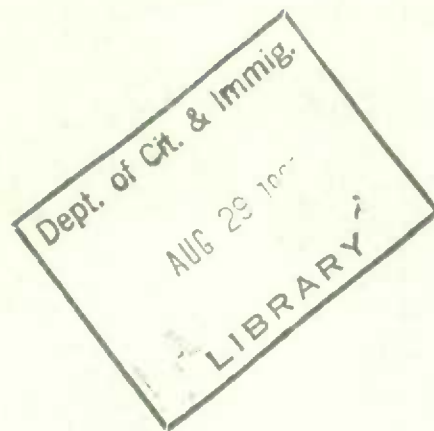


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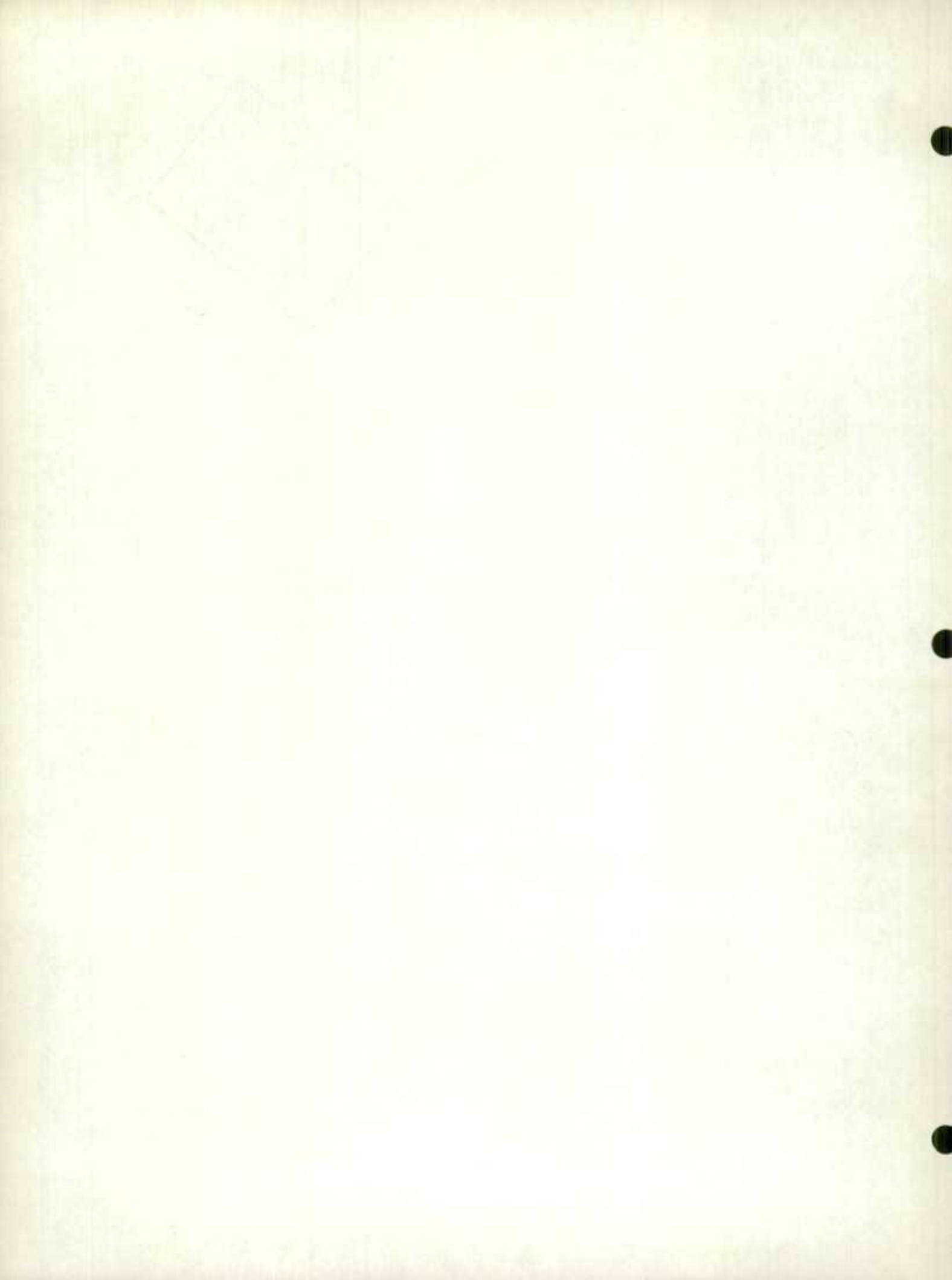
ELECTRIC POWER STATISTICS

VOLUME I

ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

1965 Actual

1966 - 1970 Forecast



DOMINION BUREAU OF STATISTICS

Industry Division

Energy Statistics Section

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SYMBOLS

The interpretation of the symbols used in the tables throughout this publication is as follows:

† Revised figures.

.. Figures not available.

... Figures not appropriate or not applicable.

- Nil or zero.

INTRODUCTION

This report presents the results of the Annual Electric Power Survey of Capability and Load which was conducted in March 1966. The survey covers all producers of electric energy in Canada which generate 10 million kwh. or more per annum. This report, therefore, covers the same group of firms which provide the statistics for the monthly "Electric Power Statistics" report (catalogue No. 57-001). The report is organized in such a manner that there is a direct comparison and link with the monthly "Electric Power Statistics" in that the generation figures are common to the two publications: Any differences are due to late revisions.

There are approximately 150 responding firms in the group, about half of which are utilities and half industrial establishments. The combined group accounts for 99.5 per cent of all generation, and all the imports and exports. The utilities group contributes approximately 80 per cent of the generation to the Canada total.

The survey is carried out in co-operation with the Canadian Electrical Association. Area representatives of the Association collect and edit the returns, which are forwarded to the Dominion Bureau of Statistics for final revision, editing, and compilation. The assistance received from the Canadian Electrical Association and its members has been invaluable.

Review of Survey Results

Total net generating capability in 1965 for firms which generate over 10 million kwh. per year increased 2,254,000 kw. or 8.66 per cent to 28,279,000 kw. The forecast years 1966-70 indicate an anticipated growth of 12,165,000 kw. or a compound growth rate of 7.42 per cent as compared with the 1955-1965 growth rate of 7.17 per cent. Thermal capability is expected to grow at an annual rate of 13.53 per cent in the forecast period compared with an actual rate of 13.81 per cent in the previous ten year period, while hydro-electric capability is expected to increase at 5.03 per cent compared with 5.68 per cent in the previous ten years. The hydro-electric capability forecast figures do not include the Churchill Falls development in Labrador nor the Nelson River project in Manitoba which are not expected to be developed in the forecast period. Eighty-two per cent of the thermal capability growth will be in conventional plants.

The first nuclear capability is forecast for 1967. The nuclear capability does not include the 20,000 kw. plant at Rolphton, Ontario, which is an experimental plant and therefore is not considered part of the capability. However, energy generated in this plant has been fed into the system and is included in Table 1.

In 1964 it was forecast that the net generating capability in 1965 would be 28,285,000 kw. The actual 1965 net generating capability fell short of this estimate by only 6,000 kw. with all provinces very close to achieving their forecast.

The largest absolute growths in generating capability for the five forecast years are indicated for Ontario - 4,450,000 kw.; Quebec, 3,269,000 kw.; British Columbia, 1,544,000 kw. and New Brunswick, 621,000 kw. Sixty-seven per cent of the increased generating capability in Ontario will be steam conventional capability, while nuclear capability will be increased to 700,000 kw. Quebec plans to increase its capability by adding 2,928,000 kw. hydro and 341,000 kw. in conventional thermal capability. British Columbia is forecasting an increase of 1,308,000 kw. in hydro capability and 236,000 kw. in thermal capability while New Brunswick estimates increases of 295,000 kw. and 326,000 kw. in hydro and thermal capability respectively.

In the period from 1955 to 1965 the growth rate of firm power peak load in Canada was 6.86 per cent. This growth rate is expected to increase to 7.55 per cent during the forecast years 1966 to 1970. During the forecast period the indicated reserve is expected to increase from 3,986,000 kw. in 1965 to 5,522,000 kw. in 1970. The indicated reserve, stated as a percentage of firm power peak load, amounted to 16.4 per cent in 1965 and is forecast that it will decline slightly to 15.8 per cent in 1970.

Indicated reserve data does not take into account reduction in generating capability due to adverse flow conditions such as ice, low water, etc., which occur during the peak load season. In 1965, this reduction in generating capability amounted to about 570,000 kw. with Quebec accounting for 89.5 per cent, Manitoba 3.5 per cent, Ontario 2.8 per cent and Newfoundland and British Columbia each 2.1 per cent.

Firm energy requirements increased 7.6 per cent from 129,339^r million kwh. in 1964 to 139,149 million kwh. in 1965 compared with a growth rate of 6.5 per cent in the previous ten year period and a forecast growth rate of 6.7 per cent for the period 1966-1970. The additional firm energy requirement was supplied by an increase in net generation of 8,859 million kwh. Net exports declined by 657 million kwh. in 1965 and secondary energy delivered within Canada rose by 306 million kwh.

Concepts and Definitions

Table 1. Capability, Firm Power Peak Load and Energy Requirements:

The generating capability and firm power peak load concepts are virtually unchanged from previous reports. Generating capability measures the expected power of all available generating facilities of the province (or nation) at the time of one-hour firm peak load for each of the respondents. This may differ from the generating capacity as measured by the name plate rating of the equipment and published in the "Prime Mover and Electric Generating Equipment" report.

The variations between generating capability and generating capacity may be caused by high water in reservoirs resulting in a higher water head and greater generation than the name plate capacity; the impossibility of placing all pieces of equipment on the line at the same time, low water, ice, or some equipment being considered unreliable, thereby resulting in generation below capacity.

All figures in Table 1 of the report are calculated at the time of the one-hour peak load for each of the respondents. As a result, capability and peak loads are non-coincident (the arithmetic sum of the actual peak loads regardless of time of occurrence) and may be equal to, or greater than, the coincident peak load for each of the provinces. Insofar as the utilities have about 80 per cent of the load of the nation and most of the peak loads occur in December, the variation from the coincident peak will not be too great. Two major systems which account for about 50 per cent of the capability have only a slight variation between their coincident and non-coincident peak loads. Of thirty-three major systems serving Canada, seven had peak loads on December 20, sixteen on other dates between November 30 and December 31 and ten outside this period.

Receipts and deliveries of firm power used in calculating net capability are the interprovincial and international transfers of power under firm contracts, or the best estimate of firm obligations possible in the absence of contracts. The actual receipts and deliveries of firm and secondary power are taken into account in the calculation of firm power peak loads.

Peak loads are the total demands within a province after all inter-changes have been taken into account to remove any duplication. The peak loads include all electricity consumed by ultimate customers, line losses, and manufacturing plants own consumption, but do not include generating station service which is deducted before arriving at generating capability. Firm power peak loads exclude the secondary or surplus power used by ultimate customers on an interruptible basis, as these are not firm obligations.

Indicated shortages (line 15, Table 1) are a measure of the firm power commitments that a system was not able to meet at the time of its peak load.

The indicated power reserve of a province (shown in Table 1) is the reserve after all firm obligations and shortages have been met or received. It is the difference between net capability and

total firm peak load within the province or gross capability less firm power peak load on the province, and is a measure of the industries' ability to satisfy demands of a province and meet contingencies. Since not all systems are fully interconnected, the reserves of power shown cannot always be fully utilized.

Net generation figures which are identical with the figures presented in the monthly "Electric Power Statistics" report (or revisions thereof) are exclusive of station service and, for 1964, are subdivided by type of generation. No forecasts of generation are given for 1966-70.

Although complete historical figures are not currently available, it is expected that they will be included in future reports.

Firm energy receipts and deliveries are the actual receipts and deliveries under firm contracts or obligations.

Secondary energy delivered within the province is the surplus energy sold at time of low demand and when surplus generating capability is available. This energy may be interrupted at any time and, consequently, sells at very low rates, generally for use in electric boilers.

Firm energy available is the measure of primary demands of electric energy, including residential, commercial and power sales, and all line losses after deducting net exports. It is an important economic indicator and, as such, is of major importance in forecasting.

Indicated shortage (line 38, Table 1) is an estimate of the total quantity of energy a system was unable to deliver due to its inability to meet firm power commitments during the year; no shortages have occurred since 1957.

Firm energy requirements are a measure of the needs for electric energy that have been or can be met (firm energy available) and those that cannot be serviced (shortage).

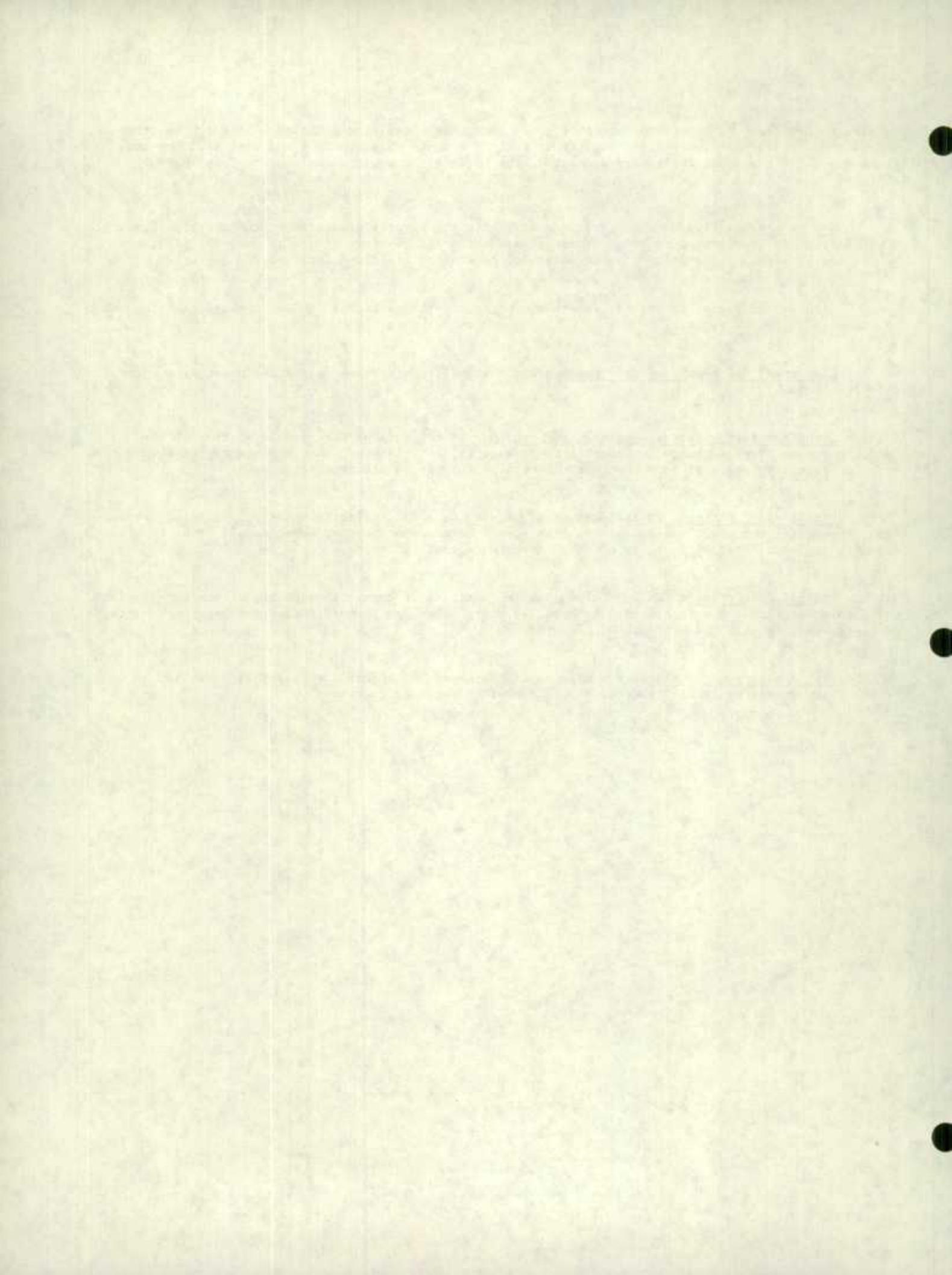


CHART - A

TOTAL GENERATING CAPABILITY WITHIN CANADA

1955 - 1970

THOUSANDS OF KILOWATTS

THOUSANDS OF KILOWATTS

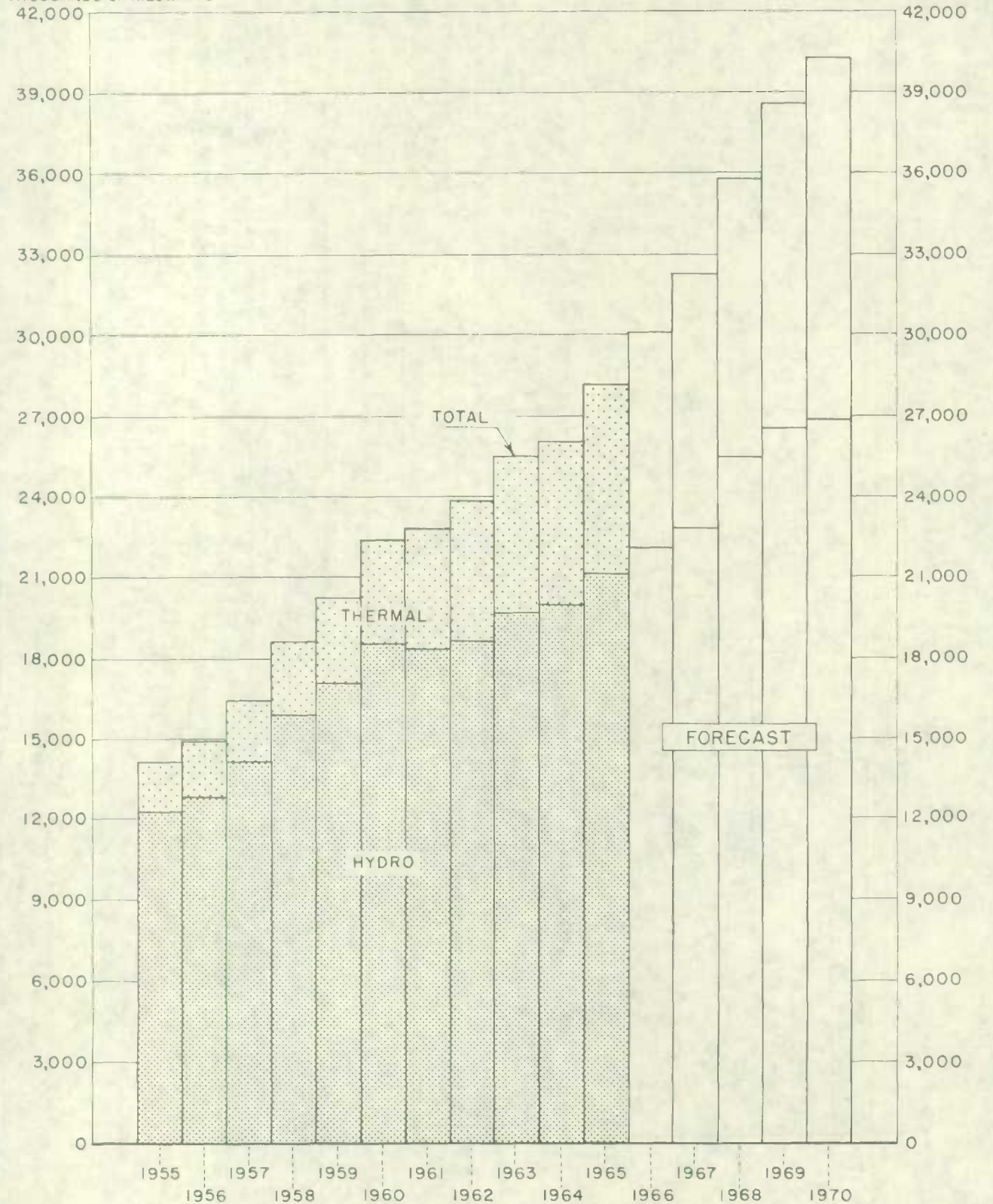
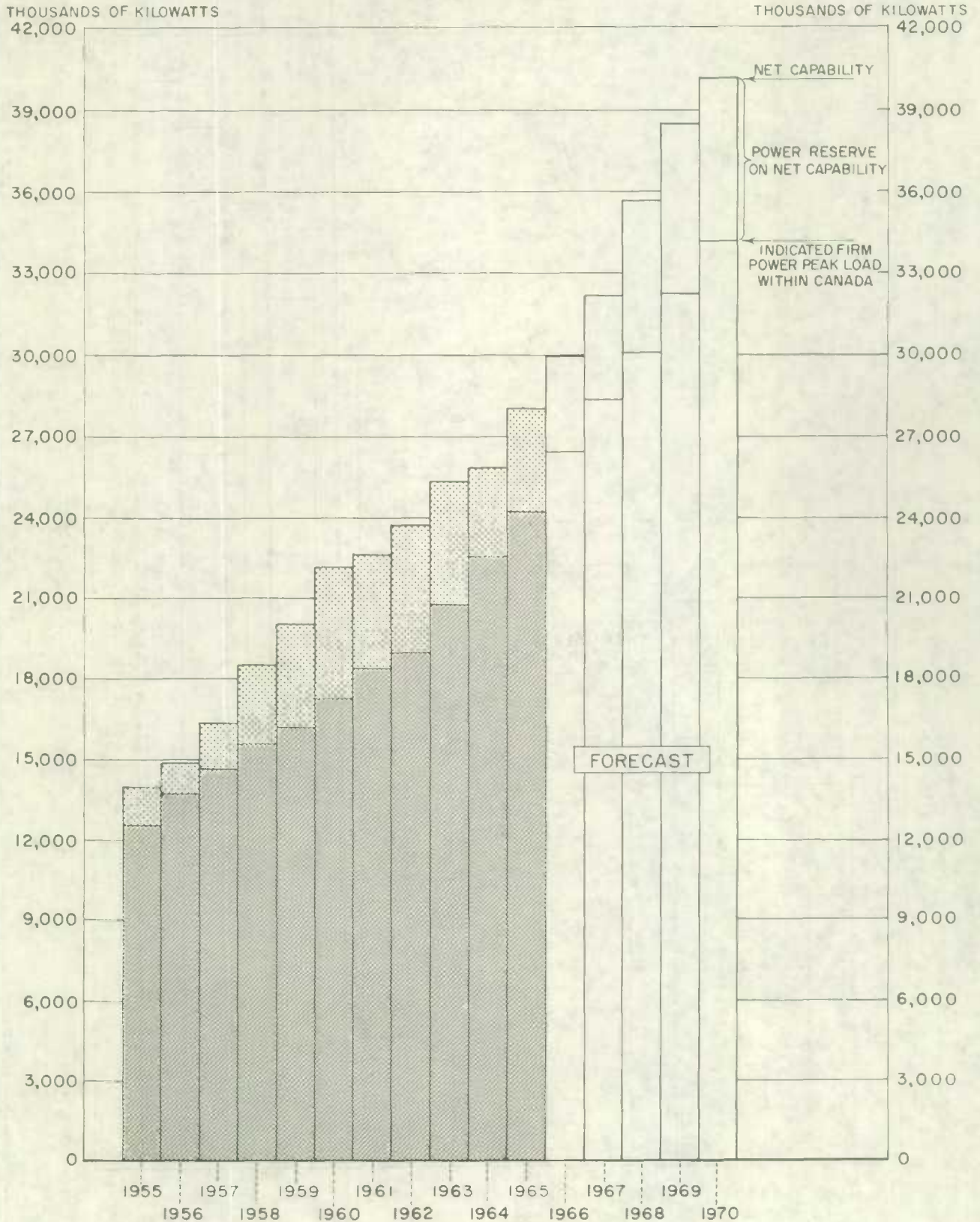


CHART-B

NET CAPABILITY AND PEAK LOADS WITHIN CANADA

1955 - 1970



NET GENERATING CAPABILITY WITHIN PROVINCES

1955 - 1970

THOUSANDS OF KILOWATTS

THOUSANDS OF KILOWATTS

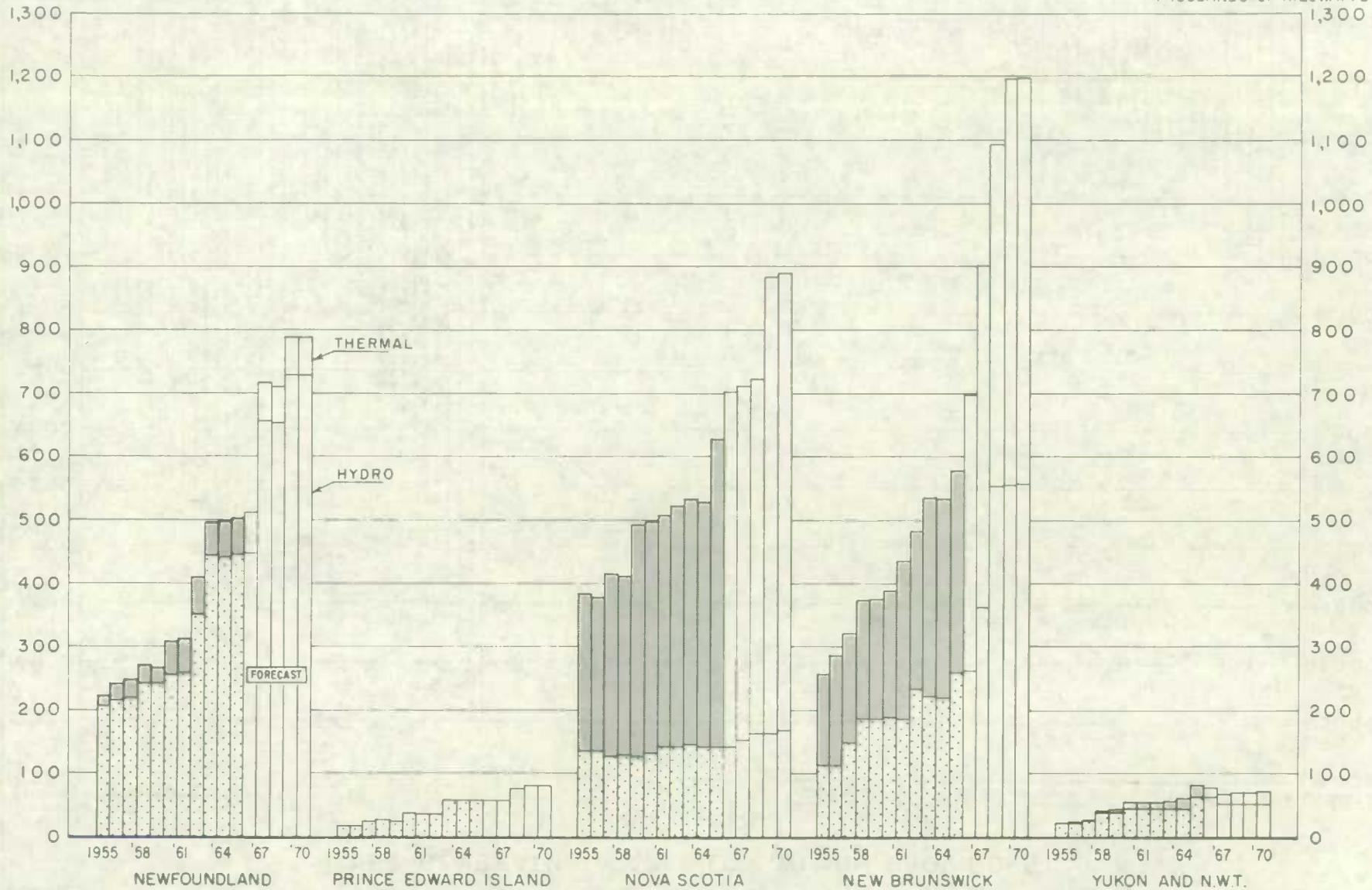


CHART - C

NET GENERATING CAPABILITY WITHIN PROVINCES

1955 - 1970

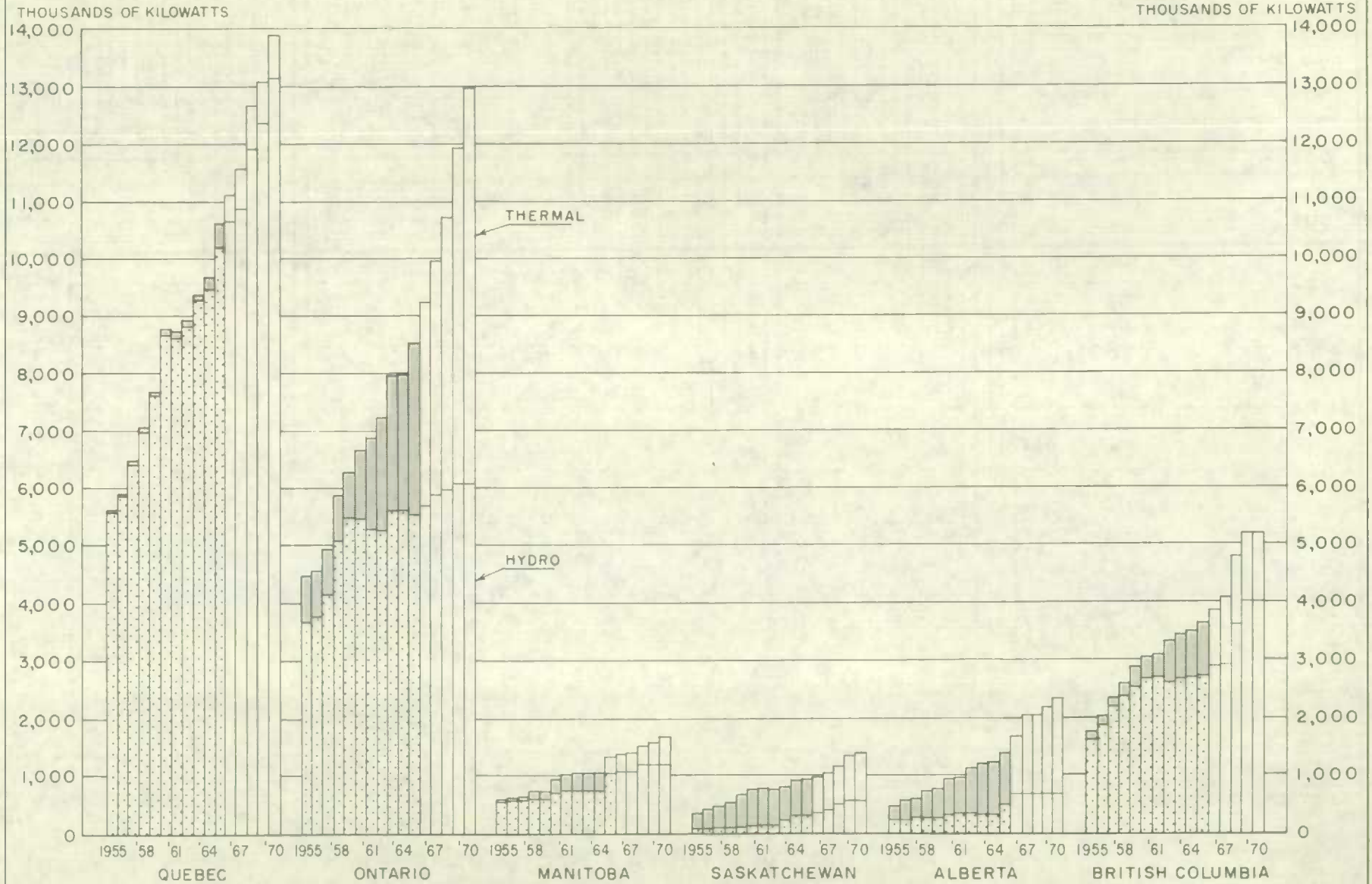


CHART - 9

NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES

1955-1970

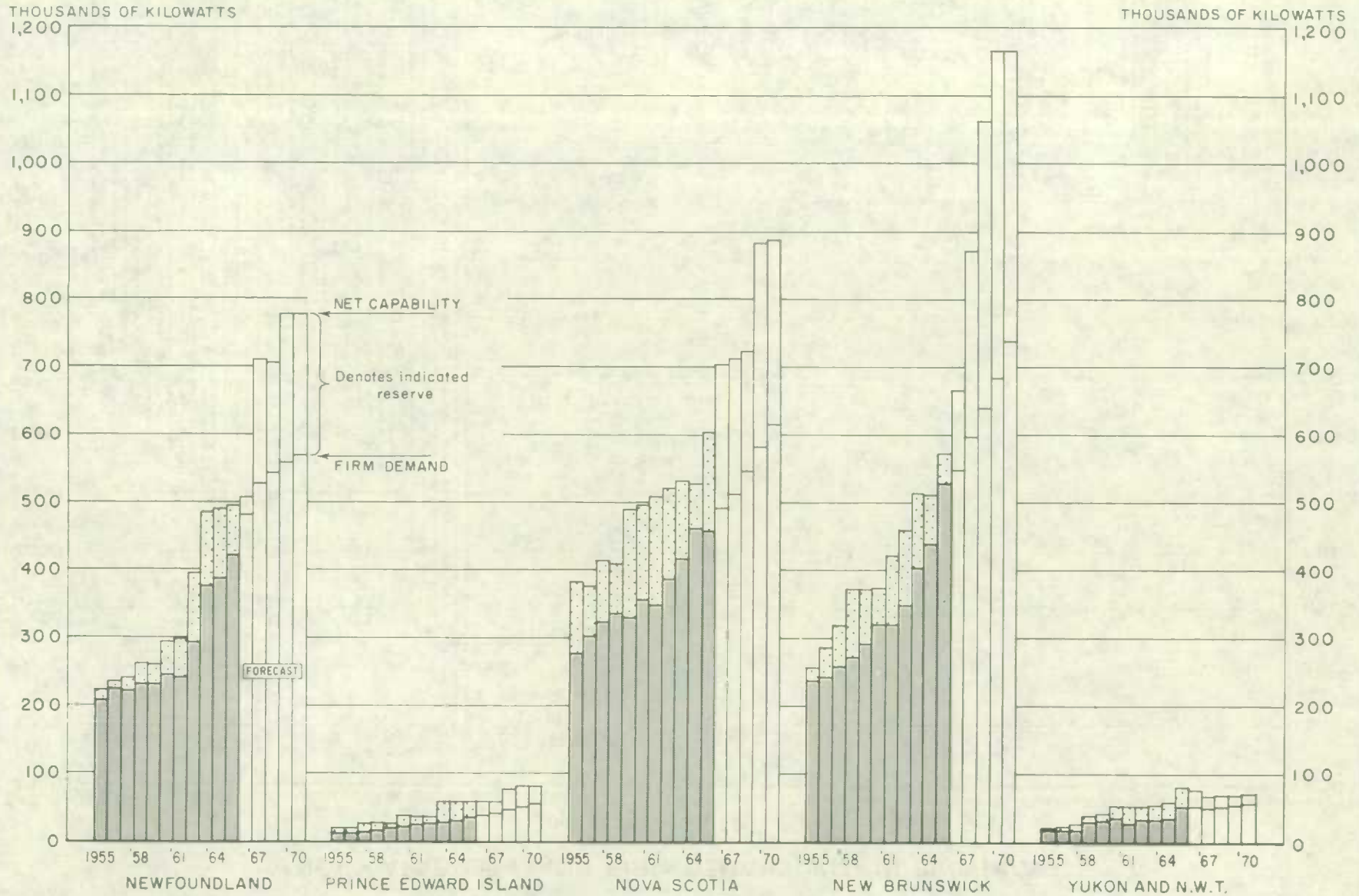


CHART-D

NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES

1955-1970

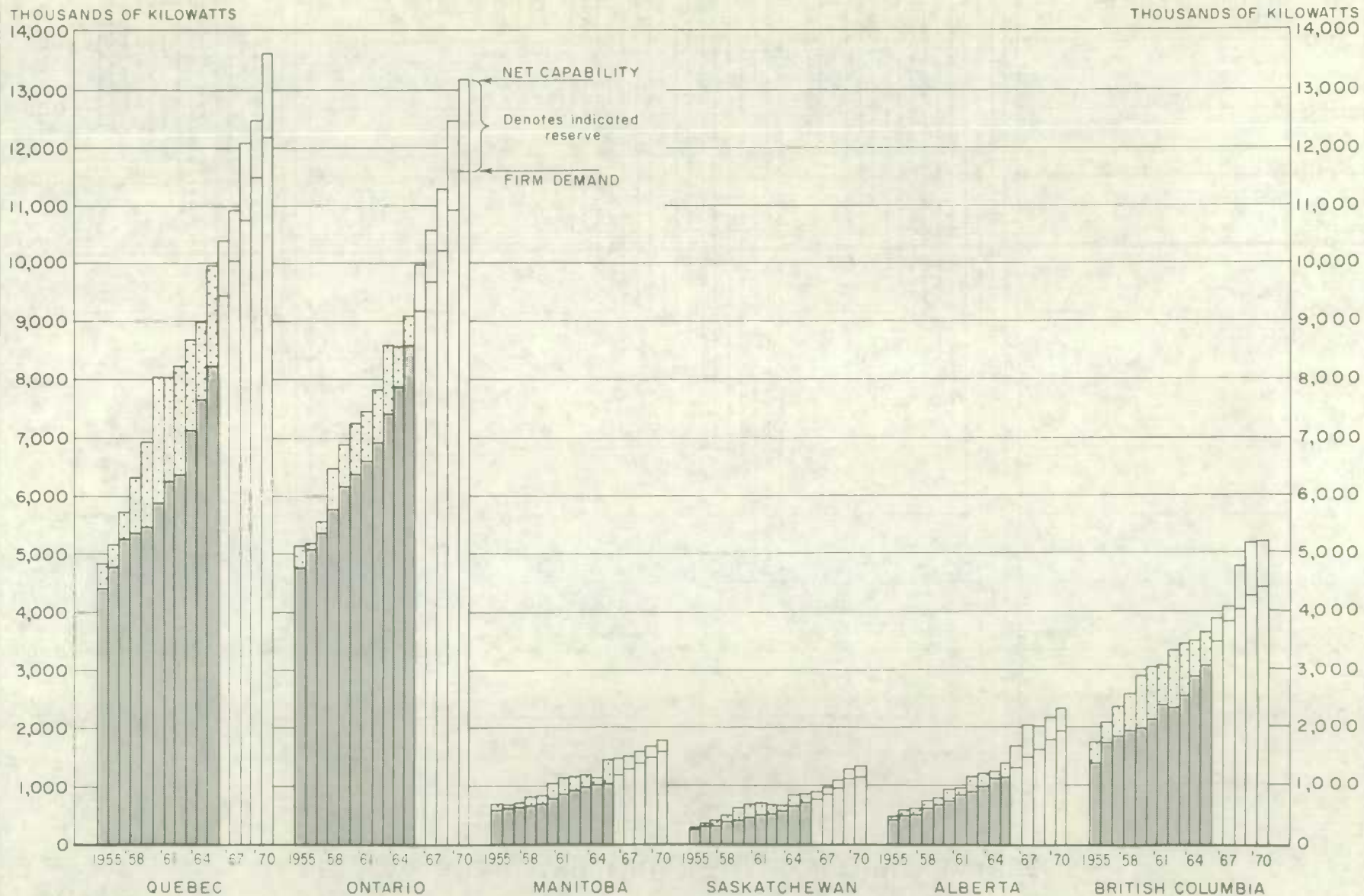


CHART - E

FIRM ENERGY REQUIREMENT WITHIN CANADA

1955-1970

BILLIONS OF KILOWATT-HOURS
200

BILLIONS OF KILOWATT-HOURS
200

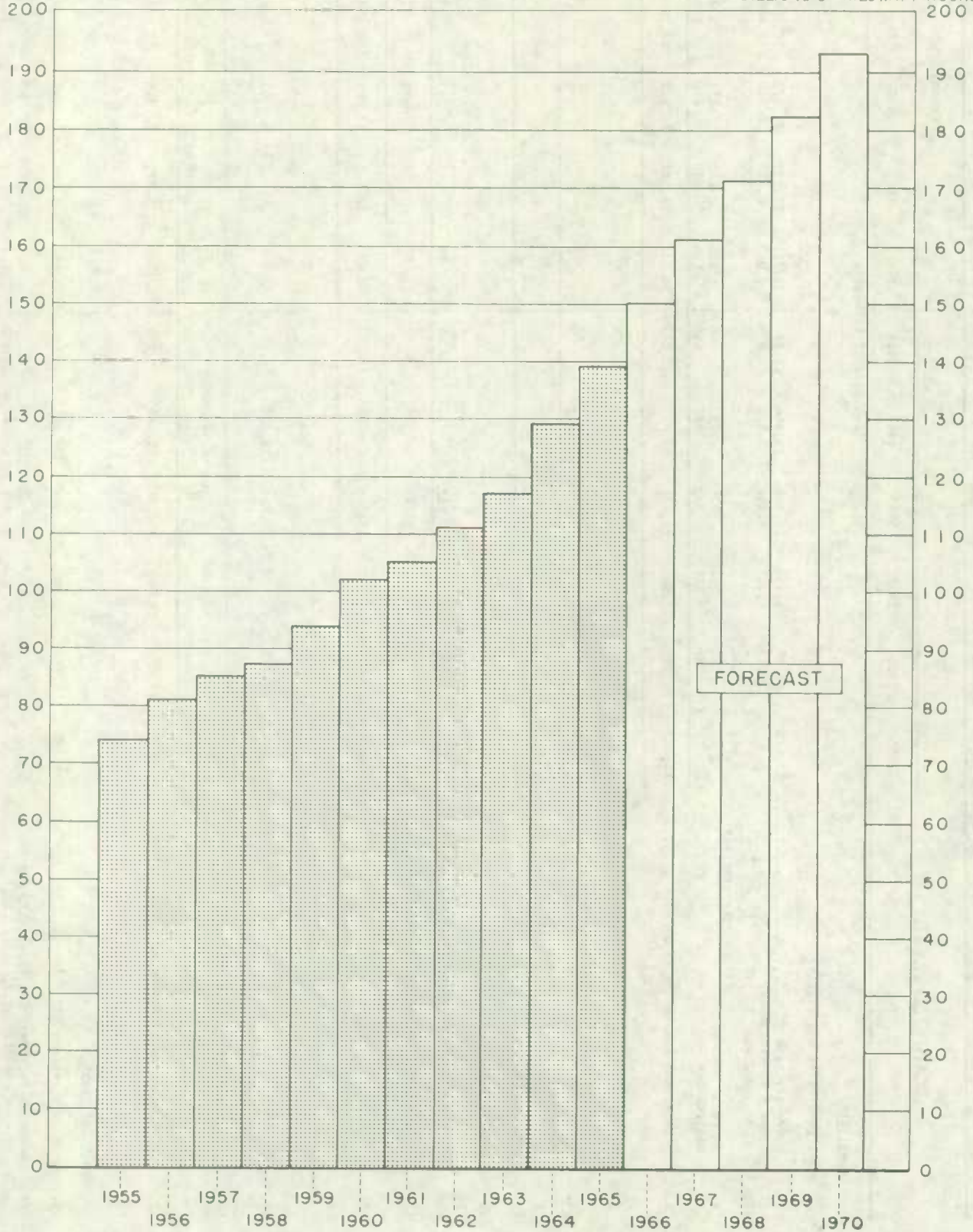


TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
thousands of kilowatts											
Capability:											
Net generating capability:											
1. Hydro-electric	12,211	18,389	18,651	19,666	19,964	21,219	22,211	22,957	25,277	26,310	27,126
2. Steam - Conventional)	(3,773	4,596	5,194	5,422	6,354	7,013	8,298	8,980	10,689	11,462	
3. Nuclear)	(-	-	-	-	-	-	200	200	200	700	
4. Internal combustion)	(1,936	240	251	236	255	246	252	252	252	253	
5. Gas turbine)	(351	371	382	384	460	696	830	830	830	903	
6. Total net generating capability	14,147	22,753	23,869	25,478	26,025	28,279	30,172	32,537	35,539	38,281	40,444
Receipts of firm power from:											
7. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...
8. United States	5	2	4	2	2	-	-	-	-	-	-
9. Total receipts	5	2	4	2	2	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...
11. United States	166	146	121	122	127 ^F	89	91	92	93	95	97
12. Total deliveries	166	146	121	122	127 ^F	89	91	92	93	95	97
13. Total net capability (6 + 9 - 12)	13,986	22,609	23,752	25,358	25,900 ^F	28,190	30,081	32,445	35,446	38,186	40,347
Peak loads:											
14. Firm power peak load within province	12,472	18,353	18,972	20,755 ^F	22,503 ^F	24,204	26,923	28,841	30,693	32,948	34,825
15. Indicated shortages	64	-	-	28	13	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	12,536	18,353	18,972	20,783 ^F	22,516 ^F	24,204	26,923	28,841	30,693	32,948	34,825
17. Firm power peak load on province (12 + 16)	12,702	18,499	19,093	20,905 ^F	22,643 ^F	24,293	27,014	28,933	30,786	33,043	34,922
Indicated reserve:											
18. Indicated reserve (13 - 16)	1,450	4,256	4,780	4,575 ^F	3,384 ^F	3,986	3,158	3,604	4,753	5,238	5,522
18a Reduction in generating capability due to adverse conditions .....	..	..	..	779	687	570	...	...	...	...	...

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric ..	103,692	103,695	103,539	113,212	116,692	...	...	...	...	...	...
20. Steam - Conventional)	(8,822	12,543	17,111	20,051	25,485	...	...	...	...	...	...
21. Nuclear)	(-	22	87	141	120	...	...	...	...	...	...
22. Internal combustion)	(509	514	593	574 ^F	509	...	...	...	...	...	...
23. Gas turbine)	(248	257	312	282	313	...	...	...	...	...	...
24. Total net generation ..	113,271	117,031	121,642	134,260 ^F	143,119	...	...	...	...	...	...
Receipts of energy from:											
(a) Firm:											
25. Other provinces ..	...	...	...	...	...	...	...	...	...	...	...
26. United States ..	8	22	12	6	4	3	3	3	3	3	3
(b) Secondary:											
27. Other provinces ..	...	...	...	...	...	...	...	...	...	...	...
28. United States ..	1,392	2,764	2,867	2,971	3,573	...	...	...	...	...	...
29. Total receipts of energy ..	1,400	2,786	2,879	2,977	3,577	...	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
30. Other provinces ..	...	...	...	...	...	...	...	...	...	...	...
31. United States ..	1,332	1,122	817	867 ^F	835 ^F	633	641	654	662	673	680
(b) Secondary:											
32. Other provinces ..	...	...	...	...	...	...	...	...	...	...	...
33. United States ..	3,058	3,267	2,754	3,392 ^F	2,937	...	...	...	...	...	...
34. Total deliveries of energy ..	4,180	4,084	3,621 ^F	4,227 ^F	3,570	...	...	...	...	...	...
35. Total energy available (24 + 29 - 34) ..	110,491	115,733	120,900 ^F	133,010 ^F	143,126	...	...	...	...	...	...
36. Secondary energy delivered within Canada ..	5,415	4,690	3,655	3,671	3,977	...	...	...	...	...	...
37. Firm energy available within Canada (35 - 36)	73,748	105,076	111,043	117,245 ^F	129,339 ^F	139,149	150,467	161,335	171,434	181,983	192,791
38. Indicated shortage ..	378	-	-	-	-	-	-	-	-	-	-
39. Firm energy requirement within Canada (37 + 38) ..	74,126	105,076	111,043	117,245 ^F	129,339 ^F	139,149	150,467	161,335	171,434	181,983	192,791
40. Firm energy requirement on Canada (30 + 31 + 39) ..	75,458	106,198	111,860	118,112	130,174 ^F	139,782	151,108	161,989	172,096	182,656	193,471

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric	207	258	350	444	442	446	447	655	654	729	729
2. Steam - Conventional)	(	40	45	45	45	45	45	40	40	40	40
3. Nuclear)	(-	-	-	-	-	-	-	-	-	-
4. Internal combustion )	(	13	14	7	11	11	11	11	7	7	7
5. Gas turbine )	(	-	-	-	-	-	10	10	10	10	10
6. Total net generating capability	223	311	409	496	498	502	513	716	711	786	786
Receipts of firm power from:											
7. Other provinces	-	-	-	-	-	-	-	-	-	-	-
8. United States	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts	-	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces	-	13	13	10	8	7	7	7	7	7	7
11. United States	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries	-	13	13	10	8	7	7	7	7	7	7
13. Total net capability (6 + 9 - 12)	223	298	396	486	490	495	506	709	704	779	779
<u>Peak loads:</u>											
14. Firm power peak load within province	206	242	294	349	376	422	482	528	543	557	569
15. Indicated shortages	1	-	-	28	13	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	207	242	294	377	389	422	482	528	543	557	569
17. Firm power peak load on province (12 + 16)	207	255	307	387	397	429	489	535	550	564	576
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16)	16	56	102	109	101	73	24	181	161	222	210
18a Reduction in generating capability due to adverse conditions .....	..	..	..	14	12	12	...	...	...	...	...

Energy	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	1,322	1,556	1,930	2,278	2,485	...	...	...	...	...
20. Steam - Conventional	(	116	101	96	98	217	...	...	...	...	...
21. Nuclear )	(	-	-	-	-	-	...	...	...	...	...
22. Internal combustion)	..	10	9	8	12	24	...	...	...	...	...
23. Gas turbine )	(	-	-	-	-	-	...	...	...	...	...
24. Total net generation .....	..	1,448	1,666	2,034	2,388	2,726	...	...	...	...	...
Receipts of energy from:											
(a) Firm:											
25. Other provinces .....	..	-	-	-	-	-	-	-	-	-	-
26. United States .....	..	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
27. Other provinces .....	..	-	-	-	-	-	...	...	...	...	...
28. United States .....	..	-	-	-	-	-	...	...	...	...	...
29. Total receipts of energy .....	..	-	-	-	-	-	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
30. Other provinces	-	80	81	36	54	56	55	55	50	50	50
31. United States	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
32. Other provinces .....	..	3	-	37	30	28	...	...	...	...	...
33. United States .....	..	-	-	-	-	-	...	...	...	...	...
34. Total deliveries of energy .....	..	83	81	73	84	84	...	...	...	...	...
35. Total energy available (24 + 29 - 34)	..	1,365	1,585	1,961	2,304	2,642	...	...	...	...	...
36. Secondary energy delivered within province .....	..	4	112	83	11	2	...	...	...	...	...
37. Firm energy available within province (35 - 36) ..	1,289	1,361	1,473	1,878	2,293	2,640	2,815	3,129	3,260	3,331	3,395
38. Indicated shortage	10	-	-	-	-	-	-	-	-	-	-
39. Firm energy requirement within province (37 + 38)	1,299	1,361	1,473	1,878	2,293	2,640	2,815	3,129	3,260	3,331	3,395
40. Firm energy requirement on province (30 + 31 + 39)	1,299	1,441	1,554	1,914	2,347	2,696	2,870	3,184	3,310	3,381	3,445

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric	-	-	-	-	-	-	-	-	-	-	-
2. Steam - Conventional)		(32	32	51	51	51	51	51	71	71	71
3. Nuclear)		(-	-	-	-	-	-	-	-	-	-
4. Internal combustion)	18	(5	5	7	7	7	7	7	7	10	10
5. Gas turbine)		(-	-	-	-	-	-	-	-	-	-
6. Total net generating capability	18	37	37	58	58	58	58	58	78	81	81
Receipts of firm power from:											
7. Other provinces	-	-	-	-	-	-	-	-	-	-	-
8. United States	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts	-	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces	-	-	-	-	-	-	-	-	-	-	-
11. United States	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries	-	-	-	-	-	-	-	-	-	-	-
13. Total net capability (6 + 9 - 12)	18	37	37	58	58	58	58	58	78	81	81
<u>Peak loads:</u>											
14. Firm power peak load within province	12	24	25	27	31	35	38	42	46	50	55
15. Indicated shortages	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	12	24	25	27	31	35	38	42	46	50	55
17. Firm power peak load on province (12 + 16)	12	24	25	27	31	35	38	42	46	50	55
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16)	6	13	12	31	27	23	20	16	32	31	26
18a. Reduction in generating capability due to adverse conditions .....	..	..	..	-	-	-	...	...	...	...	...

Energy	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	-	-	-	-	-	...	...	...	...	...
20. Steam - Conventional)		(81	93	102	119	131	...	...	...	...	...
21. Nuclear )		( -	-	-	-	-	...	...	...	...	...
22. Internal combustion)	..	(7	8	9	5	5	...	...	...	...	...
23. Gas turbine )		( -	-	-	-	-	...	...	...	...	...
24. Total net generation .....	..	88	101	111	124	136	...	...	...	...	...
Receipts of energy from:											
(a) Firm:											
25. Other provinces .....	..	-	-	-	-	-	-	-	-	-	-
26. United States .....	..	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
27. Other provinces .....	..	-	-	-	-	-	...	...	...	...	...
28. United States .....	..	-	-	-	-	-	...	...	...	...	...
29. Total receipts of energy .....	..	-	-	-	-	-	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
30. Other provinces	-	-	-	-	-	-	-	-	-	-	-
31. United States	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
32. Other provinces .....	-	-	-	-	-	-	...	...	...	...	...
33. United States .....	-	-	-	-	-	-	...	...	...	...	...
34. Total deliveries of energy .....	-	-	-	-	-	-	...	...	...	...	...
35. Total energy available (24 + 29 - 34)	..	88	101	111	124	136	...	...	...	...	...
36. Secondary energy delivered within province .....	-	-	-	-	-	-	...	...	...	...	...
37. Firm energy available within province (35 - 36) ...	51	88	101	111	124	136	154	173	195	217	243
38. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
39. Firm energy requirement within province (37 + 38)	51	88	101	111	124	136	154	173	195	217	243
40. Firm energy requirement on province (30 + 31 + 39)	51	88	101	111	124	136	154	173	195	217	243

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric	136	141	141	143	141	141	141	151	162	162	167
2. Steam - Conventional)		(365	378	387	383	482	558	558	558	717	717
3. Nuclear)		(-	-	-	-	-	-	-	-	-	-
4. Internal combustion)	248	(2	2	2	3	3	3	3	3	3	3
5. Gas turbine)		(-	-	-	-	-	-	-	-	-	-
6. Total net generating capability	384	508	521	532	527	626	702	712	723	882	887
Receipts of firm power from:											
7. Other provinces	-	-	-	-	-	-	-	-	-	-	-
8. United States	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts	-	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces	2	1	1	1	1	25	-	-	-	-	-
11. United States	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries	2	1	1	1	1	25	-	-	-	-	-
13. Total net capability (6 + 9 - 12)	382	507	520	531	526	601	702	712	723	882	887
<u>Peak loads:</u>											
14. Firm power peak load within province	278	347	388	411	438 ^r	457	493	513	547	582	615
15. Indicated shortages	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	278	347	388	411	438 ^r	457	493	513	547	582	615
17. Firm power peak load on province (12 + 16)	280	348	389	412	439 ^r	482	493	513	547	582	615
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16)	104	160	132	120	88 ^r	144	209	199	176	300	272
18a. Reduction in generating capability due to adverse conditions .....	..	..	..	-	-	-	...	...	...	...	...

Energy	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	549	710	799	718	449	...	...	...	...	...
20. Steam - Conventional)		(1,301	1,300	1,313	1,662	2,158	...	...	...	...	...
21. Nuclear )		( -	-	-	-	-	...	...	...	...	...
22. Internal combustion )	..	( -	-	-	-	-	...	...	...	...	...
23. Gas turbine )		( -	-	-	-	-	...	...	...	...	...
24. Total net generation .....	..	1,850	2,010	2,112	2,380	2,607	...	...	...	...	...
Receipts of energy from:											
(a) Firm:											
25. Other provinces .....	..	-^F	-	-	-	-	-	-	-	-	-
26. United States .....	..	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
27. Other provinces .....	..	16 ^F	67	57	43	44	...	...	...	...	...
28. United States .....	..	-	-	-	-	-	...	...	...	...	...
29. Total receipts of energy .....	..	16	67	57	43	44	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
30. Other provinces	8	12	7	8	7	34	155	-	-	-	-
31. United States	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
32. Other provinces .....	..	79	101	60	113	144	...	...	...	...	...
33. United States .....	..	-	-	-	-	-	...	...	...	...	...
34. Total deliveries of energy .....	..	91	108	68	120	178	...	...	...	...	...
35. Total energy available (24 + 29 - 34)	..	1,775	1,969	2,101	2,303	2,473	...	...	...	...	...
36. Secondary energy delivered within province .....	..	-	4	1	2	7	...	...	...	...	...
37. Firm energy available within province (35 - 36) ..	1,340	1,775	1,965	2,100	2,301	2,466	2,636	2,791	2,941	3,116	3,296
38. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
39. Firm energy requirement within province (37 + 38)	1,340	1,775	1,965	2,100	2,301	2,466	2,636	2,791	2,941	3,116	3,296
40. Firm energy requirement on province (30 + 31 + 39)	1,348	1,787	1,972	2,108	2,308	2,500	2,791	2,791	2,941	3,116	3,296

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric	112	185	233	224	222	260	261	361	553	554	555
2. Steam - Conventional)		(243	240	304	305	310	429	533	533	636	636
3. Nuclear)	144	(-	-	-	-	-	-	-	-	-	-
4. Internal combustion)		(8	7	7	7	7	7	7	7	7	7
5. Gas turbine)		(-	-	-	-	-	-	-	-	-	-
6. Total net generating capability	256	436	480	535	534	577	697	901	1,093	1,197	1,198
Receipts of firm power from:											
7. Other provinces	4	6	6	5	9	33	6	7	7	8	8
8. United States	-	-	2	2	2	-	-	-	-	-	-
9. Total receipts	4	6	8	7	11	33	6	7	7	8	8
Deliveries of firm power to:											
10. Other provinces	-	-	-	-	2	-	-	-	-	-	-
11. United States	5	22	28	28	31	37	38	38	38	39	40
12. Total deliveries	5	22	28	28	33	37	38	38	38	39	40
13. Total net capability (6 + 9 - 12)	255	420	460	514	512	573	665	870	1,062	1,166	1,166
<u>Peak loads:</u>											
14. Firm power peak load within province	235	319	347	401	461 ^F	528	548	597	637	685	736
15. Indicated shortages	1	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	236	319	347	401	461 ^F	528	548	597	637	685	736
17. Firm power peak load on province (12 + 16)	241	341	375	429	494 ^F	565	586	635	675	724	776
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16)	19	101	113	113	51 ^F	45	117	273	425	481	430
18a. Reduction in generating capability due to adverse conditions .....	..	..	..	-	-	-	...	...	...	...	...

Energy	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	994	1,191	1,272	1,019	1,104	...	...	...	...	...
20. Steam - Conventional)		(870	895	1,019	1,525	1,844	...	...	...	...	...
21. Nuclear )		( -	-	-	-	-	...	...	...	...	...
22. Internal combustion)		(18	2	5	4	5	...	...	...	...	...
23. Gas turbine )		( -	-	-	-	-	...	...	...	...	...
24. Total net generation .....	..	1,882	2,088	2,296	2,548	2,953	...	...	...	...	...
Receipts of energy from:											
(a) Firm:											
25. Other provinces .....	..	31	28	29	32	61	185	32	35	37	39
26. United States .....	..	-	14	12	3	1	1	1	1	1	1
(b) Secondary:											
27. Other provinces .....	..	79	101	60	113	150	...	...	...	...	...
28. United States .....	..	14	3	2	3	17	...	...	...	...	...
29. Total receipts of energy .....	..	124	146	103	151	229	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
30. Other provinces	-	-	-	-	1	-	-	-	-	-	-
31. United States	33	125	166	178	163	179	232	237	236	240	239
(b) Secondary:											
32. Other provinces .....	..	16	67	57	43	45	...	...	...	...	...
33. United States .....	..	78	84	68	82	57	...	...	...	...	...
34. Total deliveries of energy .....	..	219	317	303	289	281	...	...	...	...	...
35. Total energy available (24 + 29 - 34) ..	..	1,787	1,917	2,096	2,410	2,901	...	...	...	...	...
36. Secondary energy delivered within province .....	..	5	5	1	-	64	...	...	...	...	...
37. Firm energy available within province (35 - 36) ...	1,248	1,782	1,912	2,095	2,410	2,837	2,969	3,457	3,634	3,859	4,121
38. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
39. Firm energy requirement within province (37 + 38)	1,248	1,782	1,912	2,095	2,410	2,837	2,969	3,457	3,634	3,859	4,121
40. Firm energy requirement on province (30 + 31 + 39)	1,281	1,907	2,078	2,273	2,574	3,034	3,216	3,719	3,970	4,199	4,435

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
thousands of kilowatts											
Capability:											
Net generating capability:											
1. Hydro-electric	5,583	8,628	8,830	9,271	9,453	10,208	10,623	10,848	11,919	12,326	13,136
2. Steam - Conventional)	(	59	41	59	192	361	362	675	702	702	702
3. Nuclear)	(-	-	-	-	-	-	-	-	-	-
4. Internal combustion )	(	15	12	10	15	13	13	13	13	13	13
5. Gas turbine )	(	36	36	36	36	36	36	36	36	36	36
6. Total net generating capability	5,619	8,738	8,919	9,376	9,696	10,618	11,034	11,572	12,670	13,077	13,887
Receipts of firm power from:											
7. Other provinces	1	19	15	12	18	7	7	7	7	7	7
8. United States	5	2	2	-	-	-	-	-	-	-	-
9. Total receipts	6	21	17	12	18	7	7	7	7	7	7
Deliveries of firm power to:											
10. Other provinces	729	696	697	703	717	635	637	645	605	608	278
11. United States	56	38	4	6	6 ^r	6	6	6	6	6	6
12. Total deliveries	785	734	701	709	723 ^r	641	643	651	611	614	284
13. Total net capability (6 + 9 - 12)	4,840	8,025	8,235	8,679	8,991 ^r	9,984	10,398	10,928	12,066	12,470	13,610
Peak loads:											
14. Firm power peak load within province	4,367	6,258	6,370	7,118	7,651 ^r	8,228	9,430	10,019	10,740	11,494	12,170
15. Indicated shortages	44	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	4,411	6,258	6,370	7,118	7,651 ^r	8,228	9,430	10,019	10,740	11,494	12,170
17. Firm power peak load on province (12 + 16)	5,196	6,992	7,071	7,827	8,374 ^r	8,869	10,073	10,670	11,351	12,108	12,454
Indicated reserve:											
18. Indicated reserve (13 - 16)	429	1,767	1,865	1,561	1,340 ^r	1,756	968	909	1,326	976	1,440
18a. Reduction in generating capability due to adverse conditions .....	..	..	..	435	474	510	...	...	...	...	...

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy	Actual					Forecast					
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
millions of Kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	49,432	49,799	49,454	56,268	55,952	...	...	...	...	...
20. Steam - Conventional)		(276	288	320	424	897	...	...	...	...	...
21. Nuclear )		( -	-	-	-	-	...	...	...	...	...
22. Internal combustion)		(7	13	44	6	13	...	...	...	...	...
23. Gas turbine)		(11	29	1	1	1	...	...	...	...	...
24. Total net generation .....	..	49,726	50,129	49,819	56,699	56,863	...	...	...	...	...
Receipts of energy from:											
(a) Firm:											
25. Other provinces .....	..	87	110	44	83	76	55	55	50	50	50
26. United States .....	..	7	7	-	1	1	1	1	1	1	1
(b) Secondary:											
27. Other provinces .....	..	16	-	99	45	113	...	...	...	...	...
28. United States .....	..	-	-	-	-	-	...	...	...	...	...
29. Total receipts of energy .....	..	110	117	143	129	190	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
30. Other provinces	4,260	4,207	4,233 ^F	4,218 ^F	4,979 ^F	4,317	4,013	4,040	4,026	3,864	3,661
31. United States	490	353	14	15 ^F	16 ^F	14	14	14	14	14	14
(b) Secondary:											
32. Other provinces .....	..	1,649	1,963	1,004	2,040 ^F	602	...	...	...	...	...
33. United States .....	..	54	25 ^F	18 ^F	40	33	...	...	...	...	...
34. Total deliveries of energy .....	..	6,263	6,235	5,255 ^F	7,075 ^F	4,966	...	...	...	...	...
35. Total energy available (24 + 29 - 34) ..	..	43,573	44,011	44,707 ^F	49,753 ^F	52,087	...	...	...	...	...
36. Secondary energy delivered within province .....	..	4,551	3,622	2,613	2,672	2,860	...	...	...	...	...
37. Firm energy available within province (35 - 36) ..	29,479	39,022	40,389	42,094 ^F	47,081 ^F	49,227	52,708	55,874	59,435	62,751	66,215
38. Indicated shortage	362	-	-	-	-	-	-	-	-	-	-
39. Firm energy requirement within province (37 + 38)	29,841	39,022	40,389	42,094 ^F	47,081 ^F	49,227	52,708	55,874	59,435	62,751	66,215
40. Firm energy requirement on province (30 + 31 + 39)	34,591	43,582	44,636 ^F	46,327 ^F	52,076 ^F	53,558	56,735	59,928	63,475	66,629	69,890

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric	3,688	5,292	5,285	5,601	5,603	5,548	5,694	5,859	5,980	6,077	6,077
2. Steam - Conventional)		(1,555	1,926	2,376	2,379	2,885	3,270	3,591	4,221	5,307	5,850
3. Nuclear)		(-	-	-	-	-	-	200	200	200	700
4. Internal combustion)	800	(
5. Gas turbine)		(11	12	12	8	7	9	11	11	11	11
		(-	-	-	-	74	250	326	326	326	326
6. Total net generating capability	4,488	6,858	7,223	7,989	7,990	8,514	9,223	9,987	10,738	11,921	12,964
Receipts of firm power from:											
7. Other provinces	741	695	692	699	709	627	631	638	598	600	270
8. United States	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts	741	695	692	699	709	627	631	638	598	600	270
Deliveries of firm power to:											
10. Other provinces	1	5	2	2	8	-	-	-	-	-	-
11. United States	85	86	89	88	90 ^F	46	47	48	49	50	51
12. Total deliveries	86	91	91	90	98 ^F	46	47	48	49	50	51
13. Total net capability (6 + 9 - 12)	5,143	7,462	7,824	8,598	8,601 ^F	9,095	9,807	10,577	11,287	12,471	13,183
<u>Peak loads:</u>											
14. Firm power peak load within province	4,757	6,615	6,913	7,410 ^F	7,897	8,596	9,183	9,690	10,204	10,929	11,603
15. Indicated shortages	18	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	4,775	6,615	6,913	7,410 ^F	7,897	8,596	9,183	9,690	10,204	10,929	11,603
17. Firm power peak load on province (12 + 16)	4,861	6,706	7,004	7,500 ^F	7,995 ^F	8,642	9,230	9,738	10,253	10,979	11,654
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16)	368	847	911	1,188 ^F	704 ^F	499	624	887	1,083	1,542	1,580
18a Reduction in generating capability due to adverse conditions .....	..	..	..	321	192	16	...	...	...	...	...

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	33,654	30,872	29,099	30,150	32,924	...	...	...	...	...
20. Steam - Conventional)		(1,187	4,335	8,291	9,313	11,661	...	...	...	...	...
21. Nuclear)		(-	22	87	141	120	...	...	...	...	...
	..	(...
22. Internal combustion)		(31	29	24	22	21	...	...	...	...	...
23. Gas turbine)		(-	1	-	-	4	...	...	...	...	...
24. Total net generation .....	..	34,872	35,259	37,501	39,626	44,730	...	...	...	...	...
Receipts of energy from:											
(a) Firm:											
25. Other provinces .....	..	4,186	4,212 ^x	4,197 ^x	4,346	4,290	3,983	4,008	3,991	3,827	3,622
26. United States .....	..	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
27. Other provinces .....	..	1,651	2,009	1,008	2,680	603	...	...	...	...	...
28. United States .....	..	1,362	2,704	2,846	2,907	2,897	...	...	...	...	...
29. Total receipts of energy .....	..	7,199	8,925 ^x	8,051 ^x	9,933	7,790	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
30. Other provinces	3	7	7	8	28	20	-	-	-	-	-
31. United States	687	642	635	672	654 ^x	438	393	401	409	416	424
(b) Secondary:											
32. Other provinces .....	..	275	221	257	255	258	...	...	...	...	...
33. United States .....	..	2,909	3,144 ^x	2,649 ^x	3,240 ^x	2,656	...	...	...	...	...
34. Total deliveries of energy .....	..	3,833	4,007 ^x	3,586 ^x	4,177	3,372	...	...	...	...	...
35. Total energy available (24 + 29 - 34)	..	38,238	40,177	41,966	45,382	49,148	...	...	...	...	...
36. Secondary energy delivered within province .....	..	511	546	437	568	639	...	...	...	...	...
37. Firm energy available within province (35 - 36) ..	26,376	37,727	39,631	41,529	44,814	48,509	52,410	55,409	58,427	62,352	66,375
38. Indicated shortage	6	-	-	-	-	-	-	-	-	-	-
39. Firm energy requirement within province (37 + 38)	26,382	37,727	39,631	41,529	44,814	48,509	52,410	55,409	58,427	62,352	66,375
40. Firm energy requirement on province (30 + 31 + 39)	27,072	38,376	40,273	42,209	45,496 ^x	48,967	52,803	55,810	58,836	62,768	66,799

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric	547	735	735	735	735	1,061	1,061	1,061	1,171	1,171	1,171
2. Steam - Conventional)	(	291	291	291	291	291	291	291	291	361	431
3. Nuclear)	(-	-	-	-	-	-	-	-	-	-
4. Internal combustion )	(	4	7	7	8	9	10	10	10	10	10
5. Gas turbine )	(	-	-	-	-	-	-	28	28	28	56
6. Total net generating capability	593	1,030	1,033	1,033	1,034	1,361	1,362	1,390	1,500	1,570	1,668
Receipts of firm power from:											
7. Other provinces	79	83	87	134	94	83	86	86	86	86	86
8. United States	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts	79	83	87	134	94	83	86	86	86	86	86
Deliveries of firm power to:											
10. Other provinces	14	-	-	-	-	1	1	1	1	1	1
11. United States	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries	14	-	-	-	-	1	1	1	1	1	1
13. Total net capability (6 + 9 - 12)	658	1,113	1,120	1,167	1,128	1,443	1,447	1,475	1,585	1,655	1,753
<u>Peak loads:</u>											
14. Firm power peak load within province	594	849	907	955	1,004	1,022	1,170	1,272	1,365	1,462	1,569
15. Indicated shortages	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	594	849	907	955	1,004	1,022	1,170	1,272	1,365	1,462	1,569
17. Firm power peak load on province (12 + 16)	608	849	907	955	1,004	1,023	1,171	1,273	1,366	1,463	1,570
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16)	64	264	213	212	124	421	277	203	220	193	184
18a Reduction in generating capability due to adverse conditions .....	..	..	..	-	-	20	...	...	...	...	...

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	3,591	4,220	4,736	4,799	5,256	...	...	...	...	...
20. Steam - Conventional)		(238	120	61	148	199	...	...	...	...	...
21. Nuclear )		( -	-	-	-	-	...	...	...	...	...
22. Internal combustion)	..	(11	12	13	14 ^F	15	...	...	...	...	...
23. Gas turbine )		( -	-	-	-	-	...	...	...	...	...
24. Total net generation .....	..	3,840	4,352	4,810	4,961 ^F	5,470	...	...	...	...	...
Receipts of energy from:											
(a) Firm:											
25. Other provinces .....	..	623	647	687	651	599	638	650	650	650	650
26. United States .....	..	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
27. Other provinces .....	..	301	199	198	249	178	...	...	...	...	...
28. United States .....	..	-	-	-	-	-	...	...	...	...	...
29. Total receipts of energy .....	..	924	846	885	900	777	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
30. Other provinces	114	-	-	-	-	5	5	5	5	5	5
31. United States	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
32. Other provinces .....	..	6	75	65	49	111	...	...	...	...	...
33. United States .....	..	-	-	-	-	-	...	...	...	...	...
34. Total deliveries of energy .....	..	6	75	65	49	116	...	...	...	...	...
35. Total energy available (24 + 29 - 34)	..	4,758	5,123	5,630	5,812 ^F	6,131	...	...	...	...	...
36. Secondary energy delivered within province .....	..	60	120	185	153	143	...	...	...	...	...
37. Firm energy available within province (35 - 36) ...	3,122	4,698	5,003	5,445	5,659 ^F	5,988	6,351	6,858	7,309	7,738	8,204
38. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
39. Firm energy requirement within province (37 + 38)	3,122	4,698	5,003	5,445	5,659 ^F	5,988	6,351	6,858	7,309	7,738	8,204
40. Firm energy requirement on province (30 + 31 + 39)	3,236	4,698	5,003	5,445	5,659 ^F	5,993	6,356	6,863	7,314	7,743	8,209

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
thousand of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric	82	107	107	208	309	309	352	395	501	558	558
2. Steam - Conventional)		(572	575	492	529	535	535	535	535	676	676
3. Nuclear)		(-	-	-	-	-	-	-	-	-	-
4. Internal combustion)	257	(35	37	36	35	35	35	33	33	33	33
5. Gas turbine)		(43	33	39	39	41	56	86	86	86	131
6. Total net generating capability	339	757	752	775	912	920	978	1,049	1,155	1,353	1,398
Receipts of firm power from:											
7. Other provinces	-	-	-	-	-	1	1	1	1	1	1
8. United States	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts	-	-	-	-	-	1	1	1	1	1	1
Deliveries of firm power to:											
10. Other provinces	79	88	87	134	94	83	86	86	86	86	86
11. United States	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries	79	88	87	134	94	83	86	86	86	86	86
13. Total net capability (6 + 9 - 12)	260	669	665	641	818	838	893	964	1,070	1,268	1,313
<u>Peak loads:</u>											
14. Firm power peak load within province	227	466	497	531	619	685	758	832	918	1,098	1,119
15. Indicated shortages	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	227	466	497	531	619	685	758	832	918	1,098	1,119
17. Firm power peak load on province (12 + 16)	306	554	584	665	713	768	844	918	1,004	1,184	1,205
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16)	33	203	168	110	199	153	135	132	152	170	194
18a Reduction in generating capability due to adverse conditions .....	..	..	..	7	-	-	...	...	...	...	...

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Energy	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	658	704	985	1,369	1,698	...	...	...	...	...
20. Steam - Conventional)		(1,682	1,844	1,833	1,782	1,855	...	...	...	...	...
21. Nuclear )	..	( -	-	-	-	-	...	...	...	...	...
22. Internal combustion)		(109	97	106	106	91	...	...	...	...	...
23. Gas turbine)	..	(62	37	49	64	69	...	...	...	...	...
24. Total net generation .....	..	2,511	2,682	2,973	3,321	3,713	...	...	...	...	...
Receipts of energy from:											
(a) Firm:											
25. Other provinces .....	..	-	-	-	-	5	5	5	5	5	5
26. United States .....	..	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
27. Other provinces .....	..	6	29	62	17	104	...	...	...	...	...
28. United States .....	..	-	-	-	-	-	...	...	...	...	...
29. Total receipts of energy .....	..	6	29	62	17	109	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
30. Other provinces	571	621	647	687	651	599	638	650	650	650	650
31. United States	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
32. Other provinces .....	..	41	-	4	9	4	...	...	...	...	...
33. United States .....	..	-	-	-	-	-	...	...	...	...	...
34. Total deliveries of energy .....	..	662	647	691	660	603	...	...	...	...	...
35. Total energy available (24 + 29 - 34)	..	1,855	2,064	2,344	2,678	3,219	...	...	...	...	...
36. Secondary energy delivered within province .....	..	-	-	17	20	14	...	...	...	...	...
37. Firm energy available within province (35 - 36) ..	877	1,855	2,064	2,327	2,658	3,205	3,569	3,965	4,396	4,877	5,413
38. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
39. Firm energy requirement within province (37 + 38)	877	1,855	2,064	2,327	2,658	3,205	3,569	3,965	4,396	4,877	5,413
40. Firm energy requirement on province (30 + 31 + 39)	1,448	2,476	2,711	3,014	3,309	3,804	4,207	4,615	5,046	5,527	6,063

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric	220	327	327	326	326	490	680	680	680	680	680
2. Steam - Conventional)	(	498	643	713	748	750	822	1,163	1,163	1,313	1,473
3. Nuclear)	(-	-	-	-	-	-	-	-	-	-
4. Internal combustion )	(	238	33	31	31	24	24	25	25	25	25
5. Gas turbine )	(	100	130	130	130	131	156	156	156	156	156
6. Total net generating capability	458	953	1,133	1,200	1,235	1,395	1,682	2,024	2,024	2,174	2,334
Receipts of firm power from:											
7. Other provinces	-	-	-	-	-	-	-	-	-	-	-
8. United States	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts	-	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces	3	5	4	10	12	19	14	16	18	21	25
11. United States	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries	3	5	4	10	12	19	14	16	18	21	25
13. Total net capability (6 + 9 - 12)	455	948	1,129	1,190	1,223	1,376	1,668	2,008	2,006	2,153	2,309
<u>Peak loads:</u>											
14. Firm power peak load within province	391	836	882	984	1,106	1,121	1,297	1,475	1,610	1,774	1,928
15. Indicated shortages	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	391	836	882	984	1,106	1,121	1,297	1,475	1,610	1,774	1,928
17. Firm power peak load on province (12 + 16)	394	841	886	994	1,118	1,140	1,311	1,491	1,628	1,795	1,953
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16)	64	112	247	206	117	255	371	533	396	379	381
18a. Reduction in generating capability due to adverse conditions .....	..	..	..	-	-	-	...	...	...	...	...

Energy	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	1,023	956	881	896	1,411	...	...	...	...	...
20. Steam - Conventional)		(2,534	2,900	3,294	3,770	3,794	...	...	...	...	...
21. Nuclear )		( -	-	-	-	-	...	...	...	...	...
22. Internal combustion)	..	(51	59	60	90	57	...	...	...	...	...
23. Gas turbine)		(165	187	257	209	230	...	...	...	...	...
24. Total net generation .....	..	3,773	4,102	4,492	4,965	5,492	...	...	...	...	...
Receipts of energy from:											
(a) Firm:											
25. Other provinces .....	..	6	23	4	1	11	11	8	6	5	4
26. United States .....	..	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
27. Other provinces .....	..	30	-	23	21	-	...	...	...	...	...
28. United States .....	..	-	-	-	-	-	...	...	...	...	...
29. Total receipts of energy .....	..	36	23	27	22	11	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
30. Other provinces	-	1	4	-	-	-	-	5	11	20	31
31. United States	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
32. Other provinces .....	..	-	-	-	-	-	...	...	...	...	...
33. United States .....	..	-	-	-	-	-	...	...	...	...	...
34. Total deliveries of energy .....	..	1	4	-	-	-	...	...	...	...	...
35. Total energy available (24 + 29 - 34)	..	3,808	4,121	4,519	4,987	5,503	...	...	...	...	...
36. Secondary energy delivered within province .....	..	-	-	-	-	4	...	...	...	...	...
37. Firm energy available within province (35 - 36) ..	1,859	3,808	4,121	4,519	4,987	5,499	6,058	7,010	7,686	8,392	9,128
38. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
39. Firm energy requirement within province (37 + 38)	1,859	3,808	4,121	4,519	4,987	5,499	6,058	7,010	7,686	8,392	9,128
40. Firm energy requirement on province (30 + 31 + 39)	1,859	3,809	4,125	4,519	4,987	5,499	6,058	7,015	7,697	8,412	9,159

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric	1,614	2,672	2,599	2,670	2,689	2,692	2,888	2,894	3,604	4,000	4,000
2. Steam - Conventional )	(	117	424	475	498	643	649	860	865	865	865
3. Nuclear)	(-	-	-	-	-	-	-	-	-	-
4. Internal combustion )	(	109	112	106	117	115	121	119	122	119	119
5. Gas turbine )	(	172	172	177	177	177	187	187	187	187	187
6. Total net generating capability	1,747	3,070	3,307	3,428	3,481	3,627	3,845	4,060	4,778	5,171	5,171
Receipts of firm power from:											
7. Other provinces	3	5	4	10	12	19	14	16	18	21	25
8. United States	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts	3	5	4	10	12	19	14	16	18	21	25
Deliveries of firm power to:											
10. Other provinces	-	-	-	-	-	-	-	-	-	-	-
11. United States	20	-	-	-	-	-	-	-	-	-	-
12. Total deliveries	20	-	-	-	-	-	-	-	-	-	-
13. Total net capability (6 + 9 - 12)	1,730	3,075	3,311	3,438	3,493	3,646	3,859	4,076	4,796	5,192	5,196
<u>Peak loads:</u>											
14. Firm power peak load within province	1,386	2,368	2,317	2,537	2,886	3,058	3,472	3,822	4,031	4,264	4,407
15. Indicated shortages	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	1,386	2,368	2,317	2,537	2,886	3,058	3,472	3,822	4,031	4,264	4,407
17. Firm power peak load on province (12 + 16)	1,406	2,368	2,317	2,537	2,886	3,058	3,472	3,822	4,031	4,264	4,407
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16)	344	707	994	901	607	588	387	254	765	928	789
18a. Reduction in generating capability due to adverse conditions .....	..	..	..	2	9	12	...	...	...	...	...

Energy	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	12,295	13,500	14,194	15,516	15,196	...	...	...	...	...
20. Steam - Conventional)		(535	665	780	1,207	2,727	...	...	...	...	...
21. Nuclear )		( -	-	-	-	-	...	...	...	...	...
22. Internal combustion)		(246	261	300	293	255	...	...	...	...	...
23. Gas turbine)		(10	3	5	4	5	...	...	...	...	...
24. Total net generation .....	..	13,086	14,429	15,279	17,020	18,183	...	...	...	...	...
Receipts of energy from:											
(a) Firm:											
25. Other provinces .....	..	1	4	-	-	-	-	5	11	20	31
26. United States .....	..	1	1	-	2	2	1	1	1	1	1
(b) Secondary:											
27. Other provinces .....	..	-	-	-	-	-	...	...	...	...	...
28. United States .....	..	16	57	19	61	659	...	...	...	...	...
29. Total receipts of energy .....	..	18	62	19	63	661	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
30. Other provinces	10	6	23	4	1	11	11	8	6	5	4
31. United States	122	2	2	2	2	2	2	2	3	3	3
(b) Secondary:											
32. Other provinces .....	..	30	-	23	21	-	...	...	...	...	...
33. United States .....	..	17	14	19	30	191	...	...	...	...	...
34. Total deliveries of energy .....	..	55	39	48	54	204	...	...	...	...	...
35. Total energy available (24 + 29 - 34)	..	13,049	14,452	15,250	17,029	18,640	...	...	...	...	...
36. Secondary energy delivered within province .....	..	242	230	268	180	196	...	...	...	...	...
37. Firm energy available within province (35 - 36) ..	8,011	12,807	14,222	14,982	16,849	18,444	20,568	22,450	23,923	25,115	26,157
38. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
39. Firm energy requirement within province (37 + 38)	8,011	12,807	14,222	14,982	16,849	18,444	20,568	22,450	23,923	25,115	26,157
40. Firm energy requirement on province (30 + 31 + 39)	8,143	12,815	14,247	14,988	16,852	18,457	20,581	22,460	23,932	25,123	26,164

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric	22	44	44	44	44	64	64	53	53	53	53
2. Steam - Conventional)		(1	1	1	1	1	1	1	1	1	1
3. Nuclear)		(-	-	-	-	-	-	-	-	-	-
4. Internal combustion)	-	(10	10	11	13	15	12	13	14	14	15
5. Gas turbine)		(-	-	-	2	1	1	1	1	1	1
6. Total net generating capability	22	55	55	56	60	81	78	68	69	69	70
Receipts of firm power from:											
7. Other provinces	-	-	-	-	-	-	-	-	-	-	-
8. United States	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts	-	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces	-	-	-	-	-	-	-	-	-	-	-
11. United States	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries	-	-	-	-	-	-	-	-	-	-	-
13. Total net capability (6 + 9 - 12)	22	55	55	56	60	81	78	68	69	69	70
<u>Peak loads:</u>											
14. Firm power peak load within province	19	29	32	32	34	52	52	51	52	53	54
15. Indicated shortages	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	19	29	32	32	34	52	52	51	52	53	54
17. Firm power peak load on province (12 + 16)	19	29	32	32	34	52	52	51	52	53	54
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16)	3	26	23	24	26	29	26	17	17	16	16
18a. Reduction in generating capability due to adverse conditions .....	..	..	..	-	-	-	...	...	...	...	...

Energy	Actual						Forecast				
	1955	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	174	187	189	199	217	...	...	...	...	...
20. Steam - Conventional)		(2	2	2	3	2	...	...	...	...	...
21. Nuclear )		( -	-	-	-	-	...	...	...	...	...
22. Internal combustion)	..	(19	24	24	22	23	...	...	...	...	...
23. Gas turbine)		(-	-	-	4	4	...	...	...	...	...
24. Total net generation .....	..	195	213	215	228	246	...	...	...	...	...
Receipts of energy from:											
(a) Firm:											
25. Other provinces .....	..	-	-	-	-	-	...	...	...	...	...
26. United States .....	..	-	-	-	-	-	...	...	...	...	...
(b) Secondary:											
27. Other provinces .....	..	-	-	-	-	-	...	...	...	...	...
28. United States .....	..	-	-	-	-	-	...	...	...	...	...
29. Total receipts of energy .....	..	-	-	-	-	-	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
30. Other provinces	-	-	-	-	-	-	-	-	-	-	-
31. United States	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
32. Other provinces .....	-	-	-	-	-	-	...	...	...	...	...
33. United States .....	-	-	-	-	-	-	...	...	...	...	...
34. Total deliveries of energy .....	-	-	-	-	-	-	...	...	...	...	...
35. Total energy available (24 + 29 - 34) ..	..	195	213	215	228	246	...	...	...	...	...
36. Secondary energy delivered within province .....	..	42	51	50	65	48	...	...	...	...	...
37. Firm energy available within province (35 - 36) ..	96	153	162	165	163	198	229	219	228	235	244
38. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
39. Firm energy requirement within province (37 + 38)	96	153	162	165	163	198	229	219	228	235	244
40. Firm energy requirement on province (30 + 31 + 39)	96	153	162	165	163	198	229	219	228	235	244

TABLE 2. Total Net Generating Capability within Provinces(1)

Province	1955	1961	1962	1963	1964	1965	Forecast					Percentage change (compounded)		
							1966	1967	1968	1969	1970	1955 1965	1961 1965	1965 1970
thousands of kilowatts														
Newfoundland (including Labrador)	223	311	409	496	498	502	513	716	711	786	786	8.45	12.72	9.38
Prince Edward Island	18	37	37	58	58	58	58	58	78	81	81	12.41	11.89	6.91
Nova Scotia	384	508	521	532	527	626	702	712	723	882	887	5.01	5.36	7.22
New Brunswick	256	436	480	535	534	577	697	901	1,093	1,197	1,198	8.51	7.26	15.73
Quebec	5,619	8,738	8,919	9,376	9,696	10,618	11,034	11,572	12,670	13,077	13,887	6.57	4.99	5.51
Ontario	4,488	6,858	7,223	7,989	7,990	8,514	9,223	9,987	10,738	11,921	12,964	6.61	5.56	8.77
Manitoba	593	1,030	1,033	1,033	1,034	1,361	1,362	1,390	1,500	1,570	1,668	8.67	7.22	4.15
Saskatchewan	339	757	752	775	912	920	978	1,049	1,155	1,353	1,398	10.50	5.00	8.73
Alberta	458	953	1,133	1,200	1,235	1,395	1,682	2,024	2,024	2,174	2,334	11.78	10.45	10.84
British Columbia	1,747	3,070	3,307	3,428	3,481	3,627	3,845	4,060	4,778	5,171	5,171	7.58	4.26	7.35
Yukon and Northwest Territories	22	55	55	56	60	81	78	68	69	69	70	13.92	10.16	- 2.96
Canada	14,147	22,753	23,869	25,478	26,025	28,279	30,172	32,537	35,539	38,281	40,444	7.17	5.59	7.42

(1) Table 1, item 6.

TABLE 3. Firm Power Peak Load within Provinces(1)

Province	1955	1961	1962	1963	1964	1965	Forecast					Percentage change (compounded)			
							1966	1967	1968	1969	1970	1955 1965	1961 1965	1965 1970	
thousands of kilowatts															
Newfoundland (including Labrador)	206	242	294	349	376	422	482	528	543	557	569	7.43	14.91	6.16	
Prince Edward Island	12	24	25	27	31	35	38	42	46	50	55	11.30	9.89	9.46	
Nova Scotia	278	347	388	411	438 ^F	457	493	513	547	582	615	5.10	7.13	6.12	
New Brunswick	235	319	347	401	461 ^F	528	548	597	637	685	736	8.43	13.43	6.87	
Quebec	4,367	6,258	6,370	7,118	7,651 ^F	8,228	9,430	10,019	10,740	11,494	12,170	6.54	7.08	8.14	
Ontario	4,757	6,615	6,913	7,410 ^F	7,897	8,596	9,183	9,690	10,204	10,929	11,603	6.10	6.77	6.18	
Manitoba	594	849	907	955	1,004	1,022	1,170	1,272	1,365	1,462	1,569	5.58	4.75	8.95	
Saskatchewan	227	466	497	531	619	685	758	832	918	1,098	1,119	11.68	10.11	10.31	
Alberta	391	836	882	984	1,106	1,121	1,297	1,475	1,610	1,774	1,928	11.11	7.61	11.46	
British Columbia	1,386	2,368	2,317	2,537	2,886	3,058	3,472	3,822	4,031	4,264	4,407	8.26	6.60	7.58	
Yukon and Northwest Territories	19	29	32	32	34	52	52	51	52	53	54	10.59	15.72	0.76	
Canada	12,472	18,353	18,972	20,755 ^F	22,503 ^F	24,204	26,923	28,841	30,693	32,948	34,825	6.86	7.17	7.55	

(1) Table 1, item 14.

TABLE 4. Firm Energy Requirement within Provinces(1)

Province	1955	1961	1962	1963	1964	1965	Forecast					Percentage change (compounded)			
							1966	1967	1968	1969	1970	1955 1965	1961 1965	1965 1970	
millions of kilowatt-hours															
Newfoundland (including Labrador)	1,299	1,361	1,473	1,878	2,293	2,640	2,815	3,129	3,260	3,331	3,395	7.35	18.02	5.16	
Prince Edward Island	51	88	101	111	124	136	154	173	195	217	243	10.31	11.50	12.31	
Nova Scotia	1,340	1,775	1,965	2,100	2,301	2,466	2,636	2,791	2,941	3,116	3,296	6.29	8.57	5.97	
New Brunswick	1,248	1,782	1,912	2,095	2,410	2,837	2,969	3,457	3,634	3,859	4,121	8.56	12.33	7.76	
Quebec	29,841	39,022	40,389	42,094 ^x	47,081 ^x	49,227	52,708	55,874	59,435	62,751	66,215	5.13	5.98	6.11	
Ontario	26,382	37,727	39,631	41,529	44,814	48,509	52,410	55,409	58,427	62,352	66,375	8.04	6.49	6.47	
Manitoba	3,122	4,698	5,003	5,445	5,659 ^x	5,988	6,351	6,858	7,309	7,738	8,204	6.73	6.25	6.50	
Saskatchewan	877	1,855	2,064	2,327	2,658	3,205	3,569	3,965	4,396	4,877	5,413	13.84	14.65	11.05	
Alberta	1,859	3,808	4,121	4,519	4,987	5,499	6,058	7,010	7,686	8,392	9,128	11.46	9.62	10.67	
British Columbia	8,011	12,807	14,222	14,982	16,849	18,444	20,568	22,450	23,923	25,115	26,157	8.70	9.55	7.24	
Yukon and Northwest Territories	96	153	162	165	163	198	229	219	228	235	244	7.51	6.66	4.27	
Canada	74,126	105,076	111,043	117,245 ^x	129,339 ^x	139,149	150,467	161,335	171,434	181,983	192,791	6.50	7.28	6.74	

(1) Table 1, item 39.

TABLE 5. Indicated Reserve(1)

Province	1955	1961	1962	1963	1964	1965	Forecast					Percentage change (compounded)			
							1966	1967	1968	1969	1970	1955 1965	1961 1965	1965 1970	
thousands of kilowatts															
<u>Newfoundland (including Labrador):</u>															
1. Gross capability	223	311	409	496	498	502	513	716	711	786	786	8.45	12.72	9.38	
2. Firm power peak load on province ...	207	255	307	387	397	429	489	535	550	564	576	7.56	13.89	6.07	
3. Indicated reserve (1 - 2)	16	56	102	109	101	73	24	181	161	222	210	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	7.7	22.0	33.2	28.2	25.4	17.0	4.9	33.8	29.3	39.4	36.5	...	...	...
<u>Prince Edward Island:</u>															
1. Gross capability	18	37	37	58	58	58	58	58	78	81	81	12.41	11.89	6.91	
2. Firm power peak load on province ...	12	24	25	27	31	35	38	42	46	50	55	11.30	9.89	9.46	
3. Indicated reserve (1 - 2)	6	13	12	31	27	23	20	16	32	31	26	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	50.0	54.2	48.0	114.8	87.1	65.7	52.6	38.1	69.6	62.0	47.3	...	...	...
<u>Nova Scotia:</u>															
1. Gross capability	384	508	521	532	527	626	702	712	723	882	887	5.01	5.36	7.22	
2. Firm power peak load on province ...	280	348	389	412	439 ^F	482	493	513	547	582	615	5.58	8.49	5.00	
3. Indicated reserve (1 - 2)	104	160	132	120	88 ^F	144	209	199	176	300	272	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	37.1	46.0	33.9	29.1	20.0 ^F	29.9	42.4	38.8	32.2	51.5	44.2	...	...	...
<u>New Brunswick:</u>															
1. Gross capability	260	442	488	542	545	610	703	908	1,100	1,205	1,206	8.90	8.39	14.61	
2. Firm power peak load on province ...	241	341	375	429	494 ^F	565	586	635	675	724	776	8.89	13.46	6.55	
3. Indicated reserve (1 - 2)	19	101	113	113	51 ^F	45	117	273	425	481	430	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	7.9	29.6	30.1	26.3	10.3 ^F	8.0	20.0	43.0	63.0	66.4	55.4	...	...	...

(1) Gross capability (Table 1, items 6 + 9); firm power peak load on province (Table 1, item 17); indicated reserve (Table 1, item 18).

TABLE 5. Indicated Reserve(1) - Continued

Province	1955	1961	1962	1963	1964	1965	Forecast					Percentage change (compounded)		
							1966	1967	1968	1969	1970	1955 1965	1961 1965	1965 1970
thousands of kilowatts														
<u>Quebec:</u>														
1. Gross capability	5,625	8,759	8,936	9,388	9,714	10,625	11,041	11,579	12,677	13,084	13,894	6.57	4.95	5.51
2. Firm power peak load on province ...	5,196	6,992	7,071	7,827	8,374 ^x	8,869	10,073	10,670	11,351	12,108	12,454	5.49	6.13	7.03
3. Indicated reserve (1 - 2)	429	1,767	1,865	1,561	1,340 ^x	1,756	968	909	1,326	976	1,440	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	8.3	25.3	26.4	19.9	16.0	19.8	9.6	8.5	11.7	8.1	11.6	...	...	...
<u>Ontario:</u>														
1. Gross capability	5,229	7,553	7,915	8,688	8,699	9,141	9,854	10,625	11,336	12,521	13,234	5.75	4.89	7.68
2. Firm power peak load on province ...	4,861	6,706	7,004	7,500 ^x	7,995 ^x	8,642	9,230	9,738	10,253	10,979	11,654	5.92	6.55	6.16
3. Indicated reserve (1 - 2)	368	847	911	1,188 ^x	704 ^x	499	624	887	1,083	1,542	1,580	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	7.6 ^x	12.6	13.0	15.8	8.8 ^x	5.8	6.8	9.1	10.6	14.0	13.6	...	...	...
<u>Manitoba:</u>														
1. Gross capability	672	1,113	1,120	1,167	1,128	1,444	1,448	1,476	1,586	1,656	1,754	7.95	6.73	3.97
2. Firm power peak load on province ...	608	849	907	955	1,004	1,023	1,171	1,273	1,366	1,463	1,570	5.34	4.77	8.94
3. Indicated reserve (1 - 2)	64	264	213	212	124	421	277	203	220	193	184	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	10.5	31.1	23.5	22.2	12.4	41.2	23.7	15.9	16.1	13.2	11.7	...	...	...
<u>Saskatchewan:</u>														
1. Gross capability	339	757	752	775	912	921	979	1,050	1,156	1,354	1,399	10.51	5.02	8.71
2. Firm power peak load on province ...	306	554	584	665	713	768	844	918	1,004	1,184	1,205	9.64	8.51	9.43
3. Indicated reserve (1 - 2)	33	203	168	110	199	153	135	132	152	170	194	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	10.8 ^x	36.6	28.8	16.5	27.9	19.9	16.0	14.4	15.1	14.4	16.1	...	...	...

(1) Gross capability (Table 1, items 6 + 9); firm power peak load on province (Table 1, item 17); indicated reserve (Table 1, item 18).

TABLE 5. Indicated Reserve(1) - Concluded

Province	1955	1961	1962	1963	1964	1965	Forecast					Percentage change (compounded)			
							1966	1967	1968	1969	1970	1955 1965	1961 1965	1965 1970	
thousands of kilowatts															
<u>Alberta:</u>															
1. Gross capability	458	953	1,133	1,200	1,235	1,395	1,682	2,024	2,024	2,174	2,334	11.78	9.99	10.84	
2. Firm power peak load on province ...	394	841	886	994	1,118	1,140	1,311	1,491	1,628	1,795	1,953	11.21	7.90	11.37	
3. Indicated reserve (1 - 2)	64	112	247	206	117	255	371	533	396	379	381	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	16.2	13.3	27.9	20.7	10.5	22.4	28.3	35.7	24.3	21.1	19.5	...	...	...
<u>British Columbia:</u>															
1. Gross capability	1,750	3,075	3,311	3,438	3,493	3,646	3,859	4,076	4,796	5,192	5,196	7.62	4.35	7.34	
2. Firm power peak load on province ...	1,406	2,368	2,317	2,537	2,886	3,058	3,472	3,822	4,031	4,264	4,407	8.08	6.60	7.58	
3. Indicated reserve (1 - 2)	344	707	994	901	607	588	387	254	765	928	789	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	24.5	29.9	42.9	35.5	21.0	19.2	11.1	6.6	19.0	21.8	17.9	...	...	...
<u>Yukon and Northwest Territories:</u>															
1. Gross capability	22	55	55	56	60	81	78	68	69	69	70	13.92	10.16	- 2.96	
2. Firm power peak load on province ...	19	29	32	32	34	52	52	51	52	53	54	10.59	15.72	0.76	
3. Indicated reserve (1 - 2)	3	26	23	24	26	29	26	17	17	16	16	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	15.8	89.7	71.9	75.0	76.5	55.8	50.0	33.3	32.7	30.2	29.6	...	...	...
<u>Canada:</u>															
1. Gross capability	14,152	22,755	23,873	25,480	26,027	28,279	30,172	32,537	35,539	38,281	40,444	7.17	5.59	7.42	
2. Firm power peak load on Canada	12,702	18,499	19,093	20,905 ^r	22,643 ^r	24,293	27,014	28,933	30,786	33,043	34,922	6.70	7.06	7.53	
3. Indicated reserve (1 - 2)	1,450	4,256	4,780	4,575 ^r	3,384 ^r	3,986	3,158	3,604	4,753	5,238	5,522	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	11.4	23.0	25.0	21.9	14.9	16.4	11.7	12.5	15.4	15.9	15.8	...	...	...

(1) Gross capability (Table 1, items 6 + 9); firm power peak load on province (Table 1, item 17); indicated reserve (Table 1, item 18).

^r Revised figures.

GLOSSARY OF TERMS

Firm Energy Requirement

Energy required to meet firm obligations, or for use in own industrial plant other than secondary energy.

Firm Power

Maximum power always to be available, short of major outages caused by storm, explosion, strikes, etc.

Firm Power Peak Load

The annual Firm Power maximum average net kilowatt load of one hour duration within the Utility, System or Industrial Establishment.

Firm Obligations

Shall include only maximum commitments under contract agreements to accept or deliver power on an irrevocable basis or the best estimate of firm obligations in the absence of contracts.

Indicated Demand

The sum of firm power peak load and indicated shortage.

Indicated Reserve

Net capability less indicated firm power peak load within the province or gross capability less firm power peak load on the province.

Industrial Establishment

A firm which generates power primarily for use in its own plants.

Net Generating Capability

The maximum net kilowatt output (after station service) available from the generating facilities of the Utility, System or Industrial Establishment with all equipment available, at the time of the annual Firm Power Peak Load, determined as the average kilowatt output for one hour with no allowance for outages of generating units.

Net Capability

The sum of net generating capability and purchases of firm power under firm obligation from other utilities less deliveries of firm power under firm obligation to other utilities.

System

Two or more Utilities, Industrial Establishments or a combination of these, having interconnections for the exchange of power, which although they may be separately incorporated, are controlled, managed or operated by one principal.

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1965-1966

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 4. N. B. Cameron, Manitoba Hydro, P.O. Box 815, Winnipeg 1, Man.
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 8. W. A. Reed, Saskatchewan Power Corporation, Regina, Sask.
 9. K. G. Richardson, (ICES rep.) National Energy Board, 969 Bronson Ave., Ottawa.
 10. B. T. Sansom, Shawinigan Water & Power Co., P.O. Box 6072, Montreal.
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 4. G. Cornish, Deputy Manager, City of Calgary, Electric System, 2808 Macleod Trail, Calgary, Alta.
 5. W. K. Murray, N.S. Light & Power Co., Halifax, N.S.
 6. W. S. Preston, HEPC of Ontario, 620 University Ave., Toronto 2, Ont.
 7. B. T. Sansom, Shawinigan Water & Power Co., Montreal.
 8. J. E. Underhill, B.C. Hydro & Power Authority, 970 Burrard St., Vancouver, B.C.

LIST OF RESPONDENTS

Newfoundland:

The Bowater Power Co. Ltd.
 Newfoundland & Labrador Power Commission
 Newfoundland Light & Power Co. Ltd.
 Tilt Cover Power Corp.
 Twin Falls Power Corp.
 United Towns Electric Co. Ltd.
 West Coast Power Co. Ltd.

Iron Ore Co. of Canada, Menihek
 Price (Nfld.) Pulp & Paper Ltd.

Prince Edward Island:

Maritime Electric Co. Ltd.
 Town of Summerside Electric Light Dept.

Nova Scotia:

Nova Scotia Light & Power Co. Ltd.
 Nova Scotia Power Commission
 Seaboard Power Corp. Ltd.

Bowaters Mersey Paper Co. Ltd.
 Imperial Oil Enterprises Ltd.
 Minas Basin Pulp and Power Co. Ltd.
 Nova Scotia Pulp Co.

New Brunswick:

City of Campbellton
 City of Edmundston Power Plant Dept.
 Maine & N.B. Electric Power Commission
 New Brunswick Electric Power Commission

Atlantic Sugar Refineries Ltd.
 Bathurst Power and Paper Co. Ltd.
 Fraser Companies Ltd.
 Atholville Mill
 Edmundston
 Newcastle
 Irving Pulp and Paper Ltd.
 N.B. International Paper Co.

Quebec:

Gulf Power Co.
 Hart-Jaune Power Co.
 La Cite de Jonquiere
 MacLaren Quebec Power Co.
 The Manicouagan Power Co.
 Ottawa Valley Power Co.
 Pembroke Electric Light Co. Ltd.
 Commission Hydroelectrique de Quebec
 City of Sherbrooke
 Sherbrooke Land & Water Power Co. Ltd.
 Smelter Power Corporation

Aluminum Co. of Canada Ltd., and
 Saguenay Companies
 Anglo-Canadian Pulp & Paper (Limouli Plant)
 Canadian Celanese Ltd.
 Canadian International Paper Co.
 Gatineau Mills
 Three Rivers
 Dominion Ayers Limited
 Dominion Tar & Chemical Co. Ltd.
 Dominion Textile Co. Ltd.
 Domtar Pulp & Paper Co. Ltd.
 E. B. Eddy Co., Hull Plant
 Electric Reduction Co. of Canada Ltd.
 Gaspie Copper Mines Ltd.
 Gaspesia Pulp & Paper Co. Ltd.
 Iron Ore Company
 Noranda Mines Ltd.
 Ogilvie Flour Mills
 Price Brothers and Co. Ltd.
 Quebec North Shore Paper Co.
 St. Anne Paper Co. Ltd.
 Thurso Pulp and Paper Co.

Ontario

Bracebridge Water, Light and Power Commission
 Campbellford Public Utilities Commission
 Canadian Niagara Power Co. Ltd.
 Cedars Rapids Transmission Co. Ltd.
 Gananoque Electric Light & Water Supply Co. Ltd.
 Great Lakes Power Co. Ltd.
 Huronian Company Limited
 Ontario Hydro-Electric Commission
 Orillia Water, Light & Power Commission
 Ottawa Hydro-Electric Commission
 Pembroke Electric Light Co. Ltd.

Abitibi Power and Paper Co. Ltd.
 Iroquois Falls
 Smooth Rock Falls
 Sturgeon Falls
 Algoma Steel Corp. Ltd.
 Brunner-Mond Canada Ltd.
 Canadian General Electric Co. Ltd.
 Continental Can Company of Canada Ltd.
 Dow Chemical Co. Ltd.
 Dryden Paper Co. Ltd.
 E. B. Eddy Co., Ottawa Plant

LIST OF RESPONDENTS - CONCLUDED

UTILITIES

INDUSTRIALS

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Renfrew Hydro-Electric Commission
St. Lawrence Power Co.

Ford Motor Co. of Canada Ltd.
Hiram Walker and Sons Ltd.
International Nickel Co. Ltd.
The KVP Company Ltd.
Marathon Corp. of Canada Ltd.
Ontario-Minnesota Pulp and Paper Co. Ltd.
Fort Frances
Kenora
The Ontario Paper Co. Ltd.
The Polymer Corp. Ltd.
St. Lawrence Seaway Authority
Spruce Falls Power and Paper Co. Ltd.
The Steel Co. of Canada Ltd.
Strathcona Paper Co. Ltd.

Manitoba:

Churchill River Power Co. Ltd.
Manitoba Hydro
Northern Manitoba System
Southern Manitoba System
Northern Manitoba Power Co. Ltd.
City of Winnipeg Hydro Electric System

Hudson Bay Mining & Smelting Co. Ltd.
Sherritt Gordon Mines - Lynn Lake

Saskatchewan:

Churchill River Power Co. Ltd.
Northern Power Co. Ltd.
Saskatchewan Power Corp.

Eldorado Mining and Refining Ltd.
Hudson Bay Mining and Smelting Co. Ltd.
Kalium Chemicals Limited

Alberta:

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Canadian Utilities, Limited
East Kootenay Power Co. Ltd.
City of Edmonton
City of Lethbridge
Corporation of the City of Medicine Hat
Northland Utilities Ltd.

British American Oil Co. Ltd., Rimbey Gas Processing Plant
Chemcell (1963) Limited
Cloverbar Plant
Duvernay Plant
Great Canadian Oil Sands
North Western Pulp & Power Ltd.
Pan American Pet Corp., West Whitecourt Plant
Sherritt Gordon Mines Ltd.

British Columbia:

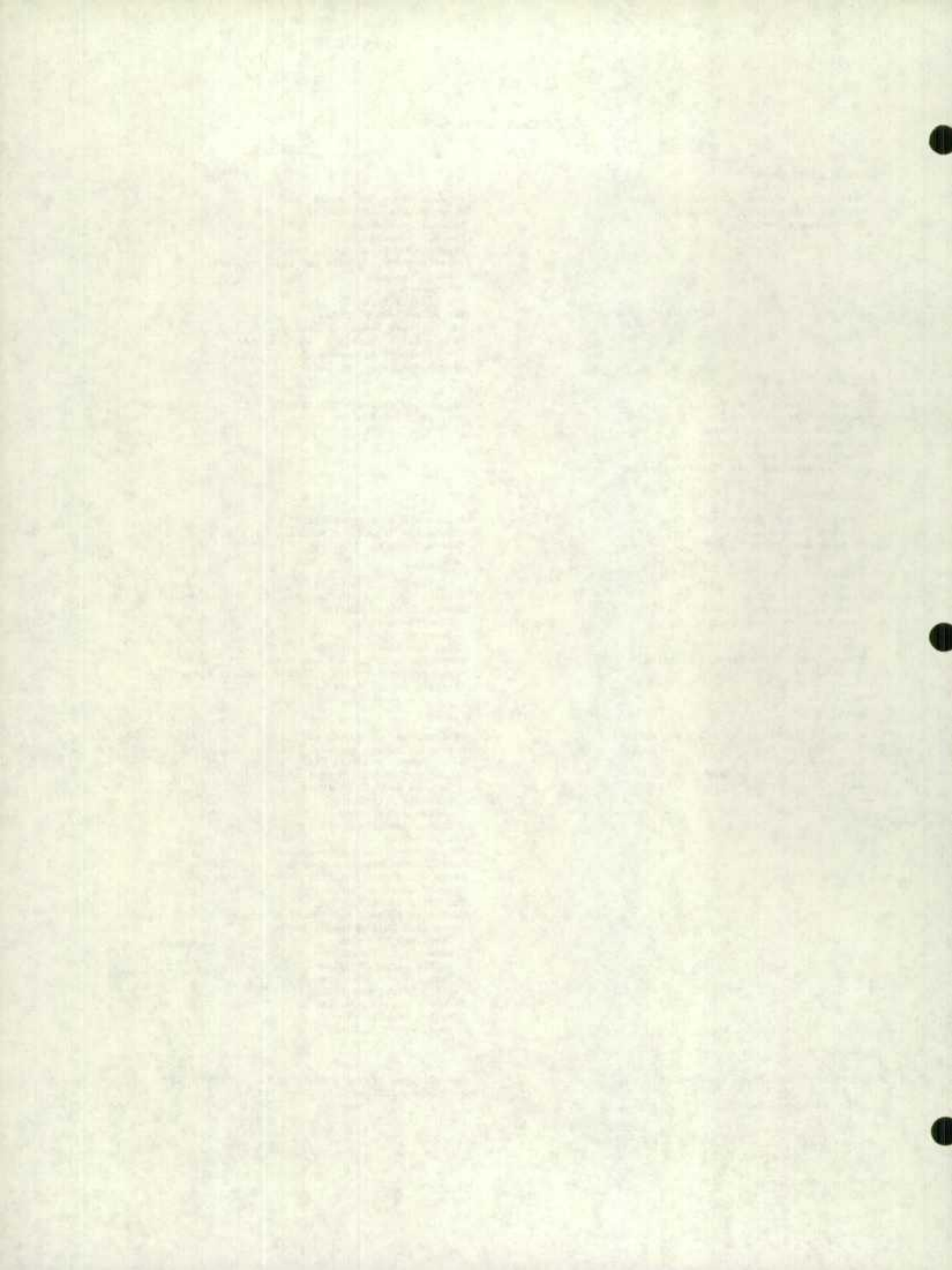
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City of Nelson
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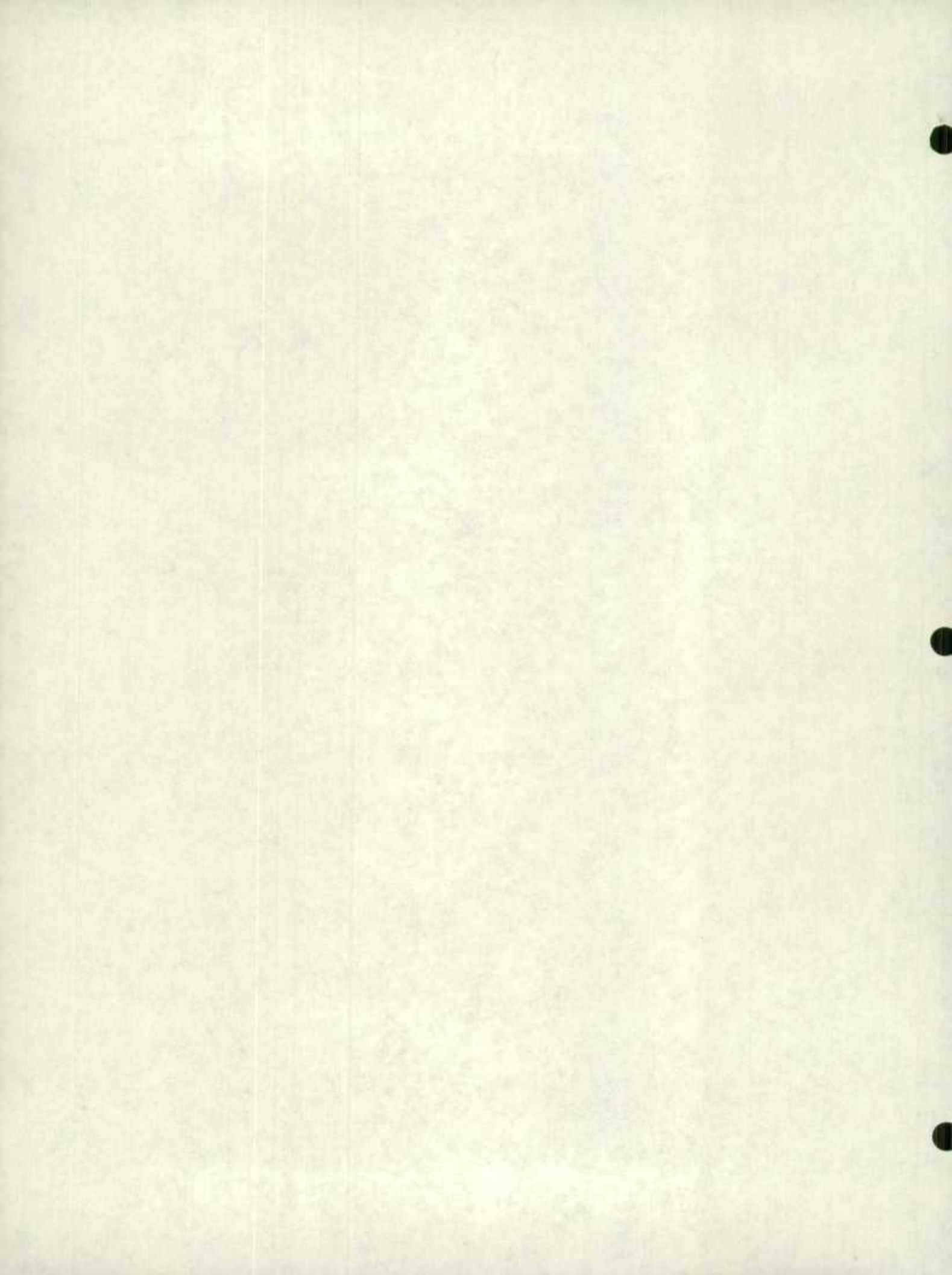
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Canadian White Pine Division
Chemainus Division
Harmac Pulp Division
Port Alberni Division
Powell River Division
Pacific Petroleum Ltd.
Rayonier Canada B.C. Ltd.
Port Alice Division
Woodfibre Division

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(B) Frobisher Bay
(C) Inuvik
(D) Mayo River
(E) Snare River
(F) Taltson River
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