

which may be taken in forecasting the return from ordinary general retail business, excluding such large consumers as freezing-works, &c. The revenue per kilowatt from the twenty-two gas-engine stations is £41 per kilowatt of output, and from the output of the two oil-driven stations is over £52 per kilowatt; but these are obtained at high retail rates, ranging from 8d. to 1s. for light and 3d. to 5d. for power, as compared with usual retail prices of 6d. and 7d. for light and 1½d. to 3d. for power.

Out of the total number of sixty-one stations and twenty-one bulk distributing authorities, twenty-seven made a loss last year, as compared with thirty which incurred a loss in the previous year. Costs are now falling again, and it is anticipated that hereafter only those that are in the first two or three years of operation will show losses.

Over the whole Dominion the electric-supply business involves a capital outlay of £5,224,629 for an installed capacity of 51,749 kw.—i.e., £101 per kilowatt; and the revenue, after paying all working-expenses (£534,642) and capital charges, including depreciation (£305,838), which work out at an average of 5·85 per cent. on the capital outlay, yields a net profit of £82,688, or 1·6 per cent. on the capital outlay. The business on the whole is thus remunerative, as well as supplying a public necessity to 88,838 consumers.

The table herewith gives a full analysis of the results of operation of the sixty-one stations, separating the returns from water-power, steam, gas, and oil stations. The most significant figures are, of course, the low costs per unit and per kilowatt output of the water-power stations. It must be noted that these figures include the returns from a number of quite small water-power plants, only five out of the twenty-seven installations being over 1,000 h.p. capacity.

The comparison of the capital cost per kilowatt is also instructive. In comparing the costs of the steam and gas stations it must be noted that the average size of the ten steam stations is sixteen times as large as the average size of the twenty-two gas stations, and this has more to do with the higher working-costs of the gas stations than the nature of the fuel. On the same average size of plant the gas stations would probably show a better result than the steam stations.

It is noticeable that the publication of these details of each of the power-stations of the Dominion is already resulting in a very healthy competition between individual stations to show good results, to the substantial benefit of the public.

Electric-power Supply of New Zealand for the Year ended 31st March, 1922.

	Water.	Steam.	Gas.	Oil.	Total.
Number of stations	27	10	22	2	61
Average capacity (kilowatts)	925	1,992	128	406	800
Number of consumers	47,357	28,570	9,376	3,535	88,838
Installed capacity (kilowatts), (main plant only)	25,125	22,470	3,343	811	51,749
Maximum load (kilowatts)—					
General supply stations	25,543	9,916	2,506	601	38,566
Special tramway stations	..	10,000	300	..	10,300
Units generated	107,674,949	56,244,921	6,303,129	1,720,547	171,943,546
Annual load-factor (per cent.)	48·0	32·0	25·5	32·5	40·0
Units sold to tramways	9,894,562	25,099,034	1,132,602	..	36,126,198
Units sold—General supply	79,134,631	24,210,925	3,084,324	1,216,201	107,746,081
Total capital outlay*	£3,506,427	£1,148,824	£478,271	£91,107	£5,224,629
Total capital per kilowatt installed* ..	£139	£92	£143	£112	£101
Total annual working-costs	£206,221	£226,193	£78,733	£23,495	£534,642
Total annual working-cost per unit sold ..	0·56d.	2·25d.	4·5	4·28d.	1·18d.
Total annual working-cost per kilowatt, maximum load	£8·1	£22·8	£31·2	£39·3	£13·8
Total annual capital charges	£189,072	£91,353	£20,200	£5,213	£305,838
Total annual capital charge per unit sold ..	0·51d.	0·91d.	1·15d.	0·96d.	0·68d.
Total annual capital charge per kilowatt, maximum load	£7·4	£9·2	£8·1	£8·7	£7·95
Total annual percentage of capital outlay ..	5·4	7·9	5·15	5·7	5·9
Total annual costs	£395,293	£317,546	£98,933	£28,708	£840,480
Total annual cost per unit sold	1·07d.	3·16d.	5·65d.	5·24d.	1·87d.
Total annual cost per kilowatt, maximum load	£15·5	£32·0	£39·3	£48	£21·8
Total annual revenue	£450,055	£338,923	£102,755	£31,435	£923,168
Total annual revenue per unit sold	1·22d.	3·4d.	5·88	5·74d.	2·05d.
Total annual revenue per kilowatt, maximum load	£17·6	£34·0	£41·0	£52·5	£24
Net profit	£54,762	£21,377	£3,822	£2,727	£82,688

* Includes distribution.

INSPECTION OF ELECTRIC LINES.

During the year the following electric-supply systems were inspected: Havelock, Banks Peninsula Power Board (part), Springs-Ellesmere Power Board (part), Rangiora County (extensions), Murchison, Motueka, Tamaki, Kaikoura, Blenheim (Hospital), Blenheim (F. O. Linstrom), Picton, Oamaru, Kaitangata, Invercargill (extensions), Gore, Maitaura, Bluff, Winton, Hikurangi (collieries), Whangarei, Devonport, Raetihi, Waiuku, Ohakune, Portland Cement Company, Wairua Falls, Pukekohe, Napier, Havelock North, Hastings, Waverley, Stratford, Patca, Inglewood, Waitara, Bull's, Eketahuna, Pahiatua, Fairlie, Wellington (extensions), Sumner, Heathcote, Ngaurawahia, Huntly, Te Aroha, Thames, Te Kuiti, Te Puke, Hamilton, Hokitika, Waiuta, Central Power Board (extensions), Te Awamutu Power Board (extensions), Thames Valley Power Board (extensions),