

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

January 14-15, 2014

Minutes

Council chair Bill Bradbury called the meeting to order at 1:33 p.m. He asked for reports from the committees.

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

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

Fish and Wildlife (F&W) chairman Phil Rockefeller reported on a briefing by John Shurts about the meaning of the “adequate, efficient, economical and reliable power system” standard in the Northwest Power Act and how it may apply to development of the F&W program. The committee discussed the work of a toxics subgroup, which is assessing the topic in the current program and reviewing comments of stakeholders, he said, noting there are a range of opinions about how to address toxics in the program. Henry Lorenzen is chairing the subgroup, which will meet again later this month, Rockefeller said.

The third topic was resident fish mitigation and a discussion of how to address settlement negotiations in the program, he said. The options include convening a work group to define a methodology for addressing construction and inundation losses in the settlement, Rockefeller said. We also discussed a schedule for the committee’s future work on amendments to the F&W program, Rockefeller said.

Power Committee chair Jim Yost reported that the committee discussed the approach to developing a wholesale power price forecast and things in the Aurora model that need to be reviewed. We had a report on incorporating energy efficiency technologies into the forecast for the Seventh Power Plan forecast, he said. Technology is moving fast and things are changing, sometimes dramatically, which may call for a different approach to how we incorporate them into the forecast, Yost stated.

There were also reports on BPA's review of its energy efficiency program and trends in energy use and peak energy loads (capacity), he continued. Yost said there are discrepancies in the numbers on energy use and the committee and staff will work with the utilities to sort out the differences. The committee also discussed recent reports on the Columbia Generating Station, he concluded.

Public Affairs Committee chair Lorenzen said the committee met in November and agreed to cease publication of the Council's quarterly newsletter and switch the emphasis to its online monthly, The Spotlight. The committee also adopted a new logo and hopes to gain unanimous support from the Council for it, he said. The Council's website experienced a slowdown due to technical issues that have been corrected, Lorenzen said, adding that a revision is being made to the website home page.

Public comment on Fish and Wildlife Program amendment recommendations.

Bill Bakke of the Native Fish Society commented that the Council's program set a goal of returning 5 million fish to the basin. The efforts to achieve this goal have not been very successful and the Council should look for a new approach, he said. Bakke suggested the Council look to the subbasin plans, rather than to F&W agencies, to get the goal accomplished. We need to set productivity goals by watershed, which means getting enough spawners back, he said. Bakke recommended steps be taken to eliminate wild fish interbreeding with hatchery fish and address the competition problems in the watersheds. The wild populations are being ignored because agencies don't make money protecting wild fish, he said. They make money mitigating for wild fish, Bakke said.

The Independent Economic Advisory Board determined it costs \$9,000 per fish for hatchery production, he continued. When the IEAB asked for permission to look at Phase 2 and what it costs to get the hatchery benefits, they were denied funding, Bakke said. Why? Can we move forward with that evaluation and look at what it costs to produce fish in hatcheries? he asked.

It is worth the hatchery investment with a situation like the Snake River sockeye where it was done to preserve the species, Bakke said. But if you are raising fish to harvest and it costs \$9,000 to \$10,000 per fish, we need to look at that, he said. The Council's program needs to address the ecosystem, Bakke said. If the program looked at habitat and made sure it was supporting abundance and diversity and protecting wild fish from hatchery strays, we would probably see recovery, he said.

The purpose of my recommended amendments is to cause a big shift in the program, Bakke said. Set goals by watershed and do compliance monitoring on those watersheds, he stated.

The Council asked questions about the work of the Hatchery Science Review Group, whether there are improvements in Idaho's wild fish returns, and the benefit of managing by subbasins.

Terry Flores of Northwest RiverPartners addressed a proposal by the State of Oregon to increase spill. She said people are very interested in what NOAA Fisheries has to say about the proposal. In documents related to the just-released Biological Opinion for the Federal Columbia River Power System, NOAA fisheries starts by saying the federal hydro system is meeting the

performance targets set in 2008, Flores said. The performance targets are rigorous, and the key questions for the Council are, how much more would we get from additional spill and what is the cost, she said.

The proposed spill study would go on for 10 years at an estimated cost of \$110 million per year or over \$1 billion for 10 years, Flores said. That translates into a double-digit rate increase for power customers, lost generation, and more carbon emissions, she said.

NOAA Fisheries said the science behind more spill is not supported by data, Flores continued. The agency also said each dam is unique and spill must be tailored to the configuration at the dam, she said. NOAA Fisheries concludes that higher spill levels will divert fish away from passage routes, increase adult fallback, and increase dissolved gas levels in the water, Flores said. NOAA Fisheries also said the contribution of other ocean and atmospheric variables means it would take 28 years for a system wide spill test to show results, she said.

The Action Agencies are on track to meet the Biological Opinion requirements and a change is not warranted at this time, Flores concluded.

1. Council decision on project review:

Mark Fritsch, manager, program implementation.

– Project #2002-011-00, Kootenai River Operational Loss Assessment, a follow-up item from the wildlife category review

Staffer Mark Fritsch said the study of operational losses in the Lower Kootenai River watershed was funded as a result of the FY 2002 Mountain Columbia Provincial review of F&W projects. The Council, as part of the Wildlife Categorical Review in 2009, subsequently made a three-year recommendation on continued project funding and since then, the project sponsors have submitted responses to conditions placed on the project, he said.

Fritsch went over the Independent Scientific Review Panel's (ISRP's) reviews and concerns about the project. In October 2013, the Council received the ISRP's final review, which found the project's operational lost assessment "meets scientific review criteria (qualified)," he said.

Panelists Norm Merz and Scott Souls of the Kootenai Tribe of Idaho, and Alan Wood and Dwight Bergeron of Montana Fish, Wildlife and Parks made a presentation to the Council on progress that has been made in developing the assessment tool. Merz described the joint project, clarifying the difference between losses due to construction of a dam and inundation, and the losses due to operations. With operations losses, we are dealing with a changed hydrograph, and when we change the hydrology, it affects the river and floodplains, he said. The changes cascade through the system and affect ecological processes, habitats, and biological communities, Merz said. The impact of operations accumulate over time and are ongoing, he indicated.

Merz provided background on the assessment project. In addition to the operational loss assessment, the project includes planning for and implementing mitigation and restoration, he said.

Merz went through the steps taken to develop an Index of Ecological Integrity to assess the losses. He also explained how the index was applied to three distinct geomorphic reaches in the Kootenai River and the results.

The Kootenai River Operational Loss Assessment provides a framework and statistical methodology that can be tested in other areas, Merz said. It provides a cost-efficient and biologically effective assessment and monitoring tools, he told the Council. Merz explained that operational losses in the Kootenai will ultimately be determined through a settlement process and the operational assessment is a tool that can be used. He outlined the data that is needed for the loss assessment, noting that the cost and time involved depends on the availability of data.

Phase 1 of the assessment project is complete, Merz said, and he listed the products developed. Phase 2 is developing a mitigation plan, and Phase 3 is mitigating for the operational impacts and monitoring the ecosystem, Merz said. He acknowledged those who helped with the project, including project funder, BPA.

Tom Karier asked what the operational losses are practically and physically. The project implementers are looking at historic data and current operations data to quantify the level of alteration, Wood said. We are trying to get to conditions prior to the project being built, and the question has been raised about where that process ends, he said. The objective is to determine at what point you get to the best conditions you can with the existing hydro project, Wood said.

When it comes to mitigation, instead of acres, we need to think about ecological system losses, Merz said. For example, the tribe is planting cotton wood and willows along the river because they have been lost, he said. We're looking at the 50-year flood plain, and depending on the location of sites, the operational impacts are adjusted, Merz added. We are working on what the loss of ecological systems means, he said.

Bergeron said the assessment index looks at the ecological losses on a community basis rather than by acre. The losses are specific species, Wood agreed.

What mitigation actions could be brought to bear to improve the score from the index? Rockefeller asked. As we fine-tune the assessment tools, we hope to get to those, Merz said. This is a framework and methodology for negotiating losses and it seems logical, Rockefeller commented.

Merz noted that work is being done to see if the methodology can also be applied to the Flathead Basin, which is adjacent to the Kootenai.

We've struggled with defining operational losses, staffer Peter Paquet said. The idea behind this assessment is to serve as a pilot so we can learn how to come up with a method to define these losses, he said. The next question is whether this tool is applicable and can help answer questions in other parts of the basin, Paquet said. It gives us a protocol that is worth testing, and it has proved valuable in the Kootenai system, he stated.

The ISRP wants to see the loss assessment implementation plan when it is complete, Fritsch said. The project funding was favorably recommended by the F&W Committee, he stated.

Jennifer Anders made a motion that the Council recommend that the Kootenai River Operational Loss Assessment Project (#2002-011-00) proceed to the next step in its phased approach and develop a mitigation implementation plan for ISRP review by April 2015, as described by the project sponsor and staff and recommended by the Fish and Wildlife Committee. Further implementation of this project and funding will be determined based on ISRP review and a Council recommendation. Rockefeller seconded the motion, which passed unanimously.

2. Briefing on the work of the Fish and Wildlife Committee on the Fish and Wildlife Program Amendments:

Phil Rockefeller, Washington Council Member; and Patty O'Toole, program implementation manager.

Rockefeller reported that the F&W Committee has worked through a number of topics raised in proposed amendments to the F&W program. Remaining topics include toxics and research, monitoring, and evaluation (RME) projects, he said. Our job is to dig into the issue areas and identify topics of concern, Rockefeller explained, adding that the committee has given staff directions about where to make changes in the program. When they are ready, the changes will come before the full Council, he added.

Staffers Tony Grover, Laura Robinson, and Nancy Leonard briefed the Council on the status of the amendments. The Council received recommendations to amend the program from 480 entities and individuals, including state and federal agencies, tribes and tribal organizations, as well as utilities, utility organizations, and other river user groups, Robinson recapped. Individuals submitted 350 of the recommendations, the majority of which relate to "protected areas" provisions in the program and specifically to the Skykomish River, she added.

The Council received 197 written comments on the recommendations during the 60-day comment period, Robinson continued. Any other comments received, including those made directly to staff or Council members, become part of the public record in the amendment process, she said. Staff summarized the recommendations and comments and went over them with the F&W Committee, Robinson explained. Toxics and RME have been referred to special four-member Council work groups for review and guidance, she added.

Rockefeller noted that Oregon's spill proposal was submitted to the Independent Scientific Advisory Board for review.

Leonard said a team headed by Jennifer Anders is working on a new format and structure for the program. The team may decide to reorganize topics in the program, and staff is experimenting with that idea, she said. One of the main points to address is the variety of audiences we have, Leonard said. The document needs to make sense to all of the audiences and the team is working on how to do that, she indicated.

We've heard "loud and clear" that we ought to take advantage of the web and the interconnectivity it provides, Grover said. There is a new table of contents for the document, he pointed out, adding that "we want to retain the content but restructure it."

Grover presented a list of 20 program topics, and he, Paquet, and Jim Ruff gave an update on how the committee proposes to treat each one. Some topics won't change much, the language may be condensed or clarified, but others will be changed based on the recommendations received, Grover said.

The F&W Committee might get a draft program completed by the end of March, which the Council could release to the public at the end of April, he continued. Sixty days of public comment would follow, with public hearings, meetings, and consultations in June, Grover said.

The committee hasn't reached a decision so it's premature to say what we'll do, Rockefeller said. Once the elements are reviewed, there is need for an analysis of the "adequate, efficient, economical, and reliable" power system provisions of the Act and an additional conversation on the merits of setting budget priorities in the program, he said. You can't do everything at one time, and we need to decide the logical sequence, as well as construct an agenda for implementing the program, Rockefeller said.

We received lots of very specific funding requests, Grover said, adding that those requests will be used to develop a forward-looking plan for implementation.

Bradbury called the amendment process "remarkable" and thanked staff for its work in distilling the issues to put forward in a clear and understandable way.

3. Bonneville Power Administration Transmission Overview:

Ben Kujala, energy analyst, introduction; and Bob King, Bonneville Power Administration.

Bob King of BPA briefed the Council on BPA's transmission planning process, describing a long list of considerations. To plan, we need to know what people want to do on the transmission system, he said. Transmission permitting and construction takes a long time, often 10-plus years for a 500-kV line, King said, so planning has to start early.

We need to know where renewable resources are going to be developed and what generating resources they will displace, he explained. Most of the region's load is west of the Cascades, but the higher quality wind and solar potential is on the east side, King pointed out. And the demand for Northwest exports to California is uncertain due to changing policies, he added.

King explained BPA's transmission "flowgates" and a division of the system into three major geographic areas. Puget Sound south to Portland is a major load corridor, where growth is occurring, he said. It's a major point of congestion on the system, King added. A second area east of Portland on the Columbia River, referred to as Lower Columbia, has seen a tremendous growth in renewable projects and there are lots of transmission requests to satisfy, he continued.

Farther east is a third area, referred to as the Lower Snake, where lots of renewable projects are also going in, King said. The challenge is to know where the power is heading from the projects, he said.

A number of recent transmission upgrades provide increased capacity west out of the Lower Snake and Lower Columbia areas, King reported. Most existing interconnection stations in the Lower Columbia are full, so any new large generation projects would require additions, he said.

BPA began a “network open season” (NOS) in 2013 during which anyone with need for transmission capacity can get in a queue with the request, King explained. A “cluster study” is key to coming up with the best plan of service given the requests received, he said. We can’t do projects on a one-by-one basis so we focus on the cluster study to come up with preliminary plans, King said.

BPA took a break from the NOS in 2012 to tighten up the process and got back to it in 2013, he added. Right now, the cluster study has been done for the 2013 process, and BPA is in the project definition stage, King said. Up next is a business evaluation step, which is followed by a decision on proceeding with an environmental study agreement, he said.

BPA had 18 executed and funded cluster study agreements in 2013 for 3,473 megawatts of transmission service requests, King continued. BPA extended the cluster study by 120 days at the end of December to address additional issues, he said. BPA is trying to conduct the NOS on a 12-to-24-month cycle that tracks with regional planning, King said.

Lorenzen asked how BPA sets up the projected rate for a transmission request. King said it depends on whether the plan of service involves a cost that will be rolled into the network. If so, service on the line will receive the published tariff rate, he said. But if there will be more than a minimal impact on costs, we recommend an incremental rate, King explained.

How are you addressing pancaked rates? Lorenzen asked. BPA offers a short-distance discount, but much depends on the plan of service, King replied. If a new interconnection causes a build that would impact others, we establish an incremental rate, he said.

In response to a question about the volume of NOS requests, King said “the mix is always different.” The reason BPA stepped back from offering NOS in 2012 was that we got commitments early on in the previous process but found the certainty wasn’t there for some projects, he explained. This time, we’ll ask for the commitment in stages as we get closer to going forward with a project, King said, adding that less than 5 percent of the requests come through in the end.

Rockefeller asked about BPA’s statement that it will work to improve the efficiency and lower the cost of integrating renewables. The rate case is where “the rubber meets the road” on costs, King responded. We are seeing pressure on rates, and “segmentation” of the system will be contentious, he said. We are committed to a public process to discuss the issues, King said. It is important to keep the Northwest’s transmission system together, he added.

“It’s important to have a system that recognizes opportunities for renewables,” Rockefeller stated. BPA tries to sit in the middle and see both sides, King said. Lorenzen pointed out that the transmission costs can be an incredible strain on small co-ops and rural customers.

BPA operates on the principle of cost causation and tries to find a balance between cost causation and rate shock, King stated. “We try to get the costs into the right bucket,” he said. Rockefeller asked if there is some “socialization” of transmission costs, and King said there is.

Black pointed out that similar transmission rate issues have been around for a number of years and remain difficult. BPA would not have the latitude to give special treatment to renewables, he added. That would be considered discriminatory by the Federal Energy Regulatory Commission, Black said.

4. Draft schedule and process for the Seventh Power Plan:

Charlie Black, director, power division.

Black described the activities and proposed schedule for developing the Council’s Seventh Power Plan. Advisory committees are up and running, and we are actively engaged with the region through them, he reported.

A new group, the Resource Strategies Advisory Committee, holds its first meeting this week, Black said. The committee has 34 members and will be chaired by Henry Lorenzen, he said, adding that all Council members are invited to attend. The committee roster is “a who’s who” in Northwest energy and it should be very helpful to the Council, Bradbury commented.

Staff is working on redevelopment of the Regional Portfolio Model (RPM), which is used for strategic risk analysis and developing an overall strategy for the plan, Black continued. The Council issued a request for proposals for software development in December and about 30 individuals participated in a pre-bid conference, he said. We will report back in February on the responses we receive and hope to have a vendor recommendation in March or April, Black said.

Other steps in preparing for the Seventh plan include writing issue narratives like those done for the mid-term assessment, Black said. We have more symposiums planned, including one in March on the change in demand growth for electric utilities, he added. We are also working on forecasts and other inputs and assumptions for the plan, Black reported, adding that the Genesys model will be used for developing a picture of resource adequacy, both for energy and capacity.

Staff is working on issues like balancing and resource integration, Black went on. We are also developing an approach for the region to make policy propositions for us to test, such as Governor Inslee’s “glide path” to reduce carbon emissions and the associated price tag, he said

The schedule calls for having a new RPM available in the first quarter of 2015, Black said. A draft plan with a public comment period would follow, and plan approval would occur by the end of 2015, he stated.

The Council must also develop an environmental methodology ahead of the plan, Black went on. We’ll propose a methodology for Council approval, he said. Staff wants your suggestions on how to make this plan useful, Black concluded.

5. Sixth Power Plan: Ninth Circuit remand: Council decision on release for public review and comment of methodology for determining quantifiable environmental costs and benefits:

John Shurts, general counsel.

Staffer John Shurts explained a recommended response to the Ninth Circuit Court's limited remand of the Council's decision on the Sixth Power Plan. This recommendation addresses one issue in the remand, he said: allowing public notice and comment on the proposed methodology for determining quantifiable environmental costs and benefits.

Shurts said he recommends the Council follow the remand as closely as possible. Appendix P in the Sixth plan has the methodology for determining the environmental costs and benefits, and we have drafted a letter that will release the appendix and seek comment on it, he stated.

The comment period would be 45 days, until March 5, and the Council then has to consider the comments and whether it would have done anything differently as a result of them, Shurts explained. If not, the Council would make a final decision in March or April, he said.

This is a procedural problem we are trying to resolve, Shurts continued, adding there were substantive issues in the case that were not resolved and could resurface. He noted that the proposed letter makes clear the Council will be working to develop the environmental methodology for the Seventh plan. In the meantime, we need to clean up this issue for the Sixth, Shurts said.

Anders made a motion that the Council release Appendix P to the Sixth Power Plan for a 45-day public review and comment period with the accompanying letter of explanation presented by the staff, as a step in the Council's compliance with a remand order from the Ninth Circuit Court of Appeals. Karier seconded the motion, which passed unanimously.

6. Potential regional approach to Clean Air Act rules implementation:

Angus Duncan, Chairman, Oregon Global Warming Commission.

Former Council member Angus Duncan, chair of Oregon's Global Warming Commission, briefed the Council on "the latest wicked problem that is coming our way" in the form of Section 111(d) of the Clean Air Act (CAA). The major climate change initiatives of the Obama Administration are auto fuel-economy standards, which are doubling by 2025, and an "obscure section" of the CAA that enables the Environmental Protection Agency to develop regulations that apply to emissions from existing power plants, he said.

Regulators will have to understand better how the electricity system works if we are to end up with rules that will not be disruptive, Duncan said. "That will require heavy lifting on our part and on the part of EPA," he added.

EPA concluded it could regulate greenhouse gases under the CAA and determined the gases were hazardous pollutants, Duncan explained. EPA initially focused its rulemaking on new power plants, he said. The rules were probably useful even though there aren't new coal plants being built that would conflict with the law, Duncan said.

Last year, President Obama asked the EPA to develop regulations under the CAA for greenhouse gases, he continued. About 37 percent of the electricity generated in the United States is from coal, down from over 50 percent 10 years ago, Duncan said. He pointed out that most old coal plants are already off the system, but new and middle aged plants remain.

As a region, we are 18 to 20 percent reliant on coal, Duncan said, adding that for Oregon, it's 34 percent. Some states are over 90 percent reliant on coal, and "they will have a hard time" under the rules, he predicted. The regulations differ dramatically from state to state and region to region, Duncan said, and "EPA has no choice, it has to do this."

With regard to the schedule, EPA has to promulgate rules by the middle of 2015, which means drafts will be needed by the middle of 2014, he continued. States will have to develop their own compliance plan or one will be imposed in 2016, Duncan said, adding that "it is a rigorous schedule to get where we need to go."

EPA will develop guidelines for the best system of emissions reduction, which will be a "safe harbor for states," he said. If a state has a plan that is different from the guidelines with equal or better outcomes, EPA will approve it, Duncan said. But if it doesn't meet the guidelines, EPA will develop a plan for the state, he said.

In the Northwest, we have plants in one state that serve loads in another, and we have to make sense of that within the CAA 111(d) construct, Duncan went on. EPA has signaled it is open to flexible solutions and to systems solutions, but it is unclear what the systems solution will be, he said. Duncan pointed out complications involved with a coal plant that serves loads several states away or a plant that has shared ownership. We need to figure out what flexible solutions there are that can accommodate the system architecture and pattern of ownership, he stated.

In terms of flexible solutions, the easiest are to close a plant or limit its production, Duncan said. Carbon capture and storage do not seem economic on a retrofit basis, he added. We can explore whether there are ways for utilities to mix and match plants, use energy efficiency that permits plants to ramp down, or introduce renewable energy plants into the system, Duncan suggested.

In addition, there is the question of what combination is the least cost solution, he continued. How do the states interact to come together to develop a least-cost solution? How do we come up with collaborative options for state-by-state plans? Duncan asked.

One option might be state-by-state bilateral agreements that focus on a specific utility, he said. For example, Oregon and Montana could wrap a plan around Montana coal generation that serves Oregon and back down the generation and emissions, Duncan said. That approach would take a lot of bilateral agreements, but it might be easier than a true regional solution, he added.

We have to think about the distributive affects, too, Duncan went on. Within Oregon, for example, the effects of a carbon reduction strategy could be dramatically different depending on the utility and its resources; customers would be at different levels of risk, he said. There will also be effects on low-income customers, the industrial mix, and urban and rural differences that have to be addressed, Duncan pointed out.

In the Sixth Power Plan, “the Council did groundbreaking work” to develop regional resource portfolio scenarios that comply with the Oregon, Montana, and Washington greenhouse gas goals, he said. The Council ran models and came up with an interesting proposition of how to achieve the least-cost compliant system and the costs were interestingly manageable, Duncan said. To meet the 2020 goals, customers were looking at a 2 percent increase in their annual cost of electricity, he stated.

We need the Council to do a similar analysis, using plausible scenarios, of how to comply with Section 111(d) and what it would do to the region, Duncan said. It wouldn’t be exact for any utility, but it would provide a framework for the most cost-efficient way to meet the law, he said.

The Global Warming Commission will be providing a venue for a utility regulators roundtable to look at options for structuring a least-cost regional response that would ameliorate distributive affects, Duncan said. The Council could have “a slot at the microphone” to talk about the Sixth Power Plan analysis and what the Council could look at to provide the least-cost context, he said. Such an analysis will probably be part of the Seventh Power Plan, Duncan said. Can we move it up in the analytic queue to inform the EPA about an optimal regional solution? he asked.

Henry Lorenzen pointed out that the Department of Environmental Quality regulates emissions from plants in Oregon. Why is the analysis different just because the product is transmitted on electrical lines? he asked. The analysis could be done that way, but most of the costs would land on the producer states, Duncan responded. By the time these rules apply, Oregon will have no coal and Washington will have very little, he said.

But aren’t the costs, which are approved by the Public Utility Commission, allocated to the delivered power? Lorenzen asked. The issue will be our collective ability to come up with a least-cost solution, Duncan said. Some solutions would advantage one state over another, he added.

Phil Rockefeller said it would be useful as a baseline for the Council to get a joint submission two dozen states made to EPA in response to the regulations. The submission had general principles and support for a system wide approach, he said.

Those comments support flexibility and defining systems so they are large enough and diverse enough to offer the opportunity for lower-cost solutions, Duncan responded. The Pacific Northwest is distinctive in how separated the generation is from load and the situation invites a different kind of flexibility, he said. We will try “to do a carve-out” with EPA, Duncan said.

Tom Karier said the schedule for the Council’s final analysis on carbon would be difficult to move up. But we can work with you to get what we can earlier, he said. This is an opportunity for the Northwest to put its interests forward, Karier said, adding that the Council hasn’t done much in the past on issues like distributive effects.

He added that equity with other regions is a consideration. We want to make sure we are rewarded and not penalized for our years of energy efficiency, Karier stated. The question is where the costs land to move to a carbon-free environment, he said. Has EPA signaled if it is looking for a specific level of carbon reduction? Karier asked.

That is “a tea-leaf exercise,” but emissions are within the same framework as the rules promulgated last year, which is to meet the emissions of a high-efficiency gas plant, Duncan responded. If we structure ourselves as a system in the Northwest, we can average things on a system basis; if emissions meet the threshold, the system would be okay, he explained. It depends on how we define the system and what EPA thinks is acceptable, Duncan added.

Are they looking at a level of emissions reduction? Karier said. EPA is inviting comments on defining the level, Duncan said. An important point is the selection of a baseline, he added. Depending on how that is done, we get credit for energy efficiency or we don’t, Duncan said.

EPA will offer draft guidelines later this year and a final rule in 18 months, he recapped. We don’t need a final regional least-cost solution now, but by the middle of next year, we do, Duncan said.

In the electricity sector, emissions are regulated as point source, but Angus is suggesting a system approach, Black clarified. The question is how to apply a system solution that may cross state boundaries, he said. To get states to participate in the process, the solution needs to deliver a net benefit to the states, Black said. The Council’s regional analytical model is being redeveloped and will not be available until the first quarter 2015, he confirmed.

Lorenzen asked if EPA would look for a system rather than point-source approach. All signals from EPA are that they want to see a system strategy, Duncan replied. They need the least-cost way to get the maximum emission reductions, he said. There will almost certainly be legal challenges to whatever they come up with, Duncan said, adding that the best system is a national cap and trade. EPA wants the most reduction with the least cost and least legal risk, he said.

This region is among cleanest if not the cleanest in the nation, Bill Booth said. Since the planned closure of Boardman and Centralia has been achieved, how about an approach that says this region is the cleanest and has done its share, he proposed. The Colstrip plant is important to Idaho and Washington and produces power that is low cost, even below the cost of conservation, Booth said. Doesn’t it make sense to say this region is very clean and has met its goal? Is it worth going after the closure of Colstrip? he asked.

EPA will look at plant-by-plant production and set an emissions level, and we will have a decision about which plants to back down, Duncan answered. The point is to reduce emissions, he said. As long as the net consequence meets EPA guidelines, they are inviting us to come back with solutions, Duncan stated. We will have to reduce emissions and meet the threshold EPA sets as though each plant is reaching its greenhouse gas goal, he elaborated. We have the opportunity to come up something better than applying “a meat ax” to each plant, Duncan said.

Pat Smith asked if there is a chance the Council could do some least-cost analysis. This presents opportunities for creative thinking about a system approach, he added.

7. Report on December cold snap in the Northwest:

Charlie Black, introduction; Jerry Rust, Northwest Power Pool; Mike Rasmuson, Williams Northwest Pipeline; and Jessica Zahnow, Argus Media.

The December cold spell was a one in five-year event, according to Jerry Rust of the Northwest Power Pool. Water conditions make a lot of difference in how the region can respond to extreme cold, he said, and in 2013, the most recent water year, the region was at 96 percent of normal. Several factors impact reliability, including load, generation, weather, and constraints, which is the ability of the transmission system to deliver generation to load, Rust said.

He set the stage with demographics about the NWPP and statistics on water conditions over the past three years. Rust also pointed out the impact of Renewable Portfolio Standards in Washington, Oregon, and Montana, and the renewable generation installed in the Northwest: 17 megawatts of solar, 908 MW of biomass, 38 MW of geothermal, and 11,000 MW of wind. The installed capacity of wind generation in the NWPP area nearly doubled from 2010 to 2014, he said, growing from 6,671 MW on June 1, 2010 to 10,903 MW on July 31, 2013, with a January 31, 2014 forecast of 11,403 MW.

The NWPP watches several factors to assure system reliability, including extreme winter weather conditions, precipitation, and the economy, Rust said. For every degree F below normal, the peak demand increases by 300 MW in the NWPP area, he said. Below-normal precipitation impacts future energy availability, and recovery or decline in the economy affects load, Rust said.

During the December 2013 cold snap, NWPP load peaked at 66,700 MW at 5 p.m. December 9, he reported. The BPA load was 9,730 MW at the peak, BC Hydro and the Alberta Electric System Operator were both at 10,830 MW, and the PacifiCorp total, West and East, was 11,480 MW. At the time, the region was importing 3,500 MW of generation from the desert Southwest, Rust said. BPA was generating 15,400 MW, part of which was being used by other entities, he explained. There was plenty of water available, and the situation gives “a perspective on what water means to the system,” Rust added. The generation needed isn’t just load, it’s also reserve requirements; currently, the reserve requirement calls for an average 2,500 to 4,500 MW of additional generation, he said.

The Puget Sound area requires monitoring during high loads, Rust pointed out. There is a constraint in that area – “we transfer a lot of power in and out of Puget Sound” – and it can become unstable with increasing loads and generation transfers, he said. The NWPP has established a trigger point to heighten awareness of the issue, Rust explained. The Puget Sound trigger point is 8,140 MW and the highest load during the recent cold spell was 7,612 MW, so there were no issues, he said.

In the end, there were no problems within the NWPP area in December, Rust said. Operators anticipated the situation and were well prepared, he said. The event was short and there were no significant transmission or generation outages during the event, “always a big plus,” Rust concluded.

Northwest Pipeline’s Mike Rasmuson said the company has served the region for over 50 years. The pipeline is a “bi-directional system” with access to domestic and Canadian gas supplies, and it interconnects in the Rocky Mountains with seven interstate pipelines. Between December 5 and December 9, 2013, daily gas prices at Sumas jumped from about \$4 per decatherm (Dth) to

over \$10, he reported. The nominations for gas at two of the company's compressor stations, Roosevelt and Plymouth South, exceeded their design capacity in December, Rasmuson said.

The weather event that was forecast for December 6-10 was widespread geographically and hit markets throughout the country, he continued. We saw it as a 20-year weather event, Rasmuson added. In preparation, Northwest declared a Stage II Entitlement for the system north of Kemmerer (Wyoming), which means a customer can't take more than 8 percent above what has been ordered without a penalty, he explained.

There is a drop in gas supply when we have a cold snap, and "we are tied to Jackson Prairie storage," Rasmuson stated, referring to the company's gas storage site in western Washington. During the December event, withdrawals from Jackson Prairie fluctuated during the day, peaking on December 6 at 972,000 Dth, which is below the maximum allowed withdrawal, he explained.

It helped that it was early in the season, Rasmuson added. There can be problems with deliverability later in the season; had it been February, for instance, the situation would have been completely different, he stated.

The gas load for power generation exceeded firm contracts for much of December, but the delivered gas did not reach the company's historical peak, Rasmuson reported. Over December 5-7, Northwest Pipeline experienced its third largest load ever, he said. "People are depending on non-firm capacity," and long-term, they may be in trouble doing this, Rasmuson stated.

In summary, advanced planning allowed Northwest Pipeline to meet all of its firm obligations, he stated. The power generation load stayed above contracted levels throughout December, Rasmuson reiterated. "Northwest is trying to serve markets with non-firm capacity, but that may not be possible long term," he said. In order to continue to meet these power generation levels on a contractual peak day, our system will have to be expanded, Rasmuson wrapped up.

Jessica Zahnow, a reporter for Argus US Electricity, briefed the Council on how generation performed and how electricity prices responded in December. There was a wide range of temperatures on the system during the December event, as low as minus 18 degrees F on Northwestern Energy's system in Montana to 21 degrees F in Seattle, she noted.

With regard to generation, hydro met the native load from December 7 to December 9, but wind "wasn't doing much," producing 1,400 MW at the a.m. peak on December 9 and about 800 MW at the p.m. peak that day, Zahnow reported. According to transmission line loadings, the region was a net importer on December 9, with about 1,400 MW being delivered over the California-Oregon Intertie at the a.m. peak and 1,000 MW at the p.m. peak; about 500 MW was coming into the region on the DC Intertie, she said.

Overall, "there were no major issues," reported, according to Zahnow. We heard from others that the forecasting was good going into Monday so systems were prepared and "a nice shot of rain before the cold hit" helped out, she said.

When the Northwest load peaked, "prices went up significantly," but there was no major price disruption, Zahnow continued. The Mid-C price was highest on January 6 for January 9 delivery, topping out at over \$80 per MWh, she said. The off-peak price swing was a bigger event,

Zahnow noted, indicating “the market is as concerned about off-peak as peak prices.” A wide range in prices indicated uncertainty following the peak, and the market reacted for a few days afterwards, she pointed out.

With regard to the Mid-C day-ahead trades December 9, the off-peak volumes were not remarkable, which could indicate there was not a lot of wind to move, Zahnow said. Year over year, the Mid-C peak volume is down 35 percent in December and the off-peak volume is down 70 percent, she pointed out. Most likely there is not as much water to move this year, but I want to look at a longer trend line to see what is happening, Zahnow added.

Northwestern Energy set a record in December for imbalance, she continued. For a utility that serves 72 percent of its load with purchases, that represents exposure, Zahnow added. The imbalance price reached its 2013 high of \$104.15 per MWh on December 9, she reported.

Electricity prices were up but gas prices were up more, Zahnow said. Gas prices made some generation unprofitable, and highly efficient combined cycle units fared best, she added.

The gas issues in California were noteworthy, Zahnow stated. Among the issues, SoCalGas was short of supply for interruptible power customers and asked the California Independent System Operator (CAISO) to step in and curtail generation, she said. Generators in Southern California were upset because they felt SoCalGas didn’t want to pay higher gas prices when there was no physical constraint on its system, Zahnow explained. The CAISO report was unclear about whether there was a physical constraint or SoCalGas was avoiding the spot market, she said.

“California can become a big issue,” Zahnow said. Some unpredictable situations can develop that could affect the Northwest, she added.

Zahnow recapped her presentation stating that power markets did not show extreme signs of scarcity during the cold spell, but eyes are on Northwestern Energy and its imbalance situation. She reiterated that California and the ISO-pipeline interaction could play a role when the Northwest is importing electricity from the south.

Jim Yost asked what will happen when Boardman and Centralia are replaced with combined-cycle gas plants. There is plenty of gas supply, but the question is whether there is pipeline capacity, Rasmuson responded. Customers already hold all the firm capacity on our system; we are fully subscribed and any new load will require new capacity, he added.

What would have happened if the cold snap had been later? Pat Smith asked. The Northwest isn’t contracting firmly for gas supply, and we can’t necessarily get more gas across the border from Canada, Rasmuson explained. We could be short of gas to meet the load if we can’t bring gas into Jackson Prairie, he said. Customers need to have firm rights, Rasmuson reiterated.

When market prices increase, are utilities holding their generation in reserve rather than taking it to the market? Yost asked. Utilities tend to hold a little back to assure they can meet load when they know a cold spell is coming, Rust replied. Contingency reserves are a requirement to assure a utility can maintain service to its load if a facility is lost, and utilities have to carry a minimum amount to address those contingencies, he said. Look at how much load has grown in the

Northwest and how many power plants have been built, Rust pointed out. The Northwest load often takes the generation we have installed, he added.

What about Independent Power Producers? Yost asked. Are they contracting with utilities to firm up load so energy isn't going into the market? he asked. Staffer Charlie Black said utilities are purchasing the merchant plants. There are a few merchant plants in the region that don't have generation committed via a long-term contract, he said, but those plants are bidding to fill utilities' requests for proposal. As time has gone on, merchant plants have been purchased by utilities and put into service to meet native load, Black stated.

While the overall NWPP peak is growing at 1.5 to 2 percent per year, the Pacific Northwest footprint within the NWPP shows no upward trend in peak or energy loads, he pointed out. This raises important questions we will be talking to the Council's Power Committee about, Black said. Are we seeing little demand growth on the system due partly to energy efficiency? It's an interesting question, he concluded.

8. 2012 Regional Conservation Achievements:

Tom Eckman, conservation resources manager; and Gillian Charles, energy policy analyst, presenters.

The region exceeded the 2012 conservation target set in the Council's Sixth Power Plan, achieving 253 average megawatts (aMW) of savings, according to a survey conducted by the Regional Technical Forum (RTF). The RTF survey gathers data annually on conservation savings and expenditures in the region, staffer Gillian Charles told the Council.

The launch of last year's survey was delayed while improvements were made to the data collection system, she explained, noting that Council staff is still working with BPA and utilities to make the process better. The survey is a big effort that involves a lot of people and it is voluntary, Charles said. In the 2012 survey, the RTF coordinated with PNUCC to collect information on utilities' projected savings and expenditures for 2013 to 2015. This will help to see whether the region is on track to meet the conservation target in the Sixth plan, she said.

While there was a drop in the number of utilities responding to the survey, down from a high of 98 in 2010 to 80 in 2012, the share of the regional load covered is 100 percent, Charles continued. The Council gathers data from the Northwest Energy Efficiency Alliance (NEEA) and BPA for utilities that do not respond directly, she explained.

"What looked like mission impossible was not so impossible," Charles said, noting that the target for 2012 was 240 MW. The region has exceeded the target set in the power plan every year since 2005, with the high being 277 aMW in 2011, when BPA's spending on energy efficiency went over budget, she pointed out.

Since 2005, Northwest utilities have acquired over 1,700 aMW of conservation savings, staffer Tom Eckman stated. That exceeds the total load of Seattle, he added. There has been a shift since 2008 in where savings are being achieved, Eckman said. Savings in the commercial and industrial sector are growing relative to the residential sector, he pointed out.

The region's investment in energy efficiency topped \$350 million in 2012, Eckman reported, noting that of the \$5.35 billion spent nationally on energy efficiency, the Northwest represents 7 percent. NEEA continues to contribute significant efficiency savings in the region, about 20 percent of the aggregate, he continued. A fair amount of the NEEA savings in recent years is attributable to increased efficiency in televisions, Eckman added.

The average levelized cost of conservation remains low and was about \$18 per MW-hour in 2012, he said. In 2007 and 2008, utilities flooded the region with compact fluorescent light bulbs at very low cost, Eckman explained. There are higher-cost measures coming into the mix, but the average is still low, he said.

In looking at the survey's projections for future achievements and investments, it's clear that the tally by 2015 will be over 2,000 aMW, he said. We should easily achieve the target in the Sixth plan, and "the question is how much we'll exceed it," Eckman added.

He went on to point out how much the region invests in energy efficiency per person, \$28.02 in 2012, which is nearly double the U.S. average of \$16.17. The Pacific Northwest also invests about twice the share of its retail electricity revenues in efficiency compared to the rest of the nation, 3.3 percent in 2012 compared to 1.63 percent, Eckman reported. Efficiency has met nearly 60 percent of the load growth in the region since 1980, he added.

Since 1978, the region has produced over 5,300 aMW of savings, with two-thirds attributed to utility and BPA programs, and one-third a result of state codes and federal standards, Eckman reported. That is enough electricity to power the entire state of Oregon, he said. Efficiency saved the region's electricity customers nearly \$3.23 billion and lowered carbon emissions by an estimated 20.8 million metric tons in 2012, Eckman said.

Energy efficiency was the region's second-largest resource in 2012, displacing coal in the resource stack, he said. Savings from energy efficiency since 1978 is nearly equal to the annual firm energy output of the six largest Columbia River dams, Eckman said. "We've stretched the Northwest's hydro resource," he wrapped up.

What is your confidence the savings persist? Rockefeller asked. To the extent we have expired measures, the savings are reduced, Eckman responded. Some measures expire and they are displaced, he added. Where we know a measure won't persist, we have made an adjustment, Eckman said.

The achievements are a great success, Karier said. This has been done at a phenomenally low cost, has reduced carbon emissions, and set an example for others in the nation, even though this region has low-cost electricity, he said. We need to think about how to build momentum for the future, Karier stated.

Council chair Bill Bradbury asked about costs going forward, and Eckman said the region has not exhausted measures under \$40 per MWh, but some of the savings have been captured by standards. There is still potential, he said.

Smith asked if changes in BPA's program will impact savings. The changes will improve the administrative structure, Eckman responded. There will be a discussion in the course of the rate

case about the appetite utilities have for more investment, he said. The current 25 percent cost-share with utilities is being met according to BPA's program review, Eckman added.

We are probably in good shape for achieving 200 to 250 aMW per year, Yost stated. But not all years are equal and this should be looked at as a five-year target, he said. Also keep in mind that this level of achievement "is paid for by someone," Yost said. "It is not free; there is a cost to conservation and it comes out of someone's pocket," he said. We also need a contribution from technology to continue the achievements, Yost said. "This is not just about cranking up the spending," he stated; there have to be technology improvements.

9. Council business:

– Approval of minutes

Anders made a motion that the Council approve for my signature the minutes of the December 10-11, 2013 Council Meeting held by conference call in Portland, Oregon. Lorenzen seconded the motion, and asked for the following changes: add language to indicate Lorenzen's absence was due to illness and delete a reference to Lorenzen in the committee reports items since he was not present. There were no objections to the changes. The motion passed unanimously.

– Approval of the final version of the Fiscal Year 2013 Annual Report to Congress

Staffer John Harrison reported that only one set of comments was received on the 2013 Annual Report to Congress. He described editorial changes made as well as updates to information in the report. Harrison said the report is ready to proceed to the final version for publication. He noted that a letter from the BPA Administrator is being prepared and will be included in the final.

Anders made a motion that the Council approve the release of the Fiscal Year 2013 Annual Report to Congress as presented by staff. Smith seconded the motion. Karier said he liked the inclusion of the Council's high level indicators in the report. The motion passed unanimously.

– IEAB reappointment, recruiting and review of candidates

Grover said two members of the IEAB are up for reappointment. Anders made a motion that the Council approve the reappointment of Dr. Roger Mann and Dr. Noelwah Netusil to the Independent Economic Analysis Board for a period of four years. Karier seconded the motion, which passed unanimously.

Grover also noted that a longtime member of the board, Dr. Dan Huppert, has resigned, which creates a vacancy. He said the staff plans to recruit from previous notices and proposes to continue to use the Pacific Northwest Regional Economic Conference to vet candidates.

The Council agreed by head nods to support the staff's recruitment and vetting proposal.

– Adoption of New Council Logo

Staffer Mark Walker said the Public Affairs Committee unanimously approved the redesign of the Council's logo. We would implement the new logo unless there is objection, he said.

Anders made a motion that the Council adopt the latest version of the Power Council logo as prepared by Melissa Shavlik. Smith seconded the motion.

Rockefeller said he thought the old logo has more meaning with its symbols of fish and the river. The proposed logo says less and embraces an abstraction over meaning, he said. The Council tries to balance fish and river uses, Rockefeller said. Somehow the logo being introduced takes us away from that idea, he said.

The Council voted to approve the new logo with seven members voting aye. Rockefeller abstained.

– Election of officers

Bradbury opened the nominations for Council officers. Yost nominated Bradbury to another term as chair. I'd like to see him continue and he has done an admirable job, Yost said. Booth seconded the nomination. There were no other nominations and the vote to re-elect Bradbury was unanimous in a roll call vote.

Bradbury said he appreciated the support and called it an honor to have the opportunity to serve as chair.

Booth nominated Anders as vice-chair. She has served in fine fashion and taken an active role on the Council and in amending the F&W program, he said. Rockefeller seconded the motion, which passed unanimously in a roll call vote.

Anders said she appreciated the support and looks forward to serving another year.

Public comment on any issue before the Council

Ralph Cavanagh of the Natural Resources Defense Council said energy efficiency achievements in the Northwest are the envy of the world. The collective achievement is extraordinary, he said. Cavanagh encouraged the Council to work with Angus Duncan on the EPA rules. The Council is uniquely capable of this type of analysis and I hope you take it on as part of developing the Seventh Power Plan; a regional approach is needed, he said.

Wendy Gerlitz of the Northwest Energy Coalition commended the Council on the conservation achievement and asked for the Council's help in maintaining the momentum. She said there is a disparity between BPA's budget cycle and the five-year conservation action plans. The BPA budget looks low for 2015, Gerlitz said. We are moving into the next BPA budgeting cycle, and we are concerned that if the downward funding trend continues, we will get behind, she said. Gerlitz asked the Council to weigh in with BPA on the funding needed to meet the conservation targets in 2015.

Brian Mercier and Peter Cogswell of BPA offered comments on BPA's F&W program expenses and 2016 budget proposal. Last week, BPA had its first Integrated Program Review meeting, which set the landscape for its future F&W effort, Cogswell said. He said someone from BPA's finance group would be present next month, and he introduced Mercier, manager of business operations for the agency's F&W program, to give context to the IPR.

Mercier said BPA met its 2012 spending challenges and stayed within its rate case budget. He presented BPA's annual F&W program costs from 2010 to 2012, noting the multiple cost components and where there were increases and decreases. Mercier also offered a breakout of the expense portion of the \$254 million 2014 F&W program budget.

He concluded with a slide showing the growth in BPA's annual F&W expenditures. Back in 2008, the expense portion of the program was \$150 million annually, Mercier said. BPA and its customers agreed to ramp up the funding, which has nearly doubled since then, he said. The agreement in 2008, was to ramp up the program for 10 years, and we have managed to the established budgets regardless of the economic downturn, Mercier said. We have raised rates to grow the F&W program, he stated. We look forward to your support in getting through the next rate period, and we encourage your participation in our processes on the F&W expense and capital budgets, Mercier said.

The meeting adjourned at 12:14 p.m.

Approved February _____, 2014

Vice-Chair