

# Copco Plants To Cost \$50,000,000

## North Umpqua Work Includes Eight Units

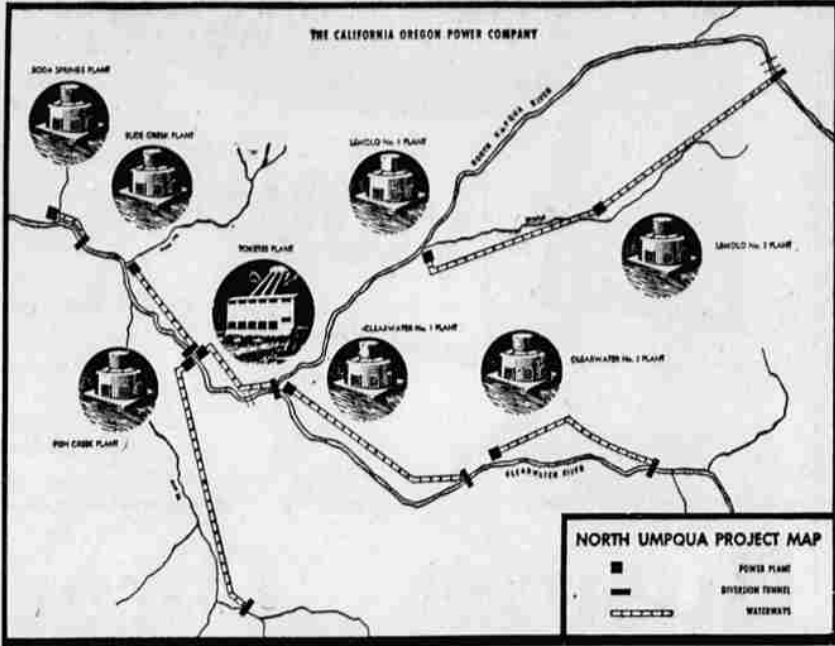
Power Output Will Be Doubled With Finish Of Program By 1953

The California Oregon Power company's five year, \$50,000,000 post-war building program—comprising eight new hydroelectric generating plants on the North Umpqua river plus extensive additions to transmission and distribution facilities is designed to meet the ever increasing electric power demands caused by the phenomenal growth of this area, company officials stated. When completed in 1953 this building program will more than double the company's pre-war generation capacity.

The North Umpqua project, which will produce 145,000 kilowatts when completed in 1953, is one of the world's unique hydroelectric generating installations. Only one of the eight plants in the project, Toketeo, will require operators in attendance. The other seven units are completely automatic and will be operated by remote control from the Toketeo power house. All eight plants of the North Umpqua project will be within a radius of 25 miles.

**Division Dams**  
Water to operate the generating units is collected by means of diversion dams on the various rivers and is transported by pipe lines and tunnels through the mountains to the penstocks and generators. Water used at one generating unit, is passed along for use at another plant.

The Toketeo power plant, first of the eight to be completed, has a generating capacity of 42,500 kilowatts and was built at a cost of \$7,000,000. Now under construction and scheduled for completion in late 1950 and 1951, respectively, are Slide Creek and Sola Springs plants. These two units will have a combined capacity of



**NORTH UMPQUA PROJECT—**  
The upper picture shows the eight units of the vast North Umpqua project which will represent an outlay of more than \$28,000,000 by the time of completion in 1953. At the right is an artists drawing of the new Toketeo power plant, which is the first of eight plants in Copco's five-year building program. Improvements to existing plants and transmission facilities will bring the total expenditure to over \$50,000,000, more than doubling the company's holdings and power output.



29,250 kilowatts and will cost \$6,500,000 to build.

The balance of the North Umpqua project, representing an investment of \$14,800,000, will make an additional 74,000 kilowatts available to Copco customers by the end of 1953.

Also included in the North Umpqua project are the Toketeo-Dixonville transmission line, already completed, and the Toketeo-Klamath Falls transmission line, scheduled for completion in October, 1952. These two lines represent an investment of \$1,000,000 each.

**Expand Facilities**  
Nearly one-half of Copco's present building program—\$21,700,000 is being used for the expansion of existing transmission and distribution facilities and for construction of additional ones. For distribution facilities as well as power plants must be built, in order to keep pace with the needs of the company's growing service area.

The Toketeo power plant plus the work already completed and underway on transmission and distribution lines meets today's needs for electric power. The remainder of the project will be brought into operation, step by step, to supply the electric power required to meet the needs of the future.

**Consumption High**  
The average residential use of electric power by Copco customers for the 12 months' period

ending Nov. 30, 1949 was 4611 kilowatt hours, while the estimated national average for the same period was only 1670 kwhs.

Copco's average residential rate for the 12 months period ending Nov. 30, 1949 was 1.60 cents per kilowatt hour. The estimated national average residential rate for the same period was 2.95 cents per kw/h.

Copco's pre-war generating capacity was 120,000 kilowatts. By the end of 1953, when the North Umpqua project is completed, generating capacity will be more than doubled—a total of 265,000 kilowatts!

### Air Progress Not Entirely Good, Says Lindbergh

WASHINGTON —(AP)—Charles A. Lindbergh says modern man has allowed science to "insulate him too greatly from the earth to which he was born," thus throwing his whole existence out of balance.

"If we are to be finally successful," the "lone eagle" of 1927 transatlantic flying fame declared in a weekend address, "we must measure scientific accomplishments by their effect on man himself."

To date, he told members of the Aero Club of Washington, the effect has not been entirely good. Lindbergh made one of his rare public appearances before the aviation group Saturday night to receive the Wright Brothers Memorial trophy for high public service in aviation. He spoke on the 46th anniversary of the original airplane flight at Kitty Hawk, N. C.

Lindbergh said he greeted the occasion with mixed emotions. Since the time of the Wright brothers, he said, aviation has "declined" from an art to a science. "As we have progressed in the science of aviation," he added,

"we have separated ourselves from the balanced quality of life. How are these perfected aircraft to be used for the benefit of man, to raise his standards in the deeper sense?"

"Great factories full of workers, great speeds over the surface of the earth, great destructive power, such items are impressive; they are even essential to our survival in these chaotic years."

"But in themselves they do not contribute to the quality of human life."

Big Bend National Park was so named because it lies in a huge U-turn in the Rio Grande River in Texas.

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### REA Authorizes \$55 Million For Power Co-ops

By Dillon Graham  
WASHINGTON —(AP)—The Rural Electrification Administration said Monday it has authorized loans of nearly \$55,000,000 to 10 borrowers in the last 90 days for the formation of super power cooperatives.

These cooperatives are combinations of a number of small co-ops. They are formed for the purpose of building their own generating plants. Before, most had their own transmission lines but bought power from private companies.

"These federations have obtained more than 50 per cent of all REA loans this year, the agency's records show. Until just after the war, such loans accounted for only 10 per cent of REA's total."

"There are several reasons for this trend toward large federated systems," explained Clyde Ellis, executive manager, National Rural Electric Cooperative association.

"Farmers are geared to electricity now," he said. "Much of their work is done by electrical appliances or machinery. They can lose a whole year's profit as a result of one day or night without electricity."

The REA program started out

### Drivers License Exams Set Thursday, Friday

A driver's license examiner will be on duty at the Roseburg city hall, Thursday and Friday, Dec. 22 and 23, between the hours of 9 a.m. and 5 p.m., according to an announcement received from the Secretary of State's office.

Persons wishing licenses or permits to drive are asked to get in touch with the examiner well ahead of the scheduled closing hour in order to assure completion of their applications with a minimum of delay, the announcement states.

primarily to set up power distributing systems to serve farmers, with most of the power supply coming from private utilities. However, since 1935, REA has loaned more than \$315,000,000 for generation and transmission. The agency said this is about one-sixth of the total loans of \$1,960,000,000 for all purposes.

One fourth of the standing saw timber in the U.S. is Douglas fir.

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**RELEASED FROM JAIL**  
Williams Thomas Rollins, 19, Williams, Calif., charged with not having an automobile registration card, and Joe Carothers, 18, Grants Pass, charged with vagrancy, were released from the county jail after serving five days each, according to Sheriff O. T. "Bud" Carter.

Glass fiber is drawn out from big glass balls.  
Philadelphia has more than 1,000 churches.

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