

*July/August 1992*

# NORTHWEST ENERGY NEWS

Northwest Power Planning Council

*Volume 11, No. 4*



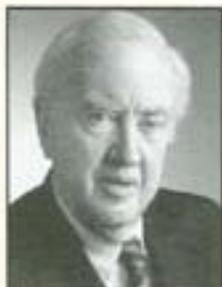
**Pushing the Wind**

# Who are you?



For more than 10 years, we've been making some assumptions about you, our readers. Now we'd like to see how close to the mark we've been. The issues we confront have become so much more complex, and the consequences of our decisions are so widespread that your participation is essential.

In my mind, the Council's most important obligation is to inform and involve Northwest citizens in energy and fish and wildlife decisions. Bringing more people to the table may not be the most efficient decision-making process, but I believe it is the most effective. Our decisions, particularly expensive ones, should reflect the values of the people we serve—YOU! Simply put, we need you now more than ever.



We'd like to know whether the information we offer in *Northwest Energy News* meets your needs. Does it help you participate in the decisions we make and actions we take?

Please take a few moments to fill out the enclosed postcard. We'll pay the postage—it could be one of our better investments.

*Ted Hallow*

**Fill out the card,  
we'll pay the postage.**

*This issue's cover illustration is by Stephen Sasser from a photo by Carlotta Collette.*

## CONTENTS

### 3 Learning From Los Angeles

The utilities that serve the city of angels stress conservation, innovation and cooperation.

### 8 Salmon Equity

The United States and Canada will renegotiate a 1985 treaty on salmon harvest, but it won't be easy.

### 12 Wind's Eastern Front

The challenge of wind development east of the Rockies.

### 19 Point of View: Elwood Patawa

Chairman "Woody" offers a tribal perspective of salmon and salmon politics.

### 25 Head Start for Salmon Recovery

Council responds quickly to protect salmon runs in 1992.

### 30 Born to be Wild

A recent trend in hatchery management encourages salmon to return to the wild, not to hatcheries.

### 33 Regional Roundup

### 37 Shorts

### 38 Calendar

Correction: In the last issue of *Northwest Energy News*, the Dave Johnston Plant near Glenrock, Wyoming, was incorrectly identified as the Centralia Coal Plant.

Note: The September/October 1992 issue of *Northwest Energy News* will be an overview of the 1992 salmon and steelhead program. The issue will be coming out in October. Watch your mailbox for it.



benefiting both its shareholders and its customers as it moves to implement the vision the two companies share.

"We think our customers and their communities want genuine environmental leadership and real environmental help," says Edison's John Bryson, "and we have special obligations to serve the community because of our utility franchise. Part of providing value and service to our customers is providing a keen environmental awareness. It will help us serve our customers better."

Born and raised in Portland, Oregon, Bryson went on to graduate with distinction from Stanford University and earn a law degree from the Yale Law School. While at Yale, he was a co-founder of the Natural Resources Defense Council, one of the nation's most influential environmental organizations.

From Yale, he returned briefly to Portland, where he served on the state's Energy Facilities Siting Council before being drafted to California to serve as chairman of the state's Water Resources Board. From 1979 to 1982, he was president of the California Public Utilities Commission. He was Edison's chief financial officer for five years before taking over the helm in 1990.

"In every survey we do," he maintains, "we find that the quality of life and the quality of the environment are things that people we serve value extremely highly. Here in

**These utilities intend to satisfy all their increases in electricity use between now and the turn of the century with energy savings.**

Southern California, there can't be any question that the poor air quality is an adverse aspect of life in these communities."

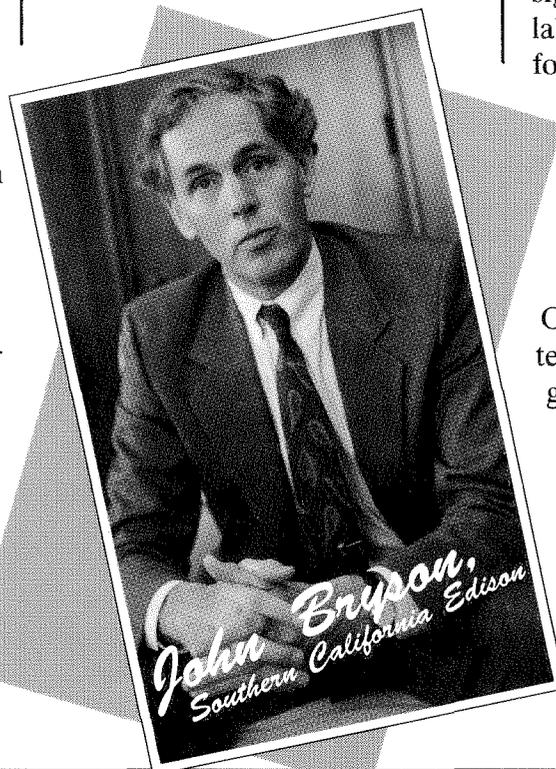
To combat that poor air quality, Edison joined the L.A. Department in becoming the first two utilities in the nation to announce plans to reduce their carbon dioxide emissions by 20 percent by the year 2010. Both companies are considering phasing out coal and oil as generating fuels, and adding costly emission

scrubbers and other technologies to their remaining power plants.

They have also negotiated with the Northwest's Bonneville Power Administration to exchange this region's hydropower with Southern California's thermal generated electricity. The California utilities will acquire the hydropower in the summer, when the dams are flushing water to aid salmon runs, and California's power needs and pollution are the greatest. In the winter, when the Northwest needs the power and the Southland's pollution is reduced, California will generate the energy to send back north.

In addition, like many utilities in the United States, the two L.A. companies are offering a varied collection of energy conservation programs. At Southern California Edison, the programs were designed through a statewide collaborative process that included four utilities and the state's conservation advocates. The Los Angeles Department designed its programs using the expertise of conservation consultants from the Pacific Northwest—Portland Energy Conservation, Inc., a nonprofit team that specializes in helping governments save energy.

The two L.A. utilities' combined energy savings goal of more than 3,000 megawatts over the next eight years is staggering, particularly to the Northwest, where a target of 1,500 megawatts *regionwide*



# Mid Life CRISIS

The Bonneville  
Power Administration  
faces the future.

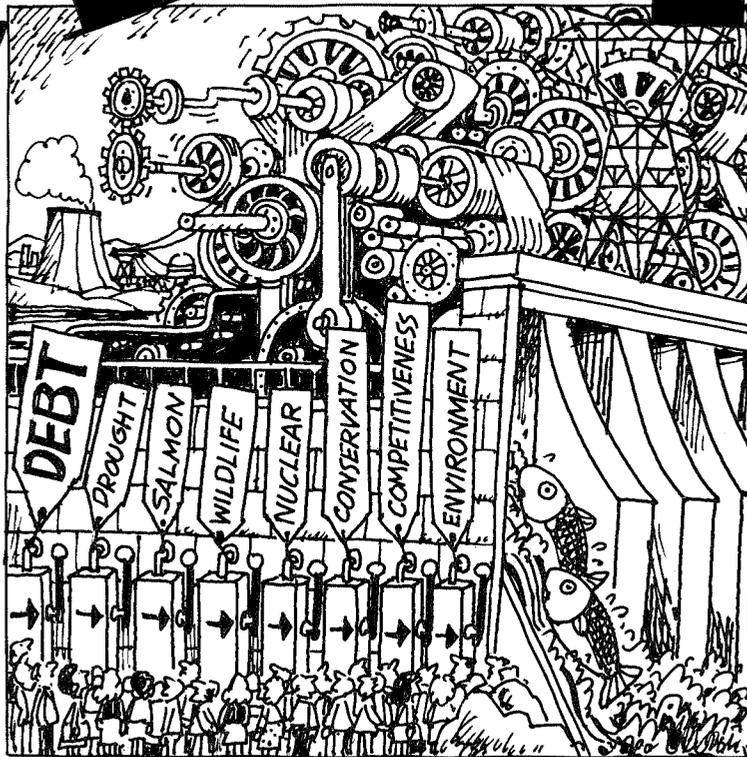
by John Harrison

**L**ike many 56-year-olds, the Bonneville Power Administration (BPA) is concerned about its future. Born among the public works projects of the New Deal, chief electricity supplier to the Northwest through its middle age, Bonneville today faces what could be its greatest challenge: avoiding retirement and remaining vital.

In a sense, that's the theme of the agency's current rate case. The rate case is a biennial process in which Bonneville negotiates with its customers the rates it charges for electricity. The current rate case began in July 1992, and new rates will go into effect on October 1, 1993.

It's a particularly difficult task this time because Bonneville's financial condition has been eroding for more than a year.

Bonneville had nearly \$1 billion in reserves in October 1991, the beginning of the current two-year



rate period, but expects to end the rate period with less than \$100 million. The agency budgeted \$70 million for short-term power purchases during the current fiscal year, but expects to spend \$280 million.

Drought and depressed worldwide prices for aluminum are the chief culprits. That's because most of Bonneville's power comes from dams, and the regionwide, six-year drought has reduced hydropower generation.

In addition, Bonneville's aluminum plant customers, which use huge amounts of electricity, have a variable rate based on the worldwide price of aluminum. When the price is low, as it is now, Bonneville doesn't receive as much from these customers as it does when

the price is higher. Thus, when aluminum prices are high, the variable rate works to the advantage of the region by boosting Bonneville's income.

In January, the agency proposed an 11.6-percent rate increase. But six months later, the estimate was up to 20 percent or higher.

"Clearly, we face a financial crisis that has serious economic repercussions for the entire Northwest," Bonneville Administrator Randall Hardy said at a news conference in April. "I am taking emergency measures to deal with it. This problem is being driven primarily by factors outside of BPA's control."

"What's at issue in this rate case has to do with the adequacy of the rates as designed to produce the revenue to cover our costs," says Steve Hickok, Bonneville's executive assistant administrator.

**B**ut Bonneville's customers say the major issue is Bonneville's competitiveness as a power wholesaler. The customers argue that unless Bonneville makes fundamental changes in the way it does business, its power will become so expensive that its customers will begin deserting to other suppliers — particularly, independent power producers who can provide low-cost power from natural gas-fired turbines.

In testimony prepared for the current rate case, the Joint Customers, an association of utilities and industries,<sup>1</sup> said: "We are concerned that BPA's current and anticipated rate increases are rapidly eroding the competitive edge of BPA's customers and that this will impair BPA's ability to make required payments to the Treasury and sustain funding to meet the objectives of BPA's programs." Bonneville's annual payment to the U.S. Treasury — \$700 million this year — to pay for the public investment in Columbia Basin dams, is due September 30.

### A history of challenges

In a sense, the current dilemma of short-term financial problems and long-term competitiveness comprises the fourth great challenge Bonneville has faced in its

<sup>1</sup>The Joint Customers include: Association of Public Agency Customers, Direct Service Industries, Non-generating Public Utilities, Northwest Irrigation Utilities, Pacific Northwest Generating Cooperative, PacifiCorp, Portland General Electric, Public Generating Pool, Public Power Council and Western Public Agencies Group.

history.

The first challenge, embodied in the Bonneville Project Act of 1937, was to electrify the empty country of the Northwest in the post-Depression era, a time when the Northwest had so much electricity from its big federal dams and so few people to use it.

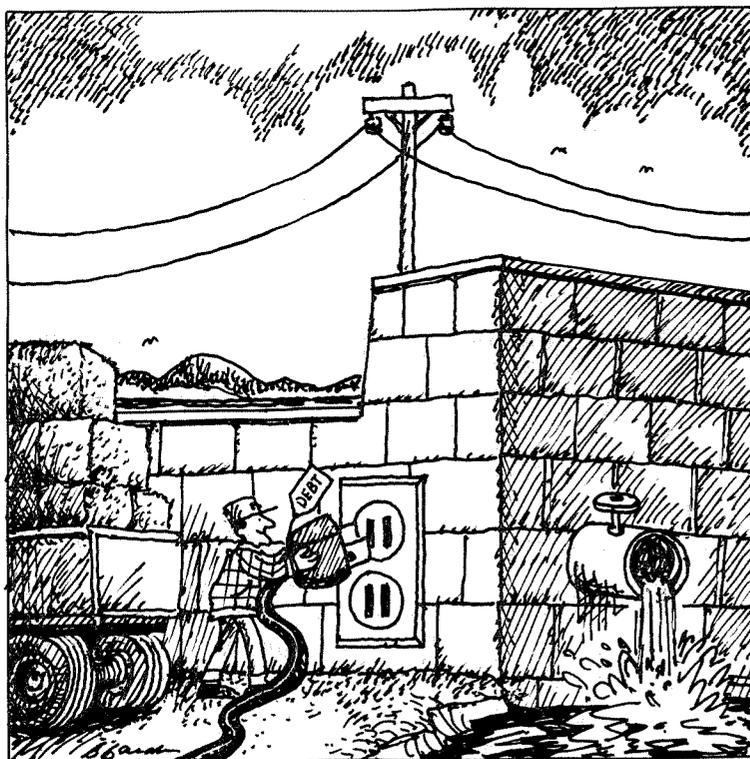
By the mid-1970s, the situation had reversed, and Bonneville faced a new challenge. The Northwest had plenty of people and an economy dependent on low-cost power, but demand for power was growing rapidly. Without new power supplies, demand soon would exceed Bonneville's supply.

Bonneville and its customers embarked on a costly — and unsuccessful — effort to build five nuclear power plants. Only one would be completed. Bonneville's power rates soon skyrocketed

about 600 percent to pay for them. The power marketer's rates had been steady for years before that, and have been stable or actually declining, when adjusted for inflation, since then.

**I**n 1980, Congress adjusted the region's focus back to low-cost power through the Pacific Northwest Electric Power Planning and Conservation Act. The Act authorized the four Northwest states to form the Northwest Power Planning Council, and it gave

**Bonneville's  
first challenge  
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Northwest.**



Bonneville a new challenge: meet future demand for power with a combination of resources — including new coal and nuclear plants, if necessary — but rely first on energy conservation and other low-cost, high-efficiency sources.

**T**he 1980 Act also directed Bonneville to protect and rebuild fish and wildlife populations that were damaged by dams. The Council was charged with developing the least-cost energy plan, and fish and wildlife program Bonneville would implement.

Today, Bonneville's fourth great challenge is two-fold: continue to meet its obligations under the Northwest Power Act and remain competitive with other power suppliers, particularly independent power producers who offer low-cost power from natural gas-fired turbines.

Can it be done?

Yes, says Bonneville's administrator, Randall Hardy.

Bonneville is "looking beyond the short-term emergency" through a competitiveness project the agency began last fall. It's a long-term effort to redefine the way Bonneville does business and become a leaner, more efficient power wholesaler. In essence, it's a business plan for the future.

"We have made this competitiveness project our highest priority for the coming decade," Hardy says.

**W**hile Bonneville and its customers differ over when Bonneville should implement this project — during the 1993-95 rate period or the 1995-97 rate period — the Northwest Power Planning Council agrees that Bonneville must become more efficient, but not at the expense of its Northwest Power Act obligations.

In a letter to Hardy in late April, after a day-long meeting where the Council discussed the rate case with representatives of Bonneville, utilities, industries and environmental groups, the Council urged Hardy to pursue savings

**By the mid-1970s, demand for power was growing rapidly.**

"...to ensure that programs are delivered as efficiently as possible." But the Council cautioned that program levels "...must be adequate to meet Bonneville's obligations under the Northwest Power Act."

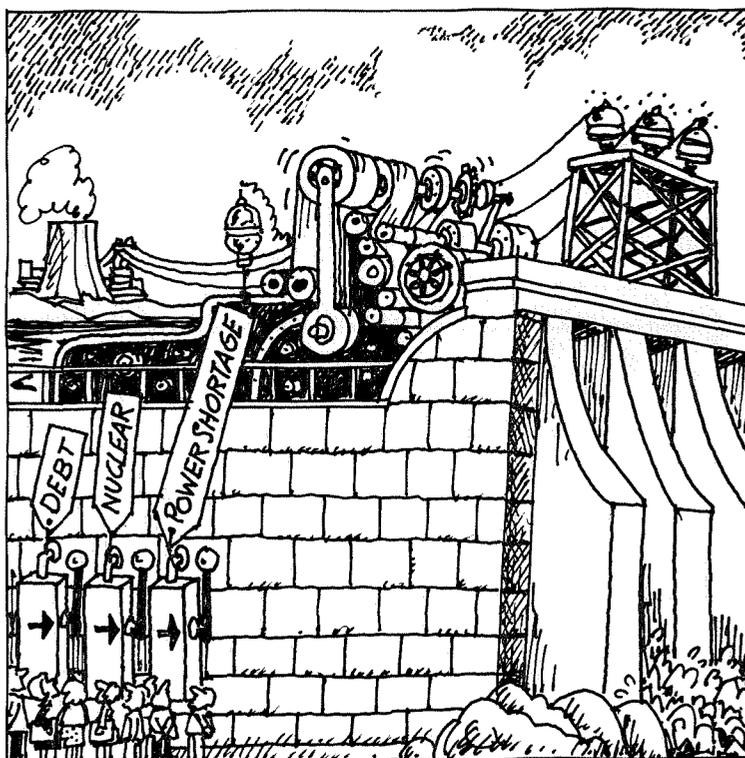
These are legal obligations and should not be considered discretionary spending, the Council wrote. These obligations include acquiring least-cost supplies of electricity, and protecting and enhancing fish and wildlife. "If you defer key programs now to keep the rate increase low," the Council wrote, "you may be inviting higher rate increases in the future."

#### The cost of competitiveness

It's no secret that people who have an interest in Bonneville — its customers, environmental groups, interested citizens — differ

over how the agency should spend ratepayers' money. But beyond pragmatic arguments over dollars and cents, competitiveness issues go to the heart of how Bonneville operates, its philosophy and what it's role should be in society.

"The biggest issue facing Bonneville is the need to make significant changes in its corporate culture to allow it to remain competitive in the years ahead," says John Carr, executive director of Direct Service Industries, Inc., an association of



large industries — primarily aluminum companies — that buy electricity directly from Bonneville. “The drought and the costly salmon recovery measures have forced Bonneville to face the financial difficulty it will continue to have in the future if it doesn’t make the transition into a lean, competitive agency.”

**F**or Northwest industries, particularly aluminum companies, this is not a good time for a rate increase, Carr stresses.

“Market conditions are very poor, not only for aluminum, but for other basic industries,” he says. “The competitive advantage that brought industry here over the last 50 years relies on reliable, inexpensive power.”

Glenn Vanselow agrees. He directs the Pacific Northwest Waterways Association, which represents ports, barge lines and other business interests that use the rivers, and also is spokesperson for the Columbia River Alliance, an association of businesses that use the river.

“I think the long-term health of Bonneville is extremely important,” Vanselow says. “Bonneville has been the source of power that has allowed economic development to prosper in the region. It also has been the source of funding for the (Council’s) fish

and wildlife programs. If Bonneville doesn’t stay healthy, then all of this is jeopardized.”

**B**onneville’s industrial customers aren’t the only ones concerned about a rate increase. Agriculture also is a major industry in the Northwest, and many farmers — from large corporate outfits to family-owned farms — are worried, too.

**In 1980,  
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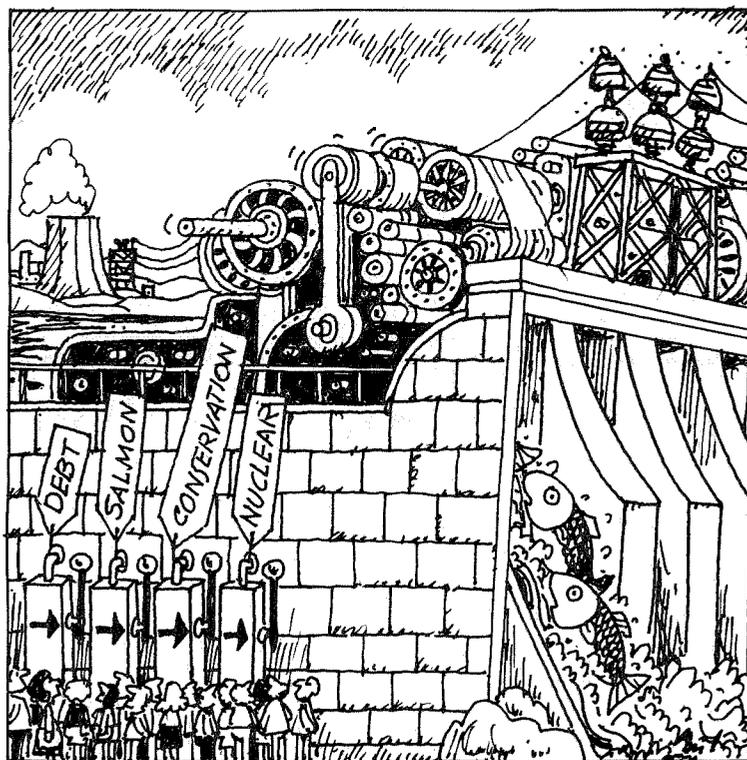
**“F**rom agriculture’s perspective, we are at the end of a line,” says Bruce Lovelin, executive director of Northwest Irrigation Utilities, which represents Bonneville’s customer utilities that sell power mainly to farms. “We can’t raise production costs as Bonneville raises its power rates. A rate increase has to come out of the bottom line. It erodes the economic viability of our industry.”

“The rate increase this time is devastating by itself,” says Bret Wilcox, president of Northwest Aluminum Company in The Dalles, Oregon. “If you add on everything else it will quickly become totally unbearable for everyone in the Northwest. At some point, Bonneville has to say, ‘we’re going to make fundamental changes in the way we do business.’ This is the best time to do

that because of the economic pressures Bonneville’s customers face. Failing to do this now will only create bigger problems in the future.”

**T**hat’s also important to Ken Canon, executive director of Industrial Customers of Northwest Utilities. His association represents 24 industries that buy power from public or investor-owned utilities, not directly from Bonneville.

“I think the major issue is the overall level of the rate increase. The cost of



electricity can mean a great deal to the profitability of industry," Canon says. "We are willing to meet Bonneville half way. We're willing to work with Bonneville to find a way to keep the rate increase down to 14 or 15 percent. But the other part of the bargain is for Bonneville to recognize its unique responsibility as the ultimate monopoly."

**B**onneville's utility customers also are concerned about the agency's future.

Bill Drummond, director of the Public Power Council, an association of Bonneville's public utility customers, says, "Right now, we are concerned about how Bonneville will stay competitive with the drought, the decline in [cash] reserves, the run-up in costs, the Treasury payment. There is the potential for an interim rate adjustment of 10 percent in 1994, and at least another 10 percent in 1995. And if you add on to that the proposed [federal] Btu tax, and possibly another 4 percent for accelerating the Treasury repayment, pretty soon you have raised rates 50 percent."

Fifty percent?

It's possible, in theory, and it would be devastating for public utilities and their customers, Drummond asserts.

If Bonneville's customers aren't competitive, then neither is Bonneville. It's a vicious circle. As rates spiral upward, Bonneville potentially loses customers. If Bonneville has fewer customers to pay for its conservation and fish and wildlife programs, then rates have to go up to maintain program levels.

**E**astern Washington Council member Tom Trulove calls this a "death-spiral scenario," and he says the threat is real.

"This is a management crisis. Bonneville simply can't keep taking on function after function after function," Trulove says.

What's the answer? In a word, change.

"Everyone likes the single-utility concept of Bonneville," Trulove says. "Even if Bonneville's rates were a little higher than other power suppliers, if people thought Bonneville was going to get some internal control, I think they'd be pretty forgiving and go with it. But, even if Bonneville's prices were less, if

there is not evidence of internal control, then they'll leave — just to protect themselves against future rate increases."

**O**ne of Bonneville's biggest customers thinks customers might leave, anyway.

"Generally, I agree with Tom, but I'm not sure we would pay a premium over and above other [power] sources just to buy from Bonneville," says Bruce Bosch, general manager of Clark Public Utilities in Vancouver, Washington. With more than 100,000 customers, Clark is one of Bonneville's biggest utility customers.

## **Bonneville's Rate Increase Causes Concern**

**A**s this edition of Northwest Energy News went to press, Bonneville Administrator Randy Hardy announced a 14 percent to 16 percent rate increase.

Bonneville cut \$268 million from its initial proposal in January, Administrator Randy Hardy said, including \$28 million from the fish and wildlife budget and \$55 million from the conservation budget.

Power Planning Council members expressed concern that Bonneville may not be able to meet its obligations under the Northwest Power Act.

"No one likes a rate increase, but this one was inevitable considering the growing pressures on Bonneville," said Council Chairman Stan Grace of Montana. "I am concerned about the effect on the region's ratepayers and on Bonneville's ongoing ability to underwrite our fish and wildlife programs. We all have to help Bonneville find better and cheaper ways to provide services."

Ted Hallock, an Oregon Council member and chairman of the Council's fish and wildlife committee, said he was "deeply concerned," adding: "It appears Bonneville may not be able to fully fund measures to rebuild fish and wildlife populations. We could see more fish populations pushed to the brink of extinction as a result."

**T**his is an industry that is rapidly becoming more deregulated and more competitive," Bosch says. "It's not the monopolistic industry it used to be. Bonneville needs to be able to market its power at a rate that is equal to or less than power from other sources."

Bonneville's Hickok, however, doesn't think utilities will flee the Bonneville fold.

"How many utilities can do that right now?" Hickok asks. "Well, none. There are serious competitiveness issues, but they cannot be visited literally overnight."

Bosch also accuses the agency of squandering a lot of ratepayer money. Bonneville should scrutinize its fish and wildlife program and pay for only those measures that bring back fish, he says, and reduce the overhead — estimated at 35-40 percent — of its energy

conservation programs. No cost-conscious, profitable business operates with a 40-percent overhead, he argues.

**T**he Pacific Northwest Utilities Conference Committee (PNUCC) shares the concern that without business-like operations, Bonneville will slide rapidly into irrelevancy. The committee is a planning agency that represents Bonneville's three major customer groups — public utilities, investor-owned utilities and industries that purchase power directly from Bonneville.

"We don't do rate cases. We don't get involved in who pays. For us, the rate case itself is not a very important issue," says the committee's Executive Director Al Wright. "I think the big issue is Bonneville's program-by-program review. Is the federal government,

in the form of Bonneville, the right entity? And if it is the right entity, is it configured correctly to be the centerpiece of our energy future?"

Wright describes Bonneville as a government agency with two personalities. One is a business personality; Bonneville's job is to provide federal electricity as inexpensively as possible. The other personality reflects Bonneville's social responsibilities; Bonneville exists to serve society.

"Those aren't necessarily compatible personalities," Wright says. "The things you do as a business person to sell energy at the lowest cost are not necessarily the things you do as a government agency for social good."

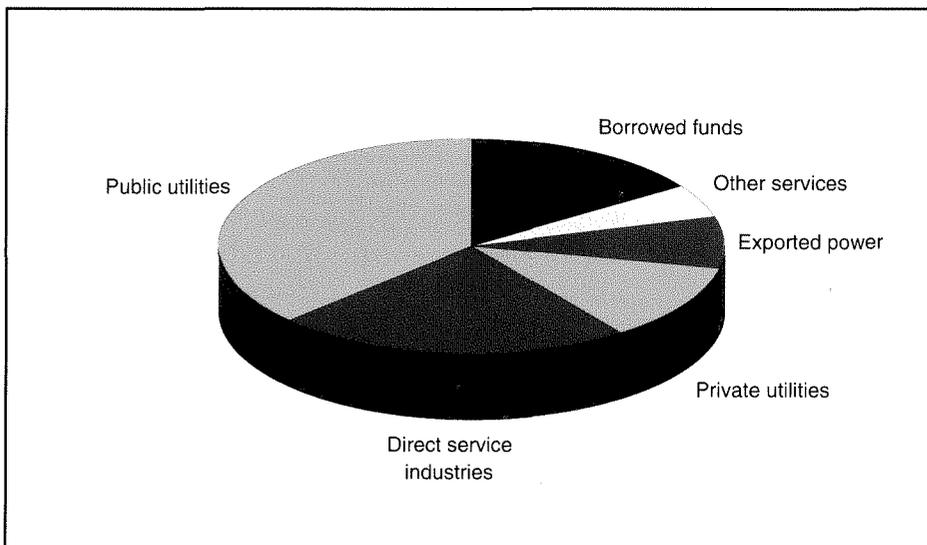
**W**right suggests there is a point where rising energy costs meet the limit of ratepayers' tolerance for financing the social good.

In short, Bonneville needs greater financial discipline, he says.

That's also an important point to Ron Wilkerson, director of the Western Montana Electric Generating and Transmission Cooperative, Inc. The cooperative includes six public utilities that buy power from Bonneville.

"My utilities have a general feeling that Bonneville is pricing itself out of business," Wilkerson says. "I think Bonneville and the [Power Planning] Council are guilty of spending a lot of money [on fish and wildlife improvements] without the science to back it up."

## Where Bonneville's money comes from



### Fulfilling federal mandates

While some Bonneville customers pressure the agency to cut its costs, redefine itself, become more competitive and generally improve its efficiency — raising the possibility of customers deserting in droves if this is not done — other customers worry that Bonneville will panic and desert its obligations to conserve energy and protect fish and wildlife.

One is Ted Strong, who directs the Columbia River Inter-Tribal Fish Commission, an association of the four Columbia Basin tribes that have fishing rights guaranteed by treaties signed with the United States in 1855.

“Cutting BPA’s fish and wildlife budget for 1994 and 1995 is inconsistent with the Power Planning Council’s salmon strategy, the accelerated efforts needed to respond to the Endangered Species Act and the federal government’s commitments to Indian tribes,” Strong says.

Bob Tuck also is concerned. A biologist, Tuck represented the Yakima Indian Nation last summer during Bonneville’s Programs in Perspective, a public review of programs that is the first step in rate-making. He says Bonneville should not defer spending on fish and wildlife in response to the current financial crisis. In es-

sence, this would amount to keeping rates down at the expense of tribal concerns over rebuilding fish and wildlife populations, he argues.

“The most basic outcome of the rate case is the long-term ability of BPA to meet its financial obligations,” Tuck says. “That means its obligations to rebuild the fish and wildlife resources as mandated by the Northwest Power Act, and its fiduciary re-

**Bonneville’s challenge now is to continue to meet its obligations and remain competitive.**

sponsibility to the tribes — even in the absence of the Act — because of its treaty obligations as an agent of the United States government.

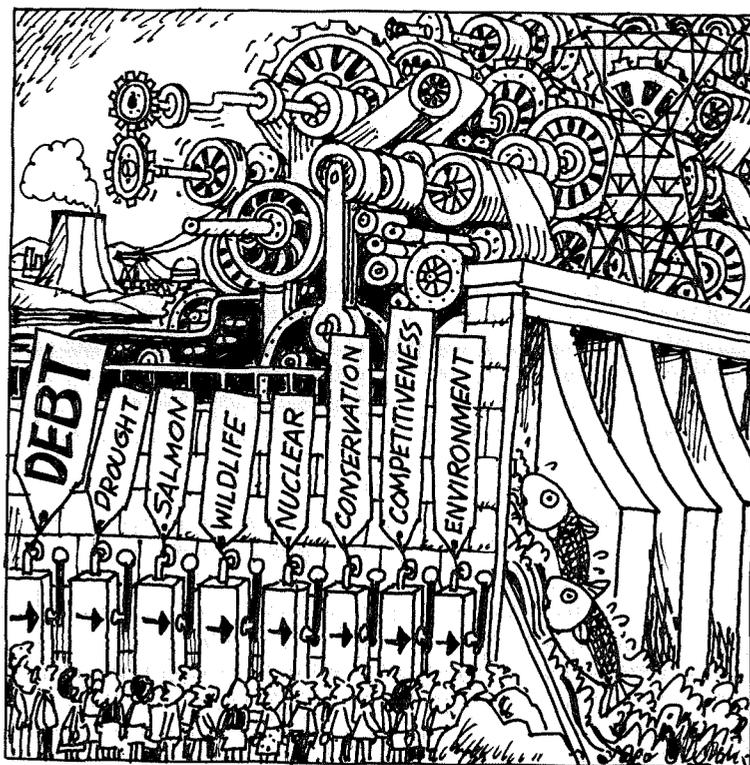
“Bonneville does not have the prerogative of crying poverty and going to the agencies and tribes and saying, ‘we don’t have enough funds to meet our congressionally mandated obligations.’ Bonneville did not implement modest rate increases through the 1980s, and now we are faced with a large rate hike that will be a considerable inconvenience to the Pacific Northwest.”

This also concerns K.C. Golden, executive director of the Seattle-based Northwest Conservation Act Coalition. The Coalition is a nationwide alliance of environmental, consumer and

other public interest groups and utilities. The group monitors implementation of the Northwest Power Act.

“The issues that have become the major issues in the current rate case should not be the major issues,” Golden asserts. “These include the issue of whether Bonneville is going to live up to its responsibilities under the [Northwest Power] Act. The issue really is how Bonneville recovers the money to meet its obligations under the Act, not whether.”

Golden says Bonneville’s Programs



in Perspective process puts too much emphasis on major policy and planning issues and not enough on programs.

**“I**n the Council’s process [the fish and wildlife program and regional electric power plan], we resolve the major policy and planning issues,” he says. “Is all of that now up for grabs in the rate case, a process that is dominated by those who have the most money, guns and lawyers? If the answer is yes, we have a big problem.”

For Golden, it’s a rhetorical question. “I feel very strongly that the entire history of regional cooperation that helped us emerge from the WPPSS [nuclear power plants] era with a good plan is at stake,” he said. “I think that if Bonneville cuts back on its conservation and fish and wildlife

programs and deludes itself into thinking it can accomplish the same goals with dramatically less money, frankly we’ll all lose.”

Golden agrees with those who say Bonneville can streamline its operations, that there are efficiencies to be gained in the way Bonneville does business. But he would take the agency beyond program efficiencies. He says Bonneville needs to send new signals to its customers and to the region. He would have Bonneville price electricity closer to its true cost by eliminating certain incentives now embodied in rates. For example, he says Bonneville should eliminate the low rate offered to utilities that sell power to irrigators.

In general, environmental groups don’t want Bonneville to go out of business, but they want

the agency to live up to its obligations and not be intimidated by doomsday scenarios.

“We feel that it is not appropriate to use the rate case to amend the fish and wildlife program,” says Dan Rohlf, an attorney for the Northwest Environmental Defense Center. The Center is at Lewis and Clark College’s Northwestern School of Law in Portland.

**“T**he Northwest Power Act is clear,” he says. “It requires the Council to come up with the program and for Bonneville to act in a manner consistent with the program. Compliance with the Council’s fish and wildlife program is a cost Bonneville must bear. Bonneville can’t pick and choose among the programs to decide which it will fund.”

## Advice to the Administrator

During its current rate-setting process, the Bonneville Power Administration (BPA) has called often for public comment. In recent interviews with leaders in the Northwest’s energy community, we heard the following advice to Bonneville’s Administrator Randall Hardy:

**From Bruce Bosch**, general manager, Clark Public Utilities

“With some real strong leadership, Bonneville can encourage conservation and produce cost-effective fish and wildlife programs. This is not a difficult thing to do.”

**From Kenneth Canon**, executive director, Industrial Customers of Northwest Utilities

“Find better ways to deliver conservation programs and resource acquisition programs generally. Establish priorities for maintenance of the transmission system, and for the fish and wildlife program. Fund the highest priorities.”

**From Bill Drummond**, manager, the Public Power Council

“We are now at a time when we have to begin to say no. Bonneville can no longer please everyone all the time.”

**From K.C. Golden**, executive director, Northwest Conservation Act Coalition

“Collect revenues sufficient to live up to your obligations under the Northwest Power Act. There is this notion that we all have to share the pain, but conservation isn’t part of the pain, conservation is the medicine.”

**From Bruce Lovelin**, executive director, Northwest Irrigation Utilities

“Bonneville’s budget exceeds the ability of its ratepayers to provide that level of revenue. He has to pare his company back, and he has to bring about a fundamental change to do things differently.”

**G**utting Bonneville's fish and wildlife program now would push certain salmon stocks closer to extinction and probably encourage new petitions to protect those fish under the federal Endangered Species Act, Rohlf said.

Environmentalists spin their own doomsday scenario: fish and wildlife programs are cut; fish runs continue to decline; endangered species petitions are filed; utilities and environmentalists file lawsuits; salmon recovery bogs down; the Northwest loses control of the salmon recovery effort to federal courts; fish die; and power rates go up to pay for court-ordered fish and wildlife protection.

"Simply put, investing in fish and wildlife now will mean lower costs for all of us in the future," Rohlf says. "The way you keep the rate increase down is to start

looking really carefully at the subsidy programs that have been ingrained in Bonneville's rate structure forever."

He also points to the irrigation discount, which costs Bonneville about \$13 million a year. Eliminating the discount would put more water in rivers, benefit fish and create more hydropower, he says.

But Lovelin of Northwest Irrigation Utilities says the discount helps farmers stay in business because the prices farmers are paid for their products are lower today, when adjusted for inflation, than they have been in decades.

#### Defining the future

Beyond the current rate case, Bonneville, its customers, environmental groups, utilities and a Congressional task force<sup>2</sup> are

looking at Bonneville's future. Bonneville already has begun to change the way it does business. It has initiated cost-cutting measures that should reduce its overhead at least in the short term. Last February, in announcing its strategic plan to change the agency, Bonneville reported:

"Change will be defined by a new business concept. BPA will renew itself through three approaches. First, it will look for greater efficiencies in existing pro-

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<sup>2</sup>In late April, Oregon Congressman Peter DeFazio's BPA Task Force conducted its first hearing to discuss Bonneville's borrowing authority, program budgets, employee levels and other issues regarding the way Bonneville operates. DeFazio discussed the task force and its work in the May/June issue of Northwest Energy News.

## Advice to the Administrator

**From Robert V. Myers**, senior vice president for operations, Puget Sound Power & Light Company

"Bonneville needs to provide people with the incentive to do the right thing. Tiered rates would be a way to begin to cause a financial incentive for conservation."

**From Dan Rohlf**, attorney, Northwest Environmental Defense Center

"Bonneville can increase its revenues, keep its rate increase under control and also do good for the environment. But that will require Bonneville to put everything on the table, and that includes its pet little subsidies — particularly the irrigation subsidy."

**From Ted Strong**, executive director, Columbia River Inter-Tribal Fish Commission

"Like all agencies of the federal government, BPA has trust obligations it must fulfill when dealing with tribal fishery management issues. BPA must not overlook its trust responsibilities, which are independent of regional economic considerations."

**From Bob Tuck**, consulting biologist, Confederated Tribes and Bands of the Yakima Indian Nation

"My bottom-line advice is that Randy Hardy has to mold BPA into a more open organization that will implement the programs adopted by the Power Planning Council."

**From Ron Wilkerson**, manager, Western Montana Electric Generating and Transmission Cooperative, Inc.

"He's on the right track in trying to adjust the organization to act more like a private business. Everybody loses if Bonneville doesn't survive."

**From Al Wright**, executive director, Pacific Northwest Utilities Conference Committee

"First, Bonneville needs to restructure its financing. Second, just make [the Treasury] repayment. Don't have this silliness about 95.6 percent probability, or whatever it is."

cesses, products and services. Second, it will look for added value from new products and services. And third, given the new mix, BPA will take a hard look at what needs to be cut out.”

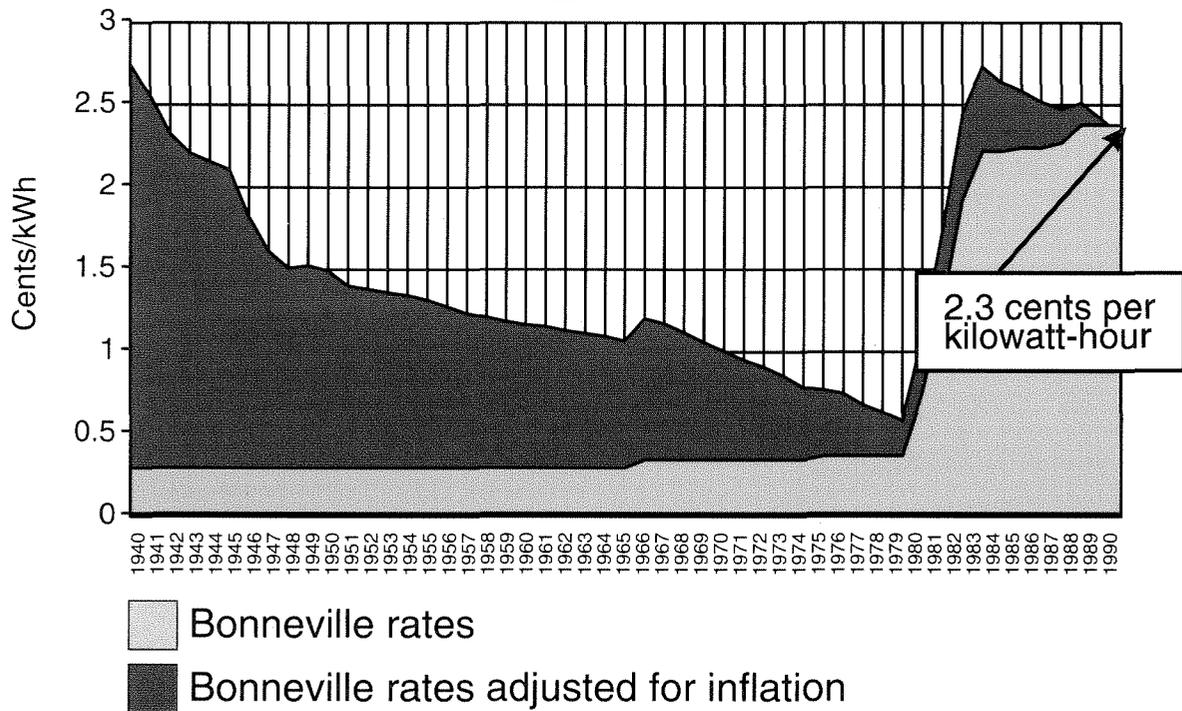
**B**onneville’s Hickok says the agency understands that its customers are positioning themselves to operate efficiently in the future. He says Bonneville is doing the same. But he reiterates that the current rate case is not the place to solve long-term issues. The focus now, he says, should be on solving the short-term financial crisis.

“As we think about how to climb out of this financial hole, we realize we can’t climb out quite as fast and keep everything quite on the same track as they were once on,” he says. “In the course of making this adjustment, all the programs for 1994 and 1995 are going to get cut, but none of them is going to be gutted. There will be delays and deferrals, and we’ll probably pick up some efficiency improvements — there’s nothing like necessity to mother some efficiency invention.”

Hickok acknowledges that Bonneville customers want the agency to move faster on its competitiveness project.

“**T**hey say to us, ‘you can’t continue to do things the way you are; you have to make fundamental change, and you have to make it yesterday.’ Well, in order to get the current rate case back down to 11 percent, you are talking about fundamental change, only it would be of the cut, tear, slash and burn variety, and it wouldn’t be constructive,” he said. “We understand the impatience. We understand the call for fundamental change. We also understand that’s being washed over by a tidal wave of concern about this short-term financial situation. We will make all possible and appropriate responses to that short-term problem in order to get the rate increase down as far as we can without crippling us.”

## Bonneville’s power rates



# How Bonneville Sets Its Electricity Rates

**B**onneville rates are set for two fiscal years at a time. For example, October 1, 1993 to September 30, 1995. Ratemaking begins 18 months before the rate goes into effect. The current rate case began in July 1992.

**Three major factors are considered when the Bonneville Power Administration sets its rates every two years:**

1. The estimated cost to operate its programs.
2. Estimated income from power sales and from transmission of power over Bonneville's lines.
3. Bonneville's financial policies, such as the level of financial reserves the agency wishes to maintain.

**Similarly, Bonneville has three goals for the ratemaking process:**

1. Limit the number of issues that are discussed.
2. Use informal workshops to raise and clarify issues before the formal rate hearings begin.
3. Improve everyone's understanding of, and access to, the computer modeling that Bonneville uses in developing rates.

**At the request of its customers, Bonneville simplified its ratemaking process in 1988. Here's how the current ratemaking process proceeded:**

- ◆ In July 1992, Bonneville conducted public meetings around the region at which customers and other interested citizens reviewed draft budgets for the agency's key programs. These included fish and wildlife recovery efforts, the resource acquisition program, the financial plan, the operation and maintenance plan, and the transmission system development plan. Participants recommended funding levels and priorities. This process is called Programs in Perspective. It lasted through the summer.
- ◆ In September, Bonneville considered the recommendations from Programs in Perspective and prepared final versions of the plans and programs.
- ◆ In October, one year before the new rates go into effect, the formal rate case began. An administrative law judge was appointed to preside. Bonneville conducted public workshops around the region to discuss its plans and programs and the results of the Programs in Perspective process. Bonneville and its customers began informal negotiations in an attempt to reach agreement on the rate increase.
- ◆ In January, Bonneville published its initial rate proposal in the Federal Register.
- ◆ In March, "parties to the rate case" filed their briefs with the hearings officer. Parties included Bonneville customers, public utility commissions, and other agencies, groups or individuals who have specific interests in the rate case and are granted party status by the hearings officer. The current rate case has about 30 parties.
- ◆ In April, Bonneville and parties to the rate case made a second attempt at negotiating a settlement.
- ◆ Then, the public comment period closed, and the parties reviewed comments and filed rebuttals with the hearings officer. The rate case assumed the air of a court trial, and parties were permitted to cross-examine each other before the hearings officer in May.
- ◆ The rate case schedule called for Bonneville Administrator Randall Hardy to file a draft version of his final decision, known as the Record of Decision, on June 30.
- ◆ Hardy is scheduled to release his final Record of Decision on July 28. Bonneville is scheduled to submit its final rate proposal to the Federal Energy Regulatory Commission on August 2. The Commission will review the rate proposal to be sure it is adequate to meet Bonneville's obligations. The Commission can approve or reject — but not modify — the rate proposal.
- ◆ With Federal Energy Regulatory Commission approval, the new rates will go into effect on October 1, 1993.

—JH

# Recipes FOR SALMON RECOVERY

Ingredients are the same, but proportions vary.

by John Harrison

There are four main ingredients in the salmon recovery recipe: harvest, hydropower, hatcheries and habitat, says Rollie Schmitt, Northwest regional director of the National Marine Fisheries Service.

Any recovery plan for Columbia River Basin salmon must address these so-called "four Hs," Schmitt told the Northwest Power Planning Council at its June meeting in Bellevue, Washington. The Fisheries Service is developing a recovery plan for Snake River salmon that have been listed under the federal Endangered Species Act. At the same time, the Council has accelerated its efforts to improve all Columbia Basin salmon runs. Last September the Council amended its Strategy for Salmon into the Columbia River Basin Fish and Wildlife Program.

The strategy includes more than 100 new actions aimed at improving all phases of the salmon life cycle. If it is successful over

## Hydropower



addressed the impact of the "four Hs" on Snake River salmon this year in a series of biological opinions.

Schmitt noted that the recovery team

and the Council take different approaches to salmon recovery, based on differing legal mandates. The recovery team follows the Endangered Species Act, which directs recovery plans specifically at the listed stocks. The Council has a broader mandate under the Northwest Power Act of 1980 to plan for the improvement of all fish and wildlife in the Columbia River Basin, including endangered or threatened species.

time, it may obviate the need for future Endangered Species Act recovery plans for Columbia Basin salmon. Schmitt said it is critical that the Council and the Fisheries Service continue to rely on each other for ideas and expertise. "Your Strategy for Salmon is practically the framework for improvement of all Snake and Columbia River salmon," Schmitt said. "The reason your work is so important is that you focus on the key elements — the 'four Hs' — of salmon restoration."

"Our remedies may follow the very same recipe, but I think we certainly will use different proportions," Schmitt said. For example, he said a biological opinion on river operations issued by the Fisheries Service in May called for higher Columbia River flows in July than the Coun-

A team of experts appointed by the Fisheries Service expects to complete its recommendation for a recovery plan for Snake River salmon later this year. In the meantime, the Fisheries Service

and the Council take different approaches to salmon recovery, based on differing legal mandates. The recovery team follows the Endangered Species Act, which directs recovery plans specifically at the listed stocks. The Council has a broader mandate under the Northwest Power Act of 1980 to plan for the improvement of all fish and wildlife in the Columbia River Basin, including endangered or threatened species.

For example, he said a biological opinion on river operations issued by the Fisheries Service in May called for higher Columbia River flows in July than the Coun-

cil called for in its salmon strategy. The Fisheries Service also called for greater water releases from Dworshak Dam to boost Snake River flows this summer.

"We asked for spring flows consistent with the Council's salmon strategy, but the summer flow requirement is intended to provide additional protection for Snake River fall chinook," Schmitt said. Only about 500 adult Snake River fall chinook returned to spawn naturally in 1992, but that is up from 78 in 1991. "We're discovering there are very few short-term things you can do, and flow is the most significant thing you can do in the short term."

He said the Fisheries Service will continue to work cooperatively with the Council and its public processes for guidance on salmon recovery.

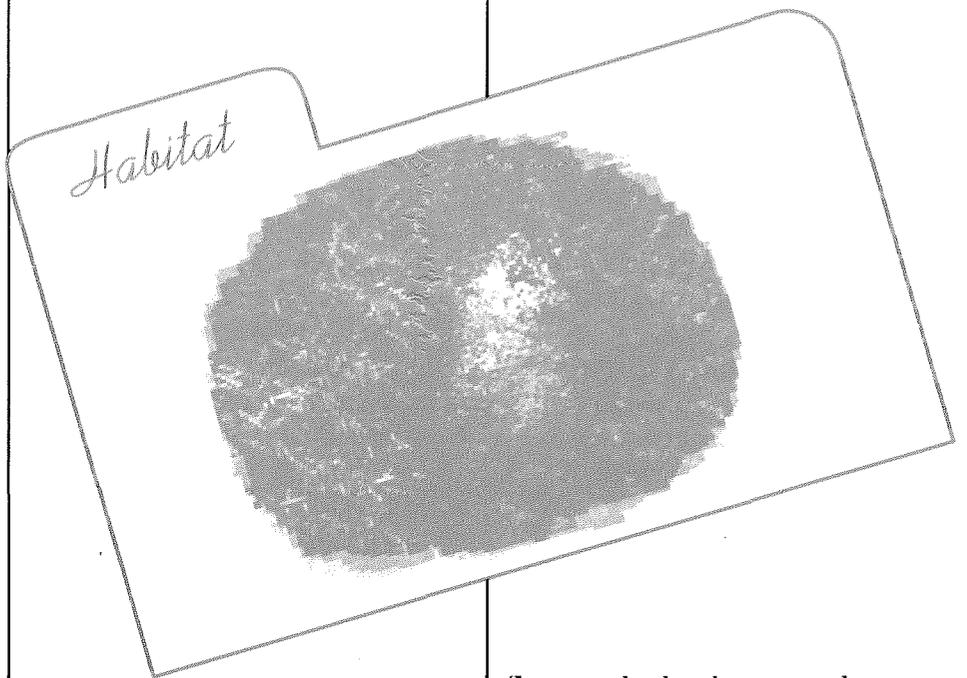
In other salmon-related matters at the Bellevue meeting, Schmitt discussed:

### Drought

"Regardless of what you may see outside today, I'm very concerned about the summer," he said on that rainy June day. "We have tremendous runoff occurring right now. I'm very concerned that it is flushing our systems dry and that we will face another drought in midsummer. Don't be lulled asleep by the wet conditions we're seeing."

### Jeopardy vs. no-jeopardy

While the recovery plan is being written, the Endangered Species Act requires the Fisheries



Service to consult with other agencies about potential impacts on the listed species because of agency activities. These consultations lead to formal biological opinions by the Fisheries Service about whether these impacts can be expected to further jeopardize the species. In the event of a jeopardy opinion, the Fisheries Service proposes so-called "reasonable and prudent alternatives." The final decision is made by the Secretary of Commerce, who oversees the Fisheries Service.

In 1993, the Fisheries Service issued biological opinions on the impacts of hatcheries, harvest and hydropower operations. The hydropower operations opinion in May probably was the most controversial because the jeopardy recommendation from Schmitt's office was changed to no-jeopardy in Washington, D.C.

Schmitt explained: "We submitted the biological opinion as jeopardy. We attached to it, as required, the reasonable and prudent

flows and other issues, and we submitted it as a draft. The action agencies [the U.S. Army Corps of Engineers, Bureau of Reclamation and Bonneville Power Administration] chose to agree with the reasonable and prudent alternatives, and therefore it went from jeopardy to no-jeopardy. Not a drop of water was changed in the biological opinion from jeopardy to no-jeopardy."

### Canadian issues

Some Columbia Basin salmon spawn in Canada, particularly summer chinook salmon in the Okanogan River and its tributaries. The practice of introducing hatchery-raised juvenile fish into streams to rebuild wild salmon populations is controversial in the United States because of potential genetic impacts from mixing hatchery fish with wild fish. Getting Canada to go along with this practice — it's called supplementation — for Okanogan summer chinook may be politically as well as biologically difficult, Schmitt said.

"If supplementation is part of the recovery plan for summer chinook, I think you wouldn't have any problem in the [U.S.] process. We'd just put it right in the plan. But it would take some interesting footwork to collaboratively work with the Canadians. They aren't mandated to do it, and it would be curious to see what they would expect out of the bargain."

### Harvest

Fishers in Alaska and Canada catch Snake River chinook salmon, as well as other Columbia Basin salmon, and imposing a conservation standard on those fisheries has been difficult. This year the United States and Canada renegotiated a salmon conservation treaty they signed in 1985. In June, the two countries agreed on further harvest reductions to divide the catch of Canadian Fraser River sockeye and protect American coho and chinook. Harvest is difficult to regulate when fish cross international borders, Schmitten said.

"The Canadians take whatever they feel is allowed under the treaty," Schmitten said. "The people I have to crank down on are the U.S. harvesters, and we'll crank down on them as far as we have to go to see improvements. We're approaching the Canadians with a carrot. We tried a stick, but it didn't work very well. The carrot would be [a West Coast program to]

enhance each other's stocks. That may be as bold and imaginative as paying to do some work in Canada."

Meanwhile, the Fisheries Service conducted a separate consultation on Alaska fisheries this year and arrived at an agreement to increase protection of Columbia Basin fish.

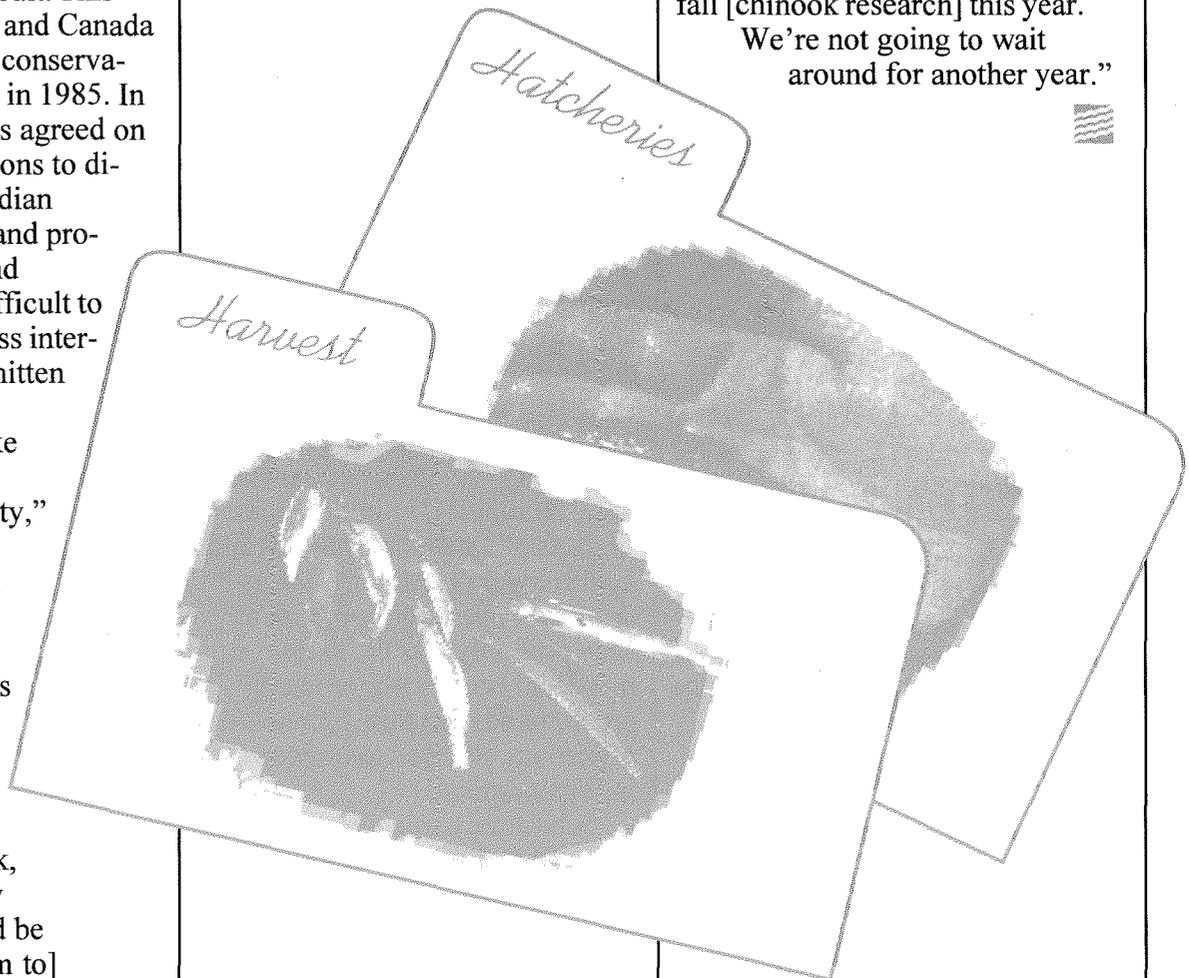
### Science

One controversy in the Columbia Basin salmon recovery effort — one of many controversies — concerns the lack of scientific knowledge about salmon. The Council's salmon strategy calls for research into key areas of uncer-

tainty and for independent scientific evaluation of recovery actions. In the meantime, according to the strategy, salmon recovery should proceed on the basis of "adaptive management," which means basing actions on the best available science and then adapting as needed when better information becomes available. It's a controversy that Schmitten finds particularly frustrating.

"We just don't have enough science," he said. "We weren't prepared for this. Relying on 1981 data is embarrassing. There should be a lot of shame passed out if we don't do better in the near future. We're attempting both spring/summer [chinook research] and fall [chinook research] this year.

We're not going to wait around for another year."



# When the **Elephant's** Gone

Portland General Electric adjusts to life without the Trojan nuclear plant.

by Linda Gist

**T**wo utility executives sit on opposite sides of the Willamette River in Portland. Both are trying to change long-entrenched corporate cultures. Both have crushing financial pressures on their organizations. Both say their institutions must become more competitive, must change to survive in today's electricity marketplace.

Ken Harrison, president and chief executive officer of Portland General Corporation, the holding company of Portland General Electric, has been chanting the "more competitive" cheer longer than Randall Hardy, Bonneville Power administrator. So what advice would Harrison give Hardy about altering the course of an organization, changing the corporate culture of a large electric utility?

Harrison sits in his 17th floor office on the west side of the Willamette River. He has a sweeping corner view of the city, the river, the Cascade Mountains. Unconsciously, he rolls his chair farther away from his interviewer,

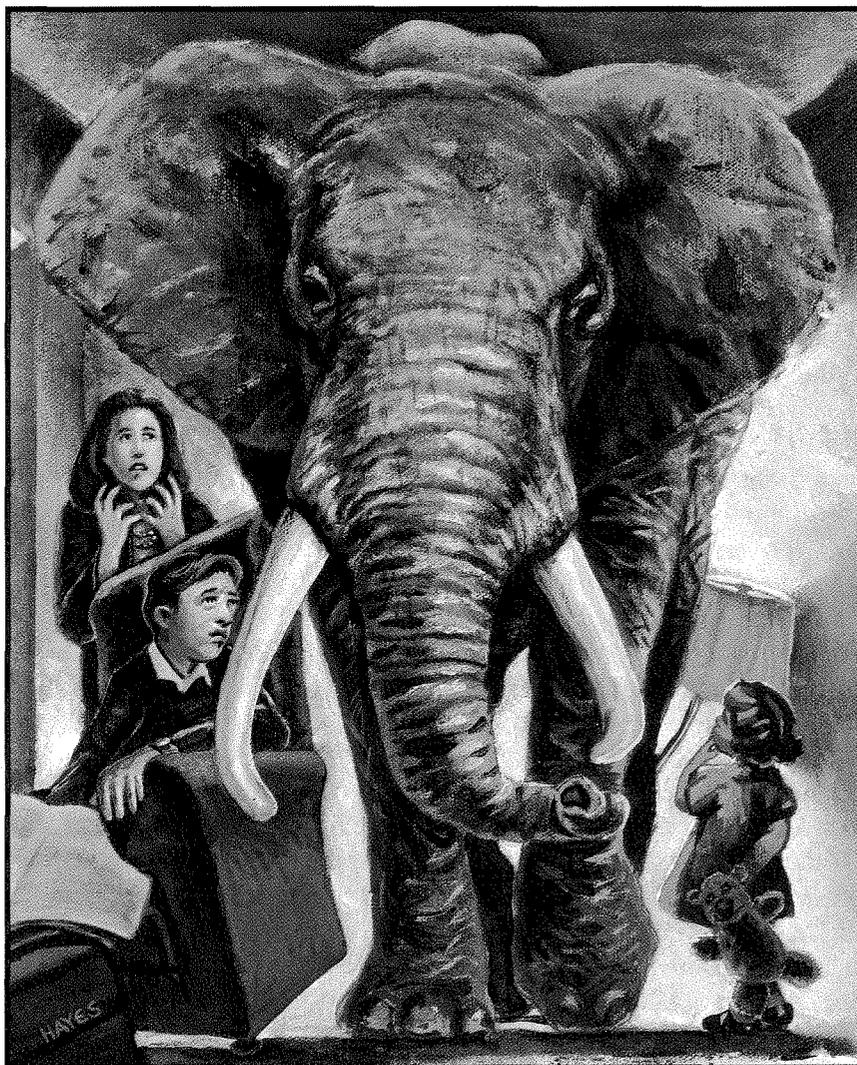


Illustration by Stephen Hayes

putting more polished tabletop between them.

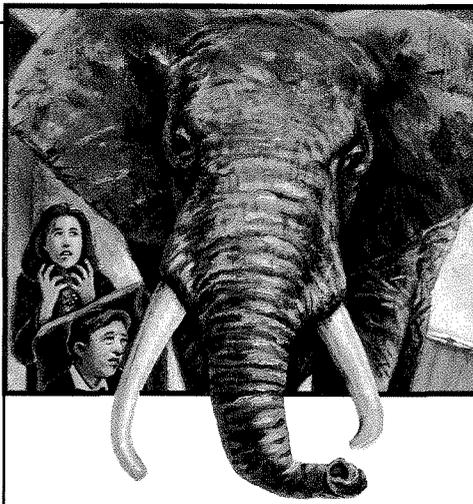
"I would rather stay away from this one," Harrison responds after a pause. "You have a huge organization being pulled and pushed by economic considerations, political considerations, different vested interests. Large organizations don't just change. They don't change easily; they don't change fast."

He mentions civil service issues and Congress. "I think his [Hardy's] job is more complicated than mine."

**H**arrison's utility is in the midst of a corporate change every bit as revolutionary as the Bonneville Power Administration's. Although Bonneville, as a federal agency with a huge debt to the U.S. Treasury and potentially the biggest rate increase in 10 years, has received far more public attention in the last five months.

Portland General Electric announced on January 4, 1993 that it was closing down its Trojan nuclear power plant for good. It was front page, banner headline news. Within a week of that announcement, the utility seemed to disappear off the radar screens of protesters, reporters and editors. And that's just fine with Ken Harrison and most of the people who work for him.

Today, talking to PGE employees about Trojan brings to mind the substance abuse television commercial with the elephant in the living room. The voice on the screen confides that an alcoholic in the family is like living with an elephant in the living



At PGE you  
kept bumping  
into the  
cooling tower  
in the living  
room.

room. Family members try to go about their daily routines, but they keep bumping into the elephant in the living room. At PGE, no matter what your job was, you kept bumping into the cooling tower in the living room.

"I just want to get to the point where 'PGE' is not always followed with 'comma, owner of the much-troubled Trojan nuclear power plant, comma,'" says John Esler, a government affairs specialist for the utility.

Now the elephant is gone. "We have just ended an era and started a new one," Harrison told an audience of utility executives last February. "We just ended a nuclear era for our company. For the last 17 years, we have been a company in which virtually everything we did, thought or said was dominated by Trojan. A world

where our financial outcomes, regulatory dealings, political perception and public perception were dominated by nuclear issues."

**T**rojan certainly dominated Harrison's goal of becoming more competitive. "The effect of Trojan on us as a company is almost impossible for me to fully appreciate," he says now. "We've been doing many of the things we needed to do to make this transition. In an effort to be more competitive, we would restructure, find ways to do the rest of our business more efficiently, do it smarter, do it with fewer people. We'd save 100 people doing things smarter in the rest of the company, and we would have to hire an additional 150 people on the nuclear side of it."

When Trojan was designed, it was expected to operate with 100 to 150 people. When Portland General announced the closure, there were more than 1,200 people working at the plant in Rainier, Oregon. Understandably, those people whose jobs have been eliminated in the last six months or who might be out of a job in the next year have a predictable and unanimous personal view of the elephant and its loss.

"The problem and the pain of it is really the people side of it," Harrison says. "The people who are either friends or acquaintances or employees of mine and all of my associates, that's difficult. It's also a major impact on the community. They're people who support families on a single in-

come. Most of those jobs or many of them were in that category. So that's an enormous impact. That's hard."

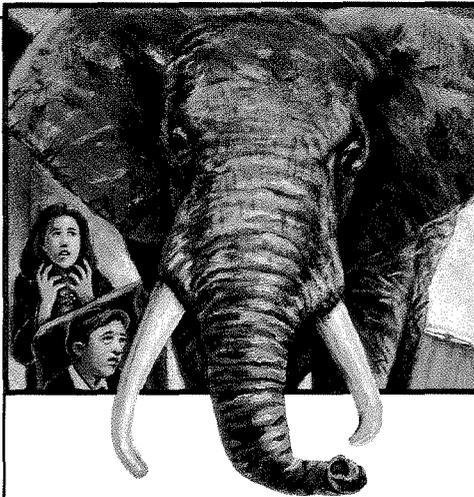
But the utility's non-nuclear staff has reacted differently. Esler calls employee attitude "upbeat, almost intoxicating."

**O**regon Northwest Power Planning Council member Angus Duncan, who has worked closely with PGE on its least-cost plan and in advisory groups, says, "Staff morale wavers between giddy and cautious, because they're trying not to let expectations get too high. PGE is a much more optimistic, much more accessible company now."

"Trojan was like a noose around the company's neck," says Eugene Rosolie, staff economist for Northwest Environmental Advocates, who used to spend his time fighting Trojan. In 1991, Rosolie was in the first group of outsiders called together by Portland General Electric to work on the company's least-cost plan. "I thought they'd never close that plant [Trojan]," he says now. "I thought they'd find excuses to run it forever; that they'd skew the economics so they could. I think the people in the nuclear division thought, 'we're not going to give into these anti-nuke people — ever.' Now the company is looser, more open, not as defensive."

All this talk about openness and accessibility makes Portland General sound like an example from the latest, trendy management seminar.

"The simplest, most widely understood name for it is just communication. Communication



"A lot of people would like for us to wave a magic wand and just have everything disappear."

implies both saying something and listening. And we're trying to exhibit that in the way we do business everywhere," says Ken Harrison. This is especially true regarding the utility's outside advisory groups, which are working on least-cost planning, regulatory changes, renewable resources and conservation efforts.

**H**arrison thinks historic lack of communication was a big factor in forcing the closure of Trojan and the unpopularity of nuclear energy throughout the country. "People were not prepared. We didn't lay

the groundwork to help them, help allay the skepticism, the uncertainty, the uneasiness. ... There was a sort of paternal attitude in the industry. We know we have all the technical expertise. We know how to build these things. We know what's best. We know what's most economic. Just let us do it and stay out of our hair. And I think that was the beginning of the problems we are seeing today."

**L**eaders in many industries that are heavily dependent on engineering and technology might wince at Harrison's words.

He says, while PGE's new emphasis on communication and public involvement is not widespread in the industry, the company is not unique. And it's happening in other industries, too.

"I think it's a natural part of operating in a more competitive world where you are really obligated, for your own economic interests, to listen to what your customers want, to what the public wants. We owe it to ourselves and to our owners to allow [the public] to participate in building information, understanding, having a dialogue, influencing decisions. Not make our decisions, but influence them. Even though there was a lot that I heard that I didn't agree with, a lot I didn't like, it very definitely had an effect on the decision [to close Trojan]."

"Culture is not a word that is developed in a year," Harrison continues. "It implies history in long, imbedded habits and behavior. The biggest challenge is getting your people to understand that you have to [change], that

there are no alternatives. I don't think I've fully met that challenge yet. People have to believe that it's going to happen. It's going to happen with or without them and it's in their interest to have it happen. If you create an environment where those people [who embrace change] are the people who get rewarded, if those are the people who advance and are enjoying themselves, then you will change the mix of people," Harrison says.

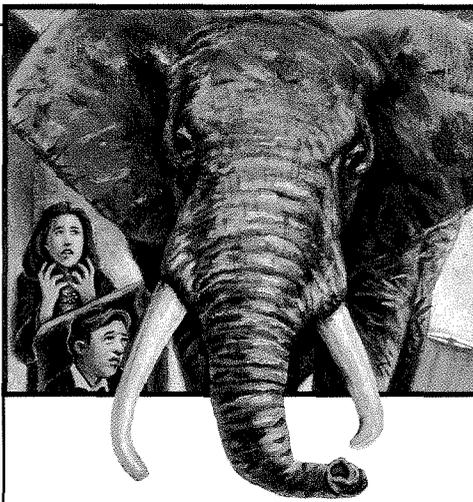
**O**n January 4, 1993, when Portland General Electric announced Trojan's death, not many people reading the headlines asked, "I wonder what this is going to do to the corporate culture?" Instead, the question all over the Northwest was: How are they going to replace the power?

Trojan provided about 500 megawatts of electricity for PGE. It satisfied almost 25 percent of the utility's load. In the next five years, the company estimates it will need about 750 megawatts to replace Trojan's output and serve new customers. How is the company going to fill that hole?

To listen to the people at PGE, that's been the easiest part of the last six months. Getting replacement power has been easier and cheaper than they expected, according to Harrison.

The utility's revised least-cost plan calls for 600 megawatts of natural gas-fired generation. "We've firmed up our belief that at least 400 or 500 megawatts of our new resources can be cogeneration," Harrison says.

When he talks about cogeneration, Harrison returns to his "communication" theme. He and Esler talk about "partnerships"



"PGE must rebuild its financial strength while keeping its rates competitive."

with their industrial customers, so electricity can be generated at the same time heat is produced for industrial processes.

Both partners benefit. The industrial customer who uses the steam from the cogeneration plant gets added efficiency. "It lowers their costs, gives them greater certainty about their future energy costs and some ability to influence those costs," Harrison says.

**T**he utility gets a new generating resource and locks in the industrial customer who is now less likely to shop around for a cheaper power supply.

Some former Trojan critics are now somewhat skeptical about PGE's increasing infatuation with natural gas. K.C. Golden, execu-

tive director of the Northwest Conservation Act Coalition in Seattle, is one who is concerned about the possible over-reliance on natural gas. "There are big risks and uncertainties with natural gas, too," Golden says, as he lists fuel price, supply, and the possibility of national regulation of carbon dioxide emissions.

But having lived with a cooling tower in the living room for 17 years, Portland General doesn't want to replace its dependence on Trojan with a total dependence on natural gas. Harrison wants flexibility in resources, something his company hasn't had.

**P**ortland General's new communication culture shows up here, too. The company has advisory working groups concentrating on development of renewable resources and energy-efficiency programs.

"By 1996, we should be achieving 20 megawatts a year [from energy efficiency] and perhaps more," Harrison predicts. Within the next 10 years, the company wants to meet about 45 percent of its load growth through energy efficiency, also called demand-side management.

Another 100 megawatts will be brought on line in the next 10 years with renewable resources, such as wind power and electricity from geothermal sources, with the possibility of increasing that to as much as 500 megawatts if renewables prove to be reliable and cost-effective.

"They need to prove they're a new environmentally correct utility," says Rosolie of Northwest Environmental Advocates. "If they

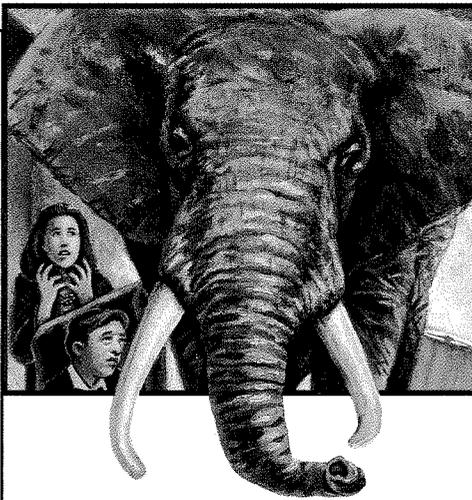
can't get 14 megawatts this year through demand-side management, people will say they're just incompetent. Their biggest challenge is coming up with enough demand-side management."

**S**ome observers wouldn't agree that energy efficiency is Portland General's greatest challenge. These people would say financial health — or survival — is.

When you talk about money at PGE, Trojan once again assumes the shape of the elephant in the living room. Some of the company's major financial issues concern Trojan: decommissioning costs and how the company will pay off the bonds that financed building Trojan.

"A lot of people would like for us to wave a magic wand and just have everything disappear, all the radioactivity and everything. You just can't do that," says Harrison, explaining that there are still safety and regulatory issues surrounding Trojan. All the estimates in the least-cost plan confirmed that closing Trojan was economically the best choice for PGE. "We're beating every one of those estimates," Harrison now boasts. "We're reducing our costs at a rate three times faster than anybody in the industry has."

A lot of PGE's financial health is dependent on Oregon Public Utility Commission rulings. As this magazine went to press, the Commission was scheduled to decide whether Portland General Electric can recover its investment and decommissioning costs from ratepayers. The company needs a friendly decision from the Commission on this one.



When you talk  
about money  
at PGE,  
Trojan  
once again  
assumes the  
shape of the  
elephant in  
the living  
room.

Oregon Power Council member Angus Duncan points out that PGE's financial and governmental tasks are deeply intertwined. Besides the Public Utility Commission's financial regulations, the utility depends on the state Department of Energy and the state Siting Council to get its new natural gas generating units sited in a timely manner.

**W**ithin the next year, Portland General will file a rate case and spell out how much of an increase it needs to pay all these Trojan

costs. "We're trying to delay that as much as we can," Harrison says, noting that many people are skeptical about the delay. "We're finding that as each month goes by we're able to confirm our prior cost estimates or lower them. None of them has gone up at this point." Harrison says closing Trojan will not "translate into a big rate increase."

"PGE must rebuild its financial strength while keeping its rates competitive," said Council member Duncan. "It must be strong enough to borrow capital to acquire these new resources."

Back in 1977, just a year after Trojan began operating, PGE also needed money and was the first American utility to sell long-term, fixed-rate bonds in Europe. "In fact, we were the first utility and the second and maybe the third. We were the only ones that did it for two or three years," Harrison remembers.

In those days, European bankers didn't know much about the private electric utility industry in this country because most of the utilities in Europe were state-owned. But Portland General had an advantage with Europeans because of Trojan. "With France being 70 or 80 percent nuclear, they had a much greater appreciation."

**T**he executive who initiated European financing for Portland General in the late 70s was Ken Harrison, then chief financial officer. In mid-May 1993, Harrison made another of his quick four-cities-in-four-days trips to visit European bankers. Once again, it appears, the timing is right.

Nuclear energy is much less fashionable today in European capitals. The risk of Chernobyl-style reactors and lack of containment buildings in Eastern Europe is more widely known. Harrison, whose utility is voluntarily closing down an operating nuclear plant, is a welcome visitor. "I got inquiries from a couple of bankers who are keenly interested in having us come over there and develop a business to help Eastern European countries decommission nuclear plants," Harrison says.

And is he interested?  
"On the surface, it sounds interesting. I'm most interested in doing ours [decommissioning] very well first."

By the end of the year, Harrison wants decisions made on replacement power sources and a clear plan for decommissioning Trojan. "I think that will put a lot of people's minds at ease."

"We need good performance and good fortune," he says. "The good fortune really is just weather. If we have very poor hy-

dro conditions during the next three or four years in this transition period before we have new resources on line, then it's going to be more difficult to accomplish what I suggested."

Across the river at Bonneville, Randall Hardy probably would echo the need for good fortune and better hydro conditions to accompany good performance.



## Banking on Renewables

**P**ortland General Electric, racing to fill the hole left by the closure of the Trojan nuclear power plant, has opened the Northwest's first all-renewables bidding process for new resources. The company has announced that it wants diversity to be one of the characteristics of its new portfolio of power supplies.

There is already a large portion of new gas-fired generation in Portland General Electric's stack of future power supplies.

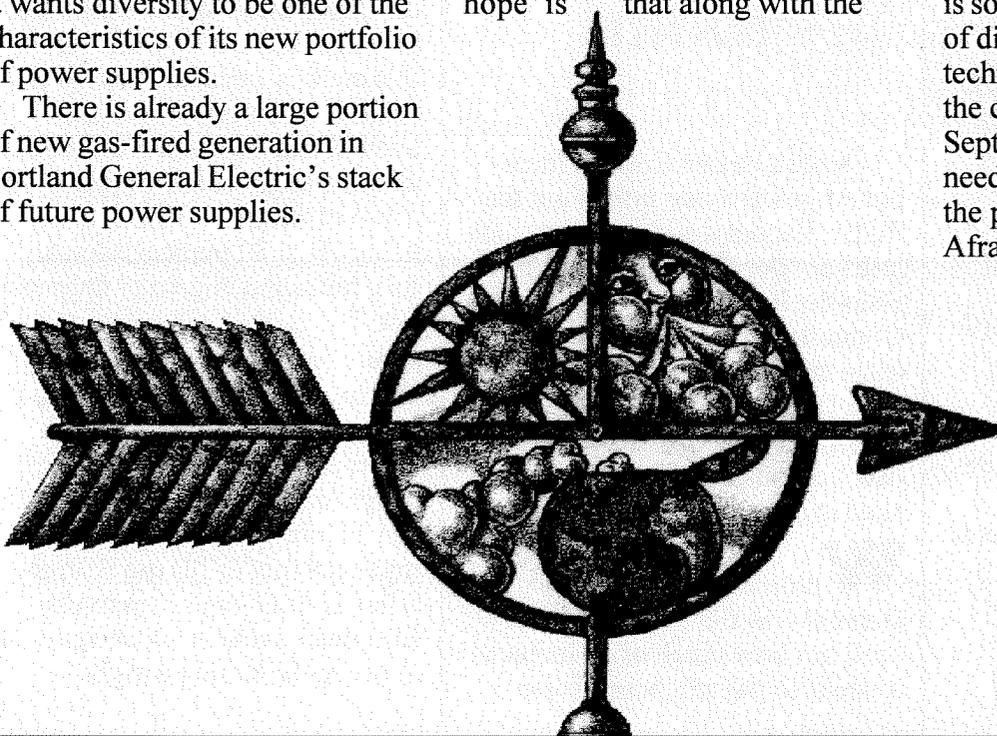
And energy-efficiency will figure large.

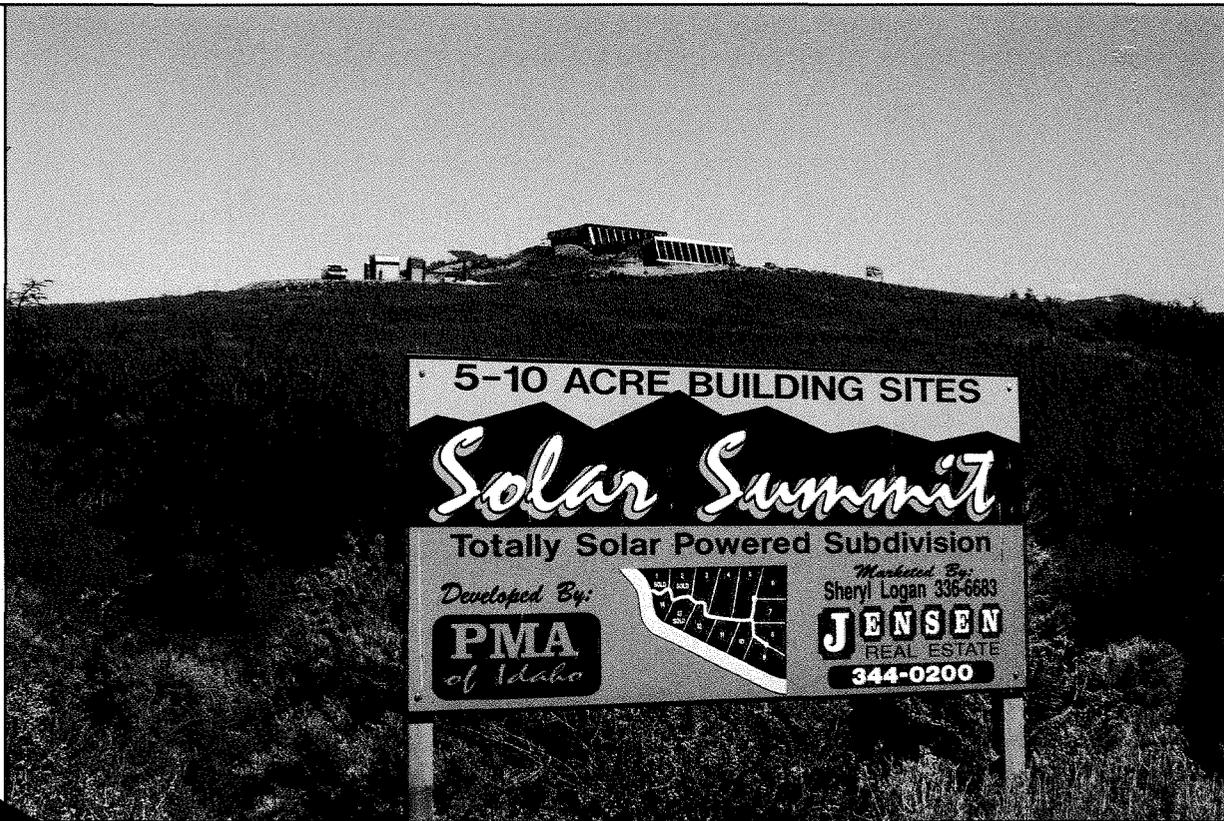
But the utility also wants to see between 50 and 100 megawatts of power supplied through water, wind, solar, geothermal or biomass-based technologies. The hope is that along with the

additional electricity, the company will acquire more experience and understanding about working with renewable resources and be able to promote public acceptance of the new technologies.

To those ends, Portland General is soliciting proposals for "projects of diverse and proven renewable technologies" to be submitted to the company by 5 p.m. on September 3, 1993. Developers needing more information about the process should contact Frank Afranji at 503-464-7033.

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# Remote POSSIBILITIES

Idaho Power offers long-distance customers solar energy.

by Carlotta Collette

Ken Olson's half-finished house feels like the remains of a medieval fortress the way it sits high above the surrounding landscape. Its massive walls, rough like old stone, are dug deep into the bare, hardpan hilltop. From there, Olson can survey the valleys below, all the way to the town of Horseshoe Bend, Idaho, where the Payette River turns on itself.

Olson, a carpenter and housing developer, prefers to picture his house as a pueblo in the old Southwest. The mass of its walls,

about three-feet thick in most places, has more to do with holding heat in and keeping cold out than with discouraging marauding knights.

And it's true, this piece of Idaho, just a half-hour drive north from Boise, bears closer resemblance to the desert Southwest than to 13th century Europe. But the impression of a cliffside "keep," strong and detached above the world below, still holds.

It is that detachment, the remoteness of Olson's home, and

the fact that it is an architectural experiment of sorts, that made it a perfect test site for a three-year pilot program being offered by the Idaho Power Company.

Idaho Power is offering customers the option of turning to solar photovoltaic systems — an expanded version of the technology used in solar-powered watches, calculators and yard lights — to generate electricity at their homes rather than extending costly power lines to distant sites.



*Ken Olson's solar home has walls made of stacked tires filled with dirt. Stucco will cover the tires and smooth out the walls.*

Olson's 'Solar Summit' is so unique that it gives us the opportunity to work out a lot of problems," says John Wennstrom, an electrical engineer at Idaho Power who is responsible for getting the company's remote applications solar electricity program up and running. "We're having to work out the details here — particularly with state and national electrical codes — that will make more straightforward applications simple."

The uniqueness of Olson's home starts with the fact that his three-foot deep walls are built up of used tires pounded full of dirt

and stacked to form U-shaped rooms that scoop in sunlight from an all-glass south wall. It encompasses 2,100 square feet of floorspace on two levels with ample space for indoor gardening. It is billed as the first home in a planned "totally solar-powered subdivision." And it will likely need little auxiliary heating or cooling, even though the climate on that windswept hill hits extremes in all seasons.

Without Idaho Power's solar system supplying electricity, Olson would have had to pay the utility to bring a new power line the

mile's distance from the nearest existing line — at a cost of \$50,000 to \$100,000, depending on the number of homes eventually built there. Alternatively, he could purchase diesel or propane generators to power the houses, or buy and install his own solar power plant.

But Idaho Power makes it easy by purchasing, installing and maintaining the photovoltaic array, the wiring to the house (the solar facility is not attached to homes), the batteries and the backup generators. For the customer, the whole system is essentially

ready to use. It is brought to the site and assembled by local contractors hired by the utility. Olson only had to plug in his power tools and, later, the appliances that will furnish his home.

Customers won't be billed for the amount of electricity they use each month because they won't be buying the power from the Idaho utility. Instead, their monthly payments will be based on the total installed cost of the solar package, plus maintenance, taxes, overhead and depreciation.

That will amount to bills that are roughly 20 to 30 times more than what grid power would cost, but as Wennstrom points out, "There's no grid there!" Furthermore, the solar power is

competitively priced with diesel or propane generation, or when compared to the cost of bringing new power lines outside existing service areas.

To operate the program under this financing mechanism, Idaho Power had to obtain the approval of public utility regulators in the states where the program would be offered: Idaho and Oregon. Both state regulatory bodies supported the company's plan.

"A few small solar businesses complained to the Public Utility Commissions in hearings because of the competition from the utility," says Wennstrom. "But even they noted that Idaho Power could help enrich the credibility of the solar industry in general, so the Utility Commissions gave us their OK."

The new program has clear advantages for some customers: those living in or planning to build homes or cabins in secluded places, outlying resorts and ranches where electricity can be used to pump water for cattle. It will also be useful for lighting signs in parks and along highways, as well as for certain communications and pipeline applications.

"Outback" customers will likely be the greatest benefactors. Wennstrom tells of a Salmon River resort, accessible only by boat, where one full day each week is taken up with boating into town to get a week's supply of diesel fuel for the power generators.

"Here's this beautiful, pristine place way up in the middle of nowhere. That's why people go there. Then they turn on the generators for a few hours, and it's

## The solar power is competitively priced with diesel or propane generation.

noisy, gives off that awful smoke, eats up the diesel. So they have to turn it off until they need the power again." In contrast, he explains, "the photovoltaic system is on all the time. It's got batteries for nighttime and back-up propane generators for those rare occasions when there are long periods with no sunshine. We buy warranted, top-quality products, and we maintain them for the customer. They can use their appliances anytime. It's not noisy or polluting. And it's a 120-volt, alternating current (AC) system, so they don't need to have dual wiring systems or the safety problems they might have with the generators."

While advantages may be clear for utility customers who choose to live at some distance from existing power lines, it's less obvious why Idaho Power would become the first major investor-owned utility in the United States to offer its customers the solar option. Wennstrom says the impetus for change came when Joe Marshall became chief executive officer and chairman of the board in 1989.

Marshall created a strategic planning department and fostered a "new openness to ideas," according to Wennstrom. Out of that new department came some proposals for expanding the services the utility could offer and an increased emphasis on environmentally sound, renewable resources.

Several solar endeavors were explored. The company agreed to participate in a utility-sponsored research project in California. The goal of the project, dubbed "Solar Two," is to create a large-scale solar array that can supply power to utility grids. The company also is studying the potential of putting a solar photovoltaic system on the roof of its headquarters.

But the most promising solar money-maker for Idaho Power over time is the remote applications program. The company conducted a market survey to determine if it could secure about \$1 million in annual solar business. The survey suggested that the market could be substantially greater than that with aggressive program marketing.

So a marketing strategy was devised. Beautiful television commercials, featuring Idaho's landscape and the promise of enjoying life's luxuries while avoiding cities, were developed and broadcast widely. The response was immediate and nearly overwhelming.

Rather than hire all new staff to run the solar pilot program, the company trained its existing staff to be able to analyze potential sites for the new systems and determine the amount of electricity each home will need. Staff help

homeowners reduce their need for electricity by recommending efficient appliances and other conservation measures to take before they install a solar system. This is because, as Wennstrom puts it, "you can't use these systems to power big, bulk wasteful loads. They cost too much."

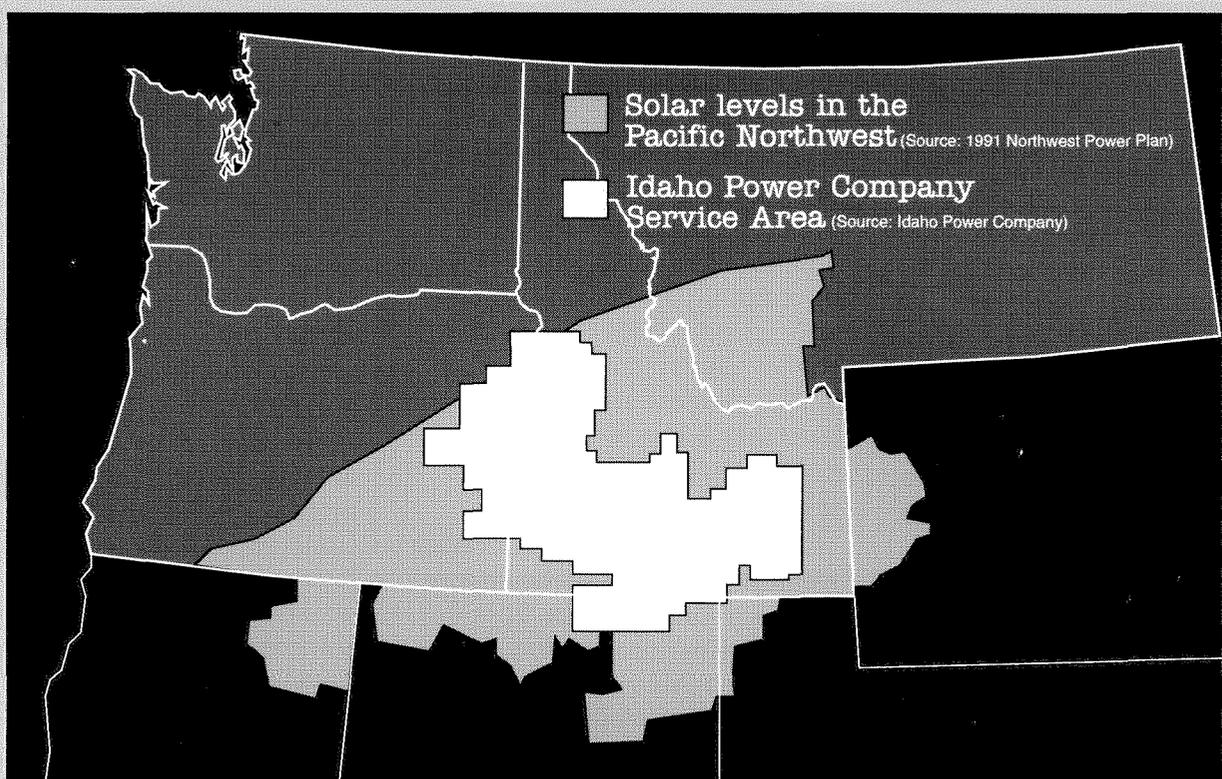
The price of solar photovoltaic systems used to generate electricity is based on the energy use of the home. The home that needs four kilowatt-hours per day of electricity will have a solar array that costs roughly twice that of the house that requires only two kilowatt-hours. So the goal is to

use electricity only where there are no less-expensive alternatives. Electronic equipment, lighting, refrigerators, etc., are good examples of appropriate uses for a solar electric system. But there are much less expensive ways to heat homes and water.

Olson's energy-efficient home, which is designed to have the sun heat it passively through the windowed south wall, is a good alternative. And propane or solar water heaters can still be used to heat water.

"Our charge is to provide this program to customers at the lowest possible price, so we want to

get the systems as affordable as possible," says Wennstrom. "We're also buying our photovoltaic systems direct from top manufacturers to save money. Even the way we're running things is kind of an internal Idaho Power experiment. We have to be innovative, and upper management supports that approach. If we did things the old way, it'd probably cost us 20 percent to 30 percent more."



Idaho Power Company's service territory includes some of the sunniest areas in the Pacific Northwest

If it's successful, the remote applications program has the potential to solve several utility problems. Long-distance customers are a utility's most expensive load to serve, says Wennstrom, because of the cost of maintaining the lines. Particularly in the case of Idaho Power, where the per-kilowatt-hour price of power is so low, revenues from isolated customers simply don't cover the costs of service.

With 20-year warranties on the photovoltaic systems and batteries that are designed to last for 10 years, maintenance costs on the solar systems are expected to be comparatively low. Furthermore, Idaho Power maintenance crews are being trained to perform most of the expected repair work.

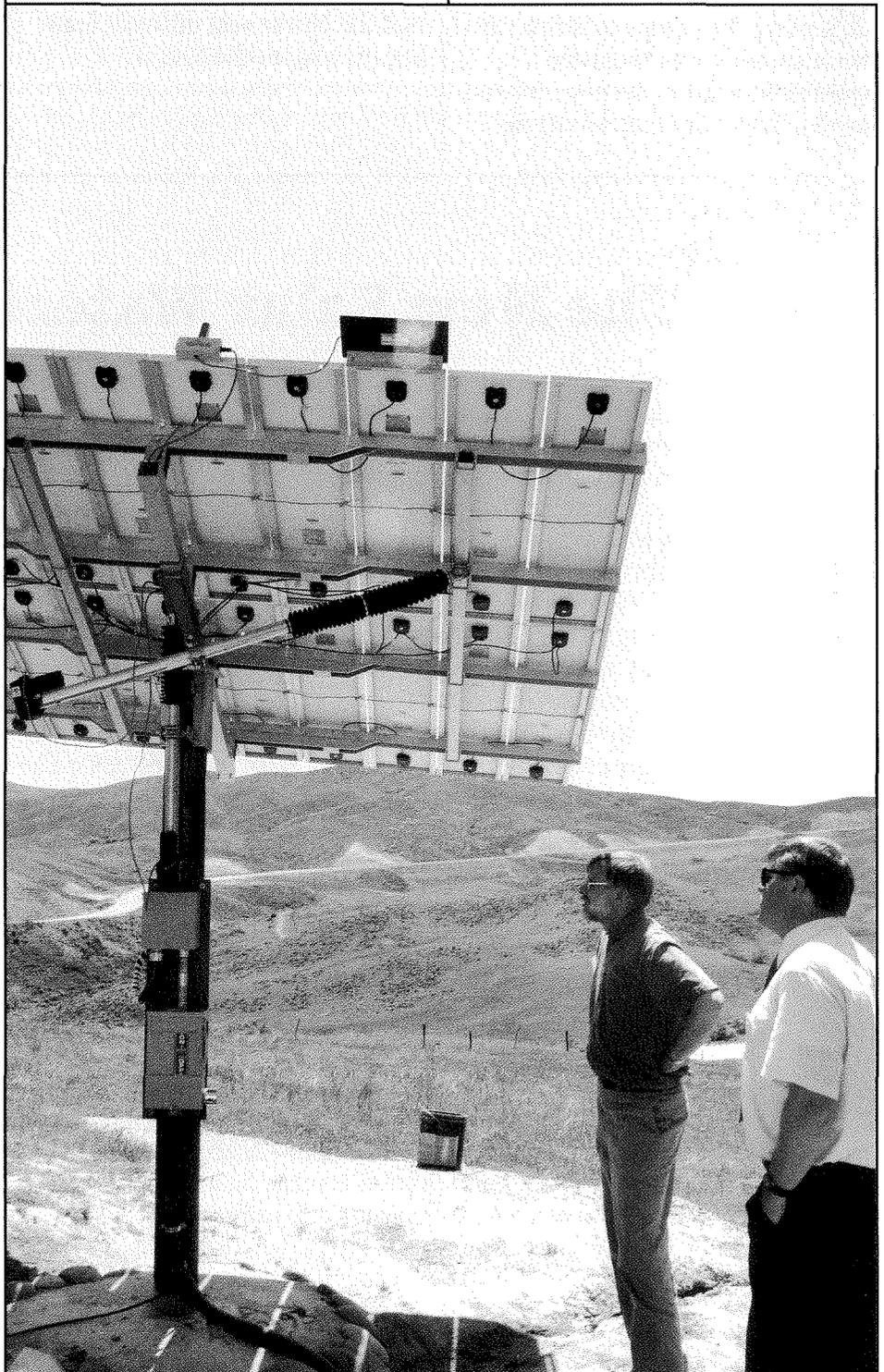
In addition, the company is considering a future project where solar systems would be installed at locations that *are* linked to the grid to eventually offset peak power use in the utility's service territory. Power lines would supply utility-generated electricity to solar customers when the sun fails to shine, and the solar customers could send power back to the utility when overall usage is peaking. Since Idaho Power's customers use the most electricity in the summer — because of irrigation pumping and air conditioning — the sun would be a perfect back-up power source.

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*Jeff King (left), senior resource analyst at the Northwest Power Planning Council, and John Wennstrom, Idaho Power Company, examine one of the solar devices in Idaho Power's new program.*

Having conducted the market survey, analyzed available solar equipment, assembled the best packages for domestic installations, trained staff, developed program guidelines, put out adver-

tisements and kicked off the program, the team at Idaho Power now feels ready to export their idea. They have produced a guidebook and offer technical support for other utilities attempt-



ing to start their own solar electric programs. The guidebook includes data about the technical equipment, market analysis, operating procedures, staff training programs and more.

**A**mong the company's first utility customers was Southern California Edison, the huge investor-owned utility that serves the

Los Angeles metropolitan area. Edison has been a national leader in turning to renewable technologies like solar and wind power. The fact that Edison turned to Idaho Power for advice about offering a solar program is evidence that the Northwest utility is leading the way to the future.

**I**daho Power is offering its customers the convenience of a modern world in places that preserve some of the best qualities of the past.



## The New Solar Watering Hole

**T**he image is golden. Cowboys on horseback herd cattle round a campsite. Even the dust looks good, spinning around in the slanted light. The voice, deep, with a bit of a twang, comes on:

"For some folks, the old ways are the best ways," the voice says. "But for homeowners and ranchers who live far from power lines, Idaho Power's new solar energy systems provide a modern, convenient power supply."

Idaho Power Company's new television commercial advertising its remote applications solar electric program wasn't taped at Bob Skinner's ranch in eastern Oregon, but it could have been. Skinner's ranch was an early prototype for the program.

Skinner had a lot of dry land and a herd of thirsty cattle. If he could get water to the cattle, he figured he could raise his livestock on some of his more marginal land. He was willing to dig a well if Idaho Power, the electric utility that supplies his ranch with power, would help him find a way to run the pump.

The company and the rancher agreed to work together. Idaho Power conducted a feasibility analysis that suggested that a solar electric system would cost less than a new power line or a gas-powered generator. Skinner bought and installed the equipment and dug a pond to serve as a holding tank from which pipes could bring water to the cattle. Eventually, the pond could become a miniature wildlife refuge (fences keep cattle out) as grasses and other plants take root and grow.

The Skinner ranch is not only a good example of a practical application of solar technology, it is a possible answer to the incompatibilities of cattle grazing in and near salmon streams. Solar-powered pumps mean that groundwater can be used to nourish herds on acreage at some distance from the streams. Stream-side land can then be restored and salmon runs sustained without jeopardizing ranching operations.

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# SHORTS

## The Northwest

**Northwest commercial and industrial conservation programs profiled.** The Northwest Power Planning Council has published a compilation of profiles of all major utility-sponsored commercial and industrial conservation programs being offered in Idaho, Montana, Oregon and Washington. The document (publication number 93-11) describes more than 30 programs, with names and phone numbers of contact people for each one. It should be of use to both business and utility managers. Copies are available free of charge from the Council's central office. See the publications list on the inside back cover of this issue to order.



**Salmon get a police escort up the river.** A 56-foot ocean cruiser and a flotilla of smaller boats are following migrating salmon up the Snake and Columbia rivers this summer to protect them from poachers. The cruiser will turn back at Lewiston, but smaller boats will follow the salmon to spawning grounds. The effort is part of a \$4.5-million law enforcement program that has been in place since January 1992. Through the program, which is financed with

Bonneville Power Administration ratepayer money, 23 officers have been added to state fish and police agencies in Idaho, Oregon and Washington. Officers will be protecting Snake River chinook salmon, which are a threatened species, and any remaining Snake River sockeye salmon, an endangered species. [Source: *The Spokesman-Review*, Spokane, Washington, April 23.]

**Hanford cooling ponds will get salmon.** The Washington Department of Fisheries and the U.S. Department of Energy will try raising salmon in a water-retention pond beside a retired nuclear reactor on the Hanford Nuclear Reservation near Richland, Washington. There are 12 uncontaminated ponds on the reservation. They once held river water that was piped through reactors to keep them cool. None of the 12 ponds holds radioactive water or other material, and all are adjacent to the river. The Hanford experiment will involve holding juvenile fall chinook salmon in the ponds until they are big enough to release into the river. [Source: *Marine Fish Management*, March/April 1993.]

**Efficiency goal: Save 20 percent by 2000.** Oregon intends to increase the energy efficiency of state-owned buildings and vehicles by 20 percent by the year 2000. The state will invest about \$30 million on the effort, which should yield savings of about \$5 million per year, according to the Oregon Department of Energy. The energy department also will work with other state agencies to reduce travel in state vehicles, increase use of alternative forms of transportation for employees to get to and from work and investigate the use of alternative fuels for state-owned vehicles. [Source: *Oregon Energy Report*, April 1993.]



**Report: Idaho steelhead fishery worth \$10.2 million.** The 1992 Idaho fall steelhead fishery was worth at least \$10.2 million to the state's economy, according to a survey by the Idaho Department of Fish and Game. Anglers made 60,280 fishing trips, spending an average of \$170 on each trip. [Source: Idaho Department of Fish and Game.]

## The Nation

**Disinterest dims sales of compact fluorescent bulbs.** The Electric Power Research Institute (EPRI) recently surveyed 400 consumers in five parts of the United States and discovered that many people simply aren't interested in purchasing energy-saving compact fluorescent light bulbs. The study showed that 43 percent of those who use compact fluorescent bulbs and 53 percent of non-users were "least likely" to buy them in the future. About 25 percent of those surveyed said they like the bulbs and would buy more of them in the future. Dissatisfied consumers complained that the bulbs did not fit existing light fixtures, could not be used with dimmers and did not produce enough light for some uses, such

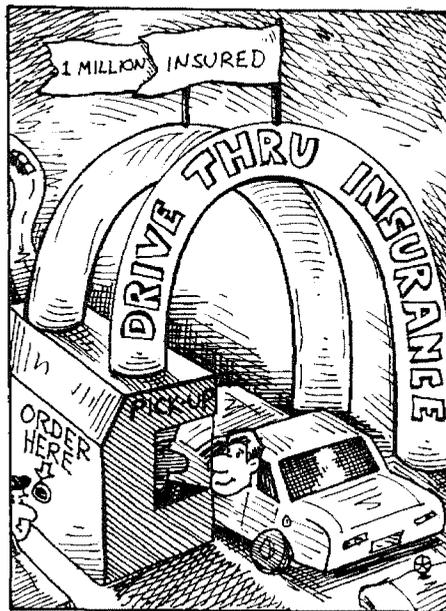
# SHORTS

as reading. Regardless, utility lighting programs saved 300 million kilowatt-hours of electricity in 1990. [Source: *EPRI Journal*, March 1993.]

**Polls: We support conservation, but we don't think about it much.** A poll taken by Friends of the Earth and the Alliance to Save Energy shows widespread support for redirecting national energy policies to stress energy conservation and renewable energy sources, the groups reported. Poll respondents favored increasing the use of solar and wind energy. Meanwhile, a poll taken by the Energy Information Administration, a division of the U.S. Department of Energy, says that while energy consumption has decreased, compared to past years, Americans are less conscious of energy conservation. The decline in consumption mainly corresponds to a decrease in household size, with a corresponding decline in energy use, the agency reported. [Source: *Energy Conservation Digest*, March 8 and 22, 1993.]

**Air pollution credits donated to Lung Association.** Northeast Utilities, which sells electricity in 406 New England communities, recently donated 10,000 tons of air pollution credits to the American Lung Association. Under the federal Clean Air Act, the utility is entitled to credits against limits on sulfur dioxide emissions from power plants that burn fossil fuels. Northeast Utilities generates most of its power with nuclear energy, and so it has excess pollution credits to sell to other utilities or give away. The Lung Association agreed not to sell the credits — about 10 percent of Northeast's total — to another utility and probably will auction them off as novelty items at fund-raising events, a spokesman said. The credits would be worth about \$3 million to a utility. By making the donation, Northeast Utilities will realize a \$1.2-

million tax break, which will be passed on to ratepayers. [Source: *Daily Journal of Commerce*, Seattle, Washington, March 30, 1993.]



**"Pay-as-you-drive" insurance seen as pollution fighter.** California's Legislature is debating the merits of a proposal that would radically alter the way auto insurance is sold and, its proponents say, reduce insurance costs and air pollution. Under the proposal, motorists would pay a flat fee to insurance companies and then get the rest of their insurance through a surcharge on gasoline of 30 to 40 cents per gallon. Proponents say the plan would reduce the cost of insurance by largely eliminating sales fees and uninsured drivers, reduce unnecessary driving and, as a result, cut air pollution from automobile exhaust. Insurance companies oppose the idea, but it has been endorsed by consumer and environmental groups and *Forbes* magazine. [Source: *Rocky Mountain Institute Newsletter*, Spring 1993.]

# CALENDAR

**August 10** — Application deadline to present papers at the 1994 Affordable Comfort Conference, scheduled for March 20, 1994, in Philadelphia. Contact Gail Ettinger, Affordable Comfort Conference, 309 Davis Street, Evanston, Illinois, 60201. Telephone 708-864-5651, FAX 708-864-7535.

**August 11, 12** — Northwest Power Planning Council meeting in Hood River, Oregon.

**August 24-26** — Northwest Power Planning Council working session in Portland.

**August 28-September 3** — "Shared Responsibility for Shared Resources," 1993 annual meeting of the American Fisheries Society, Jantzen Beach Red Lion Hotel, Portland. The meeting will focus on the challenge of finding ef-

fective ways to avoid unacceptable risks to natural resources through promoting ecologically sound goals for public and private resource users. For more information: Jerry Bouck, 503-230-5213.

**September 8, 9** — Northwest Power Planning Council meeting in Pocatello, Idaho.

**October 26-28** — World Energy Engineering Congress, Atlanta, Georgia. At this conference and exposition, 160 speakers in 43 conference sessions will offer practical information on managing energy and environmental compliance. The concurrent Environmental Technology Expo will feature 400 booths. Telephone the Association of Energy Engineers, Atlanta, 404-447-5083, FAX 404-446-3969.

## COUNCIL PUBLICATIONS ORDER FORM

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Public Affairs Director: Steve Crow

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 96-301.



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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

- 1987 Columbia River Basin Fish and Wildlife Program
- 91-04 1991 Northwest Power Plan—Volume I
- 91-05 1991 Northwest Power Plan—Volume II
- 91-26 1991 Annual Report to Congress
- 91-27 Priority Salmon and Steelhead Production and Habitat Amendments (Phase One)
- 91-31 Amendments to the Columbia River Basin Fish and Wildlife Program (Phase Two) on Mainstem Survival, Harvest, Production and Other Measures to Protect Salmon and Steelhead
- 92-10 Staff Issue Paper: Five-Year Review of Council's Section 6(c) Policy
- 92-11 Amendments and Response to Comments to the Columbia River Basin Fish and Wildlife Program on Lower Columbia Wildlife Mitigation
- 92-13 1992 Directory of Organizations
- 92-16 Proposed Amendments to the Columbia River Basin Fish and Wildlife Program on Habitat and Production (Phase Three)
- 92-17 Proposed Process and Criteria to be Used in 6(c) Process
- 92-18 Draft Fiscal Year 1994 Budget and Fiscal Year 1993 Revisions
- 92-19 1992 Draft Annual Report

#### Mailing Lists

Please **add** my name to the mailing lists for the following newsletters. (Note: 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)

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## IN THIS ISSUE



# Wind's Eastern Front

# ELWOOD PATAWA



# BORN TO BE WILD