

TABLE A.—*Electric-power Supply of New Zealand for the Year ended 31st March, 1925.*

	Water.	Steam.	Gas.	Oil.	Total.
Number of stations	33	7	14	2	56
Average capacity (kilowatts)	1,160	5,560	249	553	1,462
Number of consumers	84,134	50,993	10,234	3,338	148,699
Installed capacity (kilowatts), (main plant only)	38,354	38,925	3,491	1,106	81,876
Maximum load (kilowatts)	38,813	26,016	2,504	755	68,088
Units generated	163,786,074	82,342,500	5,812,643	1,858,701	253,799,918
Annual load factor (per cent.)	48.2	36.2	26.5	28.1	42.5
Units sold	128,766,428	64,296,213	4,679,052	1,570,210	199,311,903
Total capital outlay*	£6,181,893	£2,755,505	£528,277	£100,914	£9,566,589
Total capital per kilowatt installed*	£161	£71	£151	£91	£117
Total annual working-costs	£384,162	£319,120	£62,829	£14,715	£780,826
Total annual working-cost per unit sold	0.72d.	1.19d.	3.22d.	2.25d.	0.94d.
Total annual working-cost per kilowatt, maximum	£9.9	£12.2	£25.1	£19.5	£11.5
Total annual capital charges	£449,011	£244,115	£31,507	£7,453	£732,086
Total annual capital charges per unit sold	0.84d.	0.91d.	1.62d.	1.14d.	0.88d.
Total annual capital charges per kilowatt, maximum	£11.6	£9.4	£12.6	£9.9	£10.8
Total annual capital charges, percentage of capital outlay	7.3	8.9	6.0	7.4	7.6
Total annual costs	£833,173	£583,755	£94,336	£22,168	£1,533,432
Total annual cost per unit sold	1.56d.	2.10d.	4.84d.	3.39d.	1.85d.
Total annual cost per kilowatt, maximum	£21.5	£21.6	£37.7	£29.4	£22.5
Total annual revenue	£913,638	£627,158	£92,683	£25,836	£1,659,315
Total annual revenue per unit sold	1.70d.	2.34d.	4.76d.	3.95d.	2.0d.
Total annual revenue per kilowatt, maximum	£23.6	£24.1	£37.0	£34.2	£24.4
Net profit	£80,466	£43,403	..	£3,668	£127,537
Net loss	..	..	£1,653	..	£1,653
Total net profit	..	..	..	..	£125,884

* Includes distribution.

DAILY LOAD CURVES.

The question of the daily load curve and the ratio of the average load to the maximum load or the load-factor is an important one in determining the selling-price of electric power. Each station must ascertain its own load-factor and determine its selling policy accordingly. As a general guide the daily load curves of fourteen of the larger stations of the Dominion have, by the kind co-operation of the engineers to these places, again been obtained for two days of the current year—viz., Friday, 13th March (representing equinoctial conditions), and Friday, 26th June (representing midwinter conditions). Friday has been selected as the late-shopping night in most places, thus representing the most extreme conditions of loading. These fourteen stations have an installed capacity of 74,313 kw., or 91 per cent. of the total installed capacity of the Dominion, so that the resultant curves may be taken to represent quite accurately the shape of the load curve of the combined output of the whole Dominion. Water-power and fuel stations are proportionately represented, including all the large stations of each type, and the diagram includes not only the total output, but the water-power and fuel-power outputs separately. The summation curves are plotted in Fig. 3, and the results are as follows:—

TABLE B.—*Summer and Winter Typical Loads.*
(Fourteen Power-stations.)

	Installed Capacity.	Maximum Load.	Units.	Daily Load-factor.
March 13th, 1925—	Kilowatts.	Kilowatt		Per Cent.
Water-power	32,925	29,072	497,794	71.3
Fuel-power	40,988	24,315	219,380	37.6
Totals	73,913	48,001*	717,174	62.3
June 26th, 1925—				
Water-power	32,925	32,890	537,720	68.2
Fuel-power	41,388	32,120	266,305	34.6
Totals	74,313	56,325*	804,025	59.5

* Combined maximum.

These are daily load-factors. The annual load-factors are, of course, substantially lower, being 48.2 per cent. for water-power, 36.2 per cent. for steam-power, and 42.5 per cent. for the whole output of the Dominion.