

Then the "duty" of the water—that is to say, the amount of water required to irrigate the crops and pasture—must be estimated as closely as possible. Here it becomes necessary to make preliminary soil surveys, and this is a matter for agricultural experts to advise upon, because until this is determined the correct quantity of water that must be diverted from the source of supply cannot be decided. The co-ordination of the work throughout all stages of the investigations is therefore essential, and this will be done as soon as the survey work has been put in hand.

A start on the actual survey work will be made immediately. Information regarding climate, irrigable land areas, and existing water-supplies in Canterbury is at present being obtained.

### HYDRO - ELECTRIC DEVELOPMENT.

The various electrical developments controlled by the Government have had a fairly successful year. The prevailing economic conditions have resulted in a comparatively small increase in demand, but there are some indications in the first quarter of the current year that the rate of increase is improving. The general financial position is summarized in the following table:—

	Average Operating Capital.	Gross Revenue.	Working- expenses.	Net Balance.	Percentage Net Balance to Operating Capital.
	£	£	£	£	
Horahora-Arapuni .. ..	4,376,722	337,641	47,740	289,901	6.62
Mangahao-Waikaremoana .. ..	3,651,073	313,342	53,907	259,435	7.11
Lake Coleridge .. ..	2,028,636	213,345	57,780	155,565	7.67
Total .. ..	10,056,431	864,328	159,427	704,901	7.01

The State Supply of Electricity Act requires that each scheme, after paying net working-expenses, shall be charged with interest on the capital in operation, and with depreciation at the rate of 2 per cent. on the capital invested in depreciable assets. It also requires that, out of profits remaining, the schemes shall pay 1 per cent. to a sinking fund, and any further balance to a General Reserve Fund.

The general position to date is that the Electric Supply Account has been able to meet all operating and interest charges, has provided £339,983 towards the statutory requirement of £947,946 for depreciation, and, in addition, has provided £284,533 to sinking fund and £195,475 to General Reserve from profits made from time to time on Lake Coleridge and Horahora Power-stations. In other words, the electric-supply system has paid interest and operating-charges and provided £819,991 in reserves, of which £160,110 has already been utilized by Treasury for the paying-off of loans which formed part of the original capital.

The position of the separate accounts is as follows:—

*Horahora-Arapuni System.*—The Arapuni plant resumed operation early in April, 1932, and from that date the capital investment has been transferred back from the construction account and considered as in operation. The position is as follows:—

Capital investment at end of year .. ..	£	4,680,484
	£	
Revenue .. ..	337,641	
Operating-expenses .. ..	47,740	
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Balance .. ..	£289,901	