

PNWCC REPORT Council



Northwest Power and Conservation Council April 8-9, 2014

Electric co-op representatives urged the Council at a meeting in Spokane to focus on the effects the new Fish and Wildlife Program would have on ratepayers, and scientists described what’s wrong with the proposed spill experiment, which at this point isn’t called for in the new program. Avista’s Jason Thackston outlined key power issues the region needs to sort out in the future, and Mid-C reps recounted how they’ve worked together since a crack was discovered in Wanapum Dam. Next Meeting: May 6-7 in Boise.

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The Agenda

Remember the Ratepayer, Tighten the Program



A group of utility representatives, organized by Northwest RiverPartners’ Terry Flores, weighed in with the Council on the impacts the Council’s Fish and Wildlife (F&W) Program has on the region’s ratepayers. Bo Downen of the Public Power Council led off by observing that the costs of today’s F&W program are now 100 percent higher than they

were seven years ago, and that’s a real concern, he said.

The Council has to protect, mitigate, and enhance F&W, but you have an equally important mission, which is to assure the region an adequate, efficient, economical, and reliable power supply, Downen told the Council.

Steve Eldrige of Umatilla Electric Cooperative, based in Hermiston, Oregon, began his presentation by saying he understands that the spill experiment has not been put into the current F&W program draft, but he warned, “it will continue to lurk out there.”

If the spill test were to go forward, it would reduce our 112 average megawatts (aMW) of Tier 1 power to 105.5 aMW, and we would probably have to replace it with fossil fuel generation, Eldrige said. Reducing Tier 1 power affects BPA's ability to back up wind, he noted. The spill experiment would also have an eight to 10 percent impact on our wholesale cost of power, Eldrige added.

To replace \$35/MWh firm hydro with \$80/MWh gas-fired power is a bad deal for us, he said. Now, 16 percent of our ratepayers' bills are for the F&W program, and if we add this spill experiment, 25 percent of the bill would be for salmon recovery, Eldrige stated.

Umatilla County is 24 percent Latino and Morrow County 33 percent, he noted. Eldrige said his daughter teaches fifth grade and 80 percent of her students are Latino. These families are just getting their feet on the ground, and a 10 percent rate increase is the last thing they need, he stated. And if you couple that with the next BPA rate increase we already expect, they could be facing a 20 percent increase, Eldrige said.

He noted the historic abundance of salmon in the region, and said by the 1930s, the runs had declined 50 percent, but the first dam wasn't built until 1933. My question to you, Eldrige said to the Council, is: when the Columbia River was unfettered, why couldn't the salmon restore themselves?

Spill proponents say if we only had more spill, there would be salmon restoration, he added. But the problem may be the overall pervasive effects of modern society, where we have changed the environment so dramatically and have a town and a city on every river, Eldrige said. Given that, he asked: How can someone say that changing

one element like spill – “pulling on one string” – will recover salmon?

Inland Power's Point of View

Fred Rettenmund of Inland Power and Light said his utility has 39,000 customers in eastern Washington and northern Idaho and is 85 percent residential. Like most utilities served by BPA, we are 85 percent renewable power, and we have an active conservation program, he noted.

Inland supports a sound, science-based F&W program, Rettenmund said. We are glad the Council prepares an annual report on F&W spending and that the report includes foregone revenues because one-third of BPA's wholesale rate is affected by the F&W program, he stated.

When I worked at BPA years ago, the F&W program costs were near zero, which was probably not the best thing, but now they have reached \$13 billion, Rettenmund said. We support a science-based program and are happy to see that great progress has been made and trend lines are up, he continued.

The spill experiment doesn't seem to pencil out at all, Rettenmund told the Council. It would cost \$110 million a year, and “that's real money,” he said. We serve a number of low-income people and have many customers for whom a \$10 to \$12 a month charge means a lot, Rettenmund stated.

Given the scale of your F&W program, there should be numerous opportunities to find efficiencies, he told the Council. We would be happy to work with you to see if there are ways to lower the costs of some of these F&W activities, and determine whether we could “take some things off the table,” Rettenmund added. And the F&W program can't be considered alone because BPA has a

lot of capital spending needs coming down the pike, he said. We encourage you to look at ways to make the program more efficient, rather than adding new elements to it, Rettenmund stated.

The Council continues to push for improvements in our program, Tom Karier said. We could all work together, including representatives of Northwest RiverPartners, on getting the program to be more effective and efficient, he suggested. All of us need to look at what we are doing and do it smarter and better, Rettenmund responded.

Everything related to F&W is not a BPA responsibility, stated Eldrige. When other people have “skin in the game,” they do a better job, he said. Eldrige suggested that when people come to the Council “with a great idea,” Council members ask them “what are you going to contribute to this or do you just have your hand out?”

It is very important for us to hear from customers on a regular basis, Bill Booth told the panel. I don’t think we hear often enough from you, he added.



Avista Talks DG and Brings the Duck Graph

Avista celebrated its 125th anniversary last month, and we are planning our investments for the next 125 years, Jason Thackston of Avista said. Hydroelectricity is a tremendous part of our legacy, as it is for the region, he stated. Thackston described Avista’s resource mix, which is 48 percent hydro, 35 percent natural gas, 9 percent coal, 6 percent wind, and 2 percent biomass.

Last year, we filed an Integrated Resource Plan, which shows our load growth is about 1 percent annually, not as robust as it has been

in the past, he noted. We have sufficient resources now, but by about 2019, there will be a deficiency, Thackston reported. We plan to cover that need through natural gas and conservation, he said.

Avista is planning to build simple-cycle combustion turbines, one in 2019 and one in 2023, Thackston reported. As for conservation, our commitment goes back decades, long before I-937, he said. We have exceeded the targets under I-937, but going forward, conservation will be a challenge for us and for the region, Thackston told the Council.

At a PNUCC board meeting last week, for example, we heard that the increasing requirements of federal codes and standards will reduce the trajectory of load growth going forward, he said. We want to look for new ways to capture energy efficiency opportunities, Thackston added, noting the utility recently received approval from the Idaho PUC for additional research to do that.

He described several issues of concern to Avista on the horizon. One is distributed generation, which he explained by showing the California “duck graph.” Because of the growth of rooftop solar, starting around 2015, the net load profile of California will have changed dramatically, Thackston noted. Loads are likely to drop dramatically in the afternoon and then could more than double in a matter of hours, he said. Such changes make distributed generation a big issue for our industry and the region to consider and deal with, Thackston stated.

Another issue is coal, he continued. Colstrip provides 9 percent of our capacity and 15 to 20 percent of our energy, Thackston said. Hydro can be volatile, depending on the water year, and the wind can blow or not, he stated. Natural gas is reliable, but the fuel source can

be volatile, Thackston added. For us, coal is “the sliver that provides reliability from a price and generation perspective,” he said.

If we had to replace Colstrip today, it would cost our customers \$50 million a year, Thackston stated. It’s a complex issue, and made more so by the multi-party, multi-state ownership of Colstrip, and we’ll have to think what to do with this resource in the future, he added.

I like the legacy we have of working together to solve problems in the Northwest, Thackston said. There needs to be a regional dialogue on the issue of distributed energy resources, he stated, noting that PNUCC has been working on an analysis of the costs and benefits of distributed solar.

Avista and other utilities are working to advance energy storage technologies, and there is a lot of collaboration under way on energy imbalance market design and the development of tools and processes to define and address capacity needs across the region, Thackston said. And we are looking forward to working with you in the development of the Seventh Power Plan, he told the Council.

Karier expressed thanks for Avista’s participation on many of the Council’s advisory committees. Referring to the duck graph, Karier asked if Northwest utilities might purchase the surplus power that becomes available in the daytime. It’s an opportunity for the Northwest, more than a threat or a risk, Thackston replied. Having the flexibility of gas turbines lets us shape our generation to take advantage of such opportunities, he added.

Is distributed solar energy becoming an issue in your service area? Phil Rockefeller asked. Not yet, but that could change depending on federal and state incentives, replied

Thackston. We are trying to stay ahead of the curve, and if our customers want solar, we’d like to be able to facilitate that, he said.



ISAB: No, Yes, and Maybe on the Spill Test

Greg Ruggerone and Alec Maule of the Independent Scientific Advisory Board (ISAB) gave a presentation on the findings from the panel’s review of the spill experiment proposed by the State of Oregon and others for inclusion in the F&W program. The proposal would increase spring spill levels at each mainstem federal Snake and Columbia river hydro project up to 125 percent total dissolved gas (TDG) level in the tailrace, with monitoring of fish survival effects over 10 years.

The first question the Council asked us to answer is whether the proposal has an adequate hypothesis and appropriate study design, and “the short answer is no,” Ruggerone said. There is no study plan at present, and a detailed one is needed, he said, listing what it should contain. Nevertheless, the ISAB believes the hypothesis has worthwhile merits, and a good dialogue has taken place, Ruggerone stated.

The Council asked if it is possible to isolate spill as a causative factor for changes in fish survival, and the ISAB thinks it is unlikely, but “multiple lines of evidence” can be used to evaluate the influence of increased spill, he said. The biological risks of the proposal that a study plans needs to address include: gas bubble disease in fish, delays in adult migration, interference with actions called for in the Biological Opinion (BiOp), and reduced availability of fish for transportation, according to Ruggerone.

Factors to consider with gas bubble disease are that chinook are less susceptible than steelhead, small fish are less susceptible than large fish, cooler water temperatures make it easier to resist the disease, and being deeper in the water can protect fish, said Maule. Our data show macro-invertebrates are pretty resistant to the disease, but there were frog mortalities at over 125 percent gas, and sturgeon could become vulnerable to predation due to changes in buoyancy, he noted. There is no information on lamprey, Maule added.

While most data suggest no significant issues related to going to 125 percent, there are unknowns, such as delayed mortality effects, and we think there should be every-other-day monitoring if the spill test were to take place, he said.

As for whether the spill experiment would enhance knowledge about spill, salmon survival, and adult returns, the answer is yes, assuming there is a study plan that addresses those issues, Ruggerone stated. Smolt-to-adult returns (SARs) are well below goals, so alternative approaches are worth exploration, he added.

Spill Qs

What would it take to develop a hypothesis for this experiment? Council Chair Bill Bradbury asked, adding that he has been told about six to eight months. That seems long, replied Ruggerone. What will take a long time is peer review, he added. Depending on who you talk to, your report makes the spill proposal seem like either “the worst idea ever” or “a really sound experiment with only a few questions that need to be answered,” Bradbury said.

Your report may be the most-read report in recent time, stated Karier. For the Council,

we have to have a sense that this experiment would work – “you don’t do a billion-dollar experiment if it’s a long shot,” he said.

Karier asked if the ISAB has looked at alternatives that would not raise the TDG to “potentially problematic levels.” We only did a quick review, replied Ruggerone. The key point is that it’s an interesting concept and has some merit, but more work has to be done to examine questions the Council and others have raised, he added.

Does the ISAB know of alternative strategies that merit study? Rockefeller asked. We have talked about ideas like alternating high spill one year to the next, or alternating high spill one week and lower spill the next week during the spill season, replied Ruggerone. BPA and the Corps have talked to us about adding spillway weirs, but I don’t know how many more can be added, he said. Karier asked about an alternative that would have high spill in low-flow years and low spill in high-flow years, and Ruggerone said it was a good idea.



Uncharted Waters, But Steady Hands at Wanapum Dam

Chuck Berrie of Grant PUD explained how the utility has coped since a crack was found in a spillway structure at Wanapum Dam in February. There was no flood danger, but there was a lot of concern from the public about that issue at the outset, he said. We made communication with the public and agencies at all levels of government a priority from the beginning, issuing daily or even more frequent press releases, Berrie stated.

Once the crack was discovered, we set a series of goals, he said. The first was stabilizing spillway monolith 4, and that was

accomplished March 4 with a headwater maximum of 545 feet, Berrie reported. We are investigating the root cause for the crack and have ruled out seismicity, but our work continues, and we expect a final report from our consultant in late April or early May, he said.

We are working on an intermediate pool raise, but it requires extensive analysis and data, Berrie stated. Our contractor is doing geotechnical investigative drilling, and we estimate that will take two months to complete, he reported. We are also working to restore the pool and spillway, Berrie noted. We have formed teams for temporary mitigation issues, he said, noting that two key issues have been public safety and cultural resources. The Wanapum shoreline is closed to the public, and we have hired extra security resources, Berrie reported. We have hired archeology firms and are working to deal with any cultural resources issues that may arise, he said.

Fish passage is another key issue, Berrie stated, explaining that fish ladders are being modified so they will operate at reduced elevations by April 15. We are also looking at a parallel “trap-and-haul” option to transport fish if the passage modifications aren’t working like we think they will, he said. We expect that downstream survival this year will still be quite strong, Berrie added.

Recreation has been a huge issue since Wanapum reservoir boat launches are inoperable, but we have created one temporary boat launch, he noted. We are working with 11 irrigators who water orchards from the reservoir, Berrie stated. They are modifying their irrigation systems to prepare for the upcoming season, and we are helping them get streamlined permitting, he said.

Wanapum is generating at approximately half capacity now, and we are meeting load requirements with our current power portfolio, Berrie reported. We hold bi-weekly conference calls with Chelan and Douglas PUDs, BPA, the Corps, and Bureau of Reclamation, he said.

Chelan PUD Works in Concert

Keith Truscott of Chelan PUD gave a presentation on how his utility is managing fish passage challenges at Rock Island Dam in light of the Wanapum drawdown. We met with federal, state, and tribal authorities and developed an interim fish passage plan, which FERC approved in March and we are now implementing, he noted.

Our objectives are to provide adult fish passage by April 15, maintain the juvenile spill program, monitor and evaluate fish ladder passage, monitor and protect cultural resources, and maintain the Rock Island headwater elevation to support fish operations, Truscott said. He explained how they will operate to make sure passage will work in the spring and summer and to ensure lamprey passage is optimized.

All the river operators have shown tremendous cooperation in the wake of the Wanapum situation, Truscott stated. People have really banded together to coordinate flow, and BPA will supply 45 kcfs at Rock Island through the irrigation season to support fish operations, he said.

I have had positive reports from state agencies about the openness of your process, Karier told Berrie and Truscott. He asked if one sign of a problem with fish passage would be congregating adults below a dam. That would be an indication, replied Berrie. We will be looking to see if there is fallback, he added. At Rock Island, we will monitor daily to see

if fish are moving through on a normal timeline, Truscott said.



Fish and Wildlife Program: Ready, Set, Slog!

The Council did a page-by-page review of about one-third of the draft F&W program, making editorial changes and flagging areas for staff to rewrite. Rockefeller, chair of the F&W committee, explained that much of the 2009 F&W program was carried forward into the new draft. The 2009 program had a lot of good features, and we didn't want to lose the value of them, he said.

In preparing this draft, we made a major effort to put together a more coherent framework for accountability, Rockefeller stated. Key elements are the vision, goals and objectives, measures and action steps, and metrics, he added.

We hope to release a draft to the public by May 1 for 60 days of public comment, Rockefeller said. Once we hear from stakeholders in the region, that dialogue will allow us to better prioritize our work, he stated. Four additional sessions for the Council to finish reviewing the draft were scheduled on April 14, 21, 30 and May 1.

The 2009 F&W program had "emerging needs" like toxics, invasive, non-native species, and climate change, and those issues now are "emergent," Rockefeller stated. We have discussed how to respond to those issues and are moving cautiously to define appropriate roles for entities in the basin, he said. We can bring parties to the table who have authorities that we don't have, Rockefeller added. If we don't address these issues, they may undermine the substantial investments we are making in F&W, he said.

Jennifer Anders pointed out the F&W program has been around for 32 years, and this year, in writing the draft program, we made an effort to ask questions like "what have we accomplished and how do we go forward?" Yesterday, we heard comments from utility representatives urging us to become more efficient in the program, and this framework is trying to move in that direction, she said.

This year, we are moving away from printing and more to a web-based, on-line program, staffer Patty O'Toole noted. The draft includes a completely new section that sums up "program successes" and "program challenges," she pointed out. This section is important for improving public engagement, said Rockefeller. We need to "tell the story" so people understand the value of the work being pursued under the program, he added.

The Council discussed a number of topics during its review, including the language related to the "natural hydrograph;" a new section on "strongholds" which are locations with populations of native, wild, and naturally spawning fish; and protected areas and their relation to future hydro development.

In the draft, we broke predators into three categories: fish, birds, and seals and sea lions, staffer Jim Ruff noted. At Henry Lorenzen's urging, the Council inserted more aggressive language about reducing bird predators. "We spend enormous amounts of money to save these fish while these critters are eating them," Lorenzen stated.

Jim Yost, who was on the phone, said several areas of the draft are of concern to him, and that he would send in his comments and suggested revisions to the Council.

After about five hours, at the end of page 81, the Council agreed to resume the review at its next session on April 14.

End Notes

Who Will Redo the RPM? Three vendors have been short-listed to redevelop the Council’s Regional Portfolio Model (RPM). They are Ascend Analytics, Energy Exemplar, and Navigant Consulting.

Staffer Charlie Black reported on meetings held in March with each vendor and with an ad hoc stakeholder advisory committee, including representatives from Puget Sound Energy, Seattle City Light, Northwest Energy Coalition, BPA, the Public Power Council, and the Oregon PUC. The Council agreed to hold an executive session meeting by phone with the vendors on April 18 and later that day hold an open-to-the-public conference call on the process.

Spokanes Urge Studies for Salmon Above Grand Coulee. Matt Wynne of the Spokane Tribal Council said the pursuit of the goal of having anadromous fish above Grand Coulee Dam is critically important to the Spokane Tribe. I sit on the Columbia River Treaty group, and that group is including fish passage into Canada as a goal, but Treaty implementation is a decade away, he stated. Those future actions don’t relieve the Council of its duties under the Power Act, Wynne said.

You need to address this issue now, he told the Council. There are scientific uncertainties, but don’t use those as an excuse to “kick the can down the road for another generation,” Wynne added.

The Power Act gives the Council authority to create a program to address the whole Columbia River and its tributaries, and you can demand that BPA fund the studies needed, he stated. You can state clearly what needs to be done to mitigate impacts the Federal Columbia River Power System has had on the loss of our resources and start studies for anadromous fish passage above Grand Coulee Dam, Wynne urged.

In the talks about the Treaty, a vision developed of reintroduction, and we need to put our efforts toward that, said Karier. I encourage you to help us organize the research, he told the tribal panel. Bradbury said he had also been inspired by the conversations about reintroduction during the Treaty discussions. “I hope to be alive when the salmon go above Grand Coulee again,” he added.

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