

Bill Bradbury  
Chair  
Oregon

Henry Lorenzen  
Oregon

W. Bill Booth  
Idaho

James A. Yost  
Idaho



Jennifer Anders  
Vice Chair  
Montana

Pat Smith  
Montana

Tom Karier  
Washington

Phil Rockefeller  
Washington

January 6, 2014

## DECISION MEMORANDUM

**TO:** Council Members

**FROM:** John Shurts

**SUBJECT:** Sixth Power Plan litigation: Ninth Circuit remand recommendations: methodology for determining quantifiable environmental costs and benefits

### Introduction

In September a panel of the Ninth Circuit issued an opinion remanding the Sixth Power Plan decision to the Council. The Court issued its final mandate on November 14, 2013. Thus it is time for the Council to decide on the actions necessary to comply with the Court's remand order.

The Court remanded the Sixth Power Plan to the Council "for the limited purposes of (1) allowing public notice and comment on the proposed methodology for determining quantifiable environmental costs and benefits, and (2) reconsidering the inclusion in the Plan of the BPA's estimate of the 2009 Program's cost to hydrosystem operations." *See* previous confidential memoranda for summaries of the opinion and analyses of the issues presented by the opinion.

This memorandum concerns only the first remand issue -- allowing for public comment on the Sixth Plan methodology for determining quantifiable environmental costs and benefits.<sup>1</sup>

### Recommendation

Our recommendation is to follow the Court's remand order as precisely as we can. That is, we recommend that the Council, at the January Council meeting, release for a 45-day public review and comment period what is Appendix P to the Sixth Power Plan, "Methodology for Determining Quantifiable Environmental Costs and Benefits."

[http://www.nwcouncil.org/media/6338/SixthPowerPlan\\_Appendix\\_P.pdf](http://www.nwcouncil.org/media/6338/SixthPowerPlan_Appendix_P.pdf).

---

<sup>1</sup> The second remand issue -- concerning the inclusion in the Sixth Power Plan of information on the costs of the Fish and Wildlife Program -- will be dealt with in a separate memorandum and agenda item.

When the comment period is over, the Council will consider all comments and make a public decision on whether the comments warrant revising the methodology or amending the Sixth Plan in any other way. The comments received and the Council's discussion and decision on the Sixth Plan methodology after the end of the comment period will become part of the administrative record demonstrating how the Council is satisfying the Court's remand order.

Attached to this memorandum is a draft letter to Interested Persons that we propose to release along with Appendix P . The letter explains why the Council is taking this action and what the Council will do at the conclusion of the review period with the comments received.

The letter also lets the public know that the Council will soon be starting in on a separate public process to craft the environmental methodology for the draft Seventh Power Plan. It is important to keep these two efforts separate and distinct. We will do what we can to minimize the confusion.

### **Attachments**

- Draft letter to Interested Persons
- Appendix P to the Sixth Power Plan, "Methodology for Determining Quantifiable Environmental Costs and Benefits."

## [Council Letterhead]

January xx, 2013

**To: Interested Persons**

**Re: Invitation to review and comment on Appendix P to the Sixth Northwest Power Plan, “Methodology for Determining Quantifiable Environmental Costs and Benefits”**

In September 2013, a panel of the U.S. Ninth Circuit Court of Appeals remanded the Sixth Northwest Power Plan decision to the Council for a “limited purpose” of “allowing public notice and comment on the proposed methodology for determining quantifiable environmental costs and benefits.”

Appendix P to the Sixth Power Plan describes the methodology for determining quantifiable environmental costs and benefits that the Council used in developing the draft Sixth Power Plan as well as the final plan. Appendix P is attached to this invitation to comment and may also be found, in the context of the entire Sixth Northwest Power Plan, on the Council’s website at <http://www.nwcouncil.org/energy/powerplan/6/plan/>; [http://www.nwcouncil.org/media/6338/SixthPowerPlan\\_Appendix\\_P.pdf](http://www.nwcouncil.org/media/6338/SixthPowerPlan_Appendix_P.pdf).

At the conclusion of the comment period, the Council will consider any comments received on the Appendix P Methodology and decide whether the comments received warrant revising the methodology used in the Sixth Power Plan or in any other way amending the Sixth Power Plan.

Please submit all comments to [comments@nwcouncil.org] by the close of business on March 5, 2013.

### **Background**

Section 4(e)(3)(C) of the Northwest Power Act of 1980 requires the Council to include in each regional conservation and electric power plan a “methodology for determining quantifiable environmental costs and benefits.” When the Council released the draft Sixth Power Plan for public review and comment in September 2009, the Council forgot to include a statement describing the methodology. The methodology the Council used in developing the draft and final Sixth Power Plan was included in the final plan in Appendix P, “Methodology for Determining Quantifiable Environmental Costs and Benefits.”

The Council decided at the time not to conduct a further public comment period before including the methodology in the final Sixth Power Plan. In the Council’s view it was clear from the draft power plan and the accompanying analyses what methodology the Council was using for determining quantifiable environmental costs and benefits of the new resources analyzed for the plan’s resource strategy. As an indication of this, the Council received significant public comment following release of the draft power plan on how the Council had quantified

environmental costs and benefits of particular resources in developing the power plan, including especially whether and how to quantify the environmental costs of carbon emissions.

Nonetheless, a panel of the Ninth Circuit subsequently ruled that the failure to include the statement of the methodology in the draft plan for public comment was a procedural error that the Council must correct. The Court declined to address the petitioner's substantive challenge to the methodology adopted by the Council, deciding instead to remand "the Plan to the Council for the limited purpose of adopting a methodology through the appropriate notice-and-comment process." *Northwest Resource Information Center, Inc. v. Northwest Power and Conservation Council*, No. 10-72104, at 20-23, 28 (9th Cir, Sept 18, 2013).

**NOTE:** The Council is in the preliminary stages of the work required to develop the *Seventh* Northwest Power Plan, a power plan review that must occur at least every five years under the Northwest Power Act. In the near future the Council will be beginning a separate effort to develop the methodology for determining quantifiable environmental costs and benefits for the draft Seventh Power Plan. The Council will be certain not to repeat the procedural error of the last plan, and will instead afford a number of occasions for the public to engage on how the Council develops and uses the methodology, including an opportunity to review and comment on an explicit statement of the methodology in the draft Seventh power plan. The Council apologizes for any confusion caused by having to conduct the similar yet legally distinct public review processes.

# Sixth Northwest Conservation and Electric Power Plan

## Appendix P: Methodology for Determining Quantifiable Environmental Costs and Benefits

### Background

#### Methodology

*Cost of Existing Regulations*

*Potential Cost of New Regulations*

*Consideration of Environmental Benefits*

*Residual Environmental Costs*

### Background

Section 4(e)(3)(C) of the Act requires the Council to include in its power plan a “methodology for determining quantifiable environmental costs and benefits.” The purpose of this Appendix is both to describe the Council’s methodology for determining environmental costs and benefits and to explain how the Council has assessed environmental costs and benefits in its resource cost estimates.

The Council’s Power Plan is based on the most cost-effective resources to meet the electricity needs of the region. The Act specifies priorities for types of resources. Energy efficiency is first priority and it receives a 10 percent cost credit compared to other alternatives. Efficiency is followed by renewable resources, high-efficiency resources, and finally, all others. With the exception of efficiency improvements, the other priorities are only tie breakers. It is cost that determines the most cost-effective resources for the Council’s Plan.

The Act specifies that the costs of a conservation or generating resource are to include an estimate of “all direct costs” over the effective life of the resource, including “quantifiable environmental costs and benefits ... directly attributable” to the resource. More precisely, Section 3(4)(B) provides:

For purposes of this paragraph, the term "system cost" means an estimate of all direct costs of a measure or resource over its effective life, including, if applicable, the cost of distribution and transmission to the consumer and, among other factors, waste disposal costs, end-of-cycle costs, and fuel costs (including projected increases), **and such quantifiable environmental costs and benefits as the Administrator determines, on the basis of a methodology developed by the Council as part of the plan, or in the absence of the plan by the Administrator, are directly attributable to such measure or resource.**<sup>1</sup>

---

<sup>1</sup> The language can be read to apply only to potential Bonneville resource acquisitions and only following a particular determination by the Bonneville Administrator. Still, the Council takes this as instructive for evaluating the costs of all new resources considered in its Power Planning. In addition, Section 4(e)(3)(C)

An entire regulatory structure is in place at the national, state, and local levels to address environmental effects of various economic activities, including those related to the production and use of electricity. These regulations represent a collective choice of society about the desirable and economically efficient mitigation of environmental effects. Where policies exist and are considered up to date, the Council assumes that policy makers have balanced environmental damage against mitigation alternatives and costs to determine the desirable levels of mitigation. However, regulatory policies evolve over time as better understanding of environmental effects is gained, previously negligible impacts become significant due to expansion of human activity, and the values of society change. Where policies have not been developed or are actively being considered for revision, additional mitigation costs should be considered in planning.

Most regulatory policies do not require full abatement of impacts, but rather seek the balance between the cost of mitigation and the damages of residual impacts. Environmental effects that remain after regulatory solutions are implemented should not be ignored, however they may not be quantifiable. In addition, some resource choices have accompanying environmental benefits that should be considered.

The Council's methodology for consideration of environmental costs in developing its power plan is described below. Bonneville also should follow this methodology, in addition to applicable existing requirements and regulations, when considering expenditures related to resource acquisition.

## **Methodology**

There are four components to the Council's methodology for including quantifiable environmental costs in planning. These are: 1) including the cost of meeting existing environmental regulations into the capital and operating costs of conservation and generating resources; 2) where possible, quantifying the potential costs of new regulations under consideration; 3) accounting for the environmental benefits that may be associated with specific resources, usually associated with improved efficiency, and 4) recognizing additional environmental effects that may remain after compliance with existing regulations even though they may not be readily quantifiable.

### ***Cost of Existing Regulations***

The Council's planning assumes that all new generating resource alternatives meet existing environmental regulations. The costs of emissions reduction equipment and operations are included in resource costs, state limits on new power plant emissions are enforced, and various siting limitations, such as rivers and streams that fall in protected areas, are recognized. The

---

of the Act requires the Council to include in its power plan the "methodology for determining quantifiable environmental costs and benefits." Thus the purpose of this Appendix is both to describe the Council's methodology for determining environmental costs and benefits and to explain how the Council has assessed environmental costs and benefits in its resource cost estimates.

Council also includes the cost of meeting existing regulations affecting conservation measures, such as PCB disposal from replacement of transformers, and mercury disposal from replacement of linear fluorescent lamps. In addition, hydro operations consistent with the Council's Fish and Wildlife Program are considered a constraint on the operation of the hydropower system. These reflect the cost of policy choices that have already been made.

### ***Potential Cost of New Regulations***

Some environmental policies are still evolving or are being reconsidered. In some cases these are certain enough to include the costs in the plan directly. For example, mercury emissions limits have been assumed to become requirements and the cost added to new coal plants costs.<sup>2</sup> Similarly, the cost of recycling compact fluorescent lamps which contain trace amounts of mercury has been included in this measure's cost.

In other cases increased regulation is likely, but details have not been settled. In the Sixth Power Plan, this is the case with carbon control policies. While many states have renewable portfolio standards and limits on emissions from new power plants, carbon pricing policy is being actively discussed but is still highly uncertain in terms of its level and structure. Renewable portfolio standards and new plant emissions limits are included in the Council's analysis as existing regulations. However, carbon pricing policy is quantified as an uncertainty. Several scenarios explore the likely effects of different levels of carbon pricing on resource costs and choices.

### ***Consideration of Environmental Benefits***

For some resources, primarily efficiency improvements, there are associated environmental benefits. Where quantifiable, the Council counts these as a cost savings. For example, high efficiency clothes washers not only save energy, they also reduce water and detergent use. These are treated as positive environmental externalities in the Council's planning. The direct environmental benefit of reduced electricity use is not credited as an environmental benefit against the cost of conservation, but is instead reflected as reduced costs of avoided generation technologies.

---

<sup>2</sup> At issue here are the costs of existing coal units w/o flue gas desulphurization (Boardman is the only remaining regional example). The Council assumed costs regarding mercury abatement based on the Clean Air Mercury Rule (CAMR), issued by the Bush EPA in March 2005. CAMR established Hg emission limits for new coal units but exempted existing units. For most new pulverized coal-fired units, the CAMR limits could be achieved through "cobenefit" Hg removal (~90 percent) by required sulfur and particulate control equipment. Activated carbon filters would be required for IGCC plant compliance. (So in practice CAMR represented "business as usual" for most new and existing pulverized coal units though touted as new mercury control regulation.) Our new coal-fired power plant costs are consistent with CAMR (activated carbon filters for IGCC units; no equipment in addition to FGD & particulate control for new PC units, no new costs for existing units w/o FGD (i.e., Boardman)). However, CAMR was challenged in court and vacated by the DC Circuit Court in February 2009. The EPA withdrew its petition for review and is now developing new standards in accordance with the DC circuit court opinion. The new standards will likely require compliance by existing as well as new plants.

## *Residual Environmental Costs*

The regulations set through policy making are assumed to be acceptable levels of mitigation by society as discussed above. Also, where serious policy discussions are underway to change regulations, the Council attempts to reflect the potential changes in its planning. However, regulations seldom completely eliminate the environmental effects of electricity production and use. To the extent possible, the effects of residual emissions or other environmental effects should be considered in resource decisions.

In some cases, the Council has included unregulated mitigation requirements and cost into its planning. For example, the Council takes into account concerns about indoor air quality in homes that are highly sealed and insulated. In its first power plan and all subsequent plans the Council's Model Conservation Standards required that heat exchangers be installed to provide adequate ventilation in such homes to prevent indoor air quality problems. Ventilation requirements are now included in building codes. Other potential problems of a similar nature should be considered and mitigated where cost-effective.

The Council has not usually considered the effects of residual emissions to be reliably quantifiable. However, there have been extensive efforts to quantify such environmental costs, many undertaken for the purpose of balancing the cost of mitigation and the cost of residual damages. A recent example is from the National Research Council.<sup>3</sup> Other examples include USDOE/Commission of European Communities (1992)<sup>4</sup> and European Commission (1995)<sup>5</sup>. The Council methodology recognizes such effects and acknowledges these costs in evaluating resources, but in an unquantified manner. Bonneville, in making resource decisions, should list residual environmental effects and consider the possible costs when considering alternative resource choices. The magnitude of the costs should be considered based on credible literature such as the National Research Council and the others referenced, but this methodology recognizes that the residual environmental costs related to a particular resource very often cannot be explicitly calculated.

---

<sup>3</sup> "The Hidden Costs of Energy: Unpriced Consequences of Energy Production and Use." The National Academies Press. 2009. [http://www.nap.edu/catalog.php?record\\_id=12794#description](http://www.nap.edu/catalog.php?record_id=12794#description)

<sup>4</sup> U.S. Department of Energy and the Commission of European Communities. *U.S. - EC Fuel Cycle Study ORNL* (Reports No. 1 through 8). 1992 through 1998.

<sup>5</sup> European Commission. *Externalities of Energy EUR 16520-25* (Volumes 1 through 6). 1995.