

tons of coal per annum in the north-east coast of England are dependent upon a supply from the north-east coast power system, and that a saving of 1,000,000 tons of coal per annum has been effected in consequence. Large collieries in the Midlands, in Lancashire, Yorkshire, and South Wales obtain a supply of electric power for power-supply authorities in whose area of supply they are situated.

*Paragraphs 25, 26, 27, and 28.*

The purpose of these paragraphs is to show that the Government could not supply Auckland City Council to its advantage except at a price which would not be remunerative, and therefore at the cost of the taxpayer in general. In proof of this a table of the works-cost of the Auckland City Council electric generating-station for the year ending 31st March, 1917, is submitted, showing a total works-cost of 0.5752d. per unit, or 0.55927d. per unit according to another table. This is indubitably a fine performance. The plant is modern and of a most economical type for its size. Coal is cheap, and it is burnt and handled in the most economical way possible. In fact, it is one of the best municipal plants I know of. But when interest and depreciation are added I do not suppose that the total would be less than 0.9d. per unit. This is, then, the cost of generating electricity in Auckland under the best possible conditions and with an expert staff. This does not compare favourably with the average selling-price per unit from Lake Coleridge, nor even with what Mr. Lowe says it ought to be.

It is next stated that after taking account of the saving in coal, oil, waste, stores, repairs, and maintenance it would not pay the Auckland City Council to take a supply at the average revenue per unit from the Lake Coleridge undertaking, and the statement is reiterated that the cost of supplying energy to Auckland from the Waikato is greater than the cost per unit of supplying Canterbury from Lake Coleridge. I have disproved this in answer to a previous paragraph.

But, admitting Mr. Lowe's contention as to the increased capital and annual cost, I see no difficulty in the way of supplying Auckland to advantage and without loss to the Department. It is evident that Mr. Lowe has overlooked the effect of diversity and load factor as well as bulk upon the unit-prices, and he also seems oblivious to the fact that the Auckland City Council will be only one bulk consumer amongst many from the very outset, and possibly not the largest by any means when the scheme is fully developed. In discussing prices all the factors mentioned must be taken into account, without which any statement of price has little or no meaning. As an instance we may refer to the pamphlet under the heading of "Some Interesting Comparisons," where a statement is printed of the total costs of generating and distributing electricity by the Auckland City Council, including interest and depreciation—viz., 1.826d. per unit sold; and yet I have no doubt that the Auckland City Council have many customers paying at a lesser rate per unit than this, whilst at the same time they may be regarded, and rightly so, as being quite as or more remunerative than other customers paying more than the average cost per unit. This should show that Mr. Lowe does not prove his case by quoting either unit-costs or average prices.

*Paragraphs 29, 30, 31, and 32.*

The intention here is to show that the saving in coal resulting from a supply of hydro-electric power would only apply to slack coal, which is produced in the hewing of household coal, and which must be brought to the surface in any case, and that if it is not used it will be wasted and the Railway Department will lose revenue.

I do not know how far it is true that all the slack so produced is used for steam-raising in Auckland, but it is quite certain that a measure of economy which results in economizing coal creates a demand for coal for use in other ways than steam-raising for power purposes; and I am of opinion that the coal-mines will profit as much as any one else by the increase of general prosperity and of production. From my previous experience I feel confident that the coal-mines will be amongst the first to take advantage of a bulk supply of electricity and to use it in more ways than one. As regards the railways, a supply of electricity in bulk is essential if they are to keep pace with the development of the country. In any case I suppose they do not regard the transport of slack coal as a very profitable business, and that they would be glad to replace it with more remunerative business, such as the transport of produce and manufactures.

*Paragraphs 33, 34, 35, and 36.*

The arrangements made with the Christchurch Tramway Board and with the Christchurch City Council for maintaining steam for purposes of a standby are quoted in these paragraphs as proof positive that in order to make reasonably sure of a continuity of supply a complete steam-generating plant would be necessary in the City of Auckland for standby purposes, or else a duplicate line each capable of carrying the whole load.

I do not know why it is necessary to make deductions of this kind when the facts regarding the necessity, expediency, and use of standby plant are ascertainable by reference to the Waihi plant, or the Lake Coleridge plant, or the Dunedin City Corporation plant. Referring to Lake Coleridge, there are in use two transmission-lines each capable of supplying the whole of the present load, which load is two and a half times the maximum supplied to the Christchurch City Council. The Tramway Board maintain at their own expense the plant necessary to run the whole of their service in the event of failure of supply. The Christchurch City Council maintain at their own cost a plant of about one-third of their maximum load. The Dunedin City Corporation have duplicate lines, and maintain a standby plant consisting of oil-engines for their tramways only, but have no standby for their power and lighting load. The Waihi Gold-mining Company rely on a single transmission-line, and maintain a standby for pumping consisting of gas-engines and a steam-engine. These are examples of what