

guidelines. Resources mineable at uranium prices up to \$160/kg U were estimated at 82 000 t measured, 107 000 t indicated and 318 000 t inferred U. Additional resources were estimated at 388 000 t U.

In January 1978, Canada and the European Economic Community (EEC) signed an agreement providing for revised nuclear safeguards with respect to Canadian exports of uranium and nuclear technology. Japanese and Canadian government officials completed similar negotiations in January 1978, thus enabling uranium shipments to be resumed to Japanese customers. Negotiations providing for revised nuclear safeguards arrangements between Canada and Switzerland were not completed until mid-1979 and shipments to that country remained under embargo through 1978 and much of 1979.

In 1978, the Saskatchewan government announced that Phase I of the Cluff Lake uranium project could proceed, subject to occupational health, safety and environmental regulations recommended in the report of a provincial board of inquiry. The government agreed in principle with the general expansion of the uranium industry and committed itself to an in-depth review of the board's recommendations. A surface lease agreement reached in October 1978 with Amok Ltd. included recommendations of the board respecting environmental protection measures, the health and safety of workers, and employment and business opportunities for northerners. It was expected that these arrangements would serve as a model for later development.

The government of British Columbia announced that a provincial inquiry would begin in 1979, to recommend standards for uranium mining, to be followed by new guidelines for approval of uranium development projects. In late 1978, an interim report on nuclear power in Ontario was released by the Royal Commission on Electric Power Planning (the Porter commission). While endorsing the continued growth of nuclear power in Ontario, the report suggested that Ontario Hydro's projected installation rate seemed somewhat ambitious. Commission hearings were to continue.

Domestic uranium requirements, estimated at 560 t U in 1977, are expected to rise to some 1 600 t a year by 1985 and 2 500 t by 1990.

In mid-1977 nuclear generating capacity operating in Canada exceeded 5 000 megawatts, 95% of it in Ontario. Additional capacity totalling 10 820 MW was either under construction or committed and scheduled for operation by 1987, some 38% to be in Ontario.

In February 1978, the Ontario government approved the purchase by Ontario Hydro of some 76 160 t U from Denison Mines Ltd. and Preston Mines Ltd. over the period 1980 to 2020. These contracts, the largest sales to date in the world's uranium industry, will permit uranium operations to continue in the Elliot Lake area. As of December 1978 outstanding export commitments of all Canadian producers were approximately 63 000 t U. With continued growth it was expected that uranium would again become one of Canada's leading export commodities.

## 13.9 Electric power

### 13.9.1 Electric power development

Total installed generating capacity increased by 5.8% in 1977 to 70 217 MW with additions totalling 3 821 MW (865 MW hydro, 1 356 MW conventional thermal, and 1 600 MW nuclear capacity). Preliminary figures for net additions to generating capacities during 1978 totalled 4 040 MW and raised the total installed generating capacity by 5.7% to 74 568 MW. The capacity additions consisted of 1 564 MW hydro, 1 676 MW conventional thermal, and 800 MW nuclear.

Production of electricity in 1977 increased 7.8% over 1976 to 317 TWh. In 1978 production again increased by 6% over that of 1977, to 336 TWh. Part of the increase was due to a 5.5% growth in Canadian consumption and the balance was from increased exports to the US.

Total production of electricity in Canada in 1977 was derived from hydro, 69.6%, thermal, 22.6%, and nuclear generation, 7.8%. The respective figures for 1978 are 69.7%, 21.5% and 8.8%. Nuclear production increased by 18.4% over the previous year and provided nearly 29% of the total generation in Ontario.