

Arapuni and Horahora.—The running-times of the Arapuni and Horahora generators, together with particulars of outage and shutdowns, are as follows:—

Generator Number.	Time on Load.		Time Idle.		Time under Repair.	
	Hours.	Percentage.	Hours.	Percentage.	Not in Demand (Hours).	In Demand (Hours).
<i>Arapuni Power-station</i>						
1	8,418	96·10	337	3·85	2	3 (a)
2	8,394	95·83	341	3·89	25 (b)	..
3	8,447	96·43	312	3·56	1	..
4	7,706	87·97	300	3·42	44 (c)	710 (d)
6	6,782	94·83 (e)	370	5·17 (e)	(In service from 5th June, 1945, only.)	
7	8,431	96·25	294	3·35	35 (f)	..
8	8,017	91·52	283	3·23	460 (g)	..
<i>Horahora Power-station</i>						
1	8,155	93·10	591	6·74	14	..
2	8,467	96·66	290	3·31	3	..
3	8,433	96·27	309	3·53	18	..
4	8,469	96·68	289	3·30	2	..
5	8,477	96·77	273	3·12	..	10 (h)
6	8,438	96·32	314	3·58	8	..
7	8,586	98·01	96	1·10	67 (i)	11 (j)
8	8,667	98·94	83	0·95	10	..

NOTES.—(a) Shutdown on 11th September, 1945, for 3 hours to remove pieces of presspahn packing which had worked out from under the pole-caps of the rotor and were rubbing against the stator. (b) Water in lubricating-oil system, 8th May, 1945. (c) The main shutdowns were of 10½ hours on 18th August, 1945, to rectify an oil-leak in a servomotor-cylinder, 9 hours on 28th December, 1945, to overhaul the 6 kV.A. generator brush gear, and 14 hours on 6th February, 1946, for governor repairs. (d) One of the 11 kV. cable-boxes on the generator-transformer cables failed on 10th September, 1945, causing an outage of 52 hours; and a burn-out of the stator-winding occurred on 4th March, 1946. The generator was still under repair at 31st March, 1946. (e) Percentages are for the period 5th June, 1945, when the generator first went into service, to 31st March, 1946. (f) The main shutdown was of 22 hours on 27th March, 1946, to attend to loose laminations in the stator. (g) Shutdown on 14th January, 1946, for 457 hours to repair faults in the parallel paths of the stator winding and to replace temporary C.T.s in the neutral ends of the parallel paths by permanent C.T.s. (h) Shutdown on 6th April, 1945, for 10 hours to renew burned out D.C. leads between slip-rings and field-coils. (i) Except for a shutdown of 4 hours on 3rd March, 1946, to replace a defective solenoid relay, all shutdowns were for work on the governor, totalling 7 hours in August, 28 hours in November, and 28 hours in January. (j) Shut down on 17th June, 1945, for 11 hours to repair a seized governor-pump bearing. The other times shown under "Not in Demand" were mainly routine maintenance work.

Waikaremoana.—Further maintenance was carried out on the Tuai penstock slip. The concreting of the pipes at the No. 3 anchor block was completed with the placing of the open concrete drain at the top ends of the blocks and the sump into which it drains. The excavation of a bench alongside the pipe-line will be carried out as soon as a mechanical shovel becomes available.

During the month of March this year the starting and the initial testing of the temporary siphons was carried out. Since then the siphons have been used as required by the load-despatcher.

At Onepoto 50·46 in. of rain were recorded, and at Tuai 38·23 in. were registered. The drought conditions that prevailed throughout the latter part of the year reduced the level of Lake Waikaremoana to 2,006·4 ft. at 31st March. Further reductions in levels were recorded in April through continued mild weather conditions and the operation of the temporary siphons.

The usual cleaning and attention has been adhered to, and routine tests carried out. Nos. 1 and 2 units were shut down for major overhauls and repairs. Machines were shut down as required to allow installations and connections to be made on the new control panels.