

ments. However, ownership varies greatly in different areas of the country. Although Quebec power installations were at one time privately owned, almost all were transferred to public ownership in 1963. In Ontario almost all electric power has been produced by a publicly owned utility for over 60 years.

Because the determination of market prices and regulation of services is limited to inter-fuel competition with oil, gas and coal, some regulation of electric utilities has been attempted in all provinces. In all but two provinces the generation and main transmission of power is the responsibility of a provincial Crown corporation. Investor-owned electric utilities are predominant in Alberta and Prince Edward Island, and play a significant role in Newfoundland, Ontario and British Columbia; they contributed about 12.3% of the total power generated in Canada in 1972. Generating facilities in industrial establishments represented 10.8% of installed capacity at the end of 1972 and generated 14.1% of the total electric energy produced in Canada in that year; however, on a percentage basis, there is a continuing decline in industrial generation as it becomes increasingly attractive to purchase power from utilities which can take advantage of larger unit sizes and operational flexibility. Even when process steam is required for an industrial operation, there are instances when it is advantageous to purchase both steam and power from the electric utility.

13.7.8 Developments in 1973

A record in the amount of new electrical generating capacity installed within a single year was established in 1973 when a net total of 4,323 MW was brought into service, increasing Canada's total installed capacity by almost 8.7% to 54,271 MW. At the end of 1973, total installed generating capacity consisted of 17,339 MW of conventional thermal, 2,666 MW of nuclear thermal and 34,266 MW of hydro, representing 32.0%, 4.9% and 63.1%, respectively (see Table 13.11).

Thermal generation (including nuclear) totalling 2,574 MW made up 60% of the new capacity; hydro-electric installations totalling 1,766 MW accounted for the remaining 40%. The fourth 540-MW nuclear unit in the Pickering, Ont. station raised Canada's nuclear generating capability by 25% to 2,666 MW.

As in recent years, the substantial increase in hydro capacity was contributed chiefly by the Churchill Falls development in Labrador which provided 84% of the hydro capacity added in 1973; the remainder was installed in Manitoba and Quebec. Most provinces, as well as the northern territories, added thermal capacity; major additions were 1,547 MW in Ontario and 617 MW in Alberta, representing 60% and 24%, respectively, of the total thermal additions.

Electric energy generated in Canada during 1973 increased by 10.4% to 262,273 GWh. Although, in absolute terms, the hydro generation growth of 14,976 GWh exceeded the 9,755 GWh increase in thermal generation, the percentage increase over previous years was lower for hydro at 8.4% compared with 16.4% for thermal. The respective totals for generation were 192,868 GWh (hydro) and 69,271 GWh (thermal). Consequently, the portion of Canada's total electric energy production provided by hydro facilities declined to 74.0%, with conventional and nuclear thermal contributing 21% and 5%, respectively.

Exports of electric energy to the US increased appreciably to 16,886 GWh. With 2,162 GWh of energy imported from the US, net export was 14,724 GWh representing 5.6% of total energy generation and an increase of 86% over 1972. Primary and secondary energy supplied for consumption within Canada increased by 7.8% to 247,415 GWh.

Escalation in the cost of oil fuel in 1973 and security of supply became matters of serious concern to utilities in the Maritime Provinces where a significant portion of electrical generation depends upon imported oil — 50% in New Brunswick and Nova Scotia and 100% in Prince Edward Island. This is giving rise to review of long-range generation and transmission programs in the Maritime Provinces with emphasis on alternative sources of generation.

Newfoundland. The water power resources of this province are very substantial. On the island, although the rivers are generally not long, topography and run-off favour hydro-electric power development.

The Newfoundland and Labrador Power Commission was established in 1954 to supply power wherever needed throughout the province. The Commission began large-scale production of electric energy in 1967 when the Baie d'Espoir plant began operating and the provincial transmission grid was established. Power is supplied from this grid to several industries direct