

Columbia, the moratorium on uranium exploration should be lifted, because with proper control the possible risks attendant on this activity would be outweighed by the benefits of the knowledge gained. Despite the recommendation, the BC government indicated that the moratorium on uranium mining and exploration, announced in February 1980, would continue.

On February 6, 1981 the summary report of a 13-month Key Lake, Sask. board of inquiry was made public. The board's recommendations provided a basis for the conditions under which the \$500 million Key Lake project would receive final approval. The measures proposed by the Key Lake Mining Co. (KLMC) were judged adequate to protect environmental quality and to safeguard occupational health and safety. In late August 1981, KLMC signed a 21-year surface lease agreement with the department of Northern Saskatchewan, opening the way for ore body development.

On September 13, 1982 the minister of state for mines announced details of a five-year federal research program aimed at expediting the development of technology to determine the harmful effects of wastes resulting from the mining and milling of uranium. It was proposed that the \$9.5 million program would be administered by a national tailings program office to be established in Ottawa.

In October 1982 the Saskatchewan government announced the repeal of compulsory Crown participation in mineral development. It had previously been required to offer the provincial government up to 50% equity interest in any new mineral development in the province.

11.9 Electric power

11.9.1 Development

Data indicated that net additions in generating capacity during 1982 totalled 1 535 MW raising the total installed generating capacity by 1.8% to 85 547 MW. The 1982 capacity additions consisted of 640 MW hydro, 214 MW conventional thermal and 680 MW nuclear. Total installed generating capacity increased by 2 013 MW in 1981, a 2.5% increase over 1980.

Total electricity production decreased in 1982 by 0.9% from 1981. This decrease was linked to reduced industrial activity in Canada. The percentage distribution between generating sources in 1981 was 69.3% from hydro, 20.8% from conventional thermal and 9.9% from nuclear. In 1982, this changed to 68.6% from hydro, 22.6% from conventional thermal and 8.8% from nuclear.

11.9.2 Sources

Hydro. Water power has been developed in all provinces and territories except Prince Edward Island. In 1982 hydro generation provided over 95%

of electrical generation in British Columbia, Manitoba, Quebec and Newfoundland, about 65% in the territories and less than 40% in the remaining provinces.

Thermal power. In 1982 conventional thermal plants accounted for about 94% of electrical generation in Alberta, 84% in Nova Scotia and 76% in Saskatchewan, 64% in New Brunswick, and 33% in Ontario. Conventional thermal generation was also prominent as a source of electrical generation in Prince Edward Island although 90% of electricity consumed there was received from New Brunswick.

Nuclear thermal power accounted for 8.8% of Canada's total electrical generation in 1982. The first large-scale commercial application of nuclear generation by CANDU was in 1971 when the first unit of the Pickering, Ont. nuclear generating station achieved full-power operation. There are now five commercial nuclear stations in Canada. Pickering A (four reactors), Bruce A (four reactors) and Douglas Point (one reactor) have been operating in Ontario for several years. In 1982, these Ontario units provided about 1.6% of Canada's total primary energy demand. Point Lepreau (one reactor) in New Brunswick came on stream in 1982. Gentilly II (one reactor) in Quebec came on stream in 1983. In 1982, nuclear generation accounted for 30.8% of electricity generated in Ontario and 3.2% in New Brunswick.

11.9.3 Federal policy

In relating objectives of the NEP to electrical energy, a number of incentive programs were developed to encourage substitution from oil to more plentiful and less expensive resources. Under grants provided by the Canada oil substitution program (COSP), 107,000 conversions from oil to electrical heating took place between May 1981 and December 1982.

Directly associated with electrical energy and a resultant from the NEP are contributions from the Canadian Electrical Association (CEA) R&D fund and increased support to the National Research Council for high voltage direct current (HVDC) and dielectrics research. These totalled \$2.3 million in the 1982 fiscal year. Funding of additional programs such as heat pumps, rail electrification, small scale hydro and electric vehicles, totalled \$11.2 million. These expenditures are in addition to the major R&D program of Atomic Energy of Canada Ltd. for nuclear energy development in which \$153 million was spent in the 1982 fiscal year.

11.9.4 Provincial policy

A council of maritime premiers and the federal energy minister decided early in 1981 not to proceed with a proposed Maritime Energy Corp. Instead they agreed to establish a co-ordinating committee comprising representatives of the three provinces' utilities, and observers from the federal and the three provincial governments.