# APPENDIX D.

## ANNUAL REPORT OF 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 :—

The demand for electric power generally is still very urgent, both in the districts already partially supplied and in those in which a supply is not yet available. The fall in prices of our primary products which took place during 1921 resulted in a financial stringency amongst the primary producers which rendered it necessary for them to look very carefully into the cost of conversion of their premises to electric working, and for the time being caused a check in the demand in many directions. But the check has been only temporary. The lower prices both for primary products and manufactured goods have necessitated every effort being made to reduce the cost of production. The supply authorities—particularly the Power Boards—have realized the difficulty with which the consumer is faced in financing the conversion to electric power owing to the reduction in prices and in many cases this has been met by the provision of a special loan to make advances to consumers towards the costs of conversion. This is being largely taken advantage of by intending consumers and the demand for electric power for essential industries and for domestic supply is as urgent as ever.

The power available is still generally deficient, owing to the delays which occurred during the war period in making necessary extensions to plant both in the State and in the local installations. The accessions to the generating-capacity of the electric-power stations of New Zealand made during the year under review were the addition of one unit of 1,000 kw. at Invercargill (Borough Council, steam), and one unit of 650 kw. at Tauranga Borough plant (water-power), and of new local stations at Motueka (50 kw., gas), Kaikoura (37 kw., gas), Tamaki West (40 kw., gas), Havelock North (144 kw., water), Murchison (80 kw., water), Kaponga (90 kw., water).

The total installed plant capacity of the generating-stations of New Zealand—omitting standby provisions—at the end of the year was 51,749 kw., as compared with 49,630 kw. at the beginning of the year. But every important station is being extended, and orders have been placed for the following additions :—

| | Kilowatts. |
|---|---|
| Lake Coleridge (Public Works Department), water | 6,000 |
| Horahora (Public Works Department), water | 4,000 |
| Auckland (Electric-power Board), steam | 13,000 |
| Wellington (City Council), steam | 5,000 |
| Dunedin (City Council), water | 3,000 |
| New Plymouth (Borough Council), water | 1,000 |
| Pukekohe (Borough Council), gas | 120 |
| | 32,120 |

In addition, work is well under way for the following new stations, which will all be in operation by 1925 :—

| | Kilowatts. |
|---|---|
| Mangahao (Public Works Department), water | 20,000 |
| Waikaremoana (Public Works Department), water | 700 |
| Monowai (Southland Power Board), water | 4,000 |
| Palmerston North (Borough Council), gas | 900 |
| Teviot (Power Board), water | 250 |
| Wairarapa (Power Board), water | 300 |
| Whakatane (Borough Council), water | 300 |
| Opunake (Power Board), water | 120 |
| | 26,570 |

By 1925 the electric power available in the Dominion will thus be more than doubled as compared with the present installed capacity.

The growth in the installed capacity of electric-power stations of New Zealand since 1910 is shown in Fig. 4 herewith. The unsatisfied demand has for the whole period been substantially in advance of the developed power.