

per annum, making a total annual expenditure of £767,728, requiring an average return of £5·9 per horse-power per annum of maximum load.

The last year's return on the Lake Coleridge expenditure amounted to £5 per horse-power per annum, but this return is influenced adversely by the predominance of the concentrated city load over the more diversified general supply. It is anticipated that in the larger scheme, with a bigger range of distribution and a greater variety in the use of power, and the consequently greater diversity of demand in the system, a return of at least £6 per horse-power can be easily obtained at the same rates as those prevailing in the Christchurch district.

GENERAL REMARKS UPON THE ESTIMATES.

Referring to the estimated capital expenditure of £45·63 per horse-power of plant, this rate is somewhat less than the present inclusive expenditure upon the Lake Coleridge undertaking, which is about £50 per horse-power, and as the success of the latter is already assured there is every reason to believe that the larger development will also prove to be a financial success. The significance of the figure may readily be appreciated by comparing it with the cost of a steam plant. The figure mentioned is not at all an uncommon one when all expenditure incidental to the installation of the steam plant is included.

The significance of the proposed expenditure may also be appreciated in another way. It would require at least 1,000,000 tons of coal per annum to do the work of the proposed hydro-electric plant if burnt under existing conditions. Coal would therefore be conserved to that extent, and if its value on the average be assessed at £1 per ton the sum of £1,000,000 per annum if invested at $2\frac{3}{4}$ per cent. would amount in seven years to £7,600,000, a sum which is slightly in excess of the capital required.

Further, the total capital charges, including interest, sinking fund, and depreciation, of $7\frac{1}{2}$ per cent., amount to seven-eighths of a penny in the pound on the present unimproved value of land in the North Island. We know, however, by experience of the Lake Coleridge undertaking that even at very low rates for power, which compare favourably with rates charged in any part of the world, sufficient revenue is obtained at an early stage of development to meet all capital charges as well as working-expenses, whilst at the same time values are enhanced, production increased, and expenses of production diminished.

E. PARRY, M.I.E.E.,
Chief Electrical Engineer.

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