

APPENDIX D.

ANNUAL REPORT ON ELECTRICAL WORK AND POWER-SUPPLY UNDERTAKINGS BY
THE CHIEF ELECTRICAL ENGINEER.

The CHIEF ELECTRICAL ENGINEER to the MINISTER OF PUBLIC WORKS.

SIR,— Public Works Department, Wellington, 5th July, 1915.

I have the honour to submit the following report respecting the development of water-power and the erection of electric lines.

LAKE COLERIDGE WORKS.

This plant was officially opened on the 25th November last, and duly put into service. The head-works, however, were not quite completed, and in consequence we were unable to give a continuous service until the 1st March, since when the plant has been in full operation.

						Present Load.
The following consumers are already being supplied :—						Horse-power.
City Council	..	..	..	..	..	1,400
Riccarton Flour-mill	..	..	..	..	..	75
Central Dairy Company	..	..	..	..	..	75
Wright-Stephenson Seed-cleaning Works	..	..	..	..	..	50
Christchurch Brick Company..	..	..	..	..	..	50
Sunnyside Mental Hospital	..	..	..	..	..	30
Cashmere Sanatorium	..	..	..	..	..	20
Sharp's Works	..	..	..	..	..	8
Winsor's Woodworking Works	..	..	..	..	..	12
Retail customers—thirty	..	..	..	..	..	20
Total ..						1,740

Contracts have been entered into with the following, and supply will be given as soon as the consumers have installed the necessary plant :—

						Horse-power.
Christchurch Tramway Board	..	..	..	..	..	1,600
Lyttelton Harbour Board	..	..	..	..	..	220
Tai Tapu Dairy Company's reticulation	..	..	..	..	..	150
Canterbury Seed Company	..	..	..	..	..	33
G. L. Bowron	..	..	..	..	..	50
Canterbury Jockey Club	..	..	..	..	..	40
Prison Camp, Yaldhurst	..	..	..	..	..	20
Lincoln Agricultural College	..	..	..	..	..	20
Retail customers (about a hundred additional)	..	..	..	..	..	50
						2,183

Negotiations are also in hand with several other large power-consumers, amounting to about an additional 1,000 h.p. in immediate prospect. This includes two new freezing-works which it is proposed should be established in North Canterbury, and which will take substantial quantities of power, including a large proportion of all-night running; and also with several of the local authorities outside the city area for bulk supply for domestic purposes.

The supply within the city is only given through the City Council, whose load is rapidly increasing, and may be expected to reach 5,000 to 6,000 h.p. in course of a few years. Within the suburban boroughs, pending negotiations for the supply by the local authorities, a supply is given by the Department to retail consumers on the basis of a fixed rate per lamp, which is proving very popular and returning a reasonable revenue. This form of tariff dispenses with the need for meters and with the attendant cost of renewals, repairs, and meter-reading. Arrangements have been made with the local authorities for collecting the revenue accruing for the sale of electrical energy in their respective districts on a percentage basis, so as to obviate the necessity of creating a collecting and clerical staff.

The most interesting development is perhaps the retail reticulation of an adjoining farming district by the Tai Tapu Dairy Company. This company has taken out a license for reticulation within an area of 60 square miles, including Tai Tapu, Halswell, and Lincoln, which is entirely a farming and dairying district where the majority of the farmers are shareholders of the company. Owing to the widely spread nature of the district the number of consumers is only three to four per mile of line, which renders the problem of reticulation exceedingly difficult. As it has an existing organization in the centre of this district, the Tai Tapu Company is in a better position to undertake this work than any other authority, and has been very successful in arranging contracts for retail supplies with practically every farm or house on its distributor routes, amounting to about nine miles and a half.

Numerous inquiries are coming to hand from the Kaiapoi, Rangiora, Cust, Oxford, Sheffield, and Springfield districts, which will justify a loop line in the early future connecting with the main transmission-line at Coalgate and passing round via Sheffield, Waimakariri Gorge, Oxford, Cust, and Rangiora, joining up with the existing northern distributor at Kaiapoi, and thus considerably improving the general reliability of the whole system.