Nova Scotia. In early 1972 the Cape Breton Development Corporation (DEVCO) announced the closing of the No. 20 colliery at Glace Bay. This mine, which had operated for 32 years, had been idle since July 1971 pending an evaluation of its future. The study indicated that, even with large capital expenditures, the mine could not be operated economically. All equipment in the mine was salvaged and moved to DEVCO's three other mines in the area. During 1972 DEVCO began pre-production mining at its new Lingan mine near New Waterford, to partially offset the loss in production from the No. 20 colliery. The Lingan mine is scheduled to begin full production in 1974 at a rate of 1.5 to 2.0 million tons annually; initial operations will employ the room-and-pillar method using continuous miners and shuttle cars. In 1972, DEVCO initiated a research program to develop a way to reduce the sulphur content of Cape Breton coal. The program was undertaken by the federal Department of Energy, Mines and Resources and construction of a full-scale de-sulphurization plant was begun toward the end of 1973.

During 1972 the federal government approved the expenditure of $40 million over a five-year period to rehabilitate three established coal mines on Cape Breton Island: No. 12 at New Waterford, No. 26 at Glace Bay and the Princess colliery at North Sydney. A new preparation plant will be built as part of this program.

In June 1972 Thorburn Mining Limited, formed by the Pictou County Research and Development Commission, permanently closed its McBean coal mine on the Nova Scotia mainland. This mine had been operated for many years on financial assistance from federal and provincial governments.

New Brunswick. In 1972 N.B. Coal Limited produced coal from seven surface locations within the Minto coalfield for thermal generation of electricity in the nearby plant operated by the New Brunswick Power Commission. Underground mining has been phased out and the 2-ft-thick seam is mined by drag-line to a maximum depth of about 80 ft. Easily-mined reserves are nearly depleted but a small production of about 400,000 tons has been maintained in recent years.

Marketing factors. Although metallurgical coal is the least expensive and most efficient source of energy readily available for the steel industry, Canadian thermal coal must compete with imported coal, oil, natural gas and nuclear power. Its competitive position depends not only on mining conditions and costs but most significantly on the distance between mine and market and the availability of low-cost transportation. Transportation costs are the major reason why western Canadian coals have not been used in any significant quantities in Ontario which depends heavily on supplies from the nearer coal fields of the eastern United States. As pressure increases in the US for energy self-sufficiency, supplies from US sources may no longer be as readily available to Canada; faced with rising oil and gas prices, it may become economically feasible to supply western Canadian coal to thermal power generation stations in central Canada. Technological advances such as the use of unit trains similar to those now being used to carry coking coal from Alberta to Roberts Bank, BC could help to offset the effects of higher transportation costs. Other methods being explored include the use of slurry pipelines.

Synthetic natural gas from coal is a developing industry of considerable importance over the long term although it still faces a number of hurdles before commercialization. Advancement of coal gasification technology is expected to lead to full-scale process availability by the end of this decade.

13.7 Electric power

13.7.1 Electric power development

While most of the fossil fuels (coal, oil and gas) are extensively employed in a direct form to provide energy, a significant portion is converted into a secondary form of energy, electricity. In the case of coal, more than half of Canada's energy in this form is converted to electricity. Two other primary energy resources, hydraulic energy and uranium, are almost exclusively employed after conversion to electricity. The reasons for employing this energy conversion, and for the sustained growth in electrical energy use in Canada since the beginning of the century, are principally the ease with which energy in the electrical form can be distributed, the flexibility of control and the efficiency of conversion to mechanical power, light, heat and