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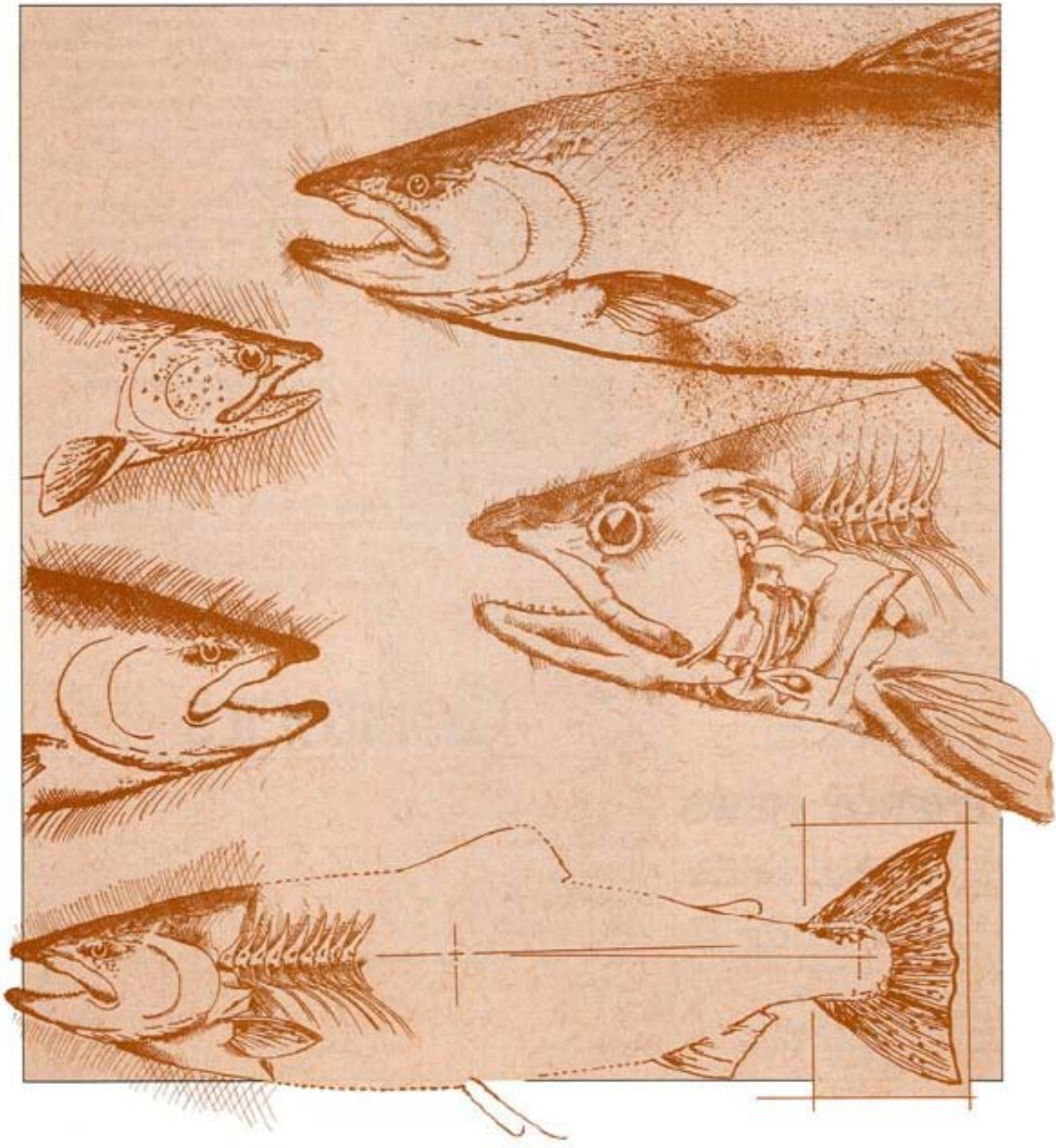

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N O R T H W E S T
ENERGY NEWS

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The Northwest Power Planning Council is required to develop a program to restore the Columbia fisheries and a regional electric energy plan, to be carried out by the Bonneville Power Administration, emphasizing cost-effective conservation and renewable resources.

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Editor's Notes

Around the region, during this season, the weather becomes a critical factor in our daily lives. How do we keep warm and dry when the weather is determined to have us cold and wet?

This is generally the time of year we decide to repair the roof and, while we're at it, tuck in more insulation. Come summer, when it's finally dry enough to carry out this resolve, we'll forget to do it. Who thinks of chilly winter in July?

For most of the Northwest, winter is the season that teaches the value of conserving energy, because most of us equate "energy" with "heat," and this is the season for which much heat is needed. But energy conservation also applies to the electricity consumed to heat water, refrigerate food and light our way.

In this issue, we explore what could be called "domestic" conservation—in Ruth Curtis' article on energy-efficient appliances, and conservation at the commercial level—in Jim Erickson's article on the region's Energy Edge competition. Erickson writes for the Washington State Energy Office.

New developments in the move to gain regionwide acceptance of the model conservation standards are covered in our "In the News" section.

Instead of a single interview for this issue, Dulcy Mahar spoke with nearly a dozen people who all had something to say about the future of the two Washington Public Power Supply System nuclear plants on hold in the region.

And Paula Walker culled comments from the Council's hearings on the fish and wildlife program's Draft Amendment Document. This selection of opinions is more of a potpourri than an indication of a basinwide consensus.

COVER ILLUSTRATION: This issue's cover was illustrated by Portland artist Lynn Carson.

LAST MINUTE NEWS:
Northwest Power Planning Council elects new chairman and vice chairman at December Council meeting in Seattle, Washington. Former Oregon Congressman Robert Duncan was chosen by his fellow Council members to lead the Council in 1987, and Morris Brusett, of Montana, was elected vice chairman. *Northwest Energy News* will carry more information in the next issue.

Contents

Conservation Comes Home

by Ruth L. Curtis

"Expensive to Run? Not a bit. It uses very little current to make all the ice we need and give us perfect refrigeration."

So ran the copy for a 1927 refrigerator advertisement in the *Ladies' Home Journal.* People considering replacing their icebox with a refrigerator were concerned with the new expense of electricity to operate this

technological breakthrough.

Somewhere along the way, that concern lost its importance. Refrigerators, freezers, clothes washers and dryers and all of the other modern appliances were taken for granted. They had become so necessary that it was difficult to picture life without them. Plentiful, inexpensive electricity made it seem useless to worry about how expensive appliances were to run. But recently, as electricity rates have climbed, some people have begun to think again about the amount of electricity their refrigerator uses to chill food and their clothes dryer uses to get the moisture out of clothing.

The question isn't really one of doing without home appliances but of improving their efficiency. This, along with other conservation measures, could hold off the need for new expensive power plants and, in addition, save consumers operating costs.

"The very cheapest of all available conservation resources comes from improving the efficiency of our appliances," explains Bob Saxvik, chairman of the Northwest Power Planning Council. "For example, refrigerator and freezer improvements cost only 0.8 cents per kilowatt-hour compared to the average 2.4 cents cost of conservation resources in the Northwest."

Household appliances (not including hot water heaters) consume a quarter of the electricity used in Northwest homes. There are 220 average megawatts that can be saved annually just by ensuring that people in the Northwest buy energy-efficient refrigerators and freezers. In addition, water heaters are second only to space heaters in home electrical use. Efficiency improvements to water heaters and hot water-consuming appliances (clothes and dish washers, and showerheads) can save up to 380 average megawatts—an amount equal to a coal plant's production.

It is possible to increase the efficiency of an appliance without sacrificing any of the latest features, such as an ice-dispenser in the refrigerator door. For refrigerators and freezers, this means putting more and better insulation in the panels and improving the motor and compressor efficiencies. Some of these techniques are still at the experimental stage, but others are already in use. In fact, the efficiency of appliances has improved quite a lot in the last decade, but it can go further.

There are 220 average megawatts that can be saved annually just by ensuring that people in the Northwest buy energy-efficient refrigerators and freezers.

Two major ways to encourage the use of efficient appliances in homes are rebates to the buyers of high-efficiency models and minimum conservation standards for appliance manufacturers. Of these two, standards are by far the more cost-effective, according to studies conducted for the Bonneville Power Administration.

The California experience

California was one of the first states to grasp the need to improve appliances, and it now has the most comprehensive appliance standards program in the nation, according to Mike Messenger of the California Energy Commission. "In 1974 when the Commission was created, its enabling legislation specifically stated that it was to adopt building and appliance standards," says Messenger.

Minimum efficiency standards were established in 1978 for refrigerators, freezers, air conditioners, water heaters and gas furnaces. A few years later the standards for refrigerators and freezers were tightened even more. These new standards will be phased in, with the first phase coming in 1987 and a second, with a more stringent efficiency level, becoming effective in 1992.

The California standards are intended to push the market into improving the efficiency of appliances. Currently, few refrigerators or freezers meet the standards, but the Commission feels that, by 1992, manufacturers will have had time to develop new products. Messenger believes that the national market will eventually catch up to the California market.

In 1980, the average efficiency for refrigerators in California was 12 percent higher than the nation's, but in 1984 it was only 3 percent higher. What's causing the change? Manufacturers say that the market is moving toward efficient appliances anyway and would move that way without California instituting standards. But others feel that California is pulling the national market along.

A national standard?

Hopes were high this summer for national appliance standards. Appliance manufacturers and energy conservation advocates got behind a bill that Senator Dan Evans of Washington introduced in Congress to establish national efficiency standards for most major home appliances. It would have phased in standards—slightly higher than the 1987 California standard—over the next five years. Council Chairman Saxvik explains the support the bill received was because it was in everyone's best interest. "The appliance industry would not have to face a patchwork of state requirements, and consumers would pay less for owning and operating their appliances."

After passing both houses of Congress, the bill was vetoed in the eleventh hour by President Reagan because he felt the measure "intrudes unduly on the free market, limits the freedom of choice available to consumers who would be denied the opportunity to purchase lower-cost appliances, and constitutes a substantial intrusion into traditional state responsibilities and prerogatives."

The Northwest

Here in the Northwest the benefits of appliance efficiency are well recognized. The Council's 1986 Power Plan encourages the Northwest states to adopt refrigerator and freezer efficiency standards that are equivalent to California's 1992 standard. The plan also calls for adoption of an electric water heater standard equivalent to California's current standard, which could save 135 average megawatts.

At the request of the Council, Bonneville has developed a strategic plan to promote efficient appliances. The agency provides technical assistance to states that are studying standards and is assessing the effectiveness of various marketing strategies and incentives.

Nationwide, the yellow Energy Guide labels are intended to promote the purchase of efficient appliances. Federal law says every refrigerator, freezer, clothes washer and dishwasher offered for sale must have an Energy Guide label. The label shows the estimated yearly cost of operating the model, but not which model is the most energy-efficient. Consumers, however, report that the labels are difficult or confusing to use, so they often ignore them.

The Bonneville Power Administration has gone a step further and developed a regionwide "Energy Efficiency Award" program to make it easy for consumers to identify which models are the most efficient. The award is an actual blue ribbon awarded to the top 15 percent of energy-efficient refrigerators and freezers. The winners of this year's award had efficiency levels higher than the 1987 California standards. Participating retailers display the ribbon on the winning models and distribute a pamphlet listing the winners.

According to Grant Vincent, who manages the program for Bonneville, "the program began this September and, by the end of October, already 25 percent of the region's appliance retailers were participating, including the Sears chain." Only in southwest Oregon and Boise, Idaho, are no blue ribbon awards visible. These two areas are being used as control locales to assess the program's impact. Bonneville is considering a similar program for water heaters.

"The goal of all this work," stresses Saxvik, "is to ensure that consumers purchase efficient appliances when they replace their old ones; otherwise inexpensive resources are lost to the Northwest for the life of the appliance." ■

THE JAPANESE VERSION

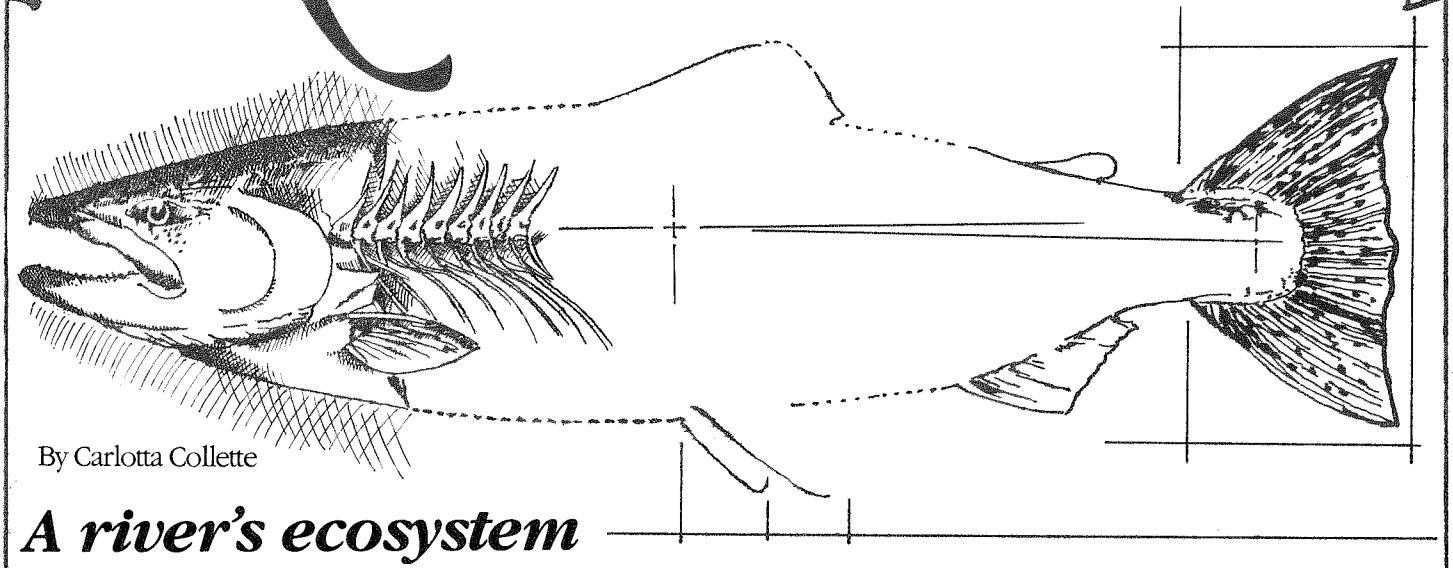
Japanese refrigerators have a reputation for being super efficient. Whether this is true or not has been the subject of some debate within the industry, because Japanese testing procedures are very different from the U.S. procedure. To get at the truth, the Bonneville Power Administration recently had several Japanese refrigerators of different models shipped to the ETL Testing Laboratory in Cortland, New York. This is where all American appliances are tested.

According to Bonneville representative Tim Scanlon, the testers found that, for large refrigerators (the most popular in this country), the imported models did not perform as well as similar American models. But the most popular Japanese models (smaller than the American average) were significantly more efficient than their American counterparts.

Next, Bonneville will be testing the Japanese refrigerators in the field to see how they actually perform. And, to determine why the small models function so efficiently, the National Bureau of Standards will be studying the components in the refrigerators, particularly the rotary compressor and the vacuum insulation—features American refrigerators currently do not have. —*RC*

BLUEPRINT FOR A BASIN'S

Renaissance



By Carlotta Collette

A river's ecosystem is a complicated thing.

In its undisturbed state, it has more interdependent components than the most intricate architectural design. Each component has its own patterns of behavior, and each interacts with the other components in particular ways. When the system is disturbed, more than individual creatures or land masses may be displaced; the balance of play among the elements also may be severed.

Reconstructing an ecosystem whose elements have been cut apart requires at least the same keen understanding of relationships and attention to detail master architects manifest. But unlike even elaborate structures, having all the pieces in their proper places doesn't necessarily mean the river system is restored to wholeness.

Because it is alive, the river's ecosystem keeps moving and changing. Because of the complexity of its multilayered interdependencies, a return to productive equilibrium may include long periods where instability is more common than stability. The recovering system doesn't necessarily behave in any reliable or predictable way. Study it for years, anticipate its every adaptation, document a lifetime of biological activity in it, and there will still be no guarantee that one season will mirror previous ones.

Rebuilding an ecosystem is an ongoing process where the boundaries of understanding are regularly revisited.

Webster's characterizes the Renaissance as a period of "enthusiastic and vigorous activity ... distinguished by a revival of interest in the past, by an increasing pursuit of learning, and by an imaginative response to broader horizons ..."

When the Northwest Power Act challenged the region's ratepayers to rehabilitate the Columbia River Basin's ecological system and undo some of the damage to fish and wildlife caused by turning that river into a major hydropower resource, the people of the region were faced with a mighty task. The Columbia River system includes about a quarter of a million square miles of land mass, nearly half a million miles of streams with about two and a half million adult salmon and steelhead trout produced by those streams each year.

Illustration by Lynn Carson

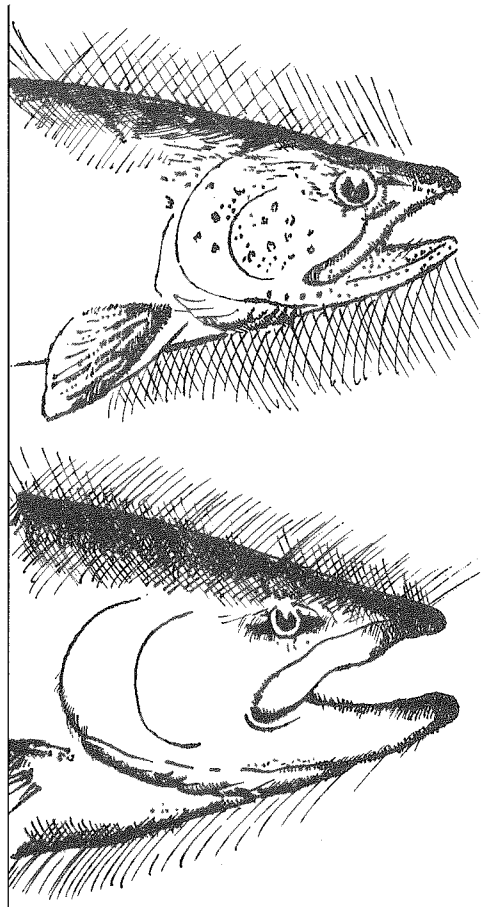
In some ways, those millions of salmon and steelhead trout symbolize the vitality of the basin, and they have been the primary focus of the ambitious Columbia River Basin Fish and Wildlife Program developed by the Northwest Power Planning Council to carry out Congress' mandate.

If the 2.5 million figure seems large, consider first that it includes Columbia Basin salmon and steelhead caught in the river and the ocean, as well as those, called the escapement, who return up the river to spawn. Then compare the 2.5 million to the plenitude of the past. The Council, in its Compilation of Information on Salmon and Steelhead Losses, estimated fish runs before hydropower development to number between 10 and 16 million annually. Of the 7 to 14 million salmon and steelhead no longer present in the basin, a large portion—5 to 11 million—appear to be the victims of hydroelectric progress.

But saying that between 5 and 11 million of the salmon and steelhead losses can be attributed to the hydropower system and repopulating the basin with that many fish are two altogether different things. Council staff have estimated that if all the existing and proposed measures in the fish and wildlife program are successful, close to a million additional salmon and steelhead would become available either to harvesters or to return to the basin to spawn.

The staff also calculated the potential for natural production using the Council's Anadromous Fish Data Base (see *Northwest Energy News,* Volume 5, Number 2) to estimate available spawning habitat and the number of fish that can be reared in that habitat. This estimate suggested that a potential run of an additional 1 to 1.5 million new fish might be sustained by the basin's existing habitat. An estimate of the potential of artificial production will include a survey of existing and potential sites for hatcheries and the development and testing of low-capital propagation facilities. These activities are in progress.

But none of the estimates the Council is studying results in a return of the full 5 to 11 million salmon and steelhead. Such an increase may be impossible. Consequently, Council staff proposed an interim objective of doubling the existing runs. It is not known whether even this number is achievable, but for the interim, it could provide a focus and incentive for innovation and creative thinking and a number to measure progress by. Efforts to meet this interim objective would be tested and results evaluated to determine appropriate long-term increases in salmon and steelhead runs.



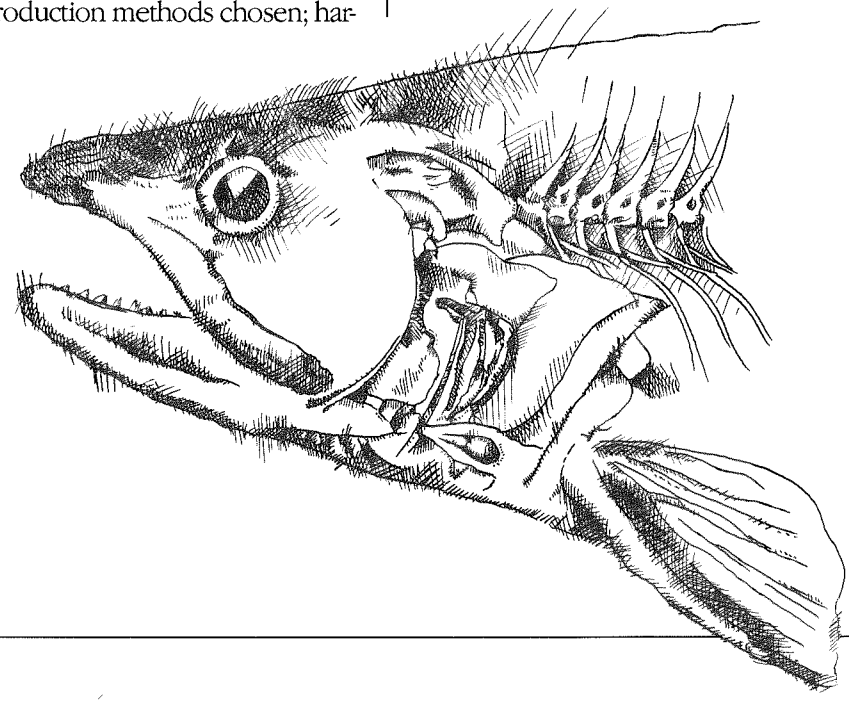
If runs can be doubled, the amount of time necessary for this doubling to occur will be affected by the production methods chosen; harvest regulations; and the effectiveness of physical alterations and operating changes made in the dams to improve fish migrations. These three are linked, because action in any one area affects actions in the other two.

During the past year, Council staff and experts from the basin's Indian tribes, fish and wildlife agencies, utilities and others have met to share information; develop a computer model capable of simulating the life cycle of Columbia River salmon and steelhead; look at opportunities for producing more fish in the basin; and examine constraints and concerns about increasing production.

The questions the Council is facing now explore production planning from a policy perspective. Is doubling the fish runs a reasonable planning concept? How will the runs be increased and where? What are the risks, and who will determine what risks are acceptable?

These questions lead into a choice between two larger policy alternatives. Would it be better to limit major hatchery developments to those projects already in the program and the Draft Amendment Document while production successes and failures are studied? Or is the imperative to increase the runs critical enough to begin incorporating new hatcheries in the planning process immediately?

The first alternative emphasizes designing actions so more knowledge can be acquired and integrated before bigger program investments are made. For at least the next 15 years (about three generations of chinook salmon), construction of



new hatcheries would be limited to those already in the program or in the proposed amendments. These and other production measures (mostly located between Bonneville Dam and the upper reaches of the basin) would be monitored to see whether naturally-spawning salmon and steelhead can be maintained in upriver areas along with large populations of hatchery fish.

The Council's focus on the upper basin—a response to information showing the most severe impacts of hydropower development occurred there—already involves a concentration of enhancement actions that have never been applied in that area on such a scale. Little is understood about the effectiveness of these efforts where dams, habitat degradation and other constraints can hamper production. Because of these uncertainties, this alternative treats the program as an enormous complex experiment with significant emphasis placed on finding the best ways to intermix wild, natural and hatchery fish through improved monitoring and evaluation.

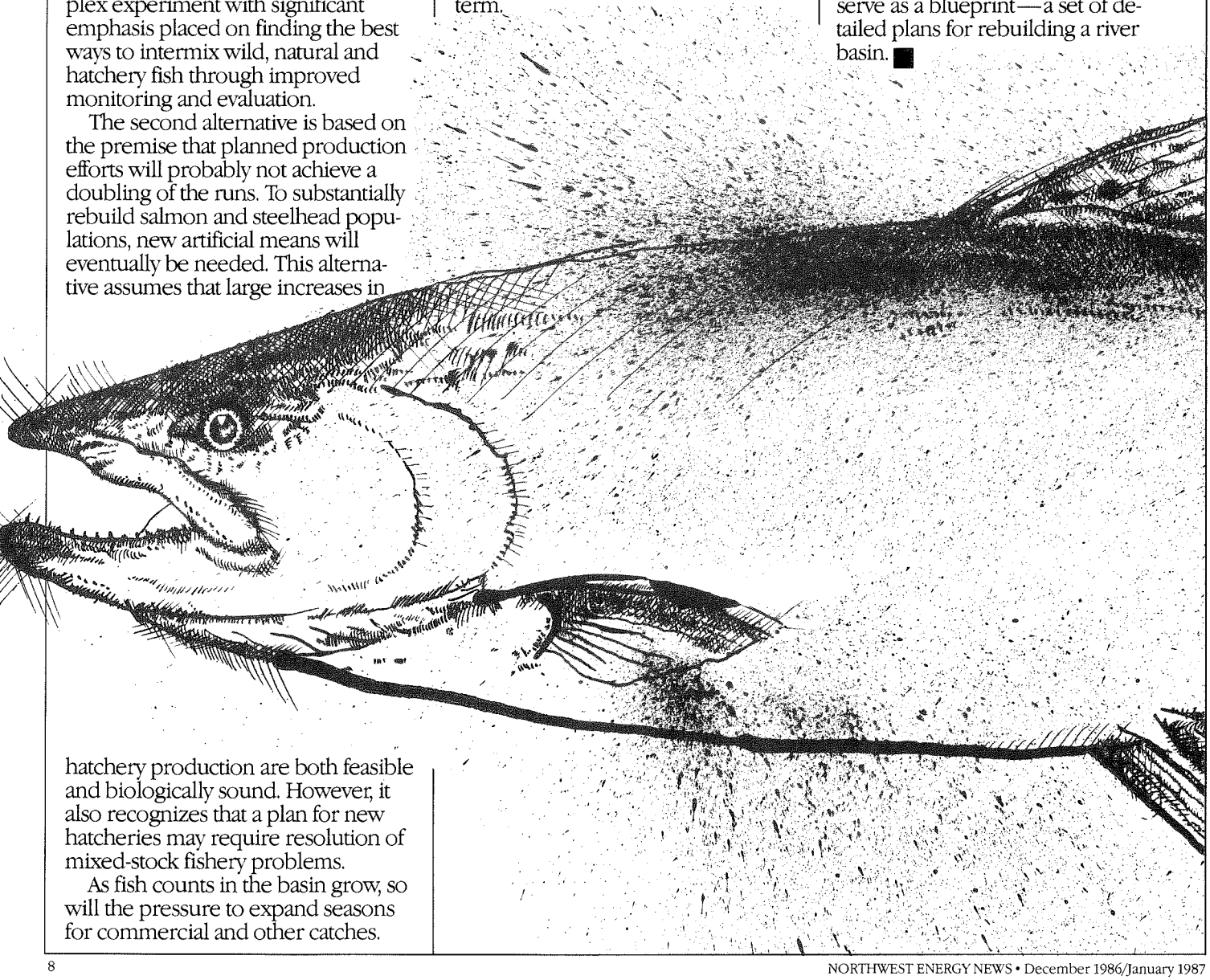
The second alternative is based on the premise that planned production efforts will probably not achieve a doubling of the runs. To substantially rebuild salmon and steelhead populations, new artificial means will eventually be needed. This alternative assumes that large increases in hatchery production are both feasible and biologically sound. However, it also recognizes that a plan for new hatcheries may require resolution of mixed-stock fishery problems.

As fish counts in the basin grow, so will the pressure to expand seasons for commercial and other catches. Because fishers generally have not harvested wild and naturally-spawning fish separately from hatchery fish, increased fishing could result in fewer wild and natural fish surviving to return to their spawning beds. Wild and natural salmon and steelhead populations are considered valuable sources for the genetic diversity that keeps the salmon runs resilient. (See *Northwest Energy News,* Volume 5, Number 5.)

Both approaches recognize the authority and responsibilities of the fisheries agencies and Indian tribes as managers of the fisheries resource. They both acknowledge the need to continue to improve passage at Columbia Basin dams to enable juvenile salmon and steelhead to migrate to the ocean. Both alternatives also see the need to make existing hatcheries more effective while preserving the genetic variation in the basin to protect salmon runs over the longer term.

Whatever alternative the Council chooses, additional planning will be needed. The fisheries agencies and Indian tribes have already begun to identify production and harvest plans in the basin. The Council's proposed subbasin planning effort would link up with this work. An important consideration in this planning process could be determining how to allocate a basinwide objective, such as the proposed interim goal of doubling the runs, among the various subbasins.

Public comment on the issue paper proposals and alternatives will be included in the decision process in the current amendment schedule. Comment will be taken through December 15, with a decision on the Draft Amendment Document and related policies raised in the issue paper coming by February 18, 1987. When the subbasin strategies are woven into the whole, the resulting new fish and wildlife program will serve as a blueprint—a set of detailed plans for rebuilding a river basin. ■



OUT OF THE ASHES

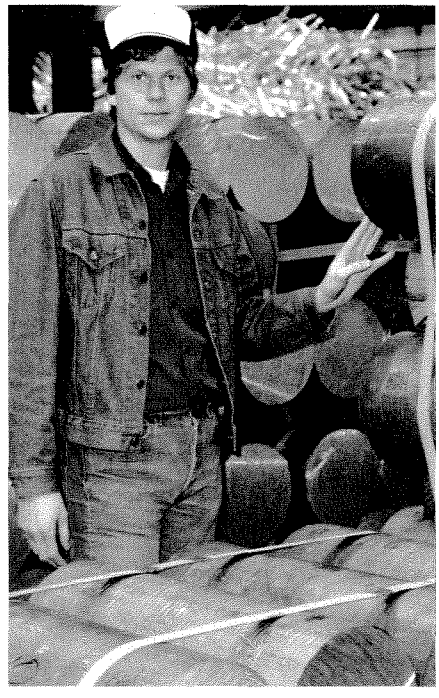
Aluminum Smelters Get Second Chance

By Paula M. Walker

Brett Wilcox may not consider himself a knight in aluminum armor, but to the people of The Dalles, Oregon, he represents a shining hope for an industry dulled by low market prices and high production costs. His vision of reopening the former Martin Marietta aluminum plant has brought a renewed spirit to the small Oregon town, which had suffered tough times since the plant's closure two years ago.

Wilcox's vision, fueled by community willpower, became reality in November, when the plant began to gear up for production. For Wilcox, the start-up of the plant under his new company's name, Northwest Aluminum Company, represented the culmination of more than a year of negotiating power rates, labor contracts and supplies of raw materials in order to whittle down overall operations costs.

Acknowledging that the undertaking is a risky proposition, Wilcox says he had a personal motivation to save the plant.



Brett Wilcox examines the finished product at his Northwest Aluminum Company plant in The Dalles, Oregon.

"I believe in the cause," he said. "It's a good smelter and it has great people. It's not a plant that should be shut down."

Wilcox is well acquainted with the realities of the aluminum industry. From 1981 to 1985 he served as the executive director of Direct Service Industries, Inc., the association that represents industrial firms, such as aluminum companies, with energy-intensive manufacturing operations in the Pacific Northwest. Before that, he was an attorney for a Seattle law firm whose clients included the direct service industries.

Because the direct service industries (DSIs) consume so much electricity in their operations, they purchase electricity directly from the Bonneville Power Administration. Aluminum companies, for instance, spend one-third of their production costs on electricity.

Officials in the industry have claimed that the price of electricity can make or break a smelter's ability to survive. Of the three main cost components—labor, raw material and power—power rates vary the most worldwide, said Mark Crisson, the current executive director of the DSIs association.

Plant closures and cutbacks in production have plagued the Pacific Northwest in the past few years. Officials of the Commonwealth Aluminum Corporation announced in late November their intention to close another former Martin Marietta plant at Goldendale, Washington, on December 31. Those curtailments generally have been blamed on high electricity rates and low aluminum prices on the world market. Aluminum prices have declined considerably since 1980, when they peaked at 95 cents to a dollar per pound. In the past year, however, there have been signs of regional revitalization in the industry.

Photographs by Paula M. Walker

In addition to Wilcox's plant, the aluminum plant in Columbia Falls, Montana, underwent a similar restructuring last year after the Atlantic Richfield Company (ARCO) closed its doors in early 1985. Like Northwest Aluminum Company, the Columbia Falls plant negotiated a labor contract that included a profit-sharing package for employees. In late October, representatives of a Cambridge, Massachusetts, company announced their intention to restart in 1987 the Aluminum Company of America (ALCOA) plant in Vancouver, Washington, which has been idle since a strike last June.

Yet, aluminum prices are still hovering around 50 cents per pound on the world market, about the same as when Martin Marietta closed its doors in The Dalles two years ago. Several low-cost smelters are coming on line in Canada, Australia and Brazil, increasing total aluminum production output and keeping prices low. By Wilcox's own admission, "it's a terrible industry to be in." Why, then, does the aluminum industry appear to be experiencing a resurgence in the Pacific Northwest?

Both Crisson and Wilcox agree that the key factor in reopening the plants has been the variable power rate offered by the Bonneville Power Administration to the aluminum industry this year. The variable rate, which went into effect August 1, 1986, fluctuates with changes in the market price of aluminum. It is structured so that when aluminum prices fall below a range that allows smelters to recover their fixed and short-term variable costs, Bonneville will reduce the companies' electricity rates to allow the region's highest cost smelter to recover its short-term operational costs.

Bonneville developed the variable rate to introduce some stability into the region's power picture. When the aluminum industry was healthy, it accounted for as much as one-third of Bonneville's revenue from total power sales. But when Northwest aluminum plants began closing their doors and cutting back on production, the curtailments threatened to have a significant impact on Bonneville's revenues. Aluminum industry payments dropped to slightly less than one-fourth of Bonneville's power sales revenues.

A full parking lot at the Northwest Aluminum Company plant is a heartening sign for residents of The Dalles.

"It's possible that the phoenix can rise from the ashes under the right circumstances."

The variable rate was one of several proposals resulting from the DSI Options Study Bonneville conducted in 1985. It is intended to replace the incentive rates Bonneville has offered the industry in the past. The agency's position is that all Pacific Northwest ratepayers benefit when the aluminum industry is healthy. If the region's aluminum industry were to fold, Bonneville maintains it would have to charge other ratepayers more to make up the lost revenue.

Aluminum companies and other direct service industries have also received a discount on the top quarter of the power they purchase from Bonneville. This power is *interruptible,* that is, Bonneville can use it for other purposes if the system needs additional power.

Another Bonneville proposal—the Aluminum Smelter Conservation/Modernization Program—would help finance projects to make aluminum smelters more energy efficient. This program could save between 200 and 250 megawatts from energy conservation for more than five years. The program is currently undergoing a review to gauge its consistency with the Northwest Power Plan.

Says the Northwest Power Planning Council's Executive Director Ed Sheets, "Both interruptibility and the variable rate are attempts to inject some stability into the fundamentally unpredictable area of forecasting the power needs of the direct service industries."

Brett Wilcox is blunt about the benefits of the new rate.

"Had Bonneville not adopted the variable rate, there would have been a lot of dead aluminum plants in the Northwest," he says. "With the rate, everyone's got a shot."

Wilcox sees the next few years as a time for a shake-out as aluminum plants determine whether they can survive with the new rate in place.

"The whole name of the game is cost control, being competitive," he said. "The Northwest industry right now is at the margin. It has a chance because power rates have gotten resolved ... For most smelters they [the rates] should be enough to survive if you also get all the other cost factors under control, the raw materials, the labor and everything else. We obviously believe we can not only survive but thrive."

Adds Crisson, "What we need is a little help from the market right now ... If prices would go up, some companies could regain a little confidence in themselves."

Nevertheless, the news about The Dalles, Columbia Falls and Vancouver plants is a bright spot for an industry that has had little to cheer about recently. As Crisson put it, "It's possible that the phoenix can rise from the ashes under the right circumstances."

Inside The Dalles plant a few days before start-up, Crisson's phoenix analogy seems particularly appropriate. The cavernous rooms containing long rows of reduction cells (or pots) where the alumina ore is transformed into metal still have a ghostly air—the result of two years of dormancy.

At the base of each pot lies the alumina ore. Usually a white powdery substance, this ore has grayed with time and disuse and resembles fine ash. In a few days when the cells are fired up, perhaps the Northwest Aluminum Company phoenix will take flight from these ashes.

The reduction cells are huge. Each one acts as a large steel battery to zap the powdery ore into molten metal. Electricity—lots of it—is used to trigger the chemical reaction in the pots. The Dalles plant will use an estimated 700 million kilowatt-hours in its first year—operating at half the plant's total capacity.

Electricity is the only form of energy that can be used with current aluminum production technology. There are no alternatives.

Wilcox and the other aluminum entrepreneurs are willing to try the variable rate as a means of stimulating aluminum production in the Northwest.

Electricity is the only form of energy that can be used in aluminum production. There are no alternatives.

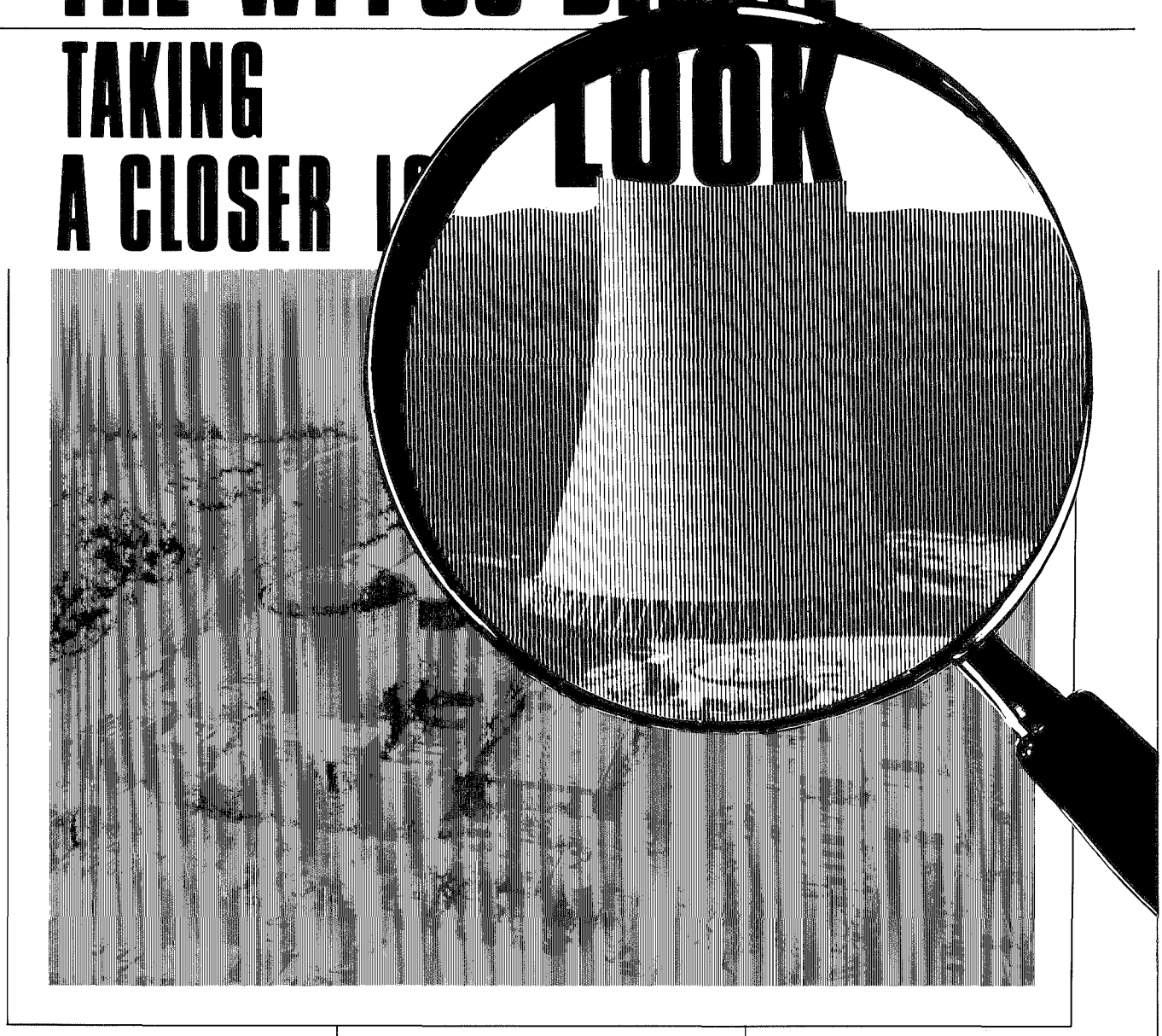
For The Dalles, running the Northwest Aluminum plant at even half its capacity means 175 jobs. A study conducted by Battelle Memorial Institute as part of Bonneville's DSI Options Study estimated that for every job at an aluminum smelter, two to three jobs were created in nearby communities—a shot in the arm for The Dalles, a community of 10,000 people.

Wayne Anderson, a staff representative of the United Steelworkers of America, has worked closely with Wilcox to get the plant up and running in The Dalles. He emphasized the community support behind Wilcox's effort:

"A few weeks ago, every marquee in town said: 'Welcome Northwest Aluminum!' The whole community has come alive." ■

From scrap metal (top) to the finished aluminum "logs" (bottom), the key ingredient in aluminum production is electricity. Instrument technician Marvin Jansen (center) looks over the control console in the room where incoming electrical power is stabilized for use in the plant at The Dalles.

THE WPPSS DEBATE
TAKING A CLOSER LOOK



by Dulcy Mahar

The acronym WPPSS—or, to be precise, its pronunciation: "Whoops"—was once banned from a courtroom because the expression carried such an emotional charge. "Emotionally charged" continues to be an apt description of anything to do with the Washington Public Power Supply System's (WPPSS) two unfinished nuclear projects (WNP-1 and 3).

Whether to preserve and eventually complete the projects or to terminate them is one of those polarizing issues that finds few people sitting on the fence. For this reason, opponents and proponents alike are welcoming major new studies of the plants that should give the region up-to-date and solid, non-emotional data on which to make a decision about the future of these resources.

In its 1986 Northwest Power Plan, the Northwest Power Planning Council argued for preserving the plants on the basis that they could have significant economic value to the Northwest in the event that the power is needed. The Council estimated the plants have an expected value of $630 million.

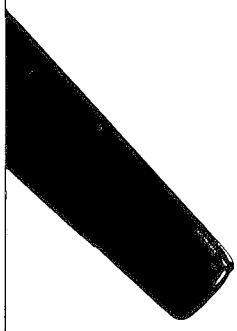
No sooner was the ink dry on the new power plan, adopted last January, than a series of events took place that may affect the value of the two projects.

In a petition brought before the Council, Senator Al Williams, chairman of the Washington State Senate Energy and Utilities Committee, cited three such events: dropping oil prices, which could depress the demand for electricity;

the Chernobyl disaster and selection of Hanford as a waste repository (events which he contends have affected public support for nuclear power); and increased institutional barriers to the two plants' preservation.

The first person to use the Council's new petition process, Senator Williams called on the Council to reopen its power plan and re-evaluate the worth of the plants. Senator Williams also made it clear that he thought a new study would lead to the conclusion that the plants should be terminated.

But others, representatives of the Supply System for example, foresee a different conclusion. While agreeing with the senator that new events may have affected the value of the plants, they say that these events fall on both sides of the ledger. For example, the Supply System cites reduced



estimates in how much it will cost to preserve the two plants as a major factor that could increase their value.

All sides of the WPPSS debate appear to agree that it is time for a new look at the plants, if for no other reason than to ensure that judgments made about the future of the plants are based on accurate and timely data. This is particularly vital when the subject is, as this one surely is, "emotionally charged."

This past summer, the Bonneville Power Administration began a major study to assess the future of the plants as part of its 1987 Resource Strategy. A draft of the study was scheduled for release in early December, and the final report is expected out next March.

As Bonneville conducts its study, the Council will take its own close look at the projects. Last October, Council members voted unanimously to accept Senator Williams' petition and announced the Council would aggressively monitor Bonneville's WPPSS studies as well as do independent analysis as necessary. The Council also committed to enter rulemaking, the process by which it amends its power plan, if the "analytical results and the Council's judgment support such action."

Bonneville study, Williams said, "I assume the Council will do an objective job of analyzing the content of the petition. I personally have my own bias. I think both plants should be terminated, but I respect the process."

The Supply System prepares estimates

At Bonneville's request, the Supply System has come up with revised estimates for a number of the costs associated with WNP-1 and 3. These include costs to complete, to preserve and to terminate the plants, as well as operating and maintenance costs. Of these, the greatest cost changes have centered on preservation.

"The new preservation estimates were based on a fresh, bottoms-up look at whatever minimum activities are necessary to preserve the projects," according to Art Kohler, WPPSS director of the projects.

"I think that both plants should be terminated, but I respect the process."—Senator Al Williams, chairman of the Washington State Senate Energy and Utilities Committee

Senator Williams declared himself "very encouraged by the Council action. I know it's the first time the Council has entertained rulemaking as a result of a petition, and I know they [the Council members] wanted to establish a workable precedent."

While making it clear that he would have preferred immediate rulemaking rather than a potential rulemaking that hinges on the

"First we scrubbed all the conservatisms and slack from our previous figures. Then we looked at a different way of organizing the projects while they're being preserved.

"We minimized the activities at the project sites. All you need is maintenance and security at the sites. Everything else doesn't have to be done on site or doesn't have to be done full time. By streamlin-

ing the activities, we've been able to reduce preservation costs by 40 percent for each project. This is still doing all the necessary maintenance," he points out. The estimates bring the annual preservation costs down from $10 million to $6.4 million for WNP-1 and from $14 million to $8 million for WNP-3.

For the first time, the Supply System has also prepared comprehensive estimates of what it would cost to terminate the plants. Working with the Washington State Energy Facility Site Evaluation Council, the Supply System prepared estimates for a three-phase termination scenario with site restoration concepts ranging from abandoning the empty plants and posting security guards on existing fences to tearing down the buildings, mounding over the area and revegetating the terrain.

"In the past," Kohler explains, "we had done some termination estimates pretty quickly, and the old numbers were not grossly in error. But certainly there were some differences. Now we've really got some detail. For example, we know what we'd do first, what we'd do second and what options we have."

The first phase of the termination schedule would be a period during which preservation continues and efforts are made to sell the plants as an entity (estimated time: one year). If this isn't successful, the second phase would be an attempt to sell machinery, pipe and materials from the plants (estimated time: two years). The third phase would be site restoration (estimated time: six months to two years depending on the extent of restoration).

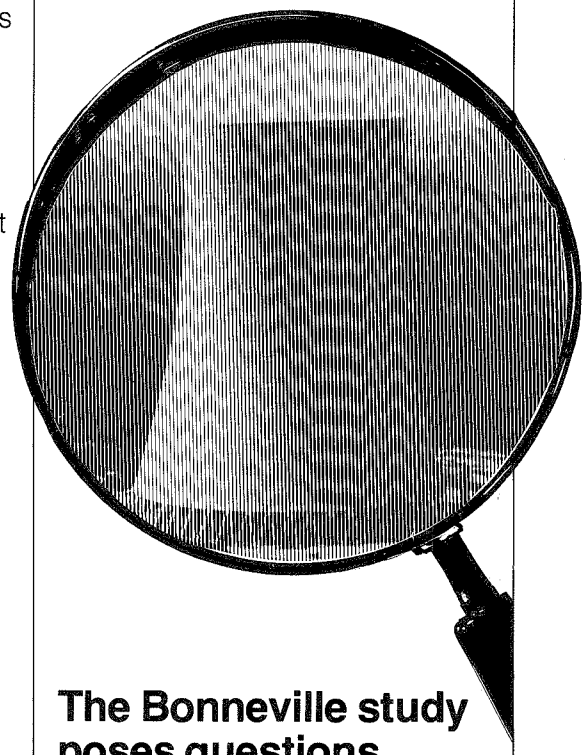
"We've used our experience with previously terminated projects 4 and 5 and adjusted the estimates for this experience. It's given us much better estimates," Kohler says. "There's also a great deal of interest in who pays the cost of termination; where the money comes from; and who'll get the money from the sale of assets. Our contract with bondholders says costs of termination are carried by ratepayers, whereas returns go to bondholders. Returns won't go back to ratepayers until the bonds are retired," he adds.

"Termination is no free ride. There are at least three-to-five years of disadvantages to ratepayers," Kohler emphasizes. "Right now we can't see any advantage to termination."

Two years ago, the Supply System did some detailed studies of completion costs. This fall, it revised those estimates for the Bonneville study. "They're slightly lower than two years ago, and the adjustments are a combination of pluses and minuses. On the one hand, we see longer delay periods, which would increase costs. On the other hand, new labor agreements and work process efficiencies can bring the costs down," Kohler reports.

The Supply System also prepared a "comprehensive" update of operation and maintenance costs. "We've used a couple of years' experience with Plant 2 and comparison with other plants. The estimates are down somewhat, certainly enough to be of interest. The principal reason is a reduction and stabilization in nuclear fuel costs worldwide," he adds.

"Termination is no free ride. There are at least three-to-five years of disadvantages to ratepayers. Right now we can't see any advantage to termination."—Art Kohler, Washington Public Power Supply System



The Bonneville study poses questions

"The important thing is that we need a carefully reasoned study of the current situation before we reach conclusions," says Gary Fuqua, Bonneville's assistant power manager for resource planning and acquisition. "We're looking at the obvious things that will impact the plants. First, how much [electrical] load growth will be placed on Bonneville. Another obvious factor is the Supply System's costs. A third factor will be the resource of choice later on [after the year 2000], which would be coal. So the cost of coal is important."

"Those three factors will have the most significant impact. In addition, there are critical legal and financial issues. How can refinancing occur? What is the impact of termination on the status of bonds? The study is much more comprehensive than just the economics of the projects," he explains.

In fact, the Bonneville study is broken out into seven major issues. These include: (1) cost effectiveness and need for power; (2) rate impacts of termination vs. completion vs. preservation; (3) institutional issues related to the projects; (4) financial impacts on Bonneville from WNP-1 and 3 decisions; (5) impact on potential bond refinancing; (6) site restora-

"The study is much more comprehensive than just the economics of the projects." —Gary Fuqua, Bonneville Power Administration

tion requirements; and (7) legal constraints and risks.

Bonneville's plan for the study posed a variety of questions: What are the impacts of uncertainty about electrical load growth? What are the costs, including environmental costs, and availability of alternative resources? What are the impacts of changes in existing resources? How do uncertainties about Bonneville's sales to the California market affect the plants' cost effectiveness?

What effects will reduced oil and gas prices have? How long will they stay low? At what level will oil and gas prices stabilize? What about uncertainties regarding project "shelf" life? If the plants are terminated, how would accelerated amortization of outstanding bonds affect rates? If the decision is for termination, how will WNP-1 and 3 costs be allocated? Are the plants needed if they will serve only public utility and direct service industry loads?

How do different alternatives affect the distribution of costs across customer classes? How would the various alternatives affect Bonneville's financial health? What effect would termination have on bonds? How thoroughly should a terminated plant site be restored? And, ultimately, what are the legal barriers and implications?

Out of all these, the biggest question mark, according to Bonneville insiders, is how much load the investor-owned utilities are likely to put on Bonneville. That's the wild card. Others add that the question applies equally to some generating public utilities.

Investor-owned utility reactions split

Representatives of the four investor-owned utilities that originally shared ownership in WNP-3 gave mixed responses both on the question of load and on their positions for the future of the plants.

"The question of how much load private utilities are going to place on Bonneville is wide open," says Rod Boucher, Pacific Power and Light vice president of power systems. "We have no plans to place load in the next seven years and probably the next 10 years. After that, it's still questionable."

Pacific Power has taken an official position favoring termination of WNP-3 independent of load forecast. "We don't see WNP-3 as a viable resource for the reasons cited," Boucher adds. Those reasons were presented in testimony Boucher gave before the Council in September. They included the current power surplus, decreasing public support for nuclear power and development of alternative nuclear technologies and alternative resources. He also told the Council that when the region gets around to building the plants, the nuclear technology of the 1970s will not be acceptable.

"To cancel them at this stage is premature. There have been surpluses before in the region, and they tend to disappear." —Robert Myers, Puget Sound Power and Light Company

Puget Sound Power and Light, which is the only investor-owned utility currently placing load on Bonneville under the power sales contracts, falls on the other side of the issue. "From our perspective on the matter, the decision is up to Bonneville. However, our general feeling is that the small cost of preservation is more than offset by the potential value of the projects," explains Robert Myers, senior vice president of operations. "To cancel them at this stage is premature. There have been surpluses before in the region, and they tend to disappear.

"It's not unusual for society to be heavily influenced by its most recent experiences, such as the current surplus, while discounting other scenarios with differing outcomes," Myers says. "We were too ready in the late '70s to believe load growth would continue at the 8.5 percent rate. Now we seem too ready to accept the surplus will last forever."

Myers believes the big problem Bonneville should focus on is developing predictable rates. "We're not opposed to and are, in fact, putting a load on Bonneville. But with an open-ended price and the possibility of a contract being terminated with five years' notice, we're reluctant for that to be the place where we put all our reliance. For one thing," he notes, "Bonneville is not very competitive with other more predictable options."

Washington Water Power is somewhere between the Pacific Power and Puget Power positions, according to Gregory Prekeges, manager of resource planning and contracts. "We've informed Bonneville that we're not planning to put load on them in the next seven years, and we'll be making a submittal to them shortly on the seventh year. Beyond that, we've got no plans one way or the other. If Bonneville power is the least expensive power available, we'll use that. If there are less expensive resources, then we'll go in that direction."

As far as the plant preservation versus termination issue, Prekeges is staying out of the debate. "We feel that as a result of our settlement agreement, Bonneville is the responsible party to make a determination of whether the plants should be preserved, constructed, terminated or any other alternative. We support a good economic study of the situation and a decision based on good economics."

Like Prekeges, Portland General Electric's manager of regulatory finance, Robert McCullough, says his utility also is staying out of the debate but not out of the study on the projects. "We don't have a direct interest in WNP-3, so we don't have an opinion on it. But in terms of Bonneville's activities, we're part of an extensive group of customers who are carefully following the study and have been making extensive recommendations on it. We don't have an agenda for or against the plants, but we want the numbers right." McCullough says Portland General Electric's plans don't include power purchases from Bonneville.

Other groups also watch study closely

The question of investor-owned utility load becomes important because, as Dan Ogden, manager of the Public Power Council, puts it, the public utilities aren't likely to need power from WNP-1 and 3 in this century. "In addition," he says, "it is the public utility customers that pay the vast majority of the preservation costs."

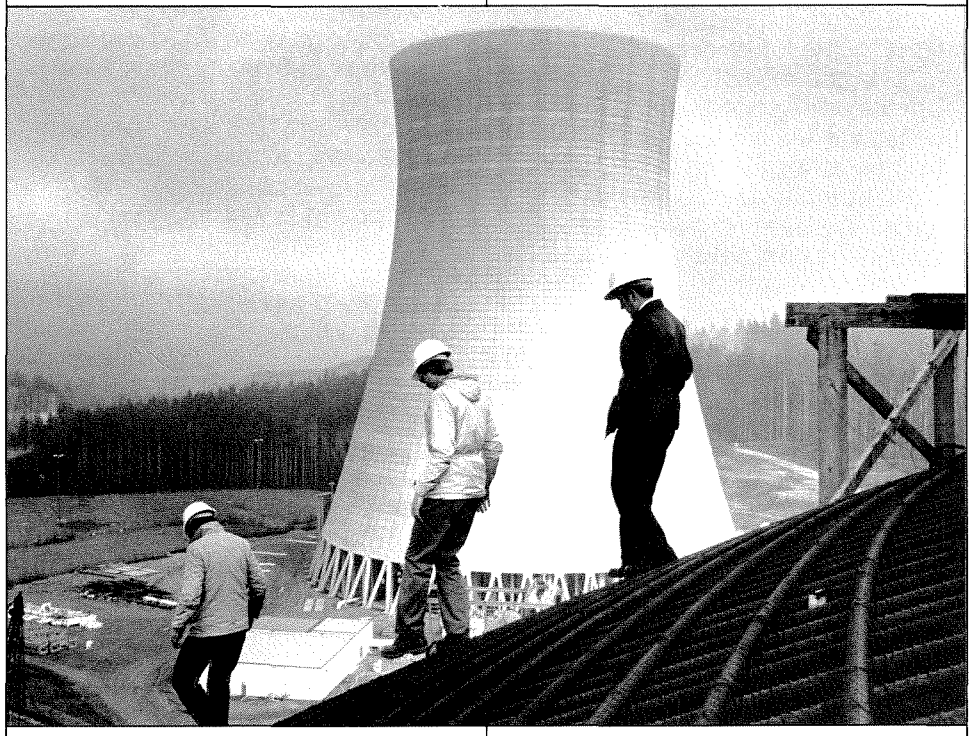
While the Public Power Council has no position on preservation versus termination, according to Ogden, "We are taking the position that preservation be at the lowest possible level. We also believe that Bonneville should be planning only on the basis of the existing contractually committed loads. That is, Bonneville should include no more investor-owned utility load than the investor-owned utilities have committed to. We're reluctant to see WPPSS investing our capital in either plant, given surplus projections."

Ogden said public power is monitoring the study very closely. "We're asking only that there be an objective analysis of the pros and cons of the options. Our involvement is to ensure the assumptions underlying the study aren't so cast as to prejudice the outcome."

Along with the utilities, the direct service industries (primarily aluminum companies) are part of the customer groups watching the study. Mark Crisson, executive director of Direct Service Industries, Inc., says his organization has no official position yet, but it does have some questions that the study needs to address. "We're concerned that if Bonneville continues to preserve the plants, it should be at the absolute minimum level," he says, noting that there is some skepticism about preservation costs.

"There are some real questions in the companies' minds about the need for one or both plants. We're waiting for the outcome, and we're participating to make sure it's a realistic study. If we feel the results of the study are credible, it'll strongly influence us," Crisson continues.

"It appears we have a very large surplus that will persist for some time. The greater problem as far as we're concerned is trying to manage that surplus. What I sense in the companies is a shift in con-



Northwest Power Planning Council members and staff view mothballed nuclear plant (WNP-3) at Satsop, Washington.

Northwest Power Planning Council file photograph

"If Bonneville power is the least expensive power available, we'll use that. If there are less expensive resources, then we'll go in that direction." —Gregory Prekeges, Washington Water Power

cerns on this issue from supply adequacy to rate impacts," he adds.

Like the utility community, the Northwest Conservation Act Coalition is also keeping an eye on the study. While it welcomes any "realistic assessment," the Coalition would prefer an independent analysis, according to Tim Stearns, policy coordinator. "We expect that such an analysis would confirm our judgment that one or both of these plants should be terminated. We'd like to see a full assessment of the technological aspects of the plants and the public and political support, especially for WNP-3," he says.

The Coalition is also on record contesting the WPPSS completion estimates. The Coalition's Executive Director Mark Sullivan notes that the WPPSS figures refer to physical completion, but he says in terms of construction costs the plants are more like 60 percent completed.

"We want to see if the plants will still be viable into the next century, which is when they're being held for," Stearns adds. "The region needs to know if it's possible to finance the plants. WPPSS hasn't gone to the bond market since the default. We'd like to know whether the plants are viable and whether they're technologically possible."

Conclusions timed for rate case

Bonneville recognizes that all the questions raised won't produce quantitative figures for answers, Fuqua says. Some of the issues, he points out, "must be analyzed qualitatively; relying on precedents, law and informed judgment. Bonneville's challenge is to develop and communicate the best possible analysis of these issues, then to apply sound business judgment to arrive at the best conclusions."

Getting answers to all the outstanding questions and reaching good conclusions by next March won't be easy. The impetus for that date is that the status of the projects could affect Bonneville's revenue requirements in the agency's 1987 rate case. A March conclusion will also allow Bonneville to use the results in its budget process for fiscal year 1989.

The heart of Bonneville's analysis, according to the study plan, will be the comparison of the cost effectiveness of and need for the plants versus other available resources.

"I think that's appropriate," says the Supply System's Kohler. "But it's also appropriate that when judging those results, they consider that the plants are two-thirds and three-fourths finished. They're being compared against resources that may not have been sited. These are resources whose costs haven't been faced, so they have a lot more inherent uncertainty. The numbers the studies produce have to be used with some judgment."

At the conclusion of the Bonneville study, the Council staff expects to prepare a paper based on an assessment of Bonneville's study and the staff's independent analysis for the Council's consideration. That paper, according to the Council's senior resource analyst Jeff King, will recommend whether the Council should enter rulemaking to alter its power plan or not. The ultimate decision will be up to the Council, a body known to respect, but not necessarily rubber stamp, its staff's recommendations. ■

"We want to see if the plants will still be viable into the next century, which is when they're being held for." —Tim Stearns, Northwest Conservation Act Coalition

Status of Power Plants

	WNP-1	WNP-3
Location:	**Hanford**	**Satsop**
Percent completed:	**63 percent**	**77 percent**
Energy capability:	**813 megawatts**	**806 megawatts**

Fish and Wildlife Update

by Ruth Curtis

December 15 is the closing date for public comment on two important sets of related Council or Council staff proposals.

First, it is the deadline for commenting on proposed amendments to the Columbia River Basin Fish and Wildlife Program. The Council's preliminary decisions on these amendments are included in the 1986 Draft Amendment Document, which was distributed for public comment in September. This fall, hearings and consultations were held throughout the Northwest as the Council solicited comments on the proposals. On the next page, an article describes some of the highlights of the hearings. The Council is studying all the comments and will adopt final amendments in February 1987.

December 15 is also the deadline for commenting on the staff issue paper on Salmon and Steelhead System Objective and Policies. The paper proposes an interim objective of doubling salmon and steelhead runs in the Columbia River Basin, with an emphasis above Bonneville Dam, and discusses planning alternatives within that objective. For more information on this paper, see the article on salmon and steelhead planning—page 6.

Hatcheries moving ahead

Major steps were taken this fall on two new Northwest hatcheries called for in the Council's Columbia River Basin Fish and Wildlife Program.

At its October meeting, the Northwest Power Planning Council approved a proposal submitted by the Bonneville Power Administration to go forward with construction of a steelhead hatchery for the Umatilla River Basin in Oregon. This will be the first salmon/steelhead hatchery completed under the program.

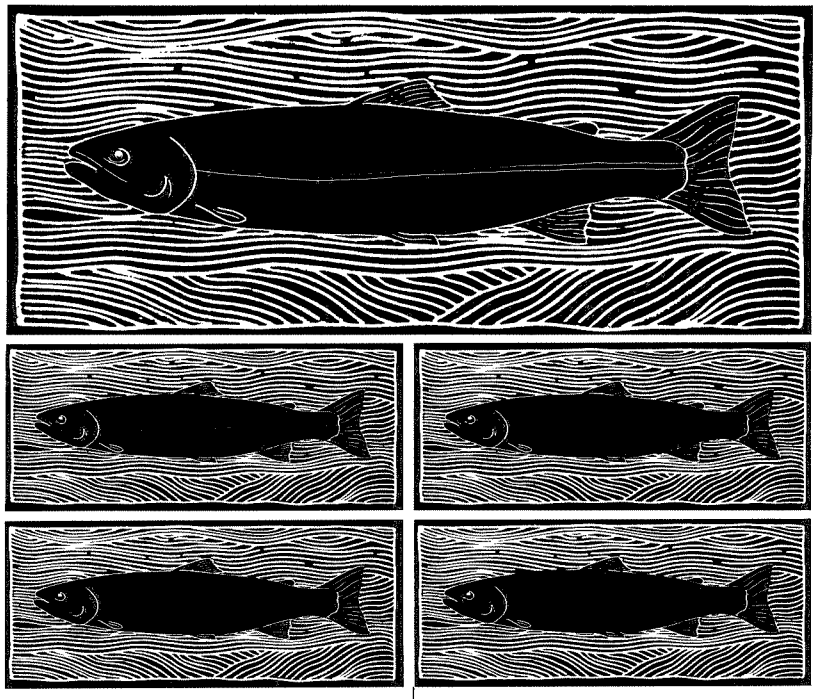


Illustration by Stephen Sasser

Located on the Columbia River, near Irrigon, Oregon, the hatchery will produce about 200,000 summer steelhead annually beginning in 1988. These fish will be used to increase the dwindling steelhead population in the Umatilla River Basin, a population affected by hydroelectric operations, irrigation and land development.

At the recommendation of the Umatilla Confederated Tribes and the Oregon Department of Fish and Wildlife, the Council had included the hatchery in its fish and wildlife program. The hatchery is truly a multi-agency effort—Bonneville is funding the design and construction; the Corps of Engineers is doing the work; and the Oregon Department of Fish and Wildlife will operate the completed hatchery.

In addition, Bonneville began funding design work for a trout hatchery to be located just below Chief Joseph Dam on the Columbia River in Washington. Construction will occur in 1987 and 1988.

The fish from this hatchery will partially replace the salmon that are no longer able to migrate upstream to the Colville Indian Reservation because of the construction of Chief Joseph and Grand Coulee dams. Rainbow, eastern brook and cutthroat trout will be produced and released in lakes and streams on the reservation.

Bonneville fish and wildlife work plan

In October, the Bonneville Power Administration released a draft work plan for fish and wildlife activities in fiscal year 1987—as called for in the Five-Year Action Plan of the Council's fish and wildlife program. The work plan reflected the Bonneville Administrator's decision to reduce the agency's program budget to about $36.8 million, in response to declining revenues. Concerned that the budget cuts would affect the implementation of the fish and wildlife program, the Council asked Bonneville to ensure the work plan was flexible enough to incorporate the amendments to be adopted in February and otherwise improve the work plan so that it is consistent with the Council's program. Contact the central office to receive a copy of the Council's comments. ■

VOICES OF THE NORTHWEST

Compiled by Paula M. Walker

In the tradition of a New England town meeting, the Northwest Power Planning Council held hearings throughout the region in October, so that interested parties could voice their views on proposed amendments to the Columbia River Basin Fish and Wildlife Program. The reference point for the hearings was the 1986 Draft Amendment Document, which the Council issued for public comment in September.

Although the Council also welcomes written comments on the document, the public hearings provided an opportunity for an exchange between Council members, organizations and individuals. The deadline for written comments is December 15, 1986. The next issue of *Energy News* will contain an overview of the written comments received.

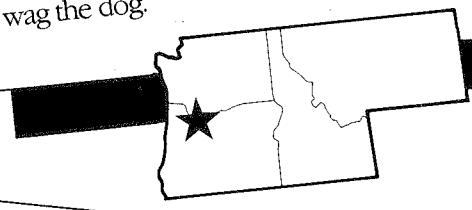
In the meantime, the oral testimony provides a "sneak preview" of comments to come. Many people who testified said they would provide more detailed comments in writing. After the December deadline, the Council will review all comments received and adopt final amendments in February 1987.

Speakers at the five hearings represented a variety of interests, including utilities, chambers of commerce, fly fishers, tribes and fish and wildlife agencies. What follows is a sample of the voices of the Northwest.

Dale Evans, The Columbia Basin Fish and Wildlife Council:

"We fully support and encourage the Council to adopt Measure 704(i)(5) as recommended by our staff to construct new hatchery facilities to produce spring chinook for northeast Oregon rivers ... We object, however, to some language in 704(i)(5) which would require that fishery management policies and procedures be consistent with the fishery management policies and subbasin plans of the Council. It seems to me the tail is attempting to wag the dog."

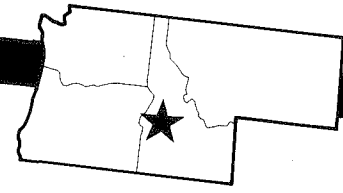
Portland, Oregon, hearing



Jim Jones, attorney general of Idaho:

"Quantifying hydropower responsibility for salmon and steelhead losses within the Columbia Basin is a positive first step. The Council should strive to fully compensate for these hydropower losses within the limits of ratepayer responsibility. The Council must insure the quality of future fish runs as well as their quantity. And in doing that, attention to quality here means attention to genetics."

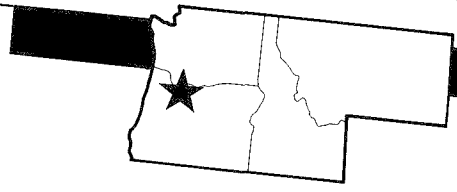
Boise, Idaho, hearing



Al Wright, Pacific Northwest Utilities Conference Committee (PNUCC):

"PNUCC and the utility industry in general is opposed to the loss estimate that you have determined. We feel you have no scientific basis that has been generated throughout this process to support a historical fishery in the Columbia River of greater than 10 million."

Portland, Oregon, hearing

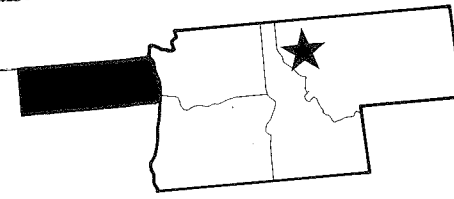


Jerry Brobst, Flathead Electric Cooperative:

"Our other concern involves the cost under the wildlife mitigation measures. At present, hydropower—that is, ratepayers—are expected to pay 76 percent of the cost of the measures. Actually, there are many other downstream beneficiaries, such as irrigation, flood control, recreation and navigation.

" ... So we would ask the Council to further explore the present cost allocation and work with the Federal Energy Regulatory Commission for a more equitable distribution of expenses."

Kalispell, Montana, hearing

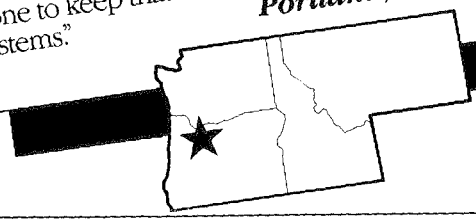


Bill Bakke, Oregon Trout:

"I'm a little concerned ... that the slippage [in scheduling construction] on the Corps [U.S. Army Corps of Engineers] bypass on the Snake is unacceptable. If I caught just a fraction of the fish that are being killed as a result of not having those bypass systems in, I would be in jail and the key would be thrown away, and anyone else in the basin, commercial fishermen or sports fishermen, who was responsible for that kind of mortality would be in a hard spot.

"Yet, the Corps, and evidently the Council, are allowing the [schedule] slippage to go on, allowing that mortality to continue, and we're having difficulty maintaining up-river natural runs of fish ... I think something has to be done to keep that schedule on schedule for those bypass systems."

Portland, Oregon, hearing

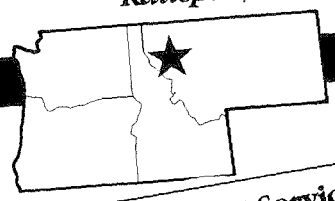


Frank Rosiejka, Flathead Wildlife, Incorporated:

"I would like to speak to the issue of the mitigation, particularly for Hungry Horse. The elk habitat, from what I understand, is to be enhanced to increase the carrying capacity that it now has, probably not to the full extent that it was before the dam, but up to about 133 head ... as opposed to the 175 that they estimated they lost the habitat for.

"We firmly believe that this is a good idea, because enhancement is all we can do. We can't make any more land. So if we can enhance what we already have, that will increase the game supply, thereby allowing the tourist industry and the hunting industry to flourish."

Kalispell, Montana, hearing



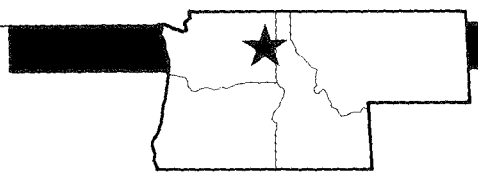
Al Scholz, Upper Columbia United Tribes:

"The other project we proposed is on the Kootenai River. And what we are proposing there is a dual sturgeon/kokanee hatchery. There is a real serious problem with sturgeon in that river ... Fishing had been allowed until 1983, and so the population was being depleted greatly by fishing pressure ... We're in danger of losing that genetic stock of fish unless something is done immediately to solve that problem ... One of the things that Libby Dam does is to create—because of power peaking demands—really large water level fluctuations downstream in the Idaho portion of the Kootenai River.

"Sturgeon spawn on rocks in shallow water. And one of the things that may happen as a result of those power peaking operations is that the eggs that are laid while the water is high, may become desiccated if the rocks become exposed to air.

"The Kootenai Tribe is particularly interested in sturgeon because they were one of the really important species utilized by the Tribe for a long time, and they would like to see something done for sturgeon."

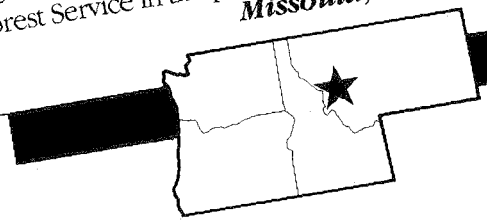
Spokane, Washington, hearing



John Chansler, U.S. Forest Service Northern Region:

"Section 200 contains areas we feel need additional focus. The Council has established subbasin planning for salmon and steelhead. While we recognize the process may be changed, we feel it is important that the Forest Service be included in this plan. The Forest Service administers over half of the existing rearing and spawning habitat for anadromous fish in the Columbia Basin, and the Forest Service land and resource management plans, which are currently being finalized, need to be correlated with the proposed subbasin plans. We request that the Council provide more direct involvement by the Forest Service in the planning process."

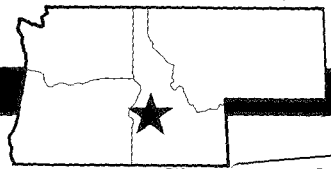
Missoula, Montana, hearing



Don Magers, Idaho Steelhead and Salmon Unlimited:

"Idaho once had over 8,300 miles of anadromous [salmon and steelhead] habitat. We now have less than 5,400 miles, of which only 2,400 miles are relatively undamaged. Idaho sportsmen and tribes were relegated to a mixed-privilege fishery this summer with rods, reels, spears, gaffs and nets crammed together on a total of 12 miles of stream bank in what was the 'best' salmon run in Idaho in 10 years. How much more of a demonstration of a need for additional habitat must there be, and why should we have to wait until 1989 to begin critical habitat projects?"

Boise, Idaho, hearing



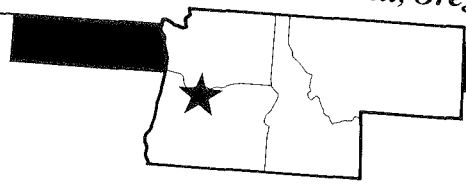
Ed Chaney, consultant for Umatilla Indian Tribes:

"This amendment basically provides that BPA [Bonneville Power Administration] would provide the power to run the pumps which would enhance industry and flows in the Umatilla River Basin. This particular amendment is integral to the whole program that's been developed by the states and tribes over a number of years, beginning back in about 1978, which identified the Umatilla Basin as one of the top priorities of basins for rehabilitating the salmon and steelhead runs in the entire Columbia River Basin.

"That priority hasn't changed. BPA has suggested that we need to get another plan; in other words, the implication is a Columbia River Basin comprehensive plan, prior to implementing plans in the Umatilla River Basin.

"We want to suggest that there have now been about five comprehensive river basin plans, and out of each of those consistently among the top one or two priorities has been the Umatilla River Basin. We suggest that it wouldn't be cost-effective to replicate that for the sixth or seventh time and that, no matter how much more planning is done by the states and tribes over and over again, priorities aren't going to change."

Portland, Oregon, hearing



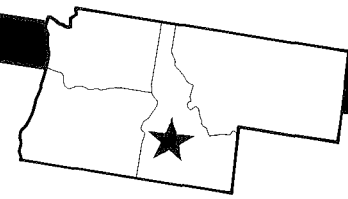
Marjorie Hayes, Idaho Consumer Affairs, Incorporated:

"In looking through the 1986 Draft Amendment Document, members of the Energy Committee of the Idaho Consumer Affairs were pleased with the improvement that has occurred in the overall planning process. The plan is taking shape as a professional document, facing up to the limitations in historic information, but identifying problems, carrying on research and seeking concrete solutions. We commend you.

"We do not think, however, that you have paid enough attention to an area that is the source of our wild salmon, one that is a great natural hatchery for these splendid fish. Marsh Creek, which together with Bear Valley Creek, form the headwaters of the Middle Fork of the Salmon, a wild and scenic river ...

"This is a resource which we simply cannot afford to lose, for the reports of millions of fry in the hatcheries succumbing to diseases makes one realize that the genetic strain which resides there and has survived since the Miocene age may hold the genetic imprinting for the survival of the species."

Boise, Idaho, hearing



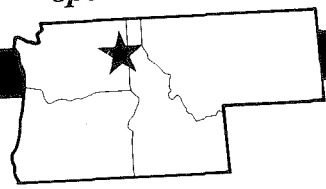
Win Self, Davenport, Washington, Chamber of Commerce:

"Finally we are getting resident fish on the agenda. That's very commendable.

"Now I'm interested in [a] net pen [for raising rainbow trout] in Lake Roosevelt ... With the cooperation of the Washington State Fish and Game, and the Chamber of Commerce, and some of my own money, we started with a net pen program three years ago. And the results have been tremendous ... These fish have gained an inch a month, and in 20 months, they weigh a pound and a half to a pound and three-quarters ...

"I'll put my money where my mouth is. I think it's a very good example of what can be done ... We would encourage you to go ahead with your two Kokanee hatcheries [in Lake Roosevelt]."

Spokane, Washington, hearing



GETTING THE EDGE ON BUILDING EFFICIENCY

by Jim Erickson

What's good for business is good for the Pacific Northwest. That's what the Bonneville Power Administration hopes to prove with its first new commercial building program called the Energy Edge.

Paul Johnson, one of Bonneville's commercial programs branch team leaders, makes a strong case for the maxim, noting that "besides those [businesses] that are directly affected, energy investments in commercial buildings benefit others, particularly ratepayers [who are 'buying' an inexpensive energy resource through the program]."

Energy Edge is a regionwide competition whereby qualifying commercial builders are paid for some of the costs of designing and constructing buildings that conserve considerable amounts of energy. In fact, Energy Edge buildings will be 30 percent more efficient than the Northwest Power Planning Council's model conservation standards require for energy efficiency in new electrically heated buildings.

The commercial sector consumes about 20 percent of the region's total energy sales. Office buildings and retail stores account for almost 50 percent of electricity consumed in the commercial sector, according to the Council's 1986 Northwest Power Plan.

Computer monitoring in the Energy Edge program will provide information on actual energy use and savings in about two dozen buildings that will be selected in the Bonneville-funded program. They will include large and small offices, restaurants, clinics, grocery stores and other buildings that are a cross section of the more than 2,000 commercial buildings built in the region each year.

Energy Edge data will show what levels of efficiency can be achieved and how close actual energy savings come to computer-projected amounts. For instance, calculations for the proposed 62-story, 1 million square-foot Gateway Tower in Seattle indicate the planned conservation measures would result in a savings of 3.16 million kilowatt-hours a year at an average cost of 26 mills (2.6 cents) per kilowatt-hour. Calculations for the one-story 2,000 square-foot Caddis/McFaddin Building, just finished in Spokane, predict a savings of 12,072 kilowatt-hours a year at an average cost of 4.4 cents per kilowatt-hour.

Those two buildings are among six sponsored by the Washington State Energy Office. Others include Bellevue Place in Bellevue, the Maritime Building in Olympia and Skipper's Restaurant in Seattle.

Fifteen buildings, thus far, have been selected as Energy Edge winners in the region.

Portland Energy Conservation, Inc., a non-profit corporation, has five projects, including the Montgomery Park Building in Portland, a 780,000 square-foot renovated historical landmark building that formerly was Montgomery Ward's regional distribution center. Another is the O'Ryan Industries Building in Vancouver, Washington, a 5,900 square-foot concrete warehouse and office building. O'Ryan Industries Building was the first building completed in the regional competition.

Pacific Power and Light has three—an office building in Yakima, Washington, a high school in Marsing, Idaho, and an elementary school in Kalispell, Montana.

The Oregon Department of Energy has one project, to date, which is a medical clinic in Ashland, Oregon.

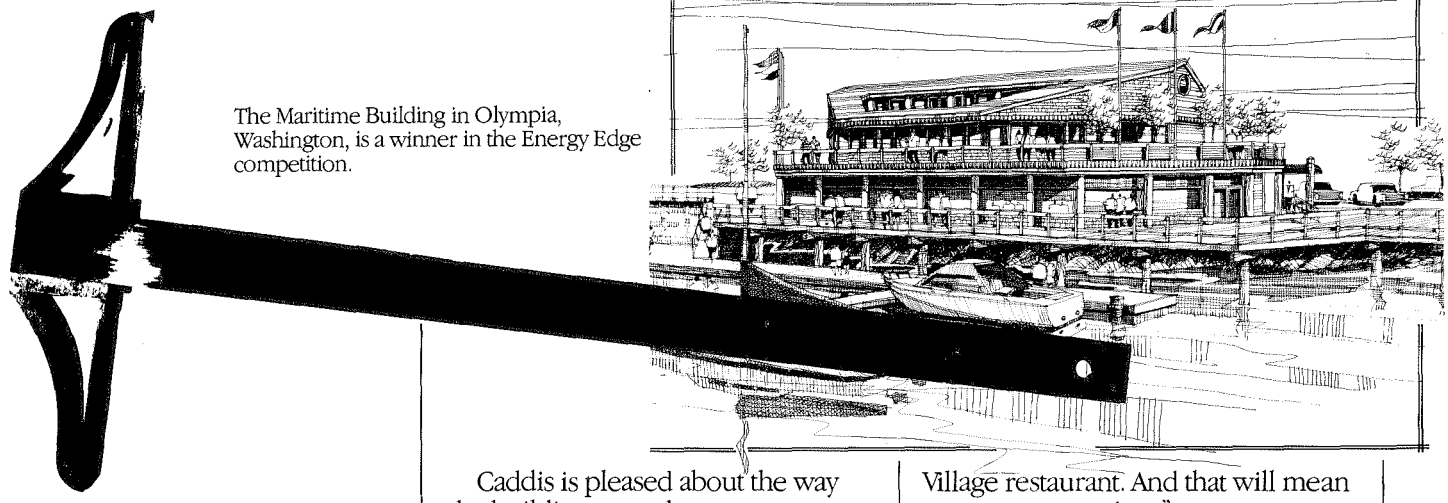
Portland's mass cash-in

Needless to say, architects, engineers and developers are enthusiastic about Energy Edge.

"I don't know of any other program like it in the United States," says Edward Knipe of Brown & Caldwell consulting engineers. "If Edge does one thing, it shows that with a little extra computation, you can get a big return on investment."

Knipe cites the Montgomery Park Building, on which he worked, as an example.

"The plan was originally laid out by a mechanical contractor, and it was a good plan, but he had used a standard computer program intended for lighter-weight buildings," explains Knipe. "The calculation didn't account for this building's own thermal mass when predicting what equipment would be needed to cool the structure. We proceeded with our calculations and found that the building weighed 100,000 tons, about the mass of an aircraft carrier. Such a large structure keeps a more even internal temperature than lighter buildings.



The Maritime Building in Olympia, Washington, is a winner in the Energy Edge competition.

"Our model determined that only about half the additional mass called for in the first calculation was required," adds Knipe, "and that meant a savings of $65,000 in first costs because only half of the cooling tower capacity was needed."

Savings in time

For Erik Bjork, a Vancouver architect who designed the O'Ryan Industries Building, working on the Energy Edge project was time consuming. But it turned out to be time well spent.

"After all is said and done, I'd have to say we're pleased," remarks Bjork. "Utility costs are down considerably from what they would have been."

Despite Energy Edge's early success, Bjork says some clients still are reluctant to pay more up front for energy savings, even though the chances are good those extra costs will be recovered later.

In the meantime, Bjork's firm is making good use of the research gleaned from Energy Edge involvement. The firm promotes itself as "architects on the edge of energy technology."

Savings in all seasons

Some participants were excited to get into Energy Edge, while others entered the program as an afterthought.

"It was our idea from the beginning to have a building that was energy-efficient in all ways," reports Jim Caddis, a partner in the Caddis/McFaddin Building in Spokane. "That was our intent before we heard about Energy Edge. When we became aware of it, we found [an architect] willing to try it."

Caddis is pleased about the way the building turned out.

"It's too early to say how well it's going," he says, "until we get a winter under our belts. We thought this area would give a real test on what kind of savings can be realized. We get some hot spells in summer, and it's cold in winter."

E-fish-ciency?

Whereas Caddis went out looking and discovered Energy Edge, Clint Marsh, energy management supervisor for Skipper's restaurant chain, was reeled on board.

"I saw one of the [Energy Edge] brochures but thought it was just another contest that was a waste of time and a hassle," recounts Marsh. "I filed the brochure away for a month. Then, a guy I know in Oregon called and asked if I was aware they were giving away money, good money. I told him I didn't know that. So, we became interested."

In reconsidering, Marsh figured it would be advantageous for the chain to "get help on energy measures it was planning to do anyway."

The chain's motives, he admits, were somewhat selfish. "We're a fish house," notes Marsh. "We're profit motivated. If energy management is not profitable, we won't do it. Our goal is to make money. The contest allowed me to take projects off the back burner and bring them to the front."

The Seattle restaurant, due to open in December 1986, is a pilot for new construction throughout the chain, Marsh says, pointing out that the chain opens about 20 new restaurants a year.

"That was our key argument on why we should be selected [as an Energy Edge winner]," Marsh maintains. "Every other restaurant we open will be a variation of the Aurora Village restaurant. And that will mean more energy savings."

The learning curve

Jim Thompson, a Kalispell, Montana, architect, says his firm took energy conservation techniques used on other buildings and put them all together for the first time on the Edgerton School project in Kalispell.

"We didn't want to take any particularly innovative steps," Thompson recalls. "We wanted a relatively simple building, not a series of widgets. We found that beating energy conservation standards by 30 percent was easily attained with standard construction techniques."

Sound logic

With the Maritime Building designed to sit on pilings along the Olympia, Washington, waterfront, it seemed logical to use Puget Sound to help heat the building, says that project's engineer, Bob Turpin.

"It made good sense to use the Sound because the temperature doesn't fluctuate," he explains. "We're using a water-source heat pump. It's a good way to go. We'll save a lot of energy."

Turpin says Energy Edge "forced us" to do a lot of extra work in studying the cost effectiveness of various energy measures, but the reward is an energy-efficient building. He believes Energy Edge has brought conservation to public attention and has had a considerable influence on the building and design community.

Energy Edge managers at the sponsoring agencies couldn't agree more.

Artwork courtesy of the Washington State Energy Office

Kim Drury of the Washington State Energy Office asserts that the next generation of commercial developers will have research data from Energy Edge to help them design and build state-of-the-art, energy-efficient buildings.

"Bonneville and regional energy planners will have a much better capability to plan for the load growth and conservation potential in the commercial sector," she contends. "Even without Bonneville paying incentives, prospective builders might, as a result of Energy Edge data being publicized, be encouraged to use computer energy modeling in the design phase of their buildings."

John Perry, the Oregon Department of Energy's Energy Edge project manager, says there is nothing being done in commercial conservation on the scale of Energy Edge anywhere else in the country.

"I occasionally go to conferences and talk about what Energy Edge is doing, and people are blown away by it," says Perry.

He feels decisions that architects make, in conjunction with mechanical engineers, have a significant influence on a building's energy use.

"If we can encourage and entice them to analyze different building approaches from an energy and cost perspective, then we've made real headway," says Perry. "Design budgets are usually so tight these days. But we're trying to convince the design community and those investing money that, with a bit of extra money spent on design, they can produce a building that operates a whole lot more efficiently."

Nancy Benner, Energy Edge manager for Portland Energy Conservation, Inc., says the program has enabled architects, engineers and developers to explore alternatives on the leading edge of technology.

Energy Edge, she says, has allowed architects to get involved with engineers "in the early stages of a project, and that has led to integration of the design and building plans for greater energy efficiency."

Pete Pendleton, Energy Edge manager for Pacific Power and Light, says response from architects, engineers and developers has been positive so far.

"But the proof will be in the pudding. Once the buildings are finished and monitored, then we're going to know," he concluded. ■

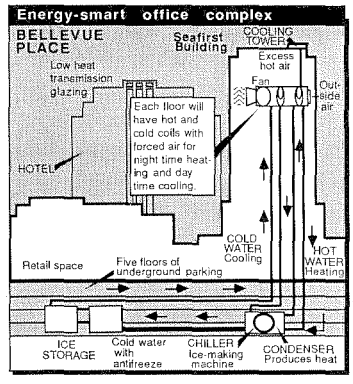
A (n)ice way to heat a building

Imagine, if you can, a giant ice cube nearly as tall as the Los Angeles Lakers' Kareem Abdul-Jabbar and wider than the Chicago Bears' William "The Refrigerator" Perry. You think that's a mini-iceberg, how about 22 of the mammoth frozen blocks? Then ponder the notion of getting any warmth from such frigid objects.

Before you decide that's about as remote as the proverbial snowball's chance, consider the way a refrigerator—the appliance, not Perry—works. Pat Burns and his associates at Holaday-Parks, Inc., Seattle, will use that principle in the design and construction of the mechanical system for developer Kemper Freeman's proposed $260 million Bellevue Place in Bellevue, Washington.

A refrigerator gives off heat from the energy used to chill the box's interior. Burns says a giant ice machine in the basement of the 380,000 square-foot complex will make ice at night—enough to fill 22 tanks, each 7 feet tall and 6 feet in diameter. Heat rejected from the process will be stored and circulated throughout the complex to keep buildings warm during the evening and early morning hours.

An architectural mock-up of Bellevue Place.



As the sun brings its warmth during the daylight hours, Burns says, the system will turn to cooling. The ice will be used for air conditioning. "As the ice melts, the water will be close to 32 degrees [freezing] for awhile. But as it warms up, chillers will be turned on [to keep the water cool]," he explains. Computers will be used to determine how much ice is needed each day, he says, adding, "We hope to make enough ice so that all of it will melt ... during the day [when it's most needed]."

That innovative approach to cooling and heating helped the Bellevue Place project emerge as a winner in the Energy Edge competition.

The ice-to-heat process has been used elsewhere, including San Francisco, but not quite in the same manner as that being proposed for Bellevue Place, says Burns, who prefers not to disclose every detail of the system in order to maintain a "competitive advantage."

But he predicts uniform temperatures created by the system will mean lower energy consumption and lower heating and air conditioning costs for the building. Energy Edge figures indicate the predicted annual savings for Bellevue Place could be as much as 2.2 million kilowatt-hours. Because of the innovative cooling/heating system, the size of the air distribution system can be decreased. In Bellevue Place this allowed for the construction of an additional floor with 20,000 square feet of rentable space.

Developer Kemper Freeman acknowledges, "I'm no expert on the nuts and bolts of the system." But he has definite ideas on its long-term benefits, saying, "I can tell you one thing. Tenants are concerned about expenses and taxes in this competitive marketplace. The [ice machine] system is a plus for the building and a selling factor. The energy efficiency can have an accumulative effect and result in a savings on the life of tenants' leases."

—JE

In The News

Council, Bonneville publish new policies for acquiring resources

The Northwest Power Planning Council and the Bonneville Power Administration have each issued policy statements on implementation of Section 6(c) of the Northwest Power Act. Under Section 6(c), the Act requires Bonneville to submit major resource acquisition proposals to a public review process to determine whether the acquisition is consistent with the Council's Northwest Power Plan. The Council then has the right to make its own consistency determination.

The purpose of the process, according to Council Executive Director Ed Sheets, is "to ensure that a major resource is needed and is cost-effective before the region invests a great deal of money in it."

Council Chairman Bob Saxvik praised Bonneville Administrator Jim Jura for his efforts to develop the policy. "Jim's personal involvement in discussions with the Council and with other regional organizations really helped," Saxvik said. "The spirit of cooperation and good will that we've developed will help the Council and Bonneville on other important issues facing the region."

The Council's policy statement covers the procedures and criterion it will use for determining consistency with the power plan. Bonneville's policy statement covers the threshold which determines when a 6(c) review will take place, public hearing procedures and Bonneville's own consistency criterion. Both policies are subject to re-evaluation at least every five years.

The 6(c) issue arose earlier this year when Bonneville proposed its Aluminum Smelter Conservation/Modernization Program. That program could result in the acquisition of up to 250 megawatts of conservation. The Act stipulates that "major" resources are subject to review and identifies such resources as those over 50 megawatts and having more than five years' duration.

Originally, Bonneville did not submit the proposed acquisition for review on the ground that the aggregate megawatts acquired from any single smelter would not exceed 50 megawatts.

After extensive discussions between the Council and Bonneville, both inviting public comment from the region, Bonneville agreed that a conservation program, such as the Conservation/Modernization Program, is subject to review if it proposes to acquire more than 50 megawatts of energy savings from logically related activities in a single sector through generic contracts offered as part of an overall conservation program. Bonneville's policy also provides that generating resource programs will be reviewed pursuant to Section 6(c).

"We think Section 6(c) is an extremely important part of the Act," Sheets said. "It speaks directly to the balance of power between state and federal interests that Congress set up. The Act expanded Bonneville's authority to acquire resources, but it also gave the states, through the Council, the right to review those acquisitions."

Sheets noted the fact that the Council and Bonneville were able to work out many of the differences between their interpretations of Section 6(c) is an indication that the "balance of power" is working as Congress intended.

A copy of both the Council's and Bonneville's policy statements are available by writing to the Council.

—DM

Council Chairman Bob Saxvik (l) and Bonneville Power Administrator Jim Jura (r) seal the new resource acquisition agreement with a handshake.

Bonneville Power Administration photograph

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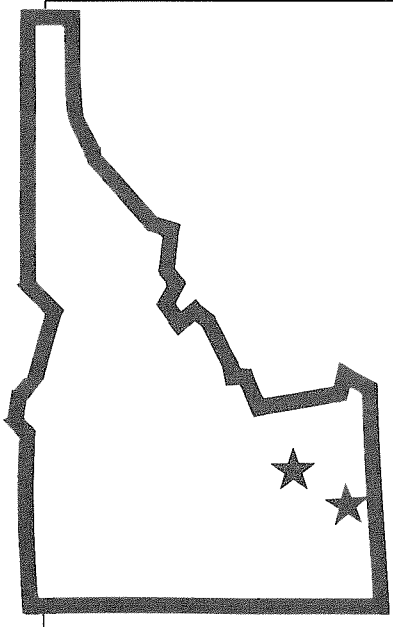

Two Idaho communities join early code adopters

Bonneville County and Idaho Falls in southeast Idaho will soon be leading that state in conserving electricity and helping to keep electricity rates down. Those two local governments are the first in Idaho to adopt new building codes that meet the Northwest Power Planning Council's model conservation standards. Consequently, new electrically heated homes in Idaho Falls and surrounding Bonneville County will be so energy-efficient that homeowners may save up to 60 percent on their heating bills.

Not only will homeowners be better off financially, they will help stretch the Columbia River's hydropower resources. The longer the region can stretch those resources, the longer it can postpone using other more expensive sources of electricity.

"We thought the conservation standards were reasonable and the right thing to do," said Mayor Tom Campbell of Idaho Falls. "Builders in Idaho Falls are building houses almost to the new code anyway. It wasn't much of a change for them."

The mayor admits that one of the factors that led to adoption was the builder incentives offered by the Bonneville Power Administration to local governments that adopt the standards early. Although two of the six city council members voted against the new code, Mayor Campbell described the public adoption process as an easy one. "Among the building community, there was no controversy at all," he said. "People here demand it [energy efficiency]. They understand the value of well-insulated homes."

Because Idaho Falls and Bonneville County adopted the energy codes before 1989, they are eligible for a host of benefits under the Bonneville Power Administration's "Early Adopter Program."

Such assistance is the Bonneville Power Administration's way of "acquiring" the energy savings, not unlike spending money to acquire a coal plant to meet the Northwest's future electricity needs. But with the Early Adopter Program, Bonneville is spending a fraction of what would be spent on a coal plant.

In addition to financial assistance to the governments, homebuilders will initially receive $3,800 for each house they build to the new codes. The incentive will help defray the incremental costs of building to the new codes, costs that are estimated to range from $2 to $4 per square foot. Under Bonneville's Early Adopter Program, the builder incentive will decrease to $3,300 in 1988 and disappear in 1989.

Serr projects Bonneville County will see anywhere from 50 to 150 new houses in 1987, nearly 98 percent of them electrically heated. In Idaho Falls, Klomp expects that next year's building season will produce about 150 new electrically heated homes.

A large portion of the incremental costs of building to the new energy standards is the cost of installing a heat recovery ventilator, a mechanism that forces fresh air into a house and stale air out while recovering some of the outgoing air's heat.

In Idaho Falls, where over a dozen homes were built to the energy standards this year under Bonneville's Super Good Cents marketing program, Klomp thinks builders are charging too much for the ventilators. "Some are buying $350 units and charging over $800," he said. He noted that he has received a number of inquiries about installing the devices and is confident the price will come down. "I think we're going to see some competition developing soon."

When Bonneville County's Serr was asked if he was worried about the price of heat recovery ventilators he resounded, "None whatsoever." In fact, because 90 percent of the county is served by Utah Power and Light Company, residents pay over 6 cents per kilowatt-hour of electricity. That rate is almost double the price the Bonneville Power Administration used as the region's average electricity rate in a recent study determining the cost effectiveness of the energy standards. That means that heat recovery ventilators are quite cost-effective in Bonneville County and a good buy for local homeowners.

—Beth Heinrich

Council considering changes in model conservation standards

At its November public meeting, the Northwest Power Planning Council agreed to explore potential changes in the Council's Northwest Power Plan. These changes relate to the Council's model conservation standards (MCS) for making new electrically heated buildings more energy efficient.

The Council will look at specific ways builders can meet the conservation standards as well as certain programs the Council has encouraged the Bonneville Power Administration to develop in support of the standards' regionwide implementation.

As part of this procedure, the Council will also review its recommendations for Bonneville to impose surcharges on utilities that do

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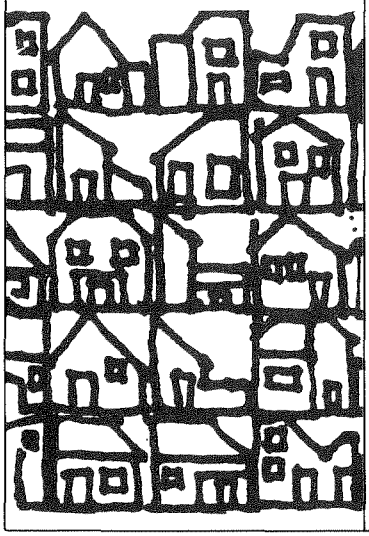
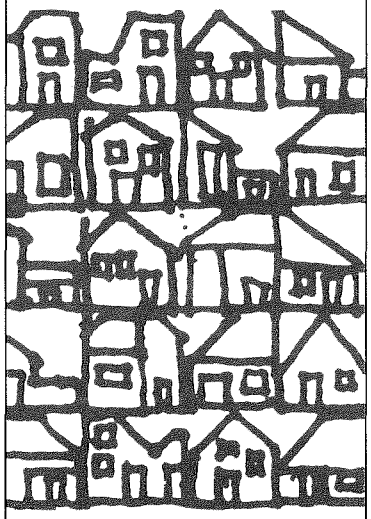
not achieve the energy savings of the standards in their locale.

The Council's current review process will include public hearings in December in each of the four Northwest states—Idaho, Montana, Oregon and Washington. Public comment is invited at these hearings and at consultations with groups particularly concerned with implementing the standards.

Hearings are scheduled for the following places and times:

- Seattle, Washington, Friday, December 12, 10 a.m., Federal Building, South Auditorium, 915 Second Avenue.
- Missoula, Montana, Monday, December 15, 1986, 1 p.m., Missoula Sheraton Hotel, 200 S. Pattee.
- Boise, Idaho, Tuesday, December 16, 1986, 10 a.m., Red Lion Riverside, Cinnabar Room, 29th and Chinden.
- Portland, Oregon, Wednesday, December 17, 1986, 10 a.m., Council Central Offices, 850 S.W. Broadway, Suite 1100.





The Council will take written comment through December 22, with a Council decision expected in January 1987. Contact Dulcy Mahar, in the Council's central office, for more information.

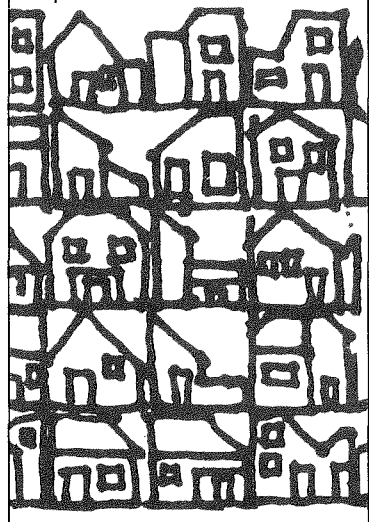
The model standards were designed with an eye to reviewing them as new information and advanced technology becomes available. In October, Bonneville released its preliminary findings from a study of the cost effectiveness of the standards.

The Bonneville study confirmed the Council's determination in its 1983 and 1986 Northwest Power Plans that the model standards represent a low-cost resource for the region's power system. Electricity acquired through building efficiency is less expensive than electricity from any other new power resource.

The study looked at monitoring results from more than 400 homes built as part of the Residential Standards Demonstration Program. "We discovered that these houses present a better value to homeowners than those typically on the market," reported Richard Perlas, Bonneville's acting conservation manager. "It costs less to own and heat an MCS home," he added.

In its 1985 model standards, the Council listed packages of conservation measures that could be implemented in building homes to use only a specified amount of electricity for space heating.

Bonneville's preliminary findings indicated that one component in the measures recommended in 1985 may be unnecessary, and possibly too costly. The use of a heat recovery ventilator and continuous air vapor barrier to reduce uncontrolled air leakage while improving indoor air quality may be considered optional.



The Council is still concerned about indoor air quality in very energy-efficient homes, and maintaining indoor air quality remains a key objective of the model conservation standards.

But, because the ventilator and vapor barrier are expensive additions to new constructions, the Council's proposed amendment would eliminate mechanical ventilators in houses built to current construction practice air infiltration levels. The ventilators and vapor barriers would be retained as options for home builders who want to save more energy and reduce moisture and other pollutants in their homes.

Other key objectives of the proposed amendments include: Northwest buildings constructed to meet the standards should be economically feasible to consumers; Bonneville and the region's utilities should provide financial, marketing and technical assistance to achieve the energy savings of the model standards regionwide; and Bonneville should continue collecting data on the standards and continue efforts to lower costs, improve performance, ensure maintenance of indoor air quality and enhance comfort and safety of buildings constructed to the standards.

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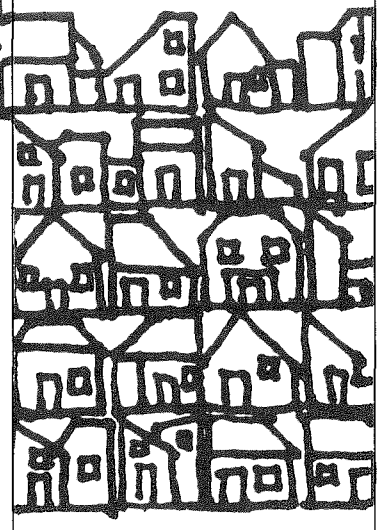


In The News

Northwest economy following forecasts

The Northwest economy is growing moderately and steadily, while growth in energy demand appears to fall well within the forecasts made in the 1986 Northwest Power Plan. Those are the conclusions in a status report issued recently by the Northwest Power Planning Council.

The report on the regional economy and power loads is the first since the Council's second power plan was adopted last January. It is part of the Council's effort to monitor changing conditions that could affect the power plan by signaling the need for finetuning. The findings indicate no changes are needed in the plan at this time.

The report surveys the most recent data on the economy, fuel prices and electrical demand. It also looks at recent forecasts made by other groups such as the Bonneville Power Administration and the Pacific Northwest Utilities Conference Committee. Both groups' forecasts conformed closely to the Council's.

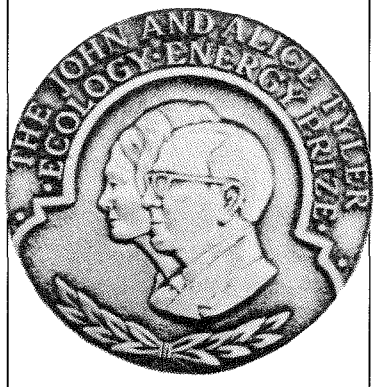
As still another checkpoint, the report compares actual electrical power sales for 1981 through 1985 to the forecasts made in the plan for those years. In this way, the Council can test the accuracy of its forecasting computer models. The average percent error over the five-year period was minus .03 percent, essentially zero.

(See back cover to order the entire report.)

—DM

Council nominated for international environmental prize

Senator Dan Evans of Washington State has nominated the Northwest Power Planning Council for the Tyler Prize—the most prestigious worldwide award offered specifically for accomplishments in the fields of environmental protection and energy technology.



Evans' letter of nomination praised the Council for having "broken new ground in strategic planning for the entire North American utility industry" and for pioneering "new concepts in water management and hydropower coordination which are already bearing fruit" for the fish and wildlife in the Columbia River Basin.

The Council's nomination—one of 40 worldwide—was seconded by Senator Mark Hatfield of Oregon, Ralph Cavanagh of the Natural Resources Defense Council and Professor Gary Brewer of the Yale School of Organization and Management. Also supporting the Council's nomination were James Jura, administrator of the Bonneville Power Administration; Stanley Hulett, commissioner of the California Public Utilities Commission; Merrill Schultz, director of the Intercompany Pool (representing Northwest utilities); and Marc Sullivan, executive director of the Northwest Conservation Act Coalition (representing the region's conservationists).

The Tyler Prize is awarded to international leaders, both individuals and organizations, who have benefited humanity in the fields of ecology or energy. Since it was first awarded in 1973, the Tyler Prize has been the largest achievement award presented by an American institution. Prizes have totaled over $1.4 million in the past 13 years, ranging from $150,000 to $200,000 annually.

Past winners have been pioneers in the areas of atmospheric chemistry and atmospheric protection, maintenance of water quality, preservation of a diversity of animal species, detection of carcinogens in the environment and in food, and the preservation of tropical forests.

The Council was created by the four Northwest states of Idaho, Montana, Oregon and Washington as a result of the Northwest Power Act of 1980. The Act called on the Council to produce a 20-year plan for the development of resources to meet the Northwest's electrical power needs at the least possible cost to the region's ratepayers. The Act carried a second mandate to protect and rebuild fish and wildlife populations in the Columbia River Basin endangered by that basin's elaborate hydropower system.

Senator Mark Hatfield addressed the "special regional character of the Council's achievements" in his letter of support. "In a field traditionally dominated by intra-state concerns and rivalries," Hatfield wrote, "the Council's work forms the most hopeful response I have seen ... to develop state-created institutions that are equipped to solve problems that do not respect state borders... What the Northwest has done, New England can do, the Desert Southwest and the other 20-odd regional power systems."

Winners of the Tyler Prize will be announced in May 1987.

—CC

In The News

Two committees formed to advise Council

The Northwest Power Planning Council has formed two new advisory committees this fall and disbanded another when its work was completed.

One of the new committees is the Economic Forecasting Advisory Committee, which will assist the Council and its staff in identifying significant changes in the Northwest's economic and demographic conditions. It will also help evaluate newly available forecasting tools and methods, and identify sources of economic data and other information.

The other new committee is the Research, Development and Demonstration Advisory Committee called for in the 1986 Power Plan. It will recommend to the Council research, development and demonstration needs to ensure that conservation, renewable and high-efficiency energy resources are available when the region needs them.

The Resident Fish Substitutions Advisory Committee's work was completed this fall, and the committee was disbanded. It had advised the Council's staff on locations and means for substituting resident fish production for salmon and steelhead losses.

—RC

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update!

NORTHWEST POWER PLANNING COUNCIL

November 26, 1986

New policies for acquiring resources

The Northwest Power Planning Council and the Bonneville Power Administration have each issued separate but comparable policy statements on the implementation of the resource acquisition provisions of the Northwest Power Act: Section 6(c). (See below to order copies of the statements.)

Section 6(c) requires Bonneville, a federal agency, to submit major resource acquisition proposals to a public review process to determine whether the acquisition is consistent with the Council's power plan. The Council, representing the states, then has the right to make its own consistency determination. The process ensures that the resource is needed and is cost-effective to the region.

The Council's policy statement covers the procedures and criterion it will use for determining consistency with the power plan. Bonneville's policy statement covers the threshold which determines when a 6(c) review will take place, public hearing procedures, and Bonneville's own consistency criterion. Both policies are subject to re-evaluation at least every five years.

Proposed MCS amendments

The Northwest Power Planning Council is considering amending those portions of the 1986 Northwest Power Plan which deal with the model conservation standards (MCS), including the utility surcharge recommendation. The standards set performance goals, energy use limits for new and building types, energy use intensity goals, performance goals, energy-use limits for new electrically heated homes and commercial buildings, and buildings converting to electric heating. Interested parties are invited to comment on the proposed amendments. (See below to order a copy.)

The amendment process is a result of new data from both a Bonneville Power Administration study and the Council's own analysis. In October, Bonneville released preliminary findings confirming the cost effectiveness of the standards. However, the Bonneville data indicated that the energy-efficiency levels promoted by the standards could be achieved less expensively than through the use of a vapor barrier wrap with an accompanying heat recovery ventilator. If the Council's analysis bears this out, the level of Bonneville's incentive funding to builders could be affected.

Also under consideration is the 10 percent surcharge on Bonneville power purchases by utilities in whose service areas the standards are not implemented. The amendment proposes the surcharge be retained for utilities which fail to submit plans to Bonneville for implementing the standards, but that the surcharge for performance levels be dropped at this time. The purpose of the surcharge is to recover Bonneville's costs of purchasing expensive new resources to serve areas which do not implement conservation.

The Council is taking written testimony through December 22 as well as oral testimony at the following hearings:

- Seattle, Washington, Friday, December 12 - 10 a.m., Federal Building, South Auditorium, 915 Second Avenue
- Missoula, Montana, Monday, December 15 - 1 p.m., Missoula Sheraton Hotel, 200 S. Pattee
- Boise, Idaho, Tuesday, December 16 - 10 a.m., Red Lion Riverside, Cinnabar Room, 29th and Chinden
- Portland, Oregon, Wednesday, December 17 - 10 a.m., Council Central Offices, 850 S.W. Broadway, Suite 1100

A final decision on the amendments is expected at the Council's January 14-15, 1987 meeting.

Phone: 503-222-5161
Toll-free: 1-800-452-3340 (Oregon)
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Keep on top of what's happening at the Council with *Update!*, our monthly public involvement newsletter.

Update! carries current information on upcoming publications, meetings and other public involvement opportunities. It complements *Northwest Energy News* which, because of its longer production time, simply isn't able to carry all of the up-to-the-minute news.

If you would like to be added to the *Update!* mailing list, call the Council's central office or use the order form on the back cover of this magazine.

—RC

Shorts

A little vodka, a few fish stories and some "flyrod diplomacy" have produced a sport-fishing agreement between U.S. fishers and their Russian counterparts. The agreement, negotiated by Trout Unlimited, for the Americans, and the Russian Society of Hunters and Fishermen (Rosohotrybolovsoyuz), calls for increased exchanges of both sport-fishing information and fishing opportunities between the two countries. Describing the pact as a "people to people" affair, Trout Unlimited President C.C. "Red" Pittack, of East Wenatchee, Washington, explained that the Russian organization is quasi-governmental in that it controls 85 percent of the land and all the natural resources in the Soviet Union. (Source: *The Trout & Salmon Leader,* P.O. Box 2137, Olympia, Washington 98507)

Salmon and steelhead eggs infected with the deadly virus IHN can be disinfected rather than destroyed, say fish disease experts at the Washington Department of Fisheries. IHN, or Infectious Hematopoietic Necrosis, attacks the kidneys and spleens of salmon and steelhead. The usual response to an outbreak of the disease that plagues Northwest hatcheries has been the destruction of millions of eggs and young fry. Results from experimental disinfecting of contaminated eggs at the Wells Hatchery in the mid-Columbia River Basin have been positive. No sign of IHN remained on the fry whose eggs and rearing water had been decontaminated. (Source: *The Trout & Salmon Leader,* P. O. Box 2137, Olympia, Washington 98507)

Handling young fish at a hatchery.

Northwest Power Planning Council file photograph

Itinerant sturgeon logs 2,000 miles in longest sturgeon saga on record; only to be nabbed by a fisher from back home. The Columbia River white sturgeon, tagged in the basin in 1983, was caught by a commercial fisherman near Bristol Bay, Alaska,—a long way from home. His captor, Joe Tarabochia, who hails from Astoria, Oregon, recognized the fish's tag as one used in the Oregon Department of Fish and Wildlife's sturgeon monitoring program. The department has been tagging sturgeon since 1980 to track the long-term health and welfare of the basin's migrating sturgeon population. The Columbia's sturgeon runs seem to be hearty, but growing harvests of the premium fish (high prices make sturgeon the most valuable fish in the Northwest's harvest) need to be watched, say department biologists. (Source: *Oregon Wildlife,* Oregon State Department of Fish and Wildlife, 506 S.W. Mill, Portland, Oregon 97201)

The answer blowing in the California wind is electrical energy, reports the American Wind Energy Association. During the month of June, California's Pacific Gas and Electric and Southern California Edison acquired 191.7 million kilowatt-hours of wind-generated electricity. From January through June, California wind farms provided enough electricity to serve 97,000 homes for a full year. (Source: *Western Energy Update,* 8500 Stapleton Plaza, 3333 Quebec Street, Denver, Colorado 80207)

Salmon may hold secret balm for sluggish blood, according to Dr. William E. Connor, M.D., head of the Division of Endocrinology, Metabolism and Clinical Nutrition at the Oregon Health Sciences University. Dr. Connor and his colleagues have been studying the diets of Eskimos whose eating habits include large doses of seal, whale and fish flesh. While these foods all carry high cholesterol and fat contents, the fat contains highly polyunsaturated "omega-3" fatty acids. These omega-3 fatty acids may be helpful in preventing coronary heart disease—Eskimos apparently have very healthy hearts. Dr. Connor notes, in a letter to the Northwest Power Planning Council, that salmon are an "especially rich" source of these omega-3 fatty acids. "The truth is we need far more fish for human consumption," he writes, "especially fish that are high in the particularly healthful fatty acids." (For more information read: *The New England Journal of Medicine,* 312:1210-1216, May 9, 1985, 10 Shattuck Street, Boston, Massachusetts 02115)

Calendar

December 16-17—Conference on "Fulfilling Indian Water Rights: Practical Approaches" in Spokane, Washington. Sponsored by the Columbia River Inter-Tribal Fish Commission. For more information: Columbia River Inter-Tribal Fish Commission, 975 S.E. Sandy Blvd., Suite 202, Portland, Oregon 97214, (503) 238-0667.

January 14-15—Northwest Power Planning Council meeting. Tentative—call Council office to confirm date and location.

January 28-29—Northwest Power Planning Council meeting. Tentative—call Council office to confirm date and location.

January 28-29—Conference on "Demand-Side Management: Options for Today, Opportunities for Tomorrow" in Boston, Massachusetts. Sponsored by the Massachusetts Executive Office of Energy Resources, the Electric Power Research Institute, American Public Power Association, and the Natural Resources Defense Council. For more information: Massachusetts Executive Office of Energy Resources, 100 Cambridge St., Room 1500, Boston, Massachusetts 02202, (617) 862-6551.

February 11-12—Northwest Power Planning Council meeting. Tentative—call Council office to confirm date and location.

March 11-12—"HVAC & Building Systems Congress" in Anaheim, California. Sponsored by the Association of Energy Engineers, Western Area Power Administration and Southern California Edison. For more information: Association of Energy Engineers, 4025 Pleasantdale Rd., Suite 420, Atlanta, Georgia 30340, (404) 447-5083.

March 22-27—1987 Solar Energy Conference in Honolulu, Hawaii. Sponsored by the Heat Transfer and Solar Energy Divisions of the American Society of Mechanical Engineers, Japan Society of Mechanical Engineers and the Japan Solar Energy Society. For more information: G. Tansey, American Society of Mechanical Engineers, Department C-494, Accounting Service Center, 22 Law Drive, P.O. Box 2900, Fairfield, New Jersey 07007-2900, (212) 705-7795.

June 15-19—1987 Cogeneration Congress in Cherry Hill, New Jersey. Sponsored by the Association of Energy Engineers, the New Jersey Department of Energy and Energy Initiatives. For more information: Association of Energy Engineers, 4025 Pleasantdale Rd., Suite 420, Atlanta, Georgia 30340, (404) 447-5083.

Compiled by Ruth Curtis

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 will be sent to you as soon as possible.)

Publications

- ☐ Staff Report: Status Report on the Regional Economy and Loads
- ☐ Petitions to Enter Rulemaking on the Model Conservation Standards—From the Natural Resources Defense Council, the Northwest Conservation Act Coalition and Citizens for an Adequate Supply of Energy
- ☐ Staff Issue Paper: Salmon and Steelhead System Objective and Policies and Technical Planning Report (previously called Columbia Basin Salmon and Steelhead System Policies. See page 6.)
- ☐ Draft Amendment Document—Columbia River Basin Fish and Wildlife Program (See page 19.)
- ☐ Summary of 1986 Applications for Amendments—Columbia River Basin Fish and Wildlife Program
- ☐ 1986 Applications for Amendments—Columbia River Basin Fish and Wildlife Program (five-volume set)
- ☐ 1986 Northwest Power Plan
- ☐ 1986 Annual Report of the Northwest Power Planning Council
- ☐ Federal Register Notice on Model Conservation Standards Amendments

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- ☐ *Northwest Energy News* (this bimonthly magazine)
- ☐ *Update!* (public involvement newsletter mailed with the Council meeting agenda)

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