

The following table summarizes the results of the year's operations in connection with electric supply throughout the Dominion :—

Results for Electric-power Supply of New Zealand for the Year ended 31st March, 1927.

	Water.	Steam,*	Gas.	Oil.	Totals.
Number of stations	35	5	5	3	48
Average capacity (kilowatts)	3,570	7,545	396	469	2,900
Number of consumers	169,096	49,691	6,301	3,257	228,345
Installed capacity (kilowatts), (main plant only)	103,288	32,324	1,978	1,325	138,915
Maximum load (kilowatts)	76,915	26,904	1,653	809	106,281
Units generated	351,654,279	93,697,052	4,552,548	2,091,231	451,995,110
Annual load-factor (per cent.)	52.5	39.7	31.3	29.5	48.6
Units sold	302,227,684	78,204,575	3,545,649	1,718,423	385,696,331
Total capital outlay (including distribution system)	£15,674,274	£2,808,160	£338,849	£114,853	£18,936,136
Total capital per kilowatt installed (including distribution system)	£152	£87	£170	£86.5	£136
Total annual working-costs	£988,994	£306,455	£42,323	£15,819	£1,353,591
Total annual working-costs per unit sold ..	0.79d.	0.942d.	2.87d.	2.2d.	0.84d.
Total annual working-costs per kilowatt (maximum)	£12.8	£11.8	£25.6	£19.55	£12.62
Total annual capital charges	£1,123,154	£279,904	£17,762	£5,499	£1,426,319
Total annual capital charges per unit sold ..	0.89d.	0.86d.	1.2d.	0.77d.	0.89d.
Total annual capital charges per kilowatt (maximum)	£14.6	£10.40	£10.7	£6.79	£13.4
Total annual capital charges as percentage of capital outlay	7.2	10.0	5.25	4.82	7.52
Total annual costs	£2,112,147	£586,359	£60,085	£21,318	£2,779,910
Total annual costs per unit sold	1.68d.	1.8d.	4.07d.	2.97d.	1.73d.
Total annual costs per kilowatt (maximum)	£27.4	£21.79	£36.3	£26.34	£26.02
Total annual revenue (not including rates) ..	£2,169,181	£647,222	£60,882	£26,760	£29,040,045
Total annual revenue per unit sold	1.72d.	1.98d.	0.41d.	3.72d.	1.8d.
Total annual revenue per kilowatt (maximum)	£28.3	£24.05	£36.7	£33.07	£27.1
Net profit	£57,033	£60,863	£797	£5,442	£124,135
Ratio of working-costs to revenue (per cent.)	45.2	47.5	69.5	59.0	46.8

* Does not include Wellington (10,000 kw.), Invercargill (2,450 kw.), Waihi (2,500 kw.) as stand-by plants for hydro stations.

GROWTH OF LOAD.

In the early days of electric supply electricity was used almost exclusively for lighting purposes. With the advent of electric motors and the application of electricity for heating purposes the power and heating load increased, until at the present time the energy used for lighting is small compared with that used for other purposes. The benefits of electric drive in factories and workshops have to a large extent been taken advantage of, and the use of electricity for commercial heating and domestic heating and cooking is rapidly increasing. The use of electric ranges and water-heaters during the past few years tends to confirm the opinion that the use of electricity for domestic purposes will soon exceed the demand for industrial and commercial uses.

Returns have again been obtained of electric ranges and water-heaters in use throughout the Dominion, and the figures obtained continue to show satisfactory increases over those of the previous twelve months, and the statistics obtained for the year ending 31st March, 1927, have been scheduled in Table Y. Of the ninety-eight electric-supply authorities engaged in retail distribution of electrical energy, seventy-nine of them have an aggregate total of 9,511 electric ranges connected to their systems, and the number now installed represents an increase of 103 per cent. for the year. The return shows the percentage of consumers using electric cooking to the total number of consumers being supplied in each area respectively, and an examination of this column shows where the field for electric cooking still remains to be developed.

The number of consumers using electric water-heaters has increased from 6,654 to 14,160 during the year, an increase of 113 per cent.

When electric-supply authorities actively canvass their areas for the above class of load the response is generally favourable, and it is only reasonable to anticipate that in the near future the demand on the available stations will be such as to warrant further extensions to keep up with the requirements. This development of load is particularly noticeable in rural and country areas, where the facilities for more congenial living-conditions are being brought into line with those already existing in the metropolitan areas.

As regards the conversion of fuel-driven to electrically-driven milking-machines, the figures this year show a steady advance over those of previous years—viz., 1925, 3,581; 1926, 4,856; 1927, 6,738. The collection of these statistics was inaugurated in 1923, when the total number of electrically-driven machines was only 1,310. The increase in four years is thus 410 per cent.; and as there are still about nine thousand machines which are fuel-driven, the work of conversion is not yet half completed, and the electric-supply authorities have still this additional load of approximately 12,000 horse-power in prospect and ready for canvassing.