

**Bruce A. Measure**  
Chair  
Montana

**Rhonda Whiting**  
Montana

**W. Bill Booth**  
Idaho

**James A. Yost**  
Idaho



**Joan M. Dukes**  
Vice-Chair  
Oregon

**Bill Bradbury**  
Oregon

**Tom Karier**  
Washington

**Phil Rockefeller**  
Washington

## **Council Meeting Portland Oregon**

**July 12-13, 2011**

### **Minutes**

Council Chair Bruce Measure called the meeting to order at 1:18 p.m. on July 12<sup>th</sup>, and adjourned it at 11:21 a.m. on July 13<sup>th</sup>. All members were present.

#### **Reports from Fish and Wildlife, Power and Public Affairs committee chairs:**

Bill Booth, chair, fish and wildlife committee; Tom Karier, chair, power committee; and Rhonda Whiting, chair, public affairs committee.

Bill Booth reported that the Fish and Wildlife (F&W) Committee discussed ocean research projects and one quarterly review F&W project. We also discussed estuary issues with representatives of BPA and the Corps of Engineers, as well as papers being prepared on the lamprey and white sturgeon, he said. BPA gave the committee a presentation on its 2012 start-of-year F&W budget, Booth stated. He said the committee discussed upcoming categorical reviews and the draft MERR plan, noting that a meeting on MERR is scheduled for September.

Tom Karier reported that the Power Committee met on July 7 and received an update on the last meeting of the Wind Integration Forum. The turnout was very large, and we had participants from California to Canada, he noted. The main topic was the oversupply issue, and we discussed solutions, Karier said. The group identified seven actions the Forum will undertake, he added. The committee also had a presentation on a joint paper staff is doing with PNUCC about wind impacts on thermal generation, Karier reported. We talked about work of the System Analysis Advisory Committee and had a presentation on the Regional Technical Forum Policy Advisory Committee, he said. Staff will revise the natural gas price forecast, as well as other forecasts, Karier noted.

Rhonda Whiting said the Public Affairs Committee would meet on Tuesday to discuss the Congressional staff tour scheduled to take place in Idaho this year, as well as Council publications and a redesign of the Council's website.

## **1. Council Business**

### **– Election of Council Vice-Chair**

Booth nominated Joan Dukes to serve as Council Vice-Chair. He said she has served for six years on the Council and that she is “an experienced and knowledgeable Council member.” Bill Bradbury seconded the motion, and the motion passed on a unanimous vote.

### **– Decision on Charter for the Fish Tagging Advisory Workgroup**

Staffer Tony Grover presented a draft charter for the Fish Tagging Forum, a group formed to address costs, efficiencies, and gaps for all fish-tagging efforts that take place under the Council’s F&W program. This effort will last two years and emphasize coded-wire tagging projects, he said.

Karier recommended that the directions for the Forum be more specific so the Council knows what it will get from the process and can be sure this work won’t duplicate previous reports. He said if the Forum were to find out that the wrong type of tags is being used, he would want to know right away, not two years later. If we can get the work done sooner, we will, Grover said.

Dukes moved that the Council approve the charter for the Fish Tagging Forum Advisory Workgroup. Booth seconded, and the motion passed.

### **– Decision on report to Northwest Governors re Bonneville Fish and Wildlife spending**

Staffer John Harrison presented a request for the Council to approve the final version of the Tenth Annual Report to Northwest Governors on the F&W Expenditures of BPA. We had one month of public comments on the draft version and received comments from PNGC Power, the Public Power Council, Northwest RiverPartners, BPA, and Tom Iverson, representing himself, he said. The comments were positive and suggested a few editorial changes, Harrison noted.

One comment recommended the document show the impact of the F&W costs on the average monthly utility bill, and staff will calculate that and add it to the report, he said. Harrison also stated that he had made a few other editorial changes, and that he would add a new chart to the report, at Council member Booth’s request.

Dukes moved that the Council approve the final version of the Report to Northwest Governors on FY 2010 Fish and Wildlife Expenditures. Karier seconded the motion to approve the report, and the motion passed.

## **2. Presentation on Puget Sound Energy IRP:**

Phillip Popoff, Manager, Integrated Resource Planning, Puget Sound Energy.

Phillip Popoff, manager of integrated resource planning for Puget Sound Energy, said PSE’s Integrated Resource Plan (IRP) focuses on the least-cost mix of energy supply resources and conservation. Key take-aways from our plan are that commercially available resource alternatives are quite limited, and that there is a regional surplus of energy, he stated. That’s not so good for stimulating new baseload generation, but it’s pretty good for our customers, Popoff

said. The surplus pushes costs down, but that can challenge the cost-effectiveness of renewable energy resources, he noted. And there is a lot of cost uncertainty, Popoff added.

Our plan calls for us to continue aggressive acquisition of demand-side resources (DSR), he reported. We will use gas peakers and transmission to access the regional surplus, Popoff said. The IRP calls for 1,065 MW of peakers by 2016, he noted. Our Lower Snake River wind project will be completed by the end of this year or early next, and that will enable PSE to meet its renewable energy goals until 2020, Popoff said.

Our plan calls for acquiring 423 MW of DSR by 2016, he told the Council. That's a big number, and it makes everybody "a little bit nervous" about whether it can be done, Popoff said. He showed a chart illustrating how DSR could keep PSE's capacity need nearly flat for the next five to seven years. DSR also has a big impact on what we need to acquire in terms of renewables, Popoff noted.

It is hard to compare PSE's plan with the Council's Sixth Power Plan because in many cases, "they ask different questions," he said. They both seek aggressive acquisition of DSR, and our analysis found that our IRP is acquiring DSR at a slightly faster pace than what is assumed in the Council's plan, Popoff noted. We rely on Council staff as a resource to help us work through these complicated analyses, he said. We also participate in the Regional Adequacy Forum, and that work is really important to us because we are so short, Popoff stated.

It's nice to have a representative from a private utility come here and say that there's a good connection with our staff and that the forums we host are of use to you, said Bill Bradbury. Booth asked what could happen if every utility plans to rely on market purchases to meet capacity needs. Are you concerned about that? he inquired. Yes, replied Popoff. That's why we rely on the Regional Adequacy Forum, and I wish "our crystal ball" would extend out further, he said.

### **3. Update on activities of Energy Trust of Oregon:**

Margie Harris, Executive Director, Energy Trust of Oregon.

Margie Harris of the Energy Trust of Oregon reported on the organization's 2010 achievements and progress since the Trust's beginning in 2002. She explained how their funding has evolved and increased over time and how their activities have helped customers of PGE, Pacific Power, Northwest Natural, and Cascade Natural Gas.

The Trust is growing and growing aggressively, Harris said. Projects completed in 2010 saved customers about \$177 million, and since 2002, customers have seen utility bill savings of almost \$800 million, she noted. The Trust's energy-efficiency investments from 2002-2010 saved ratepayers \$1.8 billion in costs utilities avoided by not having to build new resources or buy fuel, according to Harris.

The Council's staff has been really helpful to our activities and their technical expertise informs our benefit/cost analyses, she stated. We rely heavily on, and participate in funding for the Regional Technical Forum (RTF), Harris said. We encourage you to include new technologies

in your analyses, continue your investment in wind integration, and broaden your scope to include more work on gas issues, she told the Council.

#### **4. Presentation of 2010 Bob Olsen Memorial Conservation Eagle Award by Northwest Energy Coalition:**

Sara Patton, Executive Director.

Sara Patton, executive director of the Northwest Energy Coalition, presented the Council, its staff, and the Sixth Power Plan advisory committee members with the 2010 Bob Olsen Memorial Conservation Eagle Award for “outstanding commitment to a clean and affordable energy future.” Our board voted unanimously to present this award to you, she noted.

I sometimes compare the Council’s staff to “the monks of medieval Ireland, a cold, wet, green place somewhat like Portland, who preserved classical knowledge” -- your staff did that during the region’s experiment with deregulation, Patton said. The staff did excellent analytic work, and the Council’s public involvement staff is also to be recognized for their efforts to get information on the benefits of the plan out to so many in the region, she stated. Measure thanked her for the award and commended Council staff for their work.

#### **5. Briefing on proposed RTF guidelines for Savings Estimation Methods:**

Tom Eckman, conservation resources manager.

Staffers Tom Eckman and Charlie Grist described the Regional Technical Forum’s (RTF) Guidelines for the Development and Maintenance of RTF Savings Estimation Methods. The guidelines spell out how the RTF selects, develops, and maintains approved methods for estimating savings from the delivery of energy-efficiency measures, Grist said. They are a major step forward for the RTF and update decision criteria that were originally adopted over a decade ago, he added.

It is becoming increasingly important to know how good our savings estimates are and how methods and measures are working, according to Grist. The RTF plays a pivotal role in the Council’s Sixth Power Plan by measuring the savings achieved, he said. These guidelines were developed over eight months, and we are now bringing them to the Council and the RTF Policy Advisory Committee for their review, Grist added.

He described the RTF’s responsibilities under the guidelines, including the approval of unit energy savings values and of standard protocols, as well as providing advice on custom-designed protocols. The guidelines set forth the process, data quality, and reliability standards used by the RTF, Grist continued. Implementation of the guidelines will likely require increased regional investments in research and program impact evaluation, he noted. There are significant financial and resource implications for utilities, BPA, the Energy Trust of Oregon, Northwest Energy Efficiency Alliance, as well as the RTF itself, and that’s why we are bringing these forward now, Grist stated.

The RTF's work is becoming much more visible and important, observed Karier. The Council should think about adopting or approving these guidelines in some way, he suggested. This is critical work to make sure we are measuring savings properly, agreed Booth. So much of our future energy supply in the region is depending on it, and in some cases, facilities are being shut down and new plants delayed, he stated.

The RTF's job is to determine what's being used and what's being put in a box somewhere, said Eckman. We spend a lot of time on how to measure and how to survey such things, he added.

An advantage of participating in the RTF for a utility is that it can receive a calculation of what the savings of a measure would be so it doesn't have to make that determination itself, Yost said. I assume these guidelines will be used by utilities to get concurrence from regulatory commissions on savings documentation, he stated. Is that right? Yost asked. That's one of the questions front-and-center with the RTF advisory committee, replied Eckman. We've talked with regulatory staff about that, and in Washington state, if a utility employs a measure that is not an RTF measure, "you have to show your homework" to document the savings, he said.

## **6. Council decision on RME/AP Category Review:**

Grover said there are two items remaining before the Council can close out the Research, Monitoring, and Evaluation (RM&E)/Artificial Production category review. The first is a Council decision on final recommendations for three ocean research projects, and the second is Council approval of written explanations describing how the Council acted consistent with the requirements of Section 4(h)(10)(D) of the Northwest Power Act in making its final project recommendations.

### **– Decision on recommendation for ocean research projects:**

Tony Grover, director, fish and wildlife division; and Patty O'Toole, program implementation manager.

Staffer Patty O'Toole described the three ocean projects. One is a NOAA Fisheries project on ocean survival of salmonids; one is a Canada Dept. of Fisheries study on Canada-USA shelf-survival; and the third is a project by Kintama Research on coastal ocean acoustic salmon tracking.

She noted that the Council has already required the project sponsors to jointly complete a comprehensive synthesis report on their research. The F&W Committee recommends the synthesis report be done by the end of this calendar year, O'Toole said. The committee also wants to make sure that certain questions get addressed in that report, including the nexus of the ocean research with the Council's program, why ratepayers should pay for the work, and the relation of ocean research to the Biological Opinion, she explained. The committee asked the project sponsors to meet with the committee this fall to discuss progress on the synthesis report, O'Toole said.

Measure said he has a concern about the fact some of these projects extend beyond the calendar year, making the Council's decision process out of sync with BPA's contracting. This is an ongoing issue, Grover said, noting there are over 400 projects under contract. It would be more

comforting if staff would tell us well in advance about some of these issues and get us the information needed, long before BPA extends a project contract, Measure said. We'll work with BPA and try to do that, Grover responded.

With these three projects, I'm even less comfortable letting them roll over and over, said Karier. I want the sponsors to say how these projects will benefit fish recovery, and if we don't like the answer, we should get BPA to tell us why it thinks these projects are important, he stated.

In the F&W Committee, we established an expectation the synthesis work would be done by the end of the year, and BPA said it would manage the projects with that in mind, said Rockefeller. If we can anticipate BPA's cycle, we would be able to move our recommendations forward and interject ourselves if the projects need curtailing or redirection, he added.

I agree, said Karier. And once we identify the management questions, we might consider putting out an RFP on them, he stated. There are others out there that can do this work, and an RFP would ensure cost-effectiveness, Karier said. I'm not assuming that any of these projects will continue, and that's the starting point for the future, said Booth.

This is the first categorical review we've done, said Whiting. The point was to take the same type of projects together, and they were bound to have different start dates, she stated. This process wasn't designed to keep certain projects in -- we just started doing business differently with the categorical review, Whiting added.

We have brought to BPA's attention that we are uncomfortable with this process and that we need to work our way through this with BPA, said Yost. "This isn't the only apple in the barrel that needs attention," he added.

Dukes moved that the Council recommend to BPA the implementation with conditions through FY 2012 of three ocean research project (Projects Nos. 199801400, Ocean Survival of Salmonids; 200300900, Salmon Shelf Survival Study; and 200311400, Coastal Ocean Acoustic Salmon Tracking), as recommended by the F&W Committee. Bradbury seconded, and the motion passed.

– **Approval of written explanation required by Section 4(h)(10)(D) to accompany Council's final decision on recommendations**

John Shurts, general counsel; and Lynn Palensky, program development.

Staffer John Shurts explained the need to complete the Section 4(h)(10)(D) requirements. We largely followed the Independent Scientific Review Panel's recommendations during this review, but in a few cases we didn't, so I wrote an explanation for those cases, he said.

Dukes moved that the Council approve the written explanations that address formal requirements of Section 4(h)(10)(D) of the Northwest Power Act to accompany the final recommendations in the RME/AP category review, as recommended by the F&W Committee. Booth seconded, and the motion passed.

## **7. Presentation on Bonneville Environmental Foundation activities:**

Margie Gardner, Chief Executive Officer.

Margie Gardner, CEO of the Bonneville Environmental Foundation (BEF), began her presentation by explaining the BEF is a nonprofit organization established in 1998 to further the development and use of new renewable energy resources and restore watershed ecosystems. She described the history of the BEF and how it is funded.

BEF's renewable energy work includes installing solar facilities at schools, helping utilities do small-scale renewable projects such as small hydro and biodigesters, and purchasing renewable energy credits (RECs), Gardner explained. Voluntary RECs have been very significant and have had as large an impact on the development of renewable energy as regulation, she stated.

Gardner described BEF's model watershed program and watershed restoration work. She said BEF also sells water restoration certificates (WRCs) to consumers and companies that want to restore flows to critically dewatered ecosystems. The WRCs are similar to RECs, and each represents 1,000 gallons of water, Gardner noted. Customers can match their water footprint with an equal amount of restored streamflows, she said.

We have three WRC projects going on in the Northwest now, two in Oregon and one in Montana, Gardner noted. I'd like to see the WRC market grow like the REC market has, she said. We are seeing a lot of interest and exploring opportunities in Washington, Idaho, California, Utah, and other states, companies like Patagonia, Intel, breweries, and others that want to be able to advertise these efforts to their customers. It's a good way to put water back into streams without having utilities pay for it, she said.

## **8. Briefing on analysis of climate change effects on the Columbia River hydrosystem:**

Jim Barton, U.S. Army Corps of Engineers, Pat McGrane, U.S. Bureau of Reclamation, Boise; and Rick Pendergrass, Bonneville Power Administration.

Representatives from the Bureau of Reclamation, BPA, and the Corps of Engineers briefed the Council on their recently completed analysis of climate-change effects on the hydropower system. Pat McGrane of Reclamation said the study built off data from the University of Washington and noted that the project was led by the River Management Joint Operating Committee, which consists of water managers, hydrologists, and power schedulers from the three agencies.

One thing the study found is that "climate models favor it to become wetter in the Northwest," and all 112 scenarios we ran show it's going to be warmer, McGrane reported. The study found there will be increased winter runoff and less spring and summer runoff, but the impacts on water supply do not appear to be as great as anticipated. We found that Reclamation's flood control curves are self-adjusting -- "it turns out that Reclamation's existing curves are pretty robust," McGrane reported. The study shows there will be an increased reliance on stored water versus natural flow, he added.

Jim Barton of the Corps described the study's flood control analysis and said the work is still preliminary. One initial finding is that there will be higher runoff variability in subbasins across the region, he noted. The implication, according to Barton, is that the overall distribution of flood control storage at different reservoirs may need to be revised and that water management decisions may become more challenging.

Another finding is that many basins could have higher fall/winter runoff, runoff shifted earlier in the spring, and lower runoff in the spring and summer, he said. That could mean drafting reservoirs to their deepest draft earlier for flood risk management, Barton stated.

The study found that winter rain and rain-on-snow events would become more likely, leading to less predictable reservoir inflows, he noted. As a result, some projects may need to be drafted deeper earlier in the fall/winter season to respond to this unpredictability, and draft rate limits may need to be revisited, Barton said.

BPA's Rick Pendergrass said that generally speaking, the climate-change scenarios studied result in higher natural streamflows in the winter-to-spring period and lower streamflows in the summer. At McNary, there would be a large increase in flows in the late fall and early winter and a drop in flows in June, July, and August, he noted. With more water in the winter and less in the summer, there will be larger generation increases in the fall and winter and less generation in the summer, Pendergrass stated.

It is premature to include these results in current operations, but it is time to start planning for the future, he said. Proposed actions for the next 10 years, according to Pendergrass, include data refinement, more flow analysis, and establishing criteria for when "change" warrants adjustments to current operations. Among the long-term planning processes that should incorporate climate-change analysis are the Columbia River Treaty, future Biological Opinions, BPA's resource program, flood control, and storage studies, he said.

What you've found doesn't seem like such a major shift, said Jim Yost. It doesn't, but with some reservoirs, there are fairly extreme changes in some years, and we need to do further study, replied Barton. The hydrograph is peaking three or four weeks earlier so it's moving the freshet and changing the distribution of it, Pendergrass said.

It seems to me we could work closer on flood control drafting, maybe even on a weekly basis, Yost stated. I'm frustrated because we aren't putting flood control water on spring fish attempting to migrate, and climate change will compound that problem, he said, adding "we need more day-to-day management."

You are looking at flows and shifts in runoff, but there are other effects like temperatures, said Rockefeller. I don't see warming data in what you've presented, and there are also acidification issues, he noted. Does your study look at the multitude of effects from climate change or concentrate on storage and hydro operations? Rockefeller asked.

There is information in this 600-page report about temperatures, but it doesn't speak to acidification, replied Pendergrass. Someone else could take this data and use it to do fish survival models, added McGrane.

There is not a lot of storage in the Columbia River system as a whole, besides the reservoirs and what is in Canada, said Rockefeller. Our “reservoir” in the past has been the snowpack, he stated. Are you looking at recommending building new large storage projects? Rockefeller asked. Reclamation is always looking at storage issues, replied McGrane. The study didn’t get far enough to address how to rectify the problems, said Pendergrass.

We’ll have to look at the infrastructure, said Rockefeller, noting that the issue of additional storage has come up in Treaty review discussions. It takes decades to bring such new projects online, and the costs are enormous, he noted. It would be good if you could identify whether you think we’ll need those kinds of projects, Rockefeller added. Storage questions will become more important in the future, agreed McGrane.

## **9. Presentation on Oregon’s Roadmap to 2020 Greenhouse Gas reduction strategy:**

Angus Duncan, Chair, Oregon Global Warming Commission.

Angus Duncan, chair of the Oregon Global Warming Commission, gave a presentation on the commission’s recommendations to help achieve the state’s goal of reducing greenhouse gas emissions levels to about 30 percent below current levels by 2020. The commission was created by the legislature in 2007.

Duncan summed up the impacts to Oregon from climate change as “fire and water,” including more extreme heat, reduced snowpack, wildfires, increased coastal erosion, and more floods. He predicted difficult situations, such as “when you get to July and August, and fish and power and irrigation are all competing for the same smaller flows that have been degraded by higher temperatures.”

Oregon is meeting the legislature’s 2010 goal to keep emissions at levels where they were in 2000, Duncan noted. We’ve been able to do that because of decreases in industrial emissions from the loss of some industry and because of energy efficiency, he said.

Duncan explained seven propositions that underpin the commission’s recommendations. The first is to “embed carbon in the planning process,” including transportation and land use decisions, as well as gas and electric utility planning, he stated.

Duncan said his group plans to propose taxes that “acknowledge CO<sub>2</sub>, but are revenue-neutral.” He suggested, instead of a gas tax, a fee for miles traveled times vehicle carbon efficiency so that “a bicycle and a Cadillac Escalade” would both pay for mileage, but the bicycle would not have to pay the second cost because it has no emissions. We are also looking at a property tax keyed to the energy efficiency of a house times the number of its full-time residents, not market value, Duncan stated.

The commission would like to ramp down coal capacity and replace it with increased efficiency, renewable power, and gas turbines, he said. The commission proposes that 100 percent of new load growth be met with energy efficiency, and “substantial reductions” in coal generation by

2020, Duncan reported. Our vision of the future would require new transmission and new storage facilities, he added.

One problem in meeting carbon goals in the region, according to Duncan, is that there's a contrast between what the Council says is doable regionally and the sum of utilities' resource acquisition plans, based on numbers from PNUCC. Utilities project more wind, less energy efficiency, and more gas use than does the Council's plan, he said. There's "a disconnect" between the power plan and individual utility's planning processes that needs to be addressed, Duncan stated.

Portland General Electric's shutting down the Boardman coal plant is a step, but not a sufficient step, he continued. You have to replace it, and if you make the wrong choice, you may lower greenhouse gas emissions in the short run, but increase them in the long run, according to Duncan. If PGE replaces power from Boardman with gas turbines, by 2030, PGE's emissions will be higher than they were in 2010, he said. Duncan recommended replacing the coal plant's output with a 50/50 mix of gas and "zero-emission resources."

We need to look further ahead when we assess choices to get us to our carbon, reliability, and cost-management goals, and the only entity that can do that is the Council, he said. So "the ask here today" is that you take advantage of "your high-priced talent," and look at a 30 or 40-year scenario, rather than a 20-year scenario, Duncan told the Council. You should look at an extensive penetration of wind, solar, and energy efficiency so we can get to a downward-trending greenhouse gas emissions line, he said.

## **10. Briefing on Wildlife Crediting Forum:**

Peter Paquet, manager, wildlife and resident fish.

Staffer Peter Paquet briefed the Council on the Wildlife Crediting Forum draft report. It is intended to provide a blueprint or framework for future discussions between BPA and regional F&W agencies and tribes on the development of agreements for meeting BPA's wildlife mitigation obligations, he said.

Paquet explained the background and activities of the Forum, which has been meeting since January 2010. Paquet said accomplishments of the Forum include: establishment of a ledger depicting the current status of BPA-funded wildlife mitigation activities; protocols for determining the amount of credit BPA should receive for management actions on federal lands and for determining the credit BPA should receive for fish mitigation projects that benefit wildlife; and acceptance of the F&W program loss assessments as the agreed-upon measure of wildlife losses. Issues that remain outstanding, he noted, include agreement on: application of the crediting ratio established in the F&W program; how to deal with wildlife species benefiting from open-water habitats resulting from reservoirs associated with dam construction; and how to account for mitigation occurring prior to the 1980 Power Act.

How will these accomplishments be formalized? Karier asked. It would be good if the Council endorses this report, and we'll talk about doing that in the future, said Shurts.

D.R. Michel commented by telephone on behalf of the Upper Columbia United Tribes. He said his comments were based on a June 13 letter to the Council. The Wildlife Crediting Forum tried to solve some issues, but failed, Michel said. There is no scientific credibility for the ledger created, and we do not agree with the ledger, he stated. We do not agree that the protocols developed are helpful, Michel said. We think the only solution is a series of settlement agreements, and that the Council should encourage BPA to reach settlement agreements with each tribe and agency that focus on their unique geographic area, he said.

## **11. Continuation of Council Business:**

### **– Approval of minutes**

Dukes moved that the Council approve the minutes of the June 7-8, 2011 Council meeting held in Whitefish, Montana. Booth seconded, and the motion passed.

### **– Decision on Council Fiscal Year 2013 budget and 2012 budget revisions**

Staffer Sharon Ossmann said that the Council released a draft FY 2013 budget and FY 2012 revised budget two months ago for public comment. We received one oral comment at our meeting in Montana and one written comment from Charles Pace, she noted. Ossmann said that Mr. Pace questioned the basis of BPA's firm power sales and their relation to the Council's budget. The issues Mr. Pace raised are not new, and his comments show a misunderstanding of how the budgets are calculated, she stated.

Dukes moved that the Council adopt the FY 2013 budget and the FY 2012 revised budget. Yost seconded, and the motion passed.

Approved August 10, 2011

/s/ Joan M. Dukes

Vice-Chair

---

x:\jh\ww\minutes\july 2011 short version.docx