

(2) GENERATING PLANTS : SOUTH ISLAND

At *Cobb* excavating and concreting in the spillway channel is being continued. Excavation for the power-house extension has commenced and preparations are being made for the construction of the new steel penstock. Sufficient man-power is not available on this job to maintain the scheduled rate of construction, and steps are being taken to minimize the effects of any delay occasioned by this factor.

In the *Lake Rotoroa* area investigation work and the construction of access roads is in progress in connection with the proposed Braeburn scheme.

At *Tekapo* the power-house building is practically completed and the steel penstock is well advanced. The construction of the surge chamber has commenced. The tunnel intake work has been hampered by difficulties with the coffer-dam. The erection of the generating unit is well ahead and every endeavour is being made to have this plant ready for operation before the winter of 1951.

At *Pukaki* the main earth dam is practically complete. Concreting of the spillway channel continues and is nearing completion. The temporary storage was of prime importance during the year and has enabled the Waitaki Power-station to carry heavy loads throughout the winter.

At *Waitaki* preparations for adding two new units are well under way and the generating plant is on order.

At *Roxburgh* the excavation of the river diversion channel has proceeded apace, 358,000 cubic yards of material having been removed. The building of the temporary construction village is being pushed ahead, some 114 houses having been built and a further 53 houses are in course of erection. The main generating plant has been ordered.

(3) TRANSMISSION LINES

Excellent progress has been maintained in the survey and construction of new transmission lines. With the exception of Australian hardwood poles and cross-arm timber and some items of pole hardware, all materials are now more readily available than they have been for some years. The company which established a transmission-tower factory in New Zealand in 1948, and with which several contracts have been placed, has achieved a steady rate of production.

Construction of the 220 kV. lines in the North Island was maintained at the planned rate in spite of staff shortages and fluctuations in man-power. Three hundred and twenty towers were erected in the year, one hundred of them in March. Improvements in the supply position in regard to steel towers enabled a start to be made late in the year on the construction of the 220 kV. line from Whakamaru to Bunnythorpe with confidence that the work would proceed without interruption.

The survey of the 220 kV. lines from Roxburgh to Christchurch was continued, and tenders will be called shortly for the towers for the first section of this work.

Preliminary work on camp construction, track formation, and route clearing was carried out on the Henderson-Maungatapere 110 kV. line. Materials for this work are coming to hand and it is expected that the line will be ready for service late in 1951. The line will be operated temporarily for a short period at 50 kV. and will give much needed relief to the electricity supply of North Auckland.

Delays in the supply of materials and shortages of man-power have retarded progress on the 66 kV. line linking the Nelson-Marlborough area with the main South Island system. Nevertheless, it is expected that the southern section, taking supply to the Buller Electric-power Board, will be ready in 1952.

Work is in progress on a number of other lines in the North and South Islands to cope with the increasing demand.