

Among the provinces, Quebec has the largest generating capability, followed by Ontario, British Columbia and Alberta. Quebec also has the largest hydro-electric generating capability, followed by Ontario and British Columbia, but Ontario has the largest thermal capability, followed by Alberta and British Columbia. The first nuclear capability is scheduled in Ontario for late 1965.

The largest absolute growth in generating capability for the forecast years is indicated for Quebec amounting to 3,683,000 kw., followed by Ontario 3,517,000 kw., British Columbia 1,752,000 kw., and Alberta 822,000 kw. Quebec will meet most of its increased generating capability by adding 3,140,000 kw. in hydro capability and 543,000 kw. in thermal capability. Ontario will add 398,000 kw. hydro and 3,119,000 kw. thermal, the latter including 200,000 kw. nuclear, and British Columbia will add 1,374,000 kw. hydro and 378,000 kw. thermal. Thus, it is apparent that thermal capability is becoming of greater importance, partly because of decreasing availability of hydro resources in provinces such as Ontario and partly because technological advances have made possible much more efficient use of thermal fuels in the operation of thermal base load plants.

Firm power peak load is the measure of the maximum average net kilowatt demand of one-hour duration from all loads, including commercial, residential, farm and industrial consumers as well as the line losses. Such load demand increased at the rate of 7.1 p.c. a year from 1954 to 1964 but only 6.9 p.c. a year from 1960 to 1964; peak load demand is forecast to increase at the average rate of 6.9 p.c. a year in the period 1965-69. As a result of the rapid increase in generating capability and the somewhat slower but steady increase in the peak loads, together with the slight reduction in deliveries of firm power to the United States, the indicated reserve on net generating capability increased each year from 1954 to 1964, with the exception of 1961, 1963 and 1964. The forecast is for increases from 1965 to 1969 with the exception of 1966. The reserve ratio as a percentage of firm power peak load, which reached a high of 28.2 p.c. in 1960, is expected to decrease to 18.9 p.c. in 1969.

4.—Net Generating Capability, by Province, 1964

(Thousand kilowatts)

Type of Generating Facility	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.
Hydro-electric.....	442	—	141	222	9,453	5,603
Thermal-electric—						
Steam.....	45	51	383	305	192	2,379
Internal combustion.....	11	7	3	7	15	8
Gas turbine.....	—	—	—	—	36	—
Totals.....	498	58	527	534	9,696	7,990
	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
Hydro-electric.....	735	309	326	2,689	44	19,964
Thermal-electric—						
Steam.....	291	529	748	498	1	5,422
Internal combustion.....	8	35	31	117	13	255
Gas turbine.....	—	39	130	177	2	384
Totals.....	1,034	912	1,235	3,481	60	26,025