

professional engineers per million of the population at the respective periods. The questionnaire shows that the number of engineers per million of the population is now 630, a figure which represents a decrease from earlier years :—

Year.				Number of Professional Engineers.	
1911	..	..	..	750	per million of population.
1916	..	..	..	845	..
1926	..	..	..	835	..
1936	..	..	..	670	..
1948	..	..	..	630	..

76. The following figures submitted as evidence have not been verified by the Committee, but they are included as offering an interesting comparison with the figures for New Zealand :—

Country.				Number per Million.	Date of Information.
Australia	..	..	..	700	1941
United Kingdom	..	..	..	795	1933
Canada	..	..	..	1,800	1941
United States of America	..	..	..	2,250	1946

77. The figures taken from the questionnaire are sufficiently arresting to require some further comment. It is possible that if engineers could suddenly be supplied to fill all the 286 vacancies that are stated to exist, they might not be absorbed immediately. On the other hand, there is ample evidence that staffs are inadequate to cope with existing demands even though a good deal of engineering work is held up for lack of essential materials.

78. When the Prime Minister received the deputation from the New Zealand Institution of Engineers, which resulted in the setting-up of this Committee, he received at the same time a deputation from the Professional Engineers' Association which drew attention, among other things, to the extreme shortage of qualified engineers in this country. Several local bodies when sending in their return commented on the fact that they had advertised vacancies without success—sometimes without receiving a single reply. One large Government Department indicated that its return was based on the assumption that the same policy would be pursued in the future as in the past of employing equal numbers of qualified and unqualified engineers. This policy had been forced on it for the time being by the impossibility of securing greater numbers of qualified professional engineers. As one illustration of the effect of this shortage the Committee was informed that the Project Engineer of the Waikato hydro-electric scheme estimated his requirements at 21 experienced engineers and 22 juniors, a total of 43 for the work to be carried on with efficiency. The staff is actually 18 experienced engineers and 5 juniors, a total of 23, or little more than half the number required. It is known that all the Government Departments employing large numbers of engineers are having extreme difficulty, not only in handling the tasks immediately ahead of them, but also in planning for the future.

79. It is interesting to note that a similar investigation into the requirements of scientific man-power revealed a present shortage of 20 per cent., compared with twenty-six per cent. for engineers and an additional fifty-three per cent. required in five years, inclusive of present vacancies, compared with sixty per cent. in this inquiry.

80. According to the questionnaire answers the total number of positions available to professional engineers to-day is 1,366. It seems probable that, had complete coverage been obtained, there would have been revealed an additional 70 filled positions (see para. 69) and a further 14 or so vacant positions, making some 84 in all. The number 1,366 must therefore be increased to 1,450, which works out at about 800 per million. If similar adjustments are made to the number required in five years' time, the questionnaire figure of 1,733 would become, say, 1,825, or approximately 935 per million of the estimated population at that date.