

Wairarapa Power Board. The peak load on the plant by the end of June had reached 9,080 kilowatts.

The operation of the plant has been very successful, and no serious interruptions have occurred. It is gratifying to know that of the slight mishaps that have occurred none have been due to the transmission.

CONSTRUCTION WORK.

During the year the total expenditure on new works has been £1,043,176, increasing the total expenditure on hydro-electric development from £3,035,172 to £4,078,348. The main items of expenditure have been—

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Lake Coleridge (15,000 k.w. extension, &c.)..	115,690
Horahora (4,000 k.w. extension, &c.) ..	48,156
Mangahao (24,000 k.v.a.)	624,944
Arapuni 1A development 45,000 k.w.!	253,520
Waikaremoana (construction plant and surveys)	691
Surveys, other schemes	175

LAKE COLERIDGE DUPLICATION, ETC.

Substantial progress has been made with the work of installing a new tunnel, pipe-lines, and additions to power-station and plant to make available a further 20,000 horse-power at this development. Some difficulty was experienced on the tunnel contract with an inflow of water at the centre shaft, and the alignment was amended to take the new tunnel farther away from the present operating-tunnel. Work is now proceeding without any great difficulty at all four faces, and it is anticipated that the tunnel will be completed in ample time to give additional supply next winter.

Good progress has been made by the Department's own staff with the intake for the new works on the lake-shore. The steel cylinder has been floated into position, sunk, and the shell filled with concrete. The material is now being excavated from the inside, and the cylinder lowered into its final position on the rock. The under-water drive connecting the gate-chamber and tunnel with the cylinder intake has been driven out to within a few feet of the cylinder, and will be broken through as soon as the cylinder is finally embedded in position.

Substantial progress has been made with the extension to power-house, which is now nearing completion; the erection of new pipe-lines is under way, and a drag-line excavator is engaged on the excavation of new tail-race.

Contracts have been let for the supply of new generating plant and switch-gear both for the power-house and the Addington Substation, to provide for the additional loading that will be possible with the extended development. Fair progress is being made on all sections, and it is anticipated that the Department will be able to meet all demands for power on this system by the end of July, 1926.

Materials have been obtained and contracts let for the erection of a second transmission-line between Hororata, on the Coleridge-Christchurch line, and Timaru, and arrangements are being made for the Department to extend this line from Timaru to Oamaru. An endeavour is being made to have these extra lines completed and ready for operation by the time the duplication works at Lake Coleridge are completed. The new line has been designed so that it may ultimately be operated at 110,000 volts, and form part of a main trunk system connecting the different power-stations that may be developed in Canterbury and Otago.

MANGAHAO SCHEME.

The major portion of the expenditure on hydro-electric development during the last year has been in connection with this scheme. Altogether a sum of £624,944 was expended during the past financial year. The construction of the dams at Mangahao and Tokomaru, and the interconnecting tunnels, have been completed. The power-house building has been completed, and the whole of the plant and machinery installed and gone into operation. The construction of the main transmission-lines and substations has been expedited. The lines have been