

Extensions were made during the year at Lake Coleridge (3,000 kw., water-power), Wellington (5,000 kw., steam), and Auckland (5,000 kw., steam). The changes during the coming year will also be in the direction of increasing the large stations and closing down the small ones, giving greater economy in operation.

The total installed capacity has increased during the year by 8,365 kw., or 14·5 per cent. (from 57,589 kw. to 65,954 kw.), while the sum of the maximum loads has decreased by 390 kw., or less than 1 per cent. (from 54,502 kw. to 54,112 kw.). This is due to the concentration of the peak load into a lesser number of stations.

The proportion of installed plant is now as follows:—

	Stations.	Kilowatts.	Proportion per Cent.
Water-power	30	30,392	46·1
Steam-power	8	30,085	45·6
Gas-power	18	4,621	7·0
Oil-power	2	856	1·3
	58	65,954	100·0

This increase in the proportion of steam-power is due to the addition of units in the Auckland and Wellington stations, pending completion of the Government hydro-electric stations. Next year the proportion of water-power will be considerably increased.

The number of consumers supplied has increased from 106,790 to 124,705, an increase of 17,915, or 17 per cent., for the year. The units per consumer were 1,394, as compared with 1,280 last year.

The total population included in the various areas of electric-power supply is 824,030, or over 61 per cent. of the total population of the Dominion; so that the ideal of a supply being available to every home in the Dominion is well on the way to realization.

The maximum demand per head of population in the areas supplied is 0·066 kw., practically one-half of the allocation of 0·15 kw., or 0·2 h.p. per head of population, which is the basis of the design of the Government schemes. The units sold per head of population supplied were 211, as compared with 178 last year.

The total length of distributing-line is 4,878 route-miles, as compared with 3,758 last year, an increase of 1,120 miles, or 30 per cent. The number of consumers per route-mile is 25·6, as compared with 28·4 last year, the reduction being due to the large mileage of new lines erected during the year to which the full number of services are not yet connected.

The power-demand per route-mile of line is now 11 kw., the sales 35,648 units, and the revenue £292. These are substantially smaller than last year, for the same reason, but are still remunerative returns over the whole business.

The revenue per kilowatt of output of all stations was £26·3, as compared with £24·2 last year. The water-power stations show a revenue of £23·1 per kilowatt, steam stations of £30·9 per kilowatt, and gas stations of £32·8 per kilowatt. These are valuable figures for use in forecasting the revenue from systems of various descriptions. The water-power systems include the largest proportion of large consumers, and the gas-engine stations the largest proportion of small consumers.

Out of the eighty-three distributing authorities, sixty showed a profit for the year amounting to £170,939, and twenty-three showed a loss amounting to £26,213. The general result is a net profit for the whole Dominion of £144,726 after paying working-costs (£715,441) and capital charges (£563,218) at the rate of 7·2 per cent. on the total capital outlay of £7,822,034. This shows a net profit of 1·85 per cent., as compared with 1·7 per cent. last year. The business on the whole is thus a thoroughly sound and remunerative one, as well as supplying a public necessity to 61 per cent. of the population of the Dominion.

Electric-power Supply of New Zealand for the year ended 31st March, 1924.

	Water.	Steam.	Gas.	Oil.	Total.
Number of stations	30	8	18	2	58
Average capacity (kilowatts)	1,013	3,761	257	428	1,137
Number of consumers	71,397	40,144	9,995	3,169	124,705
Installed capacity (kilowatts), (main plant only)	30,392	30,085	4,621	856	65,954
Maximum load (kilowatts)	32,949	17,522	2,949	692	54,112
Units generated	152,302,799	56,312,793	6,658,394	1,535,445	216,809,431
Annual load-factor (per cent.)	52·8	36·7	25·8	25·3	45·7
Units sold	120,617,414	46,712,494	5,272,399	1,202,985	173,895,292
Total capital outlay*	£4,985,857	£2,162,342	£594,720	£79,115	£7,822,034
Total capital per kilowatt installed*	£164	£72	£129	£92	£119
Total annual working-costs	£315,231	£317,156	£69,249	£13,805	£715,441
Total annual working-cost per unit sold	0·63d.	1·63d.	3·15d.	2·56d.	0·99d.
Total annual working-cost per kilowatt, maximum load	£9·6	£18·1	£23·5	£19·9	£13·2
Total annual capital charges	£350,651	£183,075	£23,429	£6,063	£563,218
Total annual capital charges per unit sold	0·70d.	0·94d.	1·07d.	1·12d.	0·78d.
Total annual capital charges per kilowatt, maximum load	£10·6	£10·4	£7·9	£8·8	£10·4
Total annual capital charges, percentage of capital outlay	7·03	8·47	3·94	7·66	7·20
Total annual costs	£665,882	£500,231	£92,678	£19,868	£1,278,659
Total annual costs per unit sold	1·33d.	2·57d.	4·22d.	3·69d.	1·77d.
Total annual cost per kilowatt, maximum load	£20·2	£28·5	£31·4	£28·7	£23·6
Total annual revenue	£760,587	£541,225	£96,605	£24,968	£1,423,385
Total annual revenue per unit sold	1·51d.	2·78d.	4·40d.	4·63d.	1·96d.
Total annual revenue per kilowatt, maximum load	£23·1	£30·9	£32·8	£36·1	£26·3
Net profit	£94,705	£40,994	£3,927	£5,100	£144,726

* Includes distribution.