

Returning to Auckland and going thence to Rotorua, we visited the Okere Falls, a beautiful place and a very valuable asset. Continuing our journey we reached Wairakei, and, making it our headquarters, we examined the Waikato watershed, visiting the following places: Atiamuri Rapids, Rainbow Falls, Gorge below Orakei Korako, Orakei Korako Rapids, Aratiatia Rapids, Huka Falls, Lakes Taupo and Rotoaira. In this region, which is quite unusual in many ways, immense quantities of power can be developed, and, though somewhat distant from centres of industry, it will some day prove of wonderful value to the colony.

Passing from the Waikato watershed we reached the Rangitikei, a strange district, but one in which it is possible to develop a considerable amount of power. Leaving Hunterville by train it was but a short ride to the noted Manawatu Gorge, strange and beautiful in many ways but not up to what was thought for power purposes. From Woodville by train to Wellington was a delightful ride through an excellent district.

From Wellington we took boat to Lyttelton, thence train to Christchurch, from which as a centre we examined the Waimakariri, a very large stream where power can be developed when the need warrants. We examined it as far up as the confluence of the Broken River, giving it a good deal of attention because it was the first shingle river we were examining. From the Wainakariri we journeyed to Lake Coleridge and the Rakaia, and back to Christchurch. Lake Coleridge seemed so likely a place that we arranged to study further the question of locating a power-station there.

The Rangitata was the next on the list, but we were satisfied after considerable study of conditions that it was not necessary to spend much time on it, especially as those most familiar with it could not mention any place where it would be possible to locate power-stations to advantage.

However, we arranged to give this river as thorough consideration as any of the others.

Proceeding by train we reached Fairlie where we examined the Opihi and the Opuha Rivers. Journeying through Burke's Pass we reached the watershed of the Waitaki, a wonderful region, where great quantities of power can be developed when needed. We examined the rivers and lakes very carefully, Tekapo, Pukaki, and Ohau, with their rivers, and the Waitaki down to Kurow.

At Kurow we took train to Dunedin, from whence we examined the watersheds of the Clutha and Taieri Rivers. The whole region is a very rich one, where an abundance of power can be developed. We first went to Lawrence, from whence we examined the Clutha from Beaumont to Miller's Flat. Returning to Dunedin for maps and other data we took train to Ida Valley, examining on the way the Deep Stream and the Taieri up to the lake. At Ida Valley we took coach to Ophir, where we examined the Manuherikia. Passing on to Clyde, Cromwell, and Pembroke, we had an excellent view of the Clutha and its surroundings. At Pembroke we examined Lakes Hawea and Wanaka, and then hurried on to Wakatipu. We made Queenstown our headquarters and visited the outlet of the lake and the Shotover River, going up it as far as Skipper's. From Queenstown we proceeded *via* Lumsden and Mossburn to Lakes Te Anau, Manapouri, and Monowai. We spent several days examining the lakes and rivers of this region, which has great possibilities. A number of locations were examined which will prove of great value later on.

At Otautau we reached the railroad again, by which we journeyed to Invercargill, Dunedin, Christchurch, and Springfield, and thence by coach to Otira, where we stopped to examine the Otira and Rolleston Rivers, beautiful gorges both, and susceptible of considerable development.

From Otira we travelled to Greymouth, where we stopped a short time for consultation with the local engineers and for map-study. We proceeded from Greymouth to Reefton, and thence to and through the Buller Gorge to Nelson, a wonderful district, full of possibilities, and which furnished us a delightful ride. On the way we stopped a number of times to examine the river and its tributaries, especially the Inangahua and the Rotorua.

Reaching Nelson we spent a day in examining maps for accurate information of the district, and in making a trip up the Maitai River. At Nelson we took the coach to Blenheim, and after a casual observation of the Pelorus, Wakamarina, Wairau, Waihopai, and Awatere we returned to Wellington.

The tour gave us a wonderful impression of the possibilities of the colony, its sublime scenery, and the bright future ahead. Both Islands have great reserve resources which only await development to richly repay the investments. The wonderful development already reached is worthy of great praise.

From observation of existing conditions we found it evident—First: That the business of the colony is developed to such an extent that large investments in transmission-work will be profitable. Second: That the industries of the colony are growing healthfully, and that there is throughout the country a general feeling of confidence in the Government and in general trade conditions. Third: That the Government will be supported in carrying out a great industrial undertaking of this nature. Fourth: That the climate and the local conditions are such that it is certain that work of this nature will be successful. Fifth: That the water-power is ample for all existing needs and any future growth and extensions that may ever be devised.

Following up the ideas advanced, it seems that a very suitable place to start operations is at Lake Coleridge, to supply Christchurch and its tributary district. This location offers the following advantages: (a.) Simplicity of installation. (b.) The storage of a great quantity of water. (c.) No enormous cost for initial installation. (d.) The plant can be enlarged as needed. (e.) Development can be carried up to a very large amount later as it is required.

Starting with the existing low-water flow from the lake of 82 cubic feet per second, 4,645-horse power theoretical can be developed for twenty-four hours' service. The expression "theoretical horse-power" does not consider any losses. If only an eighteen-hour service is necessary, 6,967 theoretical horse-power can be developed; or, if only a twelve-hour service is necessary 9,260 theoretical horse-power can be developed without drawing on the reserve storage at all. If the storage is considered, the development can be carried very much farther without getting any additional water into the lake. The transmission-line from the generating-station to Christ-