

This figure also does not include the 22,452 h.p. of electric motors already installed, as these are supplied from the other prime movers included in the above total; but this figure is of importance in indicating the amount of motive power in the Dominion which is already applied electrically. Of this electric-motor power 22,000 h.p. has been installed during the past six weeks—that is, under present conditions 3,600 h.p. of electric motors are being installed per annum.

TABLE NO. 2.—COMPARISON OF TOTAL POWER (EXCLUSIVE OF RAILWAYS) IN USE IN NEW ZEALAND IN 1904 AND 1910.

	1904. (Mr. Hay's Report.) Horse-power.	1910. Horse-power.	Percentage.
Auckland	51,603	57,973	Inc. 12·3
Hawke's Bay	9,888	11,008	" 11·4
Taranaki	9,084	10,415	" 15·8
Wellington	28,568	38,921	" 36·2
Nelson South	8,724	8,393	Dec. 3·8
Nelson North	3,699	3,491	" 5·6
Marlborough	2,615	3,138	Inc. 20·0
Westland	7,156	7,780	" 8·7
Canterbury	13,576	17,179	" 26·7
Timaru	3,774	7,189	" 90·5
Otago	27,741	23,283	Dec. 16·0
Southland	14,160	15,688	Inc. 10·8
Total	180,588	204,458	Inc. 13·2

In Table No. 2 herewith the total power now installed in each district is compared with that in 1904, as published in Mr. P. S. Hay's report (parliamentary paper, 1904, D. 1A). The average increase for the six years is 13·2 per cent.—about 2 per cent. per annum. But the progress of the centres which offer the most likely markets for power-development is much larger than the average—viz.,

Canterbury	26·7 per cent. in 6 years.
Wellington	36·2

Auckland District has progressed steadily (12·3 per cent.), and Southland shows a growth of 10·8 per cent. for the six years. Timaru District, showing an increase of 90·5 per cent., is adjacent to the Canterbury District, and would be supplied ultimately from the same power-scheme.

The figures for Otago are instructive—viz., a reduction of 4,458 h.p. It must be noticed that the latter figure does not include 6,382 h.p. of electric motors, of which 5,381 h.p. are supplied from the Waipori water-power system. Undoubtedly the Otago District has progressed industrially, and has not retrogressed, but the introduction of electric power with the consequent economies in direct application has enabled the greater industrial requirements to be met by a smaller rated horse-power of prime movers, showing the influence of the load-factor on the power installed, a point that will be discussed in dealing with each proposed power-system.

TABLE NO. 3.—DETAILS OF POWER REQUIREMENTS AND COSTS OF NEW ZEALAND CITIES, INCLUDING SUBURBS, YEAR ENDED 31ST MARCH, 1910.

	Wellington.	Auckland.	Christchurch.	Dunedin.
Population	76,390	97,929	78,605	62,584
Present power in use,—				
Steam-engines	H.p. 17,500	14,500	10,800	9,800
Gas and oil engines	6,420	5,900	3,360	2,400
Pumping water and sewerage	1,000	660	450	300
Harbours and docks	560	260	500	460
Railway workshops	120	80	440	240
Total prime movers	25,600	22,400	15,550	13,200