

The survey of the new Tuai-Bunnythorpe 110 kV. line was continued, and the formation of access tracks, roads, and bridges, scrub clearance, and establishment of line-construction camps was proceeded with. A commencement was made of the construction of the line, but only a small amount of steelwork for the tower formation has been received so far.

The 110 kV. tie-line between Tuai and Kaitawa has been virtually completed, except for the end span at Kaitawa.

SOUTH ISLAND ELECTRIC-POWER SYSTEM

1. SYSTEM OPERATION AND LOAD DESPATCH

The maximum half-hourly demand on the Department's generating-stations was 121,460 kW., as compared with 117,890 kW. last year, an increase of 3 per cent., whilst the combined demand, which includes the Dunedin City Council's plants, increased from 134,680 kW. to 142,734 kW., 5.98 per cent.

The system generation for the whole year was 678,225,892 units, as compared with 634,220,456 units the previous year, an increase of 6.9 per cent.

Details of output of individual stations for the inter-connected South Island system are as follows:—

Station.	Year ended 31st March, 1946.			Year ended 31st March, 1945.		
	Maximum Kilowatts.	Units generated.	Annual Load Factor.	Maximum Kilowatts.	Units generated.	Annual Load Factor.
Waitaki	68,000	358,588,820	Percentage. 60.2	67,280	327,959,850	Percentage. 55.6
Coleridge	41,800	133,015,560	36.3	42,040	138,733,400	37.7
Highbank	26,000	37,281,630	..	(Commenced 8th June, 1945.)		
Arnold	3,250	23,093,200	81.0	3,200	24,992,900	89.2
Monowai	6,600	24,599,300	42.3	6,600	31,834,250	55.0
Waipori (D.C.C.) ..	..	101,108,211	..	..	109,391,318	..
Auxiliary and standby stations ..	..	539,171	..	..	1,308,738	..
Totals	..	678,225,892	..	..	634,220,456	..

2. OPERATION AND MAINTENANCE

(a) Power-stations

The generating-plant at all stations gave satisfactory running, there being no major breakdowns.

At Waitaki Station routine maintenance only was required, and at Coleridge Station No. 3 and No. 9 units received a general overhaul.

Ample water-supplies were available during the year. The maximum flows recorded in the Waitaki River were 35,719 cusecs on 6th February, 1946, and on 6th December, 1945, 35,629 cusecs. The minimum average weekly flow was 3,953 cusecs for the week ending 8th July, 1945. The average flow for the year was 15,157 cusecs. The maximum level of Lake Coleridge was 1,673.85 ft., and the minimum 1,667.27 ft., on 2nd August, 1945.

The Monowai Station was in continuous operation throughout the year in parallel with other stations. The Invercargill City steam-plant was run on a few occasions to allow maintenance and repair of the Winton-Invercargill main supply-line to be carried out. Routine maintenance was carried out, and renewing of panels damaged by fire was completed.