

The last set of manganese bronze buckets was received and fitted, so that all five turbines have been rebucketted within the last four years. A fire in the tap-changing compartment of one of the Horowhenua regulators was successfully dealt with before much damage was done.

Generator-running times were :—

Machine No.	Time on Load.		Time Idle.		Time under Repair.		Percentage Availability for Service.
	Hours.	Percentage.	Hours.	Percentage.	Not in Demand (Hours).	In Demand (Hours).	
1	8,242	94.1	315	3.6	203	..	97.7
2	8,050	91.8	241	2.8	469	..	94.6
3	8,450	96.4	294	3.4	16	..	99.8
4	8,422	96.1	315	3.6	21	2	99.7
5	8,437	96.3	304	3.5	19	..	99.8

2. SUBSTATIONS

Normal conditions obtained throughout the year, the following incidents only being worthy of special mention :—

(a) 110 kV.

Mangamaire.—A 1,000 kVA. transformer was replaced by the 1,500 kVA. transformer from Greytown and transferred to Woodville.

The 1,500 kVA. synchronous condenser was transferred to the Auckland district.

Dannevirke.—The 1,500 kVA. synchronous condenser was transferred to the Auckland district.

A 1,500 kVA. transformer was transferred temporarily to Waipawa Substation and another ex-Mangahao installed. After a brief period on load this failed, and was railed to Napier for a complete overhaul. This reduced the capacity of the station to 1,500 kVA., causing the Dannevirke Electric-power Board to transfer part of its loading to the Woodville area.

Waipawa.—Two 1,500 kVA. transformers were removed in turn for overhaul and provision of Buchholz protection. A transformer from Dannevirke was used as the spare.

Bunnythorpe.—Work necessary to take power from the new Tuai-Bunnythorpe 110 kV. lines was carried out.

Khandallah.—The additions necessary to give supply to the second circuit on the Central Park 110 kV. line were made.

(b) 50 kV.

Edgecumbe.—An earthquake caused a substation outage in October and cracked all the cottage chimneys.

Karapiro.—This temporary 50/11 kV. substation was shut down in January. Some of the equipment, including transformers, will be used at Whakamaru.

Maratai.—A flashover on an 11 kV. A.B.S. caused an outage of over six hours on Boxing Day.

Waikino.—The synchronous condenser 11 kV. O.C.B. was badly damaged in April by a flashover due to a rat getting into the cubicle.