

The item of generating-costs includes the operation of the Grand Junction plant since the date of purchase by the Department, and this accounts for the increase. 3,612,720 units were purchased from or generated by this plant during the year at a total cost of £13,300 9s. 11d., as compared with 162,700 units the previous year for £1,250.

The total units generated at Horahora were 88,703,370, at a working-cost of £5,837.

As Horahora was loaded almost up to its full capacity in the previous year, and almost all the power available from McLaren's Falls and Omanawa was being supplied, the normal increase of load would of itself have necessitated greater use of the Junction plant, with its comparatively high generating costs. This effect was increased in January and February as a result of the Arapuni diversion, and in March by the low water stage reached in the Waikato River.

The table given below is an analysis of the sources and amounts of revenue :—

Revenue from—	1925. £	1926. £	1927. £	1928. £
Large mining companies	18,086	16,476	16,150	16,091
Four original Power Boards (Cambridge, Central, Te Awamutu, and Thames Valley)	35,302	42,226	50,616	52,487
Additional Power Boards (other than Auckland)	..	504	6,173	18,198
Auckland Power Board	..	10,850	15,139	16,132
Hamilton Borough	5,461	6,205	6,888	7,452
Tourist Department, Rotorua	..	276	2,262	2,440
Other wholesale consumers	4,264	7,432	8,988	9,871
Miscellaneous	2,071	1,861	2,532	2,641
Total	65,184	85,380	108,748	125,312

The table shows that the only striking increase in revenue is in the case of the new Power Boards, other than Auckland—i.e., Waitomo, Franklin, and (principally) Waitemata. The amount of power supplied to Auckland was not materially greater than in the previous year, and amounted to 15,486,310 units, or approximately one-sixth of their total consumption of power.

The increase in the case of the four original Power Boards has been small, owing partly to the fact that they are approaching a condition of saturation, and partly owing to the improvement of power-factor by them. One of these Boards (Te Awamutu) shows a decrease in revenue for the year.

Future Prospects.

The financial prospect for the coming year is less favourable, as the indications are that the Horahora output will be reduced about 10 per cent. by loss of head, and this difference, as well as the increase in demand, will have to be made up by increased supply from the more expensive Grand Junction and Penrose Diesel plants. With Arapuni likely to be in service fairly early in the year following, the prospect for that year is good.

EXTENSIONS DURING THE YEAR, AND FUTURE EXTENSIONS.

General, Additional Consumers, and Connected Load.

During the year supply has been given at the following additional points :—

Consumer.	Point of Supply.	Date.
Tourist Department, Rotorua ..	Mamaku	14th April, 1927.
Thames Valley Power Board ..	Kerepehi (Temporary substation) ..	10th July, 1927.

The substation at Mamaku is a small substation of 150 kv.a. capacity, 50,000 to 11,000 volts stepping down again from 11,000 to 400 volts, to supply Mamaku Township.

The 11,000-volt supply will permit of supply to the timber-mills in the district if any of them require electric power, but up to the present the demand from them has been inconsiderable.

The connected load, not including Auckland, has increased from 52,205 kw. to 64,580 kw., as shown in table N.

The number of milking-machines supplied has increased from 3,308 to 3,559, as shown in Table Q.

The maximum load last year and this year has been as follows : Horahora—Last year, 12,400 kw. ; this year, 12,400 kw. System—Last year, 14,160 kw. ; this year, 15,700 kw.

The "system total" of units generated and purchased for the year was 100,075,668, and thus for the first time exceeded 100,000,000.

The diversity factor, exclusive of power supplied to Auckland and of connected load in Auckland, is 4.8, compared with 4.1 last year.

Horahora.

There were no extensions at Horahora during the year.