

to be drawn upon in cases of emergency. We import what we need from year to year, and any shortage of supply from whatever cause affects seriously our industries and the comfort of our people.

We can not afford, in the light of past experience, to waste capital on the experimentation for the discovery of processes, which shall be continuous in operation and furnish a fuel from peat similar to coal, nor can we wait until some one at some time in the future will invent such process and demonstrate its commercial possibilities. Neither should prospective manufacturers listen to the marvellous representations made by promoters of schemes and processes, which promise great profit from production at excessively low costs of a peat-fuel superior to anything yet put upon the market, but wisely adopt processes which are already an assured commercial success in the peat-using countries of Europe.

The peat bog at Alfred was acquired by the Government for the purpose of demonstrating to prospective manufacturers of peat-fuel one of these processes, and to prevent failure from choosing bogs unsuitable for their purpose, the Mines Branch has recently undertaken a systematic investigation of the more easily accessible peat bogs. In carrying out this investigation, our peat expert has been instructed to determine and map their extent, ascertain their depth, and also the quantity, character, and calorific value of the peat contained in them. So far, twelve bogs have been investigated, mapped, and reported upon. In case of need, the staff performing this work can be increased to meet the requisitions made upon the Department.

The successful inauguration of a peat-fuel industry in Canada may be looked forward to with confidence if, content to accept European practice, we establish peat plants at strategic points on the workable bogs scattered throughout the farming regions of those Provinces which require to import coal, and operate them in the interests of the neighbouring communities. This will prevent long hauls, for which air-dried machine peat is not fitted.

Regarding the transportation of peat-fuel, our railway companies, realizing the importance of an adequate fuel supply for the central Provinces, and its intimate connexion with the prosperity and further development of these Provinces, should come to our aid by granting special rates for the transportation of this class of fuel. This is the course followed by Germany in those districts which depend to a large extent upon peat for their fuel.

Air-dried peat is not alone an excellent fuel for domestic use, but for the production of power it proves an ideal fuel in the peat-gas producer, which is, to-day, as reliable and efficient in its operation as the coal-gas producer. I do not hesitate to say that it is an ideal fuel, because the peat from most bogs is free from a clinkering ash, and yields on combustion a fine white residue which readily allows of the thorough cleaning of the fire, and the property of not fusing or caking in the producer assures regular operation. Moreover, since gas leaves the producer with a high degree of sensible heat, which must be cooled to the temperature of the atmosphere before being used in the gas engine—it is exceedingly important that as much of this sensible heat as possible be utilized in the producer itself, in order to increase its thermal efficiency. This is accomplished in coal-gas producers by the introduction of water vapour, which passes through