

Supply was given to the Railway Department at 3,300 volts at the beginning of December. An 11,000-volt line was erected from the Point Switching-station to Mr. T. A. Phillips's residence, Wind-whistle, and livened up in February. The mileage of the Department's 11,000-volt feeders has been increased during the year from 90 to 99 miles.

A contract was let in February for extensions to Addington Substation building, and good progress has been made by the contractors. The extensions should be completed during the year, and will provide the necessary accommodation for a third bank of transformers, synchronous condenser, and additional switching equipment required. When this work is completed the capacity of Addington Substation will be increased to 13,500 K.V.A.

Tenders were called on the 23rd March for one 6,000 K.V.A. synchronous condenser for Addington. This machine will replace the existing 1,500 K.V.A. condenser, which will be transferred to Timaru Substation.

The outdoor oil circuit-breakers for use at the Point Switching-station have come to hand, and will be installed during the coming year.

Supply was given to the Ashburton Power Board in August, and to the South Canterbury Power Board in December. The latter Board was formed during the year, and will control the whole of South Canterbury south of the Rangitata River, including Timaru Borough. A Power Board has been formed, to include the counties of Malvern, Selwyn, and Tawera, under the name of "The Malvern Electric Power Board," and steps are being taken to raise the necessary loan for reticulation purposes. The Springs-Ellesmere Power Board area has been increased to include Paparua County, and arrangements are being made by the Board for the purchase of the Department's reticulation in that county.

For the purpose of overhaul and inspection of the tunnel, pipe-lines, and machinery, the plant was shut down on Sunday, 23rd December, between 6 a.m. and 5 p.m., the result of the inspection being quite satisfactory.

Transmission System.—The Point-Ashburton section of the Timaru transmission-line was put into service in August, and in December the section Ashburton-Timaru was livened up at 11,000 volts to enable a temporary supply to be given to Timaru Borough. This section was finally put into service at 66,000 volts in February.

The overhaul and reconstruction of the three transmission-lines to Christchurch was completed at the beginning of the year. Two of these lines are constructed with 19/13 S.W.G. copper cables, and are at present used for supplying Christchurch. The other line (north) is constructed partly with aluminium and partly with copper, and will be brought into permanent service when the extensions to Addington Substation are completed. Steps, however, have been taken to enable this line to be used in case of emergency in the meantime.

Lake Coleridge Duplication.—The work in connection with the duplication of the plant is well in hand. A co-operative contract was let on the 26th January to Messrs. J. Beban and party for construction of the tunnel, and by the close of the financial year good progress had been made; the necessary adit and 82 ft. of the actual tunnel were driven at the surge-chamber end, and work on the shafts at centre of tunnel and intake was commenced. The intake works are being carried out by the Department, and will consist of a tunnel driven out under the lake and terminating in a concrete-lined steel cylinder beyond the area affected by shingle. Satisfactory progress has been made with the excavations for the surge-chamber, power-house building, and pipe-lines. Specifications have been drafted for the pipe-lines, power-house building, and switch-gear, and tenders were called in January for two 7,500 kw. turbines and generators.

The new tunnel will be sufficiently large to deal with all the water required for the complete station output of 27,000 kw., should this be required. Provision is being made for the installation of a third pipe-line and 7,500 kw. set, to act as a standby.

WAIKATO ELECTRIC-POWER SUPPLY.

Capital Outlay and Financial Results.—The capital outlay at the end of the year was £474,817, as compared with £395,022 at the end of last year, an increase of £79,795. This is analysed in Table B herewith. Of this outlay, about £80,000 represents assets not yet in operation, this being almost entirely due to expenditure on additions to Horahora.

The year ended with a profit, after paying interest, working-expenses, and depreciation (but not sinking fund), of £15,826. This is sufficient to pay off the accumulated sinking-fund arrears and the sinking fund for the year ended, amounting in all to £12,718, and leaves a surplus of £3,108, which, together with £386 from last year, makes an accumulated surplus of £3,494.

The revenue for the year increased from £41,818 to £59,924, an increase of £18,106, or 43 per cent.

Table A gives the financial results of operation and operating figures, and the revenue from different classes of consumers is shown in the following statement:—

Revenue from—		1922.	1923.	1924.
		£	£	£
Large mining companies .. ..	..	19,547	20,177	24,635
Power Boards .. ..	..	4,310	14,728	26,007
Hamilton Borough .. ..	..	1,391	2,911	4,621
Other wholesale consumers .. ..	..	1,675	2,565	3,281
Miscellaneous .. ..	..	1,374	1,437	1,380
		<u>£28,207</u>	<u>£41,818</u>	<u>£59,924</u>

It is very satisfactory to note that this result as shown by the above table is due principally to the large increase in revenue from the Power Boards. The sum of their maximum loads has increased from 1,051 kw. (1,400 horse-power) in 1922 to 1,845 kw. (2,460 horse-power) in 1923, and to 3,038 kw. (4,050 horse-power) in 1924.