# SOUTH ISLAND ELECTRIC-POWER SYSTEM.

#### Introductory.

Hitherto the "South Island electric-power system" referred to the Lake Coleridge and Waitaki plants which are now operating as an interconnected system, but during the year the generating plant at Lake Monowai, together with the whole reticulation system of the Southland Electric-power Board, was acquired by the Government and placed under the control of this Department as an addition to the "South Island electric-power system," although it is not yet interconnected with the Lake Coleridge-Waitaki section.

Consequential on this acquisition the two accounts have since been amalgamated, and in future the "South Island electric-power system" will comprise the Lake Coleridge-Waitaki-Southland

plants operating as an interconnected unit.

The capital in operation at 31st March, 1937, was £6,085,892, and in addition to this amount there is a sum of £63,332 representing assets not yet in operation. In Table II will be found an analysis of the capital outlay. The revenue for the year was £329,058, and working-costs £85,829, which resulted in a gross profit of £243,229, equal to a return of 4 per cent. on the capital in operation. After paying interest £212,640, depreciation and other capital charges £138,695, the net result was a loss of £108,106 for the year.

The accumulated Depreciation Reserve, General Reserve, and sinking funds as at 31st March, 1937, amounted to £809,900, and Table I gives full particulars of financial results as well as other

relevant statistical information.

Pending completion of the 110 Kv. transmission-line to connect the two systems together the report of operating results is this year presented under two individual headings—viz., (a) Christchurch District, and (b) Invercargill District.

### A. CHRISTCHURCH DISTRICT.

The year ending 31st March, 1937, represents the twenty-second year of operation of the Lake Coleridge undertaking and the second complete year of operation of the Waitaki Power Scheme.

During this period the Coleridge and Waitaki Stations have continued to be run in parallel, and

the accounts have accordingly been combined.

The year's operations have been outstanding with respect to marked increase in load on the system and the new works undertaken in connection with the supply and distribution of electric power to the West Coast districts.

## 1. Capital Outlay.

The capital outlay at 31st March was £4,499,767, of which assets to the value of £59,393 were not in operation.

## 2. Financial Results.

The total revenue for the year was £259,864, and working-expenses totalled £65,275, making a gross profit of £194,589, which equals a return of 4.38 per cent. on the average capital outlay in operation

(£4,440,466).

The interest charge for the year was £177,126, which, together with depreciation (£79,653) and cost of raising loans (£26,420), necessitated the transfer of £88,610 from the General Reserve Fund to enable the full appropriation to be made for the Depreciation Reserve Account. The year's working, therefore, resulted in a loss of £88,610.

No funds were available for sinking fund this year; the deficiency to this account was £98,492 at

31st March.

The accumulated Depreciation Reserve and sinking funds at 31st March, 1937, amounted to £709,053, and the General Reserve Fund to £67,703.

The detailed operating-costs show that the total cost per unit generated for the year was 0.0823d., compared with 0.0751d. for the previous year, an increase of nearly 10 per cent. This increase is due

chiefly to the institution of the forty-hour week, plus wages and salary increases.

In Table V are given the gross financial results of the distribution of energy from the Lake Coleridge-Waitaki-Southland electric-power system, and of the power supply authorities and other consumers connected to the Government system.

#### 3. General.

The total units generated was 190,280,000, representing an increase of 11.6 per cent. on those for last year. Of these units, 166,406,285 were sold, while 3,399,537 were otherwise accounted for. The balance of 20,474,178 units represents transmission and distribution losses and amounted to 10.7 per cent. of the units generated.

The maximum system load increased from 36,780 Kw. to 44,520 Kw., an increase of 21 per

cent., which is an exceptionally large increase.

The average load factor for the year was 48.8 per cent., a decrease on that of last year; this is largely due to the exceptional peak load experienced.