

APPENDIX D.

ANNUAL REPORT OF THE CHIEF ELECTRICAL ENGINEER.

The CHIEF ELECTRICAL ENGINEER to The Hon. MINISTER OF PUBLIC WORKS.

SIR,—

I beg to report on the position of the development of electric power in the Dominion for the past year, as follows:—

GENERATING-SCHEMES IN OPERATION.

NORTH ISLAND ELECTRIC-POWER SYSTEM.

Since the 15th day of April, 1934, the Arapuni, Mangahao, and Waikaremoana schemes have been grouped as one system.

During the year under review the accounts have been amalgamated and the financial and other relevant statistical information is now presented under the comprehensive heading of the North Island Electric-power System.

1. Capital Outlay.

At the close of the year 1934–35 the total capital outlay was £8,443,582, representing assets in operation, and £61,957, representing assets not in operation, giving a total capital outlay of £8,505,539, and Table II gives an analysis of this amount.

2. Financial Results.

The total revenue for the year amounted to £712,766 and working-expenses £120,927, which resulted in a gross profit of £591,839, equal to a return of 7·087 per cent. on the average capital in operation (£8,350,506).

After paying interest (£414,042), depreciation (£150,538), and the departmental proportion of the capital charges on King's Wharf Station (£37,687) there was a net loss of £10,428. The accumulated loss now stands at £586,849 for the North Island system.

Comparative figures for the year ending 31st March, 1934, are as follows: Revenue, £681,879; working-expenses, £98,884; interest, £434,623; depreciation, £78,717; and King's Wharf charges, £38,113—with a net profit of £31,543.

The increase in the depreciation charge from £78,717 in 1934 to £150,538 in 1935 is due to having to debit the statutory charge on the assets of the amalgamated systems, whereas prior to the amalgamation, each individual scheme paid its own statutory charge, with the result that when the Mangahao–Waikaremoana fund reached the 12½-per-cent. limitation two years ago, no subsequent payments were made to its depreciation fund. In the case of Arapuni the 12½-per-cent. limitation had not been reached prior to the amalgamation of the accounts.

The increase in this year's working-expenses is due mainly to the 5-per-cent. restoration of salaries and wages, repairs to Arapuni head-race, maintenance of roads, maintenance of additional main transmission lines, and general increase of work due to growth of load, together with expansion in the amount of testing work now carried out by the Department.

The accumulated Depreciation Reserve and Sinking Funds as at 31st March, 1935, amounted to £1,015,016. Table I gives full particulars of financial results as well as other relevant statistical information.

3. General.

The units generated totalled 580,338,247, and to this must be added 62,712 purchased units, making a grand total of 580,400,959 units output for the system. Units actually sold total 519,542,480, and units used for station auxiliaries, &c., total 5,866,868.

The number of non-productive or lost units total 60,858,479, equivalent to 10·49 per cent. of total output.

The maximum load on the system was 111,290 kw. and the annual load factor 59·5 per cent. The total connected load was 766,198 kw., and the demand factor or ratio of maximum load to connected load was 14·52 per cent.

4. Construction, Operation, and Maintenance.

A. HAMILTON DISTRICT.

(1) CONSTRUCTION.

(a) Power-stations.

Arapuni.—Work was commenced on the Arapuni extensions late in August, 1934, when a commencement was made with assembling and installing the necessary construction services.

A 4 ton overhead cableway over the site of the proposed power-house extension was put into service, and on the completion of the electrical and compressed-air installations, the excavation work on the new site was commenced late in September. Simultaneously, excavation work on the proposed site of the outdoor station extension was completed, a total of 2,260 cubic yards of excavation and 1,190 cubic yards of filling being handled.