



NORTHWEST POWER AND CONSERVATION COUNCIL May 12-13, 2009

Key parts of the Sixth Power Plan remained shrouded in mystery after an all-day work session in Walla Walla, and the Council decided not to release a draft before July. Milton-Freewater City Light representatives reported on their considerable experience with energy-efficiency programs, and the Council, BPA, and others are getting ready once again to try to push the monitoring and evaluation rock up the hill. Next Meeting: June 9-11 in Whitefish, Montana.

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FOR OPENERS

Lieutenant Colonel Michael Farrell, commander of the Walla Walla District of the Corps of Engineers, updated the Council on what the district has done in the past year. He said the Columbia Basin Fish Accords have brought "a genuine partnership" and that there's a degree of trust and candid dialogue that was lacking in prior negotiations.

The Biological Opinion (BiOp) has brought a degree of precision to our operations that is nothing short of remarkable, Farrell told the Council. He reported on habitat projects and fish

passage improvements at Corps projects, noting that all the projects now have spillway deflectors. With the spill regime we've had over the past few years, we've done less fish transport than in the past, Farrell said. The Corps is transporting one-fourth as many fish, he noted.

On the power side, Farrell pointed out that the infrastructure at Corps projects is aging, which "increases our day-to-day challenges." It's getting harder and harder to get replacement parts, he said. Farrell described recent improvements, such as the installation of fire protection systems at all the projects. The Corps is trying to

develop a next-generation turbine runner at Ice Harbor Dam, he reported.

THE AGENDA



The Power Plan Is Still Out of Focus

The Council's work session on the Sixth Power Plan began with a discussion of four different approaches. All have significant amounts of conservation, assume that utilities will meet their Renewable Portfolio Standards (RPS), and meet reliability and adequacy standards for energy and the winter and summer peak, staffer Michael Schilmoeller explained.

The discussion zeroed in on two approaches: Plan A, dubbed "least cost," which would have greater rate and cost volatility due to reliance on the wholesale electricity market and would develop 5,527 average megawatts (MWa) of conservation; and Plan D, dubbed "least risk," which would develop 5,827 MWa of conservation and have lower cost and rate volatility because it relies less on the wholesale market. Both plans would have a 160 MWa per-year limit on discretionary conservation development and a \$10 per MWh cost-effectiveness premium for conservation over the wholesale electricity price. Staffer Terry Morlan said the \$10 per MWh is not an assumption, but rather a result of the model.

I want a vision and plan that makes sense "in the real world" so that when our

friends in the utility industry look at it, they say "that's reasonable," and that "we're not out there with a computer-driven result," said Council chair Bill Booth. It's important to put this into terms people can understand, agreed Dick Wallace. At the end of the day, the public will ask, "what might this do to my electric bill," he said. As for risks, we ought to be able to describe them in terms of what they mean to the ratepayer, Wallace added.

What we've seen in the past is that when power prices drop, utilities reduce their energy-efficiency efforts, staffer Tom Eckman said. Adding the \$10 per MWh premium is a way to sustain those efforts when prices fall, he stated. The slack-off in conservation expenditures is one of the reasons we got into trouble during the energy crisis, added Melinda Eden.

There are lots of audiences we are trying to serve with the plan, Morlan told the Council. The plan's credibility depends on its technical soundness, but we also want it to be understandable to the average person, he stated. PNUCC has said that's important, and I agree, added Wallace.

Morlan said the Council selected the least-risk approach for the Fifth Power Plan. The least-risk plan (Plan D) being considered for the Sixth Power Plan recommends planning, siting, and permitting to support the construction of new gas turbines in 2016 and 2018, as well as 1,200 MW of wind in 2016 and 52 MW of geothermal in 2018, if utilities have not already achieved that as part of their RPS obligations, according to a handout.

Is the Surplus Bigger than a Bread Box?

Schilmoeller presented a chart titled "Be Prepared to Hear about the Energy Surplus." He explained that the Council's calculation for energy adequacy includes purchases and reliance on the market, but that utilities don't include those in their adequacy assessments.

The Council's calculation is for the whole region, Schilmoeller noted. We need to make it clear this doesn't pertain to any individual utility, he said. The surplus calculation was an issue in the Fifth Power Plan, and it is an issue "out there" now, Schilmoeller added.

Staffer John Fazio said the Council's calculation includes about 4,000 MW of uncommitted resources owned by independent power producers and available out-of-region resources. If you compare this to PNUCC's Northwest Regional Forecast (NRF) or BPA's White Book, you would subtract the 4,000 MW from those numbers, he stated.

How do we explain all this surplus while many utilities like Idaho Power are scrambling to build new resources? Jim Yost asked. Utilities will be going to their public utility commissions to get cost recovery for the new generation, and the PUCs will have this graph from the Council in front of them, which says the region is surplus and that utilities don't need to build, he said. Utilities won't want this graph in our plan, Yost added.

The difference stems from the regional perspective of the Council versus the perspectives of individual utilities, Morlan

said. The plan needs to explain the difference and how the plan does and doesn't apply to individual utilities, he noted.

A lot of the surplus we show is not owned by Northwest utilities, and they will have to decide how much to rely on imports from California, Tom Karier stated. Our plan incorporates a doubling of conservation in the region, and if that happens, there may be less need to build new resources, he added. The point is to make sure this isn't misleading; we need to explain this issue to the layman, Booth said.

Besides choosing a plan approach and conservation levels, the Council will need to make decisions on other issues, such as what happens if utilities don't meet their RPS requirements or states rescind those requirements, according to Schilmoeller.

Climate change is another issue, he said, pointing out staff is doing a study on its impact on loads and hydro generation patterns. Staff ran a study of the hydro system without the Lower Snake River dams, Schilmoeller noted. Since breaching wouldn't take place for at least 10 years, from the plan's standpoint, there would be time to make arrangements to compensate for loss of the power, he said. But we are not suggesting that breaching is a desirable alternative, Schilmoeller added.

We are looking into the value of preserving the hydro system, and we used the Lower Snake example because "it's an issue out there," said Morlan. This is a "what if" study, he added. It's just one

additional scenario we are running in addition to the regular modeling, Eden said.

Cutting Carbon

Schilmoeller said if the Council chooses the least-risk plan, it would return CO₂ emissions from the Northwest power system to 1990 levels. He went on to say there is still a 40 percent chance of not meeting that target and a 20 percent chance the region won't reduce CO₂ emissions at all.

While the least-risk plan would reduce carbon emission rates, a significant risk remains that the six coal plants in the region would continue emitting carbon at nearly the same rates, Schilmoeller said. So investing in renewables and efficiency, along with arrangements for the direct curtailment of the coal plants, might provide "a manageable, low-risk means" for the region to meet emissions standards, but he cautioned that if coal generation were curtailed too abruptly, the region would have to "backfill with gas-fired generation," which would then cut possible emissions reductions by half.

"There are an awful lot of ifs, might, and buts in this," commented Booth. If we are talking about the curtailment of coal as a key part of the plan, we have to know it's feasible, he stated. I was in Washington, D.C. recently, and to me, it doesn't look like a cap-and-trade system "is a slam dunk" there now, Booth added.

We ought to look at the fiscal operation of a coal plant, said Yost. If we are going to lay off people at certain times of the year

and incur start-up and shut-down costs, some plants could shut down entirely, he stated. We need to do "a reality check" so we can see the impact on certain industries and what the ratepayer will pay for this, Yost added.

I agree, Booth stated. Let's make sure at the end of the day, we do a reality check and that we have a reasonable, real-life outcome -- "that's my main interest," he said.

The Big Picture

Morlan explained some of the basic findings staff proposes for the plan. These include that the region faces slower demand growth, but increasing summer peak loads, as well as higher fuel prices and the risk of CO₂ penalties, he said. We are looking for a mix of efficiency improvements or generating resources that meet demand at lowest cost and low risk, and we've added "a new measure of merit" -- CO₂ emissions -- to the key elements in the plan, according to Morlan.

Plan D, the least-risk approach, calls for 5,800 MWa of efficiency improvements at an average cost of \$34 per MWh, and wind development to go up to 5,400 MW, with smaller contributions from geothermal and combustion turbines, he said. Under Plan A, the least-cost approach, there would still be a large reliance on efficiency improvements, with 5,500 MWa developed, Morlan pointed out. Wind development would be at 5,400 MW, and no other resources would be optioned until toward the end of the planning period, he said.

I don't see much difference between Plan D and Plan A, and there's seems to be only about a 1 percent difference in cost, Karier commented. Would you opt for more reliance on the market or less? Morlan asked him. Plan D has options that don't have significant costs in the early years, Karier replied. If we have gas plants optioned and then don't need them, fine; but if we do need them, they would be optioned, he said.

If one is uncomfortable with the size of the surplus, the way to buy that insurance is to go with Plan D because then you would option the gas plants, stated Eden. I'm not ready to make a selection because there are so many variables we haven't looked at yet, said Yost.

What is happening here is "we are buying a house based on the color, but we don't know whether it has indoor plumbing or the number of bedrooms," he continued. I want to know some of the basics, Yost said. I don't object to focusing on Plan D and then plugging in other variables, but there's a lot of information we don't have yet, he added.

Let's Give It a Stress Test

Booth asked staff to provide a two-page summary of the risks and costs associated with Plans A and D. I agree with Jim that it's okay to converge on one approach, but not choose yet, said Karier. The plan needs to be stress-tested by staff and Council members, he stated. And the two-page summary presenting the options should be written at an eighth-grade level, added Wallace.

Schilmoeller said electricity rates are expected to increase by about 30 percent over 20 years under all the approaches being considered for the Sixth Power Plan. We've found that new generating resources are more expensive, and that while efficiency acquisition can affect consumers' rates, it can reduce electricity bills because fewer kilowatt-hours are consumed, he noted.

The plan would maintain a substantial energy surplus, and there would be adequate capacity in the winter and summer, but summer is an area of growing need, Schilmoeller continued. Resource flexibility for within-hour balancing reserves may be needed for wind integration, he added.

Morlan noted several issues related to the plan that are being discussed in the region. These include the estimate of the size of the surplus and concerns about the region's ability to develop the high levels of conservation called for in the plan, he said. Plus, the whole region is struggling with how to provide flexibility reserves to integrate large amounts of wind, according to Morlan. He also said planning at the regional level creates a disconnect from utility plans. We are always struggling with this distinction, Morlan added.

Conservation Laundry List

Staffer Charlie Grist said energy efficiency is the first-priority resource in the plan and that achieving the conservation levels called for in the plan will require aggressive actions. The plan aims to increase efforts to identify and verify new cost-effective technologies and

to develop regional mechanisms to keep efficiency policies up to date with new information and track and verify achievements, he explained.

Grist pointed out the power plan will be adapted to match up with new appliance standards the federal government has adopted. He said there are 22 federal appliance standards "up for grabs" in the next 18 months. If they are successful, we'll have less to do on the utility front, and if they are not, we'll have more to do, so we should support those in Washington, D.C. who are working to pass those standards, Grist stated.

Staff has developed a list of 19 conservation action items for the plan, he said. The Council suggested the Power Committee review them in detail.

Staffer Jeff King described proposed action items related to generating resources. One is providing guidance for resource acquisition and optioning in the near term, he stated, noting that while the model says no optioning recommendations or resources would be needed until the late teens, utilities will need resources to meet RPS requirements. I recommend the plan provide guidelines to BPA and utilities confronting the need for generating resources, King said.

Another action item is ensuring adequate system flexibility, which includes assessing the benefits of increased geographic diversity of wind, he noted. The question is whether the region should develop transmission to bring in wind and solar from remote areas or continue to build wind facilities within the region,

according to King. It may make more sense to build balancing reserves instead of transmission, but a bigger study of this is needed, he said.

It would be good to conduct a regional inventory of the potential for hydro system upgrades, King noted. We've heard there could be up to 1,000 MW of potential, but a study is needed, he said.

Fazio said the action items related to adequacy include doing annual assessments of the adequacy of the power supply and making sure the Council's load and resource reporting are accurate and match up with PNUCC's NRF and BPA's White Book.

Staffer Ken Corum described action items related to demand response, which include developing pilot projects and assessing demand response's potential as a flexibility resource. BPA may or may not serve the DSIs, but if it does, we recommend BPA use the DSI loads as a source of reserves, he stated. Alcoa is proposing some "really progressive" things that could provide balancing and reserves, Corum noted.

Hands Off the MCS Trigger

Eckman made a presentation on what the plan might recommend with respect to the Model Conservation Standards (MCS), which are required by the Northwest Power Act. He said the plan must set forth MCS for new and existing buildings and utility and government conservation programs. The plan also is required to contain a recommendation to the BPA Administrator on whether a utility's failure

to achieve MCS savings should be subject to a surcharge on all of its power purchases from BPA, Eckman pointed out. The surcharges may not be less than 10 percent or greater than 50 percent of BPA's rate, he said.

It was "inflammatory" to put the MCS surcharge in the first Council plan, but it got everyone's attention, Eckman stated.

When the Council adopted the first MCS in 1983, it was sued by the Seattle Master Builders, but the Ninth Circuit ruled in favor of the Council, he said. All the Northwest states have now adopted the MCS as code, according to Eckman.

The Council has recently completed a new cost-effectiveness review of the MCS, he said. Based on that, staff recommends the plan revise the MCS for new electrically heated residential buildings to reflect all regionally cost-effective measures, including space conditioning, lighting, and water heating, Eckman stated.

Staff recommends maintaining the current MCS for new commercial buildings and for utility programs targeted at new residential and commercial buildings, he said. We also propose that the current surcharge policy be kept, with no recommendations to the Administrator about levying a surcharge, Eckman added.

, Will revising the MCS put us above current codes in the states? Booth asked. Yes, replied Eckman, noting that the Council's MCS usually become new targets for the states to meet. Would builders have to follow the MCS? Booth asked. They have to follow state codes --

the MCS don't pre-empt those codes, replied Eckman.

Wallace asked about ways utilities meet the MCS. Eckman said some offer financial incentives, and he described a Mason PUD #3 program that told manufactured home builders, if you don't build to that standard, we'll charge you \$3,000, but if you do, we'll give you \$3,000.

Staff recommends maintaining the commercial MCS standards as they are, said Grist. State commercial building codes are getting closer to one another -- there's not that much difference between them, he noted.

Booth asked what the MCS add to the price of a new home. Eckman said the cost is in the range of \$10,000 for a \$250,000 to \$260,000 home.

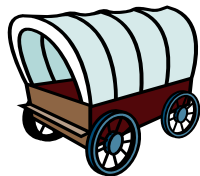
Are you recommending no surcharge because it's a controversial issue? Wallace asked. Utilities are pursuing residential conservation programs, and we don't sense the kind of resistance there was in the early 1980s, Eckman replied. Staff didn't think it was necessary "to rattle the saber" to get utilities to do these kinds of programs, he said. Instead, utilities are "ready, willing, and able," Eckman added.

Can the Council reconsider the surcharge issue at any time if there is a need to do so? Karier asked. Yes, the Council decides whether the Administrator should levy a surcharge, and the Administrator decides the amount and on whom to levy it, Eckman replied. "We cock the gun, they pull the trigger," he said.

Schedule Change

Given the discussion today and the number of issues that remain to be talked through and brought before the full Council, I recommend we plan to adopt the draft plan in July, rather than June, said Eden. That will give us more time to work through the issues and the model results and get answers to questions posed by Council members, she added. This is so important -- let's take the time to get it right, said Wallace. The Council agreed to the schedule change.

Milton-Freewater Pioneers in Conservation



Mike Charlo, electricity superintendent of Milton-Freewater City Light and Power, told the Council Milton-Freewater is the oldest municipal utility in Oregon, is a full-requirements customer of BPA, and has the third lowest rates in the state of Oregon. He reported that Milton-Freewater was one of the original 11 Northwest utilities in BPA's residential weatherization pilot program back in 1980. In 1985, Milton-Freewater instituted a voltage reduction program, Charlo noted.

In 1986, we found a GE technology called Radio Energy Management System (REMS), which is a small radio receiver that hooks up to water heaters, electric central heaters, and air conditioners and can shut them off during times of peak usage, he said. We offered customers a

discount on their bills if they would sign up, Charlo explained. So now on a cold winter morning, the system can turn off those appliances for short periods, and "it's invisible" -- customers usually don't know it has happened, he said.

We send out a signal to the load control device, and it's a one-way system, Charlo noted. The trend today is for two-way communications, and we are working to change our relays to two-way, he said.

For years, I've been trying to get BPA interested in working with these kinds of systems, Charlo stated. This kind of technology has been used heavily in the Southeast by Duke Power and Florida Power and Light, but it didn't catch on in the Northwest, he said. Now demand response has become the buzzword, and lots of people want to talk with us about our system, Charlo added.

Pat Didion, conservation director for Milton-Freewater, explained some of the difficulties small utilities face in participating in regional conservation programs. The problem is the income level and lack of economies of scale on this side of the mountains compared to the I-5 corridor, he said.

For example, all of our HVAC contractors are in Pacific Power territory, and local contractors tell us they have to get their people certified for Pacific Power, Charlo stated. But they would have to meet different training criteria set by BPA in order to work in our service territory, he said.

We've heard about the need for more flexibility in BPA's programs from others, and we've taken those comments to BPA, Booth stated.

"You're not alone," Bruce Measure told the utility representatives. All rural utilities have the same fears about BPA's conservation programs, he stated. Measure urged them to provide the Council comments about this problem during the public comment period for the draft power plan. "It's really important that we hear from you," he added.



Once More Into the M&E Breach

Under the BiOp, BPA and NOAA Fisheries have specific monitoring and evaluation (M&E) obligations to meet, and the Council has incorporated the BiOp as part of its fish and wildlife program, staffer Tony Grover said. Greg Delwiche of BPA has proposed using a collaborative, multiparty negotiation process in which experts meet to identify the M&E needs for anadromous fish in the basin and discuss how that work could be done, Grover reported. I think it's a good approach, he added.

At the end of the day, the M&E people in the region have to make some decisions about what's going to be done, and I'd like the Council to be at the table, Grover stated. We've talked with representatives from BPA, the Columbia Basin Fish and Wildlife Authority (CBFWA), and NOAA Fisheries about this and laid out a

timetable, he said. A collaborative negotiation doesn't commit anyone to an outcome, Grover noted.

Brian Lipscomb of CBFWA said his organization has been working on this for some time. We've identified the things that are needed, and CBFWA has authorized me to sit with BPA, the Council, and others to define an M&E framework and a timeline for accomplishing what needs to be done, he stated. We are proposing a three-step process that will include holding workshops across the basin aimed at defining the M&E framework needed by each Evolutionarily Significant Unit (ESU) and to figure out the funding, Lipscomb said.

The BiOp has some pretty onerous M&E reporting requirements, noted Bill Maslen of BPA. We've come to a unified approach on how to do this -- it is a convergence of a lot of good things at the right time, he said.

This proposal would create an integrated, focused research, monitoring, and evaluation program for anadromous fish that will enable us to meet our obligations, according to Maslen. Our interest is in a focused program on a rigorous schedule, he added.

The intent here is to get everyone "using the same currency," and this process is bringing into alignment a pretty fragmented bunch of parallel processes, said Scott Rumsey of NOAA Fisheries. I'm very optimistic we'll get a process to meet all our needs, he added.

Overall, it seems like a good opportunity, and you've got the right players, said Wallace. You should sort out the roles and responsibilities right up front, he advised. I have some anxiety about how it will fit in with the Council's M&E strategy and with our high-level indicators, Wallace stated.

The Council has brought in people before to try to develop a coordinated approach to M&E, but without much success, noted Karier. "Every time we've made an assault on this hill, we've been driven back," he said.

We did some similar work in "a small chunk of the Methow," and we found it was important to narrow things down, Karier stated. The key is to keep the effort focused and go for substance, not a framework, strategy, or principles, he said. "Counting fish should not be that hard, but we've made it very difficult," Karier added. This is very consistent with our work on high-level indicators, and it's critical that you succeed so your work can feed into the Council's process, he said.

Grover said the proposal would be put before the Council for approval at its June meeting. We'll bring you some alternatives, and you'll be able to "slice and dice" among them, he added.

Chief Joe Hatchery Wants to Take the Third Step

Staffer Mark Fritsch said the Independent Scientific



Review Panel's (ISRP) final Step 2 review of the Chief Joseph Hatchery Program in April found that it "meets scientific review criteria." Joe Peone, F&W director for the Confederated Tribes of the Colville Reservation, said the tribes are now seeking approval to proceed to Step 3 (final design). The purpose of the hatchery program, he said, is to support conservation and harvest of Upper Columbia summer and fall chinook and spring chinook in the Okanogan and Columbia rivers.

Peone pointed out that the fourth and final hatchery authorized as mitigation for Grand Coulee Dam was never constructed in the Okanogan River, so "we pulled it off the shelf, dusted it off, and got it started."

The program's goal for spring chinook is to reintroduce those fish to historical habitats and restore the tribes' ceremonial and subsistence fishery and recreational fishery, he said. For summer and fall chinook, the goal is to increase abundance, distribution, and diversity of naturally spawning chinook in the rivers and increase and stabilize the tribal ceremonial and subsistence fishery and the recreational fishery, according to Peone.

Step 2 accomplishments have included confirming cost-sharing interests with Chelan, Grant, and Douglas PUDs, as well as completing an environmental impact statement and the ISRP review, which helped refine the program, he reported.

Program refinements have included adopting the Hatchery Scientific Review Group (HSRG) principles and standards

for summer and fall chinook, intensification of selective fishing, and the consideration of a weir in the Okanogan to ensure achieving HSRG standards, Peone said.

The cost of the project to date is \$6.8 million, and construction costs are estimated to be \$37.5 million, he told the Council. Final engineering and construction plans will be completed this fall, Peone said.

Shaun Seaman of Chelan PUD told the Council all the cost-sharing negotiations have been very open and have made it easy for the PUDs to participate. Participation in this project enables us to provide mitigation for Rocky Reach and Rock Island dams, he said.

A lot of hard work has gone into this program, said Karier. This hatchery, with its embrace of HSRG principles and selective fishing, has become a model even before it is built, he noted. The Council approved the program moving on to Step 3.



The Estuary: Ready for its Close-up in Astoria

Staff proposes to hold the Council's next "science and policy exchange" conference on the topic of the estuary, staffer Patty O'Toole reported. The purpose would be to educate ourselves and the public about the estuary, identify critical uncertainties, and inform the development of the next fish and wildlife program, she said.

Our proposal is to hold the conference in conjunction with the Council's September meeting in Astoria, O'Toole stated. The one-and-one-half day conference would begin September 10, she said.

The Council liked the idea, and Booth instructed staff to proceed with the planning and report back

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Council 2009 Calendar

June 9-11	Whitefish, MT
July 14-16	Portland, OR
August 11-13	Spokane, WA
September 9-10	Oregon
October 7-9	Ketchum, ID
November 12-13	Teleconference
December 8-10	Portland, OR