

mencement to be made accordingly as soon as practicable after the passing of the estimates.

The Department is in possession of more complete engineering data regarding the Hutt and Lake Coleridge schemes than with respect to any of the others, owing principally to the more advanced condition of the surveys. As regards the Hutt scheme, three estimates of cost have been prepared by engineers acting entirely independently of each other, and as regards the Lake Coleridge scheme four such estimates are available. The details of these are as under :—

|                                   | Hancock. | Hay.                      | Birks.   | Holmes.  |
|-----------------------------------|----------|---------------------------|----------|----------|
| LAKE COLERIDGE SCHEME.            |          |                           |          |          |
| Horse-power provided for ... ..   | 10,000   | 58,000 or )<br>29,000     | 13,300   | 15,000   |
| Estimated capital cost ... ..     | £241,667 | £700,000 or )<br>£440,000 | £291,500 | £421,000 |
| Working-expenses per annum ... .. | £58,792  | ...                       | £44,070  | £44,500  |
| Probable receipts " ... ..        | ...      | £200,000 or )<br>£100,000 | £90,000  | ...      |
| Probable profit " ... ..          | ...      | ...                       | £45,930  | ...      |
| HUTT RIVER SCHEME.                |          |                           |          |          |
| Horse-power provided for ... ..   | ...      | 17,000                    | 13,300   | 12,500   |
| Estimated capital cost ... ..     | ...      | £470,000                  | £443,960 | £422,000 |
| Working-expenses per annum ... .. | ...      | ...                       | £50,639  | £38,000  |
| Probable receipts " ... ..        | ...      | £50,000                   | £118,300 | ...      |
| Probable profit " ... ..          | ...      | ...                       | £67,661  | ...      |

It will be observed from Mr. Holmes's report appended to this Statement that, although his proposal is to deliver only 15,000-horse power in Christchurch, he allows for the construction of hydraulic works of sufficient capacity to develop between 25,000 and 30,000 horse power. This will account for his estimate being higher than those of Messrs. Hancock and Birks.

As regards the other schemes proposed, much less information is available, and it will be necessary during the present year to gather further details and complete the surveys which are absolutely necessary, in order that full and reliable estimates, not only of the probable cost, but of the commercial results likely to be obtained from the working of the schemes, and of the markets for power, may be available for submission to Parliament next session.

Honourable members will observe that Mr. Birks's estimates of the probable receipts and expenditure in the working of the Lake Coleridge and Hutt River schemes are of a highly favourable character, and the working of the existing Waipori scheme, which is the only installation of its kind at present in the Dominion, gives some ground for the satisfactory expectation regarding the first-mentioned schemes which Mr. Birks has expressed in his report. The Waipori scheme carries a much larger capitalization per horse-power than either of the Government schemes now proposed, and is also on a much smaller scale (and consequently more expensive to work proportionately) than either of the Government schemes, and yet that scheme is now working at a profit notwithstanding that much of the energy produced is disposed of at only a small fraction over  $\frac{1}{2}$ d. per unit.

The inauguration of our development of water-power policy will render it necessary to obtain the services of a hydraulic and electrical engineer of good standing, so that the Government and the country may feel assured that the moneys appropriated by Parliament for expenditure on these services are laid out on good practical and commercially-sound schemes, and to the best advantage. It is proposed to invite applications for the position immediately.

The estimates now submitted provide for an appropriation of £300,000, which sum will be ample to enable an energetic commencement to be made.

#### RAILWAY ELECTRIFICATION.

Closely connected with our water-power proposals is the question of railway electrification. Inquiries were made into this matter two or three years ago, and a report on the proposed electrification of the Christchurch—