

in a satisfactory manner, it does not help to solve the problem of national efficiency. The first object is and should be to place an unrestricted supply of power at the command of the individual wherever situated, but more particularly in country districts where a supply of electricity is otherwise unobtainable, and on the principle that the more isolated a person is the more is he in need of mechanical aid. The expenditure of £1,200,000, quoted by Mr. Upton, is an estimate which covers headworks and power plant, with transmission to Auckland and other centres in the province, together with a moderate amount of distribution-lines in the province generally. The chief gain from this expenditure is not, as Mr. Upton states, the saving of expenditure upon coal-slack in the City Electricity Works, but the national one resulting from placing power at the command of the individual, thereby increasing the national efficiency and stimulating production. Compared with this, the question as to whether Auckland City Council finds it advantageous or not to take a bulk supply from the Government is a negligible issue.

As to the burning of the slack, there are more ways than one of dealing with slack, particularly if a supply of electric power is available.

It is also certain that as a direct result of increased national efficiency the demand for coal will increase for purposes other than the production of power. And as regards the revenue lost to the Railway Department, I question whether the railing of slack coal is profitable to the Department or worth the wear-and-tear on the trucks and road-bed. I think the tracks and railway service generally could be put to a better use in railing an increased quantity of agricultural produce and industrial products which would result from a generally diffused supply of electricity throughout the province.

Paragraph 6.

In this paragraph it is claimed that the profitable development of hydro-electric schemes in competition with services employing steam generation depends entirely upon the distance of the source of water-power and the cost of utilizing it, as compared with the cost of coal at the chief centre to be supplied.

So far from this being true as regards hydro-electric power, it is not even true as regards electric power derived from fuel plants. Were this true a colliery could not afford to take a supply from an electric bulk-supply undertaking with long transmission-lines, yet that is a common experience. Large numbers of very large collieries in South Wales take a supply in bulk from a power-supply authority. The same is the case in Lancashire and Yorkshire, which I know from personal experience; and it is stated in the Report of the Coal Conservation Sub-committee of the Reconstruction Committee of Great Britain that coal-mines having together an output of 20,000,000 tons per annum obtain a supply of electricity from the North-east Coast Power System. In every case the power is generated by means of a fuel plant; and were it true that profitable development depends on the single factor of distance, then it is a foregone conclusion that a colliery could not afford to take a supply of electricity from a far-distant coal-burning power-station.

In the same paragraph Mr. Upton expresses himself as satisfied that the competition which gas enterprises in Auckland may anticipate in the future can be no greater than that which Auckland Gas Company is now sustaining with a steadily growing business.

I quite agree with this view; but it does not require an investigation into "the economic soundness of the Government schemes" to prove this. The proof lies in the nature of the two agencies, gas and electricity, together with a recognition of the special functions of each. And, as I have said elsewhere, so far from the two services being run by separate authorities, they should be conducted and run by the same authority in towns where both gas and electricity are available.

Paragraph 7.

In this paragraph we learn that 60 per cent. of the gas sold in Auckland is for cooking; it is also stated that the cost of heating by electricity is about nine and a half times that of gas.

Gas is pre-eminently a heating-agent, and its advantages in this respect must be conceded; and although this advantage may not be so great as it is claimed above, due to a difference in efficiency, it is still so great as to be able to claim the field of heating as its own.

Paragraph 8.

Attention is called in this paragraph to some facts quoted by Mr. Lowe in his report regarding the successful competition of gas against electricity in Toronto (Canada) and Bergen (Norway), where it is claimed the electric services which supply these cities are amongst the most up to date in the world.

This confirms the view already expressed by me that gas succeeds on its merits as a heating-agent, and that in order to reassure the shareholders of the Gas Company regarding the effect of the Government schemes upon the gas industry in the few towns in which it is available it is not at all necessary to try and discredit electric-power supply as a State enterprise. It is worth nothing that in the case of Toronto, quoted above, the gas interest is in so-called competition with a State enterprise—viz., the Hydro-electric Commissioners of the Province of Ontario.

Paragraph 9.

Here Mr. Upton quotes Mr. Lowe to prove that the capital outlay upon the Lake Coleridge undertaking greatly exceeded the estimate—viz., £45·8 per horse-power, against £23·2 per horse-power. This is held to be significant of what New Zealand may expect in the future if similar schemes are authorized.

The above comparison is entirely fallacious, as the estimate covers only the outlay necessary to deliver a certain amount of power in Christchurch, and as such it is a fair estimate. The actual outlay