

### Canada looks towards new coal age

Canada is once again looking to coal to help solve its energy needs, reports *Canadian Scene* of September 3. With oil becoming scarcer and dearer, coal is looking better than it has for many years. And Canada has coal in abundance. Geologists estimate there are about 110-billion metric tons of coal lying under Canada's surface, of which about 50 billion tons are recoverable using current technology. The greatest concentration of coal is in Alberta, which has about 22 billion tons of accessible coal. Another 18 billion tons are in British Columbia with the rest in Saskatchewan and Nova Scotia.

An official of the federal Department of Energy, Mines and Resources, Phillip Read, says it should be Canada's policy to substitute coal for oil as much as possible in the thermal generation of electricity and also as a fuel to provide the power to extract oil from the Alberta oil sands. Another way to conserve energy is to use methanol, produced from coal, in place of gasoline. Mr. Read says experiments have indicated that methanol can be used in the conventional internal combustion engine in the ratio of one part methanol to nine parts gasoline. One drawback, which can easily be overcome, is that methanol corrodes some types of rubber and plastic seals that are now used in connection with the storage and use of gasoline.

Methanol is only one of the chemicals which can be produced from coal as

well as oil. Mr. Read says that much of the technology is already in commercial operation in South Africa, which has no oil reserves of its own and therefore has an urgent need to find substitutes. Coal is used in South Africa to produce benzene, xylol, naphtha gasoline, diesel oil and acetone as well as methanol.

### Experiment in economy

Even though coal is bound to become increasingly attractive as the costs of oil and gas increase, an experiment is under way in Alberta that could quickly make coal even cheaper and more convenient than it is and hasten the approach of Canada's new coal age. The first underground coal-gasification test in Canada has been started at Forest-

burg, 90 miles southeast of Edmonton. A coal deposit has been fired underground to convert it to fuel gas. The aim of the test is to demonstrate that coal can be used without undergoing the costly process of mining and transportation.

The test is sponsored by the Alberta Research Council and the Alberta department of Energy and Natural Resources, along with the power authorities of British Columbia and Saskatchewan, the federal Department of Energy, Mines and Resources and 11 private companies. The Alberta Minister of Energy, Don Getty, says that this test may demonstrate a method for making use of coal deposits that are at present regarded as unavailable by conventional mining methods.

### Emett fantasies in Ottawa

For one month, recently, visitors to the National Museum of Science and Technology in Ottawa enjoyed the fantasy and mechanical genius of the famous Emmett creations.

"The Afternoon Tea Train to Wisteria Halt" (*below*) was one of those on show. Designed and constructed by Rowland Emmett, this well-loved train is hauled by Nellie, the senior engine of the "Friars Crumbling to Wastecoat Fancy Railroad". Nellie embodies all that is most pleasing in locomotive practice.

Rowland Emmett, known for years as a cartoonist with *Punch* magazine, started to bring his cartoons to life in

1951. That year he designed and built his famous "Far Tottering" and "Oyster Creek Railway" for the Festival of Britain. With that success he became known as the sculptor of the fantastic. His medium—scrap metal.

Other Emmett creations on exhibit at the National Museum of Science and Technology were the "Vivivision Machine", the "Clockwork Lullaby Machine", the "Little Dragon Carpet Cleaner" and the "Husha Buy Hot Air Rocking Chair". These gadgets were designed and produced for the film *Chitty, Chitty, Bang, Bang*.

The Emmett creations were exhibited at the National Museum of Science and Technology courtesy of the Ontario Science Centre.

