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

Council Meeting
April 7, 2015
Helena, Montana

Council Chair Phil Rockefeller called the meeting to order at 1:32 p.m. All members were in attendance, except for Bill Booth, who was absent due to illness.

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

Council Member Bill Bradbury, Chair of the Fish and Wildlife Committee, began by recognizing Council Member Henry Lorenzen, who was recently reconfirmed by the Oregon State Senate to continue to serve on the Council.

Fish and Wildlife reviewed a spreadsheet that helps prioritize and track actions specified by the program. Developed by Washington staff member Stacy Horton, the spreadsheet will help during future amendments. Staff has to integrate the various sub-basin measures into this tracking device, because they aren't currently a part of the tracking system.

Council Member Jennifer Anders reported on the Cost Savings Subcommittee. In 2015, they'll try to fund some newer priorities through cost savings in the existing program.

Anders said that the goal is to fund emerging projects. They have short and long-term visions and talked about the tools at their disposal to do this. The subcommittee will look at projects that might be closing out, and ways to achieve programmatic savings. They can save enough to meet their expectations for spending, which they will be pursuing in the next few months.

Bradbury said that staff member Lynn Palensky reported on the regional coordination meeting on March 19 in Portland. Most tribal and state fish managers attended. The meeting focused on the Council's emerging priorities list. They worked on getting an understanding of the expectations about the managers' participation in program activities. They also discussed some of the expected work products and how new work might get funded moving forward. They agreed to have another coordination meeting in October.

Last, Council contractor Peter Paquet presented definitions of operational and secondary losses of wildlife. The Wildlife Advisory Committee (WAC) will take up discussion of Habitat Evaluation Procedures (HEP) and its use at its meeting in Helena. It will culminate in an October report to the Council. The WAC is assessing operational losses and will also include that assessment in its October report. The committee wanted definitions of

operational and secondary impacts, and to tie those to a sufficiency nexus for the hydro system.

Council Member Pat Smith, Chair of the Power Committee, reported on the springtime resource adequacy assessment. The test is the 5 percent loss criteria, meaning that during the year being studied, the power system would have a 95 percent chance or better of not having a shortfall. A 2019 adequacy study exceeded that standard a bit (6 percent). But in this preliminary view done for 2020, we are within that 95 percent because of reduced load forecast. One reason is there have been some improvements in the GENESYS model. Smith said we also got a peek into 2021, when some coal retirements are due in Centralia and Boardman. We're looking at an 8 percent loss of load factor and a need for 1,150 MW.

The second topic was a discussion over which existing generating units to include in carbon footprint assumptions for the Resource Portfolio Model (RPM). The staff recommended modeling units in GENESYS that are providing electricity dispatch to Northwest. This would include the coal-fired plants Colstrip, Bridger and North Valmy, but it would not include the Dave Johnston Plant in Wyoming because its not dispatched to the Northwest. Smith said that some alternatives offered could be to include Dave Johnston if consumers in Oregon had to pay upgrade costs, even though the plant was not serving Northwest load. The consensus of the committee was to go with the staff recommendation.

Third, staff also asked for guidance on the social cost of carbon and which discount rate to use in the scenario analysis for the Seventh Plan. In the Sixth Power Plan, the 3 percent discount rate was used. There was strong consensus to go with 3 percent for the Seventh Plan as well.

Staff asked for guidance on ramps for conservation development. Staff came up with a tentative, fixed amount. The approach would be to leave the 20-year amount of conservation, but have two ramp rates. One would be one-third faster than the base rate, and the other one-third slower. These are tests to put into the RPM to evaluate those ramp rates. The Power Committee approved staff's recommendation.

Staff asked the committee for guidance on climate change's direct effect on temperature changes. At the Eugene meeting, there was a consensus that indirect effects, such as population impacts, should not be included in the baseline. They could be run as a sensitivity analysis in a single scenario. But the question was, "Will the actual direct affects of temperature changes be included in all baselines?" The Committee's consensus is not to include in all baselines but rather to run it in one scenario as a sensitivity analysis. Otherwise, it would require a lot more study and would slow down the planning process by months.

Another issue had to do with demand response incentive payments — whether to include payments to encourage demand response in the total costs of demand response. FERC has a study saying incentive payments are not included because they're transfer payments. To the extent staff reached out to stakeholders, most of them felt that they should be included. There isn't a staff consensus on this. After a lot of discussion, staff is comfortable including incentive payments as part of the cost. Let's make sure we're not overestimating what those costs are, because if you include those costs, that will decrease the amount of demand response in the model. But there isn't a lot of information out there. Power

Planning Director Tom Eckman said that this is an adequacy issue as much as it is a cost issue, so the need for it will outweigh the cost.

The Committee had a preview of the RPM, which was enabled a few days prior.

Council Member Jennifer Anders, Chair of the Public Affairs Committee, said the committee planned to meet following the Council meeting. There are three items to discuss: Jeff Allen will report on the Idaho office's plan for the Congressional Staff trip in and around Orofino, which will take place around August 18–20. Second, the Committee will discuss the Bonneville Power Administration (BPA) fish and wildlife cost report, and consider what changes are needed to the format if any; and Council Member Tom Karier may have suggestions on how to integrate the report with high-level indicators. Also on the agenda is Anders' proposal to hire a Montana grad student for the summer in conjunction with the University of Montana, as recommended by the Transboundary Conference, which took place last fall in Spokane.

1. Remarks by the Honorable Steve Bullock, Governor of Montana

Anders introduced Governor Bullock. She said they worked together on many projects when he was Attorney General. He also took a case to the Supreme Court.

Governor Bullock's remarks:

"She omitted that I used to work for her. She was head of criminal appeals bureau. Fine lawyering was honed under Jennifer.

It's a pleasure and an honor to be here. Though my tour in this job has been relatively short, I find that when the western governors get together, we find such areas of commonality. Who would have thought I'd consider Butch Otter to be one of my better friends? When he pats me on the back, I try to act younger and tougher than him, and I'm not sure either is the case.

It really is nice to meet the folks doing the work that I only get to hear about in this anecdotal world that I live in as Governor. I applaud the Council for the important, critical important work that you do. As much pride as each of us have in our individual states as citizens or as governors, we know that we're interconnected. The decisions made in one state are going to impact others. When we work together to coordinate energy and wildlife policies, we're much more able to benefit the region for generations to come. Like the rest of the region, Montana is following the development of your Seventh Power Plan. Profound changes are taking place in the world, nation and region in energy consumption and production. New technologies are emerging at a rate faster than seemed possible. The lowest cost resource, energy efficiency, has contributed to the flattening of load growths, which is a good thing for consumers. More renewables are entering the grid and that is causing integration challenges.

Since the 1970s, Montana has been a major exporter of electricity to the Pacific Northwest. Currently, half of Montana's generation is exported. We're proud of our role in powering the Northwest. Montana generation creates thousands of jobs, it is important to our tax base,

and to our state's economy. We see that role continuing. However, with 90 percent of Colstrip generation and Montana wind generation owned by out-of-state companies, we know that Montana by itself doesn't define the future. Montana must position itself for the future, and we'll look to Seventh Power Plan to help us understand what that future is.

The NW Power Act and the Council have prioritized cost-effective energy efficiency and renewable energy in the plan. The Northwest has largest nation's largest hydroelectric base. As a result, the region enjoys the cleanest and lowest-cost electricity in U.S. I think that's a great legacy to build on for the future. It's important that, just as that energy future unfolds, our electricity system remains secure, reliable and economical.

I'm asked to do a lot of things in this job as governor, and I'm asked to be an expert in a lot of areas. I'm not a scientist, but you don't have to be a scientist to know that our climate is changing. In Montana, we live close to the land and we see those changes first hand. We see it in our fire seasons, our river flows and our changing seasons. Very few of us would argue that our climate isn't changing, because there's too much evidence to the contrary.

Even for those who don't buy that evidence, they need to accept that most do and that will have implications for our future. I appreciate the work that the Council, BPA, utilities and other stakeholders are doing to plan for our future energy needs in the context of climate change, changing technologies and a changing world.

Montana is a major contributor to water storage in the Columbia basin. More than 40 percent of the U.S. water storage in the basin is in Montana. For more than two decades, Montana has led an effort with our partners, including the Council, to operate Libby and Hungry Horse dams in a way that respects both upper and lower basin needs. Prior to the mid-1990s, these dams were operated primarily to serve lower basin needs, to the detriment of communities, and fish and wildlife resources. With new operating procedures such as VARQ, seasonal flows and ramping rates, that has changed; and I do want to thank Council for its support in that effort. Speaking of big dams, I know that the Columbia River Treaty arises in a different forum than this Council, but it's an issue of tremendous importance to Montana. It's essential that the U.S. engage Canada on modernizing the treaty. We've had a number of meetings and discussions toward the same — and frankly, the sooner the better. The U.S. Regional Recommendation provides a helpful framework to identify needed changes in treaty operations. Montana and British Columbia have shown on the North Fork of the Flathead that we can work together to address future, cross-boundary needs. We're optimistic that those mutually beneficial outcomes are possible on the Kootenai River as well, and that other important treaty issues can be fairly addressed.

We don't have salmon here in Montana by any significant measure, but we do have the best fly-fishing in the world. Outdoor recreation tourism is the second-largest component of our economy. We've had 11 million visitors this last year alone. People come to Montana from all over the world for our beautiful landscapes, abundant fish and wildlife, and we certainly want that to continue. Although Montana receives a small percentage of funding from the Council and BPA, that funding is crucial to protecting Montana's fish and wildlife, and it's also important to our Salish and Kootenai tribes. I understand that there might be some future negotiated settlements between BPA, the states and tribes to fund new fish and wildlife projects after 2018. I would simply encourage the Council to stay actively involved. Similar efforts have worked in Montana and around the region. These agreements

not only benefit fish and wildlife, but also provide some stability to ratepayers in terms of money spent. Montana has negotiated an accord with Bonneville, and we consider it a great success story. We're able to use Bonneville funds to help purchase critical resident fish habitat in Northwestern Montana, which we manage under the public trust doctrine. Bonneville purchases were a small part of the overall funding, which came from many sources. I think that's a testament to our ability to getting things done on a Big Sky scale.

Our success story is really a success for the region. I think it should be a goal of all future accords or settlements. It's easy to say that a particular state or tribe is a beneficiary, when really we all benefit. Given the Council's role, it only makes sense that it be a part of that regional effort to improve habitat. It seems like the greater the on-the-ground, bottoms-up collaboration, the better the outcome. That happens in all areas, not just those you're involved in. The collaborative process seems the best vetting for better outcomes and better cost, and we look forward to seeing more successful collaboration in Montana and the region that benefits fish and wildlife, while also being prudent with the ratepayers' pocketbook.

Congratulations with your new fish and wildlife program, good luck with the Seventh Plan, and thank you for all you do for the Pacific Northwest and Montana. The issues you work on are detailed and heady. I have no doubt that you don't always agree as a Council or with everybody back home. But it's these areas of leadership and looking toward the future that will make a significance difference, not just for today, but also for our kids and grandkids. Thanks for the hard work you do."

Council Chair Rockefeller remarked that the Council is blessed with vigorous discussion because four of the members admit to being attorneys. Plus, we have an economist.

"Last year was 20 years after taking the bar," the Governor said. "In this new job, I miss the logic that comes from being a lawyer."

Bradbury complimented the Governor's choices in appointing Council Members Anders and Smith.

"There's a view that some of these positions are better than being Governor," Bullock replied. "With three weeks left of my legislative session, I wouldn't disagree. I was so pleased they agreed to do this because they're so eminently qualified, and down-to-earth people who want to get things done."

He also said that he had the opportunity to learn from Anders when she was his supervisor. "For a legal geek to get to argue in front of the Supreme Court, that was the Super Bowl," he said. "To get to argue the case with her was one of my professional highlights."

Council Member Tom Karier said that as the Council works on the Seventh Plan, it will be looking at Montana wind. "It's a great resource with a high capacity factor and strong efficiency, but doesn't have a lot of transmission on it," he said. "We don't plan transmission, so we have to work with what we have. Also, with the treaty, we're a little stuck with the U.S. State Department. How do you knock the treaty loose from Washington, D.C.?"

The Governor said that he would argue that Montana has some of the best wind. “Better than Texas, we just don’t brag about it,” he remarked. He said that it could provide great balance to some of the things that are occurring in Oregon. As for transmission, he said, “I hope that if we build it, they would come. We need to address our transmission challenges, and we’re talking about one of the most antiquated system cobbled together by human beings.” He also said that he recognizes that these aren’t issues that one state can solve alone. It’s helpful to incentivize our opportunities going forward.

Governor Bullock offered to have a discussion with Smith and Anders offline to engage the governors in the Pacific Northwest states to revisit the treaty issue with the State Department.

Council Chair Rockefeller said that the State of Washington is in legislative session as well. There are some legislators looking to Montana and hoping for a day when Montana is more characterized by renewable energy than fossil fuels. “Maybe you have some thoughts on how to call out the best of our potential in the Northwest,” he said.

Governor Bullock replied, “What we know and do today will have to be eclipsed by what happens in the next few decades. Any time we get polemical on either side, we’re failing to recognize that our energy future is going to change. You won’t flip a switch tomorrow. That gets lost in all sides of the discussion. The one certainty is that in 40 years, things are going to look different in technologies, transmission, applications, and how we get there in an orderly fashion. It’s a tremendous responsibility for the CEO of a state to make laws and decisions. What occurs in one state will have broader implications than what is confined in that state’s borders.”

2. Update on the O&M Strategic Plan

Council Member Bill Booth chairs the workgroup on this issue. Mark Fritsch, manager, project implementation, introduced Jeff Allen, Idaho Council staff, who was standing in for Booth. Also providing comments was Bryan Mercier, Bonneville Power Administration, and Patrick (Paddy) Murphy, chair of the fish screen oversight committee with the Idaho Department of Fish and Game.

Fritsch said that Booth wanted input from the Council to make sure they’re on the right path. There have been 35 years of investments in the basin’s fish and wildlife program. These investments were in low-hanging fruit, such as screens in the principal tributaries, and in the nursery areas of the anadromous and native species in the Columbia River Basin. Over the last 15 years, especially since 2007–09, concerns have been raised about having adequate funding to maintain the integrity of the screens.

The planning elements include the Council’s 2014 Fish and Wildlife Program. Fritsch said staff has been meeting with the Fish and Wildlife Committee since the adoption of the program, getting input and guidance. A subcommittee was formed with Member Booth and included BPA, which is vital to this initiative. The Independent Economic Analysis Board is also involved. The Council approved a task force in January, which will provide some insight later this year. Some of the plan was initiated through the Fish Screening Oversight

Committee to secure adequate funds. It completed its initial inventory last January. It should be delivered in the next couple of months.

Another planning element that will be touched upon is the asset management strategy that BPA uses for its transmission lines — it's a tool the committee wants to use and modify for its needs. In addition, it is developing a strategic plan for public review.

In the 2014 program, the attention has been on screens and diversions. That inventory and assessment is in progress. The initial delivery was in January, and the group hopes to have the remainder to the full Council in July 2015.

Hatcheries, fishways and traps are mixed together. Some traps are quite extensive and collect broodstocks, and serve as monitoring tools for some of the hatcheries. The group will focus on program facilities initially before proceeding into the Lower Snake comp facilities.

The third category is the lands, parcels bought to mitigate for the wildlife. That inventory is in progress and is influenced by settlements ongoing throughout the Columbia River Basin.

The fourth category is the Budget Oversight Group (BOG) a mechanism to keep active for unforeseen circumstances, such as mechanical, screen and natural disaster responses.

Jeff Allen said that it's interesting that screens have risen to the top of the conversation. Screens aren't attention grabbers, but they're so important. He reviewed a map of screens by state. They do the work that allows the newer projects to produce results. In the late 1950s, smolts trying to get out of the Lemhi were ending up in the irrigation system. Idaho Department of Fish and Game's effort to install fish screens in irrigation diversions has reduced the stranding of out-migrating smolts from an estimated 71 percent to less than 2 percent. It's apparent why it's so critical, and why it's where the first dollars went from ratepayers to mitigate the effects of the dams.

Paddy Murphy provided a brief overview of O&M concerns. His department ran a successful screen program in the Upper Salmon Basin in Idaho. It was a cooperative funding effort with NOAA's Mitchell Act and BPA. The Mitchell Act started funding operations in the Upper Salmon in 1958. Bonneville stepped up and matched funding in the early 1990s. The department has employees and 17 temporary workers. Twelve are screen tenders. It maintains and operates 263 fish screens over four million acres.

"Our function is fish passage," Murphy said. "If you're talking about fish screens, you're talking about fish passage."

The program's objectives: Increase fry to smolt survival of anadromous salmonids. Murphy said they are doing a lot of projects to improve fish passage into critical tributary habitat, spawning and rearing habitat, and thermal refugia. The effort also is increasing survival of native salmonids, namely bull trout and Westslope cutthroat trout.

"Our predecessors got it right," Murphy said. "Had they not screened the diversions, it wouldn't matter what the habitat quality was, because you'd lose all the production downstream when the fish were moving in their outmigrations."

Almost all the screens on Lemhi are on private property. They are all rotary drum screens. The first two generations of screens weren't what they are now. "We weren't maintaining them enough, we didn't have easements, and it's easy to turn a fish screen into a fish trap if you don't maintain passage," he said.

The golden age of screening was the impending listing of Chinook salmon in the early 1990s. The science improved screens with a true bioengineering approach. It can't just be an engineering perspective or just a biological perspective. Every site has its own characteristics. It's not a one and done. The maintenance cannot be underestimated.

Murphy then described how the screens operate and are maintained. "You don't want fish to contact the screen or have a delay. The screens run 24/7, eight months of the year during irrigation season."

High water is always a wild card. There are no assurances that you're protecting fish without the maintenance component. He then discussed the importance of screen tenders. The program is $500,000 a year for screen tenders, but that's only about 2–3 percent of the estimated worth of our inventory. There are filters that have to be cleaned every day.

Murphy talked about having to work with landowners. "We're dealing with irrigators' livelihoods," he said. "We have a successful program because we negotiate with them. They know us, they're used to us and they allow us access to the screens. We're their business partners. We can't put screen maintenance on the landowner or we'll lose ground."

There are rising costs and shrinking budgets. They received $1.5 million from the Mitchell Act in 1995. About three years ago, they took a hit and the budget is down a third to $1 million. What drives the program is gasoline, fabricated steel and minimum wage … all with a decreasing budget.

It's a challenge to deal with aging infrastructure. Forty percent of the screens are over 20 years old. They're hoping to get 30 years out of them, with maintenance. They will identify their replacement needs going forward. On a good note, they have had some great steelhead seasons in the upper basin for 15 years, half a dozen Chinook seasons, sockeye is coming online … there's a lot of optimism.

Rockefeller asked how they address the reduced budget. Are there other sources of funding or appropriations?

Murphy replied that their two funding pots have been the Mitchell Act and BPA. Back in the 1990s, the Mitchell Act paid all the capital projects. That has since flip-flopped to BPA. Those are the only two funding sources utilized to date.

Jeff Allen said that each state is different with the screens. Part of the need is to get a strategic plan to cover the out years for these facilities.

Groups of hatcheries, fishways and traps are listed under the:

- Lower Snake Compensation Plan

- Bureau of Reclamation
- Corps of Engineers
- Mitchell Act
- NPCC Fish and Wildlife Program

The program hatcheries are starting to age. Fifteen were built with BPA funds and the ownership was transferred to state, tribal or federal entities. BPA's project managers and the state and tribal project leads will assist in the inventory and assessment. The O&M on these facilities is funded by BPA.

Bryan Mercier, Bonneville Power Administration, talked about the lands inventory in progress, which is influenced by settlements. He said that they have a pretty good program in place, so they're devoting their attention to screens and hatcheries.

BPA currently has an asset management plan for all acquired Fish and Wildlife lands – focused on compliance with conservation easement terms.

The majority of BPA's wildlife mitigation program has focused on the permanent protection of high-priority habitats through the acquisition of conservation easements. It systematically reviews the condition of these assets using LIDAR to make sure that they're still getting the fish and wildlife benefit.

Restoration and maintenance activities continue after the acquisition of land, in order to enhance and maintain conservation values, including using stewardship funds.

There are settlement agreements to identify the outstanding obligations of Bonneville to mitigate the impacts of the hydro system. Rather than a long O&M tail, it is settling with stewardship funds to provide funding of a parcel in perpetuity. It provides O&M, funding certainty and low administrative burdens.

The settlements include:
- Montana Wildlife Settlement
- Dworshak Wildlife Settlement
- Washington Interim Wildlife Settlement
- Willamette Wildlife Settlement
- Southern Idaho Wildlife Settlement

There are four phases to the asset management strategy:

> Phase 1: Inventory – understanding which screens BPA has built and which ones they are in partnership with. There are hundreds of screens. Is BPA responsible for all of them? They argue BPA is not.
>
> Phase 2: Enduring safety, compliance and maintaining the condition of the equipment and assets at these facilities.
>
> Phase 3: Criteria for prioritization – high cost per outage are their highest priorities.

Phase 4: Strategic Planning – Planning, funding and a transition to prioritized implementation.

Fritsch said that Member Booth wants to confirm that the Council supports the categories selected and the progress made to date. It also dovetails into what Member Anders is working on in terms of cost savings. Fritsch said they could create some efficiency with these projects. They will be returning to the Council this summer, and to the committee almost every month.

Rockefeller praised the presentation and asked if the old screens aren't as effective compared to modern ones. How does BPA look at the question of updating or replacing portions of the 263 screens?

Murphy said that this generation of screens all meet the criteria. The ones from the 1990s are fine. But they have to be maintained. The program has everything reviewed by a national fisheries service.

Each state is a little different and they are funded differently. Oregon's is a larger program. The question of how to maintain them all continues to be an issue. In Idaho, we're the mom and pop show, Murphy said.

Mercier said that if they found a screen not in compliance, it would go to the top of their priority list. In addition, the BOG will continue to be used as a tool to address natural events, emergencies and miscellaneous needs.

Karier said that this offsite mitigation is very important. It isn't fixing dam passage; it's fixing something in the irrigation system. "We tried to come up with totals," he said. "All we could get was from 2006 onward. What about earlier? There's no record of it. It's good to keep track of and we should take impacts into account. Taking an inventory now is really important.

"When you're done, what are we going to see from you and what are the policy questions along the way? Will we see an inventory of all screens, or just BPA's? What about budgeting and upgrade schedules?"

Fritsch said that's what we need to determine in the subcommittee, and then determine the policies for those needs. Getting their hands around the initial assessment is important.

Karier said that providing a single slide saying what you intend to provide the Council would be helpful. "We need to see what the O&M is across the basin," he said. "While land is a lower priority, keep lands in and tally it up. Show us the amounts."

Fritsch replied that Booth just wanted to get a read of the Council's wishes and to start thinking about what the product will look like.

Anders asked if there was a projected timeline for the four phases. Fritsch replied that there is for phases 1 and 2 (for the screens and hatcheries). There are questions on how to do the condition assessment. There are questions on how to do an audit on that to get a

picture across all facilities in a consistent manner. He said they haven't worked out all those details.

Mercier said that one of the products they hope to get out of this is a longer-term, more-sustainable effort. When we do have assets deteriorating, we can plan for that. There will be opportunities for a number of policy opportunities.

Bradbury said it would be great to develop the asset management strategy for these two issues.

Rockefeller asked if they had all the partners at the table they would like to have. States are participating, but what about federal agencies besides Bonneville?

Fritsch replied, "We're trying to get our hands around our direct program and the ones we're on the hook for. If you get into the screens and hatcheries, you get into comingling with the Mitchell Act. The Mitchell Act will need attention every few years to ensure adequate funding. Otherwise, it adds a burden onto our programs and screens."

Allen said the first step is to get our own house in order. "When it comes to the Mitchell Act, it's an ongoing frustration," he said. "When you tell NOAA that their budgets are inadequate, they reply that they can't lobby congress so that's all they get. If the Council wants to get involved in lobbying Congress, that would be great. Member Booth would say there's not a lot of value to include them into our discussions because we know what we're going to hear."

Mercier said they want to build success with their own facilities first and then branch out in to other partners.

Rockefeller asked the group to come back to the Council periodically if they need those other actors as participants.

Rockefeller said the Executive Committee would meet immediately after the meeting, and that the Public Affairs Committee will meet as well.

The Council adjourned at 3:34 p.m. until 9:00 a.m., April 8.

Council Meeting
April 8, 2015

Council Chair Phil Rockefeller called the meeting to order at 9:03 a.m.

3. Briefing on the treatment of Environmental Compliance Costs for Existing Resources.

Tom Eckman, director, power division; and John Shurts, general counsel, explained the importance of considering existing resources when we're looking at using new resources. Shurts began by giving credit to staff members Gillian Charles and Steve Simmons,

contractor Jeff King, and legal intern Nate Larsen for the work on the presentation.

Shurts explained that the inputs into the analysis include the environmental compliance costs for existing system resources. The Council's task under the Power Act is to determine and compare costs, including environmental costs, of new resources. The task is not to determine and compare the environmental costs of existing system resources or make decisions about those resources.

But we still need to estimate the incremental costs of existing system resources to assess how those resources might operate and dispatch, and understand how new resources fit in. We need to include the estimated costs and operational effects of compliance with environmental regulations by existing system resources.

Shurts said that one piece was to find out the incremental costs of the existing system and get those into the model. "Once the Council gave us the nod in December to take this approach, we looked at the cost of every new final and proposed environmental regulation since the Sixth Power Plan," he said. In addition to carbon emission regulation, in the last five years, staff has had to track a number of different regulations: a new regional haze rule, the new mercury and air toxic standard, and the final regulations for coal combustion residuals. Most apply to coal plants, but some apply to other generating resources as well.

Staff still needs estimates of the future costs of compliance: both the capital costs and the O&M costs. However, the explanatory paper and cost tables are not quite finished. There are different levels of information certainty for cost estimates. A key issue is deciding which estimated costs to include in the RPM, versus costs that are simply discussed in narrative. When the cost tables are finished, you'll find different levels of information — some costs are more certain than others.

Council Member Pat Smith asked if the costs are plant specific or more generic. Shurts replied that there will be both, depending upon if they're reporting or can be found in an Integrated Resource Plan. Karier said that the data is applied on a plant-by-plant basis. Shurts said that the key task is to get the costs into the RPM. There will be other costs.

Shurts said that the first preliminary conclusion is that there has been a significant effort in the region to comply with some of these new regulations — such as a obtaining a good estimate on capital and operating costs to comply with new mercury and air toxics standards.

Cost estimates for the existing system that are important for the RPM are the incremental O&M costs, especially variable O&M costs, because that's what the model takes and decides whether a plant operates or not. So far, the preliminary estimates of additional O&M costs to comply with new environmental regulations don't appear to be significant factors as to whether or not the plants will operate.

The second preliminary conclusion is that there are three O&M cost estimates for environmental compliance:

1. Compliance actions recently completed, committed to or that are under construction. These cost estimates are relatively solid and will be included in the RPM.

2. Near-term compliance actions coming within the next five years, and will be included in the RPM.
3. Long-term potential compliance actions have the most uncertainly — both in the accuracy of the estimates or whether they'll occur at all. There could be some complicated regulations coming with regional haze regulations at two of the coal plants. There also is a whole set of proposed regulations. The costs and sources will be captured in the narrative, but they will not be included in the RPM.

The third preliminary conclusion is that capital costs for some compliance may be so significant that owners will have a decision point on whether to incur those costs. The potential costs are not a factor or an input into the RPM. If you want to incur a capital cost for a coal plant, you need to create a scenario. Whether to incur capital costs or retire them has to be handled outside the RPM.

Eckman said, "The system cost of that scenario will net out any cost that would have incurred by retiring plants. So it's a fair comparison of what the incremental costs of alternative resource development might be. If you retire an existing plant, it doesn't incur these costs going forward. That's a reduction in our system cost compared to something we have to build as an alternative. It will be an after-the-fact calculation, but it will net out so you can see the true cost of alternative resource development."

Council Member James Yost asked when the staff would put together that kind of scenario. Eckman said that existing Scenario 3a pushes carbon down as low as possible with existing technology. That would retire coal and gas fleet, and any costs that those would incur within existing regulations would be netted out of that.

Yost asked what is done about coal plant stranded costs and reclamation plans? Eckman replied that the reclamation costs would be included. Yost said, "If we close before life expires, they have to pay those reclamation and stranded costs up front. A coal plant has contracts for selling energy — so we'll disrupt contracts if we close early."

Those resources have to be replaced with other plants, and that's part of the cost of renewing the contract with another plant, Eckman said.

Yost asked how we handle reclamation, stranded, recovery and contract costs. Eckman said that the presumption is that we'll build additional resources to make sure that contracts are honored if a plant is retired. If a plant closes, there is a cost to retire early and that will be incorporated.

Yost asked if customers pay for retirement costs as well as new power costs. Eckman said, "Yes, it's an expensive scenario, you can be assured of that." Rockefeller asked if this includes decommissioning costs. Eckman replied, "Yes, whatever site reclamation has to be done, as well as state and permit requirements. Plant closure is not zero costs."

Yost commented that plant owners have to set aside money each year for reclamation. But if you close the plants early, they haven't collected the money from their budgets. "I'm wondering if an early closure will be too expensive, and what it will mean for the customer," he said.

“We’ll find out,” Eckman said. “By closing plants early that aren’t fully amortized, we’re building resources before retiring ones we already have, and that’s an expensive proposition.”

Karier said that you just don’t want to count the money twice. Eckman said that the power replacement costs are pretty straightforward, and that site reclamation will have to be paid regardless.

Shurts continued that aside from coal, the Nuclear Regulatory Commission has post-Fukushima upgrades that need to be done to existing nuclear resources. “You’ll see those costs,” he said. “There are wind production requirements too. It isn’t just about the coal plants. We’ll send you that table in the next couple of days.”

Smith observed that this is probably a more rigorous view that staff has taken of these existing environmental costs. Shurts said that for last couple of power plans, the costs didn’t change dramatically. After the Sixth Power Plan, staff decided to delve more deeply and more people are watching how we track these costs.

Regarding the longer-term costs, Karier urged staff to carry it though. “Utilities are facing that same kind of uncertainty,” he said. “This is something someone will make a decision about in the future, so I think this uncertainty is an interesting cost.” Eckman replied that we couldn’t reflect the cost for the plant owners in the risk analysis because we don’t have enough information.

4. Update on Power Plan scenarios

Tom Eckman summarized what the Power Committee reviewed and agreed to, and asked for the full Council’s consensus.

Staff is seeking guidance on the following scenario input assumptions:

Under Scenario 2b, which social costs of carbon should be assumed? The proposal is to use the Interagency Working Group’s estimates based on a 3 percent discount rate.

Under Scenarios 4c and 4d, what should be the range of conservation resource uncertainty tested? Staff proposes to assume we could achieve 33 percent faster or 33 percent slower than the maximum pace of our base assumptions. The Council accepted that as guidance.

In respect to all scenarios, the question is should the potential direct impacts of climate change be assumed in all scenarios or treated as a sensitivity study? Staff proposes to treat it as a sensitivity study.

Demand response – how should we establish the cost of demand response resources? Staff proposes using “incentive payments” as a proxy for the cost of developing demand response resources that require load curtailment (this cost is in addition to marketing, administration and the hardware cost required to enable demand response).

Bradbury asked what the difference is between assuming the potential direct impacts of climate change in all scenarios or treating it as a sensitivity study? Eckman replied that each of the 800 futures per scenario are created from a baseline forecast in a high/low range. The load shape in that range reflects what we anticipate the summer and winter peak relationship to be over time. In the sensitivity study, that relationship changes because temperature increases, and we see summer peaks exceeding winter peaks by the end of the forecast horizon. In the baseline case, the peaks are equal. Instead of including winter peaking change, in all cases, we do it as a single case in one condition rather than in all scenarios.

Ben Kujala, system analysis manager, said that looking through the model, it's not enough to use temperature change's impact on load to reflect the impact of climate change. There are so many other impacts that have to be estimated and captured, so to put it in all scenarios would be misleading.

Eckman followed that staff recognizes that whole energy estimates would have to be changed because the winters would be warmer, there would be less heating demand, weatherization would be less, air conditioning would be higher, and they would have to use different load shapes for the savings. Prices would assume it would only happen in the Northwest, and that's not accurate. So they recommend treating it as a sensitivity study.

There are 15 scenarios, and there are 800 futures in each scenario.

Karier asked, "When we do that scenario, will we do those other cases?" Eckman replied that they don't have the load changes that represent climate change, so it's pure speculation on what the rest of the West will look like.

Karier asked, "If we adjust hydro and adjust load by temperature … what's missing?" Kujala and Eckman listed legacy prices, conservation, the impact on generating resources, lighting and air conditioning. "Well, do the best you can," Karier said. Eckman said they would have to caveat it a lot, which is why they don't want it embedded in everything else.

Smith observed, "These changes are way out in years. This will be in power plans down the road … perhaps the eighth or ninth … before we get close to that impact. Bradbury said that scientists say it's down the road quicker than we thought it was. "I'm not saying it's the Seventh Power Plan, but it's quicker than we thought."

Charlie Grist commented, "The vagaries of change are year to year. There's a lot of noise in our system with respect to water and temperature. What we don't have a good handle on are the long-term trends. What Tom is saying, is that they're all interconnected. If you want to change the regime, you want to change it consistently across the board. You can't change it piecemeal."

Next, the Council received a preview of the RPM and how to read the graphs on the model. Kujala and Eckman examined four different resource strategies, using the draft inputs for scenario 1b. They discussed the type of results being produced by the RPM and what insights might be gained from an analysis of those results. The four resource strategies are:

- Net system costs

- Conservation development
- Impact of conservation development on net system cost
- Impact of RPS on resources

Kujala said that the long-term capacity expansion logic is still being reviewed — so there is still the potential for revision. The System Analysis Advisory Committee (SAAC) and Resource Adequacy Advisory Committee (RAAC) will be reviewing the RPM capacity expansion logic, which uses GENESYS results to ensure that resource strategies satisfy regional adequacy standards.

The RPM tests resource strategies across 800 different futures — with each having a unique result. In the RPM, we compare single resource strategies across a single future (or subsets of futures) to ascertain why it is more or less "successful" under specific conditions. Multiple resource strategies of 800 futures are tested within a single scenario to find the least-cost and least-risk resource strategies.

We have a comparison of four illustrative Resource Strategies across 800 futures

1. Impact of conservation development on net system costs
2. Distribution of Resource Portfolio Standard development
3. Impact of conservation on other resources in terms of capacity to add to the system
4. Impact of conservation development levels on CO2 emissions.

Eckman next explained net system costs, which is the cost of building and operating new resources and operating the existing power system. We net out the benefits and costs from selling or buying power outside the region, he said. The penalties associated with not meeting system adequacy requirements (referred to as "curtailment costs") are costs we impose.

Council Member Henry Lorenzen asked why fixed O&M costs are included and not variable. Eckman replied that there should be both.

Kujala explained why fixed costs are included: "You're trying to capture all the costs that aren't sunk costs," he said. "If you took the plant offline, you could avoid that cost but incur other costs. The fixed O&M tallies up costs that exist unless the plant is retired."

Four illustrative resource strategies include:

- No new resource additions – probably the least realistic.
    - No conservation and no new generation, except for RPS-required generation.
- Conservation resource additions at cost, up to short-run market prices (the low conservation case).
- Generation resource additions for reliability and economics with low conservation.
- Generation resource additions for reliability and economics with high conservation.
    - These are conservation resource additions at cost, exceeding the long-run generating resource cost without carbon.

Karier said that when we start running our other scenarios, we'll run a lot more strategies. How many does it create? Kujala said we'll let the model go, throw a bunch of factors in and we'll come up with thousands of strategies.

Eckman said that a system doesn't get built because it's profitable; it's built to satisfy load requirements. That's what's driving it. We have a low-priced market going forward. New resources get built based on need.

Lorenzen asked, "How do you encourage the marketplace to get them built?"

Eckman said that if you go to an organized market (we have a disorganized one) you get a forward capacity payment. That way, they get paid whether it operates or not. Prices don't stay high enough, long enough.

Karier said that even the organized markets have struggled with this capacity payment. We've tried several strategies like this that have not worked very well.

Kujala said that if you look at California, you see regulatory action rather than capacity markets. Texas has tried to stay with high-energy payments. PJM probably has most developed capacity market, but they're going to the Supreme Court to see how demand response is treated. So it's been a hard path for the organized markets.

Using these resource strategies, staff discussed the RPM outputs and showed how to compare them.

The resource strategies examined four different conservation purchase strategies in combination with difference generation resource options. These resource strategies are:

- No Conservation, generation or demand response resources available
- Low Conservation without generation or demand response resources available
- Medium Conservation with only low cost demand response and natural gas-fired peaking generators available
- Medium Conservation with all generation resource options available
- High Conservation with all generation resource options available

Kujala said we also want to show what will happen if you throw a switch and shut conservation off. In this case, you can see that we have a much higher system cost.

Karier asked, "In that case, are loads met by curtailment?" Eckman replied, "They are met by imports or curtailment."

Bradbury asked how does risk show in this? Eckman replied that it is in the probability of large system cost.

Lorenzen asked if the expected value is computed. Kujala said it is.

Kujala said that under these circumstances, we would see renewable, thermal and demand response resources.

We start out by seeing a lot of demand response, then thermal and renewable on top. When we do higher conservation, we see less of these resources being built. The demand response comes in pretty quickly, but the thermal and renewable builds are much smaller with higher conservation.

Karier said, “I find it curious that demand response kicks in faster than coal plant curtailment.”

Kujala said that information coming out of the RAAC shows us in a bit of a hole, and that we don’t have enough capacity to meet the standards over all the various futures.

“I thought it would be a 4.7 percent loss of load probability from here to 2020, which is adequate, so why would we kick in this capacity resource?” asked Karier.

Kujala said that the RAAC takes a narrower view of what happens than what the RPM does. We’re trying to be consistent on how they are looking in terms of loads, but you might see a much higher or lower one in the RPM.

Karier: Well, I encourage you to think about that a little bit. RAAC says don’t worry until after 2020, but this one says to worry now. Eckman said that this shows capacity in place, not whether it’s deployed.

Karier continued: “We might want to see how frequently demand response kicks in. It might be cheap to buy it and have it in place, but if it’s not activating it, that would be good to know as well.”

Kujala said that another item is how much emissions are estimated. The more conservation, the less CO_2 coming from the system. The less conservation, the higher the CO_2 emissions. But the CO_2 emission range is very wide, because we have a lot of different water and load conditions in this model.

Eckman said that in trying to meet a fixed target, water conditions alone could move us around significantly.

A webinar is scheduled for later in this month, where staff will present a 1b scenario and further instructions on how to read these tea leaves.

5. Panel discussion on low-income energy efficiency:

Council Member Pat Smith introduced Ray Ellis, manager of the Lincoln Electric Cooperative in Eureka Montana; Jim Morton, executive director District XI (Missoula) of the Human Resources Council; Brent Barclay, BPA energy efficiency programs manager; and Diego Rivas, Montana policy associate, Northwest Energy Coalition (NWEC).

Morton said that Montana operates its low-income weatherization system funds through the State Department of Health and Human Services. It contracts with the community action agencies in Montana. The same department operates the bill assistance program. There is a priority list of those with the higher energy burden, and that’s how they address who receives the weatherization services in Montana. Bonneville’s funding to the State of Montana uses that same list. The rule of thumb is you must use that list unless other resources are brought to bear.

There is a home rehab program using other funds. Morton said that an income criterion prevents them from doing as many homes as they would like. “Sometimes that sends a

mixed message," he said. "If you're a few dollars over, you don't get those services. So we promote conservation, but we won't help unless you're low income."

They also do a lot of work with indoor air quality. After having tightened up homes, now 40 years later, we're learning that a lack of air exchange has caused some harmful effects. This includes mold and an increase in childhood asthma. Now the emphasis is "weatherization plus heath."

Barclay said that Bonneville is designing programs for its public utility customers. For achieving Bonneville's portion of the shared targets, it also has grant program responsibility. Carrie Nelson, BPA program grant manager, explained the program by phone.

"We have two different channels reaching low-income households. It's now called energy efficiency to include lighting, and improved heating and duct systems. One channel is acquisition — a structure provides a budget over a two-year period. Utilities have discretion over which customer segments they want to direct their efforts to. We're indifferent as to who is helped, but we want to meet our overall target. Our grant program is viewed as a public purpose investment program. There's a secondary benefit in that energy savings accrue, but they aren't optimized to get the highest energy yield from the dollars invested. The program distributes $5.25 million to four states, including a percentage to serve tribes. In our grant terms, we follow the U.S. Department of Energy weatherization program rules. In our acquisition program, we're using deemed measures that the regional technology forum has approved and those savings are figured out in our portfolio. Over the last three years, utility spending is about equivalent to the grant program. About $10 million is flowing through BPA for low-income energy efficiency.

Diego Rivas outlined Low Income Home Energy Assistance Program's (LIHEAP) activities. LIHEAP reaches less than 25 percent of eligible households in the U.S.. American Recovery and Reinvestment Act (ARRA) funds for low-income energy efficiency are drying up and LIHEAP funding is down 35 percent from 2010. The need for funding continues to grow as the number of families below 200 percent of the poverty level gone up to the mid-30s as a percentage of population.

BPA's low-income program is working well, he said, but suffers from a lack of funding. Increased funding is an absolute necessity. States say they could spend twice as much and still have a long waiting list of customers unserved. NWEC has been pushing BPA to increase LIHEAP funding, and encouragement from Council would be helpful.

A second barrier is access. In many areas, including rural Montana, the rural co-op doesn't have a program for low-income customers or otherwise. The way that many community action agencies prioritize helping customers (based on usage or need) means that many have to wait to have their homes weatherized. Or, they just fall through the cracks. This leaves low-income customers spending a large percentage of their monthly income on large utility bills.

Investing in LIHEAP can yield incredible savings. Economists have found that each $1 in LIHEAP funding yields $1.13 in economic activity, Rivas said.

No BPA customers have a low-income specific, energy-efficiency program. Only 23 of region's 144 utilities reported any savings attributable to low-income programs. This means that only 23 ran their own low-income specific energy efficiency program. Those programs achieved 1MW of savings last year.

Ideally all utilities should have a LIHEAP and run it in coordination with their local community action program (CAP). That's critical as CAPS are the most effective providers of services for low-income households, and they have connections to other services and programs.

Last year, a group of low-income advocates asked BPA to create a process whereby a utility could request that BPA directly administer a portion of their energy efficiency dollars directly to low-income energy efficiency programs. This would help small rural utilities establish programs for low-income customers. BPA has not heeded this recommendation.

Another barrier is a lack of coordination. Some utilities don't have capacity or aren't interested in coordinating with CAPS or with other utilities. Many CAPS don't have a relationship with BPA or their local utility. If a low-income customer asks for help, in the best case they get BPA-EEI dollars from the utility. It helps, but it isn't tailored to the needs of the customer.

In the worst case, if the utility has no program, customer may get nothing. He said that the BPA low-income working group is working on this issue to make utility/CAP partnerships easier.

There is language in previous power plans indicating that BPA should distribute aid equitably throughout the region, Rivas said. And low-income customers should have program penetration in proportion to their service territory. There's a lot of skepticism since BPA has a woefully inadequate $5 million budget, with only 23 of 144 utilities running specific, low-income programs. Rivas asked the Council to consider adding language to the Seventh Power Plan that encourages BPA to improve the penetration of energy-efficiency services throughout the region.

Ray Ellis provided an overview of Lincoln Electric's operations. It is a small, widespread utility in Northwest Montana with 6,500 meters and 1,000 miles of line. "We have a lot of challenges," he said. "When it comes to energy efficiency, we have a robust program. But I want you all to understand: When you require BPA to spend money, it's our money; it's not coming from some another place."

Ellis said that he just explained to his members two weeks ago that there would be a 6 percent rate increase. It's solely based on wholesale power costs.

Forty-eight percent of Lincoln Electric's power bill doesn't come from generation and transmission of electricity. It comes from programs they're required to support. Twenty-five percent of Lincoln Electric's customers are at-or-below the poverty line, and another 25 percent are just barely over. "We have a low-income energy efficiency program, but it's shifting," he said. "You talk about Bonneville dollars, but those are our dollars. BPA administration costs are fairly high. When I send money to Portland, and get back 40–60 percent, my customers ask me where's the rest? I can't explain that."

He said if they didn't have the help of PNGC, they would have a difficult time. He operates with 18 employees and their energy efficiency person wears three other hats. "We try hard to make that program work," he said. "We spend $145,000 to $160,000 per year on energy efficiency. For us, that's a lot of money."

Most of Lincoln Electric's program in the past has been taking money from low-income members and using it to purchase appliances for relatively higher-income members. If they self fund the program, they have to raise rates. "As a co-op, we're nonprofit — all of our excess margins go back to the members, Ellis said. "Any time there's a rate increase, it comes out of their pockets."

Ellis also explained the problem of losing load. Their projections are flat, if not negative, but they still are required through BPA to implement energy-efficiency programs. That means raising rates to low-income people.

"Where I need help is keeping the rates down," he said. "That's as important as any energy efficiency we could do."

He further explained that a lot of homes aren't worth trying to modify. Putting money into a trailer house with walls less than two-inches thick is not cost effective.

"Again, it's very important for the Council and BPA to understand, that when anyone says something about spending more money, it comes out of our members pockets," Ellis explained. "That's food not on the table, gas not in the car and clothes not on the kids going to school.

"Plus, we're losing load. We just lost our pellet mill. We're down to two industrial accounts. About 50 percent of our load used to be industrial, and now it's down to 5 percent. I'm seeing an influx of Canadian dollars for seasonal homes, which are extremely fickle, hard to budget for in energy usage, and drive our demand through the roof. Plus, we don't sell any kWh.

"My bills from BPA on the demand side are killing us," Ellis continued. "We had our highest demand in February 2014. We had four months of year making margin in the winter. Energy efficiency is important to us; we have a robust program, especially for low income. BPA is fairly agnostic that we've been shifting $ from other programs to low income."

Karier said that if the 48 percent of their bills from BPA is only from generation and transmission. That does not include energy efficiency. If BPA bought energy from a gas plant, would that be counted.

Ellis replied that BPA isn't buying additional energy for them since they don't have load gain.

Karier said if they didn't do energy efficiency year in/year out, BPA would have to buy the energy from somewhere else. "In our calculations, it costs more to buy the power than to save it," he said.

Ellis said, “We’re losing load because of energy efficiency. If I require tier-two energy, energy efficiency makes sense, but I’m buying energy through tier one, so it’s going somewhere else. It’s not solving problems in my area. Where utilities have no load growth. I desperately need a demand response program, but that costs money. With demand response, I could cut my wholesale power bill and lower my numbers.

Karier asked Barclay that when spending on low-income measures, how is it different from other energy efficiency programs? Are you spending more per measure in a low-income house? Or are you spending on marginal measures that would not make the cut? Barclay replied that they have symmetry between the measures available. BPA’s willingness to pay is greater under low income.

Karier asked the panel if there is a solution to the trailer problem.

Morton replied that some are older, pre-1978 homes with no code. They’re very difficult. Some have said we could replace them and save money. The legislature appropriated funds in a pilot program to replace mobile homes. We replaced many with used, energy efficient homes. We loaned households money at 1 percent, but mobile homes are a big component throughout the region.

Rockefeller asked what percentages of the homes are mobile? Ellis guessed about 25 percent. “It pulls at your heartstrings knowing that you’re raising their rates and not being able to help them.”

Rockefeller asked if is there a separate charge from BPA for energy efficiency? Ellis said that it’s blended into the composite rate. “This year, we got 60 percent back because we applied for additional money, but generally, it’s between 40 and 60 percent.”

Barclay said that in the tier-one rate, the difference of what comes back to the utility is to do many things to support the infrastructure. “We’re investing to see third parties drive savings, and are doing research on new measures,” he said. “A lot of costs are shared in running a steady-state operation.”

Lorenzen commented that, before joining the Council, he represented Umatilla Electric Co-Op. “Steve Elders mentioned to me that an economic sound way of BPA going about energy efficiency is to put out RFPs for energy efficiency,” he said. “You could get the greatest impact within the region for the least amount of money. That would keep it from going back to the individual utilities. How would you feel about that?”

Ellis said, “If I had load growth, I could see that being one remedy. But without load growth and secondary markets where they are now, I don’t know where they expect them to go in the next 5-10 years. We don’t see prices going up much. That’s a real problem. I don’t have the answers. I can see taking money from one utility and spending it somewhere else rubbing some members a little bit wrong. And I’m not saying that all the research from BPA isn’t worthwhile; it’s just tough to explain in light of rate increases. Seeing them increase our bills three-to-four times the inflation rate — that is harmful to us.

Smith mentioned BPA’s low-income, roundtable outcomes timetable. “I’d like to extent the invitation to everyone… we’re in the midst of our Seventh Power Plan … think outside the

box on how this can work better and increase penetration for low-income people. We're open to suggestions."

Barclay said as part of their post-2011 review, one issue was around low income, and how they could do more and do it better. One outcome was an agreement that BPA would facilitate meetings that brought together various parties. There have been two meetings, with another scheduled for April 20, to piggyback on the Efficiency Exchange Conference. It's a public meeting at the Convention Center.

Carey Moser said that State and CAP agencies know very little about each other's programs. So it's been great to understand how each program works. It would be helpful for leveraging funding. It's like a case study — we're going to find out what happens at a CAP agency, a state agency and a utility when they're working low-income programs. CAP agency people have been in the field so long they have great ideas on how to implement this.

Ellis said that he appreciates the idea that of reducing conservation targets, but urged keeping that funding and shifting it to helping low income.

Karier said that when he was at a PNUCC meeting last Friday. There was a report on what energy efficiency levels the Council was looking at in the Seventh Plan, looking at efficiencies between 800–1100 MW. I corrected them, because that's not quite right. We aren't looking at reductions in the next five years, but over a 20-year period, we looking at 1 MW in reductions. We're going to test levels of investment of 1,000–1,600 MW over a five-year period, compared to a 1,200 MW target in the Sixth Plan. It's not clear how much energy efficiency is cost effective for the region and what will be needed over the next five years. That remains to be seen and needs to be tested.

Rockefeller concluded by saying, "You've shown us the vulnerabilities of our aspirations. It's a set of issues we've wrestled with for a long time. I don't know if there are easy solutions. There are issues with financing, access and scope of effort. Also, what outcomes you're trying to achieve and for whom. We need to devote more time at the Council level with community action agencies and utilities to think through this.

6. Panel presentation from Montana public utility representatives

Joe Lukas, general manager of the Western Montana Generation and Transmission Cooperative, began the panel presentation by saying that so much of what they deal with, in regard to BPA remaining competitive and the cost of power, is driven by Council activities. He recalled Karier's comments about conservation targets and the need for more spending.

"You talked earlier about energy efficiency, fish and wildlife, and the Columbia River Treaty, and those are of significant concern," Lukas said. "Plus, Alcoa announced that it's terminating its BPA contract since the rates under it are no longer competitive. So long-term competitiveness and the cost of power is of paramount importance."

He said there are utilities buying record amounts of generation at negative prices, and that the infamous “Duck Curve” in California is showing itself years ahead of projections. “We’re going to have some real challenges before us,” he said. “Hopefully, as you consider perspectives of my members and the cooperatives, it will help you make better decisions.”

Mark Hayden, general manager, Missoula Electric Cooperative (MEC), lauded Ray Ellis for explaining the situation in Montana during his low-income presentation. MEC is a relatively small, rural electric co-op serving 12,000 in Montana and Eastern Idaho. Its territory stretches from Condon, Montana, to Powell, Idaho, along the scenic Highway 12 corridor. Some communities they serve are Seeley Lake, Frenchtown and Clinton. Frenchtown suffered a major loss of jobs when the Smurfit-Stone paper mill closed. He said that since 1950, his members have relied on hydropower for their generation. They represent a major stakeholder group in every decision that affects the system. Any financial impact that future power plans have on BPA will be passed directly to electric customers throughout the region.

“The driving force behind our local economies was linked to timber industry. Many of those jobs have been lost,” Hayden said. “Names like Plumb Creek, Stinson and Smurfit-Stone are things of the past, and our communities are struggling to reinvent themselves.” He added that at MEC, they’ve felt the ripple effects. Since 2011, its growth — not adjusted for weather — has been is just 0.75 percent. During that time, MEC’s members have realized a 39 percent power cost increase.

MEC was a beneficiary of low power costs under the 1996 Hungry Horse contract, but they had to absorb those costs in 2011, and have had to reduce staff 12 percent.

Past power plans place greater emphasis on energy efficiency and conservation, Hayden said. MEC has done its part to meet those goals. “Nobody wants to pay their fair share of any program, only to find that we’re unable to fund those projects,” he said.

In the past, MEC’s agricultural, commercial and its one industrial program achieved real savings. But in small rural communities, those opportunities are dwindling. The Energy Smart grocer program had one potential account in Clinton, two in French town and a half dozen in Seeley Lake. Once those savings are achieved, the opportunities are fairly limited.

The resources available to small businesses aren’t there in many cases. The use of home energy audits is minimal, and those who follow through with upgrades are few and far between. Those who could benefit the most from energy efficiency programs are the ones who can least afford it.

The utility’s LED “Dusk to Dawn” program has been a bright spot, with an install rate of 95 percent. Even with that, the remaining balance is about $190,000 out of a total of $325,000 for the remaining two-year period.

Like most small outfits, MEC’s employees wear many hats.

“After the low-hanging fruit of energy efficiency is harvested, it’s tough to find the time to administer those programs locally,” he said. “It’s much different than in urban areas. I hope

council will consider this regional diversity and the challenges created by setting targets for energy efficiency when formulating the Seventh Power Plan. These across-the-board targets cause MEC to fund and acquire energy efficiency savings — without regard to our level of load growth or the revenue needed to cover the expenses."

A lack of load growth in MEC's service territory raises important questions about the appropriate level of energy acquisition in the Seventh Plan. A more appropriate use of those same funds would be better spent on demand response, he said.

"Our weather in Montana can be quite volatile," Hayden said. "Demand response could help smooth those peaks, especially as more emphasis is placed on system demand in a capacity-constrained system."

Finally, new technology allows MEC's customers to manage their own consumption, such as online usage displays or prepaid service. These self-managed programs have helped change behaviors when it comes to reducing electric usage. He concluded by asking the Council to consider these regional differences as they move forward with the Seventh Power Plan.

Ellis added, "I do a lot of whining to BPA and now I'm whining to you about the conditions at Lincoln. In the past, felt like all the programs are 'Interstate-5 centric' — meaning that they deal with lots of energy savings and people. But when a program is just tailored to that, and not to western Montana, the two don't align at all.

"We're starting to see some 'regionality' on addressing issues. One size does not fit all. I get frustrated talking to legislatures in D.C. and Helena, and to Bonneville; they think one thing is going to fix everybody. We need to tailor programs to different regions or utilities. Here we have forecasts that show that load is declining. We see an increase in the number of services, but not in sales. Our needs are different. With high demand with no kW sales, we can't make the revenue. Some might say it's a rate case problem, maybe it is. But if the Council wants to get out in front, they should be demanding that utilities look at fixed-cost rates. That way, we could accept all types of energy efficiency and all types of distributed generation, without hurting our ability to supply energy to our members when they need it."

Ellis said that he talked to several politicians about it – but nobody wants to get out there because they get beat up. "In my prior utility, I was on a cooperative and our board decided to go to fixed rates … and what a riot that was."

He asked the Council to allow them to use our energy-efficiency dollars on demand response programs. "If we can keep our demand down, we can control our rates. I don't see a kWh charge on my BPA bill, just all these different kinds of rates that we're told we're supposed to sell less of. Ratepayers are the ones footing the bill, not the solar panel or wind turbine sellers. If you have questions about whether a program would be positive or detrimental to Lincoln customers, I'll be happy to share. Nobody asks us, we're not an IOU. I see my members in the grocery store every day. I see them in my office when they're having trouble paying their power bill. We have programs, such as those to help the elderly, but we can't do everything, we need help."

Lorenzen said that he appreciated the concern about the rate impacts of conservation, but what about the positive benefit? “I believe that your rates are actually lower because of the conservation that BPA has done,” he said. “Would you find that helpful to communicate to members?”

Ellis replied, “When we aren’t experiencing load growth, I still have to raise rates.” Lorenzen followed, “But without conservation, there’s a potential that would you have had to raise them even more. Frankly, I’m trying to get ahold of this, trying to get the information from Bonneville.”

Ellis said that his utility is the smallest in western Montana, and that they have a robust energy efficiency program. He said they don’t want to do away with energy efficiency, but that going forward, it doesn’t fit for them.

Lukas said that the uniqueness of the cooperative world is local solutions. “I have a member that is implementing a three-part rate,” he said. “It is transitioning to a basic charge, a residential demand charge and a lower energy charge. There are investments in new technologies, automated meter technologies, and every one of the 130,000 accounts will have the capability of full demand information. Some just print it on bills. As we talk about the challenges, we’re working on solutions locally.”

Lukas said that during the first week of March, they had temperatures 10 and 12 below zero. Then weeks later, they were pushing 70 degrees. “We see many months where we see 70–80 degree swings,” he said. “That’s much different than utilities west of the cascade. We have a demand management problem unique to our geographic location. We’d like to see a mechanism to apply our ratepayer provided dollars to the solutions we need, not the one-size-fits all subsidy arrangement.”

Karier said it was a useful discussion, and that the Council can defend what they’ve done in the past at a regional level. But it’s important to hear the impact on specific utilities. This rate design can solve some of the problems. Regarding demand response, won’t that raise many of the same issues? I think of it more as the large food processor that can adjust demand up and down.

Ellis said, “With us it’s residential customers, such as water heater control. We started a propane company to mitigate the cost of propane and to encourage our customers to switch to propane during high use periods. It’s finding inventive ways to mitigate against those peaks.”

Hayden said, “The bread and butter of our demand response system in the Midwest was residential load control – water heaters, dryers and hot tubs. The savings were dramatic. There are models we can follow. This isn’t new territory.”

Lukas said there are significant demand response opportunities in the irrigation front too. Also, many households have dual heating capacity. But when they’ve been asked to push Douglas heat pumps, they’ve been a hard sell. “I have one and it’s an expensive air conditioner — it doesn’t heat anything.”

7. Council business

Northwest Power and Conservation Council Motion to Approve the Minutes of the March 10-11, 2015, Council Meeting.

Anders moved that the Council approve for the signature of the Vice-Chair the minutes of the March 10-11, 2015, Council Meeting held in Eugene, Oregon. Yost seconded. No additions or corrections to the minutes. Motion passed unanimously.

There was no public comment.

Adjourned at 11:59 a.m.

Approved May ___, 2015

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Vice-Chair

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