

Electrodes were installed on No. 5 pipe-line and the salt velocity method utilized in efficiency tests on No. 5 machine. Both machines have been out of service for minor repairs, cleaning, and general maintenance. Operation gave complete satisfaction.

Generator-running times were as follows for the year:—

Generator Number.	Time on Load.		Time Idle.		Time under Repair.	
	Hours.	Percentage.	Hours.	Percentage.	Not in Demand (Hours).	In Demand (Hours).
<i>Tuai</i>						
1	5,394	61.5	2,456	28.0	865	45
2	5,474	62.5	2,293	26.2	991	02
3	7,293	83.5	1,242	14.2	225	..
<i>Piripaua</i>						
4	4,810	54.9	3,430	39.1	519	01
5	3,917	44.7	3,227	36.8	1,614	01

Mangahao.—Rainfall at No. 1 dam was above average and well distributed over the year. This made maintenance of roads continuous, though there was only one large slip.

Rainfall for year was: No. 1 dam, 198.05 in.; No. 2 dam, 134.77 in.; No. 3 dam, 100.00 in.; Power-house, 50.02 in.

Inspection of part of inside of pipe-lines was made and the surge chamber cleaned out. Painting of outside of pipes was carried out as weather conditions permitted.

Due to lack of suitable new turbine buckets during the year and rapid deterioration of original cast-steel ones, a considerable amount of bucket changing and repairing had to be done. The situation has been relieved only to a very small extent by the recent receipt of a new set of bronze buckets which have been fitted to No. 4 turbine. Many of those released are unfit for further service. The extent to which Mangahao has been used is shown by the yearly load factor of 68 per cent. on a maximum load of 20,900 kW.

The generator-running times were as follows:—

Generator Number.	Time on Load.		Time Idle.		Time under Repair.	
	Hours.	Percentage.	Hours.	Percentage.	Not in Demand (Hours).	In Demand (Hours).
1	8,612	98.3	66	0.8	76	6
2	8,641	98.7	44	0.5	69	5
3	8,664	98.9	36	0.4	54	6
4	8,444	96.4	36	0.4	275	4
5	8,676	99.0	35	0.4	45	4

(b) *Transmission and Distribution*

Inspections and patrols were regularly carried out throughout the year and maintenance effected as and when required. Lightning again was the predominant cause of transmission faults, but, as in previous years, the very high standard of reliability of supply was maintained.