

Bill Bradbury
Chair
Oregon

Henry Lorenzen
Oregon

W. Bill Booth
Idaho

James A. Yost
Idaho



Jennifer Anders
Vice Chair
Montana

Pat Smith
Montana

Tom Karier
Washington

Phil Rockefeller
Washington

Council Meeting Portland Oregon

March 12-13, 2013

Minutes

Council chair Bill Bradbury called the meeting to order at 1:30 p.m. He began the meeting with a welcome to the Council's newest member, Jennifer Anders of Montana.

Bill Booth made a motion to revise the agenda of the meeting to include a Council decision on a letter to the region calling for recommendations to amend the Council's Fish and Wildlife (F&W) Program; find that Council business requires this discussion; and find that no earlier notice was possible. Phil Rockefeller seconded the motion. Rockefeller explained that the Fish and Wildlife Committee came to a rapid consensus on the letter. If the Council moves forward at this meeting, we can get the letter out the door and into the hands of stakeholders sooner, he said. The motion passed on a roll call vote, with all members voting aye.

Reports from Fish and Wildlife, Power and Public Affairs committee chairs:

Phil Rockefeller, chair, fish and wildlife committee; and Jim Yost, chair, power committee; Henry Lorenzen, public affairs committee.

F&W Committee chairman Rockefeller said the committee met and had a discussion of the draft letter soliciting amendments to the F&W program. The committee decided to recommend Council approval of a shorter letter with an attachment that invites program recommendations, he said.

The committee had a report on the ocean plume workshop with Rockefeller noting that workshop participants identified a variety of research topics the Council could prioritize for the region.

Other updates the committee received included Lynn Palensky's report on the last of the series of categorical reviews and NOAA Fisheries' overview of the status of the ESA-listed Columbia River eulachon; an update on the lamprey synthesis report; and a discussion of the coordinated assessment, Rockefeller said.

Power Committee chairman Jim Yost said the committee went through financial assumptions for the Seventh Power Plan and had a preliminary discussion focused on inflation and capital costs.

We considered recommendations from the Resource Portfolio Model review group and plan to implement most, if not all, of them, he said. The committee also talked about including transmission zones in the modeling, Yost said. We discussed the status report from the end-use load forum and made a final review of the Sixth Power Plan midterm assessment report. The committee recommends the Council support the assessment report, Yost stated.

Henry Lorenzen said he would convene a meeting of the Public Affairs Committee later in the day, his first since becoming committee chairman. He said staff would soon finish the Council's winter quarterly publication, and he listed the stories that would appear in it.

1. Remarks from Bill Drummond, Administrator, Bonneville Power Administration.

BPA Administrator Bill Drummond began his presentation by noting it was his "third incarnation" appearing before the Council over 25 years: the first was as executive director of the Public Power Council and the second as manager of the Western Montana Generating and Transmission Cooperative.

"I'd like to stress the important role the Council plays in the region," he stated. It is about more than producing a power plan or a fish and wildlife (F&W) program – the Council provides a discussion forum and an opportunity for the unbiased exploration of pressing issues, Drummond said, adding that the Council "has been a success story."

BPA's 2014-2015 rate case is one of my current areas of focus, he explained. BPA has proposed a 9.6 percent power rate increase and 13 percent on the transmission side, Drummond said. "These are big numbers" for a region that has not recovered economically, he added. The reasons for our rate increase proposal include the operation and maintenance expenses at the federal hydro projects, as well as needed investments in the Columbia Generating Station (CGS) and the transmission system, Drummond said.

In addition, low natural gas prices, which have been good for gas consumers, "have crushed" nonfirm power revenues, he stated. BPA's sales in the wholesale market reduce its revenue requirement, and while the agency has earned as much as \$700 million in nonfirm revenues in years past, sales were half that amount in 2012, Drummond reported. This year looks even worse since the agency will have less than average water to work with, he acknowledged. On both the power and transmission sides, staff is asking for a lot of money, and "we think these are important investments," Drummond said.

BPA is working hard on producing a new Biological Opinion (BiOp), which is due to the court in January 2014, he continued. And BPA and the Corps are charged with coming up with a recommendation for the U.S. State Department on the Columbia River Treaty, Drummond said. We are working with the Sovereign Review Team, and "I'm optimistic the region can provide a credible direction" to the State Department, which will get us to "a better, stronger, and more malleable agreement" than we have today, he stated.

Longer term, Drummond said he foresees the need for significant hydro system upgrades and rehabilitation. BPA just celebrated its 75th anniversary, and some of the Columbia River hydro facilities are that old, he said. BPA has agreed to a major rehabilitation of units at Ice Harbor

Dam, and there is a huge upgrade project going on in the third power house at Grand Coulee, Drummond noted.

The transmission system is also showing signs of wear and tear, and BPA will need to spend lots of money “to get it to where it needs to be,” he stated. The vast majority of our capital investment over the next 10 years will be on the transmission side, Drummond added. To give a sense of the numbers, he said over the next 10 years, BPA’s capital budget will be about \$10 billion, \$250 million per year on federal hydro projects and double that for transmission, Drummond said, adding that the rest will go towards F&W, energy efficiency, and information technology. Reliability and security mandates from federal regulators will require more investment, he added.

Energy efficiency, including Smart Grid and demand response, are also important for BPA, according to Drummond. The benefits from these efforts are similar, but they take different approaches, he said. BPA is engaged with the Pacific Northwest National Laboratory and other Northwest utilities in the country’s largest Smart Grid project, the outcome of which will help us determine where to make investments, Drummond reported. The focus for energy efficiency is shifting from energy to capacity and balancing resources, and that is where demand response resources offer potential, he indicated.

Council chair Bill Bradbury asked Drummond to support additional spending for quagga and zebra mussel prevention. Only three of the region’s federal hydro projects have undergone “vulnerability assessments,” Bradbury said, urging BPA to insist on one at every dam.

The assessments make sense, Drummond responded. He noted that BPA has invested in a technology innovation project to research “coatings” that resist the mussels and that turbine runner replacements at Ice Harbor will make it possible to remove fish screens and reduce the project’s vulnerability to the mussels.

Has BPA seen any significant issues with implementing tiered rates? Henry Lorenzen asked. Overall, there have not been problems and the contracts have worked out well, Drummond responded. I’ve seen a huge reduction in the time spent on rate cases since the 1990s, when I was arguing for those contracts as a customer, he added. The biggest challenge is for utilities that made resource commitments prior to the recession and now find themselves long on resources, Drummond said.

BPA just filed its Oversupply Management Protocol (OMP) with the Federal Energy Regulatory Commission (FERC) last week, he reported. We hope we’ve reached a general understanding in the region about how this will work in the future, Drummond said. In its order last year, FERC asked us to provide it with the costs for shutting down thermal generators, he noted. The OMP would run until 2015, but the program is otherwise the same as last year, Drummond said. He added that the allocation of costs for generation shutdowns is an issue in the current rate case.

I view the OMP as a temporary fix, Drummond continued. By increasing the transfer capability out of the region, working with Canada to find more storage, and by pursuing opportunities like Smart Grid, “we will get to the place where oversupply doesn’t occur or is rare,” he stated. We

are forecasting a 50 percent probability this year of having to use the OMP since water conditions are low and CGS will be offline, Drummond said.

I think I can speak for the Council in saying “we feel a good connection with you,” Bradbury wrapped up.

Rockefeller thanked BPA for its response to the challenges with F&W funding in 2012. BPA instituted a number of controls to make sure its F&W partners stay within the available resources, he said. Rockefeller acknowledged Lorri Bodi and Bill Maslen for their ability to manage the challenges and their openness in dealing with the situation.

2. Briefing on Bonneville Power Administration White Book and Resource Program:

Tina Ko and Robert Petty, Bonneville.

BPA’s White Book is a study of the agency’s loads and resources, according to Robert Petty and Tina Ko of BPA, who briefed the Council on the 2012 edition. In the study, BPA reviews its contractual load obligations and resources to provide a 10-year forecast for the federal power system and the Pacific Northwest, Ko said. The White Book does not guide day-to-day operations or set strategies, but it illustrates trends, she said, adding that BPA conducts a full loads-and-resources study in the even years and updates the information in the odd years.

The White Book has four specific studies, Ko said: federal system analysis, federal needs assessment, federal resource adequacy, and regional system analysis. In the 2012 results, the studies show the federal system has a January energy and capacity deficit throughout the study period, which was also the case in 2011, she said. BPA has “its own version” of a resource adequacy study for the federal system, but is continuing to investigate metrics that are appropriate for a large hydro system, Ko explained.

Results of the regional system analysis are largely dependent on the assumption regarding the availability of independent power producers (IPPs) to serve regional load, she said. If all IPP generation is available, there are large surpluses in the study period; if no IPP generation is available, there are significant deficits that start in the middle of the study period, Ko stated.

BPA looks at three scenarios for the federal needs assessment, she continued. The low-economy scenario shows a need of about 8,000 average megawatts (aMW) throughout the 2013 to 2021 period, Ko said. Under the “expected” scenario, the need climbs to just over 9,000 aMW in the period, and with a high-economy scenario, need grows to nearly 10,000 aMW, she reported.

Petty explained that the 2013 Resource Program updates the 2010 program and is BPA’s version of the Regional Power Plan. It is interrelated with the White Book and details how BPA intends to address the power supply needs identified in the 2012 assessment, he said.

The needs assessment shows BPA could have to supplement the federal system to meet existing and projected obligations, Ko said. This conclusion reflects additional limits on the projected capability of the Federal Columbia River Power System (FCRPS) since 2010, she added. The hydro modeling assumptions decreased the expected annual and winter FCRPS generation, Ko

said. Under the expected case, modest annual energy deficits are projected under critical water, but there is some chance of significant deficits in winter and late summer, she indicated.

BPA plans to address the energy need by achieving the conservation targets in the Sixth Power Plan and continuing to make wholesale purchases from the market, Petty reported. Any residual power needs are expected to be small and very seasonal, he said, adding that BPA assumes they could be met with minimal market purchases.

BPA uses an 18-hour metric to gauge the availability of capacity, Ko said. The metric covers the six highest-load hours for three consecutive days in a heat wave and a cold snap, she explained. Using this metric, any capacity surplus is minimal to nonexistent in winter or summer during the study period, Ko said. The winter capacity numbers have changed significantly since 2010 due to extreme-weather load differences, the expiration of winter purchases, and changes in FCRPS generation forecasts, she stated.

Petty said BPA is more concerned about capacity than energy. Achieving the Sixth Power Plan conservation targets will reduce loads, which helps to supplement the existing capacity of the FCRPS, he said. But BPA is concerned that not all of the conservation would occur during times of extreme loads, and more research is needed on load shapes, Petty added.

BPA could make market purchases to supplement its capacity needs, and the agency intends to explore opportunities for more Non-Treaty storage in Canada, he continued. Demand response also holds promise as a cost-effective way to meet capacity needs, and there are plans to continue to evaluate a pumped storage project in the region, Petty stated.

As for balancing reserves, the assessment reflects that the FCRPS will be insufficient to meet the forecast 99.5 percent level of service for balancing reserves in fiscal years 2016 and 2019, he reported. There are a lot of processes going on to address the region's need for balancing reserves, including the Ancillary and Control Area Services Practices Forum and the Northwest Power Pool market initiative effort, Petty said. Balancing service requests come in every two years to cover a period of two years, which creates a lot of uncertainty about what BPA may be asked to provide, he explained. BPA's current strategy is to make short-term purchases of balancing reserves in the wholesale market if they are needed, Petty added.

BPA has an action plan that responds to the updated White Book, he went on. The plan includes a number of items, such as evaluating the contribution of conservation to meet capacity needs, further definition of system and resource flexibility, and monitoring factors that could reduce the capability or output of the FCRPS, Petty stated. In addition, BPA will collaborate with the Council to prepare the Seventh Power Plan and BPA's next resource program, he concluded.

Lorenzen asked if there is likely to be an energy imbalance market (EIM) in the Northwest. BPA is participating in forums exploring an EIM, and those analyses are nearing completion, Petty said. Then there will be a decision, he added.

Tom Karier said BPA's assumptions about winter power imports may not be consistent with those of the Regional Adequacy Forum and suggested BPA take another look. Jim Yost asked about the use of Non-Treaty storage to meet capacity needs. Steve Kerns of BPA said the decision to call on Non-Treaty storage is based on operational objectives at the time. BPA has

very little operating flexibility across the year, and we need to talk about it, he stated. The issue “is bigger than incs and decs,” Kerns added.

3. Presentation on oversupply management for 2013:

Steve Kerns, Bonneville Power Administration

Generation oversupply occurs in low load, high water conditions, according to Kerns. Last March, BPA filed its OMP proposal with FERC, he explained. The OMP differed from BPA’s previous Environmental Redispatch policy in that it specified that generation would be displaced on a least-cost basis, Kerns said. BPA also proposed to reimburse generators for the costs of displacement and split the costs 50/50 between power customers and wind generators, he noted.

BPA did not get support from FERC for the 50/50 split, Kerns stated. In a December 2012 ruling, FERC conditionally approved BPA’s use of the OMP, but asked the agency to reconsider the proposed allocation of displacement costs and file a new methodology within 90 days, he explained.

BPA planned to resolve the cost allocation issue in a rate case that was already under way and asked FERC for an extension of the March 20 filing deadline, Kerns said. FERC granted the request in order to give BPA time to complete its rate process, he added. In the meantime, BPA refiled its OMP with FERC last week and intends to implement it during the spring of 2013 if necessary, according to Kerns.

In 2012, “a big water year,” BPA displaced roughly 50,000 MW-hours (MWh) of wind generation and paid wind generators \$2.7 million, he continued. While BPA displaced less wind in 2012 than it did in 2011, when 97,000 MWh were curtailed, the prevalence of negative prices in the 2012 market indicates that oversupply conditions were actually worse, Kerns said. Day-ahead light-load hour prices at the mid-Columbia hub were negative nearly 60 percent of the time from April through July last year, he added.

Other factors contributed to the low displacement numbers in 2012, including wind generation that was lower than estimated and water storage available in Canada, Kerns explained. About 2.8 million acre-feet (MAF) or “a lot of water” was stored in Canadian reservoirs last spring, he added. In addition, there was more storage in Grand Coulee than was expected, and the federal projects arranged “spill exchanges” with mid-Columbia hydro projects, Kerns said. The mid-Cs will spill for us if they can stay within their total dissolved gas limits, he elaborated.

To forecast the displacement in 2013, BPA updated its modeling assumptions and incorporated the lessons learned from last year, Kerns said. We adjusted the thermal output to account for CGS being down for refueling, he added. The expected wind displacement in 2013 is 283 MW-months, with an estimated cost of \$10 million, Kerns stated. The likelihood of displacing wind is about 50 percent, as opposed to 65 percent in the 2012 study, and the chance the costs will exceed \$50 million is less than 5 percent, he reported.

The current runoff forecast is below average, Kerns pointed out. In the last two years, we have had really wet springs that added to the snowpack late in the season, and if that happens this year, it could exacerbate the oversupply situation, he added.

Bradbury asked how Non-Treaty storage can help with oversupply. BPA's Non-Treaty storage agreement with Canada expired in 2002, after which storage terms were year-to-year, Kerns responded. BPA now has a new multiyear agreement with Canada, he said. The federal agencies make a decision every week during the runoff season about whether to use the Non-Treaty storage in Canada, Kerns explained. It's hard to know what will happen ahead of time, but we usually store between one MAF and one-and-a-half MAF in Canada, he concluded.

4. Briefing on 2013 Columbia River Basin fish run forecasts and 2012 fishery retrospective:

Dan Rawding, WDFW; Ed Schriever, IDFG and Brian Burke, NOAA.

Staffer Jim Ruff introduced a panel of fisheries scientists who presented an update on the 2013 Columbia River salmon forecast and a retrospective on the 2012 runs. Dan Rawding of the Washington Department of Fish and Wildlife gave an overview of the upriver stocks, those upstream from Bonneville Dam, starting with a description of the U.S. v Oregon Technical Advisory Committee (TAC). TAC met 20 times in 2012 to provide the in-season run size updates on spring, summer, and fall Chinook, and sockeye, he said. The in-season updates allow managers to adjust fisheries to meet management guidelines, Rawding stated.

Upriver salmonid returns have been better in the most recent 10 years than in the previous 20 years, he said. Most of the fish are Chinook, but other salmonid species, including sockeye and steelhead, are up as well, Rawding reported. TAC has had difficulty in getting a good predictor of the runs, and some years the forecasts have been way off, he acknowledged.

Rawding went through the forecast numbers for upriver spring Chinook, including Upper Columbia spring, summer, and fall Chinook. The 2012 sockeye run was the largest return since Bonneville Dam was completed, and the 2013 forecast for 180,500 is much lower than the 521,000 fish that returned last year, he said. We don't have a great summer steelhead predictor, Rawding said, indicating that the return since 2009 has declined. He said upriver coho return numbers are explained by upriver hatchery releases, which have grown since 1986.

Rawding reported on the 2012 Non-Indian sport fisheries and the Non-Indian commercial fisheries. He noted that the "Select Areas" commercial coho harvest took a steep decline and in 2012, was 30 percent of the average in recent years. Rawding also gave figures for the Treaty Indian fisheries, which he said are for ceremonial and subsistence purposes or commercial sale.

Ed Schriever gave the Snake River update. The opportunity to fish and rebuild stocks is very important in the Snake River, he stated. The 2000-2012 trend information focuses on four species, Schriever said: fall Chinook, sockeye, summer steelhead, and spring/summer Chinook. He said the spring/summer Chinook in the Snake River share the same life history, unlike in downriver Chinook.

Schriever went through the returns and the 2013 forecasts, noting there is continuing good news for fall Chinook with increases in natural spawners. The fall Chinook return above Lower Granite Dam is quite a success story, he said.

The counts for sockeye salmon indicate there is high loss between Lower Granite Dam and the spawning grounds in the Stanley Basin, he continued. In presenting the steelhead returns and forecast, Schriever explained that steelhead that crossed Bonneville Dam from July to October 2012 are still “trickling in to Idaho.” It’s a struggle to forecast the “one-ocean” steelhead, he said. Schriever went on to present the summer steelhead numbers and the sport harvest. “We only harvest hatchery fish in Idaho,” he reiterated, adding that 9,600 summer steelhead are needed to meet the broodstock requirement above Lower Granite Dam.

The return for spring/summer Chinook has been above the 10-year average for the last three years, but the 2013 forecast is well below the last five years, Schriever added. We won’t make a harvest proposal until we see what happens, he stated. Only the number of fish above what is needed for broodstock needs is allowed for harvest, Schriever added.

Booth asked about the effect of downstream harvest on returns to Idaho. With a forecast like 2013, there are decreases in the downstream fishery based on a sliding scale, Schriever responded. Booth pointed out that there is incidental take of 10 to 12 percent downstream, which could be as many as 1,000 fish that won’t make it up to the Snake River to spawn. I’d ask whether it makes sense in the lower years to restrict downstream harvest further, and I’d put in a pitch for being cognizant of that impact, he said.

Schriever wrapped up by saying the forecasts “are fraught with error.” He showed a graph illustrating that when using jacks as a predictor, we over-forecast large runs and under-forecast small runs,” he stated.

Brian Burke of NOAA’s Northwest Science Center described how ocean indicator data is used to forecast runs. He said the trickiest part of the forecasts is the variability in the runs and the magnitude of the mortality that occurs in the ocean.

Burke provided an overview of NOAA’s ocean research projects since 1998 and explained what is measured in the ocean. He described how the models have evolved, explaining that the “first generation” models presume all factors influence salmon mortality equally. The second generation of models weight the survival indicators, Burke said.

He explained the NOAA forecasts for spring Chinook overall and for smaller populations of hatchery and wild fish that return to specific spawning grounds. Burke also went over the forecasts for hatchery and wild steelhead.

In summary, he said NOAA has been doing ocean research for 15 years and can use its understanding of ocean life to forecast returns. The NOAA and other 2103 forecasts are for slightly above average returns for Chinook and steelhead, Burke stated. There are future plans for the research that include developing additional dependent variable sets and increasing stock specificity in the forecasts, he said. Burke pointed out that sockeye, for example, come out of the Columbia River early and head north fast.

5. Council decision on revised Regional Technical Forum Conflicts of Interest Policy and corresponding RTF charter amendment:

Charlie Black, director, power division; and Jim West, RTF chair.

Staffer Charlie Black introduced Jim West, co-chair of the Regional Technical Forum (RTF) Policy Advisory Committee (PAC). Black explained two decision items for the Council, the first a revision to the RTF Conflicts of Interest policy, which clarifies the process to manage the appearance of or a real conflict on the part of those who are subject to the conflicts policy. The second change is the expansion of the scope of the persons subject to the policy to include RTF members, RTF subcommittee members, and RTF staff, he said. Along with the change to the policy, there is a corresponding amendment to the RTF charter that removes a paragraph that would be inaccurate with the revised policy.

West said both the RTF and the RTF PAC have been reviewing the policy with an eye towards making updates. Since the February Council meeting, when there was a presentation on the policy, the RTF reviewed changes made by the PAC and recommended an additional change, he said. The addition would add to the conflicts policy an RTF vote on the life of an efficiency measure, West explained. The changes specify that the appearance of a conflict or an actual conflict be disclosed ahead of a discussion, he clarified. This is in essence an update, and it is the first time the policy has been reviewed by the PAC, West said. He added that one of the changes allows RTF members to declare a conflict and participate in discussions of a proposal even if they cannot participate in the vote.

Pat Smith made a motion that the Council approve the revised Regional Technical Forum Conflicts of Interest Policy recommended by the Regional Technical Forum Policy Advisory Committee with the additional language suggested by the Regional Technical Forum as described by staff, and that the Council approve the amendment to the Charter of the Regional Technical Forum as recommended by the Policy Advisory Committee and approved by the Regional Technical Forum. Karier seconded the motion, which passed unanimously.

6. Council decision on renewal of the RTF Policy Advisory Committee charter:

Charlie Black and Jim West.

Smith made a motion that the Council approve the renewal of the charter for the Regional Technical Forum Policy Advisory Committee for a period of two years. Karier seconded the motion, which passed unanimously.

7. Council decision to adopt Mid-Term Assessment Report:

Charlie Black.

The Council's mid-term assessment of the Sixth Power Plan was released for public comment December 20, 2012 and the comment period ended January 31, staffer Charlie Black told the Council. During the comment period, we received written comments and in-person presentations, he said. Staff subsequently reviewed the comments and held discussions with the Council to get agreement on any changes to the assessment, Black noted. There was one final change after the Council's February meeting, and the report is now ready for approval, he stated.

Yost noted that the staff and Power Committee worked a long time on the assessment and got broad input. It is "a fair reflection" of the current status of the power plan after two-and-a-half years, and it's ready to be approved, he stated.

Bradbury asked about a statement in the assessment related to a decrease in the potential for lost-opportunity conservation resources. The point of the statement is that as federal standards for appliances and state building codes are upgraded, the amount of savings available from utility programs decreases, Black explained. The savings come about as a result of the standards and codes and are shifted away from utility programs, he said.

Smith made a motion that the Council approve the Sixth Northwest Power Plan Mid-Term Assessment Report as recommended by the Power Committee. Yost seconded the motion, which passed without objection.

8. Briefing on regional energy efficiency implementation:

Charlie Grist; Susan Stratton, Northwest Energy Efficiency Alliance; and Margie Harris, Energy Trust of Oregon.

Energy efficiency is a complex regional system with interdependent actors, staffer Charlie Grist told the Council. The web of interrelationships includes numerous regional groups, such as the Northwest Energy Efficiency Alliance (NEEA) and the Energy Trust of Oregon (ETO), state and local regulators, utilities, and end-use consumers, he said. Grist explained how revenues to fund energy efficiency flow from end-use customers to utilities and BPA, and how funding flows back through various channels to deliver programs. He also stepped the Council through how energy efficiency policy is made in the region. All of the layers in the web of energy efficiency have their constituencies and regulators, Grist pointed out.

The Northwest has a reputation for its support of energy efficiency and mechanisms for delivering it, according to NEEA's executive director Susan Stratton. The reason for energy efficiency is to decrease waste in energy use and "decrease the waste of precious resources," she said. Efficiency can meet future load growth and is currently meeting a large percent of growth in the region, Stratton reported.

She went on to describe NEEA's key role in market transformation, which she defined as "the strategic process of intervening in a market to create lasting change." NEEA takes a long-term view of market transformation, Stratton said. NEEA intervenes in the market, accelerates the adoption of energy efficient products, and "locks in" the savings through codes and standards, she explained. "We make sure inefficient stuff leaves the market," Stratton added.

NEEA, which was founded in 1997, works with 137 partners in the region and bases what it does on input from them, she continued. The alliance has a budget between \$38 million and \$40 million annually, with the largest shares provided by BPA (36 percent), ETO (21 percent), Puget Sound Energy (14 percent), and Idaho Power (8.5 percent), Stratton reported.

NEEA has a record of success, she said, pointing out several specific programs, including promotion of Energy Star windows, a Betterbricks program for energy management in health care institutions, and a program in which food processors commit to reduce energy consumption by 50 percent. Stratton described a recent success story with energy efficient televisions, in which NEEA talked to retailers about getting more efficient TVs onto retail shelves and offered an \$8 to \$10 incentive per TV for them to do so. Now, retailers representing 84 percent of the TVs sold in the Northwest promote "Energy Forward" sets, which are 60 percent more efficient

than just three years ago, she stated. “We are changing what they buy,” Stratton said of the retailers, adding that NEEA got the savings at a low cost by changing the retailers’ stocking practices.

Manufacturers’ behavior is another area in which NEEA has influence, she said. NEEA partnered with Northwest food processors to help them understand how to make better use of energy, and NEEA developed a strategic energy management template for food processors to use to cut energy consumption, Stratton explained.

NEEA has delivered 887 aMW of savings to the region, she went on. When NEEA intervenes in the market, it takes years to measure the effect, Stratton pointed out. Programs carried out in past funding cycles are still delivering savings, she added.

Stratton explained how NEEA is “filling the pipeline” with emerging technologies, which have been proven in the laboratory and are about to hit the market. NEEA also works to remove barriers for new products, she said. For example, energy efficient clothes dryers in the European market are small and take longer to dry clothes than dryers used by U.S. consumers, Stratton said. NEEA looks for ways to address such drawbacks and barriers to acceptance, she added. Research is another area NEEA promotes, Stratton said, citing the Residential Building Stock Assessment, as well as commercial and industrial stock assessments.

NEEA is developing a strategic plan to make sure it stays consistent with the Council in pursuing energy efficiency, she said. The alliance is also looking at how to value efficiency as a resource for meeting energy and peak needs, Stratton concluded.

Anders asked if NEEA is addressing the role of LED lighting. NEEA is focusing more on compact fluorescent lights in commercial buildings at the moment, Stratton responded. The price point on LEDs is still quite high but is coming down, she added.

Lorenzen pointed out that consumer-owned utilities see drawbacks to energy efficiency because it leaves them with less revenue to cover fixed costs. How do we create incentives for utilities? he asked. This is a problem for smaller utilities, and there is no easy answer, Stratton acknowledged. We tend to focus attention on rates and not bills, where consumers can see more clearly how energy efficiency is saving them money, she added. We need to do a better job of communicating about how rates may go up while bills are coming down, Stratton said.

Margie Harris of ETO said her organization is funded through a 3 percent public purpose charge on Oregonians’ utility bills. ETO serves 1.5 million people in Oregon and 70,000 in Washington, with a goal of finding all cost-effective energy efficiency available to meet Regional Portfolio Standards, she explained. ETO has been offering programs for 11 years and delivered 456 aMW of savings, 52.9 aMW of those in 2012, Harris added.

The programs ETO offers are diverse and serve every type of customer, she continued. We depend on the marketplace for assessments, and measures are installed by private businesses, Harris stated. So far, we have saved customers \$1 billion on their utility bills and caused \$2.1 billion in investments to be deferred, she said. In Oregon, we are able right now to meet load growth with efficiency, Harris concluded.

9. Presentation (updated 3/14) by the Independent Scientific Advisory Board on the 2009 Fish and Wildlife Program:

Erik Merrill; Rich Alldredge, ISAB chair; and Chris Wood and Greg Ruggerone, ISAB.

Staffer Eric Merrill introduced members of the Independent Scientific Advisory Board (ISAB) to present their review of the Council's 2009 F&W program. The review was done in the spirit of adaptive management and how the Council might move forward with the program in the future, he stated.

Rich Alldredge, ISAB chair, began by acknowledging many people who worked on the ISAB report, as well as the staffs of the Council, BPA, and other agencies. He explained that the ISAB was assigned to evaluate the scientific merits of the F&W program in time to inform the next set of amendments and as a way to guide the region in developing recommendations for the Council in framing the program. Alldredge described the review process and those who assisted in it.

In general, the 2009 F&W program has been a useful framework and is well written and presented, he said. Alldredge said the ISAB's review of the program was shaped by the time available and the focus was on scientific concepts and to a lesser extent, implementation. This is an opportunity to look ahead and to ask whether we are heading toward success, he stated.

ISAB vice chair Chris Wood went on to explain that the reviewers reexamined the conceptual foundation of the program in light of recent scientific developments. He said recent science indicates attempts to maximize production in ecosystems tend to become unsustainable and that complex systems are shaped by extreme events that are unpredictable. Rather than maximize production, aim for sustainability, Wood added. He went on to explain the two components of sustainability, resilience and adaptability, the ISAB uses throughout its report.

Wood described the ISAB's review of the scientific principles in the 2009 program and their relationship to resilience and adaptability. He laid out the ISAB's general recommendations for the program that address loss of biological diversity, climate change, chemicals and contaminants, and non-native species.

Greg Ruggerone of the ISAB explained recommendations for considering the carrying capacity of the ecosystem. He said a key recommendation is that the F&W program should address the carrying capacity for juvenile salmonids when introducing plans for artificial production and habitat restoration. The ISAB also made recommendations related to harvest, including assessing the extent to which harvest slows recovery of naturally reproducing populations and addressing ecosystem-scale effects of harvest and hatcheries, Ruggerone said.

He explained ISAB concerns about hatchery straying and the numbers of hatchery fish that end up on the spawning grounds. The ISAB recognizes the dilemma because the conservation of endangered salmon calls for decreasing harvest, but that can lead to too many hatchery fish on the spawning grounds, Ruggerone stated. He also pointed out the increase in jacks and minijacks in the runs and new evidence showing why that is occurring.

Booth asked if the ISAB favors implementing the Hatchery Scientific Review Group initiatives. Ruggerone said he favors most of the HSRG recommendations.

Ruggerone went on to present the ISAB recommendations related to knowledge gaps on hydrosystem impacts, the estuary, and the impact of ocean conditions. He said the ISAB recommends the F&W program develop quantitative biological objectives that can be monitored. The program should develop quantitative objectives for the ecosystem characteristics needed to achieve the biological objectives for population performance, Ruggerone stated.

Alldredge said the ISAB supports a planning process that takes a more complete landscape approach. In landscape-scale planning, you evaluate the efforts for artificial and natural production and integrate supplementation and habitat restoration efforts, he said. The challenge is keeping everything in mind at once, Alldredge added.

He presented a number of questions that need to be answered about whether the F&W program is on a trajectory to be successful and whether the success will be sustainable. There is insufficient data, he said, and the knowledge gaps imply uncertainty about hydrosystem and habitat impacts, Alldredge said. With regard to artificial propagation, there is the question of whether it is the foundation for restoration, he said, and again there are knowledge gaps that imply uncertainty about habitat restoration, estuary, and ocean effects.

The ISAB concluded that the implementation of adaptive management has not been effective, and the reasons are varied, Alldredge said. We recommend getting into structured decision making to address the uncertainty, he said.

Bradbury pointed to an ISAB statement in the Executive Summary of the report. It says continuing to implement the F&W program on its current trajectory is highly uncertain to reach the objectives, the ISAB is concerned that relying on hatcheries is a risky foundation for restoration, and adaptive management has not been conducted in the manner originally envisioned. "That is a very strong statement," he said. We are getting the message that we need to figure out a different way of doing this, Bradbury added.

There are lots of good intentions in the program, such as trying to restore habitat and meet tribal obligations for harvest, Ruggerone responded. But it is not easy to manage diverse desires for hatchery and wild fish, he said. The risk is that in the balancing act to reduce harvest that can interfere with restoration, we are allowing too many hatchery fish to reach the spawning grounds, Ruggerone said. He suggested more programs to cull out hatchery fish may be needed.

Karier said the qualities of a good program include sound science, regional support, and being implementable. I encourage you to think about the implementable part, he said. The ISAB could advocate for specific measures to make implementation easier, Karier said. Another area would be establishing a harvest target, i.e., how much harvest is attributable to particular hatcheries and how much of the production is not harvested, he stated.

Booth said the Council has done a lot of work to gain efficiencies and put the maximum dollars toward on-the-ground efforts. In the process, we calculated 50 to 60 percent of our F&W funding goes to research, he said. My view is we need to be more strategic about that, Booth stated. If you have a high-risk, high-cost project, you want RME; but with a low-risk, low-cost project, you could spend almost nothing on RME, he suggested. Would you support that type of future project review? Booth asked.

Allredge described the ISAB's recent review of monitoring and evaluation efforts. He said if the Council would like ISAB members to reflect on the question, they would be happy to do so.

The amount we spend on RME has grown and is a high percentage of the budget, Karier said. If the science panels can't give us the priorities, we'll have to try to do it, he said. We can't let the program become 100 percent RME; we have to mitigate, enhance, and recover, too, Karier said. We would like any help you could give us, he added.

You have raised the stakes for all of us who will be rewriting the program, Rockefeller said. The multitude of stakeholders who will be coming in with submissions for the program would be advised to look at your recommendations, he stated.

You are saying that habitat restoration is unlikely to be successful as currently carried out and that the current program in its very design may be highly uncertain of success, Rockefeller commented. You have raised the issue of whether we have picked the right strategies to evaluate and suggested the program needs to be ecosystem based with habitat restoration being one component, he said. What are the major elements of the landscape approach? Rockefeller said.

Wood provided a brief overview of the landscape approach. Allredge pointed out the difference between program implementation that takes advantage of opportunities, like the Council's program, and a more holistic approach.

10. Council decision (updated 3/12) on Fish and Wildlife Program amendment announcement and call for recommendations:

Tony Grover, director, fish and wildlife division; and Patty O'Toole, program implementation manager.

Staffer Patty O'Toole gave a presentation to set the context for the F&W program amendment process. She said the process would soon be launched to amend the Council's 2009 F&W program, which consists of basinwide and mainstem provisions, as well as about 60 subbasin plans adopted from 2004 and 2005. O'Toole listed the contents of the program and how staff approaches the amendment process.

Staffer Tony Grover noted that there are five members of the Council who have not gone through the amendment process. He pointed out that the recommendations for amendments can come in many forms. From the time the solicitation letter goes out, we try to document all instances when suggestions are made, Grover said, adding that staff will provide members with a form to document interactions with people on program amendments.

O'Toole described the "extensive process for soliciting recommendations" and doing outreach to the public. She explained the schedule, pointing out there is a period of at least 90 days for taking in the recommendations. The current schedule calls for the close of that period in July, she said, and at that point, the clock starts on 12 months in which the Council must develop a final program, she explained. We want to get our work done and the process buttoned up in advance of fall 2014 so the program is ready to become part of the next power plan, O'Toole said. She added that all of the program recommendations are released for public comment.

O'Toole went over a description of the outreach procedures, which include meetings and consultations.

Grover suggested staff could notify the Council when the process is buttoned down, which could make a decision about the launch date by conference call. Bradbury agreed to have a conference call within the next two weeks.

Karier said the Council could consider the amendments an opportunity to reframe the F&W program. He pointed out the Columbia River Accords with the tribes present a change in context that didn't exist before. The role of the Biological Opinion is another consideration and it includes a long list of measures that parallel the Council's F&W program, Karier said. A rollover of the status quo would not serve the region, he added.

The Council discussed the solicitation letter and whether more changes are needed. Anders referred to a place in the text that refers to "the current policy" and said she thought that should be explained. Grover said there are deep differences about what the current policy is and the simplest thing would be to take out that reference. The Council members agreed.

Rockefeller made a motion that the Council approve the letter to the region forwarded to the Council by the F&W Committee calling for recommendations to the Council's Fish and Wildlife Program, with changes identified by the members at today's meeting. Booth seconded the motion, which passed with all eyes. Rockefeller clarified that the letter would not go out immediately.

11. Briefing and primer on generating resources:

Charlie Black; Steve Simmons, energy analyst; and Gillian Charles, energy policy analyst.

Moved to the April agenda.

12. Continuation of Council Business:

– Approval of minutes

Yost made a motion that the Council approve for the signature of the Chair the minutes of the February 12-13, 2013, Council meeting held in Portland, Oregon. Booth seconded the motion, which passed unanimously.

– Update on May 15 Mussel Summit

Staffer Jim Ruff reported that the Council and the Pacific States Marine Fisheries Commission and the Pacific NorthWest Economic Region are working together to jointly sponsor a workshop on preventing an invasion of quagga and zebra mussels in the Northwest. He said a notice of the workshop will go out to a mailing list of 450 to 500 people and the sponsors are expecting a good turnout. The workshop is scheduled for May 15 in Vancouver, Washington, and will feature expert speakers from areas, such as the Great Lakes and Lower Colorado River Basin, that are dealing with mussel invasions and the economic consequences, Ruff stated. The purpose of the workshop is to educate people and build partnerships to prevent an invasion, he said.

– **Election of Council Vice-chair**

Bradbury called for the election of the Council vice chair. Smith nominated Anders. Rockefeller seconded the nomination. Anders was elected unanimously on a roll call vote.

Bradbury announced that staffer Ken Corum, whose first day at the Council was January 20, 1982, was retiring. This is Ken's last Council meeting after 31 years on the staff, he said. On behalf of the Council and staff, I want to express our sincere appreciation for your great work, Bradbury stated.

The Council meeting adjourned at 12:02 p.m.

Approved April __, 2013.:

Vice Chair

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