

BOISE, IDAHO - - Kilowatts of electric power urgently needed in the Pacific Northwest will be flowing a year from now from Idaho Power company's vast Brownlee project, the first of three hydroelectric projects being developed in the Hells Canyon reach of Snake river on the Idaho-Oregon boundary.

To a region suffering with a power shortage this year due to low water in the Columbia river, Brownlee power will furnish a large measure of relief through its transmission interconnection with the Northwest Power Pool. In the inter-mountain area of Idaho, Oregon and Utah, Brownlee power will arrive just in time to forestall a serious shortage.

Matched against time, nearly 1,500 construction workers at Brownlee are utilizing \$6,000,000 worth of heavy earth-moving equipment around the clock to complete the dam and install a powerhouse with 360,000 kilowatts of initial capacity. The ultimate development will generate 540,000 kilowatts.

Construction crews of Morrison-Knudsen Co., Inc., arrived in the primitive canyon in November of 1955, and have devoted approximately 3,500,000 man-hours of labor to the \$63,000,000 Brownlee project and to preliminary work on the nearby Oxbow project, the second of the three-dam development, which will cost approximately \$24,000,000.

Building roads as they went, the crews transported equipment and materials across the mountains from a distant rail-head, carved out a camp site, set up living facilities, warehouses and shops. Then they attacked the job of building the world's second highest rock-fill dam, which is rising 400 feet above bed-rock. The dam will be 1,380 feet wide, a quarter of a mile thick at its base, and will impound 1,500,000 acre-feet of water in a 57-mile reservoir.

First came a diversion tunnel 42 feet high, which was drilled and blasted through a half-mile of solid rock, to carry Snake river around the dam site.

Then the river channel was "un-watered", and excavated to a depth of 120 feet to provide the solid foundation for impervious clay which forms the core of the dam. A native deposit of clay found high on the canyon wall is used.

Rock from the tunnel, and from the intake and spillway excavations, forms the massive, compact embankments for the dam structure. Some 3,500,000 cubic yards of rock and clay have been put in place.

Altogether, the Brownlee project is approximately 60 percent completed. Construction expenditures in the canyon total more than \$63,000,000, including work at Oxbow, for transmission line facilities, and for equipment on order for the Brownlee powerhouse.

Deliveries to date of equipment and materials to the project represent the equivalent of eight train-loads of 100 cars each.

Excavation has been completed for the powerhouse penstocks, four in number, each 28 feet in diameter and 520 feet in length, drilled and blasted diagonally through the rock of the canyon wall. Steel liners for the penstock tunnels, fabricated at the site, are being installed.

Idaho Power company's Oxbow project, 12 miles downstream from Brownlee, will have an initial generating capacity of nearly 200,000 kilowatts. Following the completion of Oxbow a third project of 272,000 kilowatts will be built at Hells Canyon, <sup>23</sup>~~32~~ miles further downstream. Total cost of the three projects will be \$133,000,000, plus an additional \$21,000,000 for related transmission facilities.

All three Idaho Power projects have been licensed as a unit by the Federal Power commission, and will provide flood control, navigation and recreational benefits. When completed, the projects will produce an estimated \$10,000,000 annually in taxes, including \$6,000,000 annually in Federal taxes.