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UNITED STATES
DEPARTMENT OF THE INTERIOR
Bureau of Reclamation

Eklutna Project
Annual Project History

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Calendar Year 1961

Volume XI

NARRATIVE STATEMENT

POWER PLANT

The Eklutna Power Plant generation and distribution figures for calendar year 1961 are as follows:

Gross Generation	198,825,000 kwh
Station Service Use	636,600 kwh
Net Generation	198,188,400 kwh
Transmission Losses	6,723,018 kwh
Sales to Customers	191,077,782 kwh
Net Interchange	387,600 kwh

The maximum load on the plant was 35,000 kw which is a utilization factor of 117%.

275,989 acre feet of water were used through the turbines during the year and none was spilled. This gives a water factor of 100%.

Unit No. 1 was started 147 times during the year and operated 7827.7 hours, generating 99,112,000 kwh. Availability factor during the year was 98.7%.

Unit No. 2 was started 158 times during the year and operated 7833.5 hours, generating 99,713,000 kwh. Availability factor during the year was 98.8%.

The annual overhaul and inspection of Units No. 2 and 1 was completed September 29 and October 6, respectively. The exciters on both units were wiped and blown out and the accessible portions of the stators and rotors were wiped clean of oil and dust. One loose coil was discovered and was wedged tight again. Resistance readings were taken on the resistance temperature detectors and on the generators and exciters.

The turbines and draft tubes were inspected. Galling on the turbine wicket gates was negligible. Some cavitation was noted in the four air holes through the runner. These spots were patched with epoxy cement but inspection a month later showed that all the epoxy cement had been washed out. The holes which were plugged with lead wool two years previously had not changed appearance in the last year. No stainless steel welding was done.

DRAINAGE AND LAKE

The heated precipitation gage was moved to the upper drainage near Snow Marker #1 with the help of an Army H-21 helicopter. All materials required for the heated precipitation gage were transported by helicopter as shown by the photographs in this report.

The four snow markers showed a snow depth in the spring of about one-third above the previous year's level. Inflow predictions made in July as per Mr. P. M. Ford's equations showed June, July and August inflow at 167,800 acre feet (actual inflow was 167,000), and July and August inflow as 133,800 acre feet (actual inflow was 127,000). The lake elevation at the end of the water year on October 6 was 859.5, which is eight feet below the spillway crest. One of the four snow markers was down and could not be found in November when checked.

The army constructed a road along the lake shore to the Eklutna Glacier and conducted glacier training exercises for most of the summer.

The two stream gauging stations which were set up and checked by Geological Survey in Palmer again indicated that approximately 80% of the inflow was contributed by the two streams from the upper part of the drainage area.