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U. S. DEPARTMENT OF THE INTERIOR

## BONNEVILLE POWER ADMINISTRATION

FEDERAL BUILDING, 1002 N.E. HOLLADAY

BONNEVILLE POWER ADMINISTRATION  
WALLA WALLA AREA OFFICE  
19 EAST POPLAR STREET  
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WALLA WALLA, WASHINGTON 99362

For release

Monday, April 15, 1968

The Bonneville Power Administration sold a record 44 billion kilowatt-hours of energy in fiscal 1967.

BPA revenues increased 9.7 percent over fiscal 1966 and totaled \$110,164,000. These figures were published today in BPA's annual report.

Sales revenues again reached a new high, \$104,465,000. Revenues from sources other than sales--mainly wheeling, coordination, and head-water benefits--totaled \$5,699,000.

Revenues from the very beginning of BPA operations in 1938 through June 30, 1967, have totaled \$1,367,110,000. A large part went for interest, which totaled \$468,383,000. Operation and maintenance costs totaled \$404,375,000. The balance, \$494,352,000, was applied to the repayment of the investment in the Columbia River Federal Power System.

The amount of energy sold rose 11 percent during the year, and revenues from sales 9.9 percent.

Approximately 42 percent of the total energy sold went to 104 publicly owned utilities.

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Thirteen percent of the energy was sold to eight private utilities, 34 percent to aluminum plants, and 10 percent to other industries and Federal agencies.

Power sales brought an average of 2.38 mills per kilowatt-hour.

Among the publicly owned utilities, the largest purchasers were Seattle City Light and Snohomish County Public Utility District which bought 3.1 and 2 billion kilowatt-hours, respectively.

Pacific Power and Light Company led the private utilities with purchases of 2.5 billion kilowatt-hours.

The biggest single purchaser was Kaiser Aluminum and Chemical Corporation with 4.4 billion kilowatt-hours. Reynolds Metals Company was second among the industries with 2.7 billion kilowatt-hours, and the Aluminum Company of America third with 2.6 billion kilowatt-hours.

Hanna Nickel Smelting Company bought 726 million kilowatt-hours and led the industrial customers other than aluminum.

Firm energy sales increased 44 percent, and nonfirm energy sales 14 percent.

The aluminum and other industries purchased 19 percent more firm power, but decreased their interruptible purchases 8 percent. Publicly owned utility purchases were up 6 percent; private utility purchases increased 42 percent.

In the report's letter of transmittal to Secretary of the Interior Udall, H. R. Richmond, BPA Administrator, said the role of the U. S. Columbia River Power System in the next 20 years will be to:

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1--Add peaking capacity to existing Federal hydroelectric plants and build some additional multipurpose hydro projects at a total cost of some \$4,400,000, including costs allocated to purposes other than power.

2--Supply surplus hydro energy.

3--Build most of the region's extra-high-voltage transmission at an estimated cost of \$2 billion.

4--Provide leadership in coordinated planning.

By 1987 the total investment by Federal and non-Federal utilities in the region will total \$14,300,000,000. Of this, about \$9,300,000,000 would be expended by non-Federal utilities and about \$5 billion by the Federal Government.

The region is running out of feasible hydro sites, although a few remain which can be developed. Turbine generators will be added at some existing projects.

After July 1974, the Northwest will require steam plants to meet the base load at the rate of one plant a year with a capacity of 1 million or more kilowatts. The U.S. Columbia River Power System will support these steam plants with peaking capacity, reserves, and transmission capacity over BPA's grid.

The Pacific Northwest currently has 15,374,332 kilowatts of generating capacity installed in Federal and non-Federal projects.

The number of Federal dams producing electricity was raised to 22 in June 1967 when the Corps of Engineers completed Green Peter on the Middle Santiam River in western Oregon. The capacity installed at these projects is 6,758,150 kilowatts.

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Non-Federal generating plants in the region have a total capacity of 8,616,182 kilowatts. Included in this amount are 800,000 kilowatts of the Hanford Nuclear Generating Plant and 449,954 kilowatts for old steam plants.

Eight Federal dams were being built when the fiscal year ended. They have a total nameplate rating of 8,552,000 kilowatts. They are Foster, John Day (16 units), Lower Monumental, Little Goose, Lower Granite, Dworshak, Lost Creek, and Libby. Congress since has provided funds to begin building Teton Dam on the Teton River in Wyoming.

Additional generators to be added at The Dalles Dam and Grand Coulee Dam will have a capacity of 4,288,000 kilowatts. This figure includes 3,600,000 for the Third Powerhouse, which is in the initial phase of construction at Grand Coulee.

Congress authorized the Third Powerhouse June 14, 1967. Subject to further Congressional authorization, its capacity may be raised to 7.2 million kilowatts. Grand Coulee then would have a capacity of more than 9 million kilowatts.

The region's growing demand for electricity has sustained a strong building pace for 30 years. Today BPA operates the world's largest network of long-distance high-voltage lines--10,478.7 circuit miles. During calendar year 1967 BPA completed a total of 630 circuit miles.

The emphasis in the present construction program is on a 500,000-volt grid to overlay the existing 230,000-volt grid and give the Northwest the increase in transmission capacity it must have to assure an adequate reliable flow of power.

As of December 31, 1967, BPA had completed 835 miles of 500-kv lines, six new 500-kv substations and four 500-kv series compensation stations. The 835-mile figure includes 562 miles for the main grid and 273 miles for the Pacific Intertie. Four of the substations are on the grid, two on the Intertie.

During 1968 BPA plans to energize another 767 miles of line, much of which will be 500 kv. And before 1968 ends, BPA will have nearly finished 265 miles of the first 750,000-volt direct-current line for the Intertie. Before another ten years pass, BPA will have about 3,000 miles of 500,000-volt lines in operation at a cost approaching half a billion dollars.

Part of the grid will be a 675-mile closed loop which is to be ready in 1970. A 500-kv spur will connect the grid with British Columbia Hydro, as required by the Columbia River Treaty. New 500-kv lines will strengthen transmission to fast-growing, diversified loads in western Oregon.

Later, part of the 500-kv grid will be extended into Montana and also up the Snake River to integrate dams being built on the Lower Snake and the Clearwater River.

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U. S. DEPARTMENT OF THE INTERIOR

## BONNEVILLE POWER ADMINISTRATION

FEDERAL BUILDING, 1002 N.E. HOLLADAY

# News

For release: Friday  
May 5, 1967

The Bonneville Power Administration today released a study of Northwest population trends.

The report concludes:

1--Young adults are the most mobile of all age groups. They are the vanguard of migratory streams that swirl within the region and flow to outside destinations.

2--The movements are complex, but are motivated by a common factor--income differentials between cities and farms, urban and rural counties, and between states.

The report covers the past decade and is entitled, "Population Trends in the Pacific Northwest by Power Supply Area, 1950-60."

It points out that the long dominant westerly migration has largely bypassed the region. For the first time its population growth depends on natural increase.

If just one county, King of the State of Washington, were eliminated from the figures, all other counties of the Northwest would show a net outflow of migrants. Ninety-six of the Northwest's 130 counties saw more residents move away than moved into the counties from 1950 to 1960. Forty-four actually saw their population drop.

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Most of these persons moved to the urban fringe of central cities. They also migrated to the urban fringe from within the central cities.

Young adults are settling near the cities at a far greater rate than the rest of the population. Many are leaving farm areas, propelled by low incomes, limited job opportunities, and the higher birth rate characteristic of rural populations.

Urban dwellers make up about 63 percent of the total population in the Northwest. The percentage is increasing rapidly.

The report also concludes that the Northwest must make more jobs for its young people if it is to import more people than it exports. The per capita personal income in the Northwest, once considerably higher than that of the rest of the country, is now roughly identical to that for the nation. Incomes in neighboring states are either higher or rising faster, the report said.

These higher incomes will lure young people from the Northwest unless job opportunities are expanded here, the report said.

The study is the fifteenth in a series published by Bonneville as part of an economic base study. Previous reports covered abrasives, agriculture and food processing, alloy metals, coal, copper, lead and zinc, forest products, magnesium, personal income, steel, sulfur, titanium, water, and petroleum.

All are available from the Bonneville Power Administration,

~~P. O. Box 3321, Portland, Oregon 97208~~

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**B O N N E V I L L E   P O W E R   A D M I N I S T R A T I O N**

FEDERAL BUILDING, 1002 N. E. HOLLADAY

*News*

For release: Thursday  
May 18, 1967

Bonneville Power Administration today released a report on the Northwest's labor force.

The report, part of an economic base study, is called "Labor Force Participation Rates in the Pacific Northwest by Power Supply Area, 1950-1960." Its findings include:

1--As more of the Northwest population moved to the cities between 1950 and 1960, more women went to work.

2--Though there were more women in the urban labor force, the rate of increase of women entering the labor force was highest in rural areas.

3--Women's role in the labor force became increasingly important.

4--Men retired earlier in cities than in farm areas.

5--The percentage of men working in rural areas was higher than in metropolitan areas.

The report is a semi-technical publication. The study makes use of a technique called shift analysis. This method has been employed by the Office of Business Economics, U.S. Department of Commerce, in recent employment studies. It is used to measure the impact of selected social and economic characteristics of the population on rates of entry into the labor force.

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The study is the sixteenth in a series published by Bonneville as part of the base study. Previous reports covered abrasives, agriculture and food processing, alloy metals, coal, copper, lead and zinc, forest products, magnesium, personal income, petroleum, population, steel, sulfur, titanium, and water.

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Bonneville Power Administration  
Walla Walla Area Office  
P. O. Box 1518, Walla Walla, Wash.  
September 20, 1967

FOR IMMEDIATE RELEASE

The United States passed a milestone in the history of its electric power industry today. The first big transmission line of the Pacific Northwest-Pacific Southwest Intertie was energized at 500,000-volts.

Engineers began energizing sections of the line this morning. At 11:56 AM, BPA operators at Malin Substation on the Oregon-California border threw a switch connecting Oregon sections of the line with those through California.

The intertie is the biggest single transmission program every undertaken in this country. It is a joint project of public and private utilities and the federal government.

The line is expected to carry its first heavy loadings this fall when it brings power north to help meet Northwest peak loads as colder weather sets in. Ultimately, the line will carry a million kilowatts north or south.

The two regions will exchange power over the intertie. The Northwest peaks occur in winter, Southwest peaks in summer.

When the four major lines of the intertie are completed they will have a capacity of more than 4.5 million kilowatts. This is almost enough power to serve the combined needs of Chicago and Philadelphia. It is more than twice the current output of Grand Coulee Dam.

The lines will tie together utilities in a dozen western states spread from the Canadian to the Mexican borders.

The investment in the intertie will total \$700 million. Private utilities are putting up \$330 million, the federal government \$300 million, and the City of Los Angeles \$70 million. In the next 50 years the Intertie is expected to bring in benefits totaling \$2.6 billion.

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Malin Substation, where the switch was thrown today, is typical of the intertie. It is a \$3.1 million facility built by Bonneville Power Administration, Portland General Electric Company and Pacific Power & Light Company. BPA supervised the actual construction and put up 49.7 percent of the cost. PP&L's share of the cost is 26.5 percent and PGE's 23.8 percent.

The Northwest and Southwest have been exchanging small amounts of power over a section of the intertie since November 2, 1966, when PP&L began operating a tie at 230,000 volts.

The power today was sent south over 500,000 volt lines of BPA, PGE, PG&L, and Pacific Gas and Electric Company in California.

The electricity was generated by Portland General at its Round Butte Dam in central Oregon. It was sent over 16 miles of PGE lines to Grizzly Substation southeast of Madras and from there it went over BPA's 180-mile line to Malin Substation on the Oregon-California border.

At Malin the line connects with Pacific Power & Light Company facilities. For the next 47 miles it flowed south over PP&L circuits. At Indian Springs the power went into Pacific Gas and Electric Company's system and south to the San Francisco Bay area and beyond. PGE began operating its new 500,000-volt system through California last week.

BPA currently is completing the northernmost section of the first line. It runs north from Grizzly to John Day Dam, a distance of about 90 miles, and is scheduled to go into operation in December. Power can then go from The Dalles Dam to John Day Substation and south to California, or it can be brought north to The Dalles and fed into BPA's system, which provides the Northwest with its main grid. Power will go direct from John Day Dam after it begins producing electricity in 1968.

The second 500,000-volt Intertie line is under construction all the way from John Day Dam south to the Oregon-California border.

BPA is building the 90-mile section from John Day to Grizzly and Portland General Electric is building the 180-mile section from Grizzly to Malin. It is to go into operation in 1968. The two 500,000-volt lines parallel one another across Oregon.

This fall BPA will begin constructing a third line, the first of two 750,000-volt direct current lines. The first direct current line will go from The Dalles to Los Angeles. It is to go into operation in 1969.

The second direct current line will run from The Dalles to Hoover Dam in Nevada. It will go into operation in the early 1970's.

The two direct current lines are the first big d.c. lines to be constructed in the United States. They will be the longest d.c. lines in the world.

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For immediate release

Tuesday, October 22, 1968

PORTLAND -- Northwest utilities and the Bonneville Power Administration today announced accord on a joint hydro-thermal program to assure the region an adequate supply of low-cost power.

Under the plan, wholesale costs will continue to be lower than anywhere else in the United States.

The plan calls for a \$15 billion 20-year construction program of new thermal, hydro and transmission facilities to be undertaken by private and public utilities and by the Federal Government.

The program projects the development of about 21.4 million kilowatts of thermal capacity and 20 million kilowatts of hydro peaking capacity to keep pace with the region's growth over the next 20 years.

The announcement was made in Portland Tuesday following a meeting of the Joint Power Planning Council by H. R. Richmond, who is Council chairman and the Bonneville Power Administrator. The Council is composed of representatives of 109 utilities, including Pacific Power & Light, Portland General Electric, Washington Water Power and Puget Sound Power & Light companies.

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Richmond said that all sectors of the region's utility industry have formulated a set of principles and a general schedule which will permit them to move ahead in the construction of thermal generating plants.

The announcement culminated two years of intensive study and negotiations among private and public utilities, BPA, and electroprocess firms.

Under the hydro-thermal program, nonfederal agencies will finance and build large thermal plants. BPA is prepared to acquire surplus energy from future private utility plants under exchange agreements on a short-term basis. It is prepared to acquire all the output from publicly owned plants on a long-term basis.

BPA and the major utilities will add to their transmission systems to accommodate new thermal and hydro generation.

Richmond said the hydro-thermal program is being translated into action. Already under way are negotiations for the disposition of power from the second 700,000-kilowatt unit at the Centralia coal-fired plant, sponsored by Pacific Power & Light Company and The Washington Water Power Company.

BPA will acquire all of the output of the second unit at Centralia through August 31, 1973. The completion date for this unit has been advanced one year to September 1972. The first unit is now under construction.

Similar negotiations will begin shortly to acquire by exchange arrangements temporary surpluses from the 1,100,000-kilowatt nuclear plant to be built by Portland General Electric Company on its Trojan site near Rainier, Oregon.

Richmond noted these two plants will add 2,500,000 kilowatts to Northwest resources by 1974.

The Federal Government by 1973 will add 5.5 million kilowatts of capacity at existing plants or those under construction.

Utility leaders said the basic concept and objectives of the program are sound, realistic and best meet the power supply requirements of all sectors of the utility industry and consumers.

The hydro-thermal program meets two objectives:

1--Utilities will be able to construct larger, more economical thermal plants. Production in excess of their immediate needs will be absorbed by other utilities.

2--BPA will be able to serve the increased requirements of its preference customers, maintain reserves for unexpected load growth of all utilities, and by 1990 will more than double the amount of power available to electroprocess industries.

Richmond said the details of the program will be spelled out at a meeting in Seattle of the Bonneville Regional Advisory Council October 25. He added that the program also means that:

--Public and private utility systems will build the thermal plants located, sized and scheduled to best satisfy regional needs. The hydro-thermal program will reduce the number of thermal plants and transmission lines to be built, and will lessen the impact on the natural environment.

--BPA will not need to increase its rates for the period 1968 through 1979.

--The load growth of each utility system will be met, whether public or private, at low cost.

--Privately owned thermal plants will be assured of a market for surplus energy.

--Publicly owned utilities will have the option of owning their own plants, of owning them jointly with other utilities, of purchasing all their power from BPA, or of combining these arrangements.

--BPA will provide peaking, transmission and forced-outage reserves for the thermal plants.

--BPA's obligations, as proposed, would not require additional legislation. Congressional review of BPA's proposals related to the thermal plants will be obtained through regular BPA budget submissions.

By melding firm power from thermal plants with peaking power from hydro plants, power can be produced at lowest cost. Also, when streamflows are up, hydro power can replace higher-cost thermal power.

Implementation of the proposed hydro-thermal program will make the most effective use of the federal and nonfederal investment in electric power facilities and will be an important step toward continued economic growth of the Northwest, Richmond said.





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**BONNEVILLE POWER ADMINISTRATION**

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*News*

For immediate release

Friday, November 8, 1968

WASHINGTON, D.C. -- A three-way agreement in which major Northwest private and public utilities would team up with the Federal Government to speed a decision on Snake River dam building was announced jointly Friday by the Pacific Northwest Power Company, Washington Public Power Supply System, and Department of the Interior.

The action climaxed year-long negotiations on development of one of the largest dam sites remaining in the Columbia River Basin.

The first step to implement the agreement came today when PNP and WPPSS asked the Federal Power Commission for a six-month stay of current hearings on their license application for the High Mountain Sheep project on the Snake River below Hells Canyon. The Interior Department joined in the motion.

A stay of proceedings would enable the Interior Department to seek early Congressional authorization for a cooperative plan of construction by Federal agencies of a multipurpose project on the Middle Snake River between Oregon and Idaho with non-Federal financing of a major share of the costs.

While license applicants PNP and WPPSS have favored High Mountain Sheep as the most comprehensive project on the Snake, Interior has recommended the Appaloosa site, which would have an estimated capability of 2,500,000 kilowatts available for disposal. The Bureau of Reclamation estimates the project will cost about \$400,000,000.

(MORE)

The non-Federal groups have stated they would accept the Appaloosa - Low Mountain Sheep project or a third alternative, the Pleasant Valley - Low Mountain Sheep project, if it were determined either of these alternative projects would be more in the public interest.

The proposal, first suggested by Interior and to be submitted to Congress, would include financing of the project by non-Federal agencies of the major portion of the cost through prepayment for a block of power equivalent to the project output for a period of 50 years at Bonneville Power Administration rates, with the balance of necessary construction funds furnished by the Government.

During that 50-year period, the area's non-Federal agencies -- private and public -- would share 50-50 in the power supplied to help meet customer needs in a six-state area.

The exact amount of power would be determined by the final design of the project to be built.

The three parties said the agreement was made in the spirit of cooperation between power agencies of the Northwest. Agreement on the Middle Snake serves the intent of "prompt settlement of the issues remaining on Snake River development, and an equitable sharing of benefits by both Federal and non-Federal power suppliers."

"The interests of Idaho and Oregon -- including future upstream reclamation needs -- would be fully protected," it was added.

The parties said a Middle Snake project would be designed with regard to all the diverse interests of various water users affected by the development including fish and wildlife, recreation, flood control, and downstream temperature regulation.

(MORE)

Access from both Oregon and Idaho to the remote and rugged Snake River area below Hells Canyon and the formation of a large new lake would provide greatly expanded recreational opportunity, they said.

Hearings on the PNP - WPPSS license application had been recessed from October 21 to November 12 pending the outcome of negotiations between the parties for a possible three-way sharing in Snake River construction.

Following last year's action of the Supreme Court, sending the case back to the FPC, the FPC had conducted new public hearings in Lewiston, Idaho, and Portland, Oregon, during September.

Today's motion to the FPC by the applicants for a six-month hearing stay indicated that Congressional action could resolve the issues now before the Commission.

PNP and WPPSS told the FPC it was their intention "that a Middle Snake River project be promptly constructed," and that they would return to the Commission seeking a license if Congress disapproved of the current three-way proposal, or failed to act within a reasonable time.

"With the Northwest now entering a new era of thermal generation," they said, "the hydro peaking potential of the Middle Snake -- with ultimate capability of upwards of 4,000,000 kilowatts -- will be needed with other new hydro peaking resources to match with baseload generation to be provided by large thermal plants in the new hydro-thermal program."

The Middle Snake is an 80-mile stretch of the river where it forms the border between Oregon and Idaho. It is the only portion of that 1,000-mile long tributary of the Columbia River that is not developed by either private power companies or Federal agencies.

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