

is an adequate reserve in the sources of water to draw upon to meet these extraordinary requirements and the requirements of special industries. I would illustrate that a little better by reference to what has happened in Tasmania. In Tasmania the Government originally granted a concession to a company to develop the Great Lakes sources of water-power, which is situated near the centre of Tasmania. That company assigned a certain amount of capital for the purpose, but failed to complete, and were not able to secure the balance in order to complete the works. The Tasmanian Government ultimately took over the business on my recommendation and at a valuation which I had prepared. I gave them a forecast of the business to be done, and it was on that basis that they took it over. In making that forecast I simply took the ordinary requirements of the community—that is to say, railways, tramways, lighting in the principal towns, some irrigation, and the requirements of the mines—that is to say, the business of the community as it then appeared—and I just mentioned the possibility of special industries in the way of electro-metallurgical and electro-chemical industries. The point I wish to make is this: A few months after the Tasmanian Government took over the works and were about to complete the plant they made a contract to supply 25,000 horse-power for the reduction of zinc-ores by the electrolytic process. I had carefully consulted mining experts and others during the preparation of my report, and nobody ever suggested the possibility of that particular industry at the time. I thought the works had been developed on a rather large scale to start with, but they turned out to be developed on too small a scale in view of the requirements of these special industries. The size of the original works were 10,000 horse-power. The Tasmanian Government immediately added another 8,000 horse-power, and they have another 16,000 horse-power on order. I just mention that to illustrate what I was saying with regard to our scheme for the North Island. It has been founded on the ordinary requirements of the community, but we have seen to it that there is a surplus available at the source, which can be drawn upon at any time to meet any of these special requirements. We have also kept in mind before anything else the needs of the rural public. I think the more isolated a person is the more he requires the aid of mechanical power. It is probably more expensive to supply him than it is to supply the town population. We know from our experience at Lake Coleridge that that class of business is remunerative, and is quite as remunerative as the town business, for the reason that the farmer is more dependent upon the power than are dwellers in the towns. The town dweller can get his coal fairly cheaply; he can get gas if he wants it; and he does not, as a matter of fact, use electricity to the same extent as the farmer. And it is for that reason we are able to assure ourselves that the country business is quite as remunerative as the town business. We also have this in front of us as a principle: to provide such a general system of distribution that the supply of electric power is available wherever the circumstances are such as to need the supply of power. At the present time the industrial promoter, when locating his works, has to consider how he is going to get his coal and water, with the result that the final location is not the best for the business itself, but is the best possible compromise he can obtain under the circumstances. I think that if such a general system of distribution is made available there will be a very great industrial development, especially in the way of treating ores of different kinds. At the present time anybody contemplating that sort of business—such as the treating of ores or sluicing or dredging—is always faced with the proposition that the business is not a permanent one. Sometimes he recognizes that it will be of only three, seven, or ten years' duration, and it is a very big problem to provide a power plant which will only be used for that period. Quite a number of minerals will be treated which no one would think of treating under the present circumstances. We think also that a general scheme of distribution is absolutely necessary in order to enable the Railway Department to keep pace with the requirements and needs of the community. I may mention just what is happening in other places, which is really a very sure guide in regard to the course of development in New Zealand in the matter of railways. For instance, there is the Chicago-Milwaukee-St. Paul system. They have a section or division 440 miles in length over the Rocky Mountains, which was a great obstacle to traffic. They decided to electrify that section, with the result that they have now forgotten that the mountain division exists, to quote the words used by the president of the railway, whereas formerly it was their greatest worry. There is another division, 220 miles long, further west, known as the Cascade Division, which is also an obstacle, and they are now proceeding to electrify that division as well, and there is a section between on easy grades which they will continue to operate by steam. There is no intention at the present time to electrify the rest of the railway system, nor is it necessary to do so, as steam haulage is capable of very great expansion on easy grades; it is only on steep grades that its limitations are felt, and it is important to notice that by improving the traffic-carrying capacity on the critical sections with steep grades the whole railway system is improved to the same extent at the cost of electrifying the mountain section. Applying that to New Zealand, I think you will see where the advantages of an electric-power system of distribution comes in, which shall be available wherever it is required by the Railway Department to tide over those critical sections.

*Mr. Hornsby:* The Rimutaka, for instance.

*Mr. Parry:* I think that is rather too critical. I think that ought to be eliminated altogether. I am thinking of a section between Taumarunui and Taihape, for instance. The time will undoubtedly come when the traffic requirements will be such that this will form a serious obstacle to any increased traffic, and the country will then be faced with the necessity of regrading that section, whereas by electrifying that one section they will be able to surmount that particular difficulty and also improve the carrying-capacity of the whole of the North-Island-main-line system. We think that if such a system of electric power is generally available there will also be development of light railways in New Zealand. I mean by light railways a class of railway or tramway that can be placed on the roads, thus using the ordinary gradients of a good road, and which would not be so