Authority may decide how to restrict new load or to limit or reduce the consumption of existing consumers. This decentralization has lead, as was expected, to restrictions varying between predominantly rural and urban districts. Consumers experiencing certain restrictions have tended to criticize the absence of such restrictions in a neighbouring area, but uniform restrictions would not necessarily produce the results required nor equitably distribute the burden of conserving electricity.

The general problem of limiting new load each year is being considered, and may be the subject of later submissions.

Compared with the difficult conditions experienced in the North Island during the winters of 1945, 1946, and 1947, and in the South Island for a period in 1947, the supply position showed a marked improvement during 1948, mainly because better hydraulic conditions prevailed.

NORTH ISLAND

In April, 1948, the first 16,000 kW. generator was brought into operation at Kaitawa, followed in October by the second unit of similar capacity. At Karapiro the third unit of 30,000 kW. was put on load in June. This additional capacity enabled the North Island system peak load to be carried without difficulty, the winter peak being 396,200 kW., compared with 343,900 kW. in 1947.

Rainfall above average in the lake catchment areas during April and May improved hydraulic conditions. The reduction of 5 per cent. below allocations effected on the 14th March, 1948, and increased to 15 per cent on the 30th March, was progressively relaxed, and by the 24th May it was possible to return to normal allocations. From the beginning of January, 1948, to the 14th March the consumption was 10·5 million units above allocations. The restrictions between the 14th March and the 23rd May reduced consumption by 26·25 million units, or 8½ per cent. below the normal allocation. If the allocation had not been exceeded during the early part of the year, the average reduction necessary in April and May would have been under 5 per cent. While appreciable, a 5-per-cent. reduction might well be tolerated without serious upset to domestic or industrial electricity users. This emphasizes the desirability of a steady and sustained effort to limit consumption to the allocation, rather than having drastic power cuts for short periods to remedy a position made even more difficult by excess consumption.

Owing to the improved hydraulic conditions the units saved in April and May were returned to the consumers. By the 26th September the total consumption had exceeded the allocation to date for the proportion of the calendar year. The weekly rate of consumption was then averaging about 8 per cent. above allocation, and the lake-levels at Taupo and Waikaremoana were falling. As it was essential for storage to be built up in the summer months in preparation for the following year, Supply Authorities were advised that, for the remainder of the calendar year, consumption should be reduced to the allocations. By the end of December total consumption had exceeded the allocation for the calendar year by 36 million units, or 2¼ per cent., equivalent to nearly 3 ft. of storage in Lake Waikaremoana.

At the beginning of January, 1949, the level at Lake Taupo was 1,176·4 ft., compared with 1,175·7 ft. at the corresponding time last year, and at Lake Waikaremoana, 2,005·8 ft., compared with 1,994·6 ft. The increase in generating capacity and the improved storage position at Lake Taupo and Lake Waikaremoana made possible an increased allocation for the calendar year 1949 of 4 per cent. above that fixed for the previous year, corresponding to an estimated generation of 1,945 million units.

During January to March, rainfall at Taupo was 92 per cent. of the long-term average. By the end of March the level had fallen only 8 in. and 75 per cent. of the controlled storage remained available, compared with only 17 per cent. at the same date last year. At Lake Waikaremoana the January to March rainfall was only 66 per cent. of the average, and by the end of March the level had fallen to 2,000·6 ft. Even so, there was nearly 12 ft. more storage available than at the corresponding date last year.