

relatively greater value of energy during the peak period. These storage facilities are less expensive to develop and closer to major provincial loads than the large hydroelectric projects in the northern part of the province. Capacity of each of the three pumped storage sites would be about 2 000 MW. Others under consideration were Lac Proulx near Low, 56 km north of Ottawa, and Lac Lois, north of Quebec City on the Ste-Anne River system.

In 1978 Hydro-Québec negotiated a new interconnection agreement with Ontario Hydro for the sale of 15 billion kWh of firm energy over a period of five years. The main changes from the previous agreement are a revision of the capacity charge and a change in the method of pricing. The price of energy is 80% of what it would be if Ontario Hydro were to generate electricity from steam, including the cost of delivery. Under the old agreement, the energy price based on a shared-saving formula was the average of what it cost Ontario Hydro to generate it from steam plants and what it cost Hydro-Québec to deliver it. Hydro-Québec also undertook negotiations on a new interconnection agreement with New Brunswick Power. Hydro-Québec and the New York State Power Authority entered into an interconnection agreement for mutual assistance in case of emergency and for the purchase and sale of surplus capacity and energy. Late in 1978 the NEB approved an export licence covering this agreement.

Construction of the Manicouagan-Outardes hydro complex was completed when the last three 151.3 MW units were installed at the Outardes II station in 1978. Outardes II is Hydro-Québec's third development on the Outardes River and will replace the 50 MW development at Chute-aux-Outardes. Construction continued on the 630-MW single-unit CANDU nuclear station at Gentilly II.

The forecast deficit of generating capacity during 1978 and 1979 was to be met by the purchase of power and the installation of gas turbine units. An additional 240 MW of peaking capacity was to be supplied by installation in 1979 of a four-unit combustion turbine station, La Cité near Montreal. Power purchases were expected to include 150 MW from Alcan, 200 MW from New Brunswick Power and 350 MW from other sources.

In the Abitibi network, which was to remain isolated from the main system until 1979, a 54-MW combustion turbine unit was put in service at the end of 1976 and two more in 1977, for a total capacity of 180 MW. Ontario Hydro was to supply 100 MW until 1979. Production of the Abitibi hydro plant was to be enhanced by diversion from the Cabonga reservoir.

Electricity's share of the energy market in Quebec is expected to increase because of its availability and certainty of supply compared with oil, and it has been forecast that by 1990 there will be significant substitution of electricity for other energy forms in home heating.

## Ontario

13.10.6

Total electrical energy available for use in 1978 was above that for 1977. Energy demand showed increases in residential, commercial and industrial sectors. Production was from hydro, nuclear units and fossil fuels.

Ontario imported 12.8 TWh of electric power in 1977. Net exports to the US of 8.5 TWh (9% of total generation) and exports to other provinces (0.4 TWh) resulted in a net import of 2.7 TWh or about 2.8% of electrical energy consumed within the province.

In 1977 Ontario Hydro added the second and third of four 800-MW units at the Bruce nuclear power station, the second 37 MW hydroelectric unit at Arnprior, and an 11-MW gas turbine unit at the Bruce heavy water plant to its installed capacity.

In 1978 the seventh and eighth units at the Naticoke generating station were brought into service, bringing the station's total capacity up to 4 000 MW. The fourth and final unit of the 3 200 MW Bruce A plant produced its first power, and construction activity is now centred on the twin station, Bruce B.

In northwestern Ontario, the coal-fired Thunder Bay plant that came on stream in 1978 was expected to add 300 MW in two units in 1980. The Thunder Bay plant will use coal from the Prairie provinces delivered via the new \$60 million Thunder Bay terminal