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

January 10, 2012

DECISION MEMORANDUM

TO: Council members

FROM: John Harrison Information Officer

SUBJECT: Fiscal Year 2011 Annual Report to Congress

PROPOSED ACTION: Review revisions and comments and approve FY 2011 annual report to Congress.

BACKGROUND

The Draft 2011 Annual Report to Congress covers the period from October 1, 2010 through September 30, 2011. The required 90-day public comment period opened on September 15 and closed on December 16. Two comments were submitted.

 Bert Bowler, representing Snake River Salmon Solutions of Boise, commented: I would like to commend the Council on its Energy accomplishments to date. The NW Energy Coalition's award to the Council for its efforts on the Sixth Power Plan was well deserved.

The Council has made strides in supporting conservation and clean renewable energy in the Northwest with quality analysis. Case in point: **The Effects of an Increasing Surplus of Energy Generating Capability in the Pacific Northwest.** *The analysis presented here is clearly an initial first step. The Council staff, through the Resource Adequacy Forum and the Wind Integration Forum will continue to study and refine the analysis on the effects of wind on hydro operations and spill.*

I cannot give the same accolades for the Fish and Wildlife Report. The snapshot of a glossy overview of Snake River salmon describes a huge dollar investment that has little chance of making headway toward recovery of wild spring/summer Chinook and steelhead - the icon of the Columbia River. I recognize that we have yet to see a non-binding Recovery Plan for the Snake from NOAA, but the federal government is working overtime to lowball efforts that will allow restoration of wild salmon via the BiOp. The Council can and must do better! The message from the Power Act was not about minimal salmon runs.

The Council's 1994 Fish and Wildlife Program supported rebuilding Snake River salmon populations to productive, fishable levels as rapidly as possible within program goals. The Council set a rebuilding target for wild and naturally spawning spring/summer Chinook at 70,000. We now hover around 20,000 - the product of favorable ocean conditions, court-ordered

spill and some good runoff years. If the North Pacific Ocean takes a downturn, we could return to mid-1990 numbers. Tributary and estuary habitat is **not** limiting the recovery of these salmon - the dams and reservoirs in the lower Snake do prevent recovery.

• The Bonneville Power Administration also submitted comments. Bonneville's comments were in the form of revisions to the text of the report. These are shown in the file enclosed with this memo. Staff recommends accepting the revisions. The version in your packet also includes a letter from Bonneville Administrator Steve Wright.

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The State of the Columbia River Basin

<mark>Draft-</mark>Fiscal Year 2011 ANNUAL REPORT

October 1, 2010 - September 30, 2011



Document 2011-07

851 S.W. Sixth Avenue, Suite 1100 Portland, Oregon 97204-1348 www.nwcouncil.org Steve Crow Executive Director 503-222-5161 800-452-5161 Fax: 503-820-2370

Submitted to the

Committee on Energy and Natural Resources United States Senate

Committee on Energy and Commerce United States House of Representatives

and

Committee on Natural Resources United States House of Representatives

> 851 S.W. Sixth Avenue Suite 1100 Portland, Oregon 97204 503-222-5161 Toll Free: 800-452-5161 www.nwcouncil.org

The Northwest Power and Conservation Council was established pursuant to the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Public Law 96-501) by the states of Idaho, Montana, Oregon, and Washington. The Act authorized the Council to serve as a comprehensive planning agency for energy policy and fish and wildlife policy in the Columbia River Basin and to inform the public about energy and fish and wildlife issues and involve the public in decision-making.

This annual report has been developed pursuant to Section 4(h)(12)(A) of the Northwest Power Act. The Council's bylaws, which include its organizational structure, practices, and procedures, are available to the public at the Council's website as Document 2003-19.

Bruce A. Measure Chair Montana Rhonda Whiting

Montana **W. Bill Booth** Idaho

James A. Yost Idaho



Joan Dukes Vice-Chair Oregon

Bill Bradbury Oregon

Tom Karier Washington

Phil Rockefeller Washington

January 2012September 2011

To Congress and the Citizens of the Pacific Northwest:

This document is the draft-annual report of the Northwest Power and Conservation Council to Congress for Fiscal Year 2011, Oct. 1, 2010 through September 30, 2011. The annual report is required by the Northwest Power Act of 1980, the federal law that authorized the states of Idaho, Montana, Oregon, and Washington to create the Council.

The report provides an overview of the Council's planning activities regarding electricity in the Northwest and fish and wildlife in the Columbia River Basin in Fiscal Year 2011, as well as information about salmon and steelhead returns to the Columbia River Basin in calendar year 2010 and the effectiveness of the Council's Columbia River Basin Fish and Wildlife Program.

The report also includes information about Council organization and its budget, and expenditures of the Bonneville Power Administration to implement the Council's Fish and Wildlife Program.

In Fiscal Year 2011, the Council worked with the Bonneville Power Administration and electric utilities in the Northwest to implement the Northwest Power Plan, following revision of the Plan in 2010. The Council is pleased to report that Bonneville and its customer utilities are meeting first-year energy-efficiency goals in the Plan, which challenges the Northwest to meet most of the new demand for electricity over the 20-year horizon of the Plan with energy efficiency improvements.

Regarding the Fish and Wildlife Program, in 2011 the Council completed a year-long review process by recommending funding for a total of 140 research and monitoring projects, some new and some ongoing, to improve scientific knowledge about fish and wildlife throughout the Columbia River Basin. In recommending the projects to Bonneville, the Council emphasized that some are experimental and funding beyond the first year will depend on demonstrated effectiveness.

Thank you for your continued interest in the Council and its work. The Council's fish and wildlife program and power plan, and other information including videos and a blog, are on the Council's website, www.nwcouncil.org.

Sincerely,

Bruce Measure, Chair

Contents

The State of the Columbia River Basin in 2011	5
Council Activities in Fiscal Year 2011: Energy	11
Energy efficiency achievement topped 200 average megawatts in 2009	11
Regional Award Honors Council's Power Plan	
Regional Technical Forum Develops Guidelines for Efficiency Savings and	
Verification	
First-Ever Regional Standards for Heating, Cooling appliances	12
Natural Gas Price Forecast Revision	12
Wind Integration Forum	
Assessment Finds Regional Power Supply Will Be Adequate Through 2015	
Council Activities in Fiscal Year 2011: Fish and Wildlife	
140 Research and Monitoring Projects Recommended for Funding	
Council Honors Jay Minthorn	
Wildlife Forum Makes Progress On Crediting Habitat Losses	
Bonneville Power Administration Fish and Wildlife Expenditures	
Tracking Progress of the Fish and Wildlife Program	17
Council Hosts Opposing Sides on Debate Over Fitness of Hatchery Fish	
Council Approves Subbasin Plans for Bitterroot and Blackfoot Rivers	
Council Activities in Fiscal Year 2011: Public Affairs	
Canadian Relations	
Selected news articles that mention the Council	
Council Activities in Fiscal Year 2011: Administration	23
Council organization	
Council funding and budget	23
Council and committee meetings, Fiscal Year 2011	25
More Information	
Comments of the Bonneville Power Administration	
Background of the Northwest Power and Conservation Council	
Council Members, Fiscal Year 2011	29
Appendix 1: Council By-laws	30

The State of the Columbia River Basin in 2011

The weather was cooler and damper than usual in the Pacific Northwest in Fiscal Year 2011, leading to snowpack and runoff levels well above normal in the Columbia River Basin, an abundance of hydropower as a result, and controversy over shutting down wind turbines to accommodate the oversupply of hydropower. Salmon and steelhead returns to the Columbia River Basin continued the trend of recent years, with most runs equaling or surpassing average run sizes for the previous 10 years.

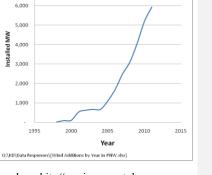
Wind power continues to be developed at a rapid pace in the Northwest, particularly in the Columbia River Basin of eastern Washington and Oregon, increasing the region's supply of carbon-free power generation. More than 3,500 megawatts of wind power capacity already are connected to the Bonneville Power Administration transmission grid, the dominant transmission system in the region, and Bonneville expects connections could reach 5,000 to 6,000 megawatts of wind generation by 2013.

The rapid proliferation of wind power is partly caused by <u>California's aggressive state</u> renewable energy standards in <u>Washington</u>, <u>Oregon and</u> <u>California</u>. -About a third of the wind power generated in the Northwest states and Wyoming is <u>currently</u> contracted to California utilities, and most of that amount is transmitted to <u>California</u> on Bonneville lines from turbines in Oregon and Washington. In 2011, Bonneville was working with the California Independent System Operator to overcome the strains on Bonneville's transmission system.

The rainy, cool weather of early 2011 resulted from a moderately strong La Nina climate event over the equatorial and northern Pacific Ocean, a condition that tends to drive storms and cool weather into the Pacific Northwest. As the likely weather pattern

became apparent in the winter of 2010/2011, Bonneville developed its "environmental **re**dispatch" policy to establish protocols for replacing other types of power generation when there is an excess of hydropower. Reducing thermal and wind generation in order to accommodate increased hydropower generation allows more water to flow through turbines and less over dam spillways, thus protecting fish from excessive levels of dissolved gas in the river below the dams.

By spring 2011 it was apparent that precipitation, snowpack, and river runoff would be substantially higher than normal. -In fact, by summer the runoff volume, estimated at about 135 million acre-feet at The Dalles Dam, would be the third-highest in 41 years of recordkeeping by NOAA's Northwest River Forecasting Center. Bonneville's environmental redispatch policy called for first reducing the output of coal- and natural gas-fired generators, then wind generators, and replacing the lost output with hydropower. Bonneville elected not to reimburse wind energy producers for lost tax credits or other revenues they receive when they generate power because that would shift costs to Northwest ratepayers for much of the wind power that is sold to California and would result in opportunities to distort the market. Bonneville also declined to pay utilities outside the Northwest to take some of the excess hydropower so that the wind turbines could continue operating.



Cumulative Northwest Wind Generation

7.000

Comment [S1]: Two reasons from the ROD Formatted: Not Highlight By early summer, virtually all of the region's thermal power plants shut down and their output largely was replaced by Bonneville with hydropower. -Bonneville also ordered periodic shutdowns of wind generators, deferred maintenance on some transmission lines, and evacuated more water from Lake Roosevelt behind Grand Coulee Dam to provide additional capacity to transmit and store energy.

By the time river flows returned to normal, in July 2011, Bonneville had curtailed 6.7 percent of the scheduled output of generating plants — coal, natural gas, and wind. During the period from May 18 through July 10th when environmental redispatch was needed, BPA curtailed approximately 5.4 percent% of the wind energy produced. Wind power producers responded by asking the Federal Energy Regulatory Commission to impose its non-

discrimination transmission rules on Bonneville. The wind-energy producers argued that through May,-and June and July Bonneville curtailed more than 60,00097,500 megawatt-hours of wind generation, causing them to lose money and break contracts with their customers because wind power could not be delivered. By the end of the fiscal yearlate summer, the dispute remained unresolved.

Controversies aside, incorporating intermittent wind power into the regional power grid is an ongoing technical challenge in the Northwest. When the wind doesn't blow and wind turbines don't produce power, energy is needed to balance the load on the transmission lines. When the amount of wind produced changes rapidly, fast-responding resources are needed to balance supply and demand. Working together, electric utilities and Bonneville are pursuing a number of activities that will reduce the cost of providing these balancing reserves for wind power. These include reducing operating schedule duration from one-hour periods to 30 minutes, establishing a platform for more liquid trading of energy within hours, improving forecasting infrastructure, investigating pumped-storage reservoirs that could provide backup power when needed, and analyzing the benefits of an "energy imbalance market" that holds promise to improve the efficiency of deploying balancing reserves.

Northwest coal-fired power generation also made headlines in 2011, but not because of its proliferation. In fact, the news was that the region took steps toward reducing coal power. Reducing coal-fired power generation is consistent with recommendations in the Council's Sixth Northwest Power Plan (issued in 2010). According to the plan, electric power producers in the region could meet their share of carbon emission-reduction targets, which are similar to those adopted by some states and proposed in national legislative initiatives, through three primary actions: achieving the energy-efficiency targets in the Council's Plan, meeting existing state renewable energy portfolio standards, and reducing the use of the existing coal-fired power plants by about half.

Washington, Gov. Christine Gregoire signed a bill that will lead to the closure a large coal-fired power plant in the state by 2025. If the TransAlta Corp. power plant in Centralia is retired as planned, Washington will become the second state, after Oregon, to close existing coal-fired power plants through agreements with plant owners. Closing the 1,376-megawatt TransAlta facility is key to the state's "clean energy future," the Governor said in a statement in May 2011. Calgary-based TransAlta is planning to build a natural gas-fired power plant in Lewis County, Wash., to replace the coal-fired plant, and the state offered expedited permitting for the project. The deal, which was completed after two years of negotiation, requires TransAlta to retire one of the plant's two boilers by 2020. The second boiler, which is the largest single source of greenhouse gas emissions in the state, would stop burning coal in 2025.

In Oregon, Portland General Electric announced plans in 2010 to close its 600-megawatt coal-fired power plant near the city of Boardman in 2020 to address haze and carbon issues. The plant accounts for 15 percent of the power provided by PGE, Oregon's largest electric utility.

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PGE plans to invest an estimated \$60 million in emissions-control technology to improve emissions from the plant before the plantit is closed.

As old sources of energy moved closer to retirement in 2011 – plans to remove old hydropower dams on the Elwa River on the Olympic Peninsula and in Washington's White Salmon River also moved forward this year -- research continued into new energy sources and new energy-management techniques. The Council is following a number of smart-grid demonstration projects in the Northwest, including advanced metering applications and the use of electric water heaters to provide flexibility and storage in the regional power system. As well, the Northwest National Marine Renewable Energy Center, based at Oregon State University and the University of Washington, developed a plan for a center to test devices that would generate electricity from the power of tides. The center, if it can be funded, would provide the opportunity to test two 1-megawatt projects for both energy production and environmental impacts. An experimental tidal power facility already is being planned by the Snohomish County Public Utility District, which has selected a site in Puget Sound near Everett and expects to be generating tidal power by 2013.

Meanwhile in 2011, the ongoing litigation over the federal government's plan for protecting threatened and endangered species of salmon and steelhead reached another milestone as the judge overseeing the litigation in U.S. District court partially accepted and partially rejected the latest version of the plan, which was issued in 2008 and amended in 2010. The judge ruled that the Biological Opinion on Operations of the Federal Columbia River Power System (BiOp) could remain in place through the end of 2013 because it sufficiently identifies "specific and beneficial" mitigation measures and plans but that NOAA Fisheries, the federal agency that administers the Endangered Species Act for Columbia River Basin salmon and steelhead and issued the 10-year biological opinion, must produce a new opinion for the 2014-2018 period. According to the court's order, the Reasonable and Prudent Alternative (RPA) actions in the BiOp include specific measures and plans for the fish through 2013, but that more certainty is needed for the later years. Accordingly, the judge ordered NOAA Fisheries to:

- Produce a new or supplemental BiOp by January 1, 2014
- Continue funding and implementing the 2008/2010 BiOp
- Continue collaboration with states and tribes to develop the mitigation actions for the new BiOp and develop the necessary scientific and technical supporting data
- File annual implementation reports detailing progress of RPA implementation
- Consider whether more aggressive action such as dam removal and/or additional flow augmentation and reservoir modifications are necessary to avoid jeopardy
- Continue to conduct spring and summer spill consistent with the Court's annual spill orders and provide monthly implementation reports.

Also in 2011, the U.S. Fish and Wildlife Service expanded critical-habitat protections for bull trout in the West, which will restrict federal approval of logging, mining, and grazing on large areas of public lands, including in the Columbia River Basin. The ruling protects 19,000 miles of streams, five times as many as protected under a 2005 rule, and 490,000 acres of lakes and reservoirs, three times more than before. The ruling affects mostly federal lands in Oregon, Washington, Idaho, and Nevada.

The protection would occur by reducing sedimentation that can cover bull trout egg nests, cooling river water to make spawning and rearing areas more hospitable to cold-water fish like bull trout, and connecting areas of bull trout habitat to broaden the habitat base. Advocates for greater protection of bull trout hailed the announcement, but some water-dependent communities and public land users said the decision could threaten future water supplies and lead to restrictions on mining and grazing. Later in the year, Oregon announced that bull trout would be

reintroduced to the Clackamas River in an effort state officials said may serve as a model for reintroducing bull trout into areas where they have been extirpated – in the case of the Clackamas River, more than 50 years earlier – and reconnecting isolated populations.

While the cool-weather La Nina climate condition contributed to increased precipitation and below-average temperatures in the Northwest, it also contributed to a trend over the last several years of good ocean conditions for salmon and steelhead. In April, the Pacific Fishery Management Council announced it would open a commercial salmon-fishing season for fall Chinook in the ocean in 2011, the second season in two years (the 2010 season was shorter than the one planned for 2011). There was no commercial fishing for fall Chinook in the ocean in 2009. The agency estimated the ocean population of fall Chinook off the Northwest coast at 750,000 fish this year, more than 10 times the numbers in 2008 and 2009.

California sea lions again made their annual spring appearance in the Columbia River in 2011. The sea lions feast on lamprey, sturgeon, and spring Chinook salmon between the estuary and Bonneville Dam, 140 miles upriver, before heading to mating areas off the southern California coast in June. NOAA Fisheries described the West Coast population of California sea lions as "healthy and stable" and probably at or near carrying capacity. But 13 salmon and steelhead populations in the Columbia River Basin are at risk. State, federal, and tribal fish and wildlife agencies have failed to deter the sea lions by nonlethal methods, yet courts reversed federal authorization to lethally remove the animals.

In 2010, NOAA Fisheries began a research project in the estuary to estimate the percentage of adult spring Chinook that survive the journey from the estuary to Bonneville Dam – and thus the number that die on the way from causes other than harvest. One of those causes is predation by marine mammals. This "unknown mortality" has not been measured before.

Researchers inserted tags in fish in the estuary and then waited for the tags to be either recovered in fisheries or detected at Bonneville Dam when the fish crossed on their way to spawn. Fish with undetected or unrecovered tags were assumed to have died. In 2010, tagging began about half way through the usual run timing, and so the results could not be considered to apply to the entire run. But the results indicated that mean survival from the estuary to Bonneville was 88 percent, meaning that 12 percent of the tagged fish died on the way from causes other than harvest (12 percent is the mean; the potential range was 7-17 percent). NOAA scientists continued the study in the spring of 2011, this time tagging fish as soon as the run began to appear in the river. **By the end of the fiscal year, results for 2011 had not been reported.** At the time this draft report was released for public comment, the 2011 results had not been reported. Over time, the researchers will work to better correlate currently circumstantial evidence of predation by marine mammals with actual losses of tagged fish.

Predation on juvenile salmon and steelhead also remains a concern. Caspian terns and double-crested cormorants are estimated to consume between 1/4 and 1/5 of all the juvenile salmon and steelhead that reach the estuary, about 25 million fish annually. However, this year was an anomaly. The tern colony **on East Sand Island** in the estuary collapsed completely, the victim of predation harassment by on their eggs by bald eagles and **subsequent predation on exposed tern eggs by** sea gulls.

Terns nest on open sand. Since 2000, terns have been nesting on East Sand Island, which is near the mouth of the Columbia, after researchers successfully caused the bird colony to relocate by planting vegetation on their previous nesting island nine miles east.- The theory, since proved correct, was that the greater percentage of marine forage fish like herring closer to the ocean would mean the birds woulnd consume fewer juvenile salmon and steelhead.

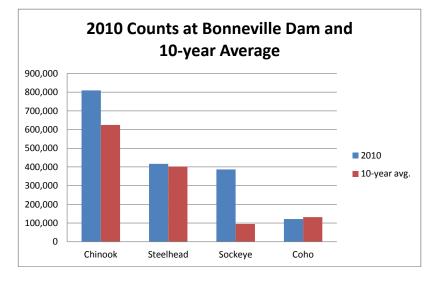
The colony grew to more than 10,000 nesting pairs in 2008, but this year researchers counted no chicks on the island and by August most of the birds had left, apparently to forage elsewhere.

At the same time, perhaps because of the high runoff and river flow volume in 2011, which resulted in more freshwater than usual in the estuary and could have excluded prevented as many many marine forage fish, from entering the estuary as usual or perhaps because of a change in bird behavior, bird predation on juvenile salmon and steelhead in the estuary was higher than <u>as high as</u> ever – an estimated 28 million fish. With fewer marine forage fish in the estuary, terns and cormorants consumed more outmigrating smolts than usual, according to a report by scientists who are studying the predation. The effect of the collapse of the tern colony on juvenile salmon and steelhead won't be evident until fish that migrated this year return from the ocean.

At the same time, **however**, 2011 **appeared to be was**- a good year for most salmon and steelhead runs in the Columbia River Basin. Because adult salmon and steelhead return to the Columbia between February and November, run-size estimates are not compiled by the federal and state fish and wildlife agencies until June of the following year. For purposes of this **fiscal-year** annual report to Congress, **therefore**, we are not able to report fully on the current-year salmon and steelhead returns, but we are able to fully report on the returns in the previous year.

In 2010, counts of salmon and steelhead at Bonneville Dam, the first dam where adult fish can be enumerated as they return from the ocean to spawn, were above the average of the previous 10 years for all species except coho. Information in the chart below came from the University of Washington Data Access in Real Time (DART) website and the U.S. Army Corps of Engineers.

Through the spring and into the summer of 2011, adult salmon and steelhead returns to the Columbia River were estimated to be near or above the average of the previous 10 years.



Finally, public attention is beginning to turn to the future of the Columbia River Treaty of 1964 between the United States and Canada. The treaty has no expiration date and will continue

indefinitely unless either country requests termination, which is allowed anytime after September 2024, 60 years after ratification, given at least 10 years' advance notice. With the first opportunity to provide notice, in 2014, just a few years away, the Council committed in the Sixth Northwest Power Plan (2010) that it will work with Bonneville and others to examine the effects of possible changes to the treaty.

Modifications of the treaty, if there were any, could change water storage and river flows and thus affect both power generation and fish and wildlife. Modifications or revisions would be negotiated between the U.S. State Department and Canada's Department of Foreign Affairs and approved by both countries.

The U.S. Entity under the treaty, assisted by the staff of Bonneville and the Corps of Engineers representing the United States, and B.C. Hydro (corporately, the Canadian entity), are conducting a process called the 2014/2024 Columbia River Treaty Review. In April 2009, Bonneville issued a report describing technical studies that will provide fundamental information about post-2024 conditions, both with and without the current treaty, from the limited perspective of power and flood control as required by the treaty. These initial studies were not designed to establish future operating strategies, alternatives to the treaty, or government policies, but simply to begin the learning process.

The results were presented in a joint report issued in August 2010 that described: 1) the methodologies and assumptions employed to complete the studies; 2) the risks, issues, and limitations encountered; and 3) the results, including findings for each of the three studies. Since then the Council and the Columbia Basin Trust (CBT), the Council's closest counterpart agency in British Columbia, have worked to inform and involve the public about the report and the treaty. This included a symposium in Corvallis, Oregon, in November 2010 conducted by the Universities Consortium on Columbia Basin Governance. The Consortium includes the University of British Columbia, the University of Idaho, the University of Montana, Oregon State University, and the University of Washington.

The Consortium planned another symposium as a follow-up to the Corvallis event in Cranbrook, B.C., in October 2011. The *Third Annual Symposium on Transboundary River Governance in The Face of Uncertainty: The Columbia River Treaty, 2014* will focus on a transboundary group discussion of alternative future scenarios for the treaty and related questions and considerations. The objective of the symposium is to develop a set of revised scenarios and related ideas, considerations, and commentary that the symposium participants would like the Entities and sovereign governments on both sides of the border to take into serious consideration in their deliberations and public processes.

The scenarios will be useful to the Council and the CBT, as well, because both agencies are considering new outreach activities to raise public awareness of the treaty and future river operations and impacts if the treaty is revised.

Council Activities in Fiscal Year 2011: Energy

Energy efficiency achievement topped 200 average megawatts in 2009

The Council tracks regional progress toward energy efficiency goals set in its Northwest Power Plan. In September 2010, the Council reported the region far exceeded the efficiency target for 2009 in the Council's Fifth Power Plan by achieving 219 average megawatts of savings. The target for the year was 150 average megawatts.

The Council aggregates the savings reported by the Bonneville Power Administration, Northwest Energy Efficiency Alliance, and the Energy Trust of Oregon. Council staff reported that the target in the Fifth Plan was exceeded in all sectors except agriculture.

For the five years between 2005 and 2009, regional savings beat the Fifth Plan goals every year. The average cost of the efficiency was \$13 per megawatt-hour (1.3 cents per kilowatt-hour). During that same period, the wholesale market price of electricity at the Mid-Columbia trading hub was \$30-\$60 per megawatt-hour (3-6 cents per kilowatt-hour). The five-year value of the 2005-2009 savings is about \$2.9 billion, according to calculations by the Council's staff, assuming that efficiency measures deliver energy savings for an average of 13 years.

With the 2009 savings, the region's energy-efficiency improvements over the last 30 years total more than 4,200 average megawatts, or enough energy for four cities the size of Seattle. In October 2011, as the new fiscal year began, the Council and its energy-efficiency partner the Regional Technical Forum reported that 2010 savings totaled 254 average megawatts. That is the power-use equivalent of 153,900 homes and the biggest one-year gain since regional energy-efficiency programs began more than 30 years ago. The measures implemented in 2010 saved Northwest electricity ratepayers \$135 million and will produce the same amount of savings every year for the next 15-20 years, at least. The Council plans to report on energy efficiency savings for 2010 in the fall of 2011.

Regional Award Honors Council's Power Plan

In July 2011, the NW Energy Coalition awarded its Bob Olsen Memorial Conservation Eagle award to the Council, staff, and advisory committee members in honor of the Sixth Northwest Power Plan. The Coalition described the Sixth Plan as "the most far-sighted, clean energy-based power plan in regional history." The Coalition presents the award annually to individuals and organizations that demonstrate leadership for a clean and affordable energy future.

"The Council, its staff and advisory committee members were chosen for creating the Sixth Northwest Power and Conservation Plan, a road map for reaching a clean energy future that benefits all Northwest families and businesses," Coalition executive director Sara Patton said.

The Seattle-based Coalition is a 30-year-old regional alliance of more than 110 organizations committed to clean and affordable energy. The Conservation Eagle Award is named for former Coalition chair Bob Olsen, a longtime public utility district commissioner in Washington state who dedicated more than 20 years of his life to securing regional investments in cost-effective energy efficiency and to protecting energy consumers.

Regional Technical Forum Develops Guidelines for Efficiency Savings and Verification

The Council established the Regional Technical Forum in 1999 to develop standards to verify and evaluate energy savings from energy-efficiency measures.

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In 2011, the RTF worked to standardize technical analysis for the review of measures and specific technologies; began working to develop an end-use load research plan and data warehouse with a funding proposal; and took steps to improve its website and database support. The RTF also continued to track regional progress toward the energy-efficiency goals in the Sixth Power Plan and developed guidelines for evaluation and verification of savings for efficiency measures. The guidelines will improve the reliability and transparency of savings estimates.

This year the Council approved creation of the RTF Policy Advisory Committee to make recommendations to the Council on the operations and funding of the RTF. Forming an advisory committee was the primary recommendation of a 20-person committee that studied the RTF at the request of the Northwest Energy Efficiency Task Force, which met in 2008-2010 to study ways to accelerate energy-efficiency improvements in the Northwest.

The goal of the RTF advisory committee, according to its charter, is to "identify a business/government structure for a sustainable entity that provides independent analyses of energy efficiency to meet the region's needs and develop a multi-year funding structure to support the entity." The committee will advise the Council, not the RTF.

The charter describes four areas in which the Council seeks guidance:

- Organization and operating procedures of the RTF
- RTF work plan priorities and the policy implications of RTF technical recommendations and their implementation
- A funding structure for the RTF, and long-term (five-year) funding commitments from the funding utilities and agencies, and
- RTF progress in accomplishing its objectives and completing its work plan consistent with the work plan priorities

First-Ever Regional Standards for Heating, Cooling appliances

The Council was part of a diverse national coalition including consumer, manufacturing, and environmental groups that developed recommendations in 2009 that informed new federal energy-efficiency standards for air conditioners and furnaces. The U.S. Department of Energy issued the new standards in 2011.

For the first time, standards for these appliances account for regional differences in energy use. The new standards also strengthen efficiency rules for heat pumps.

The new national standards recognize that different parts of the country have different needs for air conditioning and heating, which is a significant change from the previous, one-sizefits-all approach. The Council's Northwest Power Plan takes a similar approach, accounting for regional differences in energy use in assessing opportunities for improved energy-use efficiency.

The new furnace standards take effect in May 2013 and the new air conditioner and heat pump standards in January 2015. The existing national standards for furnaces, air conditioners and heat pumps date to 1992, with the only update being to heat pumps in 2006.

Natural Gas Price Forecast Revision

In 2010 it became clear that there is an abundance of natural gas that can be economically extracted from shale. Accordingly, in 2011 the Council lowered its forecast of future natural gas prices.

In 2009 and 2010, as the Council developed the Sixth Power Plan, the near-term outlook for natural gas was for declining supply and higher prices, but rapid development of shale gas has created an abundance of gas that is likely to last for several years and depress prices. In the

Sixth Power Plan, the Council recognized the potential of shale gas, but the expected cost of developing it has been reduced through technological breakthroughs so that expected future costs and prices are now lower.

In 2011, the Council narrowed and lowered the range of natural gas prices in its fuel price forecast. With this new information, by the end of the forecast horizon in 2030, the forecast reflects a range of possible long-term equilibrium natural gas prices. The likely effect of this change on a revised Power Plan would be to reduce the forecast of electricity prices.

For the Council, this was a fundamental shift in expectations about future natural gas supplies. The revised medium forecast is about equal to the medium-low forecast in the Sixth Plan at \$6.44 in 2010 constant dollars. The revised high forecast is a little above the medium-high in the Sixth Plan, and the low revised forecast is a little less than \$1 below the low case in the Sixth Plan.

A range of forecasts recognizes continued uncertainty about the development of shale gas and its costs and environmental effects. Because several organizations use the Council's price forecasts, it is important that the Council recognize the changes and provide the revised forecast to the region. A paper on the price forecast revision is posted on the Council's website at www.nwcouncil.org/news/2011/08/12.pdf.

Wind Integration Forum

The Wind Integration Forum is a joint effort of the Council and the Bonneville Power Administration to address regional issues around accommodating the unique characteristics of wind generation on the Northwest power system. Wind generation has experienced rapid growth in the Northwest since the first modern commercial-scale wind power plant was built in 1998. The Forum began meeting in 2006; its first task was to address whether the Northwest could reliably accommodate the 6,000 megawatts of wind generation envisioned in the Council's Fifth Power Plan (the Council issued the Fifth Plan in 2005). The 2007 Wind Integration Action Plan was the result of that effort (www.nwcouncil.org/energy/Wind/library/2007-1.htm).

By the end of calendar year 2011 the Northwest likely will have 6,000 megawatts of wind generation in commercial operation. In 2011 the steering committee of the Wind Integration Forum worked to answer questions about the ability of the power system to accommodate even higher levels of wind generation. The committee developed seven action items to help improve understanding of how to more efficiently integrate wind power into the system. These include examining potential reliability concerns; examining the potential for improving the efficiency of providing balancing energy for wind power by consolidating balancing authorities; investigating potential physical and legislative solutions to the problems of excess generation of wind power and hydropower; and investigating new cost-allocation strategies to address the challenges of wind integration.

In a related matter, in August 2011 the Council issued a paper that documents an analysis by the Council staff of the market effects of increased renewable energy on the power system. A consequence of the rapid development of Northwest wind projects to serve regional and California renewable portfolio standards is an increasing surplus of low variable-cost energy generating capability. This surplus puts downward pressure on electricity market prices, reduces the value of surplus hydropower energy, and increases the frequency and severity of excess energy events. The paper takes a first look at the significance of these effects to inform ongoing discussions of these issues. Here is a link to the paper: www.nwcouncil.org/library/report.asp?docid=307.

Assessment Finds Regional Power Supply Will Be Adequate Through 2015

The Council created the Resource Adequacy Forum in 2005 and adopted its recommended resource adequacy standard for the Pacific Northwest in April of 2008. Every year the Forum reassesses the adequacy of the power supply three and five years in the future to provide an early warning should power resource development fall short.

The 2010 assessment indicated the power supply would be adequate through 2015 but that summer energy adequacy was approaching the standard's limit. This result triggered a series of actions in 2011 that included a re-evaluation of the data and methods used to assess resource adequacy.

After a careful review, it was determined that some assumptions in the 2010 analysis, particularly regarding emergency resource capability, should be modified. The result of readjusting these assumptions showed that the power supply will remain adequate through 2015 in both winter and summer.

Significant revisions to the models are being developed, along with additional measures of system adequacy, and will be adopted by the Adequacy Forum in 2012.

Council Activities in Fiscal Year 2011: Fish and Wildlife

140 Research and Monitoring Projects Recommended for Funding

In 2011, the Council recommended 143 projects comprising potentially more than \$100 million in annual funding to improve scientific knowledge about fish and wildlife throughout the Columbia River Basin. Information about the projects is on the Council website at: www.nwcouncil.org/fw/budget/2010/rmeap/Default.asp.

The duration of the projects varies from one to five years; projects could be funded for their duration or for a portion with a requirement for review before approval of additional funding. Funding will be provided by the Bonneville Power Administration as part of its requirement to mitigate the impacts of hydropower dams on fish and wildlife. Project budgets will be decided by Bonneville in consultation with project proponents.

The Council's recommendations culminated nearly two years of work on research, monitoring/evaluation, and fish hatchery projects by the Council and its Independent Scientific Review Panel. The recommended projects address survival of salmon in the near-shore ocean and the Columbia River estuary, plus research on sturgeon and Pacific lamprey in the lower Columbia River, fish-tagging for research and harvest-enumeration purposes, and monitoring the effectiveness of projects designed to improve fish habitat. The Council approved 100 of the projects in April, and the remaining 43 in July. The projects will be implemented by Indian tribes, state fish and wildlife agencies, independent researchers, and others.

With the review of research and monitoring projects completed, the Council now moves on to review projects that address resident fish (those that do not migrate to the ocean), regional coordination of fish and wildlife projects and project management, and data management. That review will begin early in Fiscal Year 2012.

Council Honors Jay Minthorn

Jay Minthorn, who died in November 2010, was honored by the Council with a framed photo that now hangs in the Council's meeting room.

Minthorn, a member and former executive of the Confederated Tribes of the Umatilla Indian Reservation of Oregon, was a regular participant in the Council's fish and wildlife planning processes.- In a ceremony at the Council's December 2010 meeting, Council Chair Bruce Measure said:

"It is appropriate for the Council to honor Jay in this way, for it was in meetings and conferences where we saw him most often. We are policymakers, and Jay was a statesman. He would speak his mind, and we would listen and respond. He always was cordial, always respectful, always focused, and always looking to build relationships and trust."

Wildlife Forum Makes Progress On Crediting Habitat Losses

Under the auspices of the Council state, federal, and tribal wildlife managers began meeting in January 2010 as the Wildlife Crediting Forum to discuss revisions to the methodologies and policies for crediting and accounting of wildlife habitat mitigation associated with the construction and inundation impacts of the Federal Columbia River Power System (FCRPS).

Crediting is a critical issue in the Council's Columbia River Basin Fish and Wildlife Program, which is required by the Northwest Power Act to mitigate the impacts of hydropower dams in the basin on fish and wildlife. Crediting issues differ depending on geographic area, specific hydropower projects, and the entities involved in specific crediting decisions. The methodologies involved in crediting decisions have changed and evolved over time, and have been interpreted and applied in different ways. In some cases, crediting has been resolved through individual project agreements. In 2011, the Forum reported major areas of accomplishment, including:

- In 2011, the Forum reported major areas of accompnishment, including.
- A ledger of the current status of Bonneville-funded wildlife mitigation activities
- Standard operating procedures for future applications of the Habitat Evaluation Procedure, a tool to calculate the value of habitat proposed as mitigation for losses
- Protocols for determining the amount of credit Bonneville should receive for management actions that occur on federal lands and for fish mitigation projects that benefit wildlife
- Agreement to base mitigation on loss assessments in the Fish and Wildlife Program The Forum also identified policy issues for resolution by the Council, including:
- How to apply the crediting ratio in the Program, which is two units of acquired habitat for each unit of lost habitat
- How to deal with wildlife species that benefit from open-water habitat resulting from reservoirs created by the dams
- How to account for mitigation that occurred prior to the 1980 Power Act

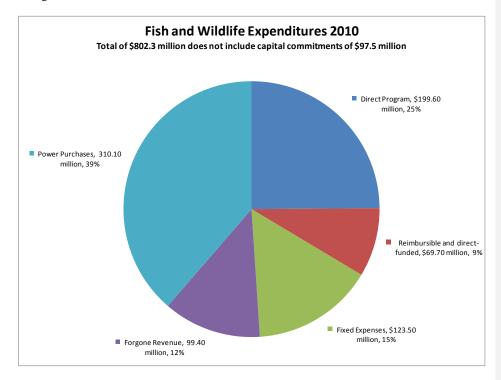
Bonneville Power Administration Fish and Wildlife Expenditures

At the **end of Fiscal Year 2011**, time the Council issued this report for public comment, in September 2011, the fiscal year had not ended and Bonneville's fish and wildlife staff had not calculated Fiscal Year 2011 expenditures in the fiscal year to implement the Council's Fish and Wildlife Program. This work might be completed by the time the Council issues the final version of this report, in January 2012 following the required 90 day public comment period. For now, the Ffollowing is a review of Bonneville's fish and wildlife spending in Fiscal Year 2010. The Council reports annually to the Northwest governors on Bonneville's fish and wildlife expenditures. Information for the report is provided by Bonneville and is not verified by the Council or others. The report on Fiscal Year 2010 expenditures is posted on the Council's website at this location: www.nwcouncil.org/library/report.asp?docid=285

In Fiscal Year 2010, Bonneville reported total expenditures of \$802.3 million, as follows:

- \$310.1 million in power purchases during periods when dam operations to protect migrating fish, such as spilling water over dams in the spring or storing it behind dams in winter months in anticipation of required spring spills, reduce hydropower generation
- \$199.6 million in direct (expense) expenditures and capital investment commitments of \$41.1 million.
- \$123.5 million in interest, amortization, and depreciation costs (these are called "fixed expenses") of capital investments for facilities such as hatcheries, fish-passage facilities at dams, and some land purchases for fish and wildlife habitat
- \$99.4 million in forgone hydropower sales revenue that results from dam operations that benefit fish but reduce hydropower generation.
- \$65 million in reimbursements to the federal Treasury for expenditures by the Corps of Engineers, Bureau of Reclamation, and U.S. Fish and Wildlife Service for investments in fish passage and fish production, including direct funding of operations and maintenance expenses of federal fish hatcheries (this category also includes \$4.7 million, which is one half of the Council's annual budget; Bonneville assigns the other half to its Power Business Line budget)

The 2010 expenditures brought the grand total, from 1978 when the expenditures began through 2010, to \$11.8 billion.



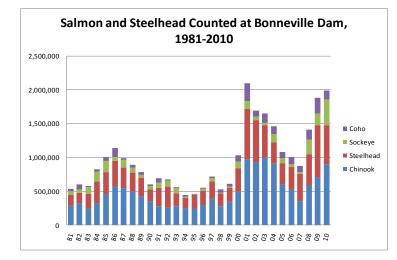
Tracking Progress of the Fish and Wildlife Program

The Council is tracking the effectiveness of its Fish and Wildlife Program as required by the Northwest Power Act (Section 839b(h)(12)(A)). Since 2001 the Council has been reporting on both expenditures of the Bonneville Power Administration to implement the Program and on salmon and steelhead returns, juvenile salmon and steelhead survival through the Columbia River hydropower system, and other measurements of Program effectiveness.

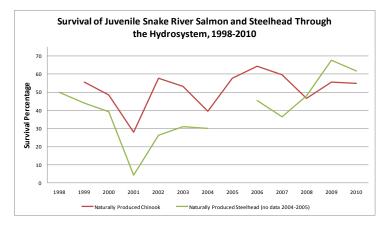
Fish and wildlife habitats and ecological processes change over time, affecting the resilience and adaptive capacity of fish and wildlife species and therefore the success of projects designed to improve fish and wildlife survival. To better understand these effects, in 2009 the Council committed to use high-level indicators to monitor and assess the progress of projects that implement the Program. Currently, the Council is tracking progress toward meeting Program goals using three high-level indicators. Posed as questions, they are: 1) Are Columbia River Basin fish species abundant, diverse, productive, spatially distributed, and sustainable? 2) Are operations of the mainstem Columbia and Snake river dams meeting the fish-passage survival objectives of the Program? 3) What is the progress of implementing the Program?

There is not enough data to answer those questions definitively, but the Council is collecting data on fish survival from fish and wildlife agencies, research scientists, the U.S. Army Corps of Engineers, NOAA Fisheries, and others. In general, the data demonstrate that:

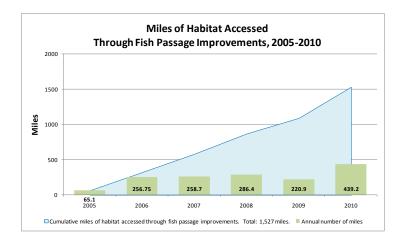
 More salmon and steelhead are returning from the ocean to spawn in the present decade than in the 1990s and 1980s:



2) Survival of juvenile salmon and steelhead migrating down the Columbia and Snake rivers to the ocean is better today than in the past:



3) Passage barriers are being removed to open more riparian habitat to spawning salmon and steelhead; and land is being acquired for wildlife habitat:



With the assistance of fish and wildlife managers and others, the Council will update the indicators periodically and, over time, adopt more indicators. In order to be accountable to the public that funds the Program, the Council intends to report annually to Northwest citizens, Congress, and the region's governors on Program progress using the high-level indicators.

Council Hosts Opposing Sides on Debate Over Fitness of Hatchery Fish

In September and November 2010, the Council hosted groups of scientists to review and discuss the use of fish hatcheries to recover and rebuild salmon and steelhead populations and the ongoing debate over the fitness of hatchery fish compared to those that are spawn and rear in the wild.

In September 2010, John Ford of NOAA Fisheries told the Council about two emerging trends: poor reproductive success of hatchery-reared fish when they return from the ocean and attempt to spawn in the wild, and the negative impact of juvenile hatchery-reared fish on juvenile wild fish in the same streams. Ford told the Council that a review of studies on the effects of hatchery-reared salmon on wild salmon suggests there is a decline in wild-fish productivity as the number of hatchery releases increases.

That technique – raising salmon in hatcheries for release into the wild to rebuild naturally spawning populations – is called supplementation. Supplementation hatcheries operated by several Indian tribes in the Columbia River Basin are funded by Bonneville through the Council's Fish and Wildlife Program.

In November, Bill Bosch of the Yakama Nation presented data in support of supplementation. He said the studies cited by Ford did not account for several "confounding factors" such as the type of broodstock and hatchery location, which he said can affect reproductive success. He said tribal hatcheries are addressing those factors by using local broodstock, lowering rearing densities, intensively monitoring fish in hatcheries for disease, and testing new strategies for rearing and releasing juvenile fish.

Council Approves Subbasin Plans for Bitterroot and Blackfoot Rivers

With the addition of the Blackfoot and Bitterroot plans, there are 58 subbasin plans in the Council's Fish and Wildlife Program, including plans for two other river basins in Montana, the

Flathead and Kootenai. Adopting the plans cleared the way for potential funding to improve fish and wildlife habitat and production in the western Montana rivers.

Subbasin plans include an assessment of fish, wildlife, and habitat and thus provide the context for the Council and its Independent Scientific Review Panel (ISRP) to evaluate and recommend projects for funding to implement the Fish and Wildlife Program.

In both rivers, over the last 100 years humans have drastically altered riparian and wetland habitats. This occurred through actions such as residential development, road-building, agriculture, and streambank stabilization with rip-rap and other hard materials. These actions in turn affected fish and wildlife populations.

Council Activities in Fiscal Year 2011: Public Affairs

The Northwest Power Act directs the Council to provide for the participation and consultation of the Pacific Northwest States, tribes, local governments, consumers, customers, users of the Columbia River System, and the public at large in developing regional plans and programs related to energy efficiency, renewable energy resources, other energy resources, and protecting, mitigating, and enhancing fish and wildlife resources. The Public Affairs Division has the primary responsibility to implement this portion of the Act.

The division uses a variety of communication tools to perform its mission, including printed and electronic publications, the Council's website, social media platforms, video, public meetings, and press releases.

The Council's website, <u>www.nwcouncil.org</u>, functions as the hub of its outreach efforts and public information strategy. The website contains myriad documents, publications, data bases, and other forms of information. Included on the site are the current versions of the Northwest Power Plan (<u>www.nwcouncil.org/energy/powerplan/6/default.htm</u>) and the Columbia River Basin Fish and Wildlife Program (<u>www.nwcouncil.org/library/2009/2009-09/Default.asp</u>), as well as news stories, press releases, Council white papers, official public comment on Council products, PowerPoint presentations, videos, Council newsletters, and other information. Documents are posted and kept current on a daily basis.

Social media platforms are increasingly used by the Council to communicate with the public. These include Facebook (<u>www.facebook.com/nwcouncil</u>), Twitter (@nwcouncil), and the Council's blog, which is posted to our Facebook page and the Council website, <u>www.nwcouncil.org</u>.

With regard to regular Council publications, the division continues to write and produce four editions of the *Council Quarterly* every year (<u>www.nwcouncil.org/library/cq/default.asp</u>). We also produce and distribute a monthly electronic email newsletter, the *Council Spotlight* (<u>www.nwcouncil.org/news/enews/current.asp</u>), which reports on the highlights of each monthly Council meeting.

Other publications that were published over the past year include a brochure, *Electricity Generation for the Pacific Northwest*, that provides the geographic location of all major power plants in the region (this brochure is linked to an online, interactive map:

www.nwcouncil.org/maps/power/Default.asp), an updated *Field Guide* brochure about the Council's Fish and Wildlife Program (www.nwcouncil.org/library/2003/2003-14/default.htm), and the *Annual Report to the Northwest Governors on Fish and Wildlife Expenditures of the Bonneville Power Administration* (the report for Fiscal Year 2010 is posted here: www.nwcouncil.org/library/report.asp?docid=285).

The Public Affairs Division also has the responsibility of advancing the Council's mission and accomplishments with members of Congress and their staffs. Along with regular Council trips to Washington, DC to brief the Northwest delegation and other interested parties on the Council's work, the Council was invited in May to testify at the House Water and Power Subcommittee's hearing on the future of hydropower. Here is a link to the Council's testimony: http://www.nwcouncil.org/library/releases/2011/karier_hydro_testimony.asp. In August, the division conducted the Council's fourth annual congressional staff trip to Boise and the Sawtooth Valley in Idaho.

Canadian Relations

The Columbia River and several of its major tributaries begin in Canada and flow across the international border. Consistent with direction in the Northwest Power Act to treat the entire Columbia River as one system for planning purposes, the Council maintains regular contact with planning entities in British Columbia. This contact primarily is through the Public Affairs and Legal divisions.

The Columbia Basin Trust (CBT), a Crown corporation of the province, is the Council's closest counterpart agency in the Canadian portion of the Columbia River Basin. Since 1996, Council members and staff have met at least annually with the Trust. In 2000, the two agencies formalized their relationship and designated the vice-chairs as official liaisons. The Trust and Council exchange visits once or twice a year to discuss Columbia River issues of mutual interest.

In 2011, the Council and CBT worked on three projects together: 1) developing a datasharing and general information website about the Columbia River Basin, including information about the Columbia River Treaty (<u>www.nwcouncil.org/treaty</u>); 2) developing a report that synthesizes the conclusions of studies done in Canada and the United States on potential hydrologic changes due to climate change in the Columbia River Basin for dissemination to help inform the public; and 3) identifying a mitigation project in the transboundary reaches of the basin that would be jointly funded by the CBT and Bonneville through the Council's Fish and Wildlife Program.

Selected news articles that mention the Council

(.pdfs will be in the draft version of the report)

Ranchers help restore flow in Lostine River," The Observer, La Grande, OR, Nov. 18, 2010

Power Council backs \$78 million for fish, The Oregonian, Portland, OR, April 14, 2011

Second phase of hatchery project underway," Quad-City Herald, Brewster, WA, April 21, 2011

Northwest wind power could double by 2025, The Daily Record, Ellensburg, WA, May 7, 2011

Nuclear power post-Japan: Parsing truth from myth, The Oregonian, June 6, 2011

Detailing the salmon data stream, The Oregonian, Portland, June 24, 2011

Wind vs. hydro, The Register-Guard, Eugene, OR, July 11, 2011

Council Activities in Fiscal Year 2011: Administration

Council organization

The governors of Idaho, Montana, Oregon, and Washington each appoint two members to the Council. The eight-member Council sets policy and provides overall leadership for Council activities.

The Council's work is performed, depending on the tasks, by the Council's professional staff (including staff in a central office and in each state), consultants under contract, or by public agencies and Indian tribes under intergovernmental agreements. The Council's executive director is responsible for coordinating with the Council, supervising the central office staff, administering the contracts, and overseeing the day-to-day operations of the Council. The Council approves major contracts and the overall work plan. The Council has 59 full-time-equivalent employees.

The central staff is organized into five divisions: Power; Fish and Wildlife; Public Affairs; Legal; and Administrative. Professional staff in each state provide technical review and assistance to Council members in evaluating matters before the Council. State staff also participate in designing and developing public-involvement programs that focus on the implementation of the Power Plan and Fish and Wildlife Program in their particular states. This support is provided through existing state agencies or by individuals directly under Council member direction.

Council funding and budget

Under the Northwest Power Act (Section 839b(c)(10)(A)), the Bonneville Power Administration funds operations of the Council. The Act establishes a formula to determine a funding limitation threshold, and authorizes the Council to determine its organization and prescribe practices and procedures to carry out its functions and responsibilities under the Act.\

The Act further provides that the funding limitation applicable to annual Council budgets will be calculated on a basis of 0.02 mill multiplied by the kilowatt hours of firm power forecast to be sold by the Bonneville administrator during the year to be funded. The limitation may be increased to .10 mill, provided the Council makes an annual showing that such limitation will not permit the Council to carry out its functions and responsibilities under the Act.

The Council determined that the 0.02-mill limitation would not allow the Council to carry out its functions and responsibilities under the Power Act in Fiscal Year 2011. The Council determined that an amount equal to 0.093 mill, which totals \$9,934,000, would be required in Fiscal Year 2011. The Council's Fiscal Year 2011 revised budget of \$9,891,000 is 2.1 percent higher than the 2010 budget of \$9,683,000, and reflects a \$43,000 reduction from the originally proposed FY 2011 budget.

The Council developed the Fiscal Year 2012 budget utilizing that same cost-containment strategy to hold the projected increase to 2.5 percent at \$10,142,000. In order to achieve these goals, we are freezing the number of full-time-equivalent employees in the Council budget while continuing to undertake expanded work and responsibilities in the region.

The Council is aware of the continued economic challenges facing the four-state region, and the need to maintain healthy financial conditions for Bonneville. Since 1997, the Council has worked with Bonneville to adopt budget agreements resulting in significant savings to the region. Actions taken to accomplish these savings include reducing our workforce, eliminating vacant

FTEs, reducing travel costs, slashing contract funding, cutting administrative costs, and curtailing lower-priority activities.

A summary of the draft budgets for fiscal years 2007 through 2011 follows. These budgets show an average annual growth over the four-year period, 2008 - 2011, of less than 3 percent per year.

Fiscal Year 2007	\$9,085,000
Fiscal Year 2008	\$9,276,000
Fiscal Year 2009	\$9,467,000
Fiscal Year 2010	\$9,683,000
Fiscal Year 2011	\$9,891,000

Council and committee meetings, Fiscal Year 2011

October 13-14, 2010	Portland
November 9-10, 2010	Portland
December 14-16, 2010	Portland
January 11-12, 2011	Missoula, Montana
February 8-9, 2011	Portland, Oregon
March 8-9, 2011	Boise, Idaho (Power Committee met via webcast March 3)
April 12-13, 2011	Wenatchee, Washington
May 10-11, 2011	Hood River, Oregon (Power Committee met via webcast May 5)
June 7-8, 2011	Whitefish, Montana
July 12-13, 2011	Portland (Power Committee met via webcast July 7
August 9-10, 2011	Spokane, Washington
September 13-14, 2011	Astoria, Oregon

More Information

For additional information about the Northwest Power and Conservation Council's activities, budget, meetings, comment deadlines, policies or bylaws, call 1-800-452-5161 or visit our website, <u>www.nwcouncil.org</u>. -Copies of Council publications are available at the website or by calling the Council. All Council publications are free.

Comments of the Bonneville Power Administration

In this draft report, this space is reserved for comments of the Bonneville Power Administration, which will be included in the final version of the report.



Department of Energy

Bonneville Power Administration P.O. Box 3621 Portland, Oregon 97208-3621

EXECUTIVE OFFICE

DEC 2 9 2011

In reply refer to: DKR-7

Mr. Bruce Measure, Chairman Northwest Power and Conservation Council P.O. Box 200805, Capitol Station Helena, MT 59620-0805

Dear Chairman Measure:

Thirty years after the Northwest Power and Conservation Council (Council) met for the first time, I am struck by the impact the Council has had. The six power plans the Council has produced over the years have set the standard for least-cost power planning. Energy efficiency is the accepted foundation of utility resource planning. By the end of 2011, the Northwest will likely have 6,000 average megawatts of wind energy in operation – nine years ahead of the schedule the Council predicted in its Fifth Power Plan. You and your staff have provided critical support as Bonneville Power Administration (BPA) and the region's utilities worked together to continue to provide an adequate, reliable, and economic power supply to the Northwest.

In awarding the Council its Conservation Eagle award in July 2011, the Northwest Energy Coalition described the 2010 Sixth Power Plan as "the most far-sighted, clean energy-based power plan in regional history." On the heels of this testimonial, in the fall of 2011, the Council reported that annual savings from the region's energy efficiency improvements were the highest achieved in 30 years. The region's annual energy efficiency achievements have exceeded the targets in the Council's power plan every year since 2005. Savings through 2010 total more than 4,750 average megawatts – or more than enough energy for four cities the size of Seattle – at a cost of 1.3 cents per kilowatt-hour.

Over the past thirty years, the region has made great progress with fish and wildlife mitigation. The Council has partnered with BPA and other Federal, state, local, and tribal governments on a Fish and Wildlife Program that is scientifically sound and broadly supported in the region. You continue to seek accountability and effectiveness in research and monitoring by defining and tracking high level indicators of fish health and ecosystem function. In 2011, the Council reviewed and recommended 143 projects for BPA funding that will ultimately deliver scientific knowledge about fish and wildlife throughout the Columbia River Basin.

In 2012, BPA celebrates its 75th Anniversary of supplying clean, reliable, and economical energy to the region. For the last thirty years the Council has been an important part of our story. We look forward to celebrating together and continuing our collaboration for many years to come.

Sincerely Twat Stall

Stephen J. Wright Administrator and Chief Executive Officer

Background of the Northwest Power and Conservation Council

The Council, known until 2003 as the Northwest Power Planning Council, is an agency of the states of Idaho, Montana, Oregon, and Washington and was created as an interstate compact agency by the legislatures of the four states consistent with the Pacific Northwest Electric Power Planning and Conservation Act of 1980. -The Council's first meeting was in April 1981.

The Northwest Power Act gives the Council three distinct responsibilities: -1) to assure the region an adequate, efficient, economical, and reliable electric power supply; 2) to prepare a program to protect, mitigate, and enhance fish and wildlife, and related spawning grounds and habitat, of the Columbia River Basin affected by the development and operation of any hydroelectric project on the Columbia River and its tributaries; and 3) to inform the Pacific Northwest public regarding these issues and involve them in decision-making. This annual report is organized around the Council's three key responsibilities.

The Power Act created a special relationship between the Council and the federal agencies that regulate and operate dams in the Columbia River Basin and sell the electricity that is generated.- The administrator of the Bonneville Power Administration, the federal power marketing agency that sells the output of the Federal Columbia River Power System (a system that includes 29 federal dams within the basin and two outside, and one non-federal nuclear power plant), is required to make decisions in a manner consistent with the Council's Northwest Power Plan and its Columbia River Basin Fish and Wildlife Program. Other federal agencies with responsibilities for dams (the U.S. Army Corps of Engineers, U.S. Bureau of Reclamation, and Federal Energy Regulatory Commission) are required to take the Council's Power Plan and Fish and Wildlife Program into account at every relevant stage of decision-making.

Despite its relationship to federal agencies, the Council is not a federal agency. -The Council is an interstate compact. -The eight-member Council consists of two members from each state, appointed by their respective governors. -The Council headquarters are in Portland.

Council Members, Fiscal Year 2011

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CENTRAL OFFICE

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Appendix 1: Council By-laws

The Council by-laws, which describe the administrative functions of the Council, are posted for public review on the Council's website at this location: <u>http://www.nwcouncil.org/library/2003/2003-19.htm</u>. The Council last updated the by-laws in October 2003.

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