PACIFIC NORTHWEST POWER COMPANY'S
DEVELOPMENT PROGRAM ON THE MIDDLE SNAKE RIVER

Summary of Notes Used by K. M. Robinson in Talking Before
Inland Empire Waterways Association at Yakima
Washington November 27, 1956

An up to date view of the Pacific Northwest region's power situation is expressed in the estimated loads and resources of the Northwest Power Pool for the winter 1956-1957, which includes all utilities - public, private, and federal, in Utah, Idaho, Washington, and most of Oregon and Montana.

The resources this winter are estimated to be about 9,600,000 kilowatts with median water and 9,300,000 kilowatts with critical water. These resources include 880,000 kilowatts of steam power, leaving hydro resources in a critical year 8,420,000 kilowatts. The total load of the area is expected to be 9,300,000 kilowatts, which includes 600,000 kilowatts of interruptible industrial load largely served directly by the Bonneville Power Administration. This leaves a firm load in the area of 8,700,000 kilowatts, which would require 280,000 kilowatts of steam power to carry only the firm load if critical water conditions should occur. Past history indicates critical water occurs once in twenty years, and something less than median water six times in twenty-two years.

The 157-day Westinghouse strike has delayed some of the units for the Chief Joseph power plant, and these delayed units will not be available to carry this winter's load. Water supply good - looks yet for winter OK

The total pool loads increased 11 per cent in 1955 over 1954, and are estimated to increase 9 per cent in 1956 over 1955.

Now we come to the Pacific Northwest Power Company's program. This new company was incorporated in Oregon in April, 1954, by Pacific Power & Light Company, Portland General Electric Company, The Montana Power Company, and The Washington Water Power Company. These companies serve 50 per cent of the power users in Oregon, Montana, Washington, and northern Idaho. The Pacific Northwest Power Company was incorporated to finance and build large projects beyond the ability of any one of the four companies individually. It has applied for a license to build the Montain Sheep and Pleasant Valley Project on the Snake River between the Hells Canyon site and the mouth of the Imnaha and Salmon Rivers, downstream.

In the five-year period ending December 1955, the four organizing companies show an electric customer increase of 13 per cent to 775,000. Their kilowatt-hour sales increased 44 per cent to 12 billion, and the electric gross revenue of the four companies increased 43 per cent to $137 million. They have more than 100,000 stockholders and about 6,500 employes.

An application for license was filed with the Federal Power Commission and the Oregon Hydroelectric Commission on September 7, 1955. The first phase of the hearings has been completed and the second phase of the hearings started on September 24. The present phase of the hearings started on November 7. After considerable investigation, it was decided that this project was the most economical new power source available to the companies, and the Pacific Northwest Power Company has spent about $2 million for preliminary engineering and drilling. Originally it was estimated the project would cost, together with transmission lines, $213 million. This has now been escalated because of increased prices to $217.4 million.

This project, consisting of two plants, would have an initial capability of 1,183,000 kilowatts, with a space reserved at each plant for an additional unit to bring the ultimate capacity to 1,446,000 kilowatts. The project increases the annual firm load carrying capability of the organizing companies by 5 billion 140 million kilowatt-hours at an estimated cost of 3.43 mills per kilowatt-hour delivered to the load centers at Anaconda, Montana; Spokane, Washington; and Portland, Oregon, or about 2.42 mills at the project. These costs will be increased if further delays are encountered.

It is planned to finance the project with 85 per cent debt and 15 per cent common equity. The companies expect to put up the equity first and then use a revolving bank loan to be reduced from time to time by the issuance of debt securities. Commercial and investment bankers have advised us that this type of financing is feasible and can be arranged. Each of the four companies will contract to pay one fourth of the cost of operating the project, including debt service, and take one fourth of the power output. It is the largest project ever proposed by private capital in the Northwest and will employ 2,300 men at the peak of construction, with direct payrolls of approximately $75 million. This project will be three times the size of the Bonneville project, 28 per cent larger than McNary, and two thirds as large as Grand Coulee. When in operation, taxes are estimated at $5 million annually.

Mountain Sheep, the downstream dam of the project, is located five miles above the mouth of the Salmon River, near Dug Bar, Oregon. It will be a 225-foot concrete gravity type dam 600 feet long at the crest, forming a 20-mile reservoir. The power house is located at the toe of the dam. The initial three units will have a capability of 333,000 kilowatts, and when the fourth unit is added it will have a capability of 432,000 kilowatts. The turbines will be 246 inches (20-1/2 feet) in diameter, the largest in physical size ever built. They will be two inches wider than the Water Power Company's Noxon turbines and three and one half inches wider than the Dnieprestroy in Russia. West Montana

near Pittsburgh Landing

The Pleasant Valley dam is twenty miles above Mountain Sheep and will be a 544-foot concrete arch dam 1,200 feet long at the crest. It will be the highest in the United States and the third highest in the world, creating a reservoir of thirty-four miles to the Hells Canyon site. It will provide 928,000 acre feet of storage, 500,000 of which is usable for power and flood control. A power house will be located on each side of the river, with an initial capability of five units of 850,000 kilowatts, and when the sixth unit is added it will have a capability of 1,014,000 kilowatts. The generators will be forty-nine feet in diameter with a capability of 170,000 kilowatts each. They will be the largest ever built. The turbines are 233,600 horsepower each, the most powerful ever constructed. Each power house will have a gantry crane of 750 tons capacity. The Grand Coulee generators will be the next largest, with a capability of 130,000 kilowatts each, driven by 175,000 horsepower turbines.

Opposition to our license is being spearheaded by the National Hells Canyon Association, the same group which is attempting to blockade progress on the Idaho Power Company's three dams immediately upstream from this project. Others who would block our project are the Northwest Public Power Association, the Oregon and Washington State Grange officers, the Farmers Union, and some of the socialistically inclined labor bosses and politicians.

The Federal Power Commission held local hearings at Pendleton, Oregon, and Lewiston, Idaho, in June of this year. Over one hundred witnesses - labor, businessmen, farmers, newspaper men, legislators, and just plain citizens, appeared in our behalf. Some one hundred fifty groups and individuals sent letters and resolutions to the Federal Power Commission urging that our license be granted promptly.

The first phase of the Federal Power Commission hearings ran four weeks, starting on June 24, 1956. We hope the balance of the hearings will be completed as rapidly as possible and that a license will be issued so work can begin early next summer.

The intervenors have deliberately stalled the progress of the hearings, spending hours trying to disqualify witnesses. They have indicated that some "sinister role" was being played by Ebasco Services Incorporated, who are the engineers designing the Pleasant Valley dam. Bechtel Corporation is the designer of the Mountain Sheep dam.

certainly
not
beneficial
to people
of N.W.

Some of the public power zealots and some anti-private power politicians insist that all future hydro developments be by the Federal government, or that nothing be done. This "federal or nothing" program would mean that the Northwest would be continuously short of power as the annual expenditure has only averaged about $150 million a year for federal power construction. Requirements for years to come will be about $300 million per year to keep up with the Northwest load growth of some 500,000 kilowatts annually.

In the four years ending December 31, 1956 hydro installations totaling 4,348,000 kilowatts of capability have been licensed, scheduled or placed under construction by non-federal public and private agencies in the Northwest Power Pool area at an estimated cost of nearly $1 billion. This capability is almost equally divided between public and private agencies.

Not good
greatest
[illegible]
industry
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The figure is larger than the recent report of Inland Empire Waterways

Association which did not include the Ross and Merwin additions, Wanapum, Snoqualmie #2, N. Fork Clackamas, Faraday, Oak Grove, Cochrane and Nisqually #1.

It is slightly above the recent Bonneville advance program figures as I have used capability instead of name plate rating.

The comparable non-federal projects for the previous four years was some 757,000 kilowatts at a cost of about $160,000,000.

This is certainly an indication that the non-federal public bodies and the private companies are ready, willing and able to finance their share of the future program if the many road blocks are removed so we can get under way.

Think we in NW negligent in selling things we have —

1 - Best area in future supply surface + underground water —

2 - Weather

3 - A highly intelligent labor supply - better prod. per man day.

One thing lack is population —

Settle who build what + where —

Pull together on promotion —

Person —