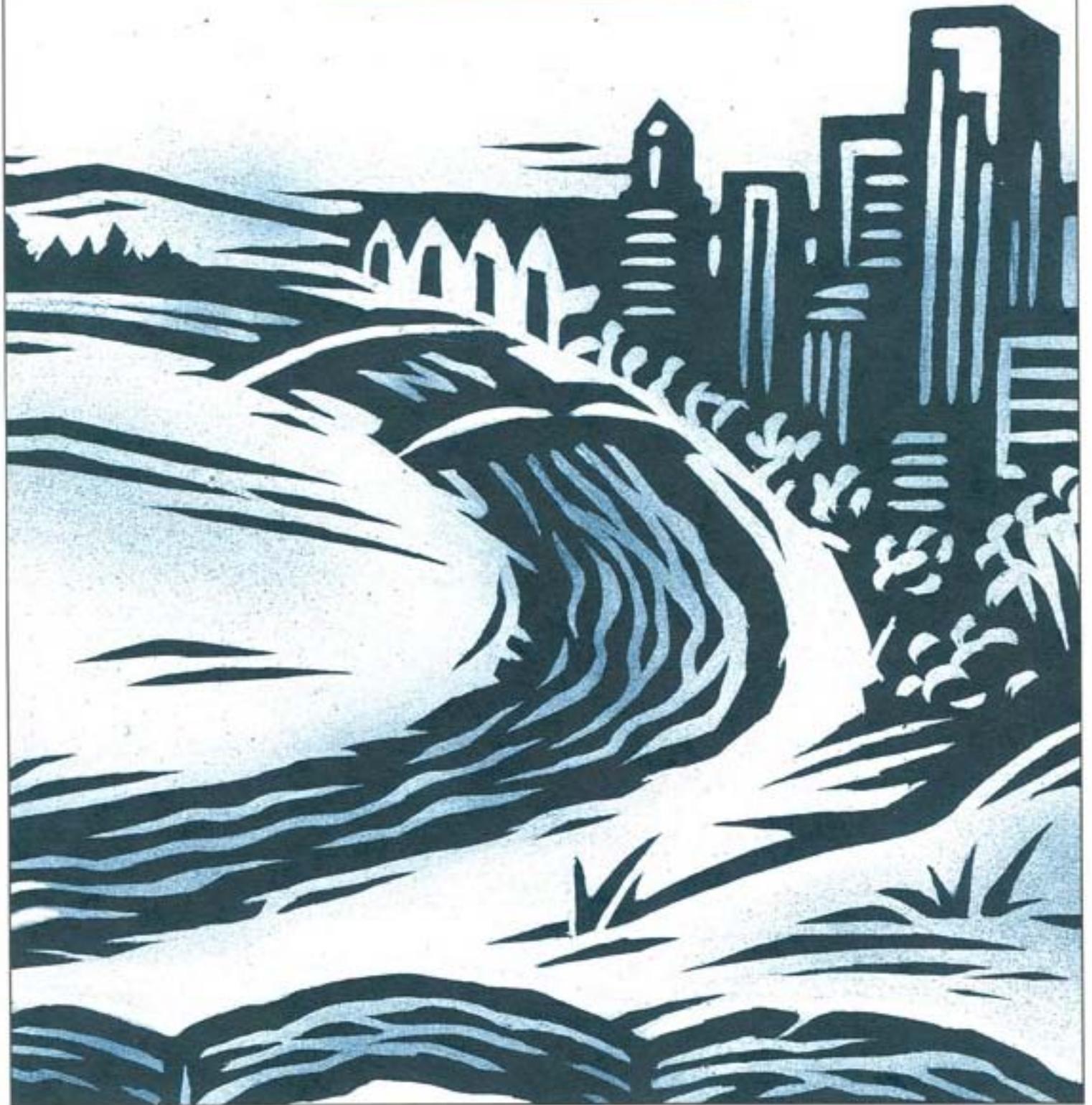


Winter 1996

NORTHWEST ENERGY NEWS

Volume 15, No. 1

Northwest Power Planning Council



Winter



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Governors Convene COMPREHENSIVE REVIEW

Northwest states chart a new energy future together.



by Carlotta Collette

The governors, left to right, are: Mike Lowry of Washington, Marc Racicot of Montana, Phil Batt of Idaho and John Kitzhaber of Oregon.

The inauguration

The room was packed. The television cameras were rolling. History, albeit an obscure segment of history, was in the making. Together, the governors of Idaho, Montana, Oregon and Washington had assembled and convened a stellar team to help the region de-

fine and pursue the energy future it most desires.

The need for such action is urgent. The electricity industry nationwide is being restructured. Utilities are rapidly being transformed from regulated monopolies to competitors in an evolving marketplace. At risk are values

long held dear in the Northwest: low-cost reliable electricity service for both urban and rural customers, an electricity system that is responsive to public direction, energy efficiency opportunities for consumers, renewable resources that ensure diversity and protection for the environment.

The four Northwest governors decided to take the initiative. They convened the Comprehensive Review of the Northwest Energy System to determine which consequences of the industry restructuring are inevitable and which are subject to regional shaping. The steering committee they assembled is charged with confirming the values the region holds for the power system and finding ways to capture those values in a more competitive industry.

The process is complex — challenging the participants intellectually and testing the region politically. It will be intense; the governors want recommendations finalized by December 1, 1996. And it will be broad; the four governors have stressed the need to engage “all of our region’s citizens” in the deliberations.

Washington Governor Mike Lowry hosted the meeting near Seattle on January 4th and opened by acknowledging the Northwest’s current economic boom. “We are doing better than anywhere else in the country,” he said, “and we realize that energy conservation and the environment are very important elements of our being able to continue the good news.”

The governors then briefly outlined their hopes for the review. Governor Lowry listed the protection of ratepayers, including rural customers; protection and enhancement of fish and wildlife; continued implementation of conservation; development of renewable resources; and inclusion in the review process of all affected parties. He added that the final product must not be a stop-gap measure—it must work for the “extensive future.”

Montana’s Governor Marc

The process is complex—
challenging the participants intellectually and testing the region politically.

Racicot made it clear that he views the outcome of the review as “critical to our economic development, critical to our environment and critical to the way of life that is unique to the Northwest we all share.” He emphasized the benefit of deciding important policy issues “close to home. ... Those who will be affected are best at finding the solutions,” he said. Governor Racicot also noted that, “Only in the Northwest is this kind of cooperation still possible.”

Governor Phil Batt of Idaho said: “We’re not here today to endorse or condemn the forces at work on the system, but to examine them in detail and make recommendations on whether the region needs to take collective action. ... It would be unwise to sit by while these changes take place.” Governor Batt also stressed the need for the region’s citizens to “become well informed and be prepared to meet major changes with definitive action.”

Oregon’s Governor John Kitzhaber spoke last among the governors, echoing many of the sentiments of the others and adding his own. “I think the change that is occurring in the electric utility industry in the Northwest should be a good thing for our region,” he said. “The product of competition is usually, although not uniformly, lower prices and abundant goods and services. ... but we should not expect these things to occur in the new environment unless we very thoughtfully plan for them to happen.”

Governor Kitzhaber asserted that the transition must be guided so “the obligations incurred by the old system are not lost when we move ... to the new system.” He listed timely repayment of the debt on the federal power system and preservation of the “public values for which we created this system in the first place” as two of his priorities for the review.

The governors asked Seattle businessman Charles Collins to lead the review process. Collins’ remarks included an explanation of why the region should take on these issues at all. “Electricity invades our lives like it does few places in the world,” he said. No other place has the high reliance on electricity for space heat, for industrial power and for irrigated agriculture. “That invasiveness makes this a public business in ways that it would not be in other places ... The stakes are simply different here, they’re higher here,” he added.

Collins reflected on his previous service in the business of power planning about a decade ago. “I have the opportunity to come back to a place I left 10 years ago ... and it’s been turned upside down. The articles of faith,

the axioms, the absolute imperatives have all changed.”

There was agreement with this sentiment from invited energy expert Jim Litchfield, president of Litchfield and Associates. Litchfield told the newly formed committee, “You have to pick up a clean sheet of paper and craft an entirely new structure for the industry. ... This is a one-in-a-hundred-year opportunity.”

Ralph Cavanagh, Northwest Energy Project director for the Natural Resources Defense Council delivered what he referred to as the “environmental blessing.” Cavanagh praised the governors’ choice of committee members. “This is the most thoughtful and best qualified group that has ever been assembled to address these questions, and you’re to be congratulated for it.” Cavanagh argued that “there is no inherent conflict between securing increased competition in electric services and doing a *better* job of meeting the power system’s public interest objectives. We’re not likely to make progress on either front unless we make progress on both.”

The governors admitted that they’d had to work at, in Governor Kitzhaber’s words, “an unprecedented level of cooperation and common effort to bring this body together.” But none of them questioned that necessity was driving their collaboration. In their own way, each governor underlined the likelihood that unless the region chooses the future it wants and works hard to secure that future, choices for the region will be made elsewhere.

Randy Hardy, administrator of the Bonneville Power Administration, urged the committee members to “be statesmen,” adding, “you are literally determining the economic future and to a large

“You have to pick up a clean sheet of paper and craft an entirely new structure for the industry.”

extent the environmental future of this region. ... Change will happen. The choice is not whether it will happen but who will control it.”

The Steering Committee meets

In the afternoon, the real work began. Inspired by their governors and informed by the other speakers, the steering committee moved to seats around a table and began with “housekeeping” issues:

- **How often will they meet?** Every other Thursday. The agendas for the first two months (January 18, and February 1, 15 and 29) include bringing in people who can get the committee up to speed on the pace and scope of change already under way, and drafting lists of the values the region wants in its future power system and possible constraints on achieving those values.

- **Where will they meet?** The Sheraton Hotel at the Portland airport as much as possible. The meetings on February 1st, 15th and 29th

will be held at the Lloyd Center Red Lion in Portland. All other meetings through April will be at the airport Sheraton.

- **How will broad public involvement be guaranteed?** The governors assigned their own representatives to work on public education and public involvement. All committee meetings will be open to the public. Technical working groups will be created, drawing from expertise outside the steering committee.

- **How will the effort be financed?** The Bonneville Power Administration, the Northwest Power Planning Council and the U.S Department of Energy will share the costs for the review.

- **What will be the scope of the review?** Committee members will define the scope of the review after the first 60 days, when they have a draft model power system to work from.

- **How can average citizens participate?** All committee meetings will be open to the public. In addition, each state will be sponsoring regular discussions with interested and affected citizens. Minutes will be taken at each meeting, and a summary of the minutes will be made available to the public.

To be put on the mailing list for regular updates, meeting schedules and locations of comprehensive review meetings, call 1-800-222-3355 or, in Portland, 222-5161.

All materials related to the comprehensive review will be available on the World Wide Web of the Internet, the address is:

<http://www.newsdata.com/enernet/review/access.html>

See Page 7 for more background about the Comprehensive Review and a list of the steering committee members.

Statement of the Northwest Power Planning Council regarding a severance agreement with its former executive director.

In January, Pacific Northwest news media reported and commented on a severance agreement between the Northwest Power Planning Council and its former executive director, Ed Sheets. The reports described an agreement that was much too expensive for everyone who expects public agencies to spend the public's money carefully. We agree that the severance policy in place at the time Mr. Sheets resigned in 1995 resulted in an inappropriate and excessive final severance package. We want to make as full an accounting of the circumstances as we can and outline the steps the Council has taken to correct the current situation and prevent future occurrences.

We have suggested to Mr. Sheets that the severance package be limited to the new Council severance policy, which the Council adopted earlier this month. Pending before the Council's Executive Committee was a proposal to limit the severance package to the present policy — no more than 12 months of compensation. We are pleased to announce that Mr. Sheets' severance agreement has been amended to limit the total amount to the 12-month maximum. Further, the Council is pleased that Mr. Sheets has voluntarily agreed to reduce his settlement.

Early in 1995, changes in the Council's membership and leadership raised questions about whether the Council could work with Mr. Sheets as executive director. We were frankly in disagreement on this matter until early September 1995. In that month, the Council asked its then-chairman, Angus Duncan, to draft a severance package with Mr. Sheets. A short time later, the agreement was signed by Mr. Duncan without approval by the Council.

In our haste to resolve a personnel issue that threatened to divert our attention from the critical fish and energy issues that face the region, we made mistakes. The Council did not know that there was a policy in place that would lead to such a large severance package. We were not clear enough that we wanted to review the package before it was made final. We did not exercise the kind of oversight that we wish we had.

Once the full Council was informed of the severance package, we took steps to remedy the situation. We sought independent legal opinion about whether the arrangement was binding and were advised that it was. We then reviewed the policies under which the arrangements were made and changed them. The Council now has a revised policy that limits any severance package and requires prior approval by the full Council. Our new severance policies, and Mr. Sheets' severance agreement, now closely correspond with federal policies.

News reports point out that the Council should not have negotiated the severance package with Mr. Sheets in private. The Council is required to follow federal laws regarding open meetings (the Sunshine in Government Act), and disclosure of information (the Privacy Act and the Freedom of Information Act). These laws restrict the release of personnel information. Nevertheless, the Council is committed to full public disclosure of all its activities. The presumption for all of our deliberations is one of openness. On those rare occasions when privacy becomes necessary, we will say so and clearly state our reasons.

Meanwhile, at the direction of Chairman John Etchart, the Council will continue to review all of its personnel policies. The aim of this review is to 1) make sure all Council members are fully aware of the policies that are in place, and 2) modify any policies as appropriate to bring them in line with those of other agencies.

We deeply regret our lack of oversight in the matter of Mr. Sheets' severance. We have taken action to make sure it doesn't happen again.

Tomorrow's Northwest

Today



Dear Northwest Citizen:

Choices being made right now could save or cost you money. They could produce or eliminate jobs. And, they could mean an improved or diminished quality of life. What are those choices? What's changing? What's changing is the way the region produces, transmits and distributes electricity. The choices are about how to deal with those changes and how to resolve the controversy over efforts to protect and rebuild populations of salmon and other fish and wildlife.

The stakes are high. Making the wrong choices could hurt peoples' livelihoods or cause harm to important species. Making the right choices could help save money, resolve controversy and create more effective ways to protect the region's fish and wildlife resources.

As members of the Northwest Power Planning Council, we were appointed by the governors of Idaho, Montana, Oregon and Washington to provide a regionally balanced public forum for helping the Northwest make these kinds of choices and adapt to change.

Just like the region, we're a diverse group. But even though we come from different states, have different backgrounds and hold different political views, we all want the region to prosper. That's why we're writing to you. The Council is involved in four major initiatives related to the choices and changes the region is facing. These initiatives are:

- The Comprehensive Review of the Northwest's Energy System
- The New Northwest Power Plan
- The 180-Day Fish and Wildlife Report
- The Independent Review of Science

These initiatives, while separate, are linked in several important ways. Like the Council itself, each project is aimed at ensuring open regional decision-making. Each can help improve regional control and accountability over government actions. Each is designed to help us balance our need for power and other resources with our need for a healthy environment. On the next few pages, you will find background on each of the projects. You will also find information about how to get involved in one or all of them, and how to get more information. Please take a minute now to review the materials.

Sincerely,

Todd Maddock
Todd Maddock
Idaho
(208) 798-8956

Mike Field
Mike Field
Idaho
(208) 334-2956

John Eichart
John Eichart
Montana
(406) 444-3952

Stan Grace
Stan Grace
Montana
(406) 444-3952

Joyce Cohen
Joyce Cohen
Oregon
(503) 229-5171

John Brogoin
John Brogoin
Oregon
(541) 276-0657

Ken Casavant
Ken Casavant
Washington
(509) 335-2816

Mike Kredler
Mike Kredler
Washington
(360) 664-4030

Background



The Comprehensive Review of the Northwest Energy System

Competition Creates Change

The electricity industry nationwide is being restructured and becoming more competitive. The power system in the Northwest certainly will be affected. The governors of the states of Idaho, Montana, Oregon and Washington asked the Council to facilitate a discussion and encourage analysis on how the Northwest can adapt to competition and the changing electric energy industry.

In response, the Council recommended the formation of a Steering Committee of regional stakeholders to manage a regional review of the Northwest energy system. The governors then selected 20 Northwest citizens to serve on the committee and asked them to initiate a process to debate and recommend alternative ways the region can enjoy low-cost energy and meet its public policy goals in a competitive market.

Although the task is a difficult one, it offers significant opportunities. With your help, and the involvement of all the region's citizens, the review will help improve the economy and the environment, and ensure that the benefits of a more competitive energy marketplace are shared efficiently and equitably.

Goal of the Review

The goal of the review is to recommend to the four Northwest states, the Northwest governors and the Congress changes in the structure of the region's utility industry. These changes should be designed to protect the region's natural resources, distribute equitably the costs and benefits of a more competitive marketplace, and, at the same time, assure an adequate, efficient, economical and reliable power system.

The Review Process

The governors asked the Steering Committee and all others participating in the review to make a good faith effort to find consensus on the measures the region should take to ensure a smooth

transition from a regulated, monopolistic utility industry to a deregulated, competitive utility industry. A consensus approach from the region will help secure support for the recommendations from the region's tribes and state legislatures, the Congress and the administration.

To make sure the review is comprehensive, the governors asked the Steering Committee to convene working groups on various topics and issues related to the changing electric utility industry. The working groups will involve a broad range of participants, including, but not limited to, all segments of the power industry, agriculture, labor, low income groups, consumer representatives, conservationists, all affected industries such as sport and commercial fishing, transportation and others. The working group structure will ensure that all affected parties are given a full and timely opportunity to participate in the review. The governors have asked the Council to ensure that there is broad public participation and reviews in all proceedings.

Questions for the Review

- Should there be changes in who owns and who operates the region's generation and transmission assets? Should one entity own both?
- How should the power and other products from the power system be managed and marketed?
- How should the costs of and debt related to federal assets be determined, paid for and amortized?
- How should the region provide for the power system's non-power obligations?
- How can the region continue its conservation and renewable energy programs in a competitive market?
- Which federal and state laws would require amendment if change is needed?

Comprehensive Review Steering Committee Members

Al Alexanderson	Portland General Electric	503 464-8000
Rick Applegate	Trout Unlimited	503 650-5412
Ken Canon	Industrial Customers of Northwest Utilities	503 239-9169
Chuck Collins	Seattle, Steering Committee Chair	206 236-8730
Jim Davis	Douglas County Public Utility District	509 884-7191
Bill Drummond	Western Montana Electric G & T Co-op., Inc.	406 721-0945
Jason Eisdorfer	Citizens Utility Board of Oregon	503 227-1984
Bob Gannon	Montana Power Company	406 723-5421
K.C. Golden	Energy Consultant	206 322-0885
Chuck Hedemark	Intermountain Gas Company	208 377-6000
Sharon Nelson	Washington Utilities & Transportation Commission	360 753-6423
John Saven	Full Requirements Group	503 233-5823
Rachel Shimshak	Renewable Northwest Project	503 223-4544
Brett Wilcox	Northwest Aluminum Company	541 296-6161
Gary Zarker	Seattle City Light	206 684-3200

Ex-Officio Members

Governors' Representatives

Todd Maddock	Idaho	208 798-8956
John Etchart	Montana	406 444-3952
Roy Hemmingway	Oregon	503 378-8582
Mike Kreidler	Washington	360 664-4030

Bonneville Power Administration

Walt Pollock	VP for Marketing, Conservation and Production	503 230-5152
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Formal Liaison

Federal Government (Congress and the Administration)
Northwest Indian Tribes

Steering Committee Resources

Northwest Power Planning Council		800 222-3355
	In Portland	503 222-5161
Robert Kahn, staff assistant to Chairman Collins		206-236-7200

Background



The New Northwest Power Plan

Reliable Electricity *and* a Healthy Environment

Since 1980, the states of Idaho, Montana, Oregon and Washington have worked together to determine how much electricity they will need in the future and how to acquire the electricity in the most cost-effective and environmentally responsible manner. The region agreed to cooperate because electricity is so vital to the Northwest's economy and its environment, and because the states share the Federal Columbia River Power System, which generates about two-thirds of the electricity we use. By collaborating and involving a broad range of public interests, our four states are able to make more balanced, economical and effective policy decisions. The four states carry on this long-range planning through the Northwest Power Planning Council, its advisory committees and its public information and involvement process.

The first regionwide power plan was adopted in April 1983. The most recent was in 1991. The Council is legally bound to review the plan at least every five years. The plan includes:

- A 20-year regional economic forecast
- A 20-year forecast of the region's power needs
- An analysis of the most cost-effective and least risky ways to meet those power needs
- A detailed review of cost-effective investments in energy efficiency
- Recommendations for research on new power technologies.

A Plan in Two Acts?

The next power plan the region develops will be different in many ways from its predecessors. In the past, power plans were based on mandates contained in the Northwest Power Act of 1980. These plans anticipated the region's utilities would be shopping for new power supplies together, most likely through the Bonneville Power Administration, the region's federal power marketer. The plans outlined which resources would be the best buys for the region over time and what policies would be the most effective means of securing those resources.

But rapid change in the electricity industry nationwide -- especially growing competition among power providers -- is influencing the direction and impact of power planning. In response, the four Northwest governors have asked the Power Planning Council to convene a review of the whole Northwest power system. One possible product of that review could be an amended Northwest Power Act, with new goals and priorities. So, while the Council began its review of the plan under the 1980 Power Act, it may not adopt a new plan until it has been given new authority under revised legislation. In the meantime, the analyses of resources, issue alternatives and the economy, all of which are nearing completion, will provide an important base for the more comprehensive review called for by the governors. The Council will defer major policy decisions until that broader review is concluded.

Power Plan Advisory Committees

In developing its power plan and analyzing the Northwest's electricity scene, the Council works closely with regional and national experts. Through advisory committees, these experts suggest areas to study, refine planning assumptions and review preliminary analysis. The committees may develop draft sections of the power plan and make recommendations for possible actions to be included in implementation strategies. The following advisory committees have participated in development of the Draft 1996 Power Plan:

Economic Forecasting Advisory Committee

This committee includes the chief economist from each Northwest state, plus leading industry and utility forecasters. The committee reviews forecasts of potential economic growth that are developed by Council staff. The committee is also convened to review new forecasting tools and changes in the Council's forecasting computer models.

Demand Forecasting Advisory Committee

Using the economic forecasts and assumptions about growth or decline in regional energy use, this committee reviews the range of future electricity use. Committee members come from Northwest utilities and major industries.

State Agency Advisory Committee

Representatives from each state's public utility commission meet regularly with Council staff to help integrate the region's planning efforts with each state's needs and priorities. Commission members also meet annually with Council members to review policy directions and identify

areas where the Council can provide additional assistance to the states.

Conservation Resources Advisory Committee

This committee, which includes several subcommittees, looks at ways the region can save electricity and what those savings are likely to cost. Committee members analyze potential savings in homes, businesses, industries, agriculture, appliances and in power transmission and distribution systems.

Conservation Acquisition Task Force (CAT Force)

The Council's CAT Force was initiated after adoption of the 1991 Power Plan, when it became obvious that an all-out effort would be needed to improve the efficiency of energy use in all sectors of the Northwest economy. The CAT Force identified barriers to securing energy savings, prioritized those barriers and suggested ways to overcome them.

Generating Resources Advisory Committee

The Council attempts to analyze all available sources of electricity to determine which are the most cost-effective. This committee, whose members are experts in the various technologies, helps review generating resources, including both fossil fueled and renewable ones.

Natural Gas Advisory Committee

Because of the expanding role natural gas is playing in the electricity industry, a committee was established to look at future prices and availability of that fuel for electricity generating. Representatives of all aspects of the gas industry serve on the committee.

Background



Northwest
Power Planning
Council

180-Day Fish and Wildlife Report

A frequently heard criticism of fish and wildlife recovery efforts in the Columbia River Basin is that no one is "in charge." In fact, over the past several decades there have been numerous agencies, courts and other entities "in charge" to one degree or another. The balance of authority has shifted with the passage and interpretation of various laws and treaties, including the Northwest Power Act of 1980, the Endangered Species Act of 1973, and a series of treaties that were negotiated in the 19th century between the United States and certain Indian tribes.

The interrelationship of these laws and treaties is complex, but it is clear that there have been conflicts. With this in mind, Congress included the following language in the Fiscal Year 1996 Energy and Water Appropriations Act:

"Within 180 days of enactment of this Act, the [Northwest Power Planning] Council shall review and report to Congress regarding the most appropriate governance structure to allow more effective regional control over efforts to conserve and enhance anadromous and resident fish and wildlife within the Federal Columbia River Power System."

Prior to 1980, decision-making authority rested largely with the federal government, reflecting our region's 60-year history of dam building in the Columbia River Basin. Since the 1930s, dams arguably have had the biggest influence on the river -- especially dams constructed, operated or licensed by the federal government.

Beginning in 1980, the region gained important control over fish and wildlife policy and the Columbia River dams through the Northwest Power Act, the law that created the Northwest Power Planning Council. The Act authorizes the states of Idaho, Montana, Oregon and Washington, through the Council, to develop a plan for the region's electric power system and a program, based on the recommendations of fish and wildlife agencies and Indian tribes, to mitigate the effects of the Columbia River dams on fish and wildlife.

Federal water and power agencies are required by the Act to take the Council's fish and wildlife program into account when they make decisions and, in the case of the Bonneville Power Administration, act in a manner consistent with the program.

In 1990, when petitions were filed to list Snake River salmon under the federal Endangered Species Act, decision-making regarding salmon policy once again shifted toward the federal government. Acting under the authority of the Endangered Species Act, the National Marine Fisheries Service has set standards for dam operations and is nearing completion of a recovery plan for three runs of Snake River salmon.

In fact, there are *three* recovery plans for Columbia Basin salmon, two of which are developed under statutory authorities -- the Council's fish and wildlife program and the draft recovery plan of the Fisheries Service. The third was developed collectively by the Columbia River treaty tribes -- the Nez Perce, Umatilla, Warm Springs and Yakama. There are common elements to all three plans, and differences, but the fact that there are three plans creates confusion over authority.

In directing the Council to explore "more effective regional control," Congress is signaling its interest in a stronger role for the region in fish and wildlife decision-making. The schedule for the review and report calls for an investigation of alternative decision-making reforms by the Council staff, followed by a public workshop meeting in Portland, February 1-2, 1996, to focus on these and any other alternatives that might be suggested. In the workshop, directed by a facilitator, the alternatives will be debated and refined. The alternatives will then be reviewed by the Council, which will identify a set of reforms for comment. Both the Council's proposal and the workshop conclusions will be circulated throughout the region for public comment. After reviewing the comment, the Council will submit a final report to Congress.

Key Fish and Wildlife Decision-makers

In addition to the Northwest Power Planning Council, a number of federal and state agencies have decision-making authority that affects fish and wildlife in the Columbia River Basin. Columbia River Basin Indian tribes also have fishery management authority. The following list only includes agencies in the United States. Numerous Canadian federal and provincial agencies have decision-making authority that affects the 400 miles of the river in British Columbia.

Federal Agencies

- Bonneville Power Administration
- Bureau of Reclamation
- U.S. Army Corps of Engineers
- Bureau of Indian Affairs
- Bureau of Land Management
- National Park Service
- U.S. Forest Service
- Federal Energy Regulatory Commission
- U.S. Fish and Wildlife Service
- National Marine Fisheries Service

State Agencies

- Idaho Department of Fish and Game
- Montana Department of Fish, Wildlife and Parks
- Oregon Department of Fish and Wildlife
- Washington Department of Fish and Wildlife
- Idaho Department of Lands
- Oregon Division of State Lands
- Montana Department of Natural Resources and Conservation

- Montana Department of State Lands
- Washington Department of Natural Resources
- Idaho Department of Water Resources
- Oregon Department of Water Resources
- Washington Department of Ecology

Columbia Basin Indian Tribes

- Burns-Paiute Colony
- Coeur d'Alene Tribes
- Confederated Tribes of the Colville Reservation
- Confederated Salish and Kootenai Tribes of the Flathead Reservation
- Confederated Tribes of the Umatilla Indian Reservation
- Confederated Tribes and Bands of the Yakama Indian Nation
- Kalispel Indian Community
- Kootenai Tribe of Idaho
- Nez Perce Tribe of Idaho
- Northwestern Band of the Shoshone Nation
- Shoshone-Paiute Tribes of the Duck Valley Reservation
- Shoshone-Bannock Tribes of the Fort Hall Reservation
- Spokane Tribe of Indians

Backgrounder Northwest Power Planning Council

The Independent Review of Science

A critical examination

In February 1995, the Northwest Power Planning Council decided to critically examine the science underlying salmon and steelhead recovery efforts and Columbia Basin ecosystem health. The Council's objective is to provide the region, to the greatest extent possible, clear and authoritative analysis conducted by impartial experts. Following peer review, the analysis will be finalized and made available to decision-makers and the public.

This analysis will be a valuable resource for decision-makers when reviewing recovery measures for their biological benefits. The findings also should enable fishery managers to focus future research activities on areas that are still not thoroughly understood. The Council expects the review to provide a fresh perspective on the science of salmon and steelhead so that public policy can be based on better information. The latter point is particularly important. The review is not intended to derive yet another set of policy recommendations for recovery and restoration. Nor will it recommend specific measures or strategies or deal with institutional structures. Instead, it should provide the scientific foundation for public policy developed by the Council and other decision-making bodies.

To conduct the review, the Council called on the Independent Scientific Group that was established through the Columbia River Basin Fish and Wildlife Program to provide scientific analysis to the Council and the Bonneville Power

Administration. The review began in the spring of 1995 and is expected to be completed in early 1996. Specifically, the Scientific Group is looking at existing information about strategies to assist salmon recovery and identifying the limits of that scientific information. In doing so, they are looking at the entire ecosystem of Columbia Basin salmon and steelhead, including their interactions with resident fish.

What do we know?

Three questions are being addressed in the review:

- What do we know, and how confident are we, about the biology associated with each portion of the salmon life cycle?
- What don't we know, or how uncertain are we, about this science?
- What do we need to do to address critical uncertainties?

The Council's review of science is intended to provide a clearly articulated scientific foundation for recovery efforts. It is not expected that the review will result in scientific certainty or put to rest scientific controversies that have simmered for decades. Instead, the review should clarify what science can say about salmon recovery and what it cannot. With this foundation, the process of crafting public policy can operate from a base of identified scientific knowledge.

Independent Scientific Group Members

Lyle D. Calvin, Ph.D., dean and professor emeritus, Department of Statistics, Oregon State University.

Charles C. Coutant, Ph.D., senior resource ecologist, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

Michael W. Erho, Jr., independent fisheries scientist, East Wenatchee, Washington, formerly a biologist for the Washington Department of Fisheries and for the Douglas County Public Utility District. Erho holds a bachelor of science degree in fisheries science.

William J. Liss, Ph.D., associate professor, Oregon State University.

James A. Lichatowich, independent fisheries scientist, Alder Creek, Washington, formerly assistant chief of fisheries, Oregon Department of Fish and Wildlife. Lichatowich holds a master of science degree in fisheries science.

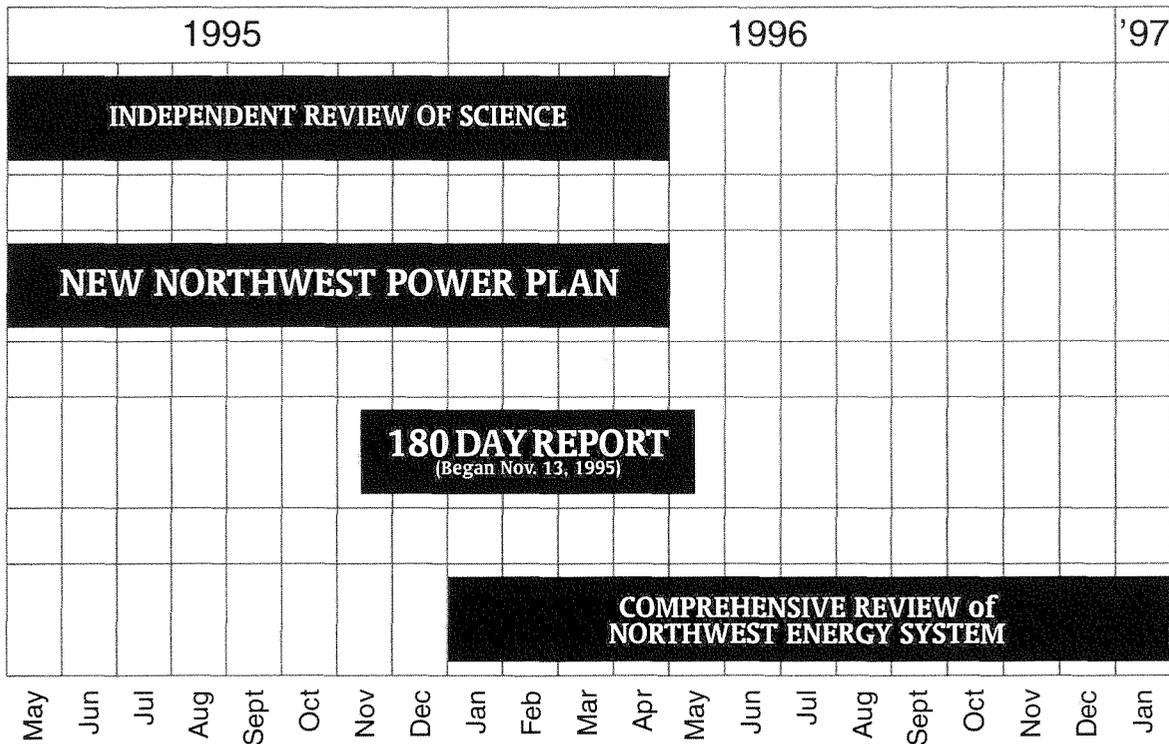
Phillip R. Mundy, Ph.D., independent fisheries scientist, Lake Oswego, Oregon, formerly manager of fisheries science for the Columbia River Inter-Tribal Fish Commission.

Jack A. Stanford, Ph.D., professor of ecology, University of Montana, and director of the university's Flathead Lake Biological Station.

Richard R. Whitney, Ph.D., independent fisheries consultant, Wenatchee, Washington, formerly a professor in the School of Fisheries, University of Washington.

Richard N. Williams, Ph.D., independent fisheries scientist, Meridian, Idaho.

Timeline



Ranchers join with the government to improve salmon spawning habitat.

by John Harrison

Standing in Dan Schlee's cattle holding area, ankle deep in mud and manure, it's hard to imagine that salmon once spawned in the South Fork of Asotin Creek, which splits the holding area in a silty swath.

But they did, and they may again because Schlee's stretch of the South Fork is being transformed. It's being made better for salmon and for cattle, and Schlee is enthusiastic — both for the fish and for his business.

"We saw an opportunity, and we went after it," he said.

Here on Schlee's ranch, about 20 miles southwest of Clarkston, the South Fork compresses into a narrow, rocky, mostly treeless canyon, leaving little room for his 350 cows and their primary water source, the creek.

Steelhead still spawn in the creek above and below this site, but chinook salmon haven't been seen in the creek since 1993, one year after they were declared an

endangered species. Asotin Creek is a tributary of the Snake River, where chinook and sockeye salmon are the target of a recovery plan being developed under the federal Endangered Species Act by the National Marine Fisheries Service.

Meanwhile, under the Northwest Power Planning Council's Columbia River Basin Fish and Wildlife Program, salmon spawning and rearing habitat is being improved in Asotin Creek through a partnership involving landowners like Schlee, the federal Natural Resources Conservation Service and the Asotin County Conservation District. That partnership appeals to Schlee and to most other ranchers along the creek. A partnership of government and ranchers working together is better than being ordered to take actions to implement a recovery plan developed primarily by a distant federal agency, Schlee agreed.

Asotin Creek is one of five model watersheds designated in the Council's fish and wildlife program for intensive habitat improvements to help recover populations of Columbia River Basin salmon and steelhead. The others are Washington's Tucannon River and Pataha Creek, Oregon's Grand Ronde River and Idaho's Lemhi River. Model watershed projects are planned or already are under way in several other Columbia River tributaries.

Schlee's cattle holding area is one of three sites targeted for improvements on Asotin Creek. With \$14,000 from the Bonneville Power Administration, which is obligated by the Northwest Power Act of 1980 to protect and rebuild salmon runs and habitat, the Conservation District is building 1,000 feet of five-strand barbed-wire fence and 1,300 feet of temporary fence to keep cattle out of the stream. Schlee also will get two



water troughs for his cows, connected by buried pipeline to the stream, and gutters for his hay shed to reduce the amount of rainwater that can flow across his holding area and carry manure-laden runoff into the stream. The work will be completed this winter.

In some model watershed projects, the landowners do the work themselves. In others, like Schlee's, a contractor is hired. "I don't have the time," Schlee said, laughing.

Will it work?

Research suggests that streamside fences and off-stream water troughs will keep cows out of the flowing water, thereby reducing water pollution and encouraging the growth of streamside grasses and trees. The rest, of course, is up to nature. A 1992 study by Oregon State University concluded, "Under winter feeding conditions, the amount of time cattle spent drinking or loafing in the area of the stream was dramatically reduced — by more than 90 percent

— by the presence of a watering tank. ... Economic and environmental implications suggest that this may be a viable alternative to the total exclusion of livestock along sensitive stream systems."

Schlee's cows spend most of the year elsewhere on the ranch — there are 6,000 acres of pasture and range land. But that changes in the fall and early winter.

"This is a collection area for livestock," Schlee said. "It's where we wean the calves, and it's been heavily impacted."

Schlee's involvement with the Asotin Creek project is a model of landowner cooperation. He was recruited by the Conservation District to join the model watershed steering committee when it formed several years ago. As he puts it, the more he learned about the impact of cows on the stream — his cows — and the resulting impact on salmon and steelhead, the more he realized there was an opportunity to help the fish while also helping his business.

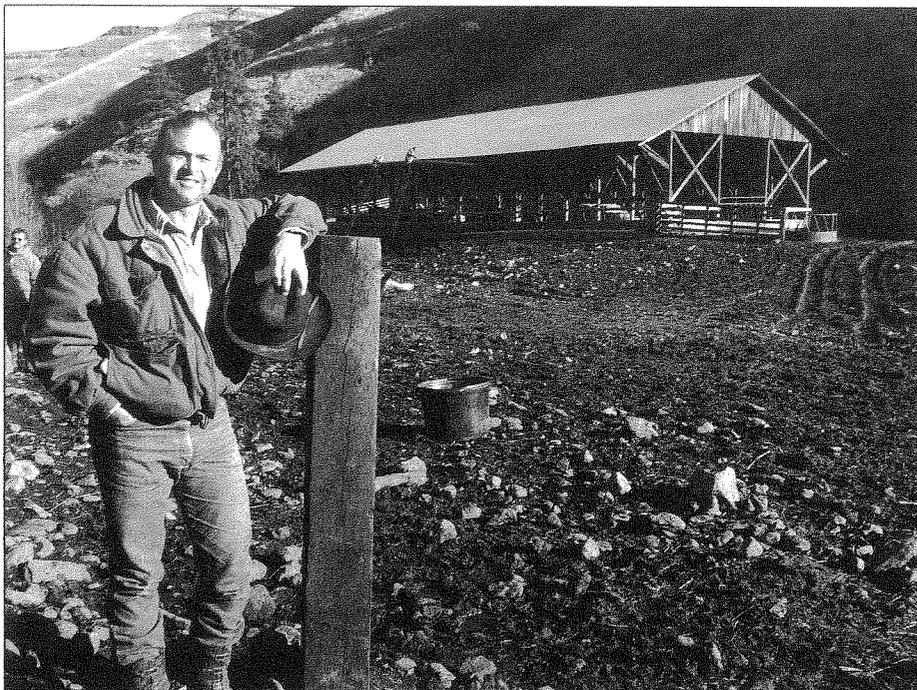
"There's no shade for the water here, and we need to keep the water cool for the fish," said Schlee who, ironically, does not fish. "A flood in 1974 took out most of the trees. There is good streamside vegetation above and below this location, on both private and state land. By planting trees here and getting cows away from the creek, I think we can improve the riparian zone."

That will be good for the fish, but what about Schlee's cows? The beauty of the model watershed program is that it was devised by the landowners, and they were able to identify measures that would help fish and cows at the same time, said Rick Stauty of the Conservation Service's Pomeroy office, who is directing implementation of the Asotin Creek watershed program. Keeping cows from degrading the stream will reduce the amount of manure that reaches the water and also stop the animals from eating or trampling streamside grasses and small trees, he said.

"Reducing runoff to the stream by putting gutters on the hay shed will give the cattle drier conditions, and that could help reduce animal health problems," Stauty said.

Will there ever be spring chinook salmon in Asotin Creek again? Perhaps. The Washington Department of Fish and Wildlife has proposed planting spring chinooks in the creek, but all of the Snake River hatchery stocks that could be used are at such low numbers themselves that there aren't enough fish available.

"We go out every summer and do spawning surveys in Asotin Creek, looking for redds (nests of salmon eggs), and it's been pretty much hit and miss the last few years," said Glen Mendel, a state



Rancher Dan Schlee leans on the new fence that will protect the South Fork of Asotin Creek from his cattle.

biologist in Dayton, Washington. "This year we found none."

Summer steelhead are a different story. There are steelhead in all three forks of Asotin Creek, but not enough to allow a sport fishery, biologist Mark Schuck said. In 1994, the Department counted 79 adult steelhead (22 in the South Fork), but only in certain stretches of the creek that are sampled every year. In other words, the total number of summer steelhead in the watershed is more than 79, but the exact number is not known. Meanwhile, the number of steelhead redds per mile in Asotin Creek generally has been declining since the mid-1980s, Schuck said.

Schlee remains a little skeptical about his new fence and the off-stream watering troughs, but he's willing to give them a try.

"I don't know if it will work for me," he said. "We've always had full access to the creek, and we're still going to be able to cross for pasture access and water as needed. My dad asked me how I could justify losing so much access. Well, my answer was that if we can help the creek, then it seems worthwhile."

Stauty said Schlee's response is pretty typical of ranchers in the Asotin Creek watershed — initial skepticism and, later, acceptance when they see benefits for themselves as well as for the fish.

"One rancher over on Pataha Creek, where we're also doing some work, thought we were just crazy," Stauty said. "When we started that project, he wouldn't come to see us, and as it went along, he just ignored us, even though part of the project was on state land that he leases for grazing. Recently we put on a tour to show the landowners how it was going. He came along, and when

he saw how the trees were growing and the grasses were coming back where the cows had been fenced out of the stream, he couldn't believe it. He really enjoyed it."

That sums up Stauty's feelings about the work, too.

"It sure would be nice to have some salmon in Asotin Creek again," he said. "I don't think

we'll ever give up. You go out there and you see things growing back, and it really looks good. It's the right thing to do." ■

More ... Contact Rick Stauty, Jim Schrader or Angela Fields, Natural Resource Conservation Service, Asotin, Washington, 509-758-8012.

Other fences, other streams

The Asotin Creek project is one of many around the Northwest where fences are going up so that salmon and cattle can become better neighbors.

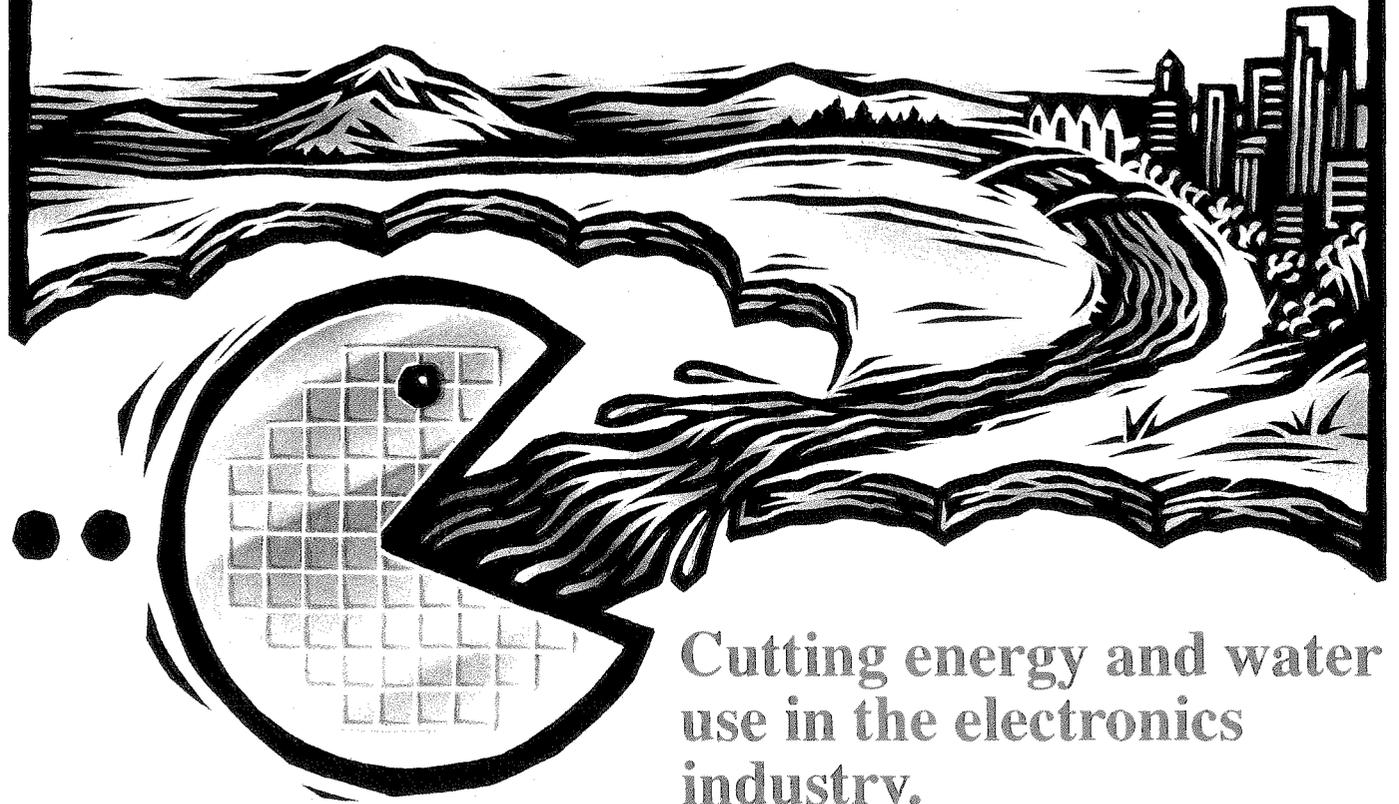
For example:

In Tillamook County, Oregon, 54 out-of-work or underemployed commercial fishers are building fences to keep dairy cows out of streams where coastal salmon spawn. The work crews also are placing large boulders to stabilize stream banks and are planting willows to replace streamside vegetation that has been destroyed by cows. Contact Richard Felley, Tillamook County Soil and Water Conservation District, 503-842-2848.

In far southeastern Idaho, the Henry's Fork Watershed Council helped finance an innovative grazing system for the Diamond D cattle ranch, which borders Henry's Lake and includes two critical spawning streams for the lake's prized trout. Rather than allowing cattle to wander across the ranch and through Targhee and Howard creeks, the new grazing system utilizes a central watering trough — supplied by a pipeline from Howard Creek — and portable fences that radiate out from the watering area. These electric fences define a grazing area shaped like a slice of pie with the trough at the point. In this way, cattle drink at the same location, but the grazing area can be shifted periodically. This protects the streams and also improves the efficiency of grazing. "It allows complete control over the whole herd all summer so the cows aren't in any one place for more than about eight days," said Rob Van Kirk, research director for the Ashton, Idaho-based watershed council. The ranch owners were active partners in designing the system, Van Kirk said. Contact Rob Van Kirk, 208-652-3567.

In Kalispell, Montana, fences are being built to help other kinds of fish. The Flathead Electric Cooperative, a utility that serves the Kalispell area, and the Public Power Council, an association of Northwest public electric utilities, paid for a water well and streamside fencing along Mill Creek, a tributary of the Flathead River. Mill Creek links the Creston National Fish Hatchery with Flathead Lake. The fence will keep cattle out of Mill Creek, and the well supplies an off-stream watering trough for the animals. Contact Rob Walton, assistant manager, Public Power Council, 503-232-2427.

TAKING A BYTE



Cutting energy and water use in the electronics industry.

by Carlotta Collette

Chalk some of it up to hyperbole, but the engineer who announced that the new microelectronics plant he was working on would “suck up” half a river was trying to sound an alarm. More likely it’ll only be a fraction of a river, and a small river at that. But that’s one plant on one fork of one river. As more plants are built, more water will need to be diverted to serve them. The Northwest’s abundant clean water is one reason the microelectronics industry is targeting this region.

Another reason is the relatively low-cost electricity. It’s no coincidence that utilities usually must install new substations adjacent to silicon wafer and computer chip plants. The fact is, these plants use

a lot of water *and* a lot of electricity, and there are a lot of them planned or under construction in the Pacific Northwest.

Wafer manufacture and chip fabrication plants each use at least a million gallons of very clean water every day, principally for high-purity cleaning of the silicon wafers, and for cooling the ovens where silicon crystals are “grown” and the furnaces where various surface films are melted onto the chips. Each of the plants also uses roughly 100 million kilowatt-hours of electricity a year for the crystal growing, surface material melting, equipment cooling and to keep air flowing through the “clean rooms” in which the silicon wafers are processed.

Those are generic figures and

probably conservative ones. For example, the Sumitomo Sitix silicon wafer facility that was proposed for Newberg, Oregon, just southwest of Portland, would have used 9 million gallons of water every day. That’s about how much the whole town of Newberg currently uses. Instead, the plant will be constructed in Phoenix, Arizona, where it will draw from a natural aquifer.

But there are at least 11 other wafer or chip plants planned or under construction in Oregon alone. That’s nearly a third of all the semiconductor plants being built in the United States, with an expected investment approaching \$10 billion and 5,000 jobs created. For the first time ever, the electronics industry has topped lumber

and transportation as the Northwest's major manufacturing employer. The resource math works out to about 4 billion gallons of water a year and at least 125 average megawatts of new electricity.

So while the bad news is that these plants will need fairly significant amounts of electricity and water, the good news is they bring jobs and improve the tax base of local communities. The other good news is: they can be built so they use 40 percent to 60 percent less water and electricity.

That's why the Northwest Power Planning Council and the Oregon Department of Energy jointly sponsored a one-day seminar in October for engineers and others interested in making their facilities more efficient. The Council and the Oregon Energy Department brought in internationally recognized engineer Lee Eng Lock, whose work with the semiconductor industry has resulted in some of the most efficient facilities in the world.

"Having Lee Eng Lock here was a tremendous opportunity for the Council to provide technical assistance to some of the key industry leaders in the region," explains Jeff Harris, a conservation analyst with the Council. "Since only about a dozen companies are building these plants worldwide, it is fairly easy to get the information to them all. Lee's experience teaches us that there are fairly off-the-shelf ways to save both electricity and water in these plants, with short payback periods and no significant delay in getting the plants up and operating."

"In places that are resource-constrained, manufacturers build more efficient plants," agrees Mark Kendall, industrial efficiency expert at the Oregon Department

For the first time ever, the electronics industry has topped lumber and transportation as the Northwest's major manufacturing employer.

of Energy. "We know it's being done more efficiently in Korea and Singapore, even in Europe, where they don't have the water we have or the energy sources we have. We feel it'd be better for our communities if these manufacturers emulate the best designs available."

Kendall recalls a conversation he overheard between a plant designer from Hyundai, the Korean memory chip manufacturer planning a facility for the Eugene, Oregon, area and an engineer helping to design the new plant. The Hyundai designer said that in Korea, they recycle 60 percent of their water in the plant. "The American engineer he was talking with told him he wouldn't have to do that in Oregon," says Kendall. "But you *should* have to do that in Oregon," he adds. To its credit, Hyundai didn't agree with the engineers and is going with the more water-efficient plant.

That's a rare occurrence. More often, energy and water efficiency are not significant concerns to wafer and chip plant owners. They are concerned with getting their

plants into production as fast as possible. "There is tremendous urgency to get these plants up and operating," explains Kendall. "Chip manufacturers measure their output in terms of dollars of product per hour of production. They can produce \$100,000 of product every *hour*. If they have to delay production for just one day to incorporate a design change they're not familiar with, that's about \$2 million in production loss." As it happens, that's about what a year's worth of electricity would cost.

The pace of construction triggers another disincentive. Because there are so few contractors involved in this industry, they tend to have a few standardized designs and use similar equipment at each facility. Kendall explains, "The buildings are pretty much identical to others. Plant designers can either just upscale the standard design or re-engineer it to incorporate higher efficiency levels. But plant owners perceive a reliability risk in going with any design changes."

The recommendations Lee Eng Lock had for the 40 participants in the October workshop are all fairly simple. While they are not routinely being used in the Northwest, they made sense to the engineers in the audience. Some engineers are already applying them when the opportunity arises. Efficient lighting, motors and some variable speed drive applications, for example, are becoming standard industry practice. But other changes are not. Even relatively easy and seemingly obvious improvements are viewed with suspicion by many in the industry.

Lee Eng Lock describes it this way: "Most people say this is impossible, but it's like karate. The hand is softer than the brick, so how can the hand break the brick?"

But it does break the brick. It's really very simple."

Heat recovery from cooling water is a good example, according to Kendall. Microchip manufacturing requires huge quantities of cold water flowing through pipes to cool the wafer ovens and other high temperature equipment. The cold water heats up as it moves past the hot equipment. At the same time, cold, highly purified water has to be preheated before it can be used to clean the wafers.

"The simplest improvement," argues Kendall, "would be to recirculate the cooling water that has drawn the heat off the ovens and other equipment and use it to preheat the water for the cleaner processes. That's what they would do in Singapore or Korea." In this country, only a few manufacturers are doing that.

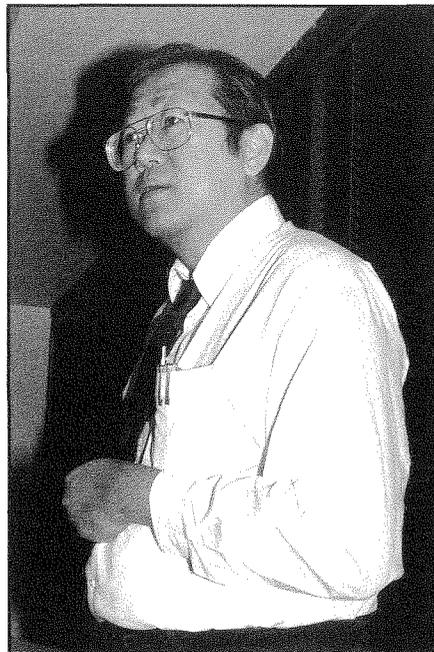
To help companies overcome the disincentives to efficiency, most Northwest utilities and the Oregon Department of Energy offer to pay for some plant and process modifications. But few programs exist to improve the efficiency of water use. Even with incentives, industry inertia won't be easily overcome, several of the workshop participants said, unless someone like Intel, the world's biggest chip fabricator, decides to make its processes and facilities more efficient. California-based Intel, whose corporate motto is "faster, cheaper, better," does tend to set the industry pace.

"To Intel's credit," says Kendall, "they have at least three people in their local plant whose job is finding ways to secure state and utility rebates for cutting energy use, recycling or reducing waste. But often the approach is to get the plant up and operating and then go back in and mine the facilities for energy savings."

The Council and the Oregon Department of Energy would prefer to have the facilities designed for more efficient operation from day one. "That's the only way to maximize the efficiencies," says Harris. "Going back in and tweaking the system to wring out some savings is better than nothing, but if Andy Grove (founder and head of Intel) gave the word to make his company's plants the most efficient in the industry, everybody would have to change how they do things. Then we'd see tremendous savings."

That thought was echoed at the workshop, where representatives from Intel and from the engineering firm that designs most Intel plants were in attendance. Also in attendance were representatives from more than a half-dozen of Intel's competitors, including: Hewlett Packard, Fujitsu Microelectronics, Wacker Siltronic, Siltec Silicon, Tektronix, Inc., and LSI Logic.

Together, these engineers and corporate representatives drafted the beginnings of a strategy to improve water use and energy



Electronics engineer Lee Eng Lock helps semiconductor plants operate more efficiently.

efficiency at microelectronics plants in the Northwest. The strategy calls for more information, better data, more workshops, tougher building codes, a test facility to demonstrate how it can be done, and local tax breaks that are linked to efficiency, not just to production and jobs.

The key here is that as these companies change technologies — go from a 486 chip to a pentium, for example — they have to expand or build new facilities," says Harris. "Sooner or later they're going to run out of easy, resource-rich sites for their plants. Communities will be less inclined to have another chip plant using all that water and electricity. If they want to keep growing, keep building their plants, they'll have to leave a lighter footprint. We'd like to see them start doing that now."

"The state of Oregon and local communities should be concerned with helping this industry make these kinds of changes so they will be more efficient and, therefore, more competitive," says Kendall. "Then they'll be more likely to last over the long term, keeping that tax base and those jobs for a long time." ■

MORE ...For more information about the Microelectronics Facility Efficiency Workshop, order publication # 95-23, from the Council's central office. Call: 1-800-222-3355 or in Portland, 222-5161. This publication includes: minutes from the workshop; a list of attendants; a report by Lee Eng Lock, which includes his analysis, calculations and equipment recommendations; information on how to apply for financial support for efficiency improvements; and information on federal industrial efficiency programs.

PUTTING *not knocking* HEADS TOGETHER

Can the Yakima River Watershed Council fix the Yakima Basin's water problems?

by Bill Dunbar

When you speak with Mel Wagner, chief executive officer of the Yakima River Watershed Council, you get the feeling that he'll stop at nothing to see a project through. As a kid he probably never left a model airplane unpainted. You just know that he always has a full tank of gas in his car. And for him, there's no such thing as a "gimme" on the golf course.

Good thing. In his work to help solve the Yakima River Basin's water-supply crisis, Wagner is shepherding a group of people representing virtually all active water interests to fix a problem that has baffled great Washington minds for decades.

With a 50-member board of directors made up of irrigation, environmental, wood product, business, tribal, food processing, state and local government, electric utility community and education interests, the Yakima River Watershed Council's goal is

to produce a consensus plan to store, conserve and deliver enough high quality water to meet all legitimate agricultural, industrial, household and environmental water needs. And this plan has to be ready for legislative action by November 1996.

Simple.

Wagner, a recently retired Yakima businessman and civic activist, traces the Watershed Council's beginnings to November 1993, when a group of 12 irrigators met in Prosser, Washington, to discuss the Yakima Basin's perpetual water-supply crisis. Even though the area had had above normal precipitation over the previous 12 years, farmers throughout the basin had been forced to ration water in seven of those years.

They realized that the area doesn't have a water shortage problem as much as it has a water management problem. They also realized that they had to enlist

outside help in getting the support of every other group interested in the Yakima's water.

"We knew that to get real buy-in for any Watershed Council plan, we had to have everybody at the table. After all, agriculture is the base of our economy. It is to this valley what Boeing is to the Seattle area. If we don't solve the water problem, everybody and everything suffers," Wagner says.

The Yakima Basin is the largest subbasin in the Columbia River's watershed, encompassing 6,000 square miles in Kittitas, Yakima and Benton counties, an area the size of Connecticut. The basin's five reservoirs — Rimrock Reservoir, Lake Cle Elum, Bumping Lake, Lake Kechelus and Lake Kachess — store only 1.1 million acre-feet of water to serve the 2.5 million acre-foot demand of the basin's many communities and 500,000 acres of irrigated land. Decades-long court battles and contentious water rights disputes

among fish, irrigation, industrial and public health concerns led to little real progress.

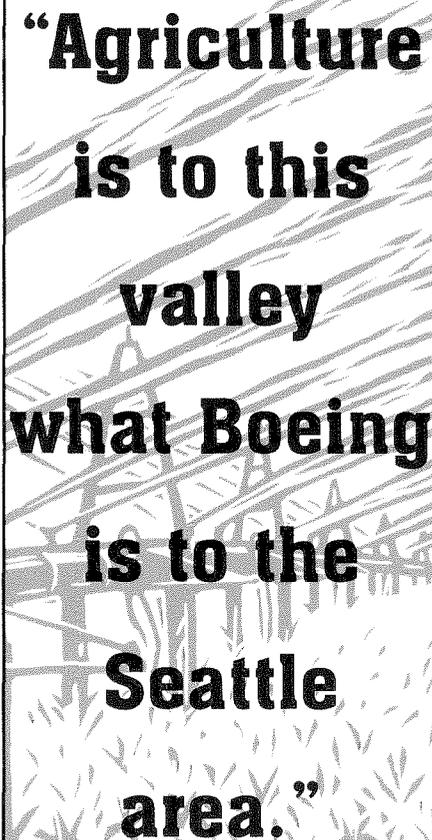
Wagner says this is where the Watershed Council represents the best chance for a negotiated resolution. "The drought was an unwelcome ally in rallying support for the concept of the Council. People here finally recognize that the system is at fault, not 'the other guy.' Our theme is 'we have to stop fighting each other over the crumbs of an inadequate loaf.'"

The Watershed Council was officially established in March of 1994, but the group didn't hold its first board meeting until September, when the Yakama Indian Nation decided to join.

The Yakama reservation is home to the basin's largest irrigation district, as well as some of the region's most respected fisheries biologists. Wagner says, "without the tribe's participation in and approval of the Council's process, any plans developed by the Council would have little chance for political or legal success."

Bob Tuck, fisheries consultant to the Yakama Indian Nation, says, "The Yakamas at first were reluctant to join the Council because for a very time long self-interested parties would come to the tribe seeking basically to co-opt their participation for political appearances. Needless to say, this led to no small bit of cynicism. The Nation's participation on the Council says something about the commitment of the Council to be inclusive, not divisive."

From the beginning, the Watershed Council felt the only path to success was to be sure that its watershed plan was the product of consensus, with nary a dissenting voice from the



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Council membership. "Had we decided to go with majority rule, we could end up with a plan that, say, 20 of our 50 members disagreed with. I think we could then reasonably expect their respective constituencies to put a lot of political heat on the Council's plan. How do you then take that plan to the public and to legislative bodies and ask for support? No, majority rule won't do. The only way this works is if anyone participating can challenge a particular portion of the plan. Then the Council's forced to make changes acceptable to everyone. This way everyone is heard, no matter how many people disagree."

Wagner reports that barriers have collapsed and peculiar relationships have developed on the Council. "A not-so-surprising bonus has been that the members of the Council are learning from

each other — and are doing a lot less demonizing of those on the other side."

For example, Wagner says irrigators have come to respect and, at times, actually agree with Katherine Ransel of American Rivers, a group that, as Ransel says, "had been complaining the loudest about overallocation of water."

Ransel adds that the Council's consensus approach helps "us to educate each other on the different natural resource issues ... to put a face on those we call 'the irrigators' or the 'timber industry.'"

Tuck, who Wagner says was demonized by agriculture interests as a radical fish advocate, laughs at the assumption that as a fisheries' biologist he would have no understanding or sympathy for agriculture's water needs. "When the farmers have a poor year, your school board levies go down to defeat, your tax revenues go down, your schools suffer, and your local watershed and habitat programs go kaput."

Tuck suggests that everyone is learning that ecosystems encompass both ecological and economic interdependencies. "The old days where everybody could go off on their own and manage any particular resource the way they saw fit are over. We all live here together and you cannot simply say 'I'm over here and you're over there and there are no strings between us.' There are strings all over the place. Everyone on the Council sees this and has to deal with it firsthand."

Conservation, regulation, and storage

The Council's watershed plan will be made up of three pieces: conservation, regulation and storage. Wagner says the first piece

— and the one with the greatest potential for immediate effect — is conservation.

Leslie Roy, a Yakima-area apple and hops producer, says conservation through irrigation improvements is proceeding at a very rapid pace. “The savings for farmers by using drip systems is astounding. I haven’t tilled the soil where my hops grow for three years and I’m saving between 50 and 75 percent on pesticides. As technologies for drip irrigation systems improve and become more affordable, more and more farmers will be using them.”

But Roy says the real conservation milestones will come with improvements to the system that delivers water to the farmers.

“Right now, we get water delivered to us whether we want it or not. It comes down the canal and we have to put it to use or it goes to waste. This is one of the issues that I’m working on with the Council. When our work is approved by the powers that be sometime in the future, we’ll have a delivery system that gets us just the water we need, when we ask for it. And that will help keep more water in the streams for fish.”

The second piece of the Council’s plan will address regulations, either getting new ones in place or more likely, changing old ones. The regulations that cause farmers to feel that they must use or lose all of their water right are highly counter-productive, Wagner says. “It just makes no sense to put a farmer in that position. We’ve got to change the rules that result in that kind of activity, whether those changes are water-banking or something else. If we can make these changes and the farmers no longer fear losing their livelihoods by conserving water and keeping it in the river,

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When the topic of additional storage facilities comes up, Wagner shifts uneasily in his chair. “Well, that’s a difficult subject. No, we don’t store enough water. But we do have additional storage besides the reservoirs — we have the Cascades. We’re lucky that way. But that supply is inconsistent in quantity and availability. When we begin to make projections about how much additional water will be needed and where it will be stored, it is not well established.”

Tuck, a member of the Council’s storage committee, says, “There’s no doubt that additional storage facilities will help everybody. But how can we count on that kind of money? What about the environmental impacts? We need to examine and propose scientifically viable options, but I think most members of the Council would agree that this is a far longer-term project than maybe some of the other things we’re trying to fix.”

A commitment for consensus

Maybe storage is a longer-term issue. But it’s clear that the members of the Yakima River Watershed Council are true believers in their ability to deliver a consensus watershed management plan.

James Horton, a Yakama tribal member, apple orchardist and board member of the Yakima Valley Community College, suggests the commitment to the watershed and its objectives is too strong for anything but consensus and success.

“I’ve been involved with a lot of volunteer organizations, and I’ve never seen commitment like this. No one misses a meeting — and as busy as most members are, that’s saying something.

“These folks are doers. With commitment like this, I think we can’t help but succeed.” ■

Bill Dunbar is public involvement coordinator for the western Washington office of the Northwest Power Planning Council.

SHORTS

Northwest

The Pacific Northwest economy is expected to grow faster than national averages for the next 10 years, according to a report by the U.S. Department of Commerce. The report, which is developed every five



years by the Department's Bureau of Economic Analysis, lists the South and the West as the nation's fastest growing regions.

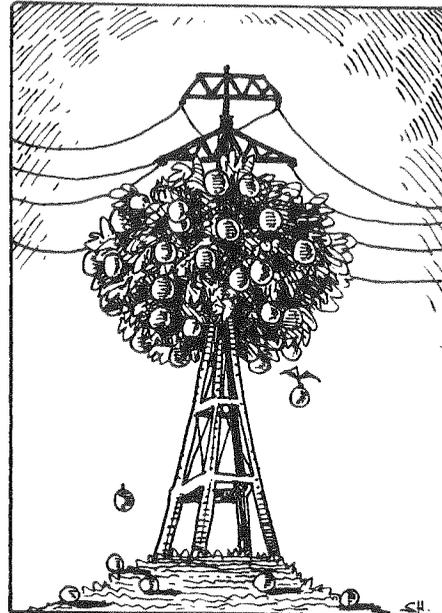
Washington's population growth rate is expected to be second only to Nevada's — 56 percent above the national average. All four Northwest states should see increasing personal incomes, as well as higher levels of gross state products than in previous years. (Source: *Marple's Business Newsletter*.)

Portland chosen as kick-off site for Environmental Technology Leadership Challenge, in which businesses and organizations will challenge their peers to use technologies and practices that protect environmental quality. For example, Pacific Power will challenge other utilities to increase their use of electric vehicles. The utility will help develop several quick-charging stations for such vehicles in Portland. Red Lion Hotels is challenging other hotel chains to copy its use of water-saving technology in its laundry. "We want to create a network of partners using environmental technologies to renew our cities, improve our industries and drive economic and competitive advantage," Portland Mayor Vera Katz said. (Source: City of Portland news release.)

Nation

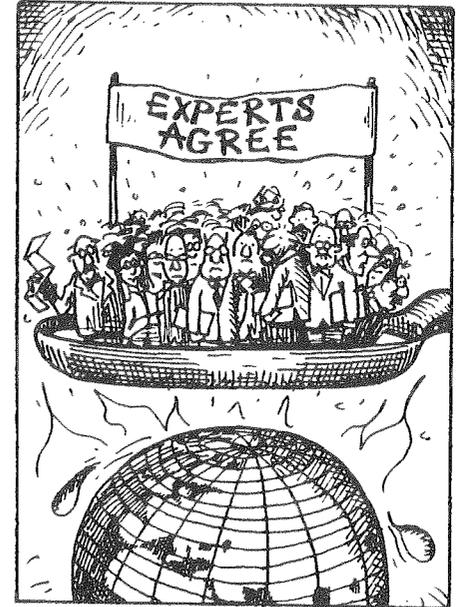
Energy-efficient apartment modules will be stacked on vacant lots in New York City. The U.S. Department of Energy's Small Business Innovation Research Program has funded the first stage of a project to design energy-efficient, multifamily apartment buildings that would be stacked four to six stories high on vacant lots in New York City. The apartment modules will use a combination of energy conservation and passive solar techniques to cut energy usage 25-30 percent over conventional multifamily housing. The project is seen as a way to improve derelict neighborhoods in New York and, ultimately, other cities. (Source: *Energy Conservation Digest*.)

World



"Orange pulp to power" could be the slogan of the world's first electricity generating plant that uses oranges for fuel. The plant, being built in Belize, will use the pulp and peels from the 83 tons of oranges

processed every hour at the Belize Food Products and Citrus Company. The plant is expected to generate 6 megawatts of electricity, which will be used at an adjacent cement plant. (Source: *The Energy Newsbrief*.)



Scientific consensus on global warming. A report that relied on the advice of more than 2,500 climate scientists, representing 75 nations including the United States, concludes that global warming is under way, that it is at least in part human-caused and that governments will need to act quickly to reverse the changes for future generations. The scientists' report, which was developed by the United Nations Intergovernmental Panel on Climate Change, states that the Earth is heating faster than at any time in the past 10,000 years. The report blames "mostly fossil-fuel use, land use change and agriculture" for the climate imbalance that could result in glacial melting and the rising of ocean levels, among a host of other impacts. The report was seven years in the drafting and required three days of negotiations before the panel that developed it agreed to its release. (Source: *The Oregonian*.)

CALENDAR

February 20-22 Northwest Power Planning Council Meeting, Red Lion Riverside, Boise, Idaho. For more information, contact the Council's central office at 800-222-3355.

February 29 Comprehensive Review Steering Committee Meeting, 10 a.m. - 4 p.m. at the Lloyd Center Red Lion, Portland, Oregon.

March 7-8 Third Annual Power Industry Forum: Competition for Customers, Creating the Strategic Advantage at The Ritz-Carlton on Amelia Island, Florida. Brings together regulators, utility decision-makers, independent power producers, power marketers and industrial energy consumers to review utility industry trends and strategies. For more information: Infocast, 18425 Burbank Boulevard, Suite 509, Tarzana, California 91356. Phone 818-609-9145, FAX 818-609-9149.

March 12-16 The Sun Rises on Global Solar Markets: Joint Annual Meeting of SOLTECH and the Utility Photovoltaic Group at the Riviera Resort and Racquet Club in Palm Springs, California. Co-sponsored by the California Solar Energy Industries Association, the Interstate Renewable Energy Council, Edison Electric Institute, the National Renewable Energy Laboratory, Sandia National Laboratories, the U.S. Department of Energy and the Western Area Power Administration. For more information: Michelle Birkenstock, 122 C Street, NW, 4th Floor Washington, DC 20001. Phone 202-383-2600, FAX 202-383-2670.

March 17-22 Affordable Comfort 96 at the Palmer House Hilton in Chicago. This year's conference will include a special focus on new HVAC technologies that address both air-quality issues and increased energy efficiency. For more information, contact Jude Rutkowski at 412-299-1136. FAX 412-299-1137.

April 2-4 Northwest Power Planning Council Meeting, in Oregon. For more information, contact the Council's central office at 800-222-3355.

April 3-4 Globalcon '96, in Denver, Colorado. This will be the 16th "national forum for energy-efficiency and

environmental compliance" sponsored by the Association of Energy Engineers and, this year, co-sponsored by the Public Service Company of Colorado. The conference and exposition will showcase new technologies that address energy use and environmental problems. For more information, contact: The Association of Energy Engineers, 4025 Pleasantdale Road, Suite 420, Atlanta, Georgia 30340. Phone 404-447-5083 or FAX 404-446-3969.

April 21-22 Sun Day 1996 and Earth Day. Communities throughout the nation will celebrate solar energy, other renewable resources, energy efficiency and ecological undertakings. Activities vary from town to town. In many areas, city governments and local utilities will be sponsoring events. Check newspapers or call your utility for what's happening in your community. For free listing of some activities, send a self-addressed stamped envelope to: Sun Day Campaign, 315 Circle Avenue, #2, Takoma Park, Maryland

April 29-May 1 Fourth National Conference on Building Commissioning at The Don Ce Sar Beach Resort in St. Pete Beach, Florida. Presentations by building owners and operators will

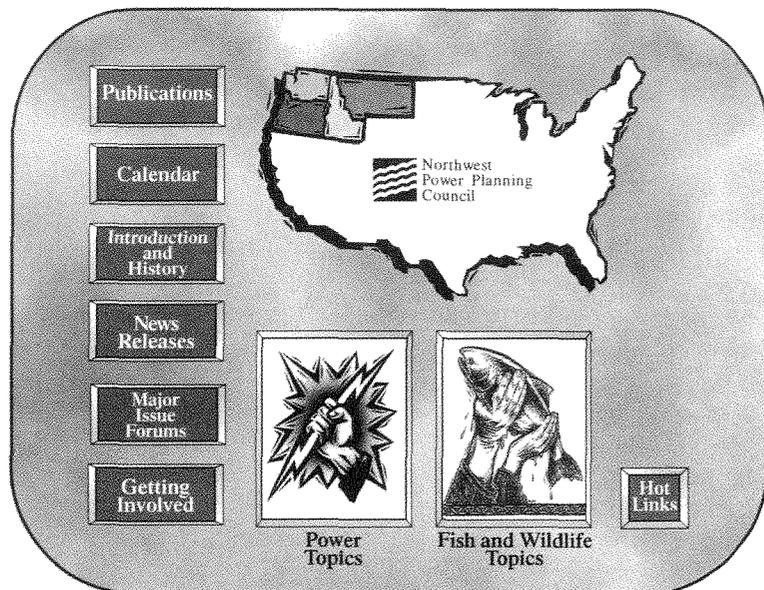
focus on trends in securing optimum building efficiency, improved air quality and other benefits of commissioning new and existing buildings. For more information, contact: Debby Dodds, Conference Manager at Portland Energy Conservation, Inc., phone 503-248-4636 ext. 205, FAX 503-295-0820 or e-mail: peci@teleport.com.

May 9-10 Second Annual Water Conference, discussing the Northwest's water Resources: A Question of Federal, Tribal, State and Local Control. Various topics highlight the changing face of regional water law and policy at all levels. The event is sponsored by the Northwest Water and Law Policy Project and will be held at the Northwestern School of Law of Lewis and Clark College, Portland, Oregon. For more information, call 503-768-6784.

May 14-16 Northwest Power Planning Council Meeting, in Eastern Washington. For more information, contact the Council's Pullman office at 509-335-2816

June 25-27 Northwest Power Planning Council Meeting, in Montana. For more information, contact the Council's Helena office at 406-444-3952.

Coming Soon



The Northwest Power Planning Council Web Page

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The Northwest Power Planning Council is required by an Act of Congress to develop a program to protect, mitigate and enhance the Columbia Basin's fisheries and a regional electric energy plan that provides a reliable electricity supply at the lowest cost. For further information, see Pacific Northwest Electric Power and Conservation Act—Public Law 96-501.



Northwest Energy News is printed with soy-based inks on recycled paper that is 30 percent de-inked fiber, including 10 percent post-consumer waste.



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COUNCIL PUBLICATIONS ORDER FORM

Please send me a copy of the following publications of the Northwest Power Planning Council. (Note: not all publications are available immediately, but they will be sent to you as soon as possible.)

Publications

- (96-1) *Northwest Power Planning Council Workshop on Fish and Wildlife Governance: Background Materials*
- (96-CR1) *Verbatim Transcript of First Meeting of Comprehensive Review of the Northwest Energy System*
- (95-24) *The Northwest Conference on Building Commissioning: Summary Report (prepared by PECO)*
- (95-23) *Micro-Electronics Facility Efficiency Workshop: Meeting Report and Appendices*
- (95-21) *1995 Annual Report*
- (95-19) *An Analysis of Western Energy Markets*
- (95-18) *Columbia Basin Fish and Wildlife Program Work Plan for Fiscal Year 1996*
- (95-17) *Considerations in the Construction of a CO₂ Mitigation Cost Curve for the Next Northwest Power Plan (a report prepared for the Northwest Power Planning Council by Trexler and Associates, Inc.)*
- (95-16) *A Renewable Energy Resource Strategy for the 1996 Power Plan*
- (95-15) *Structure of the Northwest Electricity Industry: Alternatives and Implications*
- (95-15A) *Appendices to 95-15: Structure of the Northwest Electricity Industry: Alternatives and Implications*
- (95-14) *Staff Issue Paper on the Role of the Bonneville Power Administration in a Competitive Energy Market*
- (95-12) *Fiscal Year 1997 Budget and Fiscal Year 1996 Revisions (final)*
- (95-10) *Columbia River Basin Research Report*
- (95-9) *Transcript of Panel on Bonneville Competitiveness and Ways to Cut Bonneville's Costs (Seattle, Washington, Council meeting, June 14, 1995)*
- (95-7) *Directory of Organizations*
- (94-54) *Market Transformation: What is It and How do we Get There?*

Mailing Lists

Please **add** my name to the mailing lists for the following publications. (Note: please do not check if you already are receiving them.)

- Northwest Energy News* (this bimonthly magazine)
- Update* (monthly public involvement newsletter that contains the Council meeting agenda, deadlines for public comment and a more detailed publications list)

Please **delete** my name from the mailing lists for the following publications (please include the 12-digit number next to your name on the mailing label).

- Northwest Energy News*
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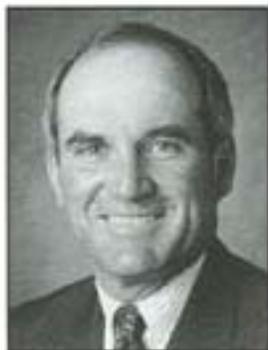
(Or call the Council's central office, 503-222-5161, or toll free 1-800-222-3355.)

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from the **CHAIR**

In January, newspapers across the Northwest carried stories about the severance agreement negotiated between former Council Chairman Angus Duncan and the Council's former executive director, Ed Sheets. The agreement and the manner in which it was developed are both regrettable. As soon as the Council became aware of the details of the agreement, we ordered an internal review of all of our personnel practices and adopted severance policies that are consistent with federal employment policies. Mr. Sheets and the Council have now renegotiated his agreement, and the



Council's official statement regarding it is carried on page 7. The Council also supports the request that the General Accounting Office of the federal government conduct a thorough review of the Council's personnel policies and practices to further protect against this ever happening again.

Also in this issue are several pages of background information on the four major power and fish and wildlife initiatives the Council is involved in. Each and every one of these will likely have an impact on this region and its future economy and environment. Each will lead to numerous decisions the Council and others will be considering. I encourage you to read the backgrounders and contact our central office to obtain more information or learn how you can be kept informed as these initiatives progress. I believe the best decisions are those that grow out of the broadest public education and involvement. We want to hear from you. Please join us.

John H. Eckhart