Then, as 1 acre 1 foot deep = 43,560 cubic feet, and a Government sluice-head = 1 cubic foot per second, one acre-foot will last $\frac{43560}{40}$ = 17 minutes 7 seconds, and one hour will require a supply of 3½ acre-feet. 1 hour per day for 20 days will require 70 acre-feet or 19,000,000 Imperial gallons, 2 hours per day for 20 days will require 140 acre-feet or 38,000,000 Imperial gallons, 5 hours per day for 20 days will require 350 acre-feet or 95,000,000 Imperial gallons, 10 hours per day for 20 days will require 700 acre-feet or 190,000,000 Imperial gallons. The quantity required I have taken as 150 acre-feet (*i.e.*, for, say, 2¼ hours for 20 days), which is 15 acres averaging 10 ft. deep, and will cover land in the mining-area upon which dam-sites and other mining rights can be granted."

4. Are there facilities for getting the dams necessary for this purpose at Waipori?—Yes, at three different locations.

5. Will there be any difficulty in obtaining the 120 heads of water which you refer to in your report?—None at all, from an engineering standpoint.

6. Mr. MacGregor asked you with regard to some figures we had as to the requirements of Dunedin. 580-horse power, we were told by Mr. Goodman, were required for the trams, and sixty arc lights for lighting the tramway?—Yes.

7. Have you considered the present known quantity of motive power in use in Dunedin?—That which I am fully aware of is somewhat more than 1,600-horse power, but in becoming aware of that I have not personally made a complete canvass of the town.

8. Mr. Hay said it was 1,760?—I believe he was a little more thorough.

9. But he thought that that power which is now used for sawmills and foundries would not be used electrically?—The reason he would have for making a statement of that sort would be that in a sawmill they would use their own refuse material for fuel. Now it happens that in Dunedin two of the sawmills already up and another which is being put up—namely, Messrs. Foster and George's and Simpson and Co.'s—are using gas-engines; and in another concern that did use a steam-boiler in Christchurch—namely, Jameson's—they have now entirely discarded their steam plant and put in an independent motor drive on each of the machines—namely, their saws, their planers, and so forth, substituting their whole steam plant with electrical motors.

10. And in each of the cases you have mentioned these sawmill-owners might have used their own refuse if they had wished?—Yes.

11. But they preferred motors?—Yes. A steam-boiler necessitates a man to take care of it, and that is a continual running-expense. A steam-boiler also requires a considerable time to start the machinery, a gas-engine less time, and an electrical motor can be simply started by turning on a switch.

12. Do you agree with Mr. Hay's view that the sawmillers now will continue steam?—No, I do not.

13. Do you know any reason why they will not use electric power if it can be supplied?—I can see no reason. I have seen steam-power displaced in sawmills in several towns in California by electrical equipment.

14. Was there a full supply of sawdust and other timber refuse there?—There was.

15. I pass now to the other class mentioned—foundries. He said that some foundries might continue to use steam. What think you?—Messrs. Burt and Co. have said they would take advantage of our advent in Dunedin to replace the steam used in working their machine tools. The principal thing I have in mind is the steam-hammer, which can be profitably displaced by a compressor—that is, compressed air.

16. Is it used in America?—Yes; they use this compressed air for many other purposes, as well as the steam-hammer.

17. Can you see any reason why electricity should not be used for foundries?—I do not.

18. He also mentioned soap-factories. What would you estimate the total power at that is used in soap-factories in Dunedin—roughly?—Somewhere about 50-horse power.

19. Assuming that 1,760-horse power steam is now being used in Dunedin, if you deduct 50-horse power for that you will still have the bulk of that steam-power in Dunedin to replace with electrical power?—Yes.

20. You have told us that you considered the lighting of Greater Dunedin would require 250-horse power?—Yes.

21. Have you calculated on the best basis what the electric lighting for Greater Dunedin and for domestic and all other purposes would require?—For domestic and public lighting, shops, factories, and stores you would require more than one light per capita.

22. What would that give you for greater Dunedin, with a population of 53,000?—5,300-horse power.

23. You have 580-horse power for trams and lighting the tram-route, assuming that you only convert 1,600-horse power of the present steam-power now being used in Dunedin, and require 250-horse power for street-lighting, and 2,000 for the calcium-carbide company, that would give you a total demand of 4,430-horse power?—Yes.

24. This does not take into account what may be required for growing industries?—No, nor for what is required by the applications we have had already. One was from the Government Railway Depot.

25. It was suggested by Mr. MacGregor on Saturday that this large amount of power for electric light would be uniformly spread over Greater Dunedin, and that therefore you would get a share outside of Dunedin proper. What do you say to that?—The population of Dunedin may be half inside and half outside—in the city proper and out of the city proper; but the place where the people work, as a matter of fact, is indicated by the concentration of even the car-lines into the city. The most of the manufacturing-shops are within the city proper, and the bulk of the lighting will be there. This average that I have spoken of as one light per capita includes all