Combined Cycle (IGCC) generation is much more pure than that from other types of plants, and people are pushing the IGCC technology because it would cut down on processing costs, Trexler continued. As for the economics, you'd have to assume that carbon mitigation has a value of five cents per kilowatt hour (kWh) to get this up and running, he said. In other words, without a carbon tax of three to six cents per kWh, you won't see this technology develop, Trexler indicated.

In response to a question from Cassidy about the risks involved in storing CO<sub>2</sub> underground, Trexler acknowledged that researchers are looking to store the gas for hundreds of years. But "a panacea is the wrong way to think of it," he added. "This is one piece of the jigsaw puzzle. . .it makes no sense to put all of our eggs in this basket," Trexler stated. In terms of the risks, "a cataclysmic release is probably not a huge issue," he said, but it poses enough risk that permitting is the industry's biggest problem. "It's almost impossible," Trexler commented.

The industry will need legislation to waive the liability, he said, comparing it to the waiver Congress granted to the nuclear industry. There are significant permitting problems even to get pilots going, Trexler stated.

"You have to assume people will pay you \$50 a ton to take CO<sub>2</sub> off their hands," he said. And you have to assume "a policy regime that's seriously tackling climate change," Trexler added. Otherwise, this technology is not feasible, he stated. If we get carbon values up to \$30 a ton and "they are there to stay," we'll see lots of interesting new technologies, Trexler speculated. He said it would take "huge greenhouse gas mandates" to overcome the costs and permitting issues involved with CCS.

"To this point, no one has bet on it," Trexler stated. Until there is big government involvement, it won't go anywhere, he wrapped up.



### **EA Warns Sea Lions to Get Their Affairs in Order**

NOAA Fisheries released a draft Environmental Assessment (EA) January 17 on the actions it plans to take to reduce the impact of sea lion predation on Columbia River salmon, Ruff told the Council. Garth Griffin of NOAA Fisheries said the sea lion problem has been building since 2001, and current estimates put the sea lion take at 4.2 percent of the anadromous fish run at Bonneville Dam. The number of animals within half a mile of the dam has been going up, he said. About 55 core animals "are now making a good living at the dam," Griffin stated.

The sea lions are also arriving earlier each year, he explained. In 2002, the first sightings were in March; in 2007, they were first sighted on January 8, Griffin said. This season, there were sightings as early as the third week of December, he said. They are there now waiting for the salmon to come, Griffin added.

Federal agencies have been using non-lethal deterrents to try to interfere with the predation, he went on. You can move the animals around by hazing, but we haven't reduced the number of fish being eaten, Griffin said. Some animals, like the Stellar sea lions, can be pushed out, but the number of California sea lions at the dam is growing, he explained. We've also found that the size of the salmon run affects the number of sea lions present, Griffin noted.

The states of Washington and Oregon applied for a Section 120 permit in 2006 to remove sea lions by lethal means, and NOAA Fisheries formed a task force to consider whether to approve the permit, he explained. The task force completed a report in which 17 of 18 members supported removal by lethal means, Griffin said. The group was split between an alternative that called for a limited removal of certain individually identified sea lions, and an alternative that called for removal of any sea lions within about five miles of Bonneville Dam, he said.

NOAA Fisheries' proposed action spelled out in the EA takes the limited approach, which the agency estimates would mean killing about 30 sea lions per year, Griffin said. Under the action, "predatory California sea lions" have to have been observed eating salmon and have to have been subject to non-lethal deterrents, he said. Griffin pointed out that all lethal removal would have to be within a controlled area around the dam from which the public is prohibited.

The comment period on the EA ends February 19, he reported. NOAA Fisheries has received about 1,600 comments, many of them form letters, Griffin said.

How confident are you that an EA will suffice? Booth asked. We feel very confident

that an EA will be strong enough to support our proposed action, Griffin responded. The court said that an EA was appropriate in the situation at the Ballard Locks, when sea lions were decimating a steelhead run in the 1990s, he added.

Griffin said NOAA Fisheries is on track for a decision in March. By the third week of March, we will have completed our work and have a yes or no finding on the states' application, he said.



### **Hats Off to Hazing**

Staffer Mark Fritsch walked the Council through a set of proposals for within-year project funding that were reviewed by the Budget Oversight Group (BOG) in the first quarter of 2008. He said BOG had 13 requests for a total of \$906,397 in FY 2008 and \$392,915 in FY 2009 funding. Staff recommended approval for five of the 13 projects.

Fritsch described the projects, which include requests to: protect the Parkdale hatchery facility from flooding and potential debris flow; replace irrigation pivots on an Idaho wildlife mitigation site; purchase equipment to study redband trout above Chief Joseph and Grand Coulee dams; incorporate new acoustic tracking technology and deploy a tracking array at the Astoria bridge; investigate the life history of spring Chinook and steelhead in the Grande Ronde Subbasin; and provide non-lethal hazing of California sea lions.

In response to questions, Fritsch said BOG received two new proposals to address sea lion predation, and the Fish and Wildlife Committee recommended a portion of one. The Columbia River Inter-Tribal Fish

Commission (CRITFC) proposed to evaluate sea lion predation at Bonneville Dam and carry out non-lethal hazing, and the committee recommended \$75,000 for the hazing, he reported.

“This sounds like a gift to me without the assurance of any results,” Bruce Measure said. I have heard nothing positive about the non-lethal hazing, he added.

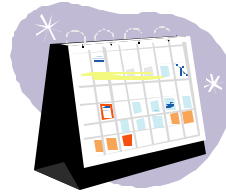
Fritsch said that the states’ request for a lethal-take permit is driving the CRITFC proposal. To get lethal take, you have to have evidence about which animals are causing a problem and whether the non-lethal hazing works, he explained.

We have been challenged by Congress to turn up the heat on hazing, according to Jamie Pinkham of CRITFC. We need to show we are doing everything possible within the legal means to eliminate the problem before we can get the Section 120 permit, he said.

The Council voted unanimously to recommend funding for the seven projects that passed muster with the F&W committee, including the stepped-up hazing of sea lions.

The Council also voted to recommend continued funding for projects sponsored by the Nez Perce Tribe and the Nez Perce Soil and Water Conservation District to protect and restore the Lapwai Creek and Big Canyon Creek watersheds. The staff recommendation on Big Canyon Creek would phase the projects out in 2009, but in the meantime, it proposes to fund a fish habitat project at \$130,000 in 2008 and \$65,000 in 2009, and a restoration project at \$165,000 in 2008 and \$82,500 in 2009. The Independent Scientific Review Panel (ISRP) found the Big Canyon Creek projects did not meet scientific criteria, Fritsch reported.

Karier questioned why the Council would fund projects at such a high level if they are being phased out. He and Measure voted no on the Big Canyon Creek proposal.



### **F&W Amendment Schedule Starts to Gel**

Staffer Patty O’Toole briefed the Council on a tentative schedule for the next steps in revising its F&W program. April 4 is the deadline for the public to submit proposed amendments, and staff plans to have a draft program together by the Council’s August meeting in Spokane, she said. Once the draft is revised and released, there would be a public comment period that extends through October 17, O’Toole said, adding that the date for close of comment could change. She asked Council members for their thoughts on the schedule, which includes a full week of public hearings in late September. We need to get the logistics nailed down, O’Toole added.

**END NOTES** \_\_\_\_\_

**Help Wanted Sign Out for ISAB.** Staffer Erik Merrill explained how the appointment process, which includes vetting through the National Research Council, is handled for the Independent Scientific Advisory Board (ISAB). He reported that staff is firming up the nomination of Dr. Robert Naiman, an expert in stream ecology, to serve on the ISAB. We have another spot open, but no nominee at this time, Merrill said. We are looking for someone with hydro system expertise, he added.

**Annual Report Released.** Walker reported that the Council's annual report to Congress has been finalized. The comment period ended January 28, and "the final looks quite similar to the draft," he said. The Council voted unanimously to release the report to Congress and the public. Karier pointed out that the Northwest Power Act contains details about what the report should address, and one of the topics is the effectiveness of the Council's F&W program. He suggested the Council now has enough information to fulfill that part of the reporting obligation and should do so next year.

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**Council 2008 Calendar**

March 11-13	Boise, ID
April 15-17	Whitefish, MT
May 13-15	Walla Walla, WA
June 10-12	Spokane, WA
July 15-17	Montana
August 12-14	Spokane, WA
September 16-18	Astoria, OR
October 15-16	Missoula, MT
November 18-20	Coeur d'Alene, ID
December 9-11	Portland, OR