

PNWCC REPORT Council



Northwest Power and Conservation Council October 6-8, 2014

The Council rounded up the outstanding pieces and adopted a 2014 Fish and Wildlife Program amendment at its meeting in Pendleton. Two eastern Oregon electric cooperatives described how the Bonneville Power Administration's conservation program hogs their finances. Regional Technical Forum staff opened the chute on the region's 2013 conservation achievements and lassoed approval for a 2015 budget and work plan, and a 2015-2019 business plan. Next Meeting: November 4-5 in Portland.

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The Agenda

Conservation Burdens Low-Growth Co-ops



Henry Lorenzen introduced Werner Buehler, executive vice president of Oregon Trail Electric Consumers Cooperative and Troy Cox, manager of Columbia Power Cooperative Association. Lorenzen noted that his appointment to the Council was bittersweet in that he had to resign from representing electric co-ops in Oregon. Two of those co-ops are here today, and their presentations will give you an idea of what they face, he said.

Cox kicked off the presentation telling the Council that Columbia Power was incorporated in 1948 and energized in the 1950s. The median income in the service territory is \$25,000 a year and there is a 21 percent poverty rate, he said. We have ten full-time employees and four part-time, with five linemen who cover 90 miles of transmission line, Cox said. We have about 1,000 miles of overhead distribution line and 14 miles of underground line, he said.

Columbia Power covers about 6,000 square miles, Cox continued. Within those miles, we have 1,822 services and only 1,200 members, so our ratio is close to one person per line mile, he added. Our average sales are about 2.2 million kilowatt-hours (kWh) and last

year, our BPA bill was \$840,000, Cox said. That bill is one-third of our revenues and one-third of that bill goes toward conservation, he explained.

We have no load growth in our service territory, Cox stated. We have less than .01 percent per year on the residential side and our commercial and irrigation load is not growing at all, he said. Irrigation is a huge summer load for us, but we have no large industrial load and no prospect of it, Cox said, adding that there's nothing to draw large industrial sites. We have no high-speed internet or other infrastructure large industries need, he acknowledged.

Most of our co-op members rely on state and some federal and school system jobs, along with ranching and farming, Cox went on. With no load growth, it is difficult to maintain our huge system, he stated. Cox noted that about six years ago, the co-op went to the Rural Utilities Service to get a substantial loan to cover the cost of rebuilding transmission lines, substations, and a main trunk line. It took so much time to get the loan approved, we were only able to cover half of the planned improvements and now have to figure out how to achieve the rest without burdening our members, he said.

Conservation programs are a big problem, Cox stated. BPA allocates us a portion of conservation money each year to help encourage members to do efficiency projects, he explained. Members approach us with projects, but once they see how little our conservation funds provide for the whole project, they find they don't have the money to go forward, Cox said. We struggle to spend the conservation money BPA allocates, he added. The people who take advantage of it would do their projects regardless of BPA's money, so "they get free money," Cox remarked.

There is no load growth in the system, and members want to lower their electricity bill, he continued. Those who can afford efficiency projects decrease their kWh use and that affects our budget, Cox explained. How do we maintain our system with the revenues dropping? he asked. We have no load growth to compensate for the customer savings, Cox pointed out.

It's a difficult decision for us to raise rates, and "we never want to do it," he said. We are a nonprofit and our margins go back into our system, Cox said. No one likes to raise rates but to maintain our system and stay up to code, the money has to come from somewhere, he said. Any program that hinders our kWh sales hurts our budget and we have to recover the money somehow, Cox concluded.

OTEC Picked Up Where CP Left Off

Buehler said the Oregon Trail Electric Consumers Cooperative (OTEC) is one of the largest co-ops in Oregon with 30,000 meters in four counties. OTEC has local offices in Burns, John Day, Baker City, and La Grande, he added. OTEC has about \$50 million in sales annually and maintains 3,000 miles of line, Buehler said. We have average demand of about 80 MW and maximum demand of 147 MW; OTEC is a full requirements customer of BPA, he said.

OTEC came about with the demise of CP National, a company that exited the power business to get heavily into telecommunications, Buehler explained. He noted that CP National had onerous PURPA cogeneration contracts for power that provided only 10 percent of energy needs but were 40 percent of the company's costs. We were "the poster child" for how those contracts were not working, Buehler indicated. Since the OTEC takeover, we have

a strong equity level despite the PURPA contracts, he reported.

The industrial load in the territory, primarily wood products, has dropped 50 percent since the CP National time, and the local economies are such that loads are flat and declining, Buehler continued. A recent conservation assessment forecast OTEC loads will decline about 3 percent overall and residential use will decline 12 percent in the next 10 years, without conservation, he said.

OTEC has focused on cost cutting and reduced its employees from 100 to 80, Buehler said. We've raised rates .004 percent, he said. Even with SmartMeters and other technology, it is difficult to have enough employees to work on the lines, Buehler said.

We have plenty of trepidation toward expanding our conservation programs with loads that are flat and declining, he said. As a not-for-profit utility, our margins are \$2 million to \$3 million, but every year we lose \$1 million in margins by participating in BPA's conservation program, Buehler said. OTEC has lost \$9 million in margins over 10 years and our current programs are reducing it further, he pointed out.

We have to have enough revenue to operate the utility safely and reliably, Buehler continued. OTEC has investigated a rate redesign to decouple conservation, he said, adding that every BPA increase has been assigned to the utility's system charge, which went from \$10 per month to \$20.65. There is not enough incentive to justify time-of-day rates at the co-op since there is not much difference in price between peak and off peak, Buehler added.

The challenges before us can be solved, he stated. A broad sweeping regional policy has had unintended consequences; we face increasing power costs and increasing

directives to acquire efficiency, but our loads are declining, Buehler explained. We have to collect the same revenue from fewer kWh, he said.

We urge the Council to discuss this as part of the Seventh Power Plan, Buehler stated. The question for us is how we serve our customers efficiently and whether we redesign the rate constructs, he said. It's important to OTEC and others in the region that the Council address and understand our situation, Buehler stated.

We have these issues with our rural utilities in Idaho, Bill Booth commented. The region benefits from conservation, but how do we rebalance this situation to protect the rural areas, he said. Perhaps the benefits that are generated from municipalities need to be shared with rural utilities, Booth suggested. Keeping the lights on in rural communities is a big deal, he added.

We hear similar concerns in Western Montana, Pat Smith said. The staffing reductions are similar at Lincoln Electric, he added. This issue may be something we need to look at in the next plan and we should talk about some ideas, Smith stated. Rural people like efficiency and self-sufficiency, he noted, adding that there is probably a rural constituency that likes the programs.

You are right, Buehler responded, but how do you make efficiency work, integrate it into what we are doing today, and still have enough revenue to make the system work. The transition is the struggle and it will take more study into how the transition can be made, he stated.

People approach us with solar and wind projects, but once they find out the real cost, they back out, Cox added. I agree with that, Buehler answered. We could do things that

make it easier for customers to take on projects, he said.

What about a BPA Solution?

The real challenge for the region is that conservation is an overall benefit, Lorenzen stated. The question is how to encourage conservation in a way that doesn't adversely impact utilities such as yours, he added. It would help us to know the impact of these programs on BPA rates, Lorenzen said. We need that full picture to understand the impact to the region's utilities, he added. The ultimate conclusion may be that for utilities with negative load growth, the benefit would be to pay BPA to do the conservation in the region, Lorenzen suggested. Maybe not in your service territory but elsewhere because the region as a whole would benefit, he said.

Henry is thinking of this in the right way, Tom Karier responded. There should be a benefit in the BPA wholesale rates, he said. We would need to look at whether this is a fair exchange for utilities such as yours, Karier told the co-ops.

If conservation wasn't in the picture, would that remove the problems you are encountering in terms of declining load? Phil Rockefeller asked. Is conservation the root problem or are other factors a part of the problem? he asked.

Conservation is compounding the problem, Cox responded.

If the conservation program went away, would you have residents taking advantage with and some conservation would take place? he asked. The end goal is to reduce the customer bill, Buehler replied. It is a problem when you have declining loads and on top of that you have to do conservation, he said. The financial impacts are real, Buehler added.

Will your business model work in the long term or would you be better off joining with a larger entity? Rockefeller asked. If you go with someone larger, you spread the pain more broadly, Buehler replied.

Rockefeller cited the example of equalization in state school funding. Could BPA play some kind of role like that? he asked. Somewhere the business model has to be adjusted and the Council could play a constructive role in looking at the options, Rockefeller added.

Jim Yost asked about the way in which co-ops lose revenue due to conservation. OTEC buys power from BPA and marks it up to cover costs; but if I can't sell that kWh, I lose money, Buehler replied. Because we have no load growth, what you see with Troy and I is the canary in the mine, he added.



F&W Amendments a Wrap after a Snag on Definitions

The Council took up the 2014 fish and wildlife (F&W) amendment Wednesday for a second time at its Pendleton meeting. We are almost through developing an amendment for 2014 that we will work from for the next five years, Council chair Bill Bradbury said, before turning the meeting over to staffer Patty O'Toole.

O'Toole pointed out that an issue or two remained to be resolved, in particular the definition of wild fish. Staff has come up with a few options and also has a definition for terminal fisheries, she said.

The staff definition for terminal fishery is fine and seems non-controversial, Rockefeller commented. As for wild fish, there are three variations on the definition and the members

are divided on these, he said. We need to get to a consensus, Rockefeller stated.

The Council had a lengthy discussion about the definition. Karier said what was lacking in the previous definition was a clear term for what we count on the fish ladders and spawning grounds. What we count are fish without a fin clip, he said, adding that we know these fish have spent their life in a natural environment, he said. Lorenzen pointed out that some fish released from tribal hatcheries are not clipped. Not all unclipped fish came from gravel so that will skew the count, he said.

There is a term in the region for what we count, "and it is called wild fish," Booth stated. If we look at the capability for separating wild from hatchery fish, most hatchery fish are marked; the identifier is the mark, he said. The NOAA delisting standard is based on wild fish, Booth said, and any unmarked fish is counted as wild. In the harvest programs, we have no other way to tell the origin so we separate fish into wild and hatchery; an unmarked fish is considered wild and it goes back, he explained. The term "wild" is well known and understood by fisheries managers and others, Booth said.

We have the latitude in our program to define this as we want, he continued. We could stick with the regionally understood definition, which is definition number 2 on the staff list, Booth pointed out. We might be aiming for a higher standard, and it would be nice "if all streams were populated with blue-blooded lineage," he added. But at the level we deal, it is simply hatchery and wild fish, Booth stated. For simplicity sake, I prefer definition number 2, he said.

The people managing the fisheries are responsible to get to the delisting point and many would like to get there to have enhanced harvest, Booth went on. We are

having a record year in Idaho for sockeye, one-third of which are natural, he said. The Shoshone Bannock tribe would like to have a fishery on those fish, Booth said. We have been in an ex parte period and haven't had recent conversations with the folks in Idaho, but based on prior conversations, I know definition number 3, which refers to multiple generations, would create practical compliance problems in the real world, he said. This issue could be deflating for those working toward delisting, Booth added. Their goal is to reach delisting and it could be deflating to them if we impose a higher standard, he said.

I didn't see this recommendation for referring to multiple generations offered by any fish managers, Booth stated. Some people like it but I don't believe in our amendment process we received any support for that type of language from the fisheries managers, he said. I won't vote for definition number 3 and adding an arbitrary standard to our definition of wild fish, Booth concluded.

I'm not sure that is what we had in mind when we were making definitions, Jennifer Anders said. The wild fish definition is not a requirement and the only place it appears in the program is in a policy statement, she said. When we talk about what we count, it is a natural-origin fish, Anders said, adding that ultimately, I don't think we will count wild fish, we will count natural-origin fish. This is a statement about the populations, she continued. Do we want to define what multiple generations means? Anders asked.

In the definition, we say we recognize this as a process and that these populations are coming back to the gravel year after year, she stated. Anders went on to explain why the Council would try to define the wild and natural-origin fish separately. I don't think definition number 3 would get us into trouble, she said. If we back off and go with

definition number 2, it is probably fine but it doesn't include a policy statement when you contemplate the cycle of the populations and what they are doing, Anders said. There is no intent here to infringe on what the managers are doing or the importance of the hatcheries, she said. It is simply a policy statement because we think it is the right thing for the program, Anders concluded.

Staffer John Shurts said the wild fish definition in the F&W program is an aspirational policy. You want to make sure the habitat work is encouraging production of fish in the wild, and you are trying to give guidance in a long-term policy sense, he said.

Yost suggested a vote. Bradbury explained that the two proposed definitions differ in that number 2 defines the fish as those that have successfully maintained natural production and number 3 adds to that success "multiple generations."

In a roll call vote, there was a 4 to 4 tie between the two definitions. Shurts pointed out that the definition in the draft amendment, which is most similar to number 2, would stand since there were not enough votes for a change.

Booth suggested the meeting minutes should reflect that the definition of number 2 intends it to pertain to more than one generation. The Council agreed the definition remains as it is in the draft since the vote to change it ended in a tie.

Yost made a motion that the Council accept the 2014 amendments to the Fish and Wildlife Program. Anders seconded the motion, which passed on a unanimous vote. The F&W program for 2014 is officially adopted, Bradbury concluded.

NW Racks up More Efficiency



Staffers Charlie Grist and Jennifer Anziano reported that the region achieved 268 average megawatts (aMW) of conservation in 2013. The numbers come from an annual survey conducted by the Regional Technical Forum (RTF) and the Council, Anziano said. We requested the actual conservation savings and the expenditures for 2013, as well as projections for what utilities plan to achieve in 2014-2016 that we could compare to the targets in the Sixth Power Plan, she said.

Anziano described the survey data and collection process and noted that the results came from 80 utilities and represent 90 percent of the region's load. The results filled in by BPA and the Northwest Energy Efficiency Alliance (NEEA) bring the total to 100 percent of the load, she added.

The region is doing a great job of achieving conservation, Anziano stated. The 2013 accomplishments of 268 aMW slightly exceed the plan's 2013 target of 260 aMW, she pointed out. In every year since 2005, the region has achieved more conservation than called for in the power plan, and utilities in the Pacific Northwest have acquired nearly 2,000 aMW of savings since then, Anziano stated. In breaking out the savings by sector, she noted that while savings are greatest overall in the residential sector, commercial and agricultural savings show continued growth.

The spending on conservation has been stable since 2010, Anziano continued. The investment in energy efficiency in 2013 was \$375 million (2006 dollars), she said. The average levelized cost of conservation remains low, and in 2013, it was \$17 per megawatt-hour, down from \$18 in 2011 and 2012, Anziano said. NEEA has done a lot for

the region, adding 60 aMW to the 2013 savings, she added.

Booth asked why there is such a drop in the projected conservation savings in 2016. Not all utilities responded to that part of the survey and only 60 percent of the region's load is represented in the projection, Anziano explained. Based on the numbers we received, things look good for meeting the upper range of the five-year goal in the Sixth Power Plan, she stated.

In comparing conservation spending in the Northwest to the U.S. average, Anziano pointed out that the per-person spending of \$28.02 here is nearly double the \$16.17 average in the country. In addition, the region invests about twice the national average of its retail electric revenues in energy efficiency, with the Northwest at 3.4 percent of revenues compared with the 1.6 percent U.S. average, she said.

“A huge accomplishment” is the percent of load growth met by efficiency, Anziano said. Efficiency has met nearly 62 percent of Pacific Northwest load growth since 1980. This is “a significant finding” in the 2013 report, she added. In addition, since 1978, utility and BPA programs, energy codes and federal efficiency standards have produced almost 5,600 aMW of savings, Anziano said. “That is a big number” and is enough power to serve all of Oregon and Western Montana, she added.

Conservation has saved the region's electricity consumers nearly \$3.5 billion and lowered the Pacific Northwest's CO₂ emissions by an estimated 21.9 million tons, Anziano stated. In 2012, energy efficiency represented the region's second largest resource, behind hydro and ahead of coal, she reported.

A graph in the presentation showed that the 5,570 aMW in energy efficiency savings since 1978 exceed the annual firm energy output of the six largest hydro projects on the Columbia River, Anziano continued. These are significant savings, she stated.

I have trouble comparing the energy produced by the dams versus the avoided need for energy, Bradbury said. It doesn't seem like “an apples to apples” comparison, he stated. Without conservation, we would have had to build up this level of resources, Anziano said.

This is a tremendous legacy for the region, Grist added. Both the hydro system and efficiency programs produce an astounding amount of low-cost and carbon-free energy, he stated.

“Good news just keeps coming,” Karier said. There were questions about whether the region could meet the targets in the Sixth Power Plan, and we have exceeded the targets and “at a ridiculously low price,” he said. This is a testament to the region working well together – it's a phenomenal achievement for the Northwest, Karier stated.

This region is “a national, possibly international star” in energy conservation, Booth said. The ramp up in the Sixth Power Plan was steep in the early years and steep in the outlying 15 years, he said. Now the achievements are leveling off at around 270 aMW annually, Booth stated. As we approach the Seventh Plan, how do we address that? he asked. There is a leveling off of investment, too, Booth said, adding that energy demand remains level. The conservation target will be a big issue in the Seventh Plan, he stated.

We are embarking on the Seventh Plan and will look at this anew, Grist responded. Among the tidbits of information is what has been accomplished with federal standards

since the Sixth Plan, he said, adding that almost 1,000 MW of the 6,000 MW in the last plan will be captured with federal standards. There will be adjustments going forward; we'll look at a new baseline and we'll remove things that have been accomplished, Grist said. We don't know yet, the trajectory may be different, he acknowledged.

Grist pointed out the impact of advances in technology, noting that solid state lighting is a big change on the horizon. We are putting together an estimate of what's left to do and what it costs, he said, adding that the new information will go into the Regional Portfolio Model analysis for the Seventh Power Plan.

Booth also questioned the graph that compares production at a dam with the conservation savings. That comparison needs another level of analysis, he said. We have the ability to ramp up those existing resources before we have to build more, Booth said.

It seems like "an apples to apples comparison" to me, Smith commented. There are other ways to analyze it but this seems close in terms of "apples to apples," he added.

There are other metrics in the high-level indicators, Lorenzen stated. Energy efficiency plays a part in reducing the cost of the system, and another impact that would be helpful to know is the effect on BPA rates, he said. We need to know how conservation affects BPA rates, Lorenzen stated.

End Notes

RTF Future on Solid Ground. The Council voted unanimously to approve a 2015 work plan and budget for the Regional Technical Forum and a 2015-2019 business and operating plan. Staff reported the 2015 budget is \$1.6 million and the work plan will focus on technical analysis for efficiency

measures. The RTF will bid out for six positions to do additional research. BPA and the utilities that fund the RTF have agreed on a 2015-2019 budget. Smith, who co-chairs the RTF Policy Advisory Committee with Jim West of Snohomish PUD, said the PAC approved the work plan and budgets at its last meeting.

NWEC Urges Council to Assume EPA Regs. Wendy Gerlitz, a Northwest Energy Coalition representative, urged the Council to assume in its Seventh Power Plan that the Environmental Protection Agency's proposed rules on carbon emissions from existing power plans will go into effect. In public comments on the Council's Environmental Methodology issue paper, Gerlitz stated that the Council would be remiss in treating the EPA proposals as other than final and said the regulations are probably not the end of EPA's greenhouse gas regulations.

Yost pointed out that EPA said it would propose five major changes to rule 111(d) before it is adopted. But you want us to accept the existing proposal into the Seventh Plan, he clarified. I don't think that is reasonable, Yost said. I'm not saying we shouldn't take carbon into consideration, but you have to be more reasonable with the Council; don't ask us to do something as illogical as accepting a proposed rule that EPA has already said it would change, he said. "Join the real world" and help us instead of being part of the problem, Yost added.

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