

The running-times of the various units in the power-station during the year, including 1st April, 1928, have been as follows :—

Unit.	On Load.		Idle.	
	Hrs.	min.	Hrs.	min.
No. 1	6,868	55	1,939	05
No. 2	6,973	55	1,834	05
No. 3	6,880	11	1,927	49
No. 4	6,875	14	1,932	46
No. 5	6,310	24	2,497	36

Transmission Lines—110,000-volt Lines.

Mangaore—Khandallah Section.—During the year there has been only one total interruption to supply over these lines. This was of 10 minutes duration and was due to an operating mistake in the power-house whereby all lines were put out of commission. The line has been brought up to standard by hanging weights, as per revised schedule, lengthening jumpers, &c.

Mangaore—Bunnythorpe Section.—West Line : This line has been in operation through the year, supplying power to Manawatu-Oroua and Wanganui-Rangitikei Power Boards. There have been five interruptions to service, totalling 5 hours 48 minutes, of which one, of 5 hours 8 minutes' duration, was arranged for work at Bunnythorpe and Wanganui Substations ; one, of 12 minutes, was due to power-house operating mistake ; one, of 4 minutes, to lightning ; one of 22 minutes, to a broken earth-wire fouling one of the cables ; and one, of 2 minutes, to some unknown cause. On this section jumpers have been lengthened and weights hung to revised schedule from Bunnythorpe to Albert Road, leaving about five miles still to complete. The earth-wire has been removed from Manawatu River to one mile from Bunnythorpe.

East Line.—Over this line power has been delivered through the year to Wairarapa and Hawke's Bay districts. Apart from three prearranged shutdowns at convenient levels, eleven interruptions have been recorded during the year, totalling 7 hours 32 minutes. One interruption, of 6 hours 45 minutes, was due to a break in one of the cables on the Bunnythorpe Woodville section, due to vibration ; one, of 12 minutes, was due to a switching mistake at the power-house ; one, of 9 minutes, was due to the surge caused by a flash-over on the Mangaore—Khandallah line ; one, of 5 minutes, was due to the failure of a rotating insulator at Mangamaire Substation ; and one, of 3 minutes, to a similar cause at Dannevirke. The remaining six interruptions, of 18 minutes, were probably due to surges caused by troubles on Power Board lines and improper functioning of the Department's oil circuit-breakers. On this line, about five miles still require weights to be hung as per revised schedule.

A piled groyne was built at the Manawatu River crossing, and the banks revetted with willows and wire netting as a protection against erosion in case of floods.

Bunnythorpe—Wanganui Line. This line is in series with the Mangaore-Bunnythorpe west line. Apart from shutdowns by arrangement at convenient times interruptions during the year numbered 23, of a total duration of 3 hours 52 minutes. Of these, four interruptions, of 54 minutes, were for the same reasons as on the Bunnythorpe west line, the longer time being required for switching at Bunnythorpe. Ten interruptions, totalling 1 hour 36 minutes, were due to troubles on Wanganui-Rangitikei Power Board's lines bringing out the oil circuit-breaker at Bunnythorpe. One interruption, of 34 minutes, was due to a fire in a gorse hedge setting a pole alight, and the line was cut out to extinguish the fire. One, of 3 minutes, was probably caused by a gorse fire under the line. No cause has been found for the remaining seven interruptions of 45 minutes' duration.

During the year two special towers were erected on the banks of the Rangitikei River, and a special crossing made of this river in stranded copper-weld cable to prevent damage by floods, most of the arranged shutdowns on this line being for this purpose. Four poles were also replaced during the year as being under specification for their respective positions when the sap had rotted.

Bunnythorpe—Woodville Section.—Apart from prearranged shutdowns 17 interruptions were experienced on this line during the year, totalling 8 hours 16 minutes. Of these, eleven, of 7 hours 52 minutes, were as for Mangaore-Bunnythorpe east section, with which this line is in series, the extra time being for switching operations at Bunnythorpe ; two interruptions, of 6 minutes, were caused by the failure of a rotating insulator on an air-break switch at Mangamaire Substation ; two interruptions, of 9 minutes, were probably caused by troubles on 11,000-volt Power Board lines ; and the remaining two, of 9 minutes, were probably caused by a heavy gale blowing jumpers or cables close enough to poles to enable them to arc over to the pole-steps.

At one tower on the Ruahines a piece of ground has been acquired round the tower and planted with willows and poplars to prevent slipping.

Woodville—Mangamaire Section.—Apart from prearranged shutdowns on this section a total of twenty-three interruptions, amounting to 10 hours 53 minutes, were experienced during the year. Seventeen of these were from causes as for Bunnythorpe Woodville Section, except for the longer time delay necessitated by switching operations at Woodville, these interruptions totalling 10 hours 34 minutes. Of the remainder, one, of 3 minutes, was due to a severe lightning-storm which blew the arrester-fuses at Mangamaire ; two, of 6 minutes total duration, were due to troubles originating on 11,000-volt feeders ; one, of 2 minutes, was due to a switching error at Woodville. The cause of the remaining two, of 8 minutes' duration, was not ascertained.

On this section weights have been completed to revised schedule, all defective insulators replaced, and the line generally put in first-class order.