Northwest **Power** and **Conservation** Council

Council Meeting
Coeur d'Alene, Idaho
November 15 – 16, 2016

Tuesday, November 15, 2016

Council Chair Henry Lorenzen called the meeting to order at 1:31 p.m. All members were in attendance.

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

Fish and Wildlife Committee

Fish and Wildlife Committee Chair and Council Member Jennifer Anders had six items. The committee had an overview of the Relative Reproductive Success (RRS) workshop held Oct. 13, 2016, in Portland. Managers shared knowledge gathered, and the progress made on their projects. There will be a presentation before the full Council in December.

There was a recommendation by the cost savings workgroup to use $200,000 of the $510,000 in savings to fund O&M, stemming from the hatchery assessment being overseen by Council Member Bill Booth. The workgroup wants to use remaining funds to study sturgeon and lamprey through a request for proposals. The full Council will address this in the morning. There was a presentation on the kelt reconditioning master plan. The committee approved the first step of the plan, which is to develop a facility at the existing Nez Perce tribal hatchery. Purpose is to support kelt reconditioning to improve ESA-listed steelhead abundance in the Snake River. The full Council will hear about it and make a decision in December.

There was a presentation from the Colville Confederated Tribes on the Okanagan Basin monitoring and evaluation program. Its purpose is to track the status, trends and condition of aquatic habitat and fish production in the Okanagan. This is done through an EDT model. It's an interesting analogy to what we do on the power side, Anders said.

Anders said that Patty O'Toole, staff program implementation manager, gave an update on the Research Plan. The presentation addressed critical uncertainties, priorities for research, what additional research areas are out there, and how we will implement the plan. The

committee consensus is that we're going in right direction. The committee will look at a new iteration of the plan in December, with the full Council taking a look at it in January. The committee discussed the potential for organizing a regional forum to address invasive mussel prevention. Anders said there is a need to spur the Army Corps of Engineers to release funds to deal with this problem, as Quagga mussels have been found on the eastern side of Montana.

Power

Power Committee Chair and Council Member Tom Karier said the committee dealt with several issues. One was about a survey of industrial energy efficiency. Staff conducted a major survey with consultants and contractors, in order to do a better job forecasting the energy-efficiency potential of the industrial sector. The survey is complete and they have much of the data needed. They looked at how the staff develops its forecast. One is a frozen-efficiency forecast. It locks in the current energy-efficiency pattern in the Northwest and forecasts loads based on that. It looks at how it affects momentum savings and other issues. The committee received an update from Gillian Charles, staff energy policy analyst, on the current state of wind technology and where it's headed. The region has 8,000 MW of wind. Many plants last 20-25 years and wind represents 10 percent of electric energy in Northwest. There's been a lot of growth in the industry and the technology. Turbines will be bigger and less costly in the future, and that will factor into our Eighth Northwest Power Plan.

Jeff Harris, chief transformation officer at the Northwest Energy Efficiency Alliance (NEEA) told the Council that NEEA is providing support for the development of demand response in the Northwest. They also are looking to get involved in electric vehicles and charging infrastructure.

Member Karier discussed his involvement as co-chair of the NW Energy Efficiency Leadership Group. It met two weeks ago. Utility general managers CEOs meet to discuss issues and solutions. There were three recommendations from the meeting:

1. Support a rate structure and business models for utilities in the Northwest to ensure continuing energy acquisition. During this period of low load growth and prices, it has created problems in their programs. The group has asked the Council for a solution.
2. Develop conservation transfer agreements. It's possible for public utilities to save energy for energy efficiency, and market that savings to IOUs. A contract like that used to exist between Snohomish PUD and Puget Sound Energy. Now there's interest in trying to revive this concept. It could provide a better market for those saving energy and a long-term assurance for those needing that resource.
3. Support the end-use study. The idea is to track pattern usage of electricity by modern appliances to better-forecast peak loads and to understand the benefits of energy efficiency in reducing those peak loads.

Public Affairs

Public Affairs Committee Chair and Council Member Jim Yost reported that there was no public affairs meeting last month. It will meet tomorrow morning to talk about revisions to the fish and wildlife program field guide, and there will be some discussion about the Council staff blog.

Member Lorenzen announced that there would be an executive committee meeting at the close of the Council meeting.

1. Update on expected deliverables from Bonneville's Tributary Habitat Framework including CHaMP, ISEMP and AEM

Nancy Leonard, staff fish, wildlife and ecosystem monitoring and evaluation manager, prepped the Council on information they will receive in December on Bonneville's Tributary Habitat Framework. This includes an update on the Columbia Habitat Monitoring Program (CHaMP), Integrated Status and Effectiveness Monitoring Program (ISEMP) and Action Effectiveness Monitoring of Tributary Habitat Improvement (AEM).

Leonard provided a review of the five logic steps associated with habitat actions, the geographic scale at which these steps can occur, and their connection to the action effectiveness research uncertainty topic. The Council staff discussed the expected deliverables related to the Council's 2013 conditions on Bonneville's program-wide approach to tributary habitat for assessing habitat condition and action effectiveness. She said five logic paths are followed:

1. The current condition
2. Decide what action to mitigate, where and for which benefits
3. Habitat change/benefits
4. Life stage change/benefits
5. Life cycle (population) change/benefits

A question of scale adds complexity to the original path, she said. Researchers do a lot of work to see if there is a change in habitat for mitigation action, and use different tools such as IMWs, ISEMP and CHaMP to see if there's a change in the fish population scale. Depending on the type of question you're asking, where you are on those logic steps, and where you are on that scale, you might get an answer in a short time or it might take quite a bit of time.

In 2011, the Council finished a review of the research monitoring and evaluation project. Part of the outcome was that it is a habitat-based program. The critical programmatic issue is whether the collective suite of proposed projects were adequate to answer the questions in the five logic steps. The Council supported the idea that Bonneville in the region would

develop a coordinated, standardized approach to monitoring habitat characteristics and to evaluate the effects of those actions.

Based on that recommendation, the Council called for specific recommendations for the CHaMP project in 2011, and the longer-term ISEMP project, monitoring watersheds. It also asked that Bonneville develop a project action effectiveness approach, which became the Bonneville AEM project.

BPA came back to the Council in 2013 with a framework for the FCRPS tributary habitat RM&E program. They identified that they were using CHaMP to gather information on habitat projects. They're using AEM and they also have fish-only monitoring projects. ISEMP is where they all come together. It helps ensure we're not cheating habitat or fish, and evaluates if we're having an impact, Leonard said.

In 2013, the Council came up with 13 conditions for BPA's program-wide approach to tributary habitat RME. Some of these conditions include:

- Bonneville's Framework
  - Explain linkage among all RME efforts: tributary, estuary, coordinated assessment, large-scale programs (PIBO), etc.
  - Explain how RME will guide habitat action implementation

- ISEMP
  - Complete ongoing IMW research (no new IMW research)
  - Clearly communicate hypothesis and end-dates

- CHaMP
  - Pilot scale pending review; integrate with existing efforts
  - Explain how habitat data can inform effectiveness

- BPA's AEM
  - Pilot scale pending review

- Budget
  - Budgetary savings from program-wide approach

In 2013, the Council asked BPA to further develop its framework. We wanted them to provide that framework and to explain how all these projects are interacting, Leonard said.

She explained that the Council had specific direction for the ISEMP project. The Council said 'we've been funding this for a while and we want you to complete what you funded, but not any new ISEMP research topics until you come back and talk with us about that.' We asked

when we could expect results from the work, she said. They will provide an updated table in December or soon after.

The Council asked for conditions related to CHaMP, which was operating in eight different watersheds. Council approved it in a pilot stage, but not to expand it to additional watersheds without a review. Bonneville has been providing annual reports. The Council asked CHaMP for habitat data and how it was used to inform other work.

BPA's AEM is the new program. The Council asked BPA to assess the effectiveness of actions at the reach scale. It should be submitted for review shortly.

The last condition is that given all these changes by project-to-project to a more program approach, we were hoping to find some funds to be freed up for reallocation. In 2013, we received some feedback from BPA on some of these conditions. In 2016, we received a smaller briefing from them. December will be the next time we get to address these 13 conditions with Bonneville, Leonard said.

Member Karier expressed frustration with the lack of concrete data from the work. "I remember the 2013 review," he said. "At that point, the Council started to develop some skepticism about these projects. They had been going on 8 or 10 years at that point without seeing results. They said to bear with us, it takes a long time to evaluate habitat."

Karier said that each year, we've asked to get results to date and got virtually nothing. So we gave them process questions, and then asked for a hypothesis. It wasn't clear at that point, after going for years, what their hypothesis was. They replied with some and, at that point, it should have raised some red flags. Those weren't the questions we had.

Karier continued that there are questions we had and still have: "What are the benefits of these investments on fish abundance and productivity? It's a critical uncertainty in our research and they've provided very little over the years to do this. I'm at a point where I'd like to see BPA have an organized closure of CHaMP and ISEMP, and salvage whatever information is useful."

"It needs to be replaced with more-focused and effective project. We've added up the total expenditures on these three projects, and have budgeted about $75 million over a decade and still have not seen much in the way of results. Every once in a while there's going to be a project that doesn't perform and this is one of them. It's the most expensive project we've seen."

Member Anders said, "I don't know if this is the time and place to have this discussion, but if this isn't panning out the way we expected, and isn't the product we need for our purposes, what are our alternatives? We need to understand the relationship between fish and habitat. So what do we do and how do we get there?"

Member Karier said we're spending $9 million and it might lend itself to a competitive bid process to see who would compete for that.

Katie McDonald, BPA fish and wildlife project manager, said that right now, CHaMP and ISEMP projects are a huge component of meeting ESA obligations under the FCRPS BiOp. At BPA, not all of the things in CHaMP and ISEMP have been included from the outset. We've been undertaking things at BPA to better understand the relationship between habitat actions and fish responses. These are underway, and we will be working over the next four to five months. We're collecting information, and are looking at salvaging what's useful and what we need going forward.

We've learned a lot in the last six months, she said. It appears we have a higher level of certainty in understanding in current conditions, implementing an action and understanding a subsequent habitat response. Once you try to move to the fourth and fifth steps, where you try to predict a change in fish abundance or productivity, or fish survival, the amount of implementation necessary in order to detect a change in those fish metrics, you need to implement at over 20 percent of the impacted watershed. So BPA is struggling with the feasibility of an implementation process that you're assisting us with. In December, we'll give you an update on the status of ISEMP and CHaMP, as well as AEM.

Member Karier said, "It's interesting you can't answer the questions on productivity and abundance. It was the very reason we started funding ISEMP and CHaMP to begin with. We had evidence on the direct habitat benefits. But they came to us and said we don't have evidence on productivity or the overall abundance of the species. They sold us on that request. Now the conclusion is they can't do that."

Member Karier continued, "I'm glad you raised the issue of the BiOp. The Council raised that question in 2013 and was told it wasn't negotiable. If you look at what happened to the BiOp, one of the reasons it lost in court was because the federal agencies couldn't justify the habitat investments and the amount of benefits they were ascribing to it, which is directly related to the failure of ISEMP and CHaMP to provide evidence."

Leonard said there are about 17 watersheds where it's been tried. The ones where it has operated, has operated well. But they've been in much smaller watersheds, where they were able to come in and oversee the actions put in place — versus showing up and implementing an army of actions that might not be well suited to the location.

McDonald said that the comment about being able to detect a fish survival fish response is included in a NOAA technical memo. We have places in the basin where ISEMP and CHaMP have been applied — in places where sponsors are executing with adequately staffed and funded programs, she said. They are trying to understand where the tools and widgets are that allow people to go from implementing an action to predicting a fish response.

Council Member Guy Norman observed that looking at steps four and five in the sequence, four is increased productivity. Five is increased response with adult abundance. “Do we have linkages in population response and adult abundance associated with those productivity changes?” Under the scenario where you do have increased productivity in the stream, and haven’t seen a response in adults, are there additional thoughts on what next steps should be? What additional sources of impacts that might affect that relationship?

McDonald said at the last Council meeting she attended, there was a great discussion of what questions we are able answer, given we’re working in a very dynamic environment in the Columbia. There are lots of factors influence fish that we can’t control, she said. In thinking about our future habitat strategy, what if we moved off of survival as our ultimate credit in assessing our habitat restoration, and instead, is there something that’s a surrogate in the middle that gets us from steps three, four and five, such as habitat carrying capacity? We could measure if our actions have achieved that purpose. Maybe there’s a metric between three and four. We’re also waiting to see life cycle model results will be.

Bonneville will present an update on the status of their response to the 2013 Council Conditions during the Dec. 13-14 Council Meeting.

Member Karier said, you mentioned that some of these results are useful. I’ll be interested in what are the results. What are the measured benefits of habitat investment on fish abundance, what’s working and why is it working? I read the ISEMP and CHaMP reports — they’re hard to get through — and I don’t find any of that in there. I’m willing to support them if they found those things. If you don’t find it either, I think you should be careful about throwing good money after bad and try to figure a way to get out of this.

Leonard said NOAA funds 13 of the 17 Intensively Monitored Watersheds (IMWs). NOAA is on task to write up a review of its results to date. They’ll be meeting in April and will be finalizing that report at the end of the year. They are invited to talk with the Fish and Wildlife Committee.

Member Karier replied that those aren’t funded by BPA. They key thing is to find out if BPA funding will go forward.

Member Yost said he agrees with Leonard that Member Karier’s right, but for the wrong reasons. The judge didn’t understand it at all on tributary habitat, he said. Maybe some estuary. Not all benefits are to the fish, some are on water quality. “The other thing is that this Council is responsible for this nest we made,” he said. “We have the ISRP. Not a single project we put out for review doesn’t require a lot of review and monitoring. We’re trying to figure out if it’s necessary or not. We know we have to get a handle on this stuff. We know we need additional abundance, we know we need more juvenile and spawning habitat, and try to take the next step to do it. We have opportunities to cut a lot of programs, but we just write nasty grams.”

2. Regional Conservation Progress report on energy efficiency resources

Jennifer Light, Regional Technical Forum manager, provided an update on regional conservation survey results from this year. One of the RTF's goals is to track progress against planned targets.

Light first explained the data-gathering process: They get detailed energy-efficiency savings data from utilities, BPA, Northwest Energy Efficiency Alliance (NEEA), and from outside utility funded programs, to understand what's driving the savings. The RTF is trained to get at what are the total expenditures put onto getting efficiency in the region. Light said it was their last chance to look at performance against Sixth Plan targets.

For public utility data, the RTF starts with Bonneville. BPA provides data on behalf of public utilities. Then, they reach out to larger BPA utilities, recognizing that they do a lot of self-funding. Then they get data from the Mid-Cs directly, which feeds into the workbook. They get data from IOUs, NEEA and momentum data (including codes and standards, and market momentum). This feeds into the workbook that is reported out to the Council annually.

Light said the data presents four challenges:

> **Challenge one:** Avoiding double counting of savings. They make sure they're not putting savings into more than one bucket. The buckets are: Utility, NEEA, state codes and standards, and market momentum.
>
> **Challenge two:** Not mixing apples and oranges. Not all reported savings are directly comparable. Some utilities report on a fiscal year, others on a calendar year. Not all utilities count savings from the same starting place.
>
> **Challenge three:** Not all data are final at the time of the Regional Conservation Program (RCP) request. Programs may have updates based on evaluation results and market studies are at least a year behind.
>
> **Challenge four:** Not all public utility data are reported to BPA. Some of it is the time lag, but some utilities run things that aren't considered reportable. For example, running HVAC programs where they don't run the PTCS.

Light said thank you to the respondents, who provided data the RTF could use. It received savings and expenditures data from 143 reporting utilities.

Results:

Looking just at 2015, utility programs and NEEA acquired 284 aMW of energy efficiency. The more exciting finding, Light said, is that over six years, the region well surpassed the Sixth

Plan target, saving total of 1739 aMW between 2010 and 2015. “Surpassing the Sixth Plan targets is a significant accomplishment we need to recognize,” she said.

There also were savings from codes, standards and market momentum. The market momentum number is a draft and is likely to increase. Light said they added a process using the Market Analysis Subcommittee, which reviews the market research that BPA is doing. It has been reviewing the lighting models. It’s adding a level of rigor and peer review to this research. The RTF expects the numbers to increase significantly.

“So we have a great story to tell that the region did a great job against that Sixth Plan target,” she said.

Council Member Bill Bradley asked for clarification on market momentum: “It’s measures that are not required, just an opportunity, such as LEDs, correct?” Light said a lot of lighting programs that are incentivized, but others are just consumers choosing to use more efficient products. That’s definitely market momentum.

Looking at Bonneville, it well surpassed its share of the target in the Sixth Plan. Included in its totals are codes, standards and market momentum.

Looking at 2015, most utility-funded program savings are from the residential sector. The commercial savings are growing and are becoming a more significant portion of the savings. The Northwest Energy Efficiency Alliance (NEEA) continues to contribute to significant energy-efficiency acquisition.

When you’re reducing energy efficiency on peak, there is an associated capacity benefit.

Programs invested more than $440 million in energy efficiency in 2015. Public utility investments are significant. IOUs are contributing more than 50 percent, then public utilities and NEEA. The biggest thing to note is how much NEEA gets done with its proportion of savings.

Member Karier said that with NEEA, one of the important things they’re doing is developing new markets for the future. That’s not really captured here. Charlie Grist, staff conservation resources manager, said that was correct. NEEA expenditures are for emerging technologies that haven’t hit the market, he said. Member Karier remarked, “So they look really good over the five year period, but it’s even better because they’re developing long-term savings for everyone.”

Light said heat pump water heaters are one sector they’ve invested in, and utilities can build on that with their own programs. She said they’re trying to mindful of those savings and are breaking them out, but the long-term savings will be greater than you can see from this data.

Grist said there would always be some lag, which is the concept behind momentum savings.

Light said that the levelized cost of energy efficiency is low and stable, and continues to stay low.

Member Lorenzen observed that as conservation is acquired, the new conservation available becomes more expensive. “But this chart indicates that it’s relatively flat,” he said. “Will we see it go up?”

Grist said they are seeing in the last couple of years, the cost per kWh saved is going up. As codes and standards have brought up the base, what’s left becomes smaller and harder to get. The Energy Trust is getting savings from commercial building, but now they have to get it from a bunch of smaller customers rather than a few large customers. They amount of money we need to spend to get it might go up some. It used to be $50 per MW for some programs in the 1990s. I don’t think it will get that high, he said.

Light said that one thing that helps counter that is NEEA’s investments in emerging technologies. There are always new things coming on that provide opportunities that are not going for the whole building, such as in controls. Grist said that since the 2000s, a lot of savings have been in lighting — about a third or more. And those have been relatively cheap.

Light said that since 1978, the region has achieved almost 6,000 aMW of conservation, the second-largest resource behind hydro. It’s very significant. A lot of it is from BPA and utility programs. That means enough energy savings to save the region’s electric consumers $4.06 billion in 2015, and to lower carbon emissions 23.5 million metric tons equivalent. That’s like taking almost five million passenger vehicles off the road.

Now looking forward, the RTF conducted a survey to inform how the RCP might better address associated capacity savings and baseline. Regarding capacity, most utilities include capacity in their cost effectiveness, but it’s not something they actually track. A first step would be to improve our definition around capacity, and to understand regional versus local capacity benefit. Looking regionally wouldn’t put as much burden on utilities.

Baselines: Light said that all utilities expressed the ability to provide data on baselines, but they cautioned us about overburdening respondents. We request quite a bit of data, she said. I want to think about how we can balance that, and look at where it really matters — looking at markets where the biggest chunk of savings is coming from.

Light described where the RTF is looking to improve. It will continue coordinating with NEEA and BPA to avoid double counting. It is getting better information about program baselines to ensure more apples-to-apples when comparing data. It is planning improved protocols for updating past data as new information is available. It will acquire measure-level data to help the RTF understand what is in the missing data, and it will work with BPA and utilities to ensure consistency as it goes forward tracking Seventh Plan goals.

Council Member Pat Smith asked if they update the final numbers when more information comes in about momentum savings? Light said that would show changes for previous years and how those were updated. Grist said it will be imperfect — sometimes they get corrections at a high level, but they can't correct every measure.

Member Karier said, "I want to acknowledge that this closes the book on the Sixth Power Plan. Looking back, it was successful in almost every respect. The Council set a target and, at the time, it was considered ambitious and controversial. I remember great debates that the targets were not achievable. They were too high and too difficult; and yet the region not only met them, but also surpassed them at a very low cost. Looking at the cost to utilities for acquiring it — below $20 per kWh — is phenomenally cheap. It's a great hedge for the future: 1,739 MW of carbon-free power that we don't have to replace. It's an example of how you can do good things, but if you don't monitor it properly, you don't acknowledge the success of it. Maybe with habitat we'll get to that point."

Member Lorenzen said, "You could safely say the plan was a failure because the plan wasn't aggressive enough in establishing the targets."

3. BPA EE Action Plan

Grist discussed staff's reactions to Bonneville's draft Energy Efficiency Action Plan for 2016-2021(Draft EE Plan), which documents the agency's current view of how it will meet its share of the Council's Seventh Power Plan efficiency goals.

Bonneville's Draft EE Plan is an in-house document that identifies four categories of savings: utility program savings funded by EEI, utility program savings self-funded by utilities, market transformation savings from NEEA, and momentum savings from new state codes, federal standards, or market uptake.

The Draft EE Plan concludes that Bonneville and its customer utilities can almost meet the six-year goal set out in the Seventh Power Plan, with the resources identified and expected levels of savings. But, there are significant uncertainties that Bonneville and its customer utilities face in implementing the plan, Grist explained. The Draft EE Plan could do a better job of identifying these risks and make the plan more of a strategic tool to help guide Bonneville's decision-making and adaptive management in dealing with changing circumstances.

BPA's share of the Seventh Power Plan's energy-efficiency goals is 42 percent. Its targets ramp up over time. EEI-funded programmatic savings totals about 40 aMW a year. Utility self-funded programmatic savings will total 96 aMW by 2021. There will be an increase in market transformation and momentum savings.

Member Norman asked Grist to explain momentum savings. Grist said it is activity in the marketplace that utilities aren't paying for. Sometimes it's a residual of things we've done before, he said.

There was a discussion of money versus savings. BPA is one step removed from its utility funders, Grist said. The utilities are the ones who offer programs to customers to get things done. BPA looked at the Seventh Power Plan, looked at what measures are in the baseline, what new technologies are on the horizon, and what utility program trends exist.

Program savings and budgets were developed. They looked at sector levels, measures and technology, and program approaches (how are they going to get those savings). They also looked at new codes and standards. They also considered cost and pace. How much money will it take per unit to get someone to adopt it, and how much savings will they get? It's all added into expected budgets and expected savings. It's taking a bottom-up approach from every sector lead's point of view.

Taking a look at five-year total savings, there is 570 aMW out of a target of 588 aMW. "We think the plan is roughly on track," Grist said.

2017 BPA Incentives are relatively low per aMW compared to other utilities.

BPA programmatic incentives for retail sales also are lower and its incentives target a smaller share of savings. BPA is expecting a lot of savings from momentum savings, whereas other utilities aren't expecting as much.

He discussed plan goals by sector compared to the Seventh Power Plan. There will be more commercial, and less industrial, distribution and residential. Council staff looked for further clarification on why residential is lower.

Member Karier asked why BPA's so much lower. Grist said BPA is expecting it to be filled by momentum savings. BPA's Draft EE Plan is not addressing savings in embedded data centers and plug loads. Momentum may backfill that piece. It's one of the unknowns in Bonneville's plan.

Member Lorenzen asked for a clarification. On the left we show what's achievable in our plan in the commercial sector. On the right is what BPA will do? It's from programmatic savings only, Grist replied. We could see momentum savings in lighting and some in HVAC.

Member Lorenzen asked why don't they show the amount of momentum savings? Grist said that BPA's momentum savings is a placeholder. They're still working on it. One risk is what will come through other channels. He mentioned a desire to have more clarification about BPA's distribution savings.

Grist said BPA expects 96 aMW from utility self-funding by 2021. Customer self-funding is an assumption based on the last three years. About 80 percent of utilities and 60 percent of load did no self-funding. Staff thinks there's a significant risk there.

Member Booth asked about Cowlitz self-funding. Grist said they've provided a lot of industrial sector self-funding.

Grist said BPA's EE plan estimate is a placeholder — it's being refined by BPA over the next month with new lighting and HVAC estimates. Staff looked at momentum from new codes and standards. There have been 14 new standards since the publication of the Seventh Plan. Staff thinks BPA's share is 40-50 aMW of those savings. A new administration in Washington, D.C., adds another level of uncertainty.

Grist outlined the areas of risk for meeting targets:

- Market momentum risk – particularly for lighting
- Standards effectiveness and timing (particularly with the new administration)
- Utility self-funding
- Effectiveness of energy efficiency incentives
- Flat budget for EEI while goals increase
- Lagging ability to increase budgets
- Ability to adjust EEI incentives in timely manner

Grist produced a cover letter and memo he wants to send to Bonneville. It has comments on its energy efficiency plan, addressing some areas of uncertainty, and some recommended technical changes. The comments are due November 18. Member Lorenzen said he would review the letter.

4. Regional Technical Forum (RTF) website

The RTF launched its updated website, providing visitors with easy-to-find work products, subcommittee reports and a calendar of events. It's also optimized for mobile devices. It can be found at: https://rtf.nwcouncil.org.

"Our staff maintenance on the new site will be dramatically reduced," said Jennifer Light, RTF manager.

Member Yost said, "We had discussion on the RTF, BPA and small rural programs. Is that on the webpage?" Light replied it is. There is a subcommittee section. "Every time someone adopts a measure, we can capture it and talk about it."

Ben Kujala, staff power division director, said that through a competitive bid process, the Council selected OMBU for this project. It was very collaborative, he said.

5. Briefing on fish and wildlife projects in Northern Idaho and the Kootenai Tribe Burbot Hatchery

Chip Corsi, Idaho Department of Fish and Game (IDFG); Sue Ireland, Kootenai Tribe of Indians; and Angelo Vitale, Coeur d'Alene Tribe of Indians, updated the Council on Northern Idaho fish and wildlife projects.

Corsi provided updates to the Council about three projects underway by IDFG: Lake Pend Oreille Fishery program, Kootenai River Fishery Program, and Albeni Falls Wildlife Mitigation Program.

Corsi discussed the conservation strategy around Kootentai River white sturgeon. They are conducting research is to evaluate movement and spawning related to management actions, and to guide habitat restoration and flow manipulations.

The objective around burbot is to restore a naturally reproducing and harvestable population. It is the only native burbot in Idaho and they are hoping to reopen sport fishing in the near future. They also are working on a nutrient addition project to restore native fisheries via a bottom-up trophic cascade.

Corsi discussed efforts surrounding Lake Pend Oreille fishery recovery. It's known as a very important sport fishing destination. Objective 1 is Kokanee Restoration. Objective 2 is bull trout and cutthroat trout conservation. Objective 3 is to restore the trophy fishery.

At Lake Pend Oreille, a lake trout suppression effort was undertaken, using commercial netting and a bounty program of $15 per head. The catch is declining. The suppression program peaked in 2006, and now it's a suppressed population. "We're not just killing them because we're trying to get a response from Kokanee, rainbow and cutthroat trout," Corsi said. "Things were pretty dismal. They were calling it a dead sea." In 10 years, they have gone from 10,000 spawners to 1.25 million spawners, and they have seen a 30-40 increase in trophy-quality rainbows.

In 2006, they saw bull trout's population peaking, then it took a nose dive when the Kokanee did. Bull trout in good shape now with numbers in the 10,000 range.

The Albeni Falls Wildlife Mitigation project centers on mitigating lost ecological services. A portion of Phase I construction was completed in 2015, protecting over 600 acres from further erosion due to the operation of the Albeni Falls Dam.

Vitale of the Coeur d'Alene Tribe, provided a status update for Coeur d'Alene Tribal projects focused on resident fish conservation and recovery in the Coeur d'Alene Sub basin, and Hangman Creek Fisheries Restoration, as part of the Spokane River Sub basin.

Vitale said it was beneficial to lay the prioritized projects on the landscape, looking at nine landowners and a few, small, private landowners. That made it a manageable situation. He discussed making progress, identified priorities and discussed milestones. “We’re seeing increasingly well-connected habitats at the watershed scale,” he said.

He said Benewah Creek is the poster child for these restoration efforts. The effect of that restoration is it created deep pools that are cooler than surface water temperatures. It provides optimal conditions for cutthroat. Beaver have begun to occupy that same region. The result is a stable dam complex that has increased the amount of water stored. The project is influenced by the Coeur d’Alene tribe’s worldview. They’re tracking cutthroat through its whole life history. He said the tribe shared the results of PIT-tagging studies done in 2011 with ISRP.

Vitale said pike has been well established for 40 years. Based on results of research, they did a pilot suppression effort in Windy Bay. It was at a scale we thought was manageable, he said. They conducted a survey on pike management as well.

They also are looking at landscape alterations in Hangman Creek for fishery restoration. They identified 32,000 acres of habitat. There’s a BPA-funded mitigation effort and an Avista-funded effort to acquire habitat for mitigation.

Finally, Vitale had a comment about phase one of the reintroduction of anadromous fish above the dams. While Kootenai is not a recipient of BPA funding, it is collaborating with other regional managers to see that the effort moves forward. The Coeur d’Alene Tribe wants to see annual salmon reintroduction for harvest.

Sue Ireland of the Kootenai Tribe, spoke about the Kootenai’s integrated fish and wildlife program and how it reflects the tribe’s emphasis on landscape-scale restoration actions, which are designed to enhance the resilience and adaptability of ecosystems.

The Kootenai River Sub basin is 9-million acres and 485-miles long. It has endangered species, hydropower and a resource-based economy. The tribe makes its living on the river. The flood plain used to be very rich, but in 1974, Libby Dam disconnected the flood plain. While it provided power and flood control, the native fish and wildlife have declined.

On the Kootenai River, the tribe is evaluating operational loss assessment, protection, and mitigation and rehabilitation. Ireland discussed reconnecting the Kootenai River with the historic floodplain. Albeni Falls wildlife mitigation also was discussed.

White sturgeon is a culturally important fish to the Kootenai culture. Discussed the history of the fish, which was listed as endangered in 1994. Ireland reviewed their recovery plan for the sturgeon and conservation aquaculture. She also covered Kootenai River Burbot population recovery efforts. The tribe went through the ISRP process and the proposed a new hatchery: the Twin Rivers Hatchery. The aim is to restore a viable and self-sustaining harvestable burbot population in the lower Kootenai River. The tribe purchased the site in 2007. Its goal at

least 125,000 juveniles. There was a thorough discussion of hatchery operations. They also did some sturgeon releases with the community.

Member Karier asked if all the habitat work is with the intention of trying to help the sturgeon. Ireland said some are targeted directly — others to enable migration. Because that reach is so shallow, and has changed so much, the hypothesis was to add some depth.

Member Norman said it looks like a successful supplementation program. Are there any indicators that flow enhancement has resulted in production improvement? Ireland said, not yet. It's difficult to catch the larval and see if they hatched on the rocks. In a couple of years, perhaps we can.

Member Norman said so you expect in a couple of years we'll have a better idea. Also, is there flow enhancement for sturgeon? Corsi said, "Yes, we're trying to replace some semblance of the natural hydrograph and the period when the sturgeon spawn. Finding out how successful it will be a long process." Many of these are spawning for the first time in 30 years of age, so there aren't many adults. And it's hard to find larvae. So it's harder than finding a needle in a haystack."

Ireland added that they're seeing some encouraging behavior above the bridge. Corsi said if we get past the bottleneck, we find that both the burbot and sturgeon are making a living.

Member Karier asked what age of sturgeon they're looking for. Larval? Two years? Corsi replied, "Ultimately it's to get them to wild reproduction. We won't know that for years to come. When we started this project, this was an old-folks home for sturgeon. They were aging themselves out of existence."

Meeting adjourned at 5:07 p.m.

Wednesday, November 16

Council Chair Lorenzen brought the meeting to order at 9:34 a.m.

6. Presentation on Staff Paper: Review of Fish Passage Technologies at High-head Dams:

The Council was briefed by Laura Robinson, staff program implementation and liaison specialist; and Jim Ruff, J. Ruff Consulting LLC, who joined on the phone.

Robinson provided an overview of the Columbia River Basin and the areas blocked by dams, and then focused on the Upper Columbia. Dams have blocked over 55 percent of the spawning and rearing habitat for fish. In 1938, Grand Coulee was built. In 1955, Chief Joseph was built. For 15 years, there were mitigation efforts to make up for the loss of fish.

The Council's 2014 Fish and Wildlife Program established a strategy for Anadromous Fish Mitigation in Blocked Areas, part of which lays out a science-based phased approach to examine the feasibility of reintroduction of anadromous fish into the blocked, U.S. waters of the Upper Columbia. One portion of Phase I, which has a due date in the Program of the end of 2016, calls for the need to: "Evaluate information from passage studies at other blockages and from previous assessments of passage at Grand Coulee and Chief Joseph dams."

Council staff reviewed fish passage systems and emerging technologies at over 20 dams in the Pacific Northwest, California, and Pennsylvania and compiled the information into a staff paper. These case studies include the location, site specifications, species, passage type, timeline, additional studies needed or underway, costs and site results.

Following the case studies, staff released its draft paper for public comment. Responders included a variety of public officials, interest groups and other stakeholders. Staff received 26 comments. Many comments stated the criteria for evaluating the dams was limited and they wanted to see more technologies. Some didn't think height was important … so we expanded criteria and added locations to be studied.

Robinson said they heard that it's a resource document and no policy direction should come from it. People were engaged in the public comment. We have all costs laid out by the year those costs were given, she said.

Staff is now ready to finalize this resource document. Council can use this in deciding whether to move on from phase one to phase two.

Robinson and Ruff described six key concepts in planning for high head dam fish passage:

1. Allow adequate time for evaluations and feasibility studies.

2. Do not evaluate or compare existing fish-passage projects on the basis of cost, as variations in site characteristics and the age of passage systems make cost comparisons inaccurate. Don't expect an approach will yield the same results everywhere. Realistic goals need to be set up, in collaboration with fish manager, tribes and other stakeholders.

3. Understand and account for differences in site characteristics. The size of a passage project needs to be scaled for the specific characteristics at each site. Behavior will be different at each dam.

4. Stay up to date with passage technologies, as fish passage technology is evolving and improving. Different approaches have been tried over the past 60 years. Reviewing older studies is important, but newer studies should be relied upon going forward.

5. Collaboration among project owners, regulators, fish and wildlife agencies, scientists and interested parties is critical to successful, large-scale anadromous fish passage projects. It's not easy, but it's critical for necessary permitting and operation. Collaboration is critical at the regional level as well.

6. Consider developing a science-based decision framework for new projects to help organize and assess all the biological, environmental, hydraulic, technical, and economic data for a range of passage alternatives under consideration at each site.

In evaluating passage, they recommended that fishery managers should consider the following questions:

1. What is the end goal or objective for fish? For example, the goal could be to achieve a natural, self-sustaining population; or it could be to gain cultural, biological and economic benefits as the result of passage.

2. Where should the juvenile fish collector be located? Consider different siting options. Are one or multiple collectors needed? Recognize:
   - Environmental factors
   - Fish migration behavior and timing
   - Hydraulic conditions
   - Life history in the reservoir and at collection
   - Ideally, studies will be done at all potential sites

3. What types of fish passage systems should be evaluated at each project? Each site will be unique and these systems are quite expensive. One size does not fit all.

There was a discussion of different fish collectors. For example, at the Penton-Round Butte collector, fish were confused and weren't finding the collector. At the Swift Dam fish collector, the net had issues with debris.

The staff's next steps are to format the staff paper and post it online as a resource document. The deadline is the end of 2016.

Member Karier praised the presentation and report. "Do any dams use multiple collectors at the same location? Robinson said Baker is one. They have juvenile collectors above and below Baker.

Member Karier observed that is unusual; it's usually a single collector. Correct, replied Robinson.

Member Karier asked what happens with the paper? Is it just posted? Fish Division Manager Tony Grover replied, yes, staff fulfilled the program language. It's up to the Council whether they want to open it for public comment or direct staff to do more work.

Member Anders said she thinks it's ready to post.

Member Norman said he likes that the door is open for emerging technologies. He's familiar with the Lewis River/Swift Dam operation, where there has been no passage since 1932. He said it started with an investigation of habitat availability. As I recall, part of that process included hatchery adults, to see if they find suitable habitat, and releasing hatchery smolts to see how they behave moving downstream. I figure that's probably a phase two activity. Do you anticipate this being a process as we move forward in looking at a final design for a fish collector?

Robinson replied that in phase one, under the bullet to investigate habitat suitability, it might include selected releases of steelhead and salmon. It's something we have in our program, but don't have it at this time. You have to release the fish, see behavior in the reservoir, see if they go into the dam and assess the habitat. Studies are underway on habitat right now by the Spokane and Colville tribes above Grand Coulee now. They just received the funding a few months ago, and we should have a report next year.

Member Norman observed there was differences between species in how they migrated and the final design had to account for that.

Member Booth said, "I feel quite strongly that the predation issue needs to be addressed if we're going to focus on a reservoir as large as Lake Roosevelt. You'd be introducing a species into a reservoir that hasn't been there for many, many years. There's a new ecosystem with predatory species such as bass and walleye. I believe this is a critical point of consideration and I didn't see it on your list."

Ruff replied that it is in the paper and it should have been highlighted as one of the key concepts. It's part of the environmental attributes in the reservoir itself to look at predator populations. Member Booth reiterated that it should be elevated as a key consideration.

Member Booth continued. "What about the economic question? You're looking at a facility that's larger, longer — and that will have to be considered somewhere along the line. We should get some kind of handle on it at the front end, but I don't see that."

Grover said they look at experiences at other facilities. We're not prognosticating on Grand Coulee and Chief Joseph at all — that's nowhere in the paper. But we could move forward on those evaluations if requested.

Robinson said more studies are needed to determine what costs are needed at Grand Coulee and Chief Joseph. "I don't know where they would put juvenile collectors," she said. "I don't

know which ones would work out. There's still time to do more studies and see how those work out, because those will be cheaper as well."

Member Booth said, "I know you put a lot of work into this. I'm anxious to see what we have. It's good to get it out in the region to show folks what we've got."

Member Karier remarked that it raises the question of what comes next. Should we proceed on the passage issue? Post it and put it to bed? Look at challenges at GC? It's not specified in the program.

Grover said there is language at the top of page 85 that talks about next steps that might include selective releases of salmon and steelhead, and investigate the scientific feasibility and cost of upstream and downstream passage options of salmon and steelhead. It's an optional trigger the Council could ask staff to embark upon.

Member Bradbury asked, "When will this come back before us? We should get public comment on this first." Robinson said they couldn't move from phase one to phase two until they receive the habitat information. The Council will be revisiting that at the end of 2017.

Council decision on the use of Cost Saving Workgroup funds

The Council discussed how to allocate $510,000 in cost savings to fund work in emerging Fish and Wildlife priority program areas. There was discussion on using the funds for the operation and maintenance of existing facilities, and to study sturgeon and lamprey. In addition, there was a mention of studying cold-water refugia and sea lion predation.

Grover urged the Council to move forward with the allocation instead of continuing discussion and requesting new proposals. "We have abundant direction," he said. "The cost savings work group has thought long and hard about avoiding teasing the region. If we ask for too many things in too many categories, we'll disappoint people. We think that with this small amount we can do sturgeon and lamprey … and could probably do some cold-water refugia. We're all concerned about predation, particularly sea lions. But we only have a tiny bit of money. We don't want people working with very little chance of success."

Member Lorenzen said he didn't want a motion. The Council consensus was to defer to Member Anders on the reallocation of the savings.

Council Business

Northwest Power and Conservation Council Motion to Approve the Minutes of the October 11-12, 2016, Council Meeting

Member Booth moved that the Council approve for the signature of the Vice-Chair the minutes of the October 11-12, 2016 Council Meeting held in Portland, Oregon.

Member Anders second. Motion passes without objection.

Northwest Power and Conservation Council Motion to Authorize a One-Year Contract with Navigant Consulting Not to Exceed $50,000 for Technical Support for the Redeveloped Regional Portfolio Model Software

Member Booth moved that the Council authorize the staff to enter again into a contract with Navigant Consulting for technical support for the redeveloped Regional Portfolio Model, for a period ending September 30, 2017, not to exceed $50,000.

Member Smith second. Motion passes without objection.

Northwest Power and Conservation Council Motion to Issue a Request for Proposals to Scope the Development of an End-Use Conservation Model

Kujala said they want to issue an RFP to see what's in the field to do an end-use forecasting model. It's not to get the model, but formulate a good plan for going forward.

Member Lorenzen praised Kujala's record, saying his team has done an admirable job of developing models, and coming in under budget. Member Karier agreed that they have a great record, which means they shouldn't be complacent. But this approach is one way to minimize those pitfalls, said Member Lorenzen.

Kujala said these kinds of contracts help us minimize risks.

Booth moved that the Council approve issuing a Request for Proposals to scope the development of an end-use conservation model, as called for in the Council's Seventh Power Plan and presented by staff, at a cost not to exceed $40,000.

Member Smith second. Motion passes without objection.

Letter from the Council to Bonneville regarding the Draft Energy Efficiency Plan

Member Lorenzen will sign the letter. That way they don't have to have a notice of this particular issue. John Shurts said these are staff comments and we're just attaching a cover letter.

Member Lorenzen said that Member Karier prepared a good cover letter. It is acknowledging BPA's accomplishments and looks forward to working with BPA going forward. Then he will attach a memo from staff with technical details.

Member Yost said he is supportive of the letter draft.

Kevin Smit said there are key areas of uncertainty we address in the technical details portion of the letter. Kujala said we could attach additional comments.

Member Karier suggested that staff could pull out technical comments from the original policy letter, and show those to the Chair, the Chair could see if they're appropriate to include in the technical letter.

Member Lorenzen said to send the draft around and gather feedback. Then he will decide whether to sign it.

Bill: I want to express concern BPA put forward. I'd prefer BPA to be more aggressive, not just barely meeting the target, but perhaps to get one and a half above the target, like they did last time. The law requires that we're supposed to do conservation first. I have some real concerns about what they put forward in their EE plan. It's not near aggressive enough to meet the legal requirements of putting conservation first.

Member Lorenzen said, "So I'll make the decision."

Grist said by telephone that, "The intent of both pieces were staff review and analysis of BPA's draft plan and recommendations on how to improve it. They asked for public comment on how to improve it, and we took our best stab at how to improve it. I don't understand what pieces of the first letter are objectionable."

Member Lorenzen again said he will look it over and decide whether to sign it.

Shurts said it would be a cover letter from the Council that is nonsubstantive and then a technical document of the staff's comments.

Member Lorenzen talked about how best to deal with issues to maintain a positive relationship, and meet the goals in our plan.

Public comment

Scott Levy, bluefish.org

He said his mission is to promote open and honest dialogue on salmon. He said he has repeatedly discussed the misinformation campaign, which is what Judge Simon said in his scathing opinion. This agency is part of that misinformation campaign. It's hard for young staffers to hear. In particular, two revealing graphics in the Seventh Power Plan shows system costs of a major loss of a non-greenhouse gas resource. It shows its economic effects if that occurred. The second graphic shows the exports. We have 420 MW exported to California, and we're selling that power at a loss. What's missing is what the powers that be want to hide.

You should come clean with what the models tell us. To hide this from Congress is a criminal violation of the ESA.

Jim Waddell, professional civil engineer.

He said it's interesting to hear about cost savings. He said his background is figuring out how much things should really cost. One issue with the Lower Snake River Dams is how much they cost. What are you getting for your money? For every dollar invested in these dams, we're getting 15 cents back. You've been losing money on those dams. In 1947, the Corp had to fabricate benefits. Economics are so bad for hydro, Congress has only authorized 12 turbines, now 24. They have exceeded their life expectancy. BPA rehabbed some of them, but won't rehab the others. He said salmon survival is declining and we're out of time. The Corps have the authority to breach these dams tomorrow. They don't need Congressional approval. The money is already there. But you folks and Governor Inslee have not asked them to.

Bo Downen, Public Power Council

Regarding BPA's energy efficiency action plan, there sounds like there's a lot of concern by the Council. The Administrator sent out a letter that outlines some policy changes. Some customers thought they didn't do enough to help the program. Customers would have liked to see broader, sweeping changes to the program. But maybe we need to walk before we run. BPA got there through a year-and-a-half-long process. You were involved. There seems to be a concern of whether BPA will get to the Council's goal. There is some concern that they should have been more aggressive. BPA was conservative in what they could achieve to get momentum savings. Let's work together. Let's keep the rhetoric down. BPA has a vested interest in achieving the goals set forth. The action plan has a good roadmap for achieving these goals. Let's get things happening and see where we are. As Bradbury said, we have been overachieving. For the first couple of years, let's not prejudge what might happen and not look at these small changes like it's some major backsliding.

The meeting was adjourned 11:27 a.m.

Approved December ___, 2017

_____

Vice Chair