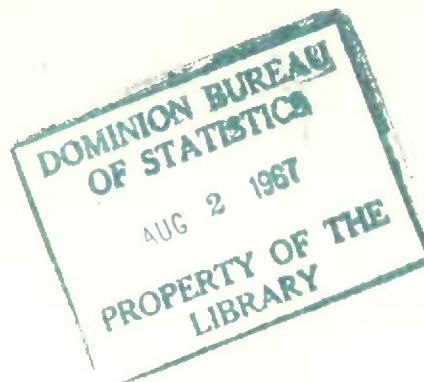


CATALOGUE No.

57-204

ANNUAL



ELECTRIC POWER STATISTICS

VOLUME I

ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

1966 Actual

1967 - 1971 Forecast

DOMINION BUREAU OF STATISTICS

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Manufacturing and Primary Industries Division
Energy Statistics Section

ELECTRIC POWER STATISTICS

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Published by Authority of
The Minister of Trade and Commerce

July 1967
6503-516

Price: 75 cents

Reports Published by the
Industry Division
dealing with

ELECTRIC POWER

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TABLE OF CONTENTS

	Page
Introduction	5

CHARTS

A. Total Generating Capability within Canada	9
This chart graphically portrays the rapid growth in ability to produce power and shows the extent to which thermal generation is becoming increasingly important.	
B. Net Capability and Peak Loads within Canada	10
This chart provides an indication of the reserves available to meet firm demand for electric power within Canada.	
C. Net Generating Capability within Provinces	11
This chart illustrates the growth in capability and the comparative importance of hydro and thermal generation within provinces.	
D. Net Capability and Firm Demand within Provinces	13
This chart provides a graphic indication of the year to year ability of each of the provinces to meet its firm demand for electric power.	
E. Firm Energy Requirement within Canada	15
This chart shows the growth in Canadian firm energy requirement during the period 1955-1971.	

TABLES

1. <u>Capability, Firm Power Peak Load and Energy Requirements</u>	16
This table summarizes capability, firm power peak load, indicated reserve, generation, interprovincial receipts and deliveries, secondary energy and firm energy requirements.	
2. <u>Total Net Generating Capability within Provinces</u>	40
This table compares provincial rates of growth in net generating capability.	
3. <u>Firm Power Peak Load within Provinces</u>	41
This table compares rates of growth of firm power peak load within provinces.	
4. <u>Firm Energy Requirement within Provinces</u>	42
This table compares rates of growth of firm energy requirement within provinces.	
5. <u>Indicated Reserve</u>	43
This table shows the relationship between the demand for power and the ability to meet it in each of the provinces and in Canada as a whole.	
Glossary of Terms	46
Canadian Electrical Association - Electric Power Statistics Committee Personnel 1966-1967	47
List of Respondents	48

SYMBOLS

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

r 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 1967. 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 1966 for firms which generate over 10 million kwh. per year increased 1,097,000 kw. or 3.94 per cent to 28,933,000 kw. The forecast years 1967-71 indicate an anticipated growth of 14,817,000 kw. or a compound growth rate of 8.62 per cent as compared with the 1956-1966 growth rate of 6.80 per cent. Thermal capability is expected to grow at an annual rate of 15.18 per cent in the forecast period compared with an actual rate of 13.31 per cent in the previous ten year period, while hydro-electric capability is expected to increase at 5.91 per cent compared with 5.27 per cent in the previous ten years. The hydro-electric capability forecast figures do not include the Churchill Falls development in Labrador which is not expected to be developed in the forecast period. Eighty per cent of the thermal capability growth will be in fossil-fuelled steam plants, sixteen per cent in nuclear-fuelled steam plants and four per cent in gas turbine 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. It is expected that by 1971 the nuclear capability will reach 1,200,000 kw. or 2.7 per cent of the total Canadian generating capability.

In 1965 it was forecast that the net generating capability in 1966 would be 29,694,000^F kw. The actual net generating capability fell short of this estimate by 761,000 kw. This was caused by the delay of the installation of some units until 1967 and by some units being put into service too late in the year to be considered part of the generating capability at the time of the firm power peak load. The 1966 capability was significantly below the 1965 forecast in Ontario, Alberta and British Columbia.

The largest absolute growths in generating capability for the forecast period are indicated for: Ontario, 5,322,000 kw.; Quebec, 3,668,000 kw.; British Columbia, 2,073,000 kw. and Alberta, 1,121,000 kw. Three million six hundred and fourteen thousand kw. of the increased generating capability in Ontario will be in fossil-fuelled plants, (steam, internal combustion and gas turbine) while nuclear-fuelled steam plants will account for 1,200,000 kw. of the increase. Quebec plans to increase its capability by adding 3,327,000 kw. hydro and 341,000 kw. in fossil-fuelled steam plants. British Columbia is forecasting an increase of 1,706,000 kw. in hydro capability and 367,000 kw. in thermal capability, while Alberta estimates increases of 188,000 kw. and 933,000 kw. in hydro and thermal capability respectively.

In the period from 1956 to 1966 the compound growth rate of firm power peak load in Canada was 6.63 per cent. This growth rate is expected to increase to 7.14 per cent during the forecast years 1967 to 1971. During the forecast period the indicated reserve is expected to increase from 2,973,000 kw. in 1966 to 7,004,000 kw. in 1971. The indicated reserve, stated as a percentage of firm power peak load, amounted to 11.4 per cent in 1966 and it is forecast that it will be 19.1 per cent in 1971.

Firm energy requirements increased 9.1 per cent from 139,049 million kwh. in 1965 to 151,633 million kwh. in 1966 compared with a compound growth rate of 6.5 per cent in the previous ten year period and a forecast growth rate of 6.8 per cent for the period 1967-1971. The additional firm energy requirement was supplied by an increase in net generation of 14,020 million kwh. Net exports increased by 1,262 million kwh. in 1966 and secondary energy delivered within Canada rose by 154 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 major systems serving Canada, four had peak loads on December 19, 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.

Reduction in generating capability due to adverse conditions (line 18A, Table 1) - Most reporting companies report net generating capability for hydro plants (item 1) as that which is available at the time of the annual firm power peak load, taking into account icing and other adverse conditions. However, certain other companies do not make these adjustments but report the estimated reduction separately. This estimate is shown in item 18A.

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 36, 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).

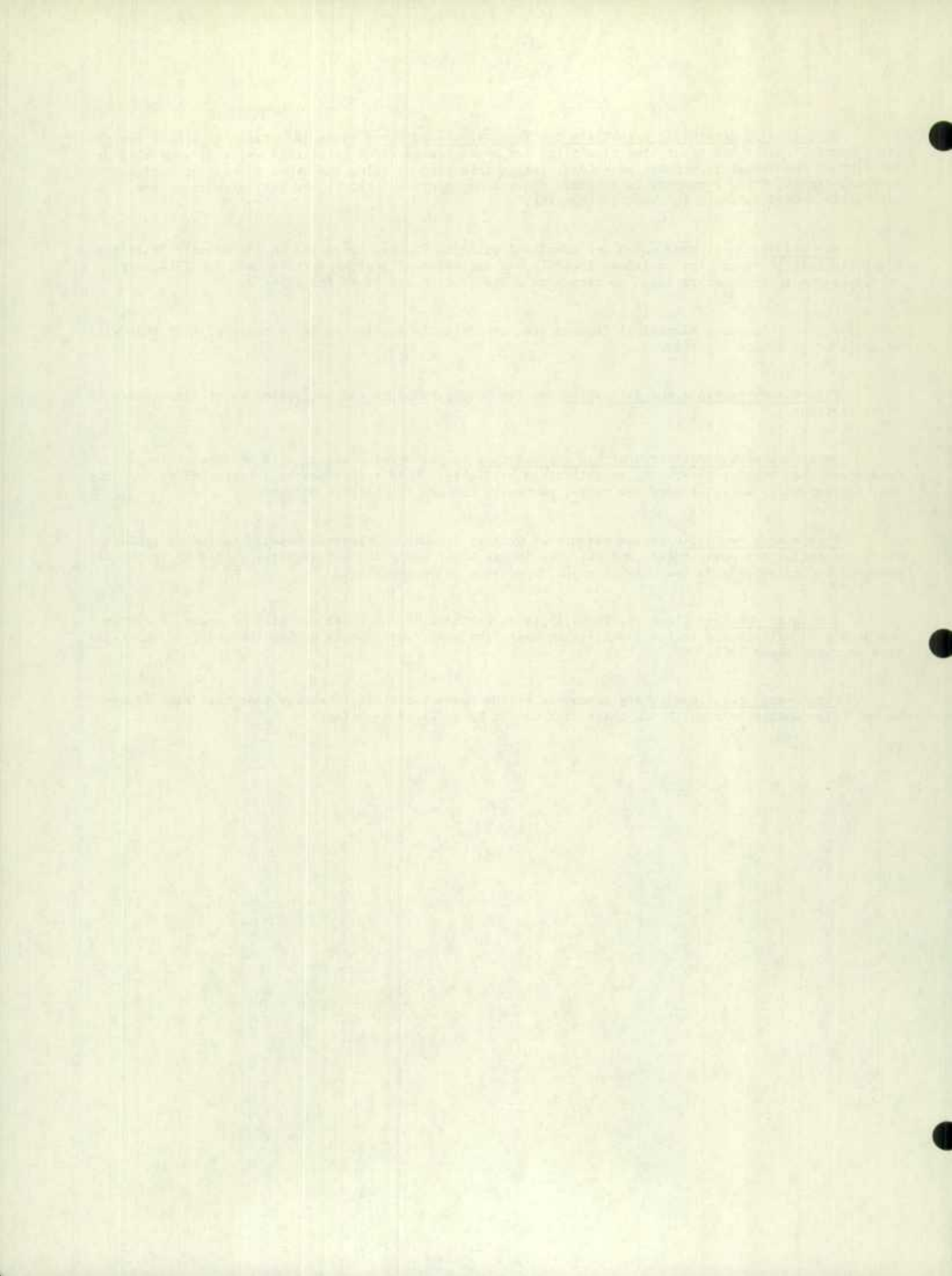


CHART - A

TOTAL GENERATING CAPABILITY WITHIN CANADA 1956-1971

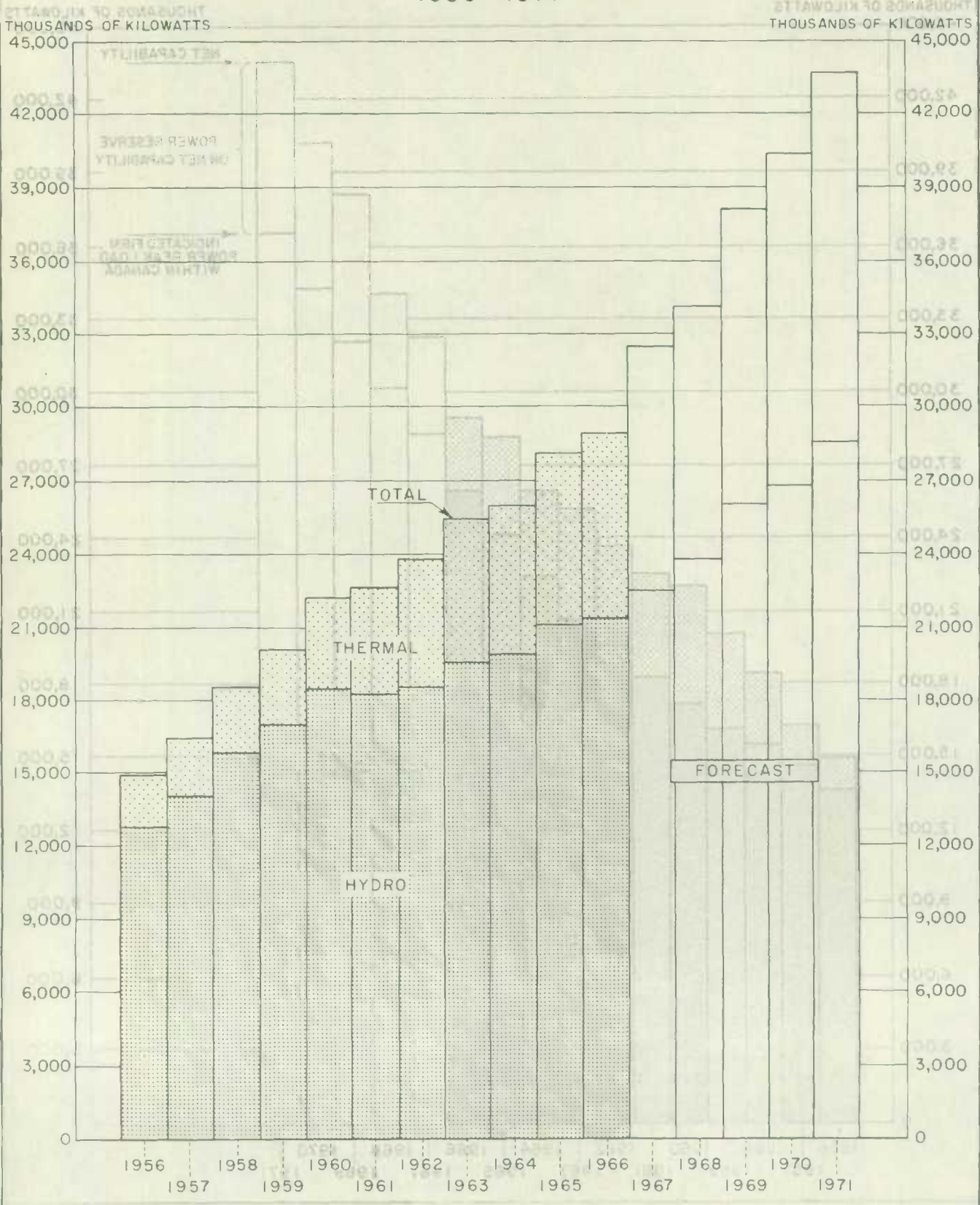


CHART - B

NET CAPABILITY AND PEAK LOADS WITHIN CANADA 1956-1971

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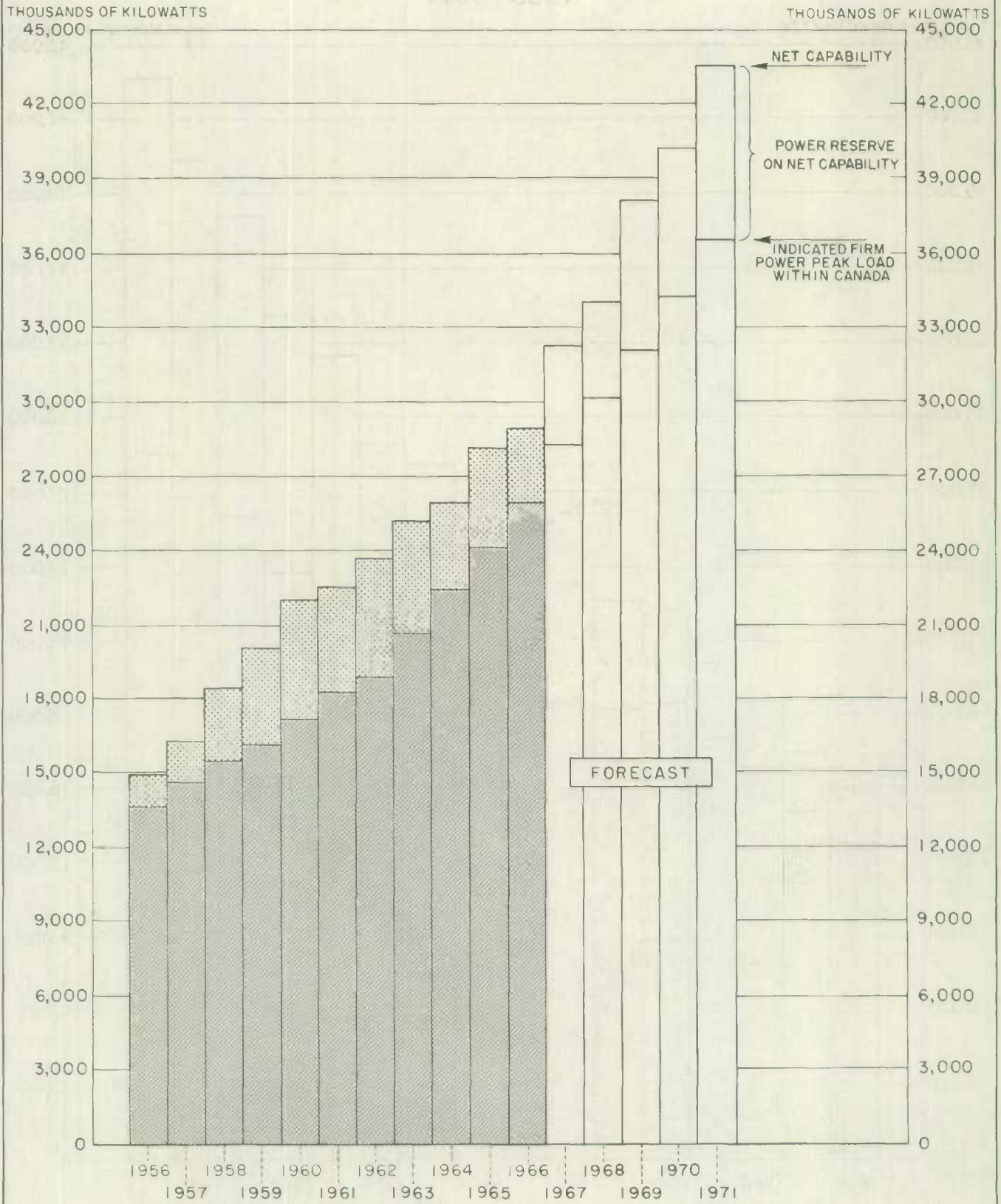


CHART - C

NET GENERATING CAPABILITY WITHIN PROVINCES 1956-1971

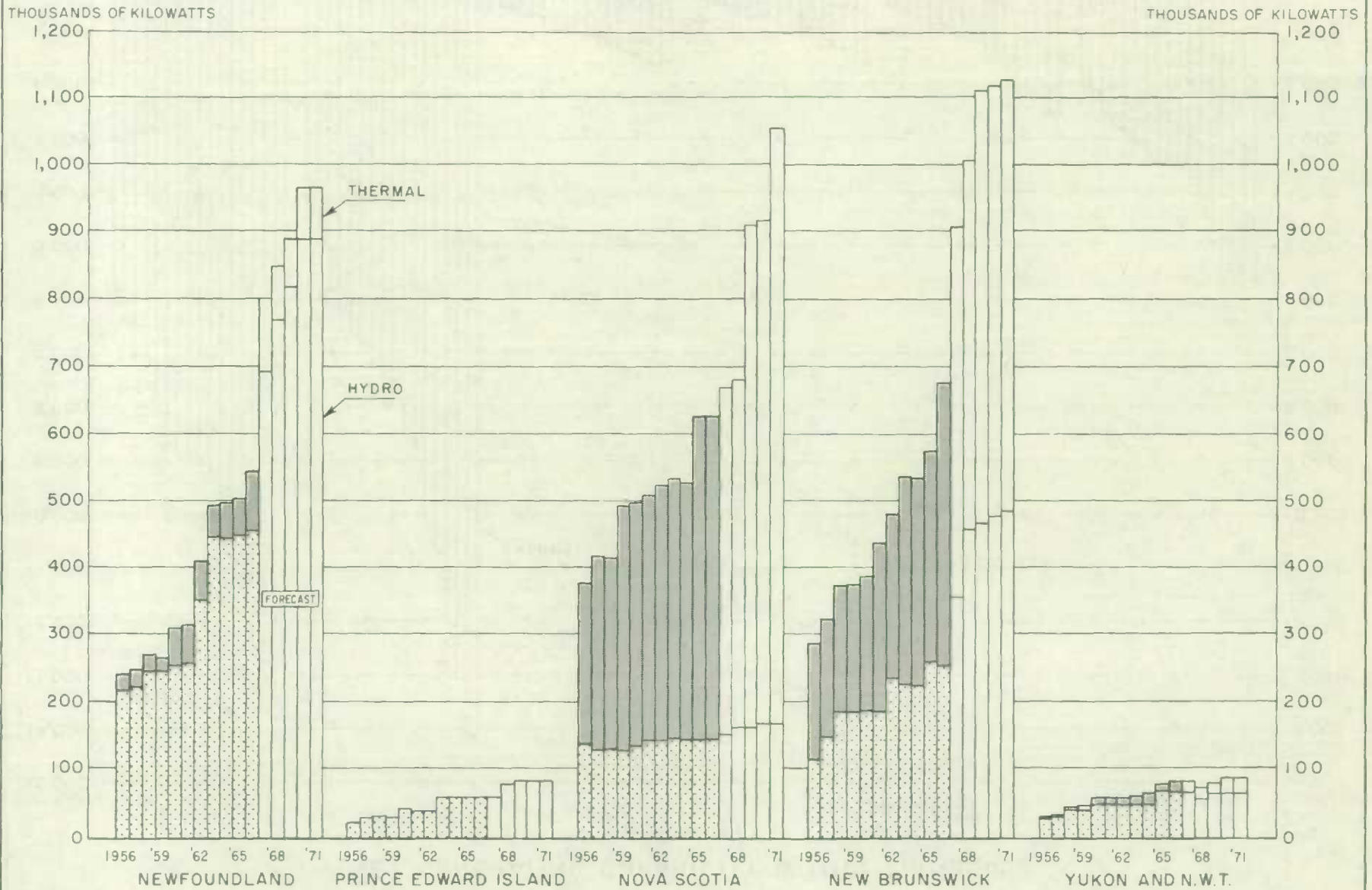


CHART - C

NET GENERATING CAPABILITY WITHIN PROVINCES 1956 - 1971

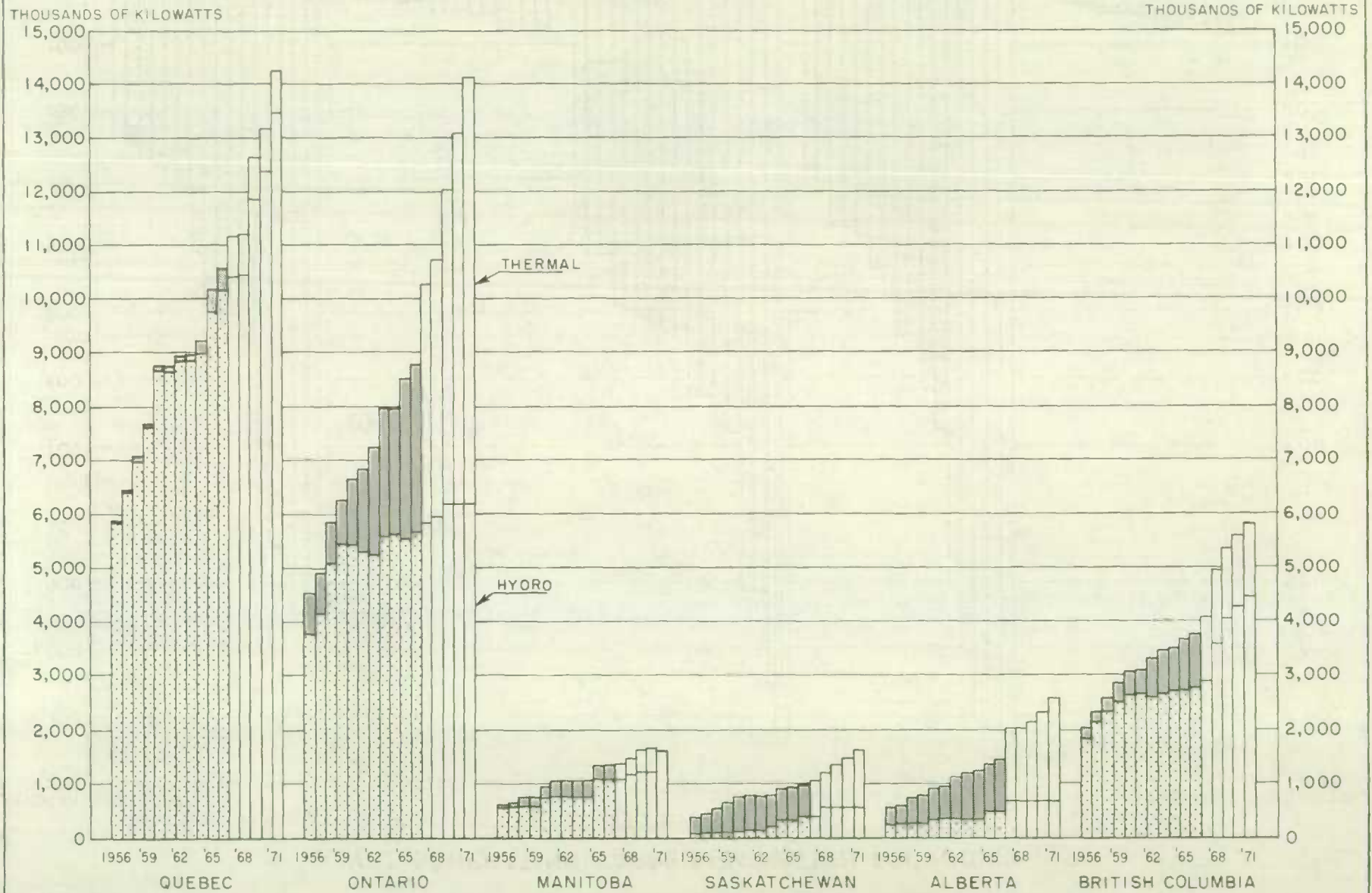


CHART - D

NET CAPABILITY AND FIRM DEMAND WITHIN PROVINCES 1956 - 1971

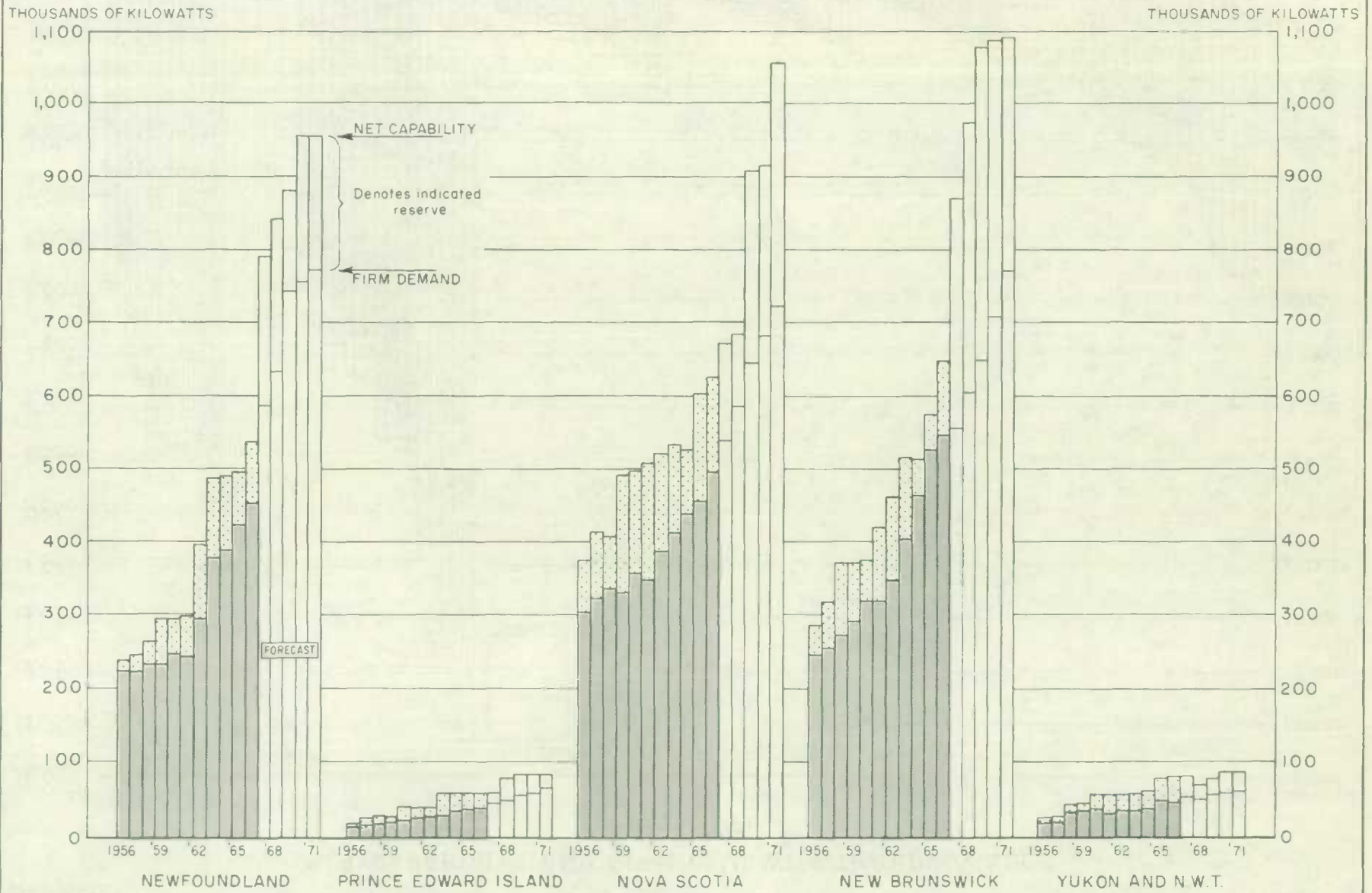


CHART -E

FIRM ENERGY REQUIREMENT WITHIN CANADA 1956-1971

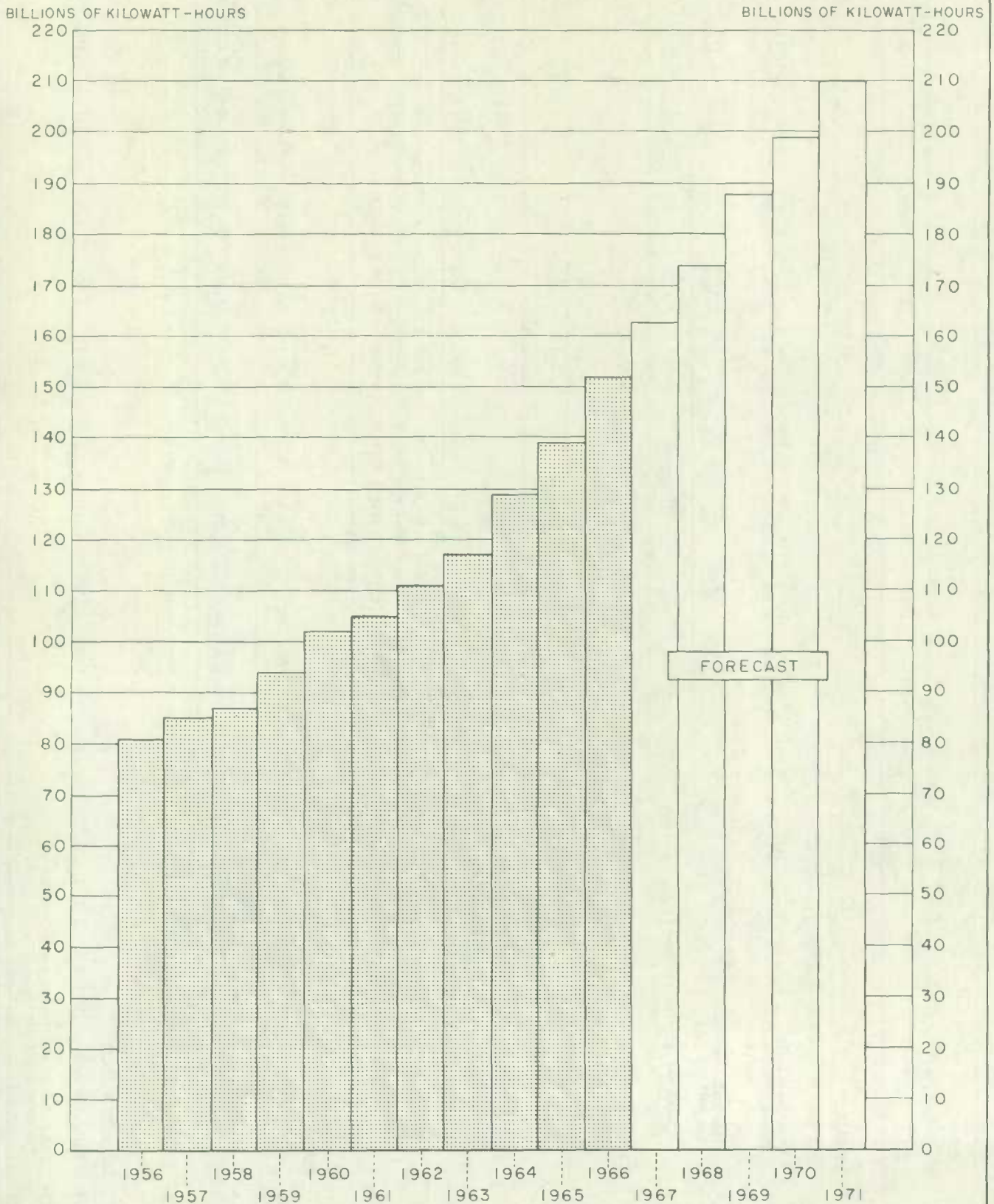


TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Capability and peak load	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric	12,841	18,651	19,241 ^F	19,493 ^F	20,779 ^F	21,459	22,539	23,837	26,023	26,882	28,598
2. Steam - Conventional )	(	4,596	5,194	5,422	6,354	6,634	8,573	9,068	10,861	11,702	12,806
3. Nuclear )	(	-	-	-	-	-	200	200	200	700	1,200
4. Internal combustion )	(	251	236	255	243 ^F	257	260	266	267	277	289
5. Gas turbine )	(	371	382	384	460	583	872	851	851	857	857
6. Total net generating capability	14,983	23,869	25,053 ^F	25,554 ^F	27,836 ^F	28,933	32,444	34,222	38,202	40,418	43,750
Receipts of firm power from:											
7. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...
8. United States	56	4	2	2	-	100	-	-	-	-	-
9. Total receipts	56	4	2	2	-	100	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...
11. United States	147	121	122	127	89	87	88	89	91	93	79
12. Total deliveries	147	121	122	127	89	87	88	89	91	93	79
13. Total net capability (6 + 9 - 12)	14,892	23,752	24,933 ^F	25,429 ^F	27,747 ^F	28,946	32,356	34,133	38,111	40,325	43,671
<u>Peak loads:</u>											
14. Firm power peak load within province	13,668	18,972	20,755	22,503	24,199 ^F	25,973	28,351	30,300	32,146	34,329	36,667
15. Indicated shortages	47	-	28	13	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	13,715	18,972	20,783	22,516	24,199 ^F	25,973	28,351	30,300	32,146	34,329	36,667
17. Firm power peak load on province (12 + 16)	13,862	19,093	20,905	22,643	24,288 ^F	26,060	28,439	30,389	32,237	34,422	36,746
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16)	1,177	4,780	4,150 ^F	2,913 ^F	3,548 ^F	2,973	4,005	3,833	5,965	5,996	7,004
18a Reduction in generating capability due to adverse conditions .....	..	..	354 ^F	216 ^F	130 ^F	101	...	...	...	...	...

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

Energy	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	103,695	103,539	113,212	116,692	129,444	...	...	...	...	...
20. Steam - Conventional )	(	12,543	17,111	20,051	25,485	26,521	...	...	...	...	...
21. Nuclear )	(	22	87	141	120	161	...	...	...	...	...
22. Internal combustion )	(	514	593	574	504 ^F	632	...	...	...	...	...
23. Gas turbine )	(	257	312	282	313	376	...	...	...	...	...
24. Total net generation		87,427	117,031	121,642	134,260	143,114 ^F	157,134	...	...	...	...
Receipts of energy from:											
25. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...
26. United States:											
(a) Firm .....	..	22	12	6	4	133	2	2	2	2	2
(b) Secondary .....	..	2,764	2,867	2,971	3,573	2,922	...	...	...	...	...
27. Total receipts of energy		227	2,786	2,879	2,977	3,577	3,055	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
28. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...
29. United States	1,226	817	867	835	633	613	655	667	679	691	577
(b) Secondary:											
30. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...
31. United States	3,885	3,267	2,754	3,392	2,937	3,697	...	...	...	...	...
32. Total deliveries of energy		5,111	4,084	3,621	4,227	3,570	4,310	...	...	...	...
33. Total energy available (24 + 27 - 32)		82,543	115,733	120,900	133,010	143,121 ^F	155,879	...	...	...	...
34. Secondary energy delivered within province	3,000	4,690	3,655	3,671	4,072 ^F	4,226	...	...	...	...	...
35. Firm energy available within province (33 - 34)	79,543	111,043	117,245	129,339	139,049 ^F	151,653	162,510	174,410	187,511	199,340	210,393
36. Indicated shortage	1,546	-	-	-	-	-	-	-	-	-	-
37. Firm energy requirement within province (35 + 36)	81,089	111,043	117,245	129,339	139,049 ^F	151,653	162,510	174,410	187,511	199,340	210,393
38. Firm energy requirement on province (28 + 29 + 37)	82,315	111,860	118,112	130,174	139,682 ^F	152,266	163,165	175,077	188,190	200,031	210,970

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

Capability and peak load	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric	215	350	444	442	446	454	695	770	815	890	890
2. Steam - Conventional)	(45	45	45	45	45	52	52	52	47	47	47
3. Nuclear)	(-	-	-	-	-	-	-	-	-	-	-
4. Internal combustion)	(14	7	11	11	11	13	13	13	13	13	13
5. Gas turbine)	(-	-	-	-	-	25	40	15	15	15	15
6. Total net generating capability	242	409	496	498	502	544	800	850	890	965	965
Receipts of firm power from:											
7. Other provinces	-	-	-	-	-	-	-	-	-	-	-
8. United States	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts	-	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces	6	13	10	8	7	10	9	9	9	9	9
11. United States	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries	6	13	10	8	7	10	9	9	9	9	9
13. Total net capability (6 + 9 - 12)	236	396	486	490	495	534	791	841	881	956	956
<u>Peak loads:</u>											
14. Firm power peak load within province	222	294	349	376	422	450	587	632	741	755	771
15. Indicated shortages	2	-	28	13	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	224	294	377	389	422	450	587	632	741	755	771
17. Firm power peak load on province (12 + 16)	230	307	387	397	429	460	596	641	750	764	780
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16)	12	102	109	101	73	84	204	209	140	201	185
18a. Reduction in generating capability due to adverse conditions .....	..	..	14	12	12	46	...	...	...	...	...

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

Energy	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	1,556	1,930	2,278	2,485	2,555	...	...	...	...	...
20. Steam - Conventional)		(101	96	98	217	286	...	...	...	...	...
21. Nuclear )		( -	-	-	-	-	...	...	...	...	...
22. Internal combustion)	..	(9	8	12	24	24	...	...	...	...	...
23. Gas turbine)		(-	-	-	-	6	...	...	...	...	...
24. Total net generation	1,355	1,666	2,034	2,388	2,726	2,871	...	...	...	...	...
Receipts of energy from:											
25. Other provinces .....	..	-	-	-	-	-	-	-	-	-	-
26. United States:											
(a) Firm .....	..	-	-	-	-	-	-	-	-	-	-
(b) Secondary .....	..	-	-	-	-	-	...	...	...	...	...
27. Total receipts of energy .....	-	-	-	-	-	-	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
28. Other provinces	31	81	36	54	56	57	55	55	55	55	55
29. United States	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
30. Other provinces	-	-	37	30	28	24	...	...	...	...	...
31. United States .....	-	-	-	-	-	-	...	...	...	...	...
32. Total deliveries of energy	31	81	73	84	84	81	...	...	...	...	...
33. Total energy available (24 + 27 - 32)	1,324	1,585	1,961	2,304	2,642	2,790	...	...	...	...	...
34. Secondary energy delivered within province	98	112	83	11	2	-	...	...	...	...	...
35. Firm energy available within province (33 - 34)	1,226	1,473	1,878	2,293	2,640	2,790	3,157	3,391	4,653	4,731	4,740
36. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
37. Firm energy requirement within province (35 + 36)	1,226	1,473	1,878	2,293	2,640	2,790	3,157	3,391	4,653	4,731	4,740
38. Firm energy requirement on province (28 + 29 + 37)	1,257	1,554	1,914	2,347	2,696	2,847	3,212	3,446	4,708	4,786	4,795

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

Capability and peak load	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric	-	-	-	-	-	-	-	-	-	-	-
2. Steam - Conventional)		(32	51	51	51	51	51	71	71	71	71
3. Nuclear)		(-	-	-	-	-	-	-	-	-	-
4. Internal combustion)	18	(5	7	7	7	7	7	7	10	10	10
5. Gas turbine)		(-	-	-	-	-	-	-	-	-	-
6. Total net generating capability	18	37	58	58	58	58	58	78	81	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	58	58	58	58	58	78	81	81	81
<u>Peak loads:</u>											
14. Firm power peak load within province	12	25	27	31	35	37	42	47	52	59	65
15. Indicated shortages	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	12	25	27	31	35	37	42	47	52	59	65
17. Firm power peak load on province (12 + 16)	12	25	27	31	35	37	42	47	52	59	65
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16)	6	12	31	27	23	21	16	31	29	22	16
18a Reduction in generating capability due to adverse conditions .....	..	..	-	-	-	-	...	...	...	...	...

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

Energy	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	-	-	-	-	-	...	...	...	...	...
20. Steam - Conventional)		(93	102	119	131	150	...	...	...	...	...
21. Nuclear )		( -	-	-	-	-	...	...	...	...	...
22. Internal combustion)	..	(8	9	5	5	5	...	...	...	...	...
23. Gas turbine )		( -	-	-	-	-	...	...	...	...	...
24. Total net generation	53	101	111	124	136	155	...	...	...	...	...
Receipts of energy from:											
25. Other provinces .....	..	-	-	-	-	-	-	-	-	-	-
26. United States:											
(a) Firm .....	..	-	-	-	-	-	-	-	-	-	-
(b) Secondary .....	..	-	-	-	-	-	...	...	...	...	...
27. Total receipts of energy .....	-	-	-	-	-	-	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
28. Other provinces	-	-	-	-	-	-	-	-	-	-	-
29. United States	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
30. Other provinces .....	-	-	-	-	-	-	...	...	...	...	...
31. United States .....	-	-	-	-	-	-	...	...	...	...	...
32. Total deliveries of energy .....	-	-	-	-	-	-	...	...	...	...	...
33. Total energy available (24 + 27 - 32)	53	101	111	124	136	155	...	...	...	...	...
34. Secondary energy delivered within province	-	-	-	-	-	15	...	...	...	...	...
35. Firm energy available within province (33 - 34)	53	101	111	124	136	140	173	193	217	242	270
36. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
37. Firm energy requirement within province (35 + 36)	53	101	111	124	136	140	173	193	217	242	270
38. Firm energy requirement on province (28 + 29 + 37)	53	101	111	124	136	140	173	193	217	242	270

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

Capability and peak load	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric	136	141	143	141	141	141	150	161	161	166	166
2. Steam - Conventional)	(378	387	383	482	482	518	518	744	744	886	886
3. Nuclear)	(-	-	-	-	-	-	-	-	-	-	-
4. Internal combustion)	(2	2	3	3	3	3	3	3	3	3	3
5. Gas turbine)	(-	-	-	-	-	-	-	-	-	-	-
6. Total net generating capability	378	521	532	527	626	626	671	682	908	913	1,055
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	25	-	-	-	-	-	-
11. United States	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries	2	1	1	1	25	-	-	-	-	-	-
13. Total net capability (6 + 9 - 12)	376	520	531	526	601	626	671	682	908	913	1,055
<u>Peak loads:</u>											
14. Firm power peak load within province	301	388	411	438	457	496	539	585	645	682	722
15. Indicated shortages	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	301	388	411	438	457	496	539	585	645	682	722
17. Firm power peak load on province (12 + 16)	303	389	412	439	482	496	539	585	645	682	722
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16)	75	132	120	88	144	130	132	97	263	231	333
18a Reduction in generating capability due to adverse conditions .....	..	..	-	-	-	-	...	...	...	...	...

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

Energy	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	710	799	718	449	439	...	...	...	...	...
20. Steam - Conventional)		(1,300	1,313	1,662	2,158	2,408	...	...	...	...	...
21. Nuclear )		( -	-	-	-	-	...	...	...	...	...
22. Internal combustion )	..	( -	-	-	-	-	...	...	...	...	...
23. Gas turbine )		( -	-	-	-	-	...	...	...	...	...
24. Total net generation	1,465	2,010	2,112	2,380	2,607	2,847	...	...	...	...	...
Receipts of energy from:											
25. Other provinces .....	..	-	-	-	-	59	-	-	-	-	-
26. United States:											
(a) Firm .....	..	67	57	43	44	-	-	-	-	-	-
(b) Secondary .....	..	-	-	-	-	-	...	...	...	...	...
27. Total receipts of energy	-	67	57	43	44	59	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
28. Other provinces	8	7	8	7	34	125	-	-	-	-	-
29. United States	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
30. Other provinces	-	101	60	113	144	123	...	...	...	...	...
31. United States .....	-	-	-	-	-	-	...	...	...	...	...
32. Total deliveries of energy	8	108	68	120	178	248	...	...	...	...	...
33. Total energy available (24 + 27 - 32)	1,457	1,969	2,101	2,303	2,473	2,658	...	...	...	...	...
34. Secondary energy delivered within province	-	4	1	2	7	10	...	...	...	...	...
35. Firm energy available within province (33 - 34)	1,457	1,965	2,100	2,301	2,466	2,648	2,883	3,149	3,441	3,805	4,035
36. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
37. Firm energy requirement within province (35 + 36)	1,457	1,965	2,100	2,301	2,466	2,648	2,883	3,149	3,441	3,805	4,035
38. Firm energy requirement on province (28 + 29 + 37)	1,465	1,972	2,108	2,308	2,500	2,773	2,883	3,149	3,441	3,805	4,035

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

Capability and peak load	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric	112	233	224	222	260	251	357	458	468	478	485
2. Steam - Conventional)		(240	304	305	310	421	538	538	632	632	632
3. Nuclear)		(-	-	-	-	-	-	-	-	-	-
4. Internal combustion)	174	(7	7	7	7	7	7	7	7	7	7
5. Gas turbine)		(-	-	-	-	-	-	-	-	-	-
6. Total net generating capability	286	480	535	534	577	679	902	1,003	1,107	1,117	1,124
Receipts of firm power from:											
7. Other provinces	5	6	5	9	33	8	7	7	8	9	10
8. United States	-	2	2	2	-	-	-	-	-	-	-
9. Total receipts	5	8	7	11	33	8	7	7	8	9	10
Deliveries of firm power to:											
10. Other provinces	-	-	-	2	-	-	-	-	-	-	-
11. United States	5	28	28	31	37	38	38	38	39	40	41
12. Total deliveries	5	28	28	33	37	38	38	38	39	40	41
13. Total net capability (6 + 9 - 12)	286	460	514	512	573	649	871	972	1,076	1,086	1,093
<u>Peak loads:</u>											
14. Firm power peak load within province	243	347	401	461	528	544	554	604	649	708	770
15. Indicated shortages	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	243	347	401	461	528	544	554	604	649	708	770
17. Firm power peak load on province (12 + 16)	248	375	429	494	565	582	592	642	688	748	811
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16)	43	113	113	51	45	105	317	368	427	378	323
18a Reduction in generating capability due to adverse conditions .....	..	..	-	-	-	8	...	...	...	...	...

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

Energy	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	1,191	1,272	1,019	1,104	1,182	...	...	...	...	...
20. Steam - Conventional)		(895	1,019	1,525	1,844	2,023	...	...	...	...	...
21. Nuclear )		( -	-	-	-	-	...	...	...	...	...
22. Internal combustion)	..	(2	5	4	5	6	...	...	...	...	...
23. Gas turbine )		( -	-	-	-	-	...	...	...	...	...
24. Total net generation	1,251	2,088	2,296	2,548	2,953	3,211	...	...	...	...	...
Receipts of energy from:											
25. Other provinces .....	..	129	89	145	211	307	30	32	35	37	39
26. United States:											
(a) Firm .....	..	14	12	3	1	10	-	-	-	-	-
(b) Secondary .....	..	3	2	3	17	1	...	...	...	...	...
27. Total receipts of energy	21	146	103	151	229	318	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
28. Other provinces	-	-	-	1	-	-	-	-	-	-	-
29. United States	32	166	178	163	179	203	237	241	245	249	249
(b) Secondary:											
30. Other provinces	-	67	57	43	45	59	...	...	...	...	...
31. United States	-	84	68	82	57	109	...	...	...	...	...
32. Total deliveries of energy	32	317	303	289	281	371	...	...	...	...	...
33. Total energy available (24 + 27 - 32)	1,240	1,917	2,096	2,410	2,901	3,158	...	...	...	...	...
34. Secondary energy delivered within province	4	5	1	-	159 ^F	116	...	...	...	...	...
35. Firm energy available within province (33 - 34)	1,236	1,912	2,095	2,410	2,742 ^F	3,042	3,479	3,721	3,928	4,225	4,547
36. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
37. Firm energy requirement within province (35 + 36)	1,236	1,912	2,095	2,410	2,742 ^F	3,042	3,479	3,721	3,928	4,225	4,547
38. Firm energy requirement on province (28 + 29 + 37)	1,268	2,078	2,273	2,574	2,921 ^F	3,245	3,716	3,962	4,173	4,474	4,796

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

Capability and peak load	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
thousands of kilowatts											
Capability:											
Net generating capability:											
1. Hydro-electric	5,854	8,830	8,846 ^F	8,982 ^F	9,768 ^F	10,141	10,406	10,427	11,864	12,390	13,468
2. Steam - Conventional )	(	41	59	192	361	374	698	698	711	711	711
3. Nuclear)	(-	-	-	-	-	-	-	-	-	-
4. Internal combustion )	(	12	10	15	13	15	17	19	19	19	19
5. Gas turbine )	(	36	36	36	36	36	36	36	36	36	36
6. Total net generating capability	5,890	8,919	8,951 ^F	9,225 ^F	10,178 ^F	10,566	11,157	11,180	12,630	13,156	14,234
Receipts of firm power from:											
7. Other provinces	7	15	12	18	7	10	9	9	9	9	9
8. United States	4	2	-	-	-	-	-	-	-	-	-
9. Total receipts	11	17	12	18	7	10	9	9	9	9	9
Deliveries of firm power to:											
10. Other provinces	691	697	703	717	635	633	632	581	582	251	252
11. United States	56	4	6	6	6	2	2	2	2	2	2
12. Total deliveries	747	701	709	723	641	635	634	583	584	253	254
13. Total net capability (6 + 9 - 12)	5,154	8,235	8,254 ^F	8,520 ^F	9,544 ^F	9,941	10,532	10,606	12,055	12,912	13,989
Peak loads:											
14. Firm power peak load within province	4,749	6,370	7,118	7,651	8,228	8,761	9,320	10,028	10,352	11,155	12,004
15. Indicated shortages	44	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	4,793	6,370	7,118	7,651	8,228	8,761	9,320	10,028	10,352	11,155	12,004
17. Firm power peak load on province (12 + 16)	5,540	7,071	7,827	8,374	8,869	9,396	9,954	10,611	10,936	11,408	12,258
Indicated reserve:											
18. Indicated reserve (13 - 16)	361	1,865	1,136 ^F	869 ^F	1,316 ^F	1,180	1,212	578	1,703	1,757	1,985
18a. Reduction in generating capability due to adverse conditions .....	..	..	10 ^F	3 ^F	70 ^F	11	...	...	...	...	...

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

Energy	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	49,799	49,454	56,268	55,952	61,900	...	...	...	...	...
20. Steam - Conventional )	(	288	320	424	897	470	...	...	...	...	...
21. Nuclear )	(	-	-	-	-	-	...	...	...	...	...
22. Internal combustion )	(	13	44	6	13	17	...	...	...	...	...
23. Gas turbine )	(	29	1	1	1	-	...	...	...	...	...
24. Total net generation	37,660	50,129	49,819	56,699	56,863	62,387	...	...	...	...	...
Receipts of energy from:											
25. Other provinces .....	..	110	143	128	189	169	55	55	55	55	55
26. United States:											
(a) Firm .....	..	7	-	1	1	1	1	1	1	1	1
(b) Secondary .....	..	-	-	-	-	-	...	...	...	...	...
27. Total receipts of energy	45	117	143	129	190	170	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
28. Other provinces	4,117	4,233	4,218	4,979	4,317	3,855	4,025	3,935	3,780	3,562	1,751
29. United States	491	14	15	16	14	14	14	14	14	14	14
(b) Secondary:											
30. Other provinces	394	1,963	1,004	2,040	602	2,453	...	...	...	...	...
31. United States	184	25	18	40	33	12	...	...	...	...	...
32. Total deliveries of energy	5,186	6,235	5,255	7,075	4,966	6,334	...	...	...	...	...
33. Total energy available (24 + 27 - 32)	32,519	44,011	44,707	49,753	52,087	56,223	...	...	...	...	...
34. Secondary energy delivered within province	2,277	3,622	2,613	2,672	2,860	2,858	...	...	...	...	...
35. Firm energy available within province (33 - 34)	30,242	40,389	42,094	47,081	49,227	53,365	55,580	59,903	63,927	67,620	70,805
36. Indicated shortage	1,546	-	-	-	-	-	-	-	-	-	-
37. Firm energy requirement within province (35 + 36)	31,788	40,389	42,094	47,081	49,227	53,365	55,580	59,903	63,927	67,620	70,805
38. Firm energy requirement on province (28 + 29 + 37)	36,396	44,636	46,327	52,076	53,558	57,234	59,619	63,852	67,721	71,196	72,570

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

Capability and peak load	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric	3,778	5,285	5,601	5,603	5,548	5,687	5,852	5,968	6,195	6,195	6,195
2. Steam - Conventional)		(1,926	2,376	2,379	2,885	2,947	3,882	4,197	5,271	5,812	6,349
3. Nuclear)		(-	-	-	-	-	200	200	200	700	1,200
4. Internal combustion)	787	(12	12	8	7	7	10	10	10	21	26
5. Gas turbine)		(-	-	-	74	149	342	342	342	342	342
6. Total net generating capability	4,565	7,223	7,989	7,990	8,514	8,790	10,286	10,717	12,018	13,070	14,112
Receipts of firm power from:											
7. Other provinces	702	692	699	709	627	625	625	574	574	242	242
8. United States	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts	702	692	699	709	627	625	625	574	574	242	242
Deliveries of firm power to:											
10. Other provinces	1	2	2	8	-	-	-	-	-	-	-
11. United States	86	89	88	90	46	47	48	49	50	51	36
12. Total deliveries	87	91	90	98	46	47	48	49	50	51	36
13. Total net capability (6 + 9 - 12)	5,180	7,824	8,598	8,601	9,095	9,368	10,863	11,242	12,542	13,261	14,318
<u>Peak loads:</u>											
14. Firm power peak load within province	5,064	6,913	7,410	7,897	8,596	9,157	9,728	10,220	10,929	11,611	12,354
15. Indicated shortages	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	5,064	6,913	7,410	7,897	8,596	9,157	9,728	10,220	10,929	11,611	12,354
17. Firm power peak load on province (12 + 16)	5,151	7,004	7,500	7,995	8,642	9,204	9,776	10,269	10,979	11,662	12,390
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16)	116	911	1,188	704	499	211	1,135	1,022	1,613	1,650	1,964
18a Reduction in generating capability due to adverse conditions .....	..	..	321	192	16	15	...	...	...	...	...

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

Energy	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	30,872	29,099	30,150	32,924	36,971	...	...	...	...	...
20. Steam - Conventional )	(	4,335	8,291	9,313	11,661	11,262	...	...	...	...	...
21. Nuclear )	(	22	87	141	120	161	...	...	...	...	...
22. Internal combustion )	(	29	24	22	21	23	...	...	...	...	...
23. Gas turbine )	(	1	-	-	4	13	...	...	...	...	...
24. Total net generation	28,783	35,259	37,501	39,626	44,730	48,430	...	...	...	...	...
Receipts of energy from:											
25. Other provinces .....	..	6,221	5,205	7,026	4,893	6,263	3,995	3,903	3,745	3,525	1,712
26. United States:											
(a) Firm .....	..	-	-	-	-	-	-	-	-	-	-
(b) Secondary .....	..	2,704	2,846	2,907	2,897	2,339	...	...	...	...	...
27. Total receipts of energy	4,805	8,925	8,051	9,933	7,790	8,602	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
28. Other provinces	4	7	8	28	20	-	-	-	-	-	-
29. United States	703	635	672	654	438	393	401	409	416	424	310
(b) Secondary:											
30. Other provinces	11	221	257	255	258	99	...	...	...	...	...
31. United States	3,681	3,144	2,649	3,240	2,656	2,853	...	...	...	...	...
32. Total deliveries of energy	4,399	4,007	3,586	4,177	3,372	3,345	...	...	...	...	...
33. Total energy available (24 + 27 - 32)	29,189	40,177	41,966	45,382	49,148	53,687	...	...	...	...	...
34. Secondary energy delivered within province	120	546	437	568	639	592	...	...	...	...	...
35. Firm energy available within province (33 - 34)	29,069	39,631	41,529	44,814	48,509	53,095	55,548	58,617	62,638	66,887	71,098
36. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
37. Firm energy requirement within province (35 + 36)	29,069	39,631	41,529	44,814	48,509	53,095	55,548	58,617	62,638	66,887	71,098
38. Firm energy requirement on province (28 + 29 + 37)	29,776	40,273	42,209	45,496	48,967	53,488	55,949	59,026	63,054	67,311	71,408

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

Capability and peak load	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
thousands of kilowatts											
Capability:											
Net generating capability:											
1. Hydro-electric	556	735	735	735	1,061	1,061	1,061	1,171	1,205	1,205	1,611
2. Steam - Conventional )	(	291	291	291	291	291	291	291	389	389	389
3. Nuclear)	(-	-	-	-	-	-	-	-	-	-
4. Internal combustion )	(	7	7	8	9	11	12	12	12	16	16
5. Gas turbine )	(	-	-	-	-	-	24	24	24	24	24
6. Total net generating capability	602	1,033	1,033	1,034	1,361	1,363	1,388	1,498	1,630	1,634	2,040
Receipts of firm power from:											
7. Other provinces	64	87	134	94	83	84	86	86	136	186	86
8. United States	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts	64	87	134	94	83	84	86	86	136	186	86
Deliveries of firm power to:											
10. Other provinces	14	-	-	-	1	1	41	1	1	1	1
11. United States	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries	14	-	-	-	1	1	41	1	1	1	1
13. Total net capability (6 + 9 - 12)	652	1,120	1,167	1,128	1,443	1,446	1,433	1,583	1,765	1,819	2,125
Peak loads:											
14. Firm power peak load within province	605	907	955	1,004	1,022	1,083	1,297	1,417	1,521	1,624	1,733
15. Indicated shortages	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	605	907	955	1,004	1,022	1,083	1,297	1,417	1,521	1,624	1,733
17. Firm power peak load on province (12 + 16)	619	907	955	1,004	1,023	1,084	1,338	1,418	1,522	1,625	1,734
Indicated reserve:											
18. Indicated reserve (13 - 16)	47	213	212	124	421	363	136	166	244	195	392
18a Reduction in generating capability due to adverse conditions .....	..	..	-	-	20	5	...	...	...	...	...

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

Energy	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	4,220	4,736	4,799	5,256	6,037	...	...	...	...	...
20. Steam - Conventional)		(120	61	148	199	75	...	...	...	...	...
21. Nuclear )		( -	-	-	-	-	...	...	...	...	...
22. Internal combustion)	..	(12	13	14	15	22	...	...	...	...	...
23. Gas turbine )		( -	-	-	-	-	...	...	...	...	...
24. Total net generation	3,331	4,352	4,810	4,961	5,470	6,134	...	...	...	...	...
Receipts of energy from:											
25. Other provinces .....	..	846	885	900	777	627	647	669	669	669	669
26. United States:											
(a) Firm .....	..	-	-	-	-	-	-	-	-	-	-
(b) Secondary .....	..	-	-	-	-	-	...	...	...	...	...
27. Total receipts of energy	555	846	885	900	777	627	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
28. Other provinces	94	-	-	-	5	17	9	9	9	9	9
29. United States	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
30. Other provinces	38	75	65	49	111	303	...	...	...	...	...
31. United States .....	-	-	-	-	-	-	...	...	...	...	...
32. Total deliveries of energy	132	75	65	49	116	320	...	...	...	...	...
33. Total energy available (24 + 27 - 32)	3,754	5,123	5,630	5,812	6,131	6,441	...	...	...	...	...
34. Secondary energy delivered within province	496	120	185	153	143	226	...	...	...	...	...
35. Firm energy available within province (33 - 34)	3,258	5,003	5,445	5,659	5,988	6,215	7,035	7,907	8,494	9,022	9,537
36. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
37. Firm energy requirement within province (35 + 36)	3,258	5,003	5,445	5,659	5,988	6,215	7,035	7,907	8,494	9,022	9,537
38. Firm energy requirement on province (28 + 29 + 37)	3,352	5,003	5,445	5,659	5,993	6,232	7,044	7,916	8,503	9,031	9,546

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

Capability and peak load	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric	82	107	208	309	309	392	392	560	560	560	560
2. Steam - Conventional)	(575	492	529	535	531	531	531	671	811	951	
3. Nuclear)	(-	-	-	-	-	-	-	-	-	-	
4. Internal combustion)	(37	36	35	35	33	33	33	33	33	33	
5. Gas turbine)	(33	39	39	41	40	85	85	85	85	85	
6. Total net generating capability	402	752	775	912	920	996	1,041	1,209	1,349	1,489	1,629
Receipts of firm power from:											
7. Other provinces	-	-	-	-	1	1	41	1	1	1	1
8. United States	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts	-	-	-	-	1	1	41	1	1	1	1
Deliveries of firm power to:											
10. Other provinces	64	87	134	94	83	84	86	86	136	186	86
11. United States	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries	64	87	134	94	83	84	86	86	136	186	86
13. Total net capability (6 + 9 - 12)	338	665	641	818	838	913	996	1,124	1,214	1,304	1,544
<u>Peak loads:</u>											
14. Firm power peak load within province	278	497	531	619	685	761	865	969	1,081	1,198	1,331
15. Indicated shortages	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	278	497	531	619	685	761	865	969	1,081	1,198	1,331
17. Firm power peak load on province (12 + 16)	342	584	665	713	768	845	951	1,055	1,217	1,384	1,417
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16)	60	168	110	199	153	152	131	155	133	106	213
18a Reduction in generating capability due to adverse conditions .....	..	..	7	-	-	-	...	...	...	...	...

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

Energy	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	704	985	1,369	1,698	1,686	...	...	...	...	...
20. Steam - Conventional)		(1,844	1,833	1,782	1,855	2,048	...	...	...	...	...
21. Nuclear )		( -	-	-	-	-	...	...	...	...	...
22. Internal combustion)	..	(97	106	106	91	106	...	...	...	...	....
23. Gas turbines)		(37	49	64	69	80	...	...	...	...	...
24. Total net generation	1,569	2,682	2,973	3,321	3,713	3,920	...	...	...	...	...
Receipts of energy from:											
25. Other provinces .....	..	29	62	17	109	306	9	9	9	9	9
26. United States:											
(a) Firm .....	..	-	-	-	-	-	-	-	-	-	-
(b) Secondary .....	..	-	-	-	-	-	...	...	...	...	...
27. Total receipts of energy	-	29	62	17	109	306	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
28. Other provinces	554	647	687	651	599	614	647	669	669	669	669
29. United States	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
30. Other provinces	-	-	4	9	4	2	...	...	...	...	...
31. United States .....	-	-	-	-	-	-	...	...	...	...	...
32. Total deliveries of energy	554	647	691	660	603	616	...	...	...	...	...
33. Total energy available (24 + 27 - 32)	1,015	2,064	2,344	2,678	3,219	3,610	...	...	...	...	...
34. Secondary energy delivered within province	-	-	17	20	14	14	...	...	...	...	...
35. Firm energy available within province (33 - 34)	1,015	2,064	2,327	2,658	3,205	3,596	4,100	4,697	5,311	5,913	6,650
36. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
37. Firm energy requirement within province (35 + 36)	1,015	2,064	2,327	2,658	3,205	3,596	4,100	4,697	5,311	5,913	6,650
38. Firm energy requirement on province (28 + 29 + 37)	1,569	2,711	3,014	3,309	3,804	4,210	4,747	5,366	5,980	6,582	7,319

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

Capability and peak load	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric	220	327	326	326	490	490	678	678	678	678	678
2. Steam - Conventional )	(	643	713	748	750	820	1,158	1,158	1,308	1,468	1,753
3. Nuclear)	(-	-	-	-	-	-	-	-	-	-
4. Internal combustion )	(	33	31	31	24	26	26	26	26	26	26
5. Gas turbine )	(	130	130	130	131	155	155	155	155	155	155
6. Total net generating capability	558	1,133	1,200	1,235	1,395	1,491	2,017	2,017	2,167	2,327	2,612
Receipts of firm power from:											
7. Other provinces	4	-	-	-	-	-	-	-	-	-	-
8. United States	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts	4	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces	-	4	10	12	19	19	19	18	18	17	17
11. United States	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries	-	4	10	12	19	19	19	18	18	17	17
13. Total net capability (6 + 9 - 12)	562	1,129	1,190	1,223	1,376	1,472	1,998	1,999	2,149	2,310	2,595
<u>Peak loads:</u>											
14. Firm power peak load within province	451	882	984	1,106	1,121	1,219	1,482	1,610	1,784	1,943	2,114
15. Indicated shortages	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	451	882	984	1,106	1,121	1,219	1,482	1,610	1,784	1,943	2,114
17. Firm power peak load on province (12 + 16)	451	886	994	1,118	1,140	1,238	1,501	1,628	1,802	1,960	2,131
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16)	111	247	206	117	255	253	516	389	365	367	481
18a Reduction in generating capability due to adverse conditions .....	..	..	-	-	-	-	...	...	...	...	...

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

Energy	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	956	881	896	1,411	1,425	...	...	...	...	...
20. Steam - Conventional)		(2,900	3,294	3,770	3,794	4,310	...	...	...	...	...
21. Nuclear )		( -	-	-	-	-	...	...	...	...	...
22. Internal combustion)	..	(59	60	90	57	80	...	...	...	...	...
23. Gas turbine)		(187	257	209	230	252	...	...	...	...	...
24. Total net generation	2,076	4,102	4,492	4,965	5,492	6,067	...	...	...	...	...
Receipts of energy from:											
25. Other provinces .....	..	23	27	22	11	19	18	16	16	14	12
26. United States:											
(a) Firm .....	..	-	-	-	-	-	-	-	-	-	-
(b) Secondary .....	..	-	-	-	-	-	...	...	...	...	...
27. Total receipts of energy	29	23	27	22	11	19	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
28. Other provinces	-	4	-	-	-	18	15	17	20	22	23
29. United States	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
30. Other provinces .....	-	-	-	-	-	-	...	...	...	...	...
31. United States .....	-	-	-	-	-	-	...	...	...	...	...
32. Total deliveries of energy	-	4	-	-	-	18	...	...	...	...	...
33. Total energy available (24 + 27 - 32)	2,105	4,121	4,519	4,987	5,503	6,068	...	...	...	...	...
34. Secondary energy delivered within province	-	-	-	-	4	-	...	...	...	...	...
35. Firm energy available within province (33 - 34)	2,105	4,121	4,519	4,987	5,499	6,068	6,995	7,628	8,405	9,176	10,026
36. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
37. Firm energy requirement within province (35 + 36)	2,105	4,121	4,519	4,987	5,499	6,068	6,995	7,628	8,405	9,176	10,026
38. Firm energy requirement on province (28 + 29 + 37)	2,105	4,125	4,519	4,987	5,499	6,086	7,010	7,645	8,425	9,198	10,049

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

Capability and peak load	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric	1,866	2,599	2,670	2,689	2,692	2,779	2,885	3,592	4,017	4,260	4,485
2. Steam - Conventional )	(	424	475	498	643	664	853	1,013	1,016	1,016	1,016
3. Nuclear)	(-	-	-	-	-	-	-	-	-	-
4. Internal combustion )	(	112	106	117	115	121	118	121	119	113	120
5. Gas turbine )	(	172	177	177	177	177	189	193	193	193	193
6. Total net generating capability	2,019	3,307	3,428	3,481	3,627	3,741	4,045	4,919	5,345	5,582	5,814
Receipts of firm power from:											
7. Other provinces	-	4	10	12	19	19	19	18	18	17	17
8. United States	52	-	-	-	-	100	-	-	-	-	-
9. Total receipts	52	4	10	12	19	119	19	18	18	17	17
Deliveries of firm power to:											
10. Other provinces	4	-	-	-	-	-	-	-	-	-	-
11. United States	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries	4	-	-	-	-	-	-	-	-	-	-
13. Total net capability (6 + 9 - 12)	2,067	3,311	3,438	3,493	3,646	3,860	4,064	4,937	5,363	5,599	5,831
<u>Peak loads:</u>											
14. Firm power peak load within province	1,724	2,317	2,537	2,886	3,058	3,421	3,887	4,139	4,337	4,537	4,744
15. Indicated shortages	1	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	1,725	2,317	2,537	2,886	3,058	3,421	3,887	4,139	4,337	4,537	4,744
17. Firm power peak load on province (12 + 16)	1,729	2,317	2,537	2,886	3,058	3,421	3,887	4,139	4,337	4,537	4,744
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16)	342	994	901	607	588	439	177	798	1,026	1,062	1,087
18a Reduction in generating capability due to adverse conditions .....	..	..	2	9	12	16	...	...	...	...	...

Energy	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric	13,500	14,194	15,516	15,196	16,978	...	...	...	...	...
20. Steam - Conventional )	(	665	780	1,207	2,727	3,486	...	...	...	...	...
21. Nuclear)	(-	-	-	-	-
22. Internal combustion )	(	261	300	293	255	331	...	...	...	...	...
23. Gas turbine )	(	3	5	4	5	20	...	...	...	...	...
24. Total net generation		9,774	14,429	15,279	17,020	18,183	20,815	...	...	...	...
Receipts of energy from:											
25. Other provinces	4	-	-	-	18	15	17	20	22	23
26. United States:											
(a) Firm	1	-	2	2	122	1	1	1	1	1
(b) Secondary	57	19	61	659	582	...	...	...	...	...
27. Total receipts of energy		52	62	19	63	661	722	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
28. Other provinces		10	23	4	1	11	19	18	16	16	14
29. United States	-	2	2	2	2	3	3	3	4	4	4
(b) Secondary:											
30. Other provinces		19	-	23	21	-	-	...	...	...	...
31. United States		20	14	19	30	191	723	...	...	...	...
32. Total deliveries of energy		49	39	48	54	204	745	...	...	...	...
33. Total energy available (24 + 27 - 32)		9,777	14,452	15,250	17,029	18,640	20,792	...	...	...	...
34. Secondary energy delivered within province	-	230	268	180	196	337	...	...	...	...	...
35. Firm energy available within province (33 - 34)		9,777	14,222	14,982	16,849	18,444	20,455	23,305	24,955	26,210	27,424
36. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
37. Firm energy requirement within province (35 + 36)		9,777	14,222	14,982	16,849	18,444	20,455	23,305	24,955	26,210	27,424
38. Firm energy requirement on province (28 + 29 + 37)		9,787	14,247	14,988	16,852	18,457	20,477	23,326	24,974	26,230	27,442

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

Capability and peak load	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric	22	44	44	44	64	63	63	52	60	60	60
2. Steam - Conventional)		(1	1	1	1	1	1	1	1	1	1
3. Nuclear)		(-	-	-	-	-	-	-	-	-	-
4. Internal combustion)	1	(10	11	13	12 ^T	14	14	15	15	16	16
5. Gas turbine)		(-	-	2	1	1	1	1	1	7	7
6. Total net generating capability	23	55	56	60	78 ^T	79	79	69	77	84	84
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)	23	55	56	60	78 ^T	79	79	69	77	84	84
<u>Peak loads:</u>											
14. Firm power peak load within province	19	32	32	34	47 ^T	44	50	49	55	57	59
15. Indicated shortages	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15)	19	32	32	34	47 ^T	44	50	49	55	57	59
17. Firm power peak load on province (12 + 16)	19	32	32	34	47 ^T	44	50	49	55	57	59
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16)	4	23	24	26	31 ^T	35	29	20	22	27	25
18a Reduction in generating capability due to adverse conditions .....	..	..	-	-	-	-	...	...	...	...	...

Energy	Actual						Forecast				
	1956	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
millions of kilowatt-hours											
Net generation by:											
19. Hydro-electric .....	..	187	189	199	217	271	...	...	...	...	...
20. Steam - Conventional)		(2	2	3	2	3	...	...	...	...	...
21. Nuclear )		( -	-	-	-	-	...	...	...	...	...
22. Internal combustion)		(24	24	22	18 ^F	18	...	...	...	...	...
23. Gas turbine)		(-	-	4	4	5	...	...	...	...	...
24. Total net generation	110	213	215	228	241 ^F	297	...	...	...	...	...
Receipts of energy from:											
25. Other provinces .....	..	-	-	-	-	-	-	-	-	-	-
26. United States:											
(a) Firm .....	..	-	-	-	-	-	-	-	-	-	-
(b) Secondary .....	..	-	-	-	-	-	...	...	...	...	...
27. Total receipts of energy .....	..	-	-	-	-	-	...	...	...	...	...
Deliveries of energy to:											
(a) Firm:											
28. Other provinces	-	-	-	-	-	-	-	-	-	-	-
29. United States	-	-	-	-	-	-	-	-	-	-	-
(b) Secondary:											
30. Other provinces .....	-	-	-	-	-	-	...	...	...	...	...
31. United States .....	-	-	-	-	-	-	...	...	...	...	...
32. Total deliveries of energy .....	-	-	-	-	-	-	...	...	...	...	...
33. Total energy available (24 + 27 - 32)	110	213	215	228	241 ^F	297	...	...	...	...	...
34. Secondary energy delivered within province	5	51	50	65	48	58	...	...	...	...	...
35. Firm energy available within province (33 - 34)	105	162	165	163	193 ^F	239	255	249	287	295	299
36. Indicated shortage	-	-	-	-	-	-	-	-	-	-	-
37. Firm energy requirement within province (35 + 36)	105	162	165	163	193 ^F	239	255	249	287	295	299
38. Firm energy requirement on province (28 + 29 + 37)	105	162	165	163	193 ^F	239	255	249	287	295	299

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

Province	1956	1962	1963	1964	1965	1966	Forecast					Percentage change (compounded)		
							1967	1968	1969	1970	1971	1956 1966	1962 1966	1966 1971
thousands of kilowatts														
Newfoundland (including Labrador)	242	409	496	498	502	544	800	850	890	965	965	8.44	7.39	12.15
Prince Edward Island	18	37	58	58	58	58	58	78	81	81	81	12.41	11.89	6.91
Nova Scotia	378	521	532	527	626	626	671	682	908	913	1,055	5.17	4.70	11.01
New Brunswick	286	480	535	534	577	679	902	1,003	1,107	1,117	1,124	9.03	9.06	10.61
Quebec	5,890	8,919	8,951 ^F	9,225 ^F	10,178 ^F	10,566	11,157	11,180	12,630	13,156	14,234	6.02	4.33	6.14
Ontario	4,565	7,223	7,989	7,990	8,514	8,790	10,286	10,717	12,018	13,070	14,112	6.77	5.03	9.93
Manitoba	602	1,033	1,033	1,034	1,361	1,363	1,388	1,498	1,630	1,634	2,040	8.52	7.18	8.40
Saskatchewan	402	752	775	912	920	996	1,041	1,209	1,349	1,489	1,629	9.50	7.27	10.34
Alberta	558	1,133	1,200	1,235	1,395	1,491	2,017	2,017	2,167	2,327	2,612	10.33	7.11	11.87
British Columbia	2,019	3,307	3,428	3,481	3,627	3,741	4,045	4,919	5,345	5,582	5,814	6.36	3.13	9.22
Yukon and Northwest Territories	23	55	56	60	78 ^F	79	79	69	77	84	84	13.13	9.48	1.23
Canada	14,983	23,869	25,053 ^F	25,554 ^F	27,836 ^F	28,933	32,444	34,222	38,202	40,418	43,750	6.80	4.93	8.62

(1) Table 1, item 6.

Table 3. Final Power Peak Load within Provinces(1)

Province	1956	1962	1963	1964	1965	1966	Forecast					Percentage change (compounded)		
							1967	1968	1969	1970	1971	1956 1966	1962 1966	1966 1971
thousands of kilowatts														
Newfoundland (including Labrador)	222	294	349	376	422	450	587	632	741	755	771	7.32	11.23	11.37
Prince Edward Island	12	25	27	31	35	37	42	47	52	59	65	11.92	10.30	11.93
Nova Scotia	301	388	411	438	457	496	539	585	645	682	722	5.12	6.33	7.80
New Brunswick	243	347	401	461	528	544	554	604	649	708	770	8.39	11.90	7.20
Quebec	4,749	6,370	7,118	7,651	8,228	8,761	9,320	10,028	10,352	11,155	12,004	6.32	8.29	6.50
Ontario	5,064	6,913	7,410	7,897	8,596	9,157	9,728	10,220	10,929	11,611	12,354	6.10	7.28	6.17
Manitoba	605	907	955	1,004	1,022	1,083	1,297	1,417	1,521	1,624	1,733	6.00	4.53	9.86
Saskatchewan	278	497	531	619	685	761	865	969	1,081	1,198	1,331	10.59	11.24	11.83
Alberta	451	882	984	1,106	1,121	1,219	1,482	1,610	1,784	1,943	2,114	10.47	8.43	11.64
British Columbia	1,724	2,317	2,537	2,886	3,058	3,421	3,887	4,139	4,337	4,537	4,744	7.09	10.23	6.76
Yukon and Northwest Territories	19	32	32	34	47 ^F	44	50	49	55	57	59	8.76	8.29	6.04
Canada	13,668	18,972	20,755	22,503	24,199 ^F	25,973	28,351	30,300	32,146	34,329	36,667	6.63	8.17	7.14

(1) Table 1, item 14.

TABLE 4. Firm Energy Requirement within Provinces(1)

Province	1956	1962	1963	1964	1965	1966	Forecast					Percentage change (compounded)		
							1967	1968	1969	1970	1971	1956 1966	1962 1966	1966 1971
millions of kilowatt-hours														
Newfoundland (including Labrador)	1,226	1,473	1,878	2,293	2,640	2,790	3,157	3,391	4,653	4,731	4,740	8.56	17.31	11.22
Prince Edward Island	53	101	111	124	136	140	173	193	217	242	270	10.20	8.51	14.04
Nova Scotia	1,457	1,965	2,100	2,301	2,466	2,648	2,883	3,149	3,441	3,805	4,035	6.16	7.74	8.79
New Brunswick	1,236	1,912	2,095	2,410	2,742 ^F	3,042	3,479	3,721	3,928	4,225	4,547	9.42	12.31	8.37
Quebec	31,788	40,389	42,094	47,081	49,227	53,365	55,580	59,903	63,927	67,620	70,805	5.32	7.21	5.82
Ontario	29,069	39,631	41,529	44,814	48,509	53,095	55,548	58,617	62,638	66,887	71,098	6.21	7.59	6.01
Manitoba	3,258	5,003	5,445	5,659	5,988	6,215	7,035	7,907	8,494	9,022	9,537	6.67	5.57	8.94
Saskatchewan	1,015	2,064	2,327	2,658	3,205	3,596	4,100	4,697	5,311	5,913	6,650	13.48	14.89	13.08
Alberta	2,105	4,121	4,519	4,987	5,499	6,068	6,995	7,628	8,405	9,176	10,026	11.17	10.16	10.57
British Columbia	9,777	14,222	14,982	16,849	18,444	20,455	23,305	24,955	26,210	27,424	28,386	7.66	9.51	6.77
Yukon and Northwest Territories	105	162	165	163	193 ^F	239	255	249	287	295	299	8.57	10.21	4.58
Canada	81,089	111,043	117,245	129,339	139,049 ^F	151,653	162,510	174,410	187,511	199,340	210,393	6.46	8.10	6.77

(1) Table 1, item 37.

TABLE 3. Indicated Reserve(1)

Province	1956	1962	1963	1964	1965	1966	Forecast					Percentage change (compounded)			
							1967	1968	1969	1970	1971	1956 1966	1962 1966	1966 1971	
thousands of kilowatts															
<u>Newfoundland (including Labrador):</u>															
1. Gross capability	242	409	496	498	502	544	800	850	890	965	965	8.44	7.39	12.15	
2. Firm power peak load on province ...	230	307	387	397	429	460	596	641	750	764	780	7.18	10.64	11.14	
3. Indicated reserve (1 - 2)	12	102	109	101	73	84	204	209	140	201	185	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	5.2	33.2	28.2	25.4	17.0	18.3	34.2	32.6	18.7	26.3	23.7	...	...	...
<u>Prince Edward Island:</u>															
1. Gross capability	18	37	58	58	58	58	58	78	81	81	81	12.41	11.89	6.91	
2. Firm power peak load on province ...	12	25	27	31	35	37	42	47	52	59	65	11.92	10.30	11.93	
3. Indicated reserve (1 - 2)	6	12	31	27	23	21	16	31	29	22	16	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	50.0	48.0	114.8	87.1	65.7	56.8	38.1	66.0	55.8	37.3	24.6	...	...	...
<u>Nova Scotia:</u>															
1. Gross capability	378	521	532	527	626	626	671	682	908	913	1,055	5.17	4.70	11.01	
2. Firm power peak load on province ...	303	389	412	439	482	496	539	585	645	682	722	5.05	6.26	7.80	
3. Indicated reserve (1 - 2)	75	132	120	88	144	130	132	97	263	231	333	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	24.8	33.9	29.1	20.0	29.9	26.2	24.5	16.6	40.8	33.9	46.1	...	...	...
<u>New Brunswick:</u>															
1. Gross capability	291	488	542	545	610	687	909	1,010	1,115	1,126	1,134	8.97	8.93	10.54	
2. Firm power peak load on province ...	248	375	429	494	565	582	592	642	688	748	811	8.91	11.62	6.86	
3. Indicated reserve (1 - 2)	43	113	113	51	45	105	317	368	427	378	323	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	17.3	30.1	26.3	10.3	8.0	18.0	53.5	57.3	62.1	50.5	39.8	...	...	...

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

TABLE 5. Indicated Reserve(1) - Continued

Province	1956	1962	1963	1964	1965	1966	Forecast					Percentage change (compounded)		
							1967	1968	1969	1970	1971	1956 1966	1962 1966	1966 1971
thousands of kilowatts														
<u>Quebec:</u>														
1. Gross capability	5,901	8,936	8,963 ^F	9,243 ^F	10,185 ^F	10,576	11,166	11,189	12,639	13,165	14,243	6.01	4.30	6.14
2. Firm power peak load on province	5,540	7,071	7,827	8,374	8,869	9,396	9,954	10,611	10,936	11,408	12,258	5.42	7.37	5.46
3. Indicated reserve (1 - 2)	361	1,865	1,136 ^F	869 ^F	1,316 ^F	1,180	1,212	578	1,703	1,757	1,985	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	6.5	26.4	14.5 ^F	10.4 ^F	14.8 ^F	12.6	12.2	5.4	15.6	15.4	16.2	...	...	...
<u>Ontario:</u>														
1. Gross capability	5,267	7,915	8,688	8,699	9,141	9,415	10,911	11,491	12,592	13,312	14,854	5.98	4.43	8.80
2. Firm power peak load on province	5,151	7,004	7,500	7,995	8,642	9,204	9,776	10,269	10,979	11,662	12,390	5.98	7.07	6.13
3. Indicated reserve (1 - 2)	116	911	1,188	704	499	211	1,135	1,022	1,613	1,650	1,964	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	2.3	13.0	15.8	8.8	5.8	2.3	11.6	10.0	14.7	14.1	15.9	...	...	...
<u>Manitoba:</u>														
1. Gross capability	686	1,120	1,367	1,328	1,444	1,447	3,744	4,584	4,766	5,820	2,7126	8.07	6.61	8.00
2. Firm power peak load on province	619	907	955	1,004	1,023	1,084	1,338	1,418	1,522	1,625	1,734	5.76	4.56	9.85
3. Indicated reserve (1 - 2)	47	213	212	124	421	363	136	166	244	195	392	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	7.6	23.5	22.3	12.4	41.2	33.5	10.2	11.7	16.0	12.0	22.6	...	...	...
<u>Saskatchewan:</u>														
1. Gross capability	402	752	775	912	921	997	1,082	1,210	1,350	1,490	1,630	9.51	7.31	10.33
2. Firm power peak load on province	342	584	665	713	768	845	951	1,055	1,217	1,384	1,417	9.47	6.68	10.89
3. Indicated reserve (1 - 2)	60	168	110	199	153	152	131	155	133	106	213	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	17.5	28.8	16.5	27.9	19.9	18.0	13.8	14.7	10.9	7.7	15.0	...	...	...

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

- 44 -

Table 3. Indicated Reserve(1) - Continued

Province	1956	1962	1963	1964	1965	1966	Forecast					Percentage change (compounded)			
							1967	1968	1969	1970	1971	1956 1966	1962 1966	1966 1971	
thousands of kilowatts															
<u>Alberta:</u>															
1. Gross capability	562	1,133	1,200	1,235	1,395	1,491	2,017	2,017	2,167	2,327	2,612	10.25	7.11	11.87	
2. Firm power peak load on province ...	451	886	994	1,118	1,140	1,238	1,501	1,628	1,802	1,960	2,131	10.62	8.72	11.47	
3. Indicated reserve (1 - 2)	111	247	206	117	255	253	516	389	365	367	481	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	24.6	27.9	20.7	10.5	22.4	20.4	34.4	23.9	20.3	18.7	22.6	...	...	...
<u>British Columbia:</u>															
1. Gross capability	2,071	3,311	3,438	3,493	3,646	3,860	4,064	4,937	5,363	5,599	5,831	6.42	3.91	8.60	
2. Firm power peak load on province ...	1,729	2,317	2,537	2,886	3,058	3,421	3,887	4,139	4,337	4,537	4,744	7.06	10.23	6.76	
3. Indicated reserve (1 - 2)	342	994	901	607	588	439	177	798	1,026	1,062	1,087	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	19.8	42.9	35.5	21.0	19.2	12.8	4.6	19.3	23.7	23.4	22.9	...	...	...
<u>Yukon and Northwest Territories:</u>															
1. Gross capability	23	55	56	60	78 ^F	79	79	69	77	84	84	13.13	9.48	1.23	
2. Firm power peak load on province ...	19	32	32	34	47 ^F	44	50	49	55	57	59	8.76	8.29	6.04	
3. Indicated reserve (1 - 2)	4	23	24	26	31 ^F	35	29	20	22	27	25	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	21.1	71.9	75.0	76.5	66.0 ^F	79.5	58.0	40.8	40.0	47.4	42.4	...	...	...
<u>Canada:</u>															
1. Gross capability	15,039	23,873	25,055 ^F	25,556 ^F	27,836 ^F	29,033	32,444	34,222	38,202	40,418	43,750	6.80	5.01	8.55	
2. Firm power peak load on Canada	13,862	19,093	20,905	22,643 ^F	24,288 ^F	26,060	28,439	30,389	32,237	34,422	36,746	6.52	8.09	7.12	
3. Indicated reserve (1 - 2)	1,177	4,780	4,150 ^F	2,913 ^F	3,548 ^F	2,973	4,005	3,833	5,965	5,996	7,004	...	...	...
4. Indicated reserve expressed as a per cent of firm power peak load	8.5	25.0	19.9 ^F	12.9 ^F	14.6 ^F	11.4	14.1	12.6	18.5	17.4	19.1	...	...	...

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

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.

CEA
ELECTRIC POWER STATISTICS COMMITTEE PERSONNEL
1966-1967

Chairman - G.H. Thompson, Calgary Power Ltd., Calgary, Alta.
Vice-Chairman - N.S. Crerar, Saguenay Power Co., P.O. Box 6090, Montreal

Policy Subcommittee

- Chairman
1. To be appointed.
 2. D. C. Campbell, Canadian Electrical Association, Montreal.
 3. W. D. Fallis, Manitoba Hydro, P.O. Box 815, Winnipeg 1, Man.
 4. J. M. Hambley, HEPC of Ontario, 620 University Ave., Toronto
 5. L. F. Kirkpatrick, N.S. Power Commission, Halifax.
 6. J. C. Lessard, Hydro-Quebec, 75 Dorchester Blvd. W., Montreal.
 7. K. W. McGrail, N.S. Light & Power Co., P.O. Box 848, Halifax, N.S.
 8. J. H. Steede, B.C. Hydro & Power Authority, 970 Burrard St., Vancouver, B.C.
 9. R. E. Tweeddale, N.B. Electric Power Commission, Fredericton, N.B.

Surveys Subcommittee

- Chairman
1. G.H. Thompson, Calgary Power Ltd., P.O. Box 190, Calgary, Alta.
 2. V.R. Berliaguette, Dominion Bureau of Statistics, Economic Statistics Branch, Ottawa.
 3. R.L. Borden, Dominion Bureau of Statistics, Manufacturing & Primary Industries Division, Ottawa.
 4. N.B. Cameron, Manitoba Hydro, P.O. Box 815, Winnipeg 1, Man.
 5. A.L. Cole, Newfoundland & Labrador Power Comm., P.O. Box 396, St. John's, Newfoundland.
 6. J.P. Comeau, Hydro-Quebec, 75 Dorchester Blvd. W., Montreal.
 7. J.R. Hanson, N.B. Electric Power Commission, Fredericton, N.B.
 8. W.K. Murray, N.S. Light & Power Co., Halifax, N.S.
 9. J.W. Newby, Calgary Power Ltd., P.O. Box 190, Calgary, Alta.
 10. W.S. Preston, HEPC of Ontario, 620 University Ave., Toronto 2, Ont.
 11. W.A. Reed, Saskatchewan Power Corporation, Regina, Sask.
 12. K.G. Richardson, (ICES rep.) National Energy Board, 969 Bronson Ave., Ottawa
 13. J.E. Underhill, B.C. Hydro & Power Authority, 970 Burrard St., Vancouver

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- Chairman
1. R.B. Gander, Montreal Engineering Co., P.O. Box 250, Place d'Armes, Montreal
 2. R.L. Borden, Dominion Bureau of Statistics, Ottawa.
 3. N.B. Cameron, Manitoba Hydro, P.O. Box 815, Winnipeg 1, Man.
 4. J.P. Comeau, Hydro-Quebec, 75 Dorchester Blvd. W., Montreal
 5. G. Cornish, Deputy Manager, City of Calgary, Electric System, 2808 Macleod Trail, Calgary, Alta.
 6. W.K. Murray, N.S. Light & Power Co., Halifax, N.S.
 7. W.S. Preston HEPC of Ontario, 620 University Ave., Toronto 2, Ont.
 8. J.E. Underhill, B.C. Hydro & Power Authority, 970 Burrard St., Vancouver, B.C.

List of Respondents

Utilities

Industrials

Newfoundland:

The Bowater Power Co. Ltd.
Newfoundland & Labrador Power Commission
Newfoundland Light & Power Co. Ltd.
Tilt Cove Power Corp.
Twin Falls Power Corp.

Bowater's Newfoundland Limited
Iron Ore Co. of Canada, Menihek
Price (Nfld.) Pulp & Paper Ltd.

Prince Edward Island:

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

Nova Scotia:

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

Bowaters Mersey Paper Co. Ltd.
Dosco Steel Ltd.
Imperial Oil Enterprises Ltd.
Minas Basin Pulp & Paper Co. Ltd.
Nova Scotia Pulp Co.

New Brunswick:

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

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

Quebec:

Gulf Power Co.
Hart-James Power Co.
La Cité de Jonquière
MacLaren Quebec Power Co.
The Manicouagan Power Co.
Ottawa Valley Power Co.
Pembroke Electric Light Co. Ltd.
Commission Hydroélectrique de Québec
Saguenay Power Co.
City of Sherbrooke
Sherbrooke Land & Water Power Co. Ltd.
Smelter Power Corporation

Abitibi Soc. Wood Paper Co. Ltd.
Aluminum Co. of Canada Ltd.
Anglo-Canadian Pulp & Paper, Limouli Plant
Canadian Celanese Ltd.
Canadian International Paper Co.
Gatineau Mills
Trois-Rivières
Consolidated Paper Corp. Ltd., Port Alfred Plant
Dominion Ayers Limited
Dominion Textile Co. Ltd.
Domtar Ltd., Donnacona
Domtar Pulp & Paper Co. Ltd., Windsor
E.B. Eddy Co., Hull Plant
Electric Reduction Co. of Canada Ltd.
Gaspé Copper Mines Ltd.
Gaspesia Pulp & Paper Co. Ltd.
Iron Ore Company
Noranda Mines Ltd.
Ogilvie Flour Mills
The Price Co. Ltd.
Quebec North Shore Paper Co.
Thurso Pulp & 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.
Peterborough Hydraulic Power Co. Ltd.
Renfrew Hydro-Electric Commission

Abitibi Power & Paper Co. Ltd.
Iroquois Falls
Smooth Rock Falls
Sturgeon Falls
Algoma Steel Corp. Ltd.
Allied Chemical Canada Ltd., Amherstburg Plant
Brown Forest Industries 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
Ford Motor Co. of Canada Ltd.

List of Respondents - Continued

Utilities

Industrials

Ontario - Concluded:

St. Lawrence Power Co.

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

Manitoba:

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 & Refining Ltd.
Hudson Bay Mining & Smelting Co. Ltd.
Kalium Chemicals Limited

Alberta:

Calgary Power Ltd.
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:

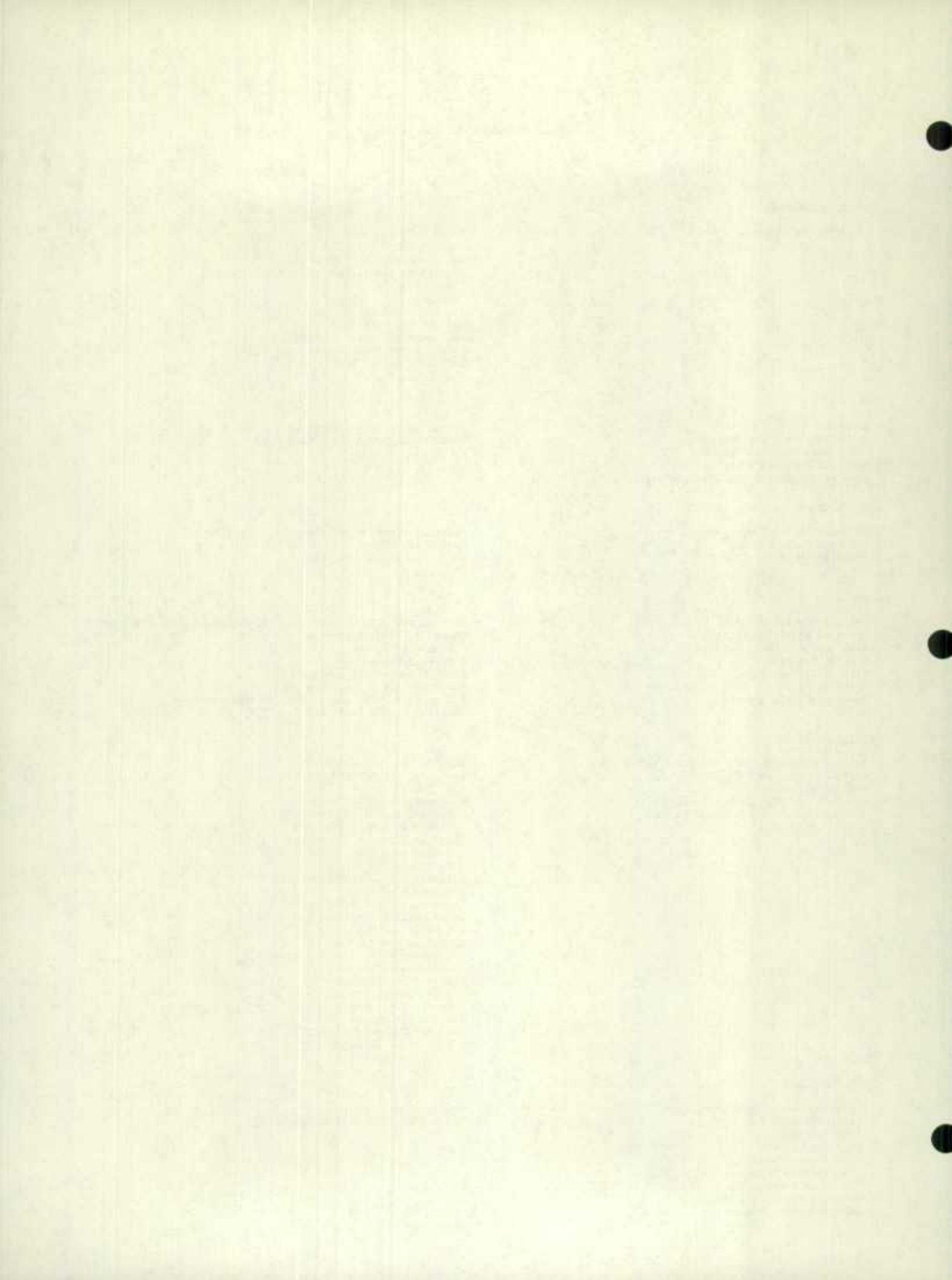
British Columbia Hydro and Power Authority
East Kootenay Power Co. Ltd.
City of Nelson
Corp. of the City of Revelstoke
West Kootenay Power & Light Co. Ltd.

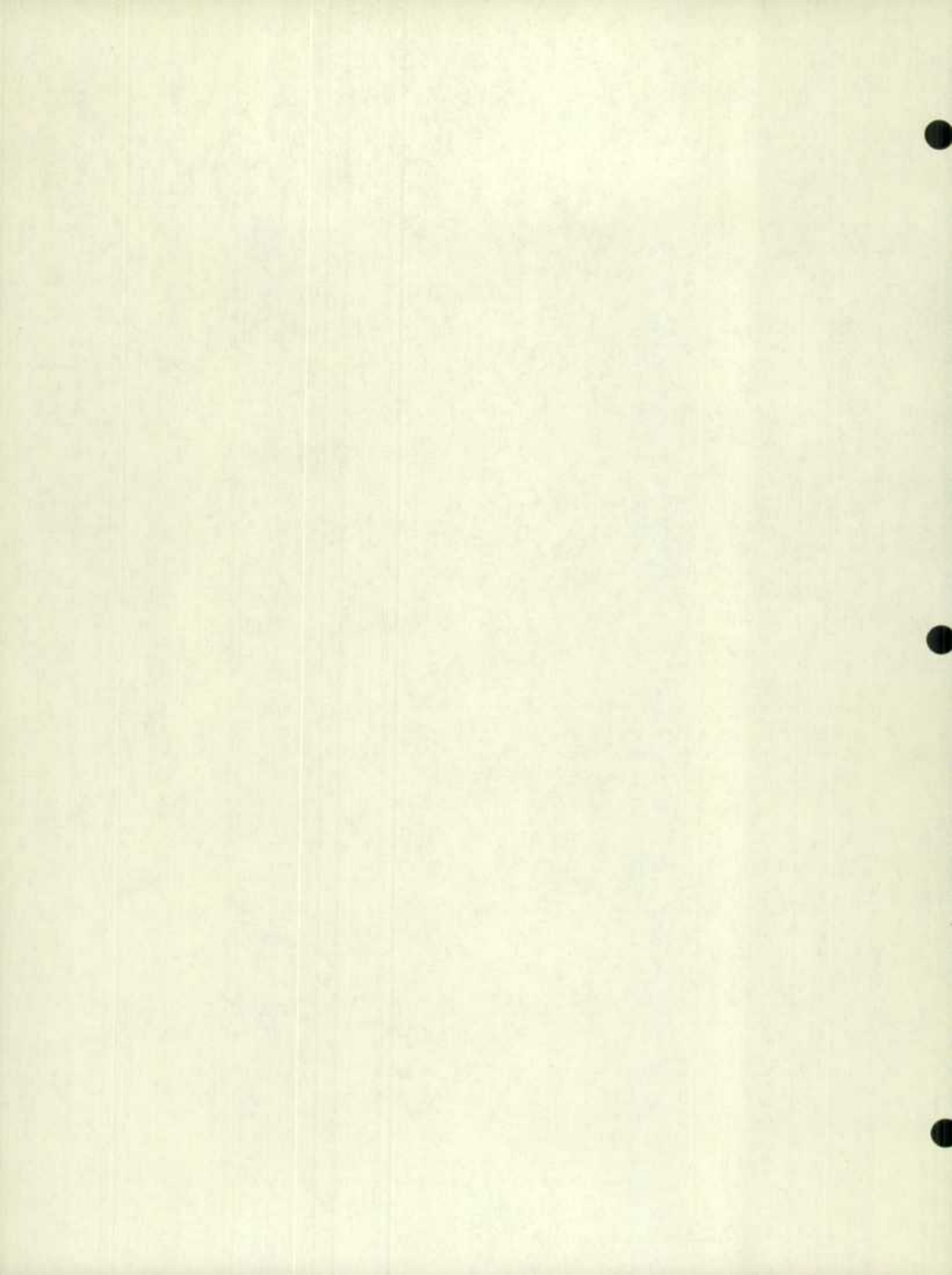
Aluminum Co. of Canada Ltd.
Anaconda Company (Canada) Ltd.
B.C. Forest Products Ltd.
Cowichan Sawmill Division
Hammond Sawmill Division
Victoria Sawmill Division
Canadian Forest Products Ltd.
Eburne Sawmills
Port Mellon
Columbia Cellulose Company Ltd.
Cominco Ltd.
Crown Zellerbach Building Materials Ltd.
Crown Zellerbach Canada Ltd.
Elk Falls Co. Ltd.
MacMillan Bloedel Ltd.
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

Yukon & N.W.T.:

Northern Canada Power Commission
(s) Frobisher Bay
(b) Inuvik
(c) Mayo River
(d) Snare River
(e) Taltson River
(f) Whitehorse
Yukon Electrical Co. Ltd.
Yukon Hydro Co. Ltd.

Cominco Ltd.
Yukon Consolidated Gold Corp. Ltd.





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