



Board of Directors August 8, 2014 Meeting Minutes

The PNUCC Board of Directors met on August 8, 2014 from 8:30 to 11:30 a.m. at the Portland Airport Sheraton. The list of attendees is attached.

Next Board Meeting September 5, 2014

Corporate Business

Following introductions and acknowledgement of the PNUCC Antitrust Compliance Statement, the Board unanimously approved the July meeting minutes.

The Board turned their attention to Dick Adams as he explained the need for the Board to consider adoption of a resolution regarding the organization's 401(k) savings plan. Dick said that to stay compliant with ever-changing rules PNUCC must "restate" the plan to meet the current federal requirements. There are no substantive changes nor financial impact to PNUCC or the employees. The resolution verifies that the Executive Director will continue to act as the Plan Trustee and has the authority to designate others to help execute and administer the plan. The Board unanimously adopted the resolution.

PNUCC Member News

First up was Greg Delwiche announcing that with Larry Bekkedahl's move to Portland General Electric, Richard Shaheen has been appointed as acting Senior Vice-President of Transmission. Richard came to Bonneville from Florida Power & Light a few months ago, Greg said. Maria Pope, Portland General Electric, added that they are excited to have Larry join their team. He will start in late August as the company's Vice-President for Transmission and Distribution.

Back-to-back storms in eastern Washington caused major outage in the Avista service territory on July 22 and August 2, Jason Thackston reported. He said Avista really appreciated the help from neighboring utility crews.

Roger Gray mentioned that Erin Erben, EWEB Strategic Planning Manager, is on loan to the Electric Power Research Institute to work on a project addressing the value of the power grid. Staffer Frank Lawson is filling in for her while she is out.

The storage battery trial is complete at Flathead Electric Cooperative, Doug Grob shared. They learned a lot during the trial. For example, the time of assembly is down to three days. The technology is becoming more viable and will be going into production soon, he said.

The group asked about the status of Wanapum Dam. Chuck Berrie, Grant PUD, said the news at Wanapum is that there is no news. Repairs are going smoothly, fish passage is good and they are expecting to raise the pool level behind the dam sometime during the fourth quarter. They are waiting for FERC to okay plans for going forward. Chuck said they are getting requests for a lessons learned report, and they agree. It would be helpful and plan to pull something together soon.

Finally, Dick Adams shared some of the most recent activities at the NW Power & Conservation Council. He mentioned additions and changes in staff. Tom Eckman is the new Power Division Director and they've contracted with both Terry Morlan and Michael Schilmoeller, former staff members to help with the Power Plan development. In addition the Council staff has teed up a concept of High Level Indicators for the Northwest power system.

PNUCC Draft 2015 Budget

The Budget Committee met prior to the meeting to discuss the budget needs for 2015. Dick Adams provided some context for their conversation and shared what he is anticipating for next year's agenda. Given the expected work load, the draft budget reflects the continued use of three central staff, significant reliance on members' staff and strategic engagement of consultants. The Budget Committee is recommending a \$25,600 (3.6%) increase in the budget and member assessments.

PNUCC members can expect a letter soon from Lisa Grow, PNUCC's Treasurer, outlining the new budget and membership dues for their consideration. The Board will be asked to approve the 2015 budget and member assessment level at the PNUCC Annual Meeting in November.

There was discussion about the possibility of growing the PNUCC membership, reaching out to eligible companies that are not members now, as well as considering other parties we could invite to join that have not been eligible in the past. Dick mentioned that the Budget Committee had briefly discussed the idea of inviting other parties to join. He plans to identify potential new members and articulate the benefits of a broader membership to add new voices to the PNUCC forum.

Columbia River Treaty Update

Rick Pendergrass, BPA Acting Vice President of Generation Assets Management and Co-Chair for the US Entity on the Columbia River Treaty Operating Committee, joined the Board to discuss the status of the future of the Columbia River Treaty. He reminded the group that the US Entity submitted a

recommendation to the US State Department last December and said the National Security Council has been studying the proposal since then. They have been seeking information from the federal entities as they digest the recommendation. BPA provided data as recent as July 25, Rick said. He is speculating it will take another few months to interpret and assimilate this latest set of information.

The US Entity has wrapped up another series of analysis, including estimates of the value of coordination, how to divvy up the elements of the Dry Year Strategy and impacts of irrigation depletions.

The Northwest has become a peak critical system based on recent analysis. Rick mentioned that this change from an energy critical system could have implications in the Treaty discussions. He also said he is confident that they have looked under every rock and are fully ready with their analysis to provide the National Security Council with what they need to approach Canada.

In a parallel effort, the Columbia River Treaty Power Group continues to consider the possibilities of a renegotiated Treaty and the value of coordinated river operation via the Treaty. The group is also educating decision makers of the implications of changes. They are relying on the expertise of the Van Ness Feldman firm to work with folks in Washington D.C.

Steve Klein, a member of the Power Group, said that Van Ness Feldman is doing a tremendous job. He encouraged utilities to consider helping with funding this effort. Jack Speer added that with today's situation we are working to squeeze the most out of the system to make ends meet. The future of the Columbia River Treaty creates wiggle room that should be taken advantage of.

ColumbiaGrid Current Efforts

To introduce this topic, David Mills, Puget Sound Energy and member of the ColumbiaGrid Executive Committee, ticked through a multitude of uncertainties facing the power industry due to the planned and potential coal plant retirements in the region. David posed several questions about the implications of the recently proposed EPA carbon reduction rules under the Clean Air Act's section 111(d). How significantly will these changes impact the transmission system? What happens if 4,000 MW of coal plants are replaced with natural gas fired generation? Where will those new plants be sited? These unknowns coupled with growing demand for natural gas beyond fuel for electric generation adds to the list of questions, prompting ColumbiaGrid to do these studies, David said.

ColumbiaGrid President and CEO Patrick Damiano presented the analytics his team is tackling. They do annual system assessment and biennial transmission expansion plans. The latest System Assessment was just completed in early July, he said.

The two most recent studies added to their work load examine reductions in coal generation and looking at the variable transfer limits of Bonneville's network and the Northwest's interties with other regions.

Patrick explained that the approach for the coal reduction studies would be to utilize a production cost model to identify any transmission flow concerns, and then follow up with transmission reliability modeling, if needed. The plan is to run the initial studies by October, then solicit input on the results in a public process and complete the report by December 2014. He walked through the possible scenarios being considered; noting that they are still under discussion and nothing is finalized.

Also in the works is the study of the variable transfer limits of the Northwest AC Intertie, Bonneville's network and interties with other regions, Patrick shared. This work has been underway since April and is expected to wrap up by September 2014. The results of this study will dovetail with the launch of the energy imbalance market by and between the California Independent System Operator and PacifiCorp, Patrick pointed out.

Lisa Grow said that Idaho Power has studied the stability of the system with no coal on their grid as well. She said we can't rest on any isolated study, and cautioned us to continue to look big picture. In solving a local problem one could be creating unintended consequences somewhere else on the system. This really is one big system, she emphasized.

WIEB Gas Infrastructure Study Results

In July 2014, the Western Interstate Energy Board released their Phase 2 Report assessing the adequacy of natural gas infrastructure for meeting electric sector needs throughout the Western Interconnection. WIEB relied on two consulting firms, E3 and DNV GL working closely with the Technical Advisory Group to complete this project. Arne Olson of E3 joined the Board to present the key results.

Arne began with a discussion of how the gas pipeline system works. During high demand hours, gas is taken out of the pipeline to fuel power plants and heat homes. During low demand hours, gas is "packed" into the pipe to prepare the system for future use.

The analysis in Phase 1 of this effort looked at the adequacy of the gas infrastructure in 10 years. They concluded in this earlier work that yes, the gas infrastructure will generally be adequate except under the most extreme winter conditions.

The Phase 2 analysis was geared to address the adequacy of the gas system's short-term flexibility to meet electric industry needs. They examined how large the hourly changes in demand for gas could be, and if the gas system would be physically capable of accommodating large swings in demand. While they

examined the entire Western Interconnection, Arne focused on the study results for the Northwest.

One of the case studies Arne shared with the Board was to understand the impact of increased wind energy on Northwest pipeline operations. When more wind is on the system there are more natural gas ramping events. However, they also observed less total demand on the gas pipeline in their modeling results. The report concludes that this decrease in pipeline throughput is increasing pipeline flexibility, indicating the pipeline is able to handle the increased ramping demands of natural gas power plants with added wind power. Arne pointed out the Northwest is fortunate to have major gas storage facility. They are a key factor in this conclusion.

Arne did offer the caveat that this analysis assumed perfect day-ahead forecasts for gas nominations and scheduling. Further investigation of what issues arise with less than perfect foresight is needed. He also noted that the full report is on the WIEB website at <http://westernenergyboard.org/natural-gas/>.

The Board asked Arne about the reliability of the Northwest pipeline. Arne noted that if firm gas transportation is purchased as new power plants are developed, he would expect that the gas infrastructure would grow alongside the increased demand for gas. The Board thanked Arne for joining them and for his part in completing the study.

PNUCC Communications Initiative

Shauna McReynolds took the opportunity to brief the Board on the latest activities in the area of communications. The purpose of this initiative, launched almost five years ago, is to educate policy makers and the public about the Northwest power system. In late July the Communications Committee gathered to delve into PNUCC's recently published Carbon Paper, discuss the growing distributed solar power in the Northwest and consider utility business changes related to rates and rate structures.

At the end of the day, the Communications Committee was interested in additional information on carbon, particularly related to the implications of the EPA proposed 111(d) rule, and a higher level presentation they could share with community and business groups. They offered insights from their perspective on solar in the Northwest that will feed the System Planning Committee's Value of Solar analysis now being developed. And the group came up with the idea of surveying several utilities to better understand who is doing what as it relates to changing rates and rate structures, and what they have learned as they are making those changes.

The audience for such a survey would be the utility community, Shauna said. And the lessons learned regarding communicating about any rate changes was of great interest to the communicators. The Board offered some additional suggestions on what to look for in any survey and agreed that the information could be helpful.



Attendance List

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John Prescott	PNGC Power
David Mills	Puget Sound Energy
Jack Speer	Alcoa
Lisa Grow	Idaho Power
Dick Adams	PNUCC
Steve Klein	Snohomish PUD
Maria Pope	Portland General Electric
Ed Brost	Franklin PUD
Ted Coates	Tacoma Power
Larry La Bolle	Avista
Chuck Berrie	Grant PUD
Greg Delwiche	Bonneville Power Administration
Roger Gray	Eugene Water & Electric Board
Phil Obenchain	PacifiCorp
Chad Bartram	Benton PUD
Mike Jones	Seattle City Light
Joe Hoerner	Puget Sound Energy
Josh Wilund	Alcoa
Bear Prairie	Idaho Falls Power
Russ Schneider	Flathead Electric Cooperative
Chris H. Byrd	Flathead Electric Cooperative
Doug Streeter	Grays Harbor PUD
Tim Nies	Franklin PUD
Jim Litchfield	Litchfield Consulting Group
Chris Johnson	Benton PUD
Melinda James-Saffron	Grays Harbor PUD
Mark Ohrenschall	Energy NewsData
Rick Pendergrass	Bonneville Power Administration
Ken Phillips	Tillamook PUD
Doug Olson	Tillamook PUD
Jason Heuser	Eugene Water & Electric Board
Frank Lawson	Eugene Water & Electric Board
Terry Morlan	Consultant
Eric Christenson	Western Energy Institute
Chris Hill	PNGC Power
Chris Robinson	Tacoma Power
Mariah Kennedy	Puget Sound Energy
Clay Norris	NW Energy Efficiency Alliance
Dan Bedbury	Lewis County PUD
Doug Grob	Flathead Electric Cooperative

Charlie Black
Scott Coe
Katherine Schacht
Ann Fisher
Scott Kinney
Craig Collar
Patrick Damiano
Harry E. Hewitt
Byron Hanke
Arne Olson
Shauna McReynolds
Tomás Morrissey

CJB Energy Consulting
Emerald PUD
Emerald PUD
AF Legal Consulting
Avista Corp
Snohomish PUD
ColumbiaGrid
Tillamook PUD
Clark PUD
E3 Consulting
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