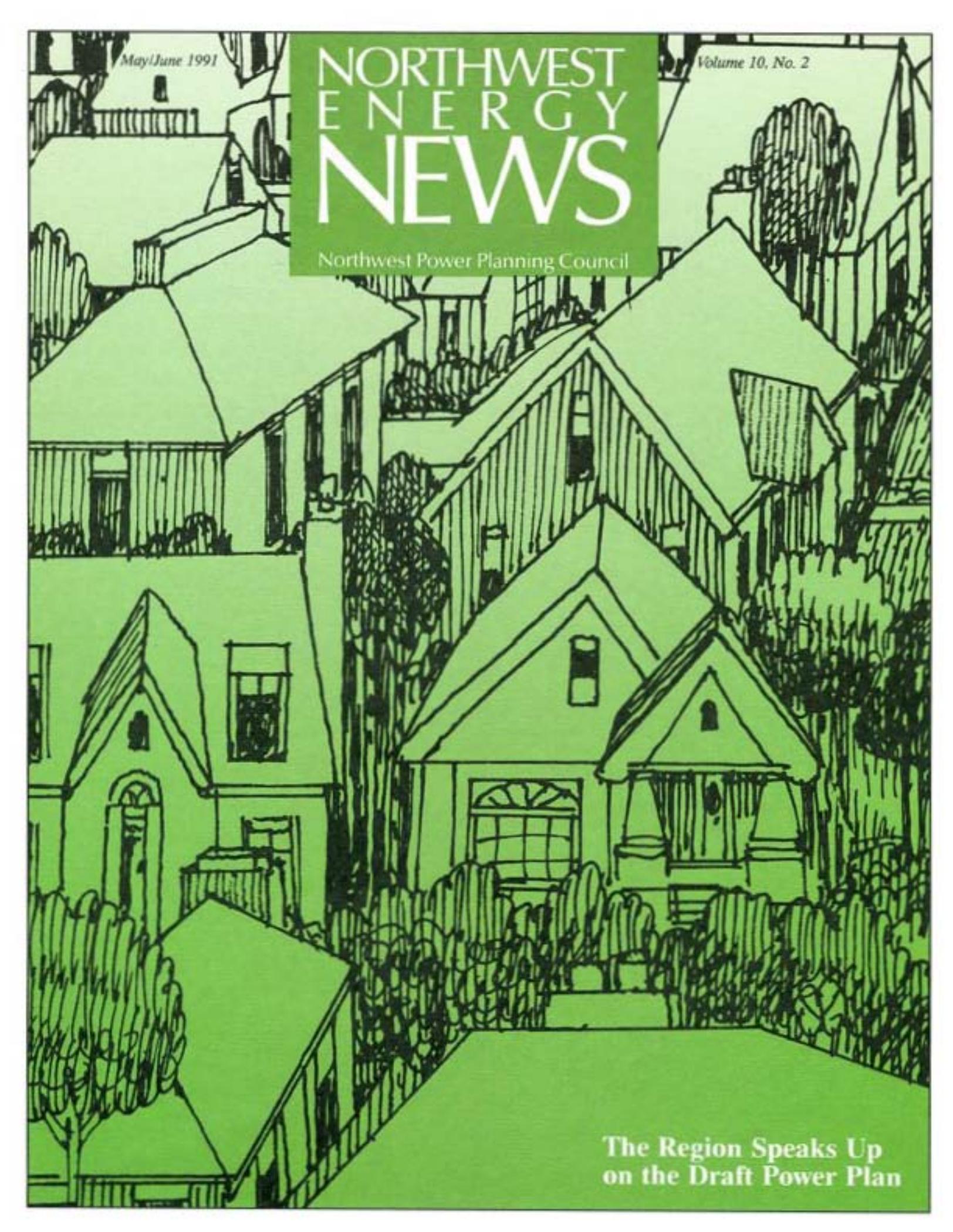


May/June 1991

Volume 10, No. 2

# NORTHWEST ENERGY NEWS

Northwest Power Planning Council



The Region Speaks Up  
on the Draft Power Plan

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This issue's cover illustration is by Frank Farah.

## from the CHAIR

For the first time in the Council's 10-year history, we have prepared a power plan for the Pacific Northwest that calls for the immediate acquisition of new electrical resources. In that plan, our first-choice resource is conservation. This is because conservation is remarkably inexpensive, and it has negligible impacts on the environment.

We must secure at least three times more conservation in the next 10 years than the region was able to acquire in the last 10 years. This isn't going to be easy. An aggressive, vital and viable conservation delivery system needs to be developed.

But even an aggressive conservation effort won't meet all of our electricity needs in the future.

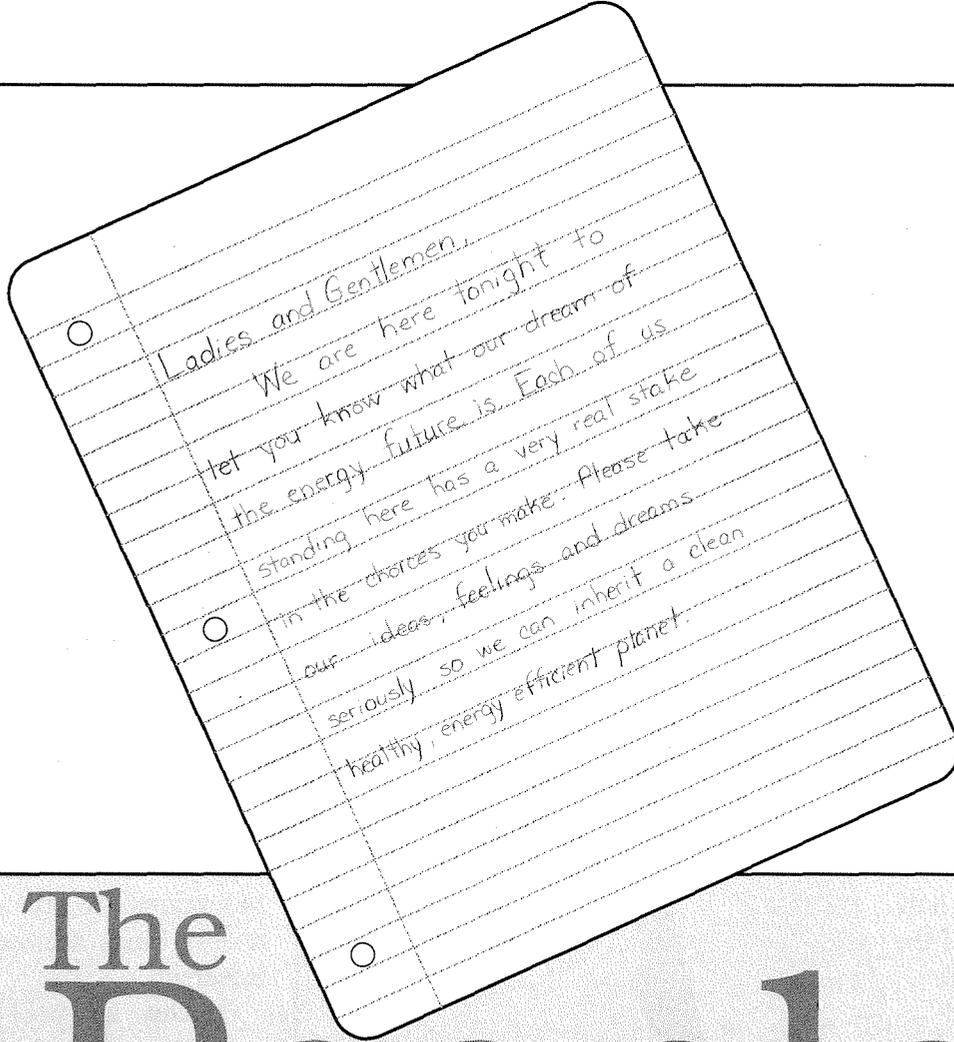
Other resources will have to be acquired, including electricity from such diverse sources as cogeneration, solar energy, wind, biomass, hydropower, geothermal and combustion turbines fired by natural gas, which can be used to back up the hydropower system.

We also must be prepared to move even more quickly if demands on the Northwest electricity system increase substantially. This could happen, for example, if some salmon stocks are listed under the Endangered Species Act, and hydropower production is reduced in order to protect the fish. I believe that the power plan is flexible enough to cover this situation, if it occurs.

The time for action is now. The Council will provide the leadership to see that the power plan is implemented, and the region's least-cost future becomes reality.



A handwritten signature in green ink that reads "Jim Anderson". The signature is written in a cursive, flowing style.



# The People Speak

by Dulcy Mahar

**Issues emerge that differ from previous plans.**

**A**fter the last envelope was opened...the last staple yanked out...the last page churned through the copying machine...the count was made.

There were nearly 1,300 individual written or phoned-in pieces of comment on the Draft 1991 Northwest Power Plan. Hundreds of people also gave

oral testimony at 16 public hearings. The comment for this, the Council's third complete power plan, surpassed the number on the first power plan in 1983, and

more than tripled the number of people commenting on the 1986 plan.

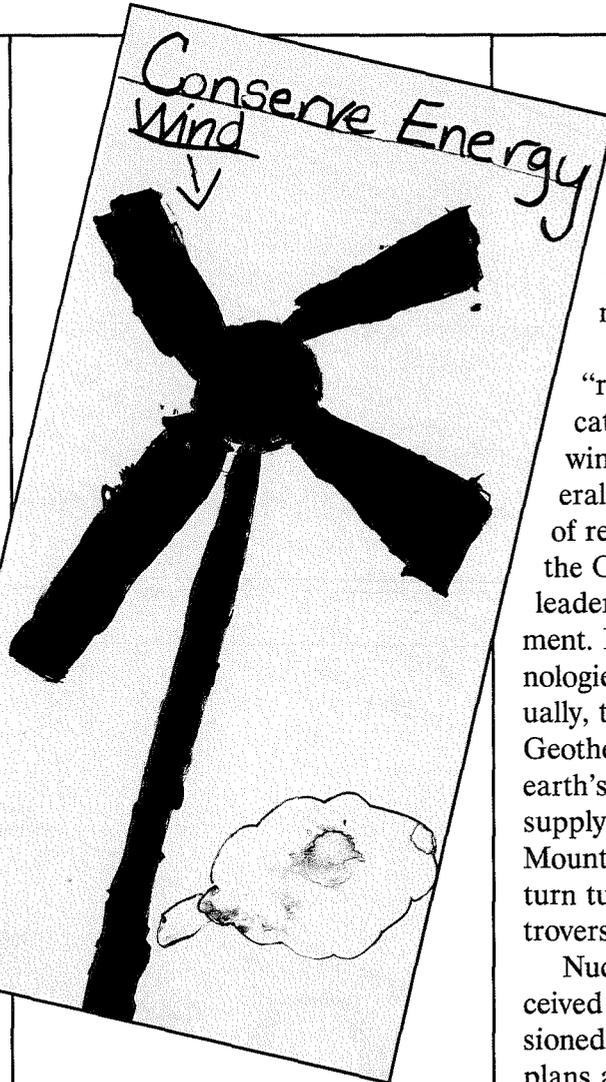
Individuals offering impressions and suggestions ranged from governors to school children. All but 80 of the people who reported in listed affiliation with an organization, although most said they were offering their private opinions.

There were even visual aids with the comment this time, including the first video tape sent in as comment. (It demonstrated a micro-cogeneration system.)

The official public review period spanned 19 weeks, stretching from early November to mid-March. For more than four and a half months, the citizens of the Northwest typed, scribbled, voiced and sometimes shouted their opinions on a draft plan that lays out electrical energy needs and choices for the next 20 years.

### Consensus for action

If there was one thing these people agreed upon, one common denominator, it was that they are very interested in their energy future. They also agreed it is time for action (although they disagreed on just what those actions should be). This is a departure from the two previous power plans, when much of the debate centered on whether action was even wise and whether the status quo should be maintained.



Virtually no one challenged the forecast of energy needs, and there was almost universal acceptance that the region has exhausted its electricity surplus.

But the question of which resources to develop was the focus of intense scrutiny. The importance of energy conservation was underscored again and again. Unlike comment in previous plans, which had targeted model conservation standards for energy-efficient construction, the emphasis here was on conservation in all applications.

The idea of recycling to conserve energy was forwarded. One example proposed recycling more aluminum to reduce the aluminum industry's consumption of energy. Patented inventions to im-

prove efficiency were also forwarded.

There was heightened interest in renewable resources, but with less emphasis on hydropower and more on other renewables.

Some people referred to "resources of the future," a category represented most by wind and solar energy. In general, people supported the idea of renewable energy and urged the Council to take a stronger leadership role in its development. But when renewable technologies were looked at individually, there were mixed attitudes. Geothermal, which would use the earth's natural heat—in great supply in the volcanic Cascade Mountains—to create steam and turn turbines, seemed most controversial.

Nuclear and coal plants received greater and more impassioned attention than in previous plans and evoked the most polarized comment. People either hated the idea of these resources or thought they were essential to the power system's reliability and should at least be held as insurance for future needs. There was little middle ground. Those people who argued against thermal plants generally felt more conservation or renewable energy was available.

## New issues

There was a sharp increase in concern for environmental costs of resources in this draft's comments. And more people wanted to know how the power plan and the Council's Columbia River Basin Fish and Wildlife Program are linked.

While almost no one thought the Council should get directly involved in setting electric power rates, there was interest in a plan that sent clearer price signals to electricity consumers. For example, rather than reporting the aggregate cost of electricity, some commentors wanted a better idea of what adding each next unit of electricity would cost.

Fuel switching—customers turning to natural gas or oil rather than electricity—was another area where commentors called for more Council attention. Further study was encouraged of the cost and availability of natural gas as a backup to combustion turbines or for use in cogeneration.

There also was increased concern for the transmission system and how it could affect the power system's reliability.

In the last round of power plan comments in 1986, commentors from public power to the Sierra Club urged the Council to forge a stronger "partnership" with the plan's implementors, such as the Bonneville Power Administration and the region's utilities. This time the public urged the Council to take a stronger "leadership" role.

In general, the public found the Council's new plan format readable and praised the Council for its efforts to seek a broad cross-section of public opinion.

## After comment

As they came in, written comments were circulated to all Council members, as well as key staff.

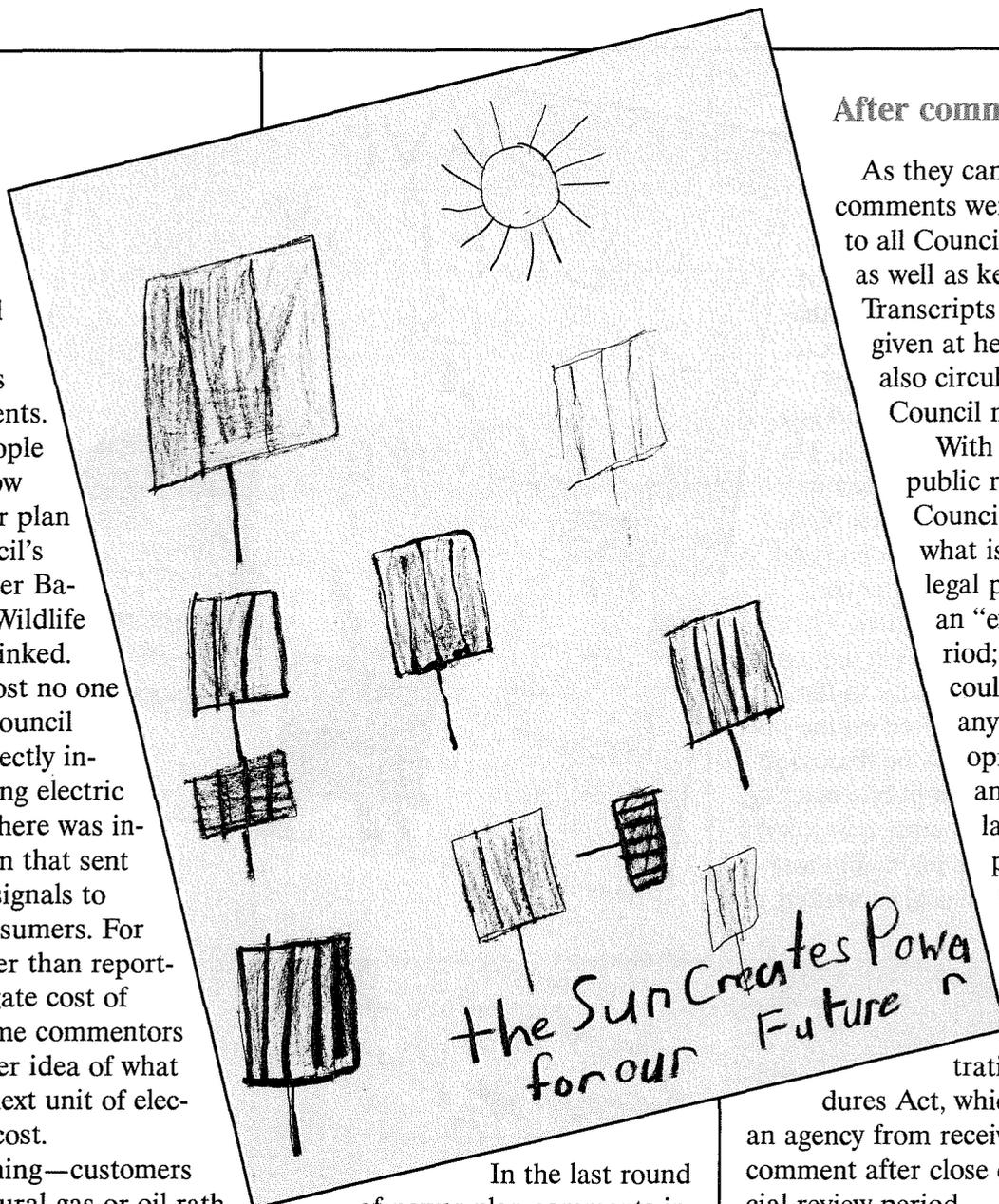
Transcripts of testimony given at hearings were also circulated to all Council members.

With the close of public review, the Council entered what is known in legal parlance as an "ex parte" period; the Council could not accept any further opinions on any issue related to the plan. The Council's activities are governed by the federal Administrative

Procedures Act, which prohibits an agency from receiving further comment after close of the official review period.

The Council then turned to analyzing the comments and examining issues arising from them. In some cases, the comments provided new information that required further analysis.

Once it had all the information before it, the Council developed policy positions to address the issues. It then worked with staff to draft language to reflect those policies. This development took place in regular monthly Council meetings and additional working sessions that were open to the public, although the public could not comment because



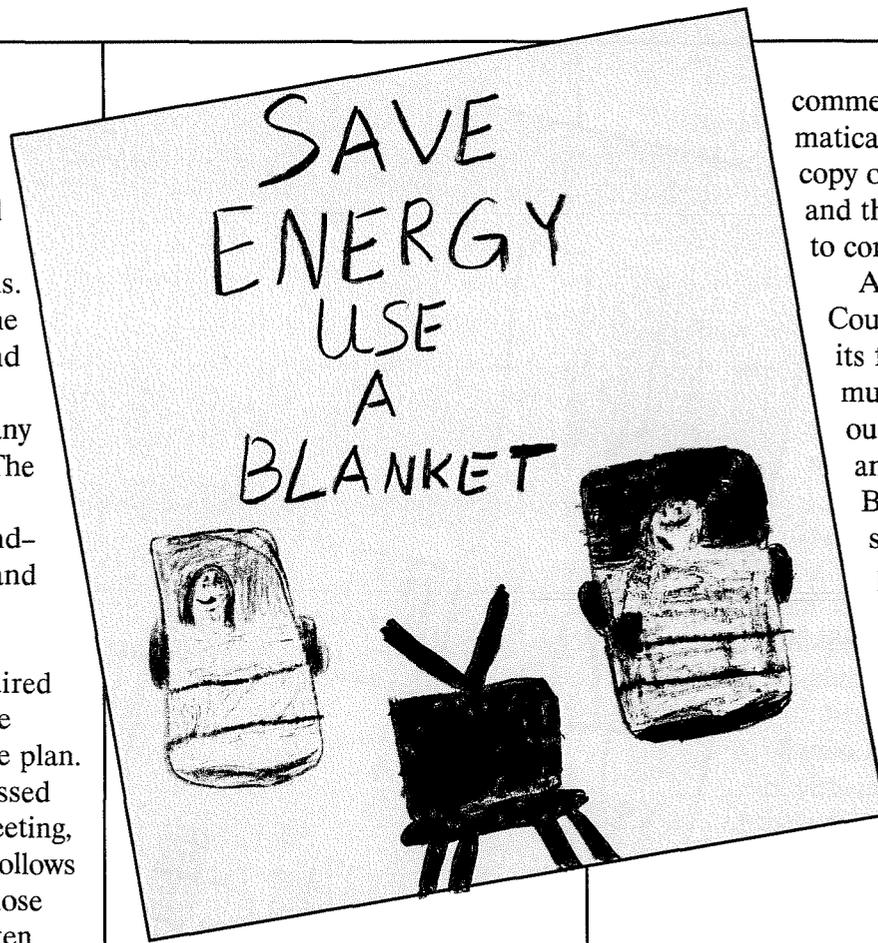
of the ex parte requirements.

As it worked out its policies, the Council compiled a record of everything it relied on in reaching decisions. These records include all the public comment (written and hearings transcripts), staff-generated documents and any other reports or research. The entire record—comments alone fill eight two-inch binders—is open to the public and available for viewing at the Council's central office.

The Council also is required to prepare a response to the comments it received on the plan. This response will be discussed and adopted in a public meeting, normally the meeting that follows adoption of the plan. All those who submitted oral or written

comment will automatically receive a copy of the plan and the response to comments.

After the Council adopts its final plan, it must be sent out for printing and binding. Because of the size of the plan, including Volumes I and II, it will be several weeks before final copies are available. ■■



# Shooting Stars

Wanting their views heard and hungry for more knowledge on energy issues, the Shooting Stars Campfire Girls from Edmonds, Washington, visited the fifth public hearing in Washington on the Draft 1991 Power Plan. Armed with colorful posters and reciting a verse to "awaken the world from the sleep of energy waste," the girls charmed the audience and Council members with their thoughtful and sincere testimony.

"I think there is a lesson there; out of the mouths of babes..." said Ted Bottiger, vice chairman of the Council.

The girls issued a challenge to the Council to teach people where energy comes from and ways each person can save energy. "If we all learned to be energy aware, we could create a better world for everyone," said 9-year old Jenny Hill.

"We also want you to look closely at energy sources and what they do to our environment," said Julie Putnins, also 9-years old.

After completing a learning section on energy issues and finding the information incomplete, Tami Page, the girls' troop leader, began researching the topic. "I learned about the hearing and the girls decided they wanted to make a difference," said Page.

"It's refreshing to see today's youth take a close look at the issues we all struggle with," said Tom Trulove, eastern Washington Council member. "The decisions we make today could very well be the legacy we leave our children."

—Carol Raczykowski  
Eastern Washington Council's staff

Art by Julie Putnins, age 9

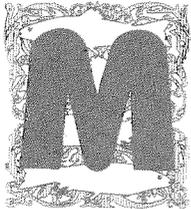
# THE BIG



# QUESTION

by John Harrison

## Can the salmon be saved?



More water will flow through the Snake River this year, and the water will move faster. In addition, efforts will be stepped up to divert salmon and steelhead from irrigation projects in the Columbia River Basin, and programs to protect young fish from predators will be expanded.

Those are the major points of agreement among members of the Salmon Summit, a group organized last fall at the request of Oregon Senator Mark Hatfield and the four Northwest state governors to develop a regional recovery plan for five runs of wild salmon.

Several groups petitioned the National Marine Fisheries Service last year to protect the five runs under the Endangered Species Act. In April, the Fisheries Service proposed that Snake River sockeye salmon be listed as endangered under the Act. By June 7, 1991, the Fisheries Service is to announce preliminary rulings on

whether to list spring, summer and fall chinook salmon in the Snake River and coho salmon in the lower Columbia River.

The Fisheries Service now has one year to determine whether to list sockeye. At that point, if the service is not ready, it may decide to take another six months. The agency must develop a recovery plan if the sockeye are listed.

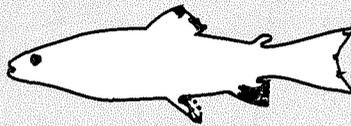
In a statement following the action, Northwest Power Planning Council Chairman Jim Goller of Idaho said, "The Salmon Summit made some progress in identifying actions for 1991. Discussions are continuing for other actions for 1991 and beyond, dealing with flows, harvest and production. The Council is committed to help develop a balanced, comprehensive solution."

The Salmon Summit involved about 30 delegates representing state and federal agencies, conservation groups and river users. The group met regularly, beginning last fall, and issued its final report in April.

The governors of the four Northwest states of Idaho, Oregon, Montana and Washington, whose representatives participated in the Summit, have indicated that the Northwest Power Planning Council would be the likely agency to carry out the Summit's plan. The Council helped bring together the Summit participants, conducted extensive analysis utilized by the Summit participants and shared the cost for a mediation service to run the meetings.



**Summit  
participants  
agreed to  
double the  
amount of  
water for  
juvenile  
salmon  
migration.**



The plan could be amended into the Council's Columbia River Basin Fish and Wildlife Program, which is a concerted effort to rebuild the fish and wildlife species that have been harmed by hydropower development and operation in the Columbia River Basin.

Additional short- and long-term actions still are being discussed and negotiated by the Summit participants. Here's a review of the actions approved for 1991:

**Snake River water  
management**

Summit participants agreed to double the amount of stored water for enhancing flows for juvenile salmon migration to 900,000 acre feet, and to gain additional water by changing the way flood control operations are handled. This water would be released between April 15 and July 15, when young fish are in the Snake and Columbia, swimming to the ocean where they grow to adulthood. Some water may be used later for fall chinook, which migrate in the summer.

The participants also want to experiment with increased flow velocity by drawing down the reservoirs behind the four federal dams on the Snake River and perhaps John Day Dam on the Columbia to minimum operating levels. That would mean drawing down the river about three feet.

Physical and legal constraints prevent full testing of this procedure in 1991, according to the U.S. Army Corps of Engineers, but Summit members asked the Corps to draw down the four reservoirs to near minimum operating levels through July 15. In addition, the Corps and interested parties agreed to discuss an experiment that would substantially lower the pool behind Lower Granite Dam this year during

annual spring maintenance work at the lock. However, a representative of the Corps said that little could be gained from such an experiment in 1991, and pledged to cooperate in an experiment in 1992.

If and when such a drawdown takes place, state and federal agencies will monitor the changes in velocity and other impacts of the experiment.

Meanwhile, the Corps will press forward with installation of fish bypass screens at Lower Monumental and Ice Harbor dams on the Snake, and at The Dalles Dam on the Columbia. The Bonneville Power Administration will expand its predator-control program, which pays a bounty for squawfish, a species of fish that is thought to be responsible for a large percentage of the salmon losses in the reservoirs behind dams. The new predator-control program will include Bonneville, The Dalles, John Day, McNary, Ice Harbor, Lower Monumental, Little Goose, Lower Granite and Dworshak reservoirs.

### **Columbia River measures**

The participants agreed that better coordination of Columbia flows is needed. To that end, the participants decided that representatives of fish agencies and Indian tribes will meet with river managers and other affected parties to determine how to ensure flows that will aid the fish. These river management meetings probably would begin in January of each year so that there is adequate time to plan for spring and



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early summer flows. Nature appears to be supplying adequate Columbia River water for spring-migrating salmon this year, but discussions are continuing on increasing flows in the future.

### **Fish habitat**

The participants hope to prevent further degradation of habitat and to restore degraded habitat for anadromous fish. An oversight committee could set priorities for habitat projects for sockeye salmon, the participants said, and the state and federal governments could agree to improve enforcement of regulations pertaining to fish habitat.

### **Fish harvest and production**

No consensus was reached on harvest or production measures at the Salmon Summit, but the participants agreed to continue discussion on the issues. In addition, the participants agreed that a monitoring and evaluation procedure is needed to measure the effectiveness of actions that result from the Salmon Summit, but such a system is not yet in place. ■■

If utility regulation were an automobile, it would have tail fins.

It would be your old friend, the car you relied on for so many years, the one you took care of and that took care of you. But now it's time to trade it in for a new, more efficient model.

The laws that govern how utilities set their rates and take their profits are like the classic old car with tail fins. The laws still work, but it's time for a change, and changes already are under way.

Traditional ratemaking policy holds that state regulatory agencies allow utilities a certain profit after they recover operating costs. As power sales increase, so do profits. It was a reasonable policy for an era when there was plenty of electricity, but times have changed.

Several years ago, public utility regulatory commissions in the Northwest began considering how rates might be redesigned to encourage conservation. In other parts of the country, regulatory reforms already in effect involve a sharing of savings by utilities and their customers.

If a utility acquires conservation for less than the cost of building a new power plant to generate the same amount of power, the savings are split between the utility and its customers. Customer bills still go up to pay for the energy savings, but not as much as they would if the utility had to build a new power plant.

Today, as states from California to New Hampshire begin looking at ways to save energy, they also are beginning to make—or already have undertaken—changes in utility laws, changes that encourage utilities to join the conservation effort. The Northwest Power Planning Council is one of many groups and agencies calling for regulatory policies that will speed the Northwest on the road toward efficiency.

“The Council believes that conservation needs a substantial long-term commitment to allow for programs and other acquisition mechanisms to be designed, implemented, evaluated and modified...It is important to note that if utilities in the Northwest are not successful in acquiring all cost-effective conservation, the region will have to develop more expensive resources,” reasoned Ted Bottiger and Tom Trulove, Washington Council members testifying on behalf of the Council about electric utility rate changes proposed in that state.

Utility commissions in each of the four Northwest states recognize the importance of conservation. Montana and Washington, to a limited extent, allow utilities a higher rate of return on conservation investments than on other power-production investments. All Northwest states allow utilities to earn a return on conservation expenditures, and Idaho allows a higher return to utilities that are diligent in their least-cost planning.

**Say goodbye  
to old reliable  
and get behind  
the wheel  
of efficiency.**

*Tail Fin*  
T H I N K I N G

by John Harrison

In its 1991 Power Plan, the Council recognizes that regulations can be barriers to efficiency. In all its plans, conservation has been the first resource to turn to. But without continued regulatory reform, progress on conservation will be limited.

### Decoupling profits from sales

Expenditures for conservation programs reduce customers' need for electricity. That, in turn, reduces the need for utilities to invest in new resources that are more expensive than conservation. But, at the same time, conservation can reduce utility revenues. In theory, rates could increase to recover the lost income. In reality, however, because of the long time between rate filings—three to five years is not uncommon—and the uncertainty of the rate filing outcome, utility

companies have tended to simply avoid conservation investments.

When energy demand increases, the utility builds more power plants and raises rates to pay for them. That's a no-win situation for ratepayers, utilities and the environment, as even the cleanest power generation technologies are costly and have some adverse environmental impacts.

That's the way it is in many states at the moment (see boxes for exceptions), but changes have been made in the Northwest. In April, the Washington Utilities and Transportation Commission, which regulates investor-owned utilities in that state, approved a proposal by Puget Sound Power and Light Company of Bellevue to decouple profits from electricity sales.

In testimony prepared for the commission, Richard Sonstelie, president of Puget Power, said: "...present regulation may discourage investment in demand-side resources, in particular, because regulation currently rewards utilities for increased sales with increased earnings...The rate adjustment mechanism we are proposing eliminates the above-described disincentives to new power contracts and conservation investment..."

Beginning next October, when the new rate mechanism goes into effect, Puget Power's income will be based on the number of customers served, not the number of kilowatts sold. The company could become indifferent to power sales as a source of income. That would free the company to serve its 720,000 customers—Puget Power is the largest utility company in Washington—with the lowest-cost forms of power, including conservation.

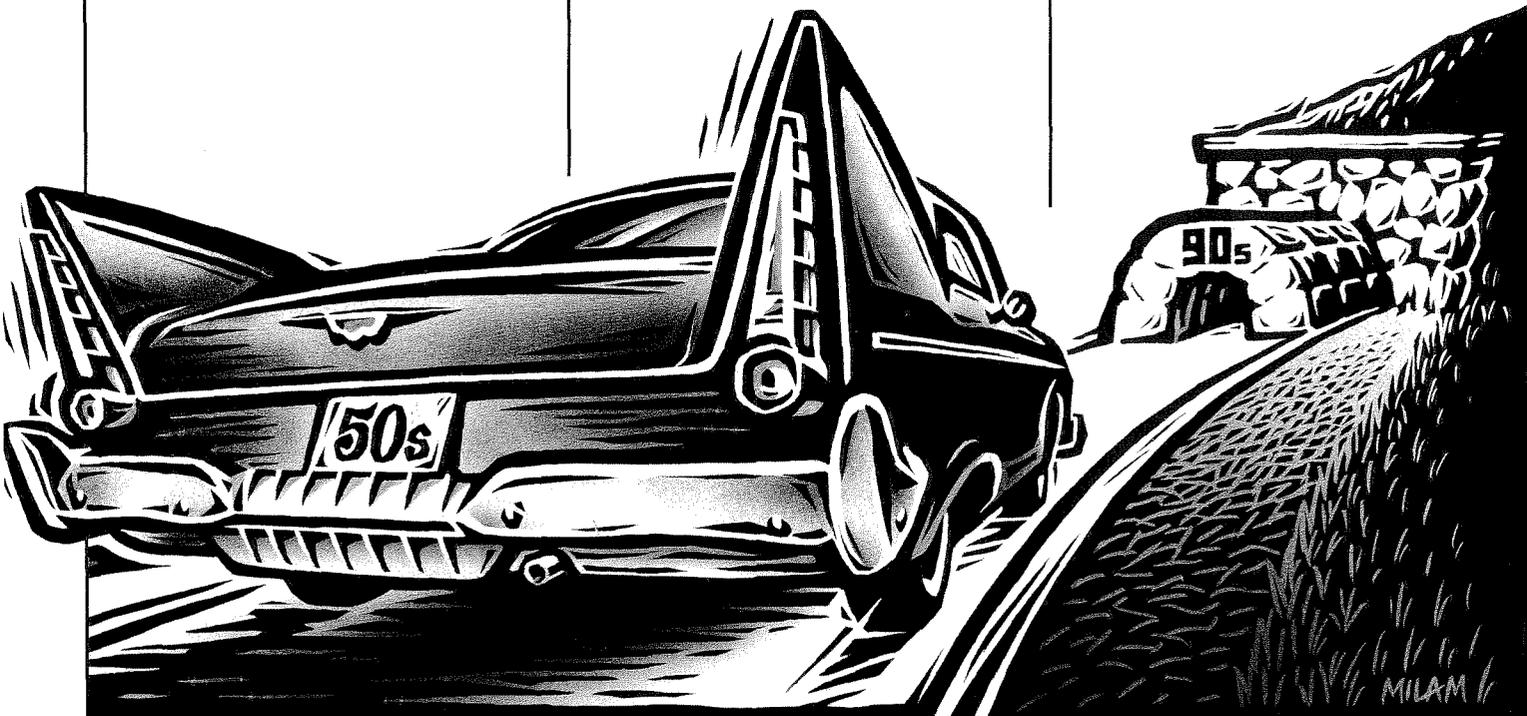


Illustration by Larry Milam

Puget's new rate mechanism is a hybrid of decoupling plans already in place in California and several New England states. The company will create two groups of costs for ratemaking purposes: base costs and resource costs. Base costs will include the costs of staff, buildings, transmission, generation and conservation. Resource costs will include costs of fuel, capital, operations and maintenance of both generation and conservation.

The company will be allowed to collect a certain amount for each customer served, and that amount will be adjusted annually to ensure the company doesn't

**Without continued regulatory reform, progress on conservation will be limited.**

collect more or less than its allowed rate of return, explained Puget spokeswoman Jude Noland. If the company overcollects in a given year, that amount would be

rebated to customers in the form of lower rates the next year. Resource costs would be incorporated in rates and would rise and fall as the costs of generation and conservation change.

Puget customers still will pay for electricity by the kilowatt-hour, and rates still would go up to pay for new sources of power—whether conservation or other sources. But customer bills would not rise as fast as they would if customers were financing a new, central-station power plant.

### Beyond decoupling

While the Council gave general support to Puget's proposal, it also told the Washington commission that it ought to go further and provide incentives for conservation. In their testimony before the commission, Council members Bottiger and Trulove encouraged Puget and the commission to "...continue working to develop fair and workable incentive mechanisms for conservation implementation."

As the experiences of other states demonstrate, there are many approaches to regulatory reform. The Council understands this, and recognizes that what works in one state may not work in another. Different approaches will be advanced and tested in order to find which work well.

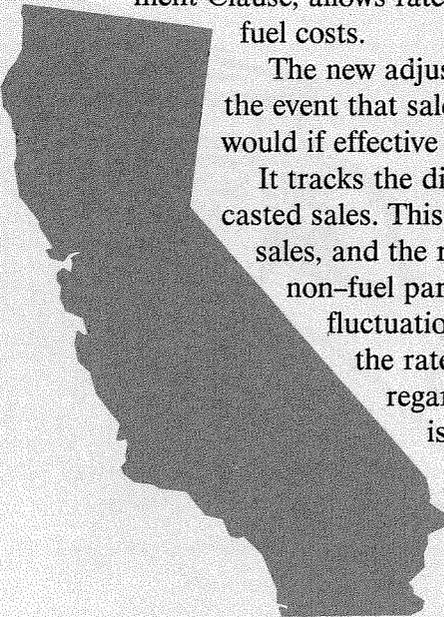
## CONSERVING IN CALIFORNIA

California adopted its Electric Revenue Adjustment Mechanism in 1982. This action eliminates the anti-conservation bias implicit in traditional ratemaking by automatically adjusting the non-fuel part of rates so that utilities collect their authorized base revenue regardless of the volume of power sales. A companion device, the Energy Cost Adjustment Clause, allows rates to be adjusted for fluctuations in fuel costs.

The new adjustment mechanism protects utilities in the event that sales fall below predicted levels, as they would if effective conservation measures take effect.

It tracks the difference between actual and forecasted sales. This difference is divided by forecasted sales, and the resulting amount is used to adjust the non-fuel part of rates up or down to account for fluctuations from the allowed rate of return. So the rate of return remains nearly constant, regardless of sales volume, and the utility is free to pursue least-cost resources, such as conservation. In addition, there is an incentive for conservation investments because shared savings add to utility profits.

—JAH



## NEW ENGLAND'S NEW APPROACH

In Oregon, for example, the Oregon Public Utility Commission recently approved an incentive program proposed by Portland General Electric Company.

In testimony before the Council in February, E. Kay Stepp, president of Portland General Electric (PGE), said, "We believe that this is the first step in decoupling kilowatt-hours from profits. It is making progress in removing the disincentives for utility investment in conservation. PGE, as a part of this program, will be rewarded for actual energy savings, not just on investing money in conservation measures."

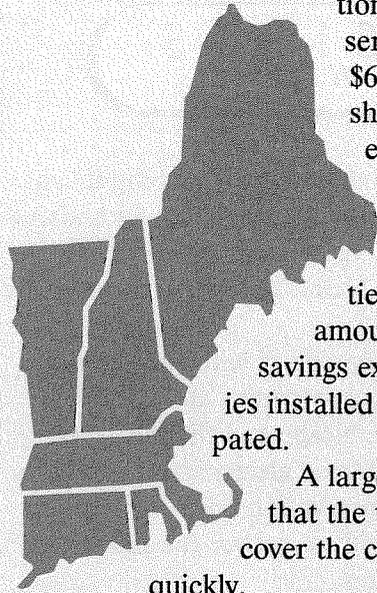
Also in Oregon, Commissioner Mike Katz has proposed an incentive program in which utilities would sell conservation the same way they sell electricity. Katz believes utilities should be in the business of selling energy services, conservation among them.

In an article in the October 1989 edition of *The Electricity Journal*, he wrote that if a utility were to treat conservation exactly as any other energy resource, "...those who consume energy services, whether conventional kWh [kilowatt-hours] or conservation kWh, [would] pay for energy services in proportion to their consumption. The utility, whose investments make it possible, charges for conservation kWh saved as well as for conventional kWh consumed. Because in this illustration it is also the least-cost resource, utility investment in conservation...results in the lowest rates for all consumers of kWh, conventional and conservation alike."

Faced with rising costs for new power plants and opposition from environmentalists to building new plants, the New England Electric System (NEES) made a big commitment to conservation in 1979.

That year NEES released a strategic plan that promoted conservation and load management. NEES is a Massachusetts-based utility holding company that has a generating subsidiary, New England Power Company, and three retail subsidiaries, which serve a total of 1.2 million customers in Massachusetts, Rhode Island and New Hampshire.

Working with a New England environmental group, the Conservation Law Foundation, NEES pushed its conservation and load management budget to \$65 million a year by 1990. Savings are shared by the companies and their customers.



The 1990 program was expected to generate \$150 million in savings to the companies, compared to what the utilities would have paid to generate the same amount of electricity. In fact, the value of the savings exceeded predictions because the companies installed more conservation measures than anticipated.

A large part of this success is due to the fact that the three states allow utility companies to recover the costs of their conservation investments quickly.

The utilities pay all or a portion of the cost of installing conservation measures, depending on the measures and the type of application, and then are reimbursed with money from a fund that is financed through rates.

"Conservation is not a natural business niche for utilities," wrote NEES chairman John W. Rowe in the December 1990 edition of *The Electricity Journal*. "Conservation involves equipment we do not make, which is installed on property we do not own, and involves kinds of work where we have no natural advantage."

But with financial incentives built into state regulation, utilities can look at conservation as a business decision, not an obligation.

—JAH

Katz notes that under such a system, a utility company also would have an incentive to invest in conservation, and earn a profit from it, just as it always had an

incentive to invest in conventional generating resources and make a profit from them.

Pacific Power and Light Company of Portland put this strategy into effect for commercial customers through a program it calls the Energy Service Charge. The program involves a charge for conservation services; it is not a loan. In theory, the strategy could be put into effect for all classes of customers.

Pacific's program works this way: Pacific conducts an audit of the customer's premises, and the audit recommends all cost-effective conservation measures and shows the cost of the measures and the amount of anticipated savings. The utility pays for installation of the measures, then

places a charge on the customer's bill. The amount of the charge is less than the savings to the customer of the conserved energy. The customer pays nothing up front, yet has lower energy costs as a result. After the life of the charge, it is removed from the bill. The charge stays with the bill for the premises, if the customer moves.

By last November, Pacific had 28 prospective customers for the Energy Service Charge and had signed up two in the Albany, Oregon, area where Pacific is experimenting with the strategy. Initial response to the program continues to be positive, officials reported.

Public response to Puget's decoupling proposal also has been positive. The *Seattle Post-Intelligencer* (Seattle, Washington) commented in an editorial: "On balance, then, Puget has come up with some reforms that should benefit both the utility and its customers." *The Seattle Times* called the proposal "numbingly complex" but also "refreshingly innovative." Noland said persons who testified at a commission hearing on the proposal "all supported the concept of decoupling to encourage conservation."

One of those was Ralph Cavanaugh, senior attorney of the Natural Resources Defense Council and a regular at rate hearings across the West. He called it "the most important rate case I've testified at in 12 years." He continued: "As long as utilities' profits are tied to energy sales, conservation achievement will remain at odds with shareholder welfare."

## WISCONSIN'S WINNING WAY

"In Wisconsin, we sort of go against the flow of huge, sweeping incentive programs in other states," said Paul Newman, assistant administrator of the electric division, Public Service Commission of Wisconsin. "We've had incentive programs, with mixed results. Today, our incentive is more psychological than financial."

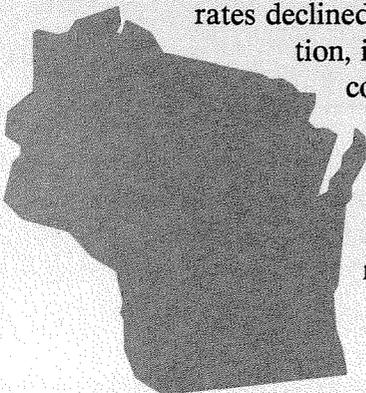
Newman said the commission works very closely with each of the companies it regulates—10 gas and electric companies and 85 to 90 municipal and cooperative utilities—to encourage and finance conservation measures. Profits are not decoupled from electricity sales. Rates are adjusted annually, and estimates of conservation costs for the next year are built into rates. Utilities are allowed to recover the full investment in conservation measures through rates.

"There's no doubt in any utility's mind in Wisconsin that if a dollar is spent on conservation, it will be recovered," Newman said. The payback comes either from a fund that is built into rates or through escrow accounting established for individual projects.

What about concerns that rates will increase because of conservation? "Hypothetically, that's true, but it's not true in the real world," Newman said. "In the electricity industry in general, what you're doing [through conservation] is slowing load growth, not raising rates. For example, the Wisconsin Electric Power Company spent more than \$100 million on conservation in the last four years, and during that time rates declined. That's not entirely because of conservation, it's because other costs of operating the company went down, too."

The company estimates it saved 250 megawatts, the equivalent output of a small coal-fired power plant. In the absence of conservation measures, the company might have had to build a new coal-fired plant, and rates surely would have gone up to pay for it, Newman said.

—JAH



He said states and utilities that pursue decoupling rate mechanisms also, stand to benefit from a new provision of the federal Clean Air Act, which will pay for energy produced by selected conservation or renewable resources, beginning in 1992. As much as \$450 million could be available from this fund, he said.

The two other regulated utilities operating in Washington, Washington Water Power Company of Spokane, and Pacific Power and Light Company of Portland, have not made similar rate proposals. But spokesmen said both utilities share Puget's goal of building an incentive for conservation into regulatory practices. ■■

## NEVADA'S NEW RULES

"In the long run, we should be regulating utility companies so that they can make money supplying power to customers and have a second company making money helping customers save electricity," argued Steve Wiel, a commissioner of the Nevada Public Service Commission.

Wiel is the driving force behind that state's efforts to provide a regulatory incentive for efficiency improvements. He is a former chairman of the conservation committee of the National Association of Regulatory Utility Commissioners.

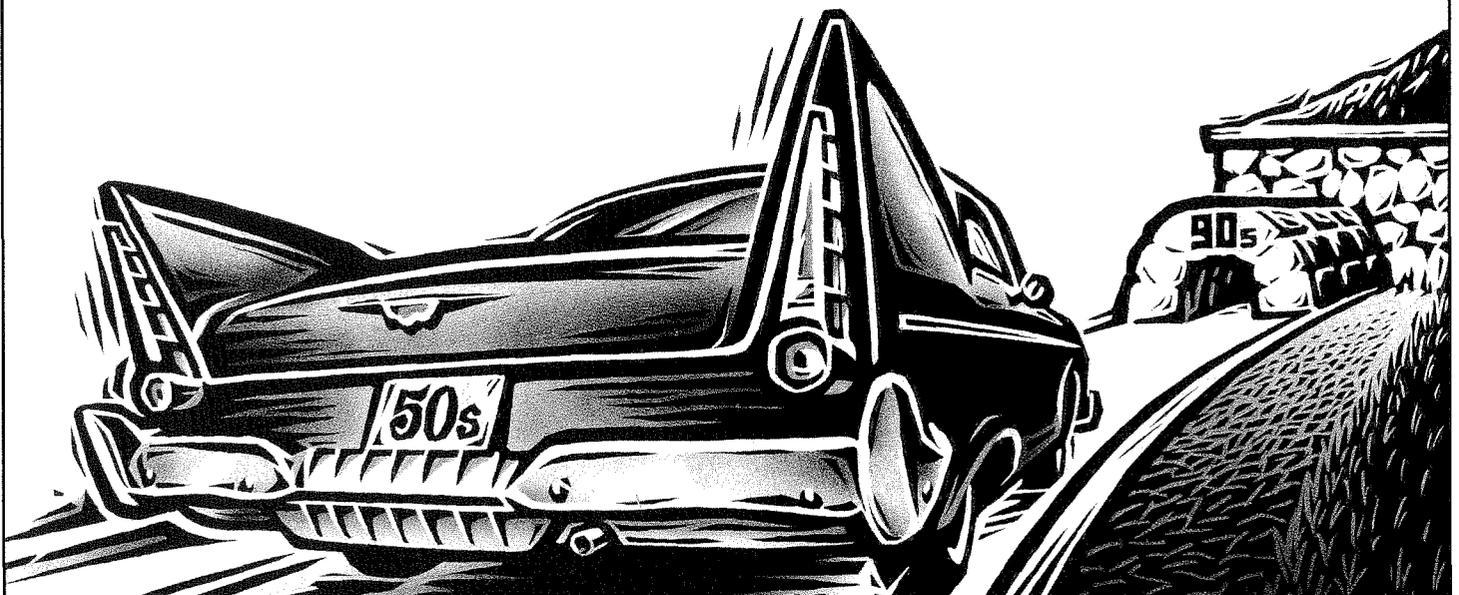
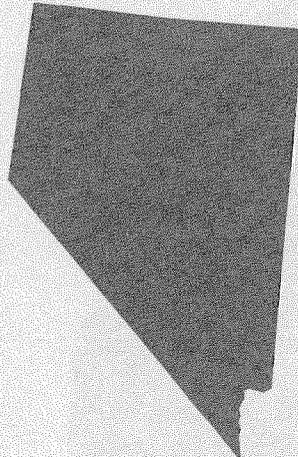
Nevada issued a proposed rule regarding regulatory incentives on March 7, 1991. The commission then conducted public hearings on the proposal and invited interested parties to submit responses, which will be considered in July or August. Three investor-owned utilities would be affected by the new rule, if it is adopted.

The rule would set procedures for including in rates the costs of new conservation and other demand-management efforts. It also would allow the recovery of lost income that results from reduced power sales and allow companies to keep 10 percent of the net system benefits that result from demand-management programs.

Utilities would recover lost income partly through rates and partly through a fund that would be established for that purpose.

"Some opponents of this, and not just in Nevada, have argued that the companies are doing enough conservation and demand-side management, and that they don't need more money for it," Wiel said. "I say the companies are tapping only a small fraction of the [savings] that are available from energy-efficiency measures."

—JAH



## Point of View

# Sue Hickey

with Dulcy Mahar

**Bonneville's assistant administrator  
is buying new resources for the region.**

*What attracted Sue Hickey to the Bonneville Power Administration in the first place was that "it had a real mission." That was something she had missed when she worked in Washington, D.C., for the Department of Energy. It didn't hurt either that Bonneville was located in Portland, Oregon, a city that had impressed her on business trips.*

*Hickey, Bonneville's assistant administrator for energy resources, defies the stereotype of the government executives who work their way up to the nation's capital. Instead, she started in the heartland of federal government and, of her own volition, moved out to the regional level.*

*Hickey arrived in the District of Columbia in the early '70s with an environmental engineering degree in hand. She went first to work for the newly formed Environmental Protection Agency. After a series of jobs in gov-*



Portrait by Lynn Carson

ernment, she ended up at the Department of Energy working on environmental issues during the Carter administration.

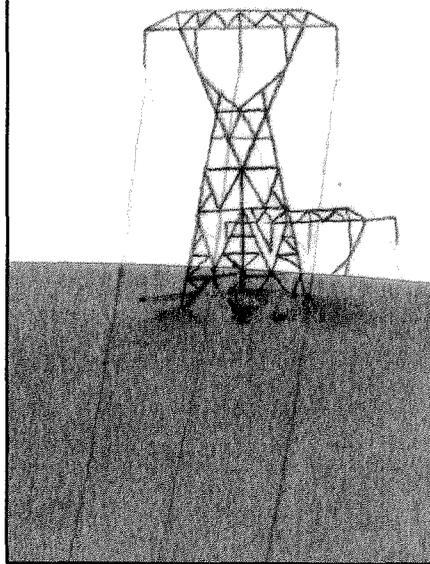
When Carter left office, Hickey decided she had seen enough of the capital. She moved to Portland and began working for Western Sun, a solar energy contractor to the Department of Energy.

When Reagan administration cuts threatened her work a few years later, she looked at Bonneville. Unlike the DOE, Bonneville seemed to know exactly what it was supposed to be doing, she recalls. "It was clear that Bonneville was implementing the [Northwest Power] Act and starting up a major conservation program. It seemed like the place to be."

Hickey moved to Bonneville as a conservation planner and found it an interesting transition from her environmental specialty. "I had a decision to make when I started looking for jobs out here. Did I want to be in the environmental field, or did I want to be in the energy field? I thought there would be more interesting policy work in the energy field."

It is a decision, she says, that "hasn't proven to be wrong."

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at the  
national level  
in energy.**



*Q. As someone who has worked at the national level, what do you think about the new National Energy Strategy?*

To tell you the truth, part of what attracted me out here was that I became fairly disillusioned with the ability to set national energy policy. As they were passing the regional [Northwest Power] Act back in Washington, I had a

sense that it might be feasible to develop regional energy policy. That's only been confirmed over the years here in this region.

We share a river, and we share values on the part of our citizens. You can look at the region as a planning unit and really understand what is going on. When we looked at the nation, our data wasn't good. Things were so different from one part of the country to the next. It's just very, very difficult to set policy and expect that you've got the tools to carry it forward.

This latest national energy strategy confirms what my thoughts were when I left. I wanted to be involved in something where there would be an impact, and I didn't see that happening at the national level in energy.

*Q. The region is at a crossroads, just ending a decade of surplus, and now Bonneville has put out its first call for new resources in years. What do you see ahead in the next decade? What do you think will be the critical issues, the new directions?*

It's hard to know where to start. Bonneville obviously needs to demonstrate that we can be not only a credible resource supplier but a competitive resource supplier. We have to be extremely smart about dealing with uncertainty and figuring out which resources will not only expose us to the least risks but reduce risk on our system.

The thing that motivates me the most, and I think motivates a lot of us here, is that we have a wonderful legacy of a very valuable and flexible hydro system, and that's something that should be enhanced. It shouldn't be diluted. That's the major challenge that we're always up against: how do you enhance the value of that hydro system, as well as the transmission system, because definitely the two go together. That's sort of the global challenge.

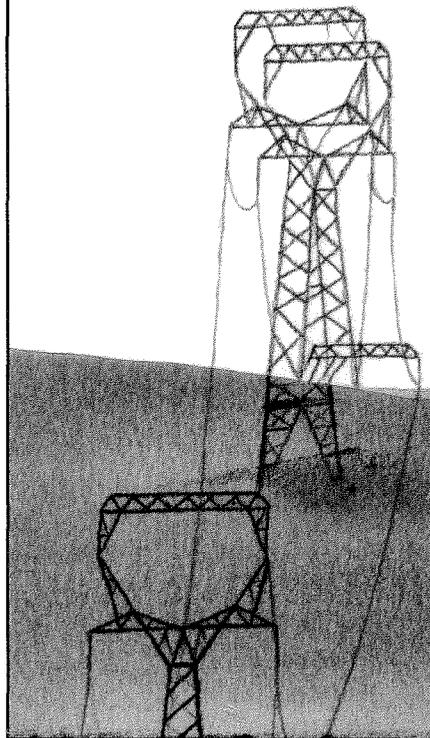
We're moving into a decade when we're going to talk about the next diversification of that system. What's it going to be, and how is it going to enhance what we have? The wonderful thing about conservation is that it doesn't pose that sort of a problem for us. We're sure that it is enhancing what we have, but in this decade, we're most likely going to be moving beyond conservation.

I also think there's a huge challenge with gas, and how this region is going to enter the arena of some fair amount of reliance on gas.

*Q. The Northwest Power Planning Council develops a power plan, and Bonneville develops a resource strategy. How do you integrate your strategy with the plan, especially since this time your strategy came first?*

We did do a resource strategy early on, and we now do a resource program. We call it a resource program because we view it as the implementing element of

**We're  
100-percent  
comfortable  
with the fact  
that we follow  
the guidance  
of your plan,  
and the  
resource  
program  
is our  
implementing  
document.**



your plan. We've got to have a document that translates the guidance from your plan into a budget. And that is the document.

We take the numbers right out of the resource program and put them into our program budgets. So it really is the translator. We ran into some difficulties last year, and I'm really proud of the way both of our organizations overcame them.

We're ahead of you because we're rigidly stuck into a certain schedule. A federal budgeting process happens at the same time every year, and our rate cases have to be in a certain window, so we have to have a budget at a certain time. Last November, we needed to have a draft, and in June we need something more final.

The Council wasn't going to be at that point with your plan. So we developed a strategy of sticking very close together on all of the basics: the models, the data, supply curves, forecasts, assumptions.

During that period, several of the staff members here met with the "power four" [Council member committee] every month, briefing the Council on what our staffs jointly were doing. Through that, we got an endorsement of the resource program from the Council.

Now we're starting on our next resource program. We need to pick up the Council's plan and put that into the resource program and say, "OK, we thought we anticipated it. Now let's see how we did as we move forward."

We're looking at many of the same issues. It's not constrained by your guidance, because your guidance is not constraining. It's more directional; it indicates the uncertainties that should be

looked at, and indicates the resource choices and the positive attributes of those choices. Those are all things that we take great pains to be consistent with. But ever since we agreed we'd have the same forecasts, models and data, it's not very difficult to be consistent.

I really think we've got an excellent framework now, as opposed to a few years back. That was way too argumentative. We had things coming in front of the Council that actually should have been worked out by staff, and they're being very effectively worked out by staff now. So although it's somewhat fluid, I think we're 100-percent comfortable with the fact that we follow the guidance of your plan, and the resource program is our implementing document.

The only time we really get into trouble is when there hasn't been enough information flowing, so it's not clear what we're doing.

This may disturb some people, but I

would really characterize the [Bonneville] relationship with the Council as collegial. I really do think we're colleagues. I don't see the Council trying to undermine Bonneville's ability to acquire the resources that are going to be the best for the region. I think we're both trying to do exactly the same thing.

In the beginning, there was a lot of arm wrestling about who was on first, and who had what sort of authority. I think that's really unnecessary. The Council's role is unique; it's an asset to the region. I wonder why in the world anyone trying to set national energy policy hasn't looked out here to say, "Hey, that regional experiment is working." The Council's a really excellent forum to bring together people in a far broader way than Bonneville can ever do.

*Q. What do you think that Bonneville's ideal role should be in the region?*

I see two interesting and distinct things going on. The first one goes back to what I said earlier about the challenge for the next decade. That is about not only preserving, but enhancing existing values in the power system. I think that's the right regional role for Bonneville, to ensure that we're providing value to the region.

That doesn't mean everybody's coming here to be served by Bonneville. But it certainly means that you're not hugely disadvantaging your existing customer, seeking new customers, which was something we had some fear we were doing in trying to have everybody purchase from Bonneville. There is definitely a leadership role that any large system



should feel. We're learning how to do that better without penalizing others.

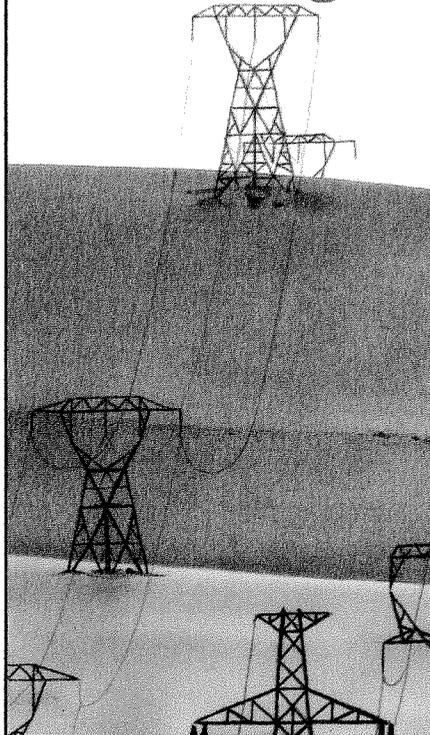
Environmental cost is a good example of that. We would like to quantify our environmental costs as a part of our planning and our selection of resources. On the other hand, we also want to recognize this is in an experimental phase and, while we might want to take it in a certain direction, others might want to take it in another direction. As a region, we are better off if we're experimenting more broadly than just having Bonneville insist that our direction is the only direction.

So I think there is a real role for leadership. I'll use the word "directionally," but not specifically about *how* something should be done. We have marvelous assets, and we've played a role in the past. We can play the same sort of pivotal role in the future, but I've never had any sense that we're the only player in town, or that we've got to be in charge of everything.

The other theme that I think Bonneville has an important role to play in is the discussions that the Council, as well as others in the region, are having about a West Coast view of things. I believe there's real value to be gained by having a broader West Coast view.

I don't think anybody wants to throw caution to the wind and move to a West Coast system. But there are obvious benefits, certainly, especially when you throw the environment strongly into the equation, that all three regions—the Pacific Northwest, California and British Columbia—probably

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could gain by closer coordination, joint research agendas and a whole series of things that are starting to be talked about. In the conservation area, you're going to have very active utilities all up

and down the West Coast, so it seems that there could be a significant advantage to having alliances in those areas.

And being really honest about it, we were up here doing conservation through a surplus and California really wasn't. There's been a renaissance of interest there, both in conservation and in the environment, that I think will ally us more closely with California. And Larry Bell<sup>1</sup> has done a tremendous job in causing interest in demand-side conservation up in British Columbia. So there's a natural set of interests here where there hasn't been before.

*Q. What do you see as the major untapped resource areas?*

Probably all of commercial and all of industrial [conservation] are largely untapped. I'm having a bit more confidence that we're beginning to get our arms around commercial, but it will take a little while longer, and I'm still not so sure about that with industrial. That's something we'll be anxiously waiting to see in this competitive bid [to supply new resources] that's coming out in June. Conservation, generally, is still largely untapped, not just in those sectors.

We've also committed ourselves to taking a look at new technologies. We used to have an attitude here that we're not going to put it in the supply curves unless it's available and reliable, and that means that it's cost-effective. That's somewhat confining.

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1. Larry Bell is the former chairman of British Columbia Hydro, that province's utility.

On the other hand, there is some responsibility here, we think as well, to demonstrate reliability and availability, and to determine when it will just take a push to put a resource in those categories. So that's a largely untapped area. It's like when NCAC<sup>2</sup> says there's 3,000 megawatts [of conservation] that we don't have in our supply curves. Our reaction's got to be, "Wouldn't that be great! Let's go see." It can't possibly be, "No, there's not. We don't believe that." Let's find out.

I think renewables also are something that's largely untapped by us up here. Both wind and geothermal are things the region needs to begin to get into. In particular, Bonneville has an interest in demonstrating geothermal viability.

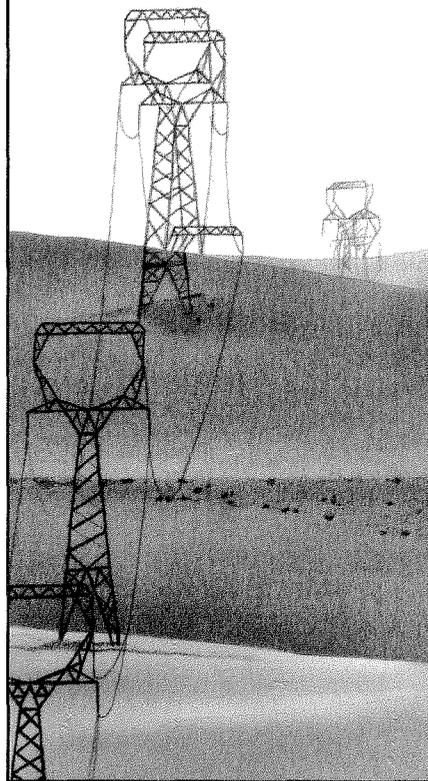
I'm going to use some old Council words here. I see us getting into "capability building" in generation. Bonneville's never been out there buying generation the way that we've been actively trying to buy conservation over the past decade.

*Q. Do you expect to see a greater focus on transmission and system reliability in general?*

Utilities have been very good at working out wheeling [transmission] practices in the region among themselves. To the degree that there are bottlenecks between systems, I think they're being worked on fairly effectively.

I think the Puget Sound reliability issues are the most recent example of utility cooperation on transmission issues. The main challenge in the Puget Sound area

**What we are trying to do is create a situation where there are no impediments to conservation being traded freely on the marketplace.**



from a power planning perspective is the resource focus on capacity, and that's not something we've traditionally planned for in our resource program.

But if you can get double duty out of locating a resource in a certain area, both for the energy side and for transmission, then that's definitely something you'd want to do. I think that it probably hasn't gotten more focus, because with that one, there's a fairly effective multiparty planning process going on.

Another area of new focus has been the interaction between resource siting and the need for transmission construction or reinforcement. With the new Bonneville approach to acquiring resources—not centrally planned, but based on sponsor proposals—we're finding a significant element of our consideration is the ease of resource integration into the existing system.

*Q. What is the status with Bonneville's billing credits program?<sup>3</sup>*

We're into the phase of negotiating contracts. Our goal was to get 50 megawatts, and it's almost a certainty that we'll do that, a large chunk of it being conservation. What's going to determine whether or not we take more than 50 is basically our own ability to negotiate those contracts, given that we've got to move into the competitive field in June.

2. Northwest Conservation Act Coalition.

3. Billing credits are a mechanism, authorized by the Northwest Power Act, that Bonneville is using to encourage its customers to develop resources to meet their own loads. In return, Bonneville credits the customer's bill to reflect what Bonneville saves by not having to develop alternative supplies of electricity.

At first we went out with the resource program, and the customers were disturbed that we were talking about a competitive bid but not billing credits, and they were right. So we modified and said, "OK, we're going to do billing credits." There was about three months notice between the time the customers knew we were going to have a "billing credits open."

That's not a lot of advance notice for resource development ideas to come to fruition. Given all of that, we're very pleased with what has happened there. We're really viewing billing credits and the competitive bid as tests. There are a lot of flaws with the billing credits process, and we hope to figure out what they are and fix them. I have been gratified by the way that customers have participated. We've hit some snags, most recently with the conservation billing credits and verification of savings.

Frankly, I should mention that as a separate issue. We've gotten a lot of help from the Council, which we appreciate tremendously. We've got a pretty big hurdle that we've got to cross with conservation in the next decade. What we are trying to do is create a situation where there are no impediments to conservation being traded freely on the marketplace. We would like to have our customers and other resource developers much more free to design what they want to bring to us, and we would purchase the savings.

There's been an initial over-reaction that what we're trying to do is shift all the risk back onto the developer. That's not at all what we're trying to do. What we would really like is more of a risk-sharing mode that reflects risks each of us can control.

If there's a certain risk that measures won't be installed correctly so they won't perform as anticipated, that seems more appropriately the utility or the developer's risk because they're the ones installing it. If it's a risk that the supply curve is wrong and the estimates were never right in the first place, then neither one of us controls that very well. Maybe that's a risk that we should share.

So, I think it's going to be a tricky issue for us to get through. There's going to have to be some transitional period; you can't just turn around and change the way you've been doing things for 10 years. I think it's a really important one for the next decade to get through that. ■■





# PUBLIC PUNDITS

by Carlotta Collette

## Expert advisors help shape the Council's strategies.

**B**efore there was a Northwest Power Planning Council office, or much of a staff, a command went out from the first Council to collect a team of outside advisors. That initial instinct

still persists. When the Council is tackling a tricky issue, it turns to the experts in the field.

"The first two division directors we hired were the directors of public information and public

involvement," recalls Edward Sheets, the Council's executive director. "The Council told us to send invitations to the biggest mailing list we could assemble. It was a call to nominate yourself,

or anyone you thought appropriate, to serve on the Scientific and Statistical Advisory Committee.”

The Council was under orders from the Northwest Power Act of 1980 to develop a program to protect the Columbia River Basin’s remaining fish and wildlife, and to produce a plan for meeting the Northwest’s electric energy needs at the lowest possible cost. The Act required that the region’s electricity consumers be both informed about and involved in these complex planning processes.

**E**ven more specifically, the Act called for a “voluntary scientific and statistical advisory committee to assist in the development, collection, and evaluation of...statistical, biological, economic, social, environmental, and other scientific information...”

Sheets, his staff of two and interested Council members reviewed the hundreds of committee nominations, looking for a balance between technical experts in the field and academics, environmentalists and utility representatives. They were looking, too, for regional distribution, so the interests of both rural eastern and more urban western Northwest states would have presence at the table.

The Council turned first to Jack Robertson, who was about to retire as director of the Region 10 office of the U.S. Department of Energy in Seattle. Robertson served at Region 10 during the 1970s, when oil supply problems involving the Middle East were beginning to signal the end of one era and the dawn of another—the

## When the Council is tackling a tricky issue, it turns to the experts in the field.

“age of scarcity.” This experience made him more than moderately mindful of resource trade-offs and the formidable tasks the Council would confront.

Waiting to grab Robertson at the moment of his retirement was the Council’s first chairman, former Governor (and more recently Senator) Dan Evans of Washington.

Robertson explains that “Sheets and the governor knew that I’d been an officer of the federal government in the field of energy, and that I knew the federal laws they’d have to follow. One August afternoon, Bob Merlino (then director of public involvement) came out to my place. Over beer and sandwiches, we worked up a possible charter for the committee. Then we worked up a scope of work for five subcommittees. I hadn’t really agreed to serve on the committee yet, but when the Council asked me to chair it, I said OK. It was, after all, a fascinating national experiment,” he adds.

Assembling an effective team of regional experts with the assignment of producing a 20-year electric power plan for the four Northwest states proved to be the easy first step in an otherwise

Herculean task that had been given a two-year timetable by Congress.

The Council and its advisers had to assess the region’s existing electrical resources, develop a 20-year forecast of future electricity needs, evaluate all possible resources to meet that future need and rough out programs and other activities to secure those resources.

In addition, the Council had to call for recommendations for actions designed to reverse the decline of salmon and steelhead, other fish and any wildlife that were damaged by construction and operation of the Columbia River’s hydroelectric system, and prepare a plan of action on that front.

Both plans were to be reviewed by as wide an audience as was practical and possible. The plans would have to be revised in response to comments and then adopted as policy for the region—all between April 1981 and two springs later.

### The first committee

The regionwide search for wise counsel resulted in a final list of 64 members who were assigned to five subcommittees: conservation, fish and wildlife, forecasting, reserves and reliability, and resource assessment and programs. At Robertson’s suggestion, a Council member also served on each committee to better integrate the committee’s work with the Council’s process.

“I remember sitting around a big table,” Sheets relates, “with Council members, a few staff and a lot of advisory committee members. The expertise of the advi-

sors guided all our early work. Sure the Act required the use of outside advisors, but it was clearly of critical importance to the Council members, too. They wanted the best information on every issue they had to deal with.”

Dr. Tom Trulove, who holds a doctorate in economics and was at the time mayor of Cheney, Washington, has similar memories of his experience as a member of that first committee, an experience that served him well later, when he was appointed by Washington Governor Booth Gardner to serve on the Council.

Trulove served on the first economic forecasting subcommittee.

“The technical advisory committees were especially useful because they were able to supply the best available scientific input. They were a means for educating the Council. They carried a weight of understanding in their fields that allowed the Council to put together what were really revolutionary plans and models.”

Trulove notes, however, that he often felt like an outsider, not completely understanding what the Council thought it was doing with all this advice. “What I saw

as a mayor was a group that seemed to be pontificating from on high without knowing how local government works,” he says.

**T**hat observation led to the Council creating a staff position to serve as a liaison with local governments. It also affects the way Trulove serves as a Council member now. “We’re under the gun to make progress and change things, and we can’t talk to everyone. But sometimes it takes less time to get the job done if you take the extra time up front to talk to the people in the towns and cities. You’ll never get their

## The Council’s Current Advisory Committees

### Fish and Wildlife

- System Planning and Oversight Committee
- Monitoring and Evaluation Group
- Wildlife Advisory Committee

### Power Planning

- State Agency Advisory Committee
- Economic Forecasting Advisory Committee
- Conservation Supply Curves Advisory Committee
- Demand Forecasting Advisory Committee
- Generating Resources Research, Development and Demonstration Advisory Committee
- Conservation Resources Research, Development and Demonstration Advisory Committee<sup>1</sup>



<sup>1</sup> The Conservation Resources Research, Development and Demonstration Advisory Committee was formed in 1991, largely in response to concerns that more activities would be necessary to confirm some of the conservation measures in the Draft 1991 Power Plan. Building on the success of the original Research, Development and Demonstration Advisory Committee, which helped the Council set an agenda for testing renewable resources, such as wind, solar and geothermal, the new committee will look at emerging efficiency technologies and devise ways to bring them into the resource stack.

cooperation without first building moral commitment based really on a kind of friendship.”

The Council and its outside navigators produced their first Northwest Power Plan and Columbia River Basin Fish and Wildlife Program on schedule.

## Shaping today's strategies

This year, after more than three years of study, analysis, public review and hard decisions, the Council is delivering its most important power plan to date. It will also review a detailed Columbia River Basin systemwide plan for producing more salmon in key subbasins of the region.

These plans come at a pivotal time. Nearly a decade of power

surpluses has come to an end. The region must begin to acquire more electricity to meet its growing needs. And after a century of declining runs, one species of Columbia River salmon was proposed for listing as endangered, and others are likely to be declared endangered or at least threatened under the federal Endangered Species Act. How these paired crises are addressed will be critical to the Northwest's ability to thrive as a region.

The Council has never been more sorely in need of good advice than it is now. Fortunately, the Council's current advisors—officially there are nearly 150 of them, but dozens more participate—are among the nation's most recognized leaders in their fields. They include members from every Northwest state's public utility regulatory body, staff from all the private utilities in the region and from many of the public ones, tribal fisheries experts, commercial and sports fishers, farmers, industrial leaders, manufacturers, bank managers, citizen groups, university specialists, major national research scientists, representatives from conservation and environmental groups, decision-makers from virtually every state or federal agency that has influence over fish and wildlife or electric power policy, and others who consider themselves “just citizens.”

**T**hese scientists, scholars and sometimes skeptics are helping the Council evaluate the efforts of the past decade and refine strategies for moving into the next century. They influence every decision the Council makes. Their tasks range from designing mathematical models of the salmon life cycle, to brainstorming home-front responses to federal and regional dealings.

Where state or federal energy policies interact with the Council's plan, the group most likely to respond is the State Agency Advisory Committee. Formed to involve public utility commissions in the development of the Council's 1986 Northwest Power Plan, this committee continues to meet more than five years later. Jim



Litchfield, who as Council director of power planning leads this committee, relies on the state agency team both for nudging utility regulatory policy and for "philosophical guidance" about how Council strategies can gain acceptance among investor-owned utilities.

Watching this committee in action (easy to do because all advisory committee meetings are open and posted in the Council's monthly newsletter, *Update*) provides perhaps the best opportunity to see how a region is attempting to shape its policies cooperatively. The committee collects the recommendations of each state and integrates them into a proposal for both the Council and each state's regulatory commission. More often than not, the approach to specific problems is collaborative.

### Exploring renewable energy resources

Because of the growing need to add power to the Northwest's grid, the Council in the past few years conducted a detailed study of new sources of electricity, such as wind, solar, geothermal (using naturally occurring hot water beneath the earth's surface to create steam and drive turbines) and biomass (burning wood wastes and other combustible cast-offs to power generators). To assist in this endeavor, the Council turned to a dozen eminently experienced resource specialists, who constituted the Research, Development and Demonstration Advisory Committee. They, in turn, assembled advisory panels on several key resources.

What followed was one of the most thorough studies of these renewable technologies ever carried out in the United States. The committee included staff from the Bonneville Power Administration, several of the region's utilities, state departments of energy and natural resources, the Electric Power Research Institute, the U.S. Solar Energy Research Institute, Washington State University's Electrical and Computer Engineering Department and the Independent Power Producers Association. The individual resource panels added to that list product manufacturers, major resource developers in each technology and additional scientists.

They were given three major assignments: determine what exists and what is needed to prove out renewable resources for utility-scale electricity generation; draft a regionwide policy for researching, developing and demonstrating renewable resources; and produce and

implement agendas for confirming these resources.

**D**r. Jan Hamrin, whose Ph.D. is in ecology and public policy, focused the group's resource developer's perspective. In 1981, she founded the Independent Energy Producers Association. Her specialty is bringing private sector generating projects, such as wind farms and small hydropower dams, to utilities. She



found her experience on the Council's committee to be "a good education in, for example, the utilities' point of view. It was an excellent process—time consuming—but not a process to underestimate. We produced a consensus document. There was no browbeating. Because of that, it will serve the Council and the region very well."

Dr. Robert Stokes, an astro-physicist trained at Princeton, served with Hamrin on the committee that reviewed renewable resources. As second in command at the nation's Solar Energy Research Institute, he shares responsibility for developing wind, solar and biomass technologies. He describes his two years on the Council's advisory committee as "enlightening and positive...personally and professionally satisfying."

"Many of the members from investor-owned utilities were quite skeptical of the role renewables could play as part of a resource acquisition strategy," he says. "Over two years, many of them came around to seeing their role. It was fascinating to see their business perspective."

**T**he committee also brought in manufacturers to talk about their products. Stokes sees this as "ensuring a very high level of technical understanding of ways to measure the performance of these technologies. The Council got a very, very high level of technical expertise overlaid with practical applicability of these resources, in terms of the transmission and distribution of electricity in the Northwest. It would be very difficult to assess this on

**These scientists, scholars and sometimes skeptics are helping the Council evaluate the efforts of the past decade and refine strategies for moving into the next century.**

a national basis," Stokes argues. "This was tailored to the specific needs of this region."

Stokes says he thinks the Northwest is a pioneer in this area. "You've served as a model to the nation on how to integrate conservation into a utility system. I hope you can take the lead, too, by introducing renewable technologies."

The analysis and agendas developed by the Research, Development and Demonstration Advisory Committee were adopted by the Council as part of the new, 1991 Northwest Power Plan.

**Tallying the effects of tampering with nature**

It has been argued that it is close to impossible to measure the effect of actions taken in natural systems. This is probably particularly true in an ecosystem as broad as the Columbia River Basin.

But electricity ratepayers in the Pacific Northwest are investing millions each year to bring into balance fish and wildlife populations that were grossly altered by the introduction of river-blocking giant hydroelectric dams. Some means of evaluating the return on these investments must be found. Some mechanisms for prioritizing projects must be developed.

Once again, the Council turned to the region's experts for guidance. There are currently three fish and wildlife advisory committees: the System Planning Oversight Committee, the Monitoring and Evaluation Group and the Wildlife Advisory Committee.

Of these, the System Planning Oversight Committee, or "SPOC" as it's commonly called, has most evolved over the four years of its existence. SPOC was created by the Council to serve as a forum to address issues that emerged from the system planning process. Eventually it became the watchdog committee for nearly all basinwide salmon endeavors.

System planning involved a comprehensive review of 31 major subbasins of the Columbia River Basin to uncover opportunities to produce salmon and steelhead in those river reaches. The 31 subbasin plans, which were themselves the product of local

advisory groups, were then combined into a systemwide plan that also incorporated larger issues such as ocean and in-river harvest of fish and mainstem passage survival.

The committee was structured to bring planners and implementors together to resolve problems during development of the systemwide plan. "SPOC looks at everything now," explains John Palensky, who as director of fish and wildlife at the Bonneville Power Administration could be considered one of the guardians of the region's fish and wildlife purse strings. Palensky has a master's degree in fisheries and worked eight years on a commercial salmon dory with his daughter before beginning his career with state and federal fish and wildlife agencies.

He observes that in SPOC sessions "you can explore issues that could become contentious if not addressed early. Is it time consuming?" he asks, rhetorically. "Yup! But you can save time by resolving issues at the committee level. If you can convince an organization's representative, you're a lot closer to getting that organization to work with you. We can have candid discussions before issues have to go to a Jura (Bonneville's administrator) or a Goller (the Council's chairman). There isn't another forum like this anywhere," he asserts.

**"These committees afford the opportunity to think more rigorously than you might otherwise on a day-to-day basis. You're challenged because you're associating with high performers."**

**— Phil Roger  
Columbia River Inter-Tribal Fish Commission**

SPOC members have pushed for increased public involvement in salmon planning, a careful review of hatchery practices and more detailed cost estimates for salmon proposals. In addition, the committee has met with and reviewed the analysis of a national panel of geneticists the Council convened to provide guidance on conserving genetic diversity in salmon populations.

If SPOC can be called the "big picture" policy-level committee on fish and wildlife, the Monitoring and Evaluation Group, or MEG, takes a colossal view, but attempts to compress and clarify it. It is MEG's responsibility to

assess the results of the fish and wildlife program. If more water is passed through the dams at a given time, for example, MEG is trying to determine how many more fish could also be passed safely. Not just the first year, either, MEG has to take the long view. How will fish populations react over several generations, decades into the future?

This perspective requires a combination of skills; an understanding of both biology and computer models. Dr. Lars Mobernd, with a doctorate in biomathematics, fits the description. So does Phil Roger, senior fisheries scientist with the Columbia River Inter-Tribal Fish Commission, who is just shy of earning his doctorate in quantitative ecology and population dynamics. Mobernd and Roger are two of the eight scientists the Council called on to develop a

way to tell how effective the fish and wildlife program is. Their fields of expertise barely existed only a decade ago. Now they are vital to weighing the costs and virtues of nearly any probe the Council makes into natural systems.

**M**obernd calls MEG "a hub for coordination...a group that is trying to separate confusion from genuine scientific uncertainties by focusing discussions on ways to test things scientifically rather than relying on assumptions, feelings or opinions."

MEG's first product was a computer model that can simulate the effects of fisheries actions by breaking them down into mathematical probabilities.

Roger agrees that the MEG process has been useful and the computer model is valuable, but he adds his concern that the technical committees have not been used to their fullest extent yet. "This isn't so much a problem of the Council's," he explains. "The fishery community in the basin hasn't fully utilized the committees. When they're constituted correctly," he says, "these committees afford the opportunity to think more rigorously than you might otherwise on a day-to-day basis. You're challenged because you're associating with high performers, with good people."

If abundant expertise in obscure fields is a criterion for serving on the Council's advisory committees, Bill Hansell might seem out of place. Hansell describes himself as an "eastern Oregon wheat farmer." He also happens to be a Umatilla County Commissioner, has been since 1983.

And the National Republican Party voted him one of 10 outstanding local officials nationwide.

**B**ut that still doesn't explain why Hansell is one of five people appointed to serve on the committee that is selecting wildlife rebuilding projects to recommend for millions of dollars in Bonneville funding. The answer relates back to Tom Trulove's complaint that the first Council sometimes appeared out of touch with local folk. Hansell says he is on the Wildlife Advisory Committee, "because the Council felt it was important to have someone who represents local governments...someone who could bring a touch of the grass roots to the process. I can't advise biologists,"

he admits, "but I can sharpen the group by bringing in a point of view that can make projects win/win propositions."

The hope when assembling advisory committees is to reflect a broad spectrum of current understanding on any given topic. The Council has found that the committees then raise the level of knowledge in their fields because of their dynamic interaction.

"The committees provide the Council's quality assurance," says Edward Sheets. "Taking work from the committee to the general public for further review gives us even more of a sense that we've heard from the best. First, the Council's staff develops information and analysis. Then we ask our technical experts to review this material. Finally, we turn the information over to the scrutiny of the general public."

The process doesn't resolve all the disputes, nor does it answer all the questions. But it does enable well-informed decision-making. The homework has all been done. ■■



**H**ere's a story about taxation, frustration and politics, a trickle-down tale that begins in the lofty goals of the National Energy Policy and doesn't stop until it hits the pocketbooks of home buyers in the Pacific Northwest.

It's a story about numbingly complex government agencies—the Internal Revenue Service (IRS) and the Department of Housing and Urban Development (HUD)—and the policies they make. A ruling by the IRS, inaction by HUD and meek conservation goals in the National Energy Policy are frustrating efforts to increase energy efficiency in a large segment of the Northwest housing industry—manufactured homes.

Manufactured homes used to be called mobile homes. They were narrow, poorly insulated and easily transportable from the manufacturing plant to the home-site. Best of all, they were inexpensive.

Today, manufactured homes are bigger, better built and more attractive than their predecessors. They come in a variety of designs. But most models remain less expensive than site-built homes.

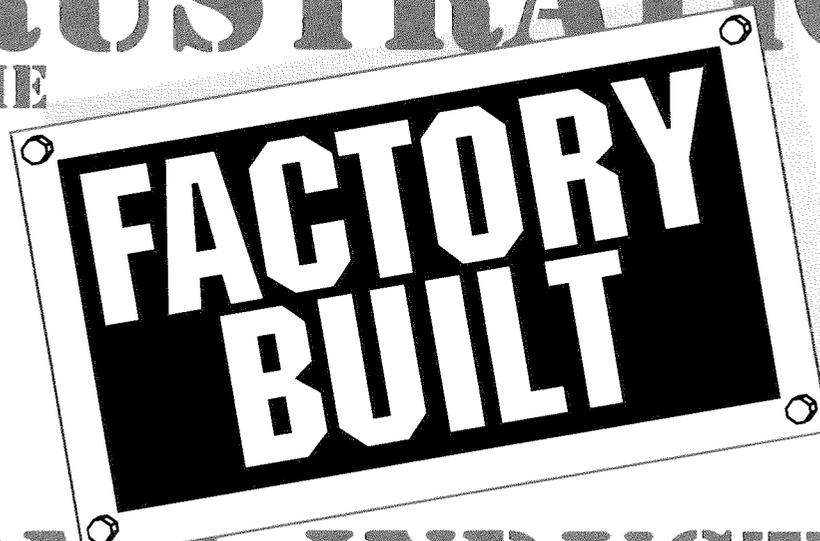
Since about 1987, 25 percent to 40 percent of all new, single-family homes built in the Northwest and heated by electricity were manufactured homes. More than 90 percent of the factory-built homes in the Northwest have electric heat.

Those homes use a lot of electricity. The potential for energy savings through conservation is great if the homes are built to the efficiency levels of the Northwest Energy Code, which is based on the Northwest Power Planning Council's model conservation standards for new electrically heated residences.

The Council identifies potential savings of between 100 and 160 megawatts in the Northwest during the next 20 years if all new manufactured homes were built to these standards. Washington will put them into effect for site-built homes in July; Oregon will adopt them next January. They've already been adopted by some jurisdictions in Idaho and by the city of Missoula, Montana. And

# FRUSTRATION

IN THE



# HOME INDUSTRY

by John Harrison

**Bureaucratic barriers bog down efforts toward efficiency.**

the Montana Legislature is considering an energy-efficiency building code for that state.

But the 18 manufactured-home builders in the Northwest aren't required to follow the Northwest Energy Code. That's because the thermal standards that apply to manufactured homes are different than those for other residential structures. The Housing Department sets the rules for factory-built homes because they are often built in one state but sited in another.

**T**he Department first adopted insulating rules for manufactured housing in 1974. At the time, industry representatives argued that home buyers could not afford to spend a lot of money on insulation, so the standards that emerged are much lower than those for site-built homes. The result is that manufactured homes can be built with a bare minimum of insulation.

"The Housing and Community Development Act of 1987 ordered HUD to upgrade its thermal standards for manufactured housing, and the Council worked with the Northwest congressional delegation to do that," said Tom Eckman, senior conservation analyst at the Council. "But HUD has yet to complete the process."

Eckman said the Department filed a proposal to upgrade the standards with the federal Office of Management and Budget, which must approve changes in HUD regulations. Neither federal agency has indicated when a decision will be made.

**The Council identifies potential savings of between 100 and 160 megawatts from new manufactured homes.**

The Council is urging HUD to adopt the model conservation standards, or something like them, as the rule for manufactured housing in the Northwest. Industry representatives say they're all in favor of conservation, but that it's difficult to sell.

"The problem is overcoming the first-time cost," said Ted Bot-tiger of Washington, Council vice-chairman. "A home built to energy-efficient standards might cost a little more at the outset, but there are savings in the long run because of lower utility bills."

Joan Brown, director of the Washington Manufactured Housing Association, said the industry still is selling amenities, not conservation.

"Consumers want it, but they don't want to pay for it if it means eliminating features they want. When you tell them, 'OK, you can have energy efficiency, but to keep the price the same you'll have to skip the microwave and you won't be able to upgrade the carpet,' they'll go for the amenities."

In addition, she said the manufacturers believe problems in the construction specifications must be worked out, such as the type and amount of windows in an energy-efficient home.

"When you tell customers, 'No, you can't have French doors, and that garden window will have to go, and so will that octagonal stained glass window by the front door, and no skylights are allowed,' they react to that," Brown said.

Politics are another roadblock to energy efficiency.

"The Office of Management and Budget sees the Housing Department's proposal as additional regulation, and under this [presidential] administration, new regulation is not the way to solve problems. You let the marketplace handle it," Eckman said.

To a certain extent, that's already happened. For example, the Bonneville Power Administration extended its Super Good Cents incentive program to manufactured homes in 1988. The program encourages new construction built to model conservation standards. That means buyers can opt for the standards and will be reimbursed for the additional expense by Bonneville. Today, the 18 Northwest manufacturers are

producing about 10,000 homes a year, and 15 percent of those are built to the Council's standards.

The Internal Revenue Service and President Bush's National Energy Policy combine to throw up another political roadblock to energy efficiency in manufactured housing. In 1980, the Solar Energy and Energy Conservation Act specifically exempted from taxation utility payments to residential customers for conservation measures in their homes. The Act also exempted conservation measures that were installed by the utilities in private residences. The exemption expired in 1989, and in that same year the IRS ruled that such payments by utilities could be considered income and thus would be taxed.

The Council, and many other interested parties across the nation, sought an extension of the tax exemption, but the matter

died in Congress during deliberations over the federal budget last year. The new National Energy Policy does not renew the tax exemption. Rate discounts granted by utilities to finance conservation measures are exempt from income taxation, but direct payments are not.

"We've found that utility incentive payments to consumers are a proven and important means to encourage long-term conservation investments," Bottiger said. "It's the only way we're going to realize the huge conservation potential out there."

Council Chairman Jim Goller, from Idaho, agreed, and added: "There are no new taxes [in the energy policy] on hydro-power, renewable energy, coal, oil, gas or nuclear resources. But conservation has been singled out for a tax, and at the very time when

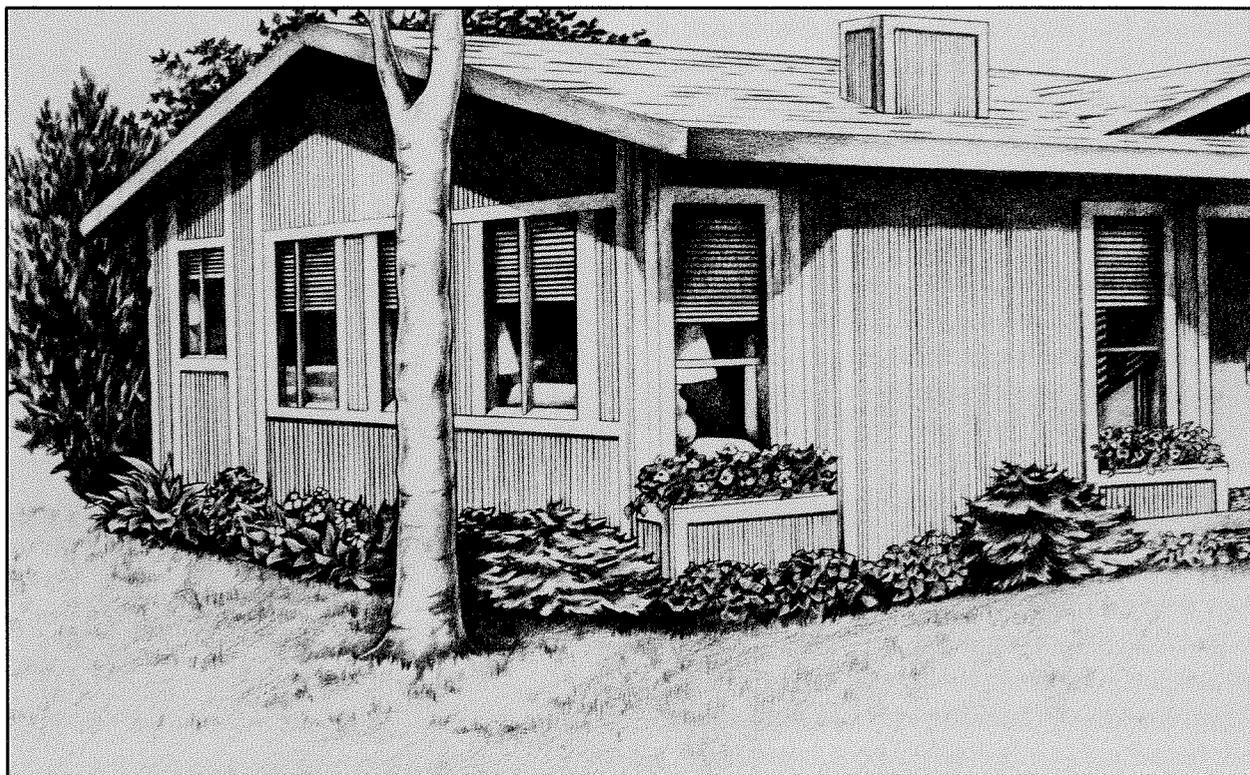
this nation needs conservation most."

Lacking encouragement from the IRS, HUD and the National Energy Policy, it will be up to the Council, Bonneville and Northwest manufacturers to make manufactured homes affordable and energy-efficient.

That work already is under way.

"We've asked that the utilities and Bonneville try to work out a deal with the manufacturers to pay for Super Good Cents output," Eckman said. "Instead of contracting with every home buyer to build a Super Good Cents home, it's simpler to contract with the manufacturers to build every home to Super Good Cents standards."

Eckman said such an effort would require the cooperation of the region's investor-owned utilities, as well as the manufac-



turers and Bonneville, because a significant portion of the population growth in future years will be in the service territories of those utilities. The parties began negotiations this spring, and they hope to make the transition from a

house-by-house program to an all-output program in 1992.

The alternative to a regionwide deal with the manufacturers is a hookup fee for mobile homes that aren't built to Super Good Cents standards. That is, a utility would charge a fee to hook up a new

home to electrical service. The fee would amount to a reimbursement to the utility for the additional strain the inefficient home would put on the electrical system.

## Glenbrook: Affordable, Energy-Efficient Homes

**G**lenbrook, a new subdivision near Kent, Washington, isn't a typical residential development. First, it's owned by the King County Housing Authority. Second, the homes in Glenbrook were built in a factory and brought to the site by truck. Third, they all are energy-efficient homes, built to the standards of Puget Sound Power and Light Company's Comfort Plus Program.

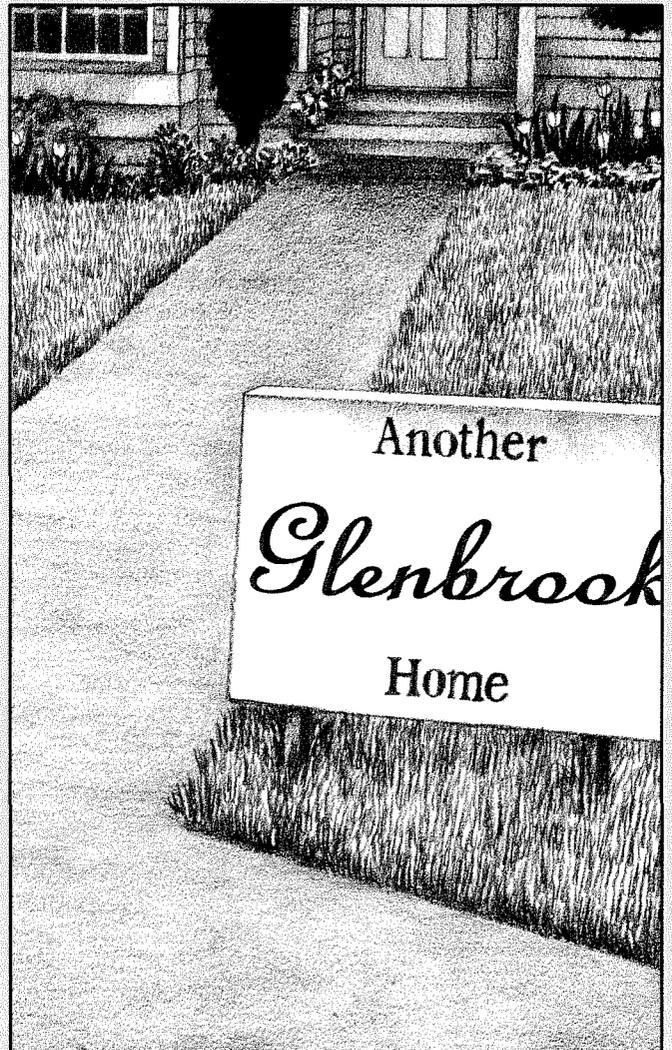
In fact, Glenbrook is a cooperative effort of Puget Power, the housing authority, U.S. National Bank and the home builder, Moduline International. Their goal: provide energy-efficient, affordable housing in the Seattle metropolitan area, where the average home price is more than \$100,000. Glenbrook prices begin at \$78,950. The 25-acre development is planned for 148 homes.

Glenbrook is on the site of an old mobile home park. The housing authority bought the park, then contracted with Moduline International of Seattle to build the homes.

Usually the housing authority rents homes and apartments to low-income persons. At Glenbrook, the housing authority is acting like a developer. Glenbrook residents pick the model they want, and it is purchased by the housing authority. The housing authority then leases the home to the resident for up to three years.

During that time, a portion of the lease price goes to building up an account to be used as a down payment to purchase the house, and U.S. Bank will cooperate on the lease-purchase arrangement and offer attractive financing when the residents decide to buy. Eventually, the housing authority will be out of the project altogether.

The three-bedroom, 1,300-square-foot homes at Glenbrook are built at Moduline's Chehalis, Washington, plant and feature R-19 Fiberglass batt insulation in the six-inch, wood-framed walls, R-30 batts in floors, R-44 batts in flat ceilings and R-33 batts in vaulted ceilings. Doors and windows are insulated, and Puget Power will purchase low-flow showerheads for each home and pay \$30 toward the purchase of an energy-efficient refrigerator.



—JAH

Washington public utilities in Tacoma, Chelan County and Grant County already are considering hookup fees, and a public utility in Mason County, Washington, has a hookup fee in effect.

But the threat of hookup fees may help force the Office of Management and Budget to make a decision on the Housing Department proposal. That's because, by law, the Office of Management and Budget must consider the economic impact to the industry in recommending for or against new Department regulations. Imposing hookup fees would have an impact on the marketplace, perhaps making inefficient homes less desirable to consumers.

"If you tell the Office of Management and Budget that failure to promulgate these regulations will result in hookup fees because their inefficient homes are inconsistent with the Northwest energy strategy, that changes the economics substantially," said Jim Litchfield, director of the Council's power planning division.

**H**ookup fees would be unnecessary if Bonneville and the utilities strike a deal with the manufacturers.

"Politically, a deal between the utilities, Bonneville and the manufacturers would be better than hookup fees," Eckman said.

**The Internal Revenue Service and President Bush's National Energy Policy combine to throw up another political roadblock to energy efficiency.**

Manufacturers also hope to avoid hookup fees, as they would exacerbate the intense competition in an industry where manufacturers worry about controlling production costs and holding their market share.

Brown, of the Washington manufacturers association, concurs.

"The industry needs incentives, not punitive measures," she said. "The entire Northwest electric energy industry, from Bonneville to the investor-owned utilities—must agree on an incentive program in order for manufacturers to build every home to Super Good Cents standards." That's because a manufacturer would lose money by shipping a home to a part of the Northwest where the local utilities won't pay the incentive or where there are hookup fees.

"The manufacturers are really working hard on this," Bottiger said. "They want a seal that says this house is at least as good as a site-built house. They're even talking about a super house with efficient lighting and appliances" in addition to the Super Good Cents insulating measures. He said the Northwest manufacturers should be complimented for being "extremely cooperative and wanting to upgrade the image of the manufactured house." ■■

**W**ho are the Northwest's energy innovators? Where is efficiency making a difference? What future technologies are being tested today?

How are Northwesterners trying to protect their salmon runs? What is being done to guard against the loss of wildlife?

This new section of *Northwest Energy News* will feature regional, and sometimes national, models, demonstrations and community projects—the incremental pieces of the Northwest's energy and environmental future. Send us a note about your favorite example.

## Montana Demonstrates New Coal Technology

Clean coal is a buzzword for the '90s. Montana, whose native coal seams are recognized as much cleaner, meaning lower in sulfur, than their eastern U.S. counterparts, is moving ahead to capitalize on this trend with a product that will enhance both the thermal and environmental aspects of its existing "clean" commodity.

Montana Governor Stan Stephens recently participated in ground-breaking ceremonies for the Advanced Coal Conversion Process plant at the Rosebud Coal Mine near Colstrip in eastern Montana. The \$69-million facility is being funded equally by Rosebud SynCoal Partnership and the U.S. Department of Energy's Clean Coal Technology Program. (Rosebud SynCoal is a partnership between Montana Power Company and Northern States Power located in Minnesota.)

This new plant will use a coal conversion process to upgrade low-rank western coal by reducing the moisture content and the percentage of sulfur. The estimated production is 300,000 tons of converted coal per year.

The conversion process will have several results:

- The heating value per pound of coal will be significantly increased. The partnership expects to raise the heating value of the raw coal that is currently 8,600 British thermal units per pound up to 11,700 British thermal units per pound.

- Moisture content will be reduced from 25 percent to less than 5 percent. Reduced moisture translates into a lighter weight product, which is cheaper and easier to transport.
- Sulfur content will be decreased. Low-rank western coal normally contains 0.5 percent to 1.5 percent sulfur. The converted coal at this project will contain .6 percent sulfur (1 pound of sulfur dioxide per million British thermal units).

With new restrictions on sulfur emissions, utilities are searching for cost-effective compliance methods. Because of its low-sulfur content, enhanced coal could allow ongoing operation of older, coal-fired generating plants that would otherwise have to be shut down or have expensive sulfur control systems installed.

This prototype plant, which will be one-tenth of commercial scale, goes one step beyond previous pilot projects in an attempt to verify the economic viability of this coal conversion process. If it proves successful, advanced coal conversion could provide an efficient and economic energy option for the future.

—Terri Wilner  
Montana Council staff



Montana Governor Stan Stephens speaks at the groundbreaking ceremony for a new clean coal processing plant near Colstrip, Montana.

## An Energy Bargain in Bend, Oregon

**A**t the Inn at the Seventh Mountain, in central Oregon, owners have learned how to pay less for more. The Inn is a high-country resort complex whose electrical space and water heating equipment were nearly 20 years old and in need of replacement. The owners turned to Pacific Power and Light Company, which supplies the Inn's electricity, and the area's gas utility, Cascade Natural Gas Company, to help devise a new space conditioning system that could also cut the resort's energy use.

"We looked at about eight options," explains Karl Friesen, whose District Utility Services Company (a part of PacifiCorp electric operations, along with Pacific Power) came up with the winning idea. "The Inn had added roof insulation, and we looked at things like storm windows. But with the number of units they had, the cost to add windows was substantial for the amount of energy you'd save."

Instead, the team proposed and helped put together a design and financing package for an innovative resortwide heating and cooling system that uses warm (about 50 degrees Fahrenheit) subsurface water in a groundwater-source heat pump.

The heat pump meets most of the heating and cooling needs of the resort, including the addition of air conditioning to every unit, but will require less than half the electricity used previously, when most of the facility wasn't air conditioned.

Furthermore, the project manifests both energy efficiency and the application of three innovative technologies: use of the Cascade Mountain Range's abundant geothermal heat; district heating and, in this case, cooling through a four-pipe loop system that serves the entire facility; and groundwater-source heat pumps.

**"Without the state participation, the project probably would have been too expensive to do right now. Geothermal projects have larger start-up costs...but in the long run, the energy savings will more than cover the costs."**

**— Scott Hannigan  
District Utility Services Company**

Two equally inventive funding options were also tapped by project developers: Oregon's State Energy Loan Program and the state's Business Energy Tax Credit Program.

"Oregon is ahead of the rest of the region with this sort of funding," says Scott Hannigan, President of the District Utility Services Company. "Without the state participation, the project probably would have been too expensive to do right now. Geothermal projects have larger start-up costs than some other technologies," he notes, "but in the long run, the energy savings will more than cover the costs."

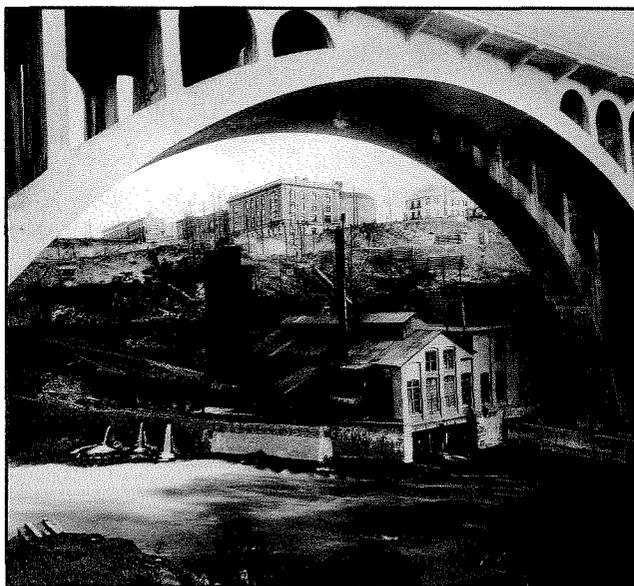
—Carlotta Collette

## Spokane's Monroe Street Dam is Retooled

In 1891, the Monroe Street hydroelectric development, located in the pioneer town of Spokane, Washington, produced less than one megawatt. As the city grew and changed, so did the Washington Water Power Company's Monroe Street facility. By 1940, improvements had raised the installed power capacity to 7.23 megawatts. In the early 1970s, the dam and the five-unit powerhouse were refurbished.

To help meet the region's growing energy needs, Washington Water Power is once again upgrading its Monroe Street facility. Production efficiency will nearly double, with an increased generating capacity of 14.8 megawatts.

"This project is a good example that we hope others follow," says Tom Trulove, eastern Washington member of the Council. "It exemplifies elements of the Council's Draft 1991 Power Plan and Columbia River Basin Fish and Wildlife Program. Plus it demonstrates what can be accomplished when people work together."



Monroe Street hydroelectric development on the Spokane River, Spokane, Washington. Circa 1920.

Roger Woodworth, Washington Water Power's license administrator, credits the Council and others with speeding up the licensing process for the renovation. "Broad-based support from the Council and others, in combination with thorough licensing preparations, allowed the Federal Energy Regulatory Commission (FERC) to expeditiously process our application," says Woodworth. "We received our order amending the license to increase capacity at the facility in less than four months."

The utility plans to invest \$26 million in the project, including complete replacement of the powerhouse and outdated equipment. A single, modern turbine and generator unit will be housed inside the new, predominantly underground, powerhouse.

Washington Water Power has implemented measures to control short-term sedimentation associated with runoff during construction and, under the terms of its license from FERC, will landscape Huntington Park, which borders the powerhouse.

Other planned improvements include nest boxes for birds in Huntington Park, a fish-stocking program in Riverfront Park, and placement of boulders and gravel in the Spokane River to improve fish habitat.

The historic role that these aging turbine-generators played in the hydroelectric development of the Pacific Northwest will be kept alive at the Henry Ford Museum of Industry in Dearborn, Michigan. Washington Water Power donated one of the 4,000-horsepower, 2.25-megawatt generating units, believed to be the oldest still operating in Washington, to the museum after the Monroe Street station shut down on June 25, 1990.

Start-up of the new Monroe Street hydroelectric facility is scheduled for April 1992.

—Carol Raczykowski  
Eastern Washington Council staff

# SHORTS

A survey by The Alliance to Save Energy shows 75 percent of Americans believe that efficiency improvements and renewable resources are the keys to a secure energy future. Other highlights of the survey: 84 percent support increasing federal fuel efficiency standards to 40 miles per gallon by the year 2000; 82 percent favor tax rebates for cars with high fuel efficiencies; 67 percent want the U.S. Department of Energy to spend the largest, or second-largest, share of research money on energy efficiency. [Source: *Alliance issue brief*, The Alliance to Save Energy, January 1991]

The National Marine Fisheries Service proposes to treat distinct salmon stocks as separate species under the Endangered Species Act. The result is that stocks from larger rivers, such as the Snake, would qualify more easily than stocks from tributaries, because a distinct population would have to represent "an evolutionarily significant unit," according to the Service, which is taking comments on the proposal through June 11, 1991. The National Marine Fisheries Service has been asked to consider declaring protected or endangered status for five stocks of salmon, four of them in the Snake and one in the Columbia River. [Source: National Marine Fisheries Service, March 1991.]



United Van Lines moved more people to Oregon last year than to any other state. The moving company reported that 68.6 percent of its moves involving Oregon last year were moves into the state. Nevada ranked second, Idaho was third and Washington was fourth. For the first time in the 14 years United has kept such records, the company moved more people out of California (51.9 percent of 42,341 moves) than into the state. [Source: *Marple's Business Newsletter*, 2/6/91.]

Blaine County, Idaho, commissioners are considering an ordinance that would prohibit new subdivisions from being built within 150 feet of electricity transmission lines. The commissioners are concerned about the health effects of living near transmission lines. More than two dozen studies are under way around the country to determine whether electromagnetic radiation from power lines causes childhood leukemia or other cancers. [Editor's note: In a study for the Electric Power Research Institute, University of Southern California epidemiologist Dr. John Peters found a higher incidence of leukemia in children exposed to power lines' electromagnetic fields than in other children. The study was

made public in March.] [Source: *The Associated Press*, 3/15/91.]

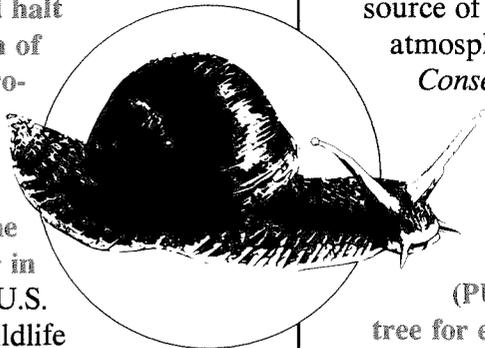
Pacific Gas and Electric Company will spend \$2 billion to promote and develop conservation

over the next 10 years. San Francisco-based PG&E, California's largest utility, expects to save the equivalent of 68 million barrels of oil. [Source: *The Wall Street Journal*, 1/30/91.]

A Super Good Cents home near Sun Valley, Idaho, is featured in a national magazine devoted to innovative homebuilding. Jonathan and Stephanie Marvel took advantage of the Bonneville Power Administration conservation program in building their 3,850 square-foot home. The payment from Bonneville totaled about \$5,000, and the Marvels agreed to allow energy use at the all-electric home to be monitored for two years without burning wood for heat. The recently completed monitoring showed a 50-percent savings in energy use over a typical home of similar size. [Source: *Fine Homebuilding*, Spring 1991.]

Demand for oil in the United States fell in 1990 for the first time since 1983. Since Iraq invaded Kuwait last August, the decline in demand has accelerated. Before the invasion, demand fell 1 percent compared to 1989. After the invasion, the decline increased to 3 percent. [Source: *Western Energy Update*, 1/25/91.]

Snails could halt construction of several hydroelectric projects on a 40-mile stretch of the Snake River in Idaho. The U.S.



Fish and Wildlife Service has proposed to list four species of snail and a species of limpet as endangered. A limpet is a snail-like mollusk. Comments on the proposal should be mailed to the Fish and Wildlife Service office in Boise. [Source: *Hydro-wire*, 1/28/91.]

Puget Sound Power and Light Company, Washington's largest utility company, hopes to acquire 16 megawatts of new conservation in 1991, double the amount originally planned for the year. Program costs would rise from \$25 million to about \$35 million. If the target is met, Puget would meet nearly a third of its estimated demand increase this year through conservation. [Source: *Northwest Conservation Act Report*, March 1991.]

U.S. Senator Tim Wirth of Colorado introduced a bill to reduce greenhouse effects by 20 percent in 15 years through energy conservation. The same bill passed the Senate last year but died in the House of Representatives. The bill would require the U.S. Department of Energy to develop a least-cost national energy plan to reduce emissions of carbon dioxide, methane, nitrous oxide and other so-called greenhouse gases that trap heat near the Earth's surface. Exhaust from the combustion of fossil fuels used to generate electricity are a major

source of these gasses in the atmosphere. [Source: *Energy Conservation Digest*, 2/4/91.]

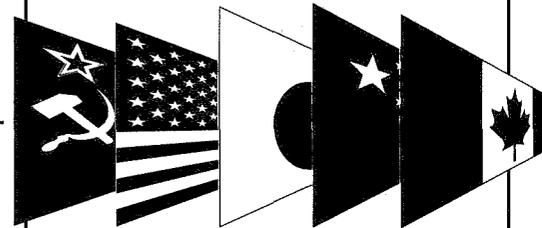
The Snohomish County Public Utility District (PUD) is giving away a tree for every power pole it purchases. The Everett, Washington, utility calls the program "treecycling." It was developed "as a way for the Snohomish PUD to improve the environment of this area," PUD Commission Chairman Matt Dillon said. The deciduous and evergreen trees are being donated to local governments in the utility's service territory and will be planted in parks and other public areas. [Source: Snohomish County Public Utility District.]

New homes on Montana Indian reservations are being built to energy-efficient standards. The Blackfeet Tribal Housing Authority designed a large housing project for tribal members, and through coordination with the Bonneville Power Administration and the Glacier Electric Cooperative the homes are being built to Super Good Cents standards. New homes on the Salish-Kootenai Reservation also are being built to Super Good Cents standards. [Source: Bonneville Power Administration.]

Electricity use jumped 3.7 percent in the Northwest between November 1987 and November 1990. Leading the increase were the direct-service industries, mostly aluminum companies, with a load growth of 6.7 percent. [Source: *Clearing Up*, 1/11/91.]

Wind power is becoming increasingly important in Europe, where the installed capacity in the 12 countries of the European Community now totals 325 megawatts. The Commission of the European Countries reports that the installed capacity in the European Community could reach 3,000 megawatts by the turn of the century. [Source: *Independent Energy*, January 1991.]

Growth rates of some Bristol Bay, Alaska, salmon have been more rapid since 1946 than in the period from 1907 to 1945, a University of Washington researcher discovered. The researcher compared the annual growth rings on the scales of fish caught recently with historical records of fish scales and determined modern fish are growing faster. He attributed this to a warmer climate and closer regulation of the spawning abundance. [Source: *Marine Research News*, Washington Sea Grant, Seattle.]



Five nations with shorelines on the North Pacific Ocean will share fishery information. Canada, China, Japan, the Soviet Union and the United States agreed in December to form the North Pacific Marine Sciences Organization, which will have its headquarters in Sidney, British Columbia. The organization will promote and coordinate marine science research in the North Pacific and the Bering Sea. [Source: *National Fisherman*, March 1991.]

Energy efficiency is examined in *The Energy Bank*, a new video tape by Umbrella Films of Brookline, Massachusetts. The film looks at the Northwest and the Northeast and profiles successful residential, commercial and industrial energy conservation projects designed to meet our nation's energy needs in an environmentally responsible manner. The 38-minute film may be purchased (\$395) or rented (\$65 plus \$5 shipping) from Umbrella Films, 60 Blake Road, Brookline, Massachusetts 02146. [Source: Umbrella Films.]

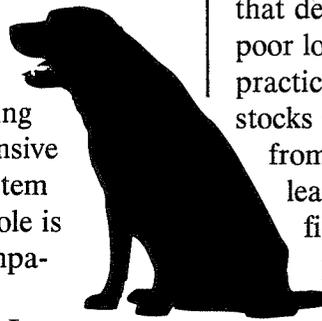
Five Northwest states have the least expensive electricity in the nation, a Department of Energy survey shows. The survey reports the price of electricity in all 50 states and the District of Columbia, averaging the rates of both public and private utilities for 1988, the most recent year for which nationwide figures are available. Alaska had the highest average at 8.75 cents per kilowatt-hour. New York was second at 8.74 cents. Oregon ranked 47th at 4.33 cents, Wyoming 48th at 4.30 cents, Montana 49th at 3.83 cents, Idaho 50th at 3.66 cents and Washington 51st at 3.38 cents. The United States average was 6.38 cents. [Source: *State Energy Price and Expenditure Report 1988*, Energy Information Administration, U.S. Department of Energy.]

Iowa will meet all future electric energy needs through conservation, rather than through new power plants. The state's new comprehensive energy plan, the first in state history, calls for increasing the use of alternative energy sources from the current 2

percent to 10 percent by the year 2015. Efficiency improvements will satisfy increased demand for electricity in the future, the plan says. [Source: *Energy Conservation Digest*, 1/21/91.]

Oregon's Public Utility Commission wants industries in the state to use electricity more efficiently. The commission also wants utilities to take the lead in implementing efficiency programs. Oregon industries could save 75 to 100 megawatts a year through efficiency improvements, the commission estimates. [Source: *Western Energy Update*, 1/25/91.]

Washington Water Power Company's latest gas sniffer barks and answers to the name Corky. The Spokane-based utility is experimenting with a black Labrador that has been trained to detect natural gas leaks. The dog's acute sense of smell and special training give its handler, gas inspector Audie Tyler, great flexibility in surveying the company's extensive gas distribution system for leaks. Corky's role is to augment the company's electronic gas-sniffing equipment. In a pre-employment test, Corky found a scratch-and-sniff target hidden in a five-acre field, and after just a few weeks on the job she already had detected several leaks. [Source: Washington Water Power Company.]



Luz Corporation, the solar thermal electric firm, completed its ninth generating system last fall, bringing its total online capacity to 350 megawatts. Luz has power-purchase contracts for another 350 megawatts and is negotiating power-purchase contracts with municipal utilities in Sacramento and Los Angeles. The most recent 80-megawatt plant will produce power at 8 cents per kilowatt-hour. [Source: *Independent Energy*, January 1991.]

The decline of native salmon, steelhead and sea-run cutthroat trout resources in the West are documented in a recently released report by the American Fisheries Society Endangered Species Committee. Almost half of the 214 wild stocks considered at risk in the report are described as "at high risk of extinction." Another 106 species already are extinct. The decline is attributed to dams that delay or block migration, poor logging and livestock grazing practices, overfishing of depleted stocks and diversions of water from river channels. Mass releases of hatchery-produced fish also are pointed to as problems because some hatchery fish compete with wild stocks, while others interbreed, causing hybridization of the native species. [Source: American Fisheries Society.]

—Compiled by John Harrison

# CALENDAR

**May 8-9**—Northwest Power Planning Council meeting at the Red Lion Downtowner in Boise, Idaho.

**May 8-11**—"Responsive Energy Technology Symposium and International Exhibition (RETSIE) '91" at the Marriott Hotel and Marina in San Diego, California. Sponsored by the U.S. Department of Energy, the California Energy Commission and others. For more information: Connie Wheaton, RETSIE '91, San Diego Gas and Electric, P.O. Box 1831, San Diego, California 92112, 619-696-4615, FAX 619-233-5701.

**June 12-13**—Northwest Power Planning Council meeting at the Sheraton Tacoma Hotel in Tacoma, Washington.

**June 17-20**—"International Symposium on Biological Interactions of Enhanced and Wild Salmonids" at the Coast Bastion Inn in Nanaimo, British Columbia, Canada. Sponsored by the Department of Fisheries and Oceans. For more information: Ann Thompson, Department of Fisheries and Oceans, Pacific Biological Station, Nanaimo, British Columbia, Canada V9R 5K6, 604-756-7260, FAX 604-756-7053.

**June 19-20**—"Renewable Energy Education" in Borlange, Sweden. Sponsored by the Energy Educators Association and the International Association for Solar Energy Education. For more information: Dr. Hameed G. Nezhad, Director,

Energy Institute, Moorhead State University, Moorhead, Minnesota 56563, 218-236-2011.

**June 21-23**—The second annual "Midwest Renewable Energy Fair" at the Portage County Fairgrounds in Amherst, Wisconsin. Sponsored by the Midwest Renewable Energy Association. For more information: Midwest Renewable Energy Association, P.O. Box 249, Amherst, Wisconsin 54406, 715-824-5166.

**June 24-26**—"Conference on Energy and Environment...The Next Generation" at Victoria College of the University of Toronto in Toronto, Ontario, Canada. For more information: Solar Energy Society of Canada, 15 York Street, Suite 3, Ottawa, Ontario, Canada K1N 5S7, 613-236-4594, FAX 613-236-5053.

**July 10-11**—Northwest Power Planning Council meeting at the Stage Coach Inn in West Yellowstone, Montana.

**July 15-19**—"Annual Meeting of the Western Division of American Fisheries Society" at Montana State University in Bozeman, Montana. For more information: Pat Dwyer, 27 Border Lane, Bozeman, Montana 59715, 406-587-9265.

**July 30 - August 1**—"Demand-Side Management: Building on Experience," the Fifth National Demand-Side Management Conference at the Westin Hotel at Copley Place in Boston, Massachusetts. Sponsored by the Electric Power Research

Institute, the U.S. Department of Energy, the Edison Electric Institute and the Synergic Resources Corporation. For more information: Betsy Johnson or Rick Mitchell, The Fifth National Demand-Side Management Conference, 286 Congress Street, Boston, Massachusetts 02110, 617-482-8228 or 617-330-1730.

**August 14-15**—Northwest Power Planning Council meeting at the Inn at Spanish Head in Lincoln City, Oregon.

**August 17-24**—"ISES 1991 Solar World Congress" conference at the Denver Marriott City Center Hotel in Denver, Colorado. Sponsored by the American Solar Energy Society, U.S. Department of Energy, Western Area Power Administration and others. For more information: American Solar Energy Society, 2400 Central Avenue, Suite B-1, Boulder, Colorado 80301, 303-443-3130, FAX 303-443-3212.

**August 20-23**—The fifth international "Energy Program Evaluation: Uses, Methods and Results" conference in Chicago, Illinois. For more information: National Energy Program Evaluation Conference, Box 601, Rochester, Illinois 62563.

A more detailed calendar of Council committee meetings and consultations is carried each month in *Update*. See order form inside back cover.

—Compiled by Judy A. Gibson

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(1-800-452-2324 in Oregon)  
Executive Director: Edward Sheets  
Information Director: Duley Mahar

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



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## COUNCIL PUBLICATIONS ORDER FORM

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

### Publications

- 91-01 Federal Register notice on proposed amendments to the Columbia River Basin Fish and Wildlife Program (Yakima River Basin, Dryden Dam and Enloe Dam fish passage facilities) and opportunity for public comment
- 91-02 Federal Register notice on proposed amendment to the Wildlife Mitigation Rule to include wildlife loss determinations for McNary, John Day, The Dalles and Bonneville dams
- 91-03 Background paper: Hungry Horse Resident Fish Amendments
- 91-04 1991 Northwest Power Plan—Volume I (available early summer)
- 91-05 1991 Northwest Power Plan—Volume II (available late summer)
- 1987 Columbia River Basin Fish and Wildlife Program

### 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)

Name \_\_\_\_\_

Organization \_\_\_\_\_

Street \_\_\_\_\_

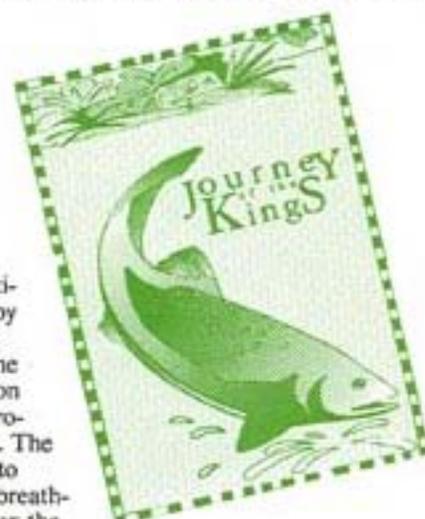
City/State/Zip \_\_\_\_\_

(Or call Judi Hertz at the Council's central office, 503-222-5161, toll free 1-800-222-3355 in Idaho, Montana and Washington, or 1-800-452-2324 in Oregon.)

### Journey of the Kings (revised December 1990)

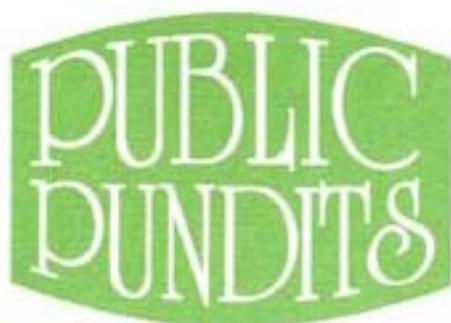
Journey of the Kings is a beautiful, half-hour video produced by the Northwest Power Planning Council. The video describes the plight of Columbia River salmon and the remarkable regional program designed to protect them. The camera soars over and dives into some of the Northwest's most breathtaking environments as it follows the migrating salmon from their freshwater birthing streams to the Pacific Ocean and back again.

The video is available on loan at no cost. It is ideal for showing to groups. Two brochures, one designed for children to read and color, and a second for adults, also are available. Contact the Council at the phone numbers above to borrow a copy.

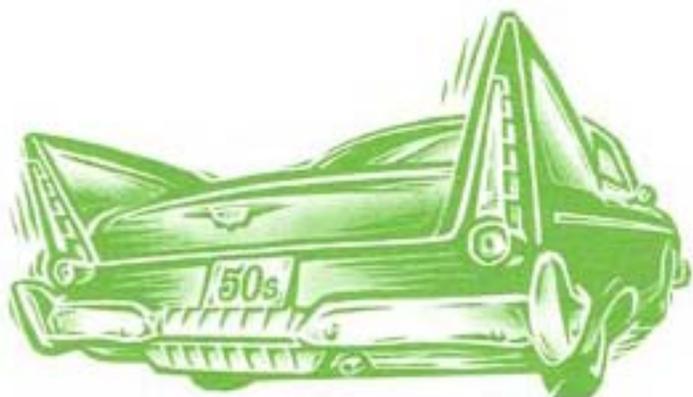


IN THIS ISSUE

The  
**People  
Speak**



**Sue  
Hickey**



**THE BIG  
QUESTION**

*Tail Fin*

T H I N K I N G