

out the distribution and sale of electrical energy (August, 1928). The total area covered is 66,903 square miles, or 63 per cent. of the total area of the Dominion; the total population concerned is 929,763, 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 £255,906,336, or 77 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-four Boards—viz., Waitemata, Thames Valley, Bay of Plenty, Cambridge, Central, Franklin, Waitomo, Te Awamutu, Hutt Valley, Horowhenua, Manawatu-Oroua, Wanganui-Rangitikei, Central Hawke's Bay, Hawke's Bay, Dannevirke, Taranaki, Wairarapa, Malvern, Banks Peninsula, Springs-Ellesmere, Ashburton, North Canterbury, 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 large portion of Wairoa County. Six—viz., Opunake, Taranaki, Southland, Wairere, Marlborough, and Teviot—have local water-power stations in operation, and the Golden Bay Power Board is arranging to do likewise. The Westland Power Board has delegated its license to Westland Power, Ltd., for a term of years. One other—viz., Poverty Bay—is arranging to take power in bulk from the Government hydro-electric sources, and is preparing its systems of reticulation with this end in view, whilst meanwhile operating its own fuel plant. 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 four—viz., Hobson, South Taranaki, Buller, and Reefton—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-three 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-seven districts which have taken their polls is £11,272,726. The population of the districts concerned is 926,017, so that the loans authorized amount to £12·1 per head of population, as compared with £13·1 last year. The unimproved valuation of the districts is £230,884,781, the loans authorized amounting to 4·88 per cent. of the unimproved rateable value of the lands pledged as security for the loans. The voting at the polls totalled 49,228 to 7,940—i.e., a majority of 84 per cent.

Table U shows the capital expenditure incurred by each Board up to the end of the financial year 1927-28, the revenue and expenditure, and the amount of rates struck and collected.

The total capital outlay by the thirty-five Boards which have started construction is £11,072,920, and a small proportion of this is on works not yet in service. The gross revenue from the sale of electricity by the thirty-five Boards which had commenced supply was £1,628,191, of which 35·3 per cent. was received by the Auckland Board. The general result is a profit over the whole business of the Power Boards of £107,702 for appropriation to Depreciation and Reserve Funds, &c.

During last year six of the Boards struck a general rate, which was collected in three cases, and five of the Boards struck special rates for the security for loans, which were collected in three cases.

Several of the Boards have been passing through a critical stage owing to the high cost and high interest rates ruling in 1921 when they started construction work, and to the fact that they have undertaken the construction of many lines without requiring the guarantees from consumers authorized by clause 7 (d) of the 1922 regulations, and since amplified in the 1927 regulations. But costs and rates of interest are now substantially lower, and other Boards are profiting by such experiences, and much better results will be attained by the Power Boards generally in future as the result of the experience of these earlier districts.

LOCAL ELECTRIC-SUPPLY SYSTEMS.

Including the Government plants, there are now (31st March, 1928) forty-one public electric-power stations in the Dominion, as compared with forty-eight last year. One new hydro station (Marlborough) came into operation, and four water-power (Fairlie, Havelock, Waverley, Rotorua), one gas (Napier), one oil (Hastings), and one steam (Wanganui) stations were shut down from regular operation when bulk supply became available.

The total installed capacity has increased during the year by 7,445 kw., or 5·3 per cent. (from 138,915 kw. to 146,360 kw.), while the sum of the maximum loads has increased by 11,163 kw., or 10·41 per cent. (from 106,282 kw. to 117,445 kw.).