

2. SUBSTATIONS

(a) 220 kV.

Bunnythorpe.—By moving some 64,000 cubic yards to various fillings the site has been levelled. Fifty-five chains of formation on the railway siding and 44 chains of road-formation have been completed. Test bores were put down on the site of the main building. A contract has been let for the construction of ten houses and two single men's quarters in the new village area. A 50 ft. by 20 ft. steel Task Force hut has been erected for a works office and store.

The following equipment has been received, inspected, and stored either on site or indoors at a rented store at Kakariki: approximately 300 tons reinforcing-steel, one 80 ton electric overhead-travelling crane, twelve of the fifteen 110 kV. oil circuit-breakers, and substantial quantities of parts and insulators for the 220 kV. and 110 kV. airbreak switchgear.

Contracts have been let for the following major items, for which deliveries have not yet commenced: two 30,000 kVA. synchronous condensers, two 50,000 kVA. banks of 220 kV./110 kV. transformers, four 220 kV. oil circuit-breakers, and two 250 kVA. local-service transformers.

Haywards (Projected).—Contour plans of the site were prepared, some test bores were made, and instructions were given for the Proclamation of that part of the site, on which the substation proper will be erected.

Otahuhu.—The Proclamation for the taking of 24 acres was gazetted in August, 1946. Subsurface explorations by means of test bores have been carried out and the materials analysed by the Soil Survey Division of the Department of Scientific and Industrial Research. These investigations have disclosed that special foundations will be needed to accommodate the heavy loads of the synchronous-condenser building. A temporary water-supply has been arranged by way of a main from the Otahuhu Borough Council and 400/230 v. light and power reticulation completed. Heavy equipment continues to arrive and is being transported and stored at Auckland. As found necessary, attention is being given to the cleaning and painting of transformers, &c., as a preservation measure.

(b) 110 kV.

Penrose.—The major work centred around the changeover to the new control-room, and this has been completed, all operating-equipment having been transferred. New 110 kV. P.T.s were installed, replacing older-type equipment. Push-button control for removing the interlock on condenser O.C.B. 102 was installed; this allows a quicker start up, avoiding the former time delay required for the machine to come to rest.

Roskill.—Cabling was run to six outdoor light-standards.

Henderson.—The 30,000 kVA. 110/50 kV. transformer-bank installation was completed. Buchholz and restricted earth leakage protection was fitted to two transformer banks. The modernization of the 11 kV. control-board was completed. Six outdoor light-standards were constructed and installed, together with utility power outlets in the transformer enclosure.

Bombay.—A 50 kV. O.C.B. for the Waiuku line was installed in May, and distance relays were put into service on the 110 kV. lines in August.

Hamilton.—The District Office staff moved into the new administrative building in December. A new carpenters' shop and a temporary store were completed. Tenders are being called for a new switchroom at No. 2 substation. New 11 kV. switchgear has been ordered.

Ongarue.—Tenders are being called for a 5,000 kVA. 110/11 kV. T.C.O.L. transformer bank.