

can be installed at a cost of about £65,000, and if the scheme proposed above is adopted this unit should be installed at Coleridge somewhat in advance of the major development at Waitaki. The per kilowatt cost is low, and, as it can be installed more quickly than can the main development, its installation would obviate any risk of short supply, and allow the main construction and expenditure to be delayed by about a year.

The amount of water available at Coleridge would want careful watching if a dry year were struck, and we would probably have to draw considerably on the storage until the Waitaki was ready. Once that scheme was in operation the supply of water in Lake Coleridge could be stored up again and the augmented Coleridge station run to full plant capacity, but on somewhat lower load-factor, to meet peak demands, whilst the bulk load was carried on the Waitaki station.

The Waitaki site outlined above appears the most suitable available, and is certainly preferable to the Waimakariri or Lake Tekapo proposals. Surveys and borings are still being carried on at different sites on the Waitaki, and it is just possible that one of two other sites a few miles farther up the river might prove slightly more advantageous than the one which has so far been most completely investigated.

Surveys commenced at the end of 1925 to determine the power resources of Lakes Te Anau and Manapouri were continued during the past season (1926–27), and will be resumed early in the coming summer, when it is hoped to complete the field-work. At the present time field-work for the scheme whereby power from Lake Manapouri will be developed at Deep Cove is complete, and huts have been established along the route from Te Anau to George Sound. Owing to delay in the delivery of the equipment ordered for making the aerial photographic survey, the Defence Department has not yet been able to make a start with this work in this district.

ELECTRIC-POWER BOARDS.

Amendments to the original Act, based on the results of experience, were passed in 1919, 1920, 1921, 1922, and 1923. The legislation was consolidated and amended in the Electric-power Boards Act, 1925.

The development of the reticulated areas of Electric-power Boards has made substantial progress during the year. One additional district was formed—viz., North Canterbury—and there are now forty-three districts constituted, and thirty-five actually carrying out the distribution and sale of electrical energy (August, 1927). The total area covered is 64,457 square miles, or 62·5 per cent. of the total area of the Dominion; the total population concerned is 886,924, or 64 per cent. of the total population of the Dominion; and the unimproved value of the land included in the electric-power districts and outer area is £263,638,004, or 79 per cent. of the total unimproved value of the Dominion.

The attached coloured map shows the location of the various Boards already constituted and the proposed Boards. The areas in which Electric-power Boards have not been set up are on the whole comparatively sparsely populated, but there are two localities where it would appear that such Boards could with advantage be formed—viz., the suggested Nelson Electric-power District, including Nelson City, Richmond, Motueka, Brightwater, Wakefield, and surrounding district, and the suggested Waimarino Electric-power District, which includes Ohakune, Raetihi, and surrounding districts.

So far only one of the four main cities—viz., Auckland—has been included in the inner area of a power district, but of the secondary centres the boroughs of Wanganui, Palmerston North, Invercargill, Timaru, Napier, Hastings, Blenheim, Greymouth, Gisborne, and Oamaru are included. The advantage of Power Board organization is more obvious to rural than to urban ratepayers, and yet the above position indicates that some of the more important centres are realizing that it is to their advantage generally to be associated with the country in undertaking the work of reticulation of electric power on a comprehensive scale.

The Boards already formed are working energetically in carrying out their functions. Twenty-two Boards—viz., Waitemata, Thames Valley, Cambridge, Central, Franklin, Waitomo, Te Awamutu, Hutt Valley, Horowhenua, Manawatu-Oroua, Wanganui-Rangitikei, Central Hawke's Bay, Hawke's Bay, Dannevirke, Tararua, Wairarapa, Malvern, Bank's Peninsula, Springs-Ellesmere, Ashburton, South Canterbury, and Waitaki—have carried out fairly complete reticulation of their areas, and are distributing power taken in bulk from the plants at Horahora, Mangahao, and Lake Coleridge. The Auckland Board has taken over the city electric-power station, and is providing for large extensions of both plant and mains. It has also entered into a contract to take the whole of its power, with a minimum of 15,000 kw., from the Government when the Arapuni Station is completed, which is estimated to be in 1929. Taranaki is now giving a supply from its own generating-station at Tariki. Wairoa is taking power in bulk from the Department's station at Lake Waikaremoana, and supplies the borough of Wairoa and a few consumers in the neighbourhood. Six—viz., Opunake, Taranaki, Southland, Wairere, Marlborough, and Teviot—have local water-power stations in operation. Three others—viz., Poverty Bay, Bay of Plenty, and South Taranaki—are arranging to take power in bulk from the Government hydro-electric sources, and are preparing their systems of reticulation with this end in view. The Grey Power Board has erected a steam station of its own. The Tauranga, Otago, and Otago Central Boards have arranged to purchase power in bulk from other authorities. The other five—viz., Hobson, Buller, Reefton, Golden Bay, and Westland—are making arrangements which have not yet been finalized.

Table T gives details of the date of constitution, the area, population, and rateable value of each of forty-two power districts already formed, also the amounts of the loans already authorized, and the voting on each poll taken. The total amount of the loans authorized by the thirty-six districts which