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Annual Electric Power Survey of Capability and Load: Catalogue No. 57-204

Preliminary Data

Total net generating capability in 1968 for firms which generate over 10 million kwh. per year increased 3,053,000 kw. or 9.73 per cent to 34,423,000 kw. This is the largest annual net increase in generating capability in Canada's history. The forecast years 1968-73 indicate an anticipated growth of 17,351,000 kw. to 51,774,000 kw., a compound growth rate of 8.51 per cent as compared with the 1958-1968 growth rate of 6.33 per cent. Thermal capability is expected to grow at an annual rate of 12.93 per cent in the forecast period compared with an actual annual rate of 14.23 per cent in the previous ten year period, while hydro-electric capability is expected to increase at 6.38 per cent compared with 4.26 per cent in the previous ten years. Seventy-five per cent of the thermal capability growth will be in fossil-fuelled steam plants, twenty-four per cent in nuclear-fuelled steam plants and one per cent in gas turbine plants.

The first nuclear capability occurred in 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 15. It is expected that by 1973 the nuclear capability will reach 2,250,000 kw. or 4.34 per cent of the total Canadian generating capability.

In the previous forecast it was estimated that the net generating capability in 1968 would be 34,250,000 kw. The actual net generating capability exceeded this estimate by 173,000 kw.

The largest absolute growths in generating capability for the forecast period are indicated for: Ontario 6,516,000 kw.; Newfoundland 3,502,000 kw.; Quebec 3,078,000 kw. and British Columbia 1,326,000 kw. Of the increased generating capability in Ontario, 4,024,000 kw. will be in fossil-fuelled plants, (steam, internal combustion and gas turbine) while nuclear-fuelled plants will account for 1,800,000 kw. of the increase. Newfoundland plans to increase its capability by adding 3,052,000 kw. hydro and 450,000 kw. in fossil-fuelled steam plants. The Quebec forecast is for an increase of 2,847,000 kw. in hydro capability and 250,000 kw. in nuclear-fuelled thermal capability, while British Columbia estimates are for increases of 1,294,000 kw. and 32,000 kw. in hydro and thermal capability respectively.

In the period from 1958 to 1968 the compound growth rate of firm power peak load in Canada was 6.77 per cent. This growth rate is expected to increase to 7.34 per cent during the period 1968 to 1973. During the forecast period the indicated reserve is expected to increase from 4,128,000 kw. in 1968 to 8,708,000 kw. in 1973. The indicated reserve, stated as a percentage of firm power peak load, amounted to 13.6 per cent in 1968 and it is forecast that it will be 20.2 per cent in 1973.

It should be noted that the firm power peak load is the calendar year peak. Some companies have winter peak loads occurring in January and must provide capability to meet these peaks. For these companies the peak load tends to be understated and the reserve is overstated by the difference between the December peak load and the peak load for January of the following year.

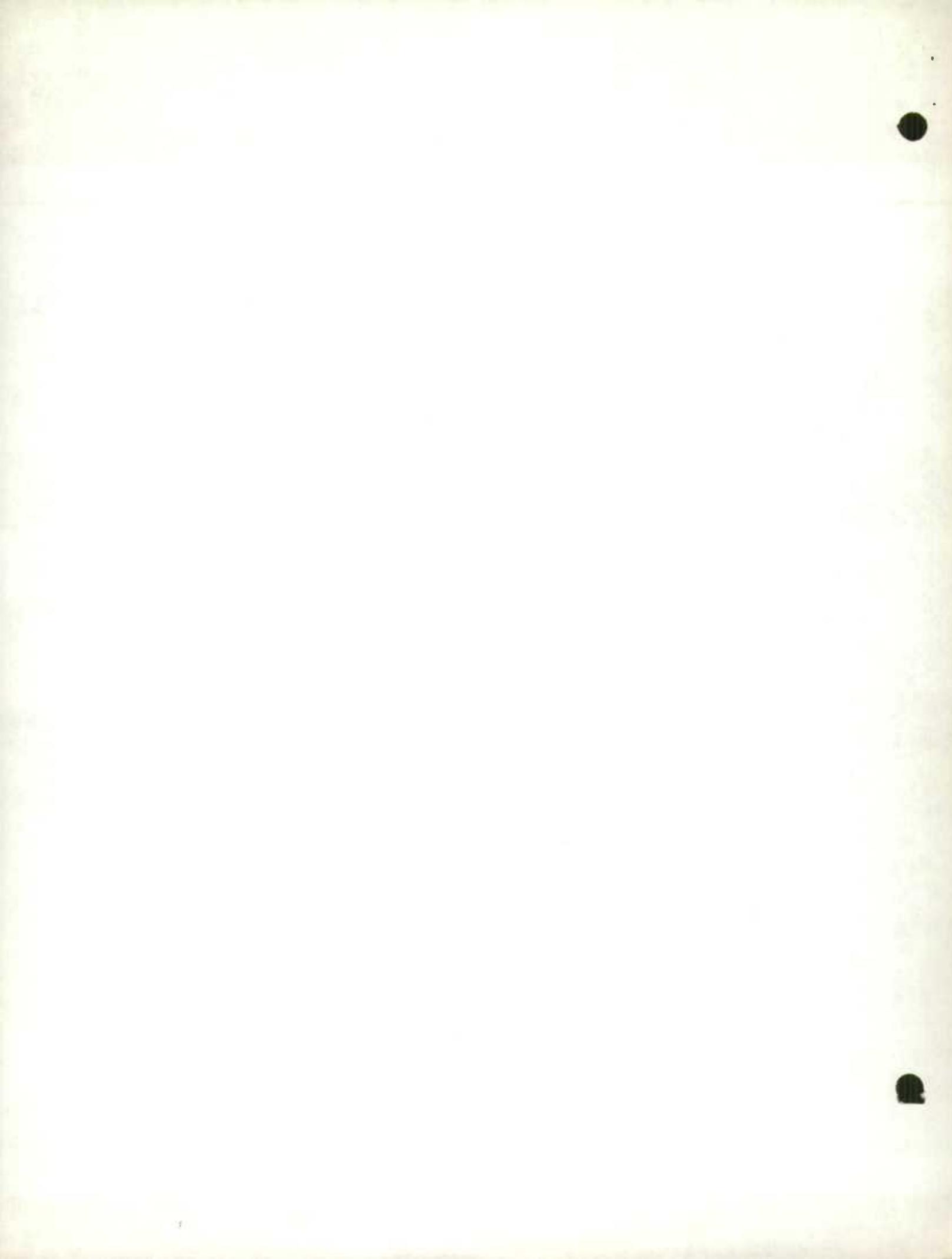
Firm energy requirements increased 7.00 per cent from 162,629 million kwh. in 1967 to 174,017 million kwh. in 1968 compared with a compound growth rate of 7.15 per cent in the previous ten year period and a forecast growth rate of 7.20 per cent for the period 1968-1973. The increase of 11,388

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million kwh. was the result of an increase in net generation of 10,587 million kwh., an increase in net imports of 201 million kwh. and a decrease of 600 million kwh. of secondary energy delivered within Canada.

The Annual Electric Power Survey of Capability and Load covers all producers of electric energy in Canada which generate or will generate 10 million kwh. or more per annum during the forecast period. 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. On May 28, 1969, a meeting of the Surveys Subcommittee was held to discuss the final compilation prior to the publication of the report. The assistance received from the Canadian Electrical Association and its members has been invaluable in all phases of the preparation of this report.

Complete details of the survey will be found in the publication Electric Power Statistics, Volume 1, Annual Electric Power Survey of Capability and Load, Catalogue No. 57-204 which will be published in August.

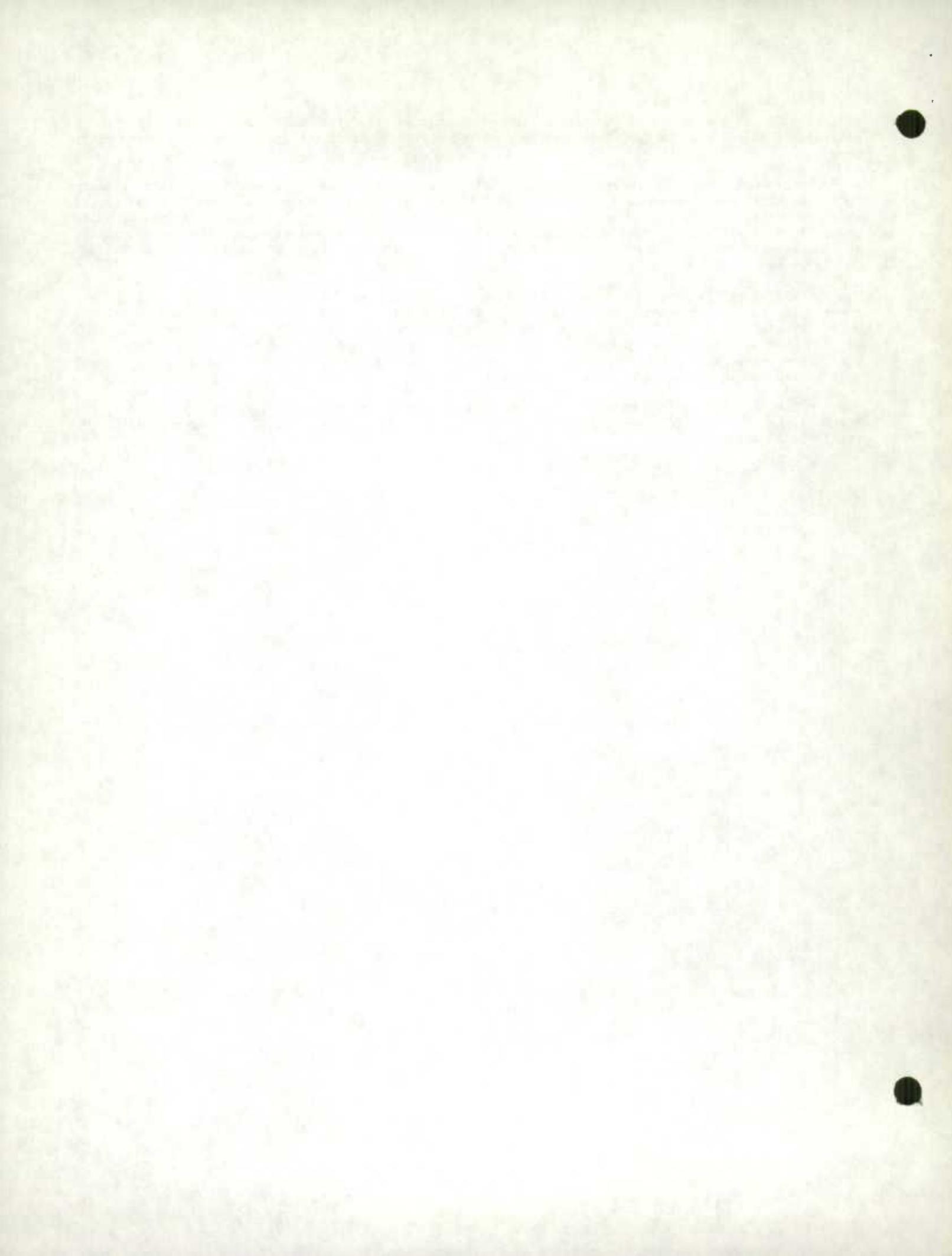


TABLE 1. Capability and Firm Power Peak load in Canada

Capability and peak load	Actual						Forecast				
	1958	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
	thousands of kilowatts										
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	15,912	19,493	20,779	21,459	22,393	24,161	26,397	27,166	28,806	31,178	32,911
2. Steam - Conventional )		5,422	6,354	6,634	7,798	8,877	10,539	12,071	12,934	13,954	15,328
3. Nuclear )		-	-	-	167	200	200	200	950	1,500	2,250
) .....	2,716										
4. Internal combustion )		255	243	257	264	310	305	319	318	324	331
5. Gas turbine )		384	460	583	748	875	873	887	932	934	954
6. Total net generating capability .....	18,628	25,554	27,836	28,933	31,370	34,423	38,314	40,643	43,940	47,890	51,774
Receipts of firm power from:											
7. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...
8. United States .....	-	2	-	100	180	110	-	90	-	-	-
9. Total receipts .....	-	2	-	100	180	110	-	90	-	-	-
Deliveries of firm power to:											
10. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...
11. United States .....	152	127	89	87	95	105	105	119	107	107	106
12. Total deliveries .....	152	127	89	87	95	105	105	119	107	107	106
13. Total net capability (6 + 9 - 12) .....	18,476	25,429	27,747	28,946	31,455	34,428	38,209	40,614	43,833	47,783	51,668
<u>Peak loads:</u>											
14. Firm power peak load within province .....	15,568	22,503	24,167 <sup>r</sup>	25,921 <sup>r</sup>	27,812 <sup>r</sup>	30,151	32,923	35,256	37,775	40,333	42,960
15. Indicated shortages .....	-	13	-	-	-	149	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	15,568	22,516	24,167 <sup>r</sup>	25,921 <sup>r</sup>	27,812 <sup>r</sup>	30,300	32,923	35,256	37,775	40,333	42,960
17. Firm power peak load on province (12 + 16)	15,720	22,643	24,256 <sup>r</sup>	26,008 <sup>r</sup>	27,907 <sup>r</sup>	30,405	33,028	35,375	37,882	40,440	43,066
Indicated reserve:											
18. Indicated reserve (13 - 16) .....	2,908	2,913	3,580 <sup>r</sup>	3,025 <sup>r</sup>	3,643 <sup>r</sup>	4,128	5,286	5,358	6,058	7,450	8,708

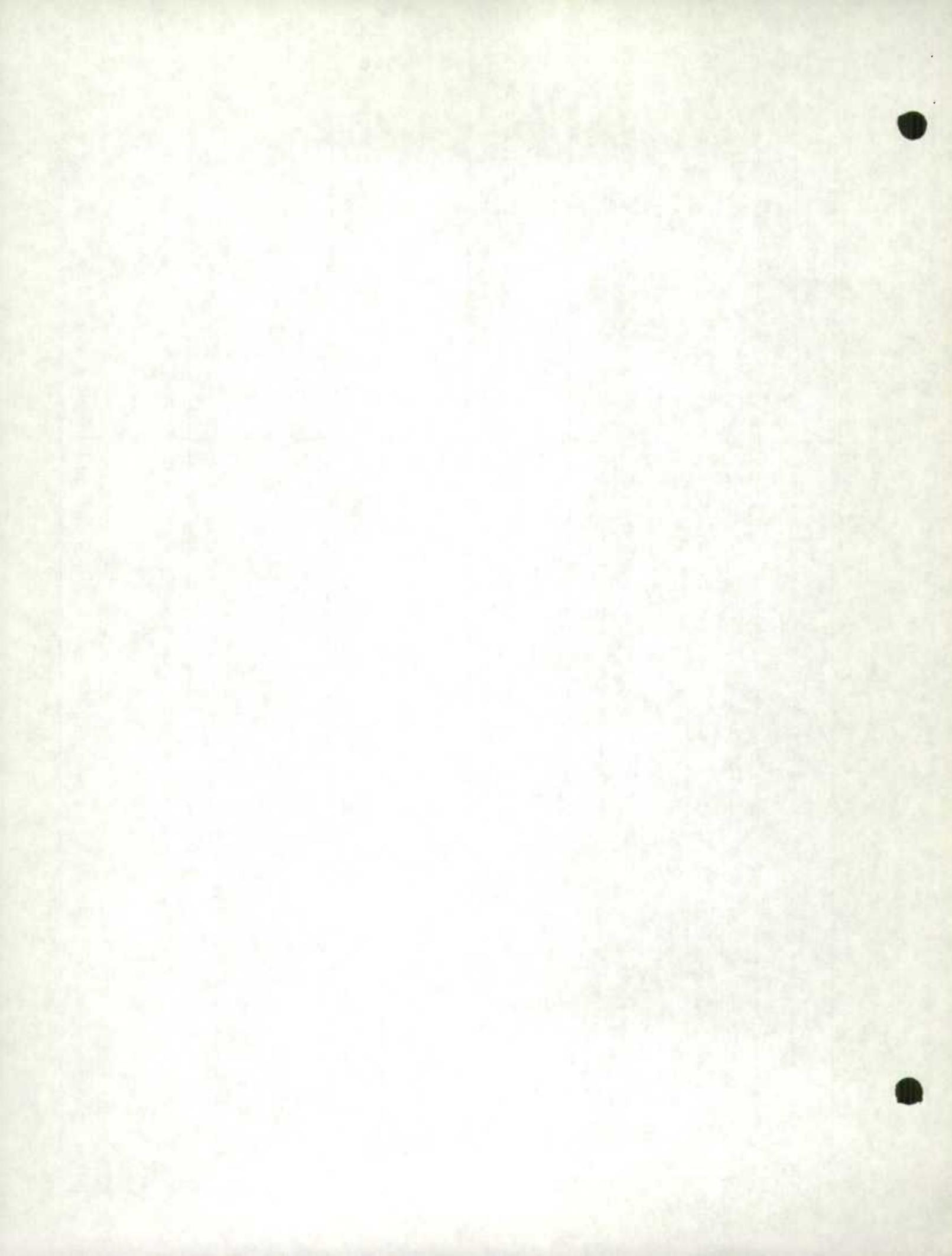


TABLE 1. Capability and Firm Power Peak Load in Newfoundland

Capability and peak load	Actual						Forecast				
	1958	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	243	442	446	454	690	808	885	960	960	2,340	3,860
2. Steam - Conventional )		45	45	52	47	30	30	180	330	480	480
3. Nuclear )	-	-	-	-	-	-	-	-	-	-	-
4. Internal combustion )	28	11	11	13	13	20	20	20	20	20	20
5. Gas turbine )	-	-	25	15	29	29	29	29	29	29	29
6. Total net generating capability .....	271	498	502	544	765	887	964	1,189	1,339	2,869	4,389
Receipts of firm power from:											
7. Other provinces .....	-	-	-	-	-	-	-	-	-	-	-
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	-	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces .....	8	8	7	10	12	12	12	12	12	936	1,870
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	8	8	7	10	12	12	12	12	12	936	1,870
13. Total net capability (6 + 9 - 12) ....	263	490	495	534	753	875	952	1,177	1,327	1,933	2,519
<u>Peak loads:</u>											
14. Firm power peak load within province .....	231	376	422	450	571	644	788	827	1,049	1,165	1,410
15. Indicated shortages .....	-	13	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	231	389	422	450	571	644	788	827	1,049	1,165	1,410
17. Firm power peak load on province (12 + 16)	239	397	429	460	583	656	800	839	1,061	2,101	3,280
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	32	101	73	84	182	231	164	350	278	768	1,109

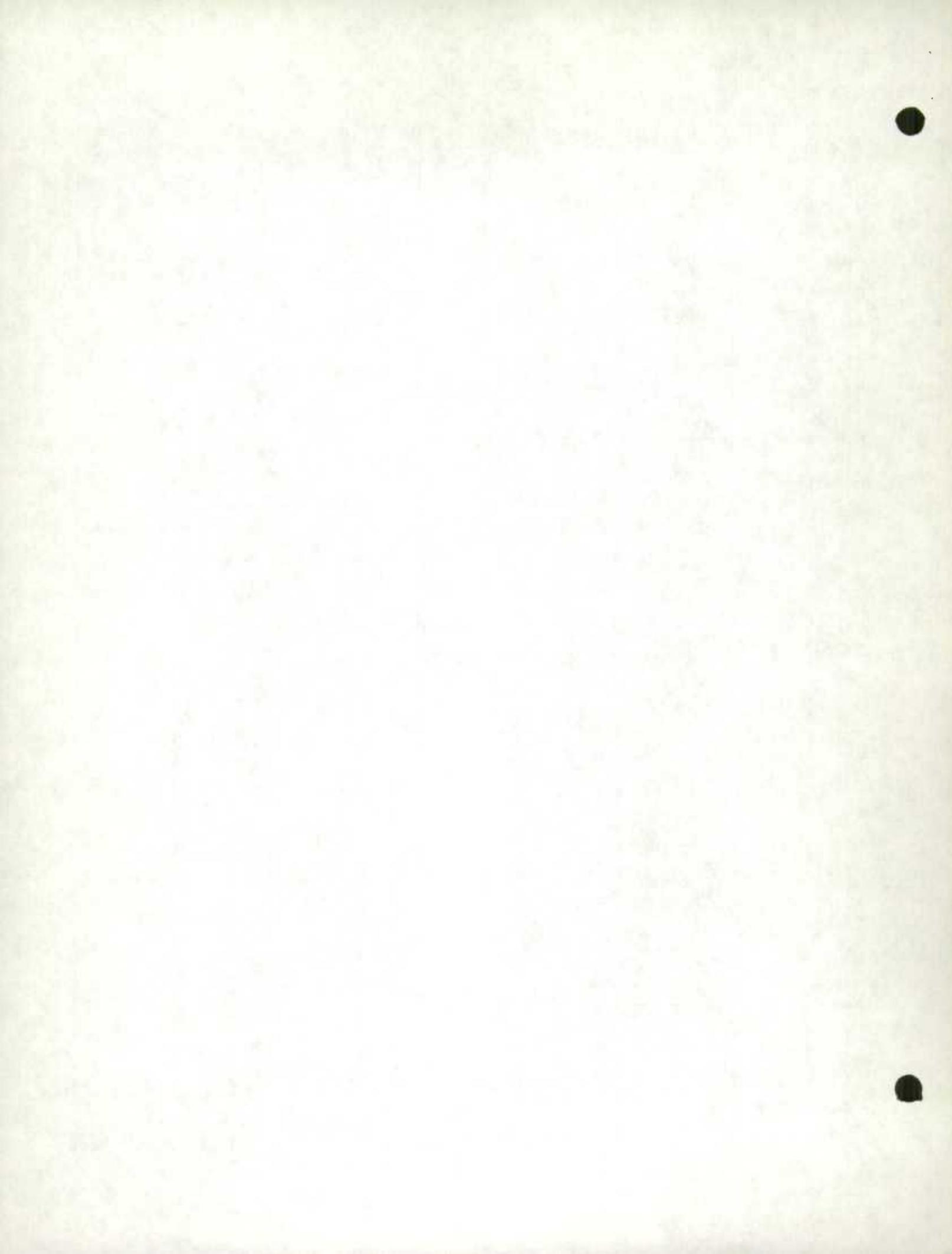


TABLE 3. Capability and Firm Power Peak Load in Prince Edward Island

Capability and peak load	Actual						Forecast				
	1958	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	-	-	-	-	-	-	-	-	-	-	-
2. Steam - Conventional )		51	51	51	51	67	67	67	67	86	86
3. Nuclear )	-	-	-	-	-	-	-	-	-	-	-
) .....	26										
4. Internal combustion )		7	7	7	7	7	7	10	10	10	10
5. Gas turbine )	-	-	-	-	-	-	-	-	-	-	-
6. Total net generating capability .....	26	58	58	58	58	74	74	77	77	96	96
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) ....	26	58	58	58	58	74	74	77	77	96	96
<u>Peak loads:</u>											
14. Firm power peak load within province .....	16	31	35	37	40	46	51	55	60	65	71
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	16	31	35	37	40	46	51	55	60	65	71
17. Firm power peak load on province (12 + 16)	16	31	35	37	40	46	51	55	60	65	71
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	10	27	23	21	18	28	23	22	17	31	25

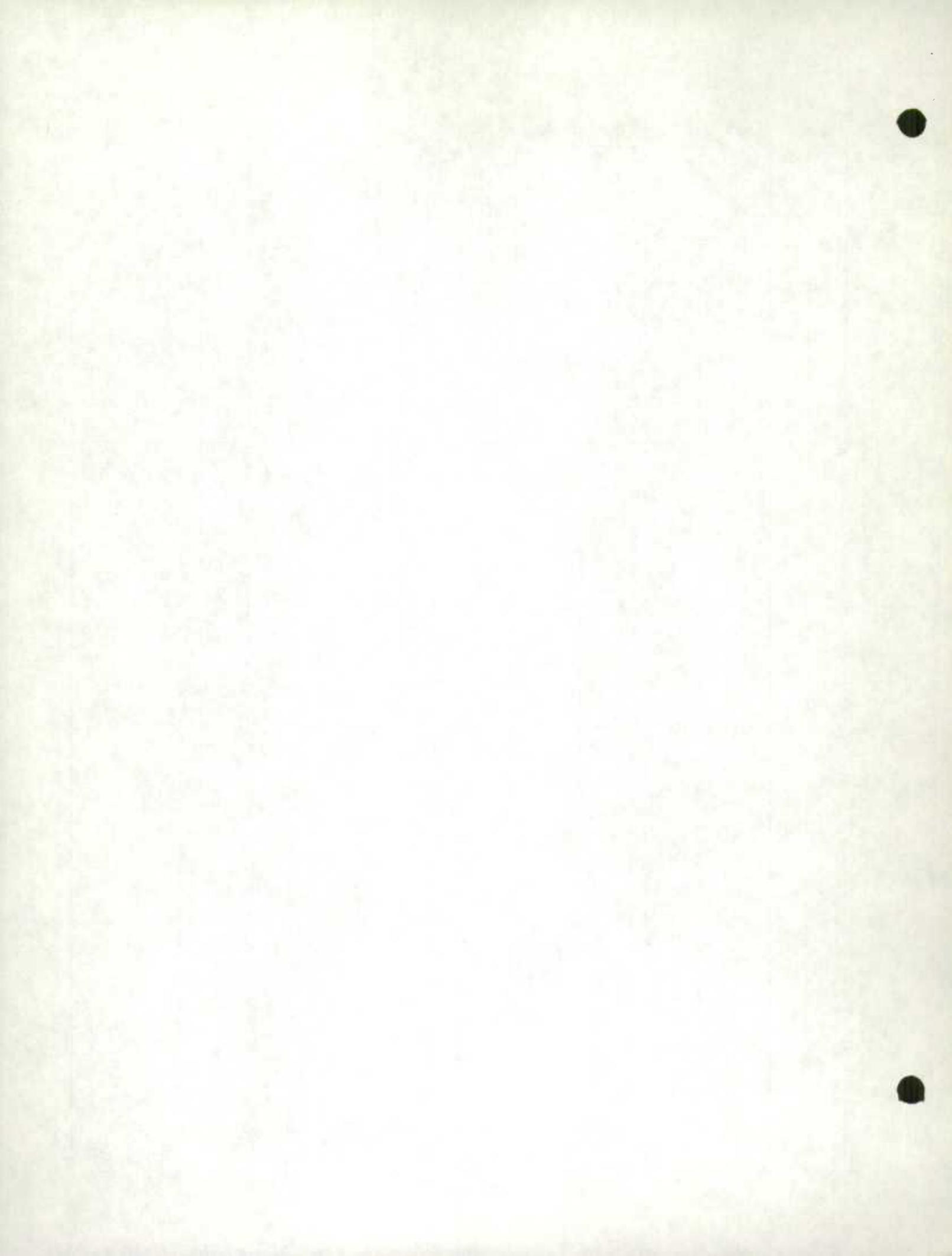


TABLE 4. Capacity and Firm Power Peak Load in Nova Scotia

Capability and peak load	Actual						Forecast				
	1958	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	127	141	141	141	151	161	160	160	160	160	170
2. Steam - Conventional )		383	482	482	540	540	750	750	750	850	850
3. Nuclear )		-	-	-	-	-	-	-	-	-	-
4. Internal combustion )		284	3	3	3	3	3	3	3	3	3
5. Gas turbine )		-	-	-	-	-	-	-	-	-	-
6. Total net generating capability .....	411	527	626	626	694	704	913	913	913	1,013	1,023
Receipts of firm power from:											
7. Other provinces .....	-	-	-	-	-	20	-	-	-	-	-
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	-	-	-	-	-	20	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces .....	3	1	25	-	-	-	-	-	-	-	-
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	3	1	25	-	-	-	-	-	-	-	-
13. Total net capability (6 + 9 - 12) ....	408	526	601	626	694	724	913	913	913	1,013	1,023
<u>Peak loads:</u>											
14. Firm power peak load within province .....	335	438	457	496	604	645	723	796	854	922	989
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	335	438	457	496	604	645	723	796	854	922	989
17. Firm power peak load on province (12 + 16)	338	439	482	496	604	645	723	796	854	922	989
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	73	88	144	130	90	79	190	117	59	91	34

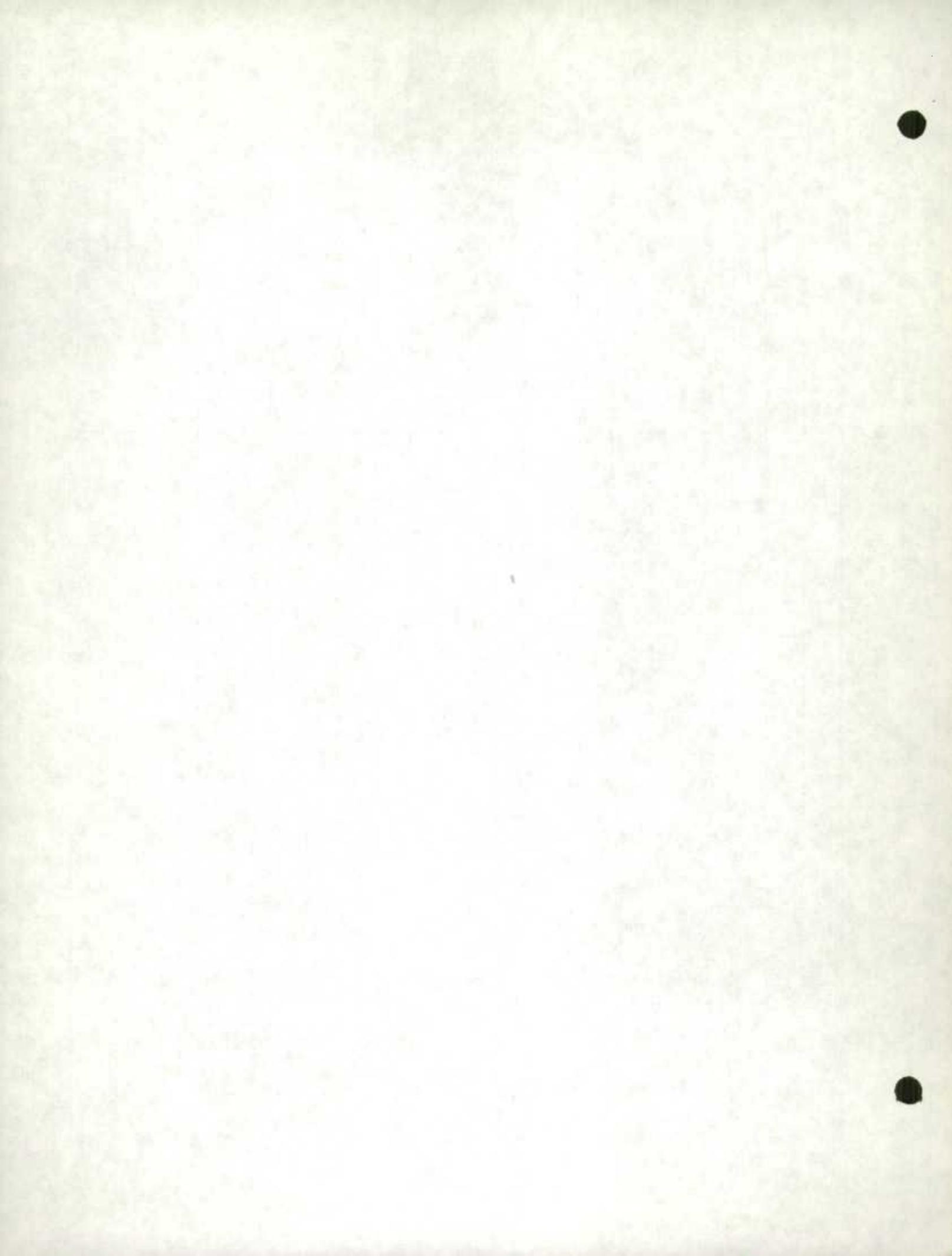


TABLE 5. Capability and Firm Power Peak Load in New Brunswick

Capability and peak load	Actual						Forecast															
	1958	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973											
	thousands of kilowatts																					
<u>Capability:</u>																						
Net generating capability:																						
1. Hydro-electric .....	185	222	260	251	253	564	565	566	567	568	569											
2. Steam - Conventional )		305	310	421	533	533	636	636	636	636	636											
3. Nuclear )	-	-	-	-	-	-	-	-	-	-	-											
4. Internal combustion )	187	7	7	7	7	7	7	7	7	7	7											
5. Gas turbine )	-	-	-	-	-	-	-	-	-	-	-											
6. Total net generating capability .....	372	534	577	679	793	1,104	1,208	1,209	1,210	1,211	1,212											
Receipts of firm power from:																						
7. Other provinces .....	8	9	33	8	8	8	8	8	51	51	85											
8. United States .....	-	2	-	-	-	-	-	-	-	-	-											
9. Total receipts .....	8	11	33	8	8	8	8	8	51	51	85											
Deliveries of firm power to:																						
10. Other provinces .....	-	2	-	-	-	90	-	-	-	-	-											
11. United States .....	9	31	37	38	45	55	61	75	80	81	82											
12. Total deliveries .....	9	33	37	38	45	145	61	75	80	81	82											
13. Total net capability (6 + 9 - 12) .....	371	512	573	649	756	967	1,155	1,142	1,181	1,181	1,215											
Peak loads:																						
14. Firm power peak load within province .....	273	461	528	544	551	579	642	728	767	819	876											
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-											
16. Total indicated firm power peak load within province (14 + 15) .....	273	461	528	544	551	579	642	728	767	819	876											
17. Firm power peak load on province (12 + 16)	282	494	565	582	596	724	703	803	847	900	958											
Indicated reserve:																						
18. Indicated reserve (13 - 16) .....	98	51	45	105	205	388	513	414	414	362	339											

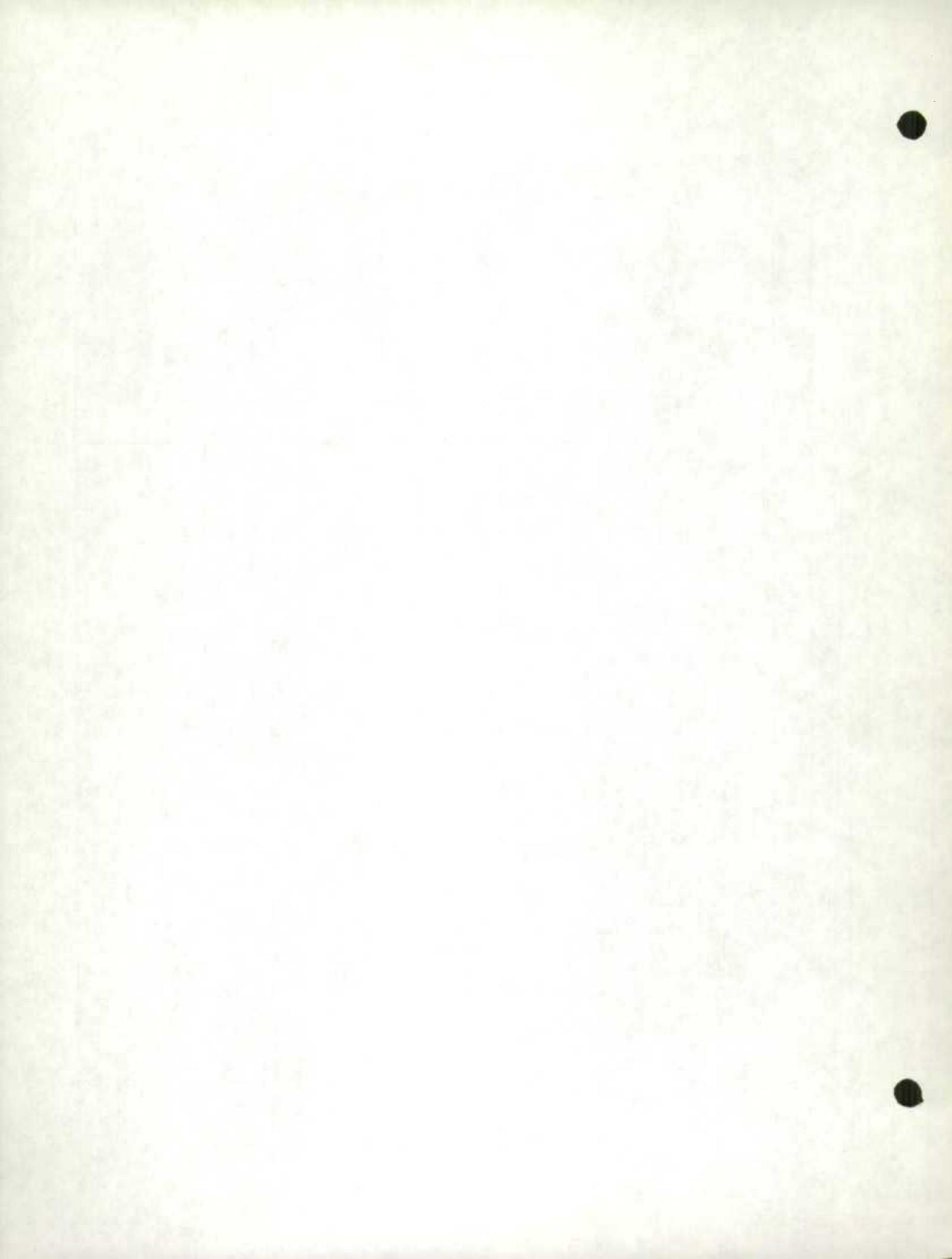


TABLE 6. Capability and Firm Power Peak Load in Quebec

Capability and peak load	Actual						Forecast				
	1958	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	6,992	8,982	9,768	10,141	10,374	10,316	11,768	12,229	12,878	13,163	13,163
2. Steam - Conventional )		192	361	374	528	696	696	696	695	708	708
3. Nuclear )	-	-	-	-	-	-	-	-	-	-	250
4. Internal combustion )	61	15	13	15	19	23	24	25	26	27	28
5. Gas turbine )		36	36	36	36	36	36	36	-	-	-
6. Total net generating capability .....	7,053	9,225	10,178	10,566	10,957	11,071	12,524	12,986	13,599	13,898	14,149
Receipts of firm power from:											
7. Other provinces .....	9	18	7	10	12	82	12	12	12	936	1,870
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	9	18	7	10	12	82	12	12	12	936	1,870
Deliveries of firm power to:											
10. Other provinces .....	673	717	635	633	633	590	590	252	295	295	329
11. United States .....	57	6	6	2	2	2	2	2	2	2	2
12. Total deliveries .....	730	723	641	635	635	592	592	254	297	297	331
13. Total net capability (6 + 9 - 12) ....	6,332	8,520	9,544	9,941	10,334	10,561	11,944	12,744	13,314	14,537	15,688
<u>Peak loads:</u>											
14. Firm power peak load within province .....	5,375	7,651	8,228	8,761	9,142	9,880	10,453	11,163	11,876	12,634	13,399
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	5,375	7,651	8,228	8,761	9,142	9,880	10,453	11,163	11,876	12,634	13,399
17. Firm power peak load on province (12 + 16)	6,105	8,374	8,869	9,396	9,777	10,472	11,045	11,417	12,173	12,931	13,730
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	957	869	1,316	1,180	1,192	681	1,491	1,581	1,438	1,903	2,289

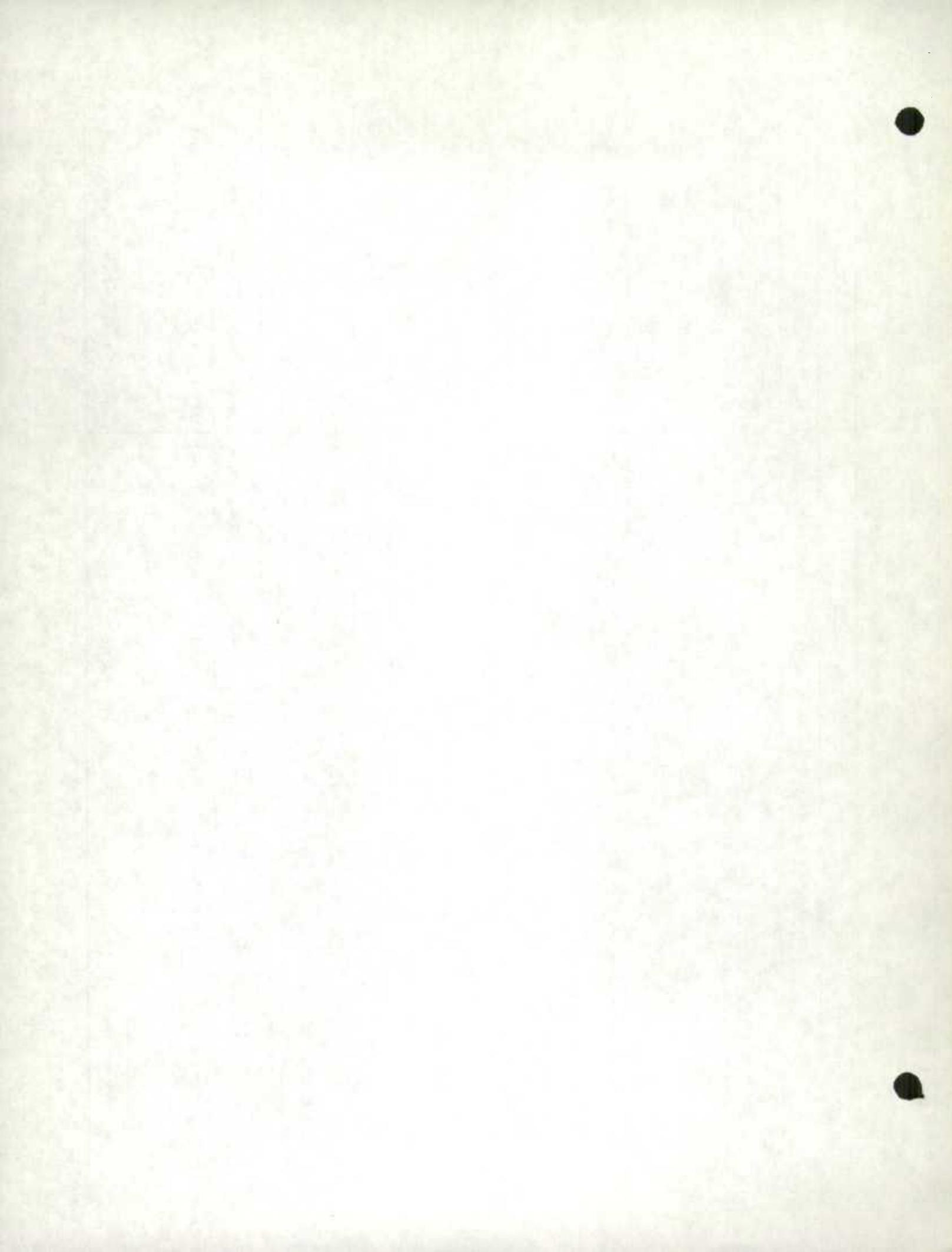


TABLE 7. Capability and Firm Power Peak Load in Ontario

Capability and peak load	Actual						Forecast				
	1958	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	5,081	5,603	5,548	5,687	5,772	6,085	6,328	6,542	6,777	6,777	6,777
2. Steam - Conventional )		2,379	2,885	2,947	3,280	4,044	5,014	6,088	6,405	6,946	8,020
3. Nuclear )		-	-	-	167	200	200	200	950	1,500	2,000
) .....	800										
4. Internal combustion )		8	7	7	8	6	6	7	7	9	9
5. Gas turbine )		-	74	149	288	352	352	352	397	397	397
6. Total net generating capability .....	5,881	7,990	8,514	8,790	9,515	10,687	11,900	13,189	14,536	15,629	17,203
Receipts of firm power from:											
7. Other provinces .....	668	709	627	625	625	582	582	244	244	294	344
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	668	709	627	625	625	582	582	244	244	294	344
Deliveries of firm power to:											
10. Other provinces .....	1	8	-	-	-	-	-	-	-	-	-
11. United States .....	86	90	46	47	48	48	42	42	25	24	22
12. Total deliveries .....	87	98	46	47	48	48	42	42	25	24	22
13. Total net capability (6 + 9 - 12) ....	6,462	8,601	9,095	9,368	10,092	11,221	12,440	13,391	14,755	15,899	17,525
Peak loads:											
14. Firm power peak load within province .....	5,794	7,897	8,596	9,157	9,930	10,648	11,548	12,303	13,169	14,057	14,858
15. Indicated shortages .....	-	-	-	-	-	149	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	5,794	7,897	8,596	9,157	9,930	10,797	11,548	12,303	13,169	14,057	14,858
17. Firm power peak load on province (12 + 16)	5,881	7,995	8,642	9,204	9,978	10,845	11,590	12,345	13,194	14,081	14,880
Indicated reserve:											
18. Indicated reserve (13 - 16) .....	668	704	499	211	162	424	892	1,088	1,586	1,842	2,667

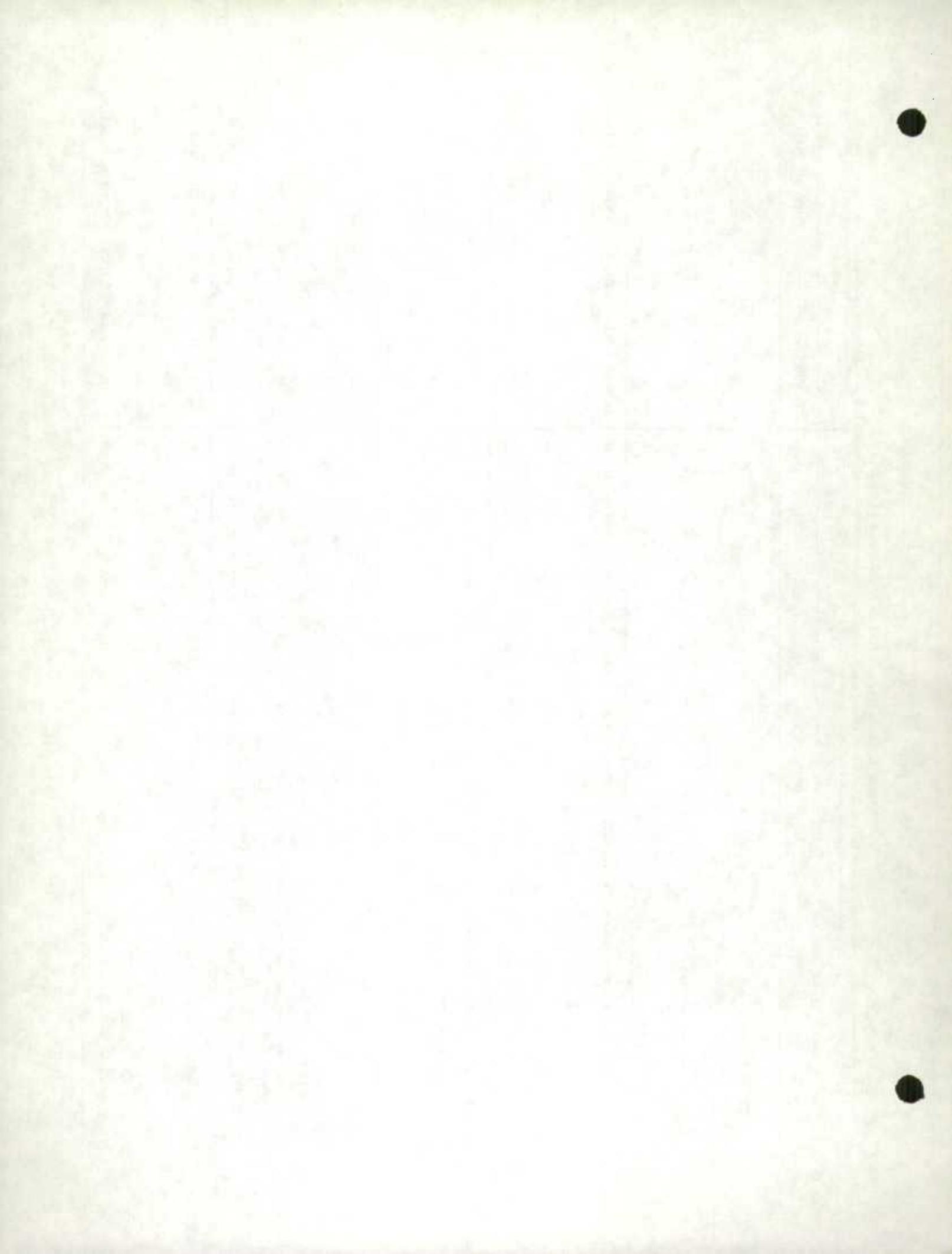


TABLE 8. Capability and Firm Power Peak Load in Manitoba

Capability and peak load	Actual						Forecast				
	1958	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	566	735	1,061	1,061	1,061	1,171	1,205	1,205	1,609	1,710	1,912
2. Steam - Conventional )		291	291	291	291	291	389	389	389	389	389
3. Nuclear )		-	-	-	-	-	-	-	-	-	-
4. Internal combustion )	168	8	9	11	12	20	22	17	17	17	17
5. Gas turbine )		-	-	-	9	24	24	24	24	24	24
6. Total net generating capability .....	734	1,034	1,361	1,363	1,173	1,506	1,640	1,635	2,039	2,140	2,342
Receipts of firm power from:											
7. Other provinces .....	68	94	83	84	87	88	139	189	89	89	89
8. United States .....	-	-	-	-	-	-	-	90	-	-	-
9. Total receipts .....	68	94	83	84	87	88	139	279	89	89	89
Deliveries of firm power to:											
10. Other provinces .....	-	-	1	1	41	1	1	1	1	51	101
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	-	-	1	1	41	1	1	1	1	51	101
13. Total net capability (6 + 9 - 12) ....	802	1,128	1,443	1,446	1,419	1,593	1,778	1,913	2,127	2,178	2,330
<u>Peak loads:</u>											
14. Firm power peak load within province .....	646	1,004	1,022	1,083	1,160 <sup>r</sup>	1,265	1,436	1,534	1,630	1,723	1,819
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	646	1,004	1,022	1,083	1,160 <sup>r</sup>	1,265	1,436	1,534	1,630	1,723	1,819
17. Firm power peak load on province (12 + 16)	646	1,004	1,023	1,084	1,201 <sup>r</sup>	1,266	1,437	1,535	1,631	1,774	1,920
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	156	124	421	363	259 <sup>r</sup>	328	342	379	497	455	511

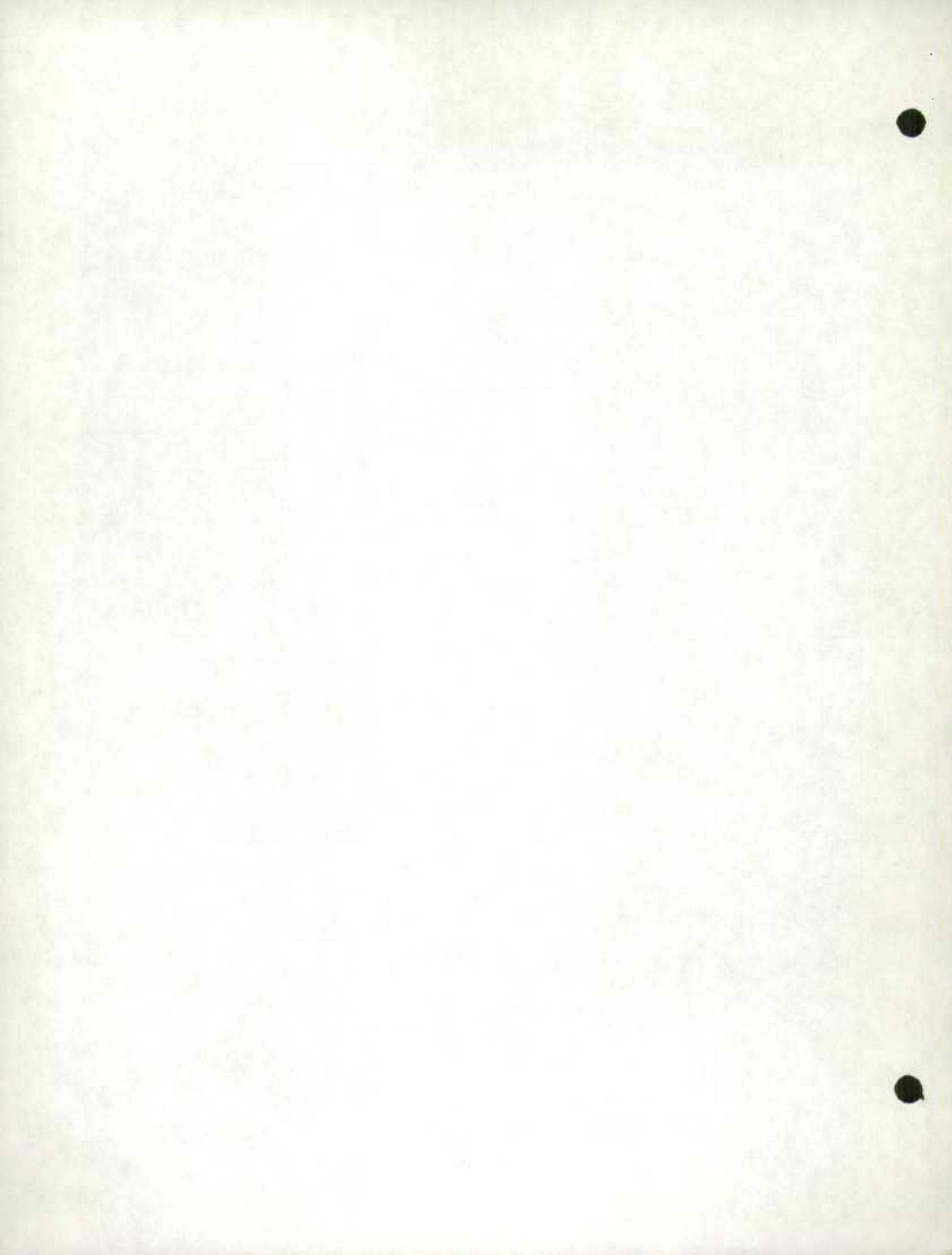


TABLE 9. Capability and Firm Power Peak Load in Saskatchewan

Capability and peak load	Actual						Forecast				
	1958	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	87	309	309	392	392	574	575	575	575	575	575
2. Steam - Conventional )		529	535	531	531	501	641	781	877	977	1,117
3. Nuclear )		-	-	-	-	-	-	-	-	-	-
) .....	451										
4. Internal combustion )		35	35	33	33	33	33	33	33	33	33
5. Gas turbine )		39	41	40	55	88	88	88	88	88	88
6. Total net generating capability .....	538	912	920	996	1,011	1,196	1,337	1,477	1,573	1,673	1,813
Receipts of firm power from:											
7. Other provinces .....	1	-	1	1	41	1	1	1	1	1	1
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	1	-	1	1	41	1	1	1	1	1	1
Deliveries of firm power to:											
10. Other provinces .....	68	94	83	84	87	88	139	189	89	89	89
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	68	94	83	84	87	88	139	189	89	89	89
13. Total net capability (6 + 9 - 12) .....	471	818	838	913	965	1,109	1,199	1,289	1,485	1,585	1,725
<u>Peak loads:</u>											
14. Firm power peak load within province .....	353	619	653 <sup>r</sup>	709 <sup>r</sup>	783 <sup>r</sup>	922	1,070	1,169	1,276	1,410	1,535
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	353	619	653 <sup>r</sup>	709 <sup>r</sup>	783 <sup>r</sup>	922	1,070	1,169	1,276	1,410	1,535
17. Firm power peak load on province (12 + 16)	421	713	736 <sup>r</sup>	793 <sup>r</sup>	870 <sup>r</sup>	1,010	1,209	1,358	1,365	1,499	1,624
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	118	199	185 <sup>r</sup>	204 <sup>r</sup>	182 <sup>r</sup>	187	129	120	209	175	190

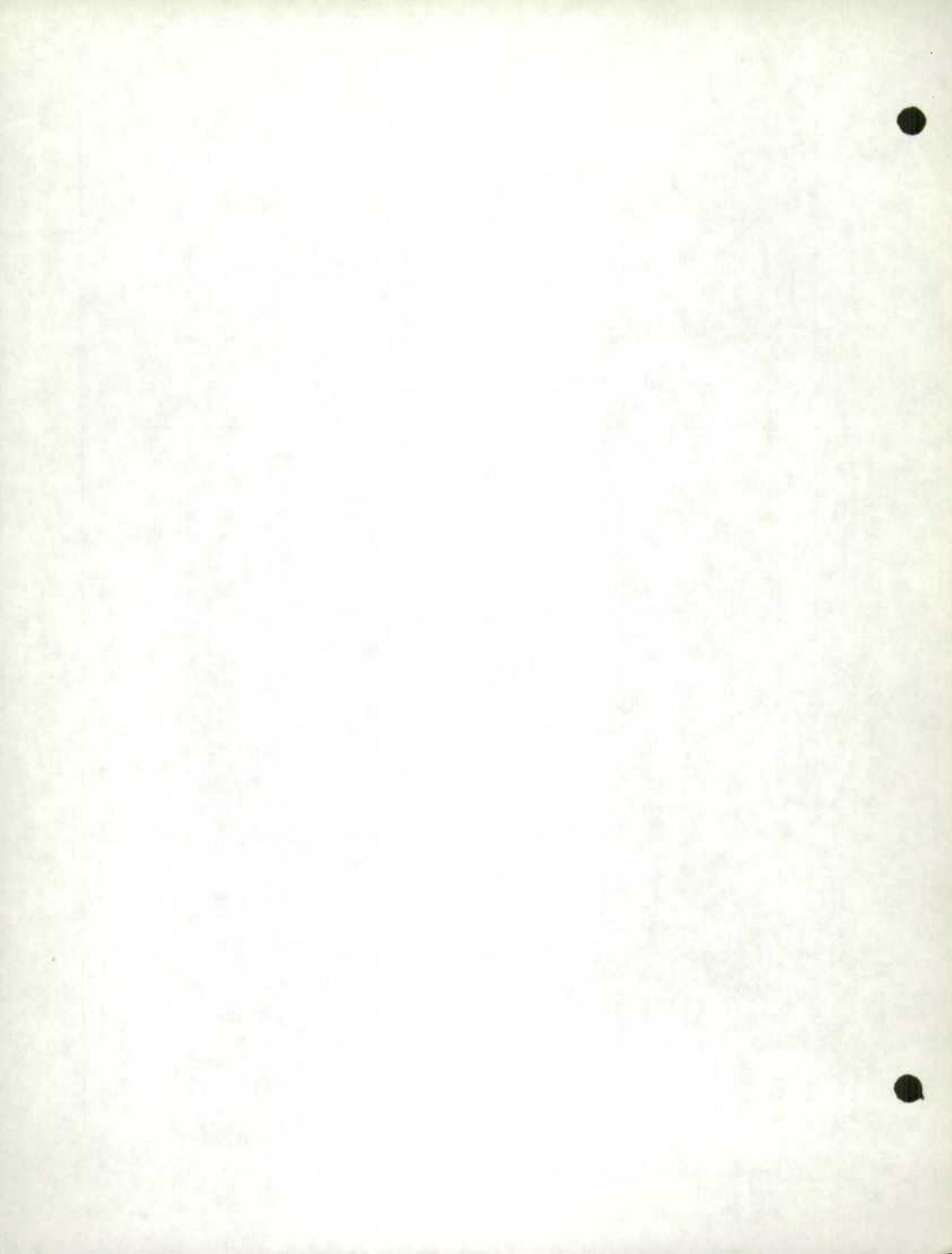


TABLE 10. Capability and Firm Power Peak Load in Alberta

Capability and peak load	Actual						Forecast				
	1958	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	238	326	490	490	680	681	681	681	681	781	781
2. Steam - Conventional )		748	750	820	1,156	1,155	1,296	1,456	1,757	1,854	2,014
3. Nuclear )	-	-	-	-	-	-	-	-	-	-	-
) .....	496										
4. Internal combustion )		31	24	26	24	36	26	28	23	24	25
5. Gas turbine )		130	131	155	155	155	155	155	191	191	191
6. Total net generating capability .....	734	1,235	1,395	1,491	2,015	2,027	2,158	2,320	2,652	2,850	3,011
Receipts of firm power from:											
7. Other provinces .....	4	-	-	-	-	-	-	-	-	-	-
8. United States .....	-	-	-	-	-	-	-	-	-	-	-
9. Total receipts .....	4	-	-	-	-	-	-	-	-	-	-
Deliveries of firm power to:											
10. Other provinces .....	1	12	19	19	15	13	36	56	60	60	60
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	1	12	19	19	15	13	36	56	60	60	60
13. Total net capability (6 + 9 - 12) ....	737	1,223	1,376	1,472	2,000	2,014	2,122	2,264	2,592	2,790	2,951
Peak loads:											
14. Firm power peak load within province .....	580	1,106	1,121	1,219	1,340	1,516	1,767	1,913	2,078	2,263	2,484
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	580	1,106	1,121	1,219	1,340	1,516	1,767	1,913	2,078	2,263	2,484
17. Firm power peak load on province (12 + 16)	581	1,118	1,140	1,238	1,355	1,529	1,803	1,969	2,138	2,323	2,544
Indicated reserve:											
18. Indicated reserve (13 - 16) .....	157	117	255	253	660	498	355	351	514	527	467

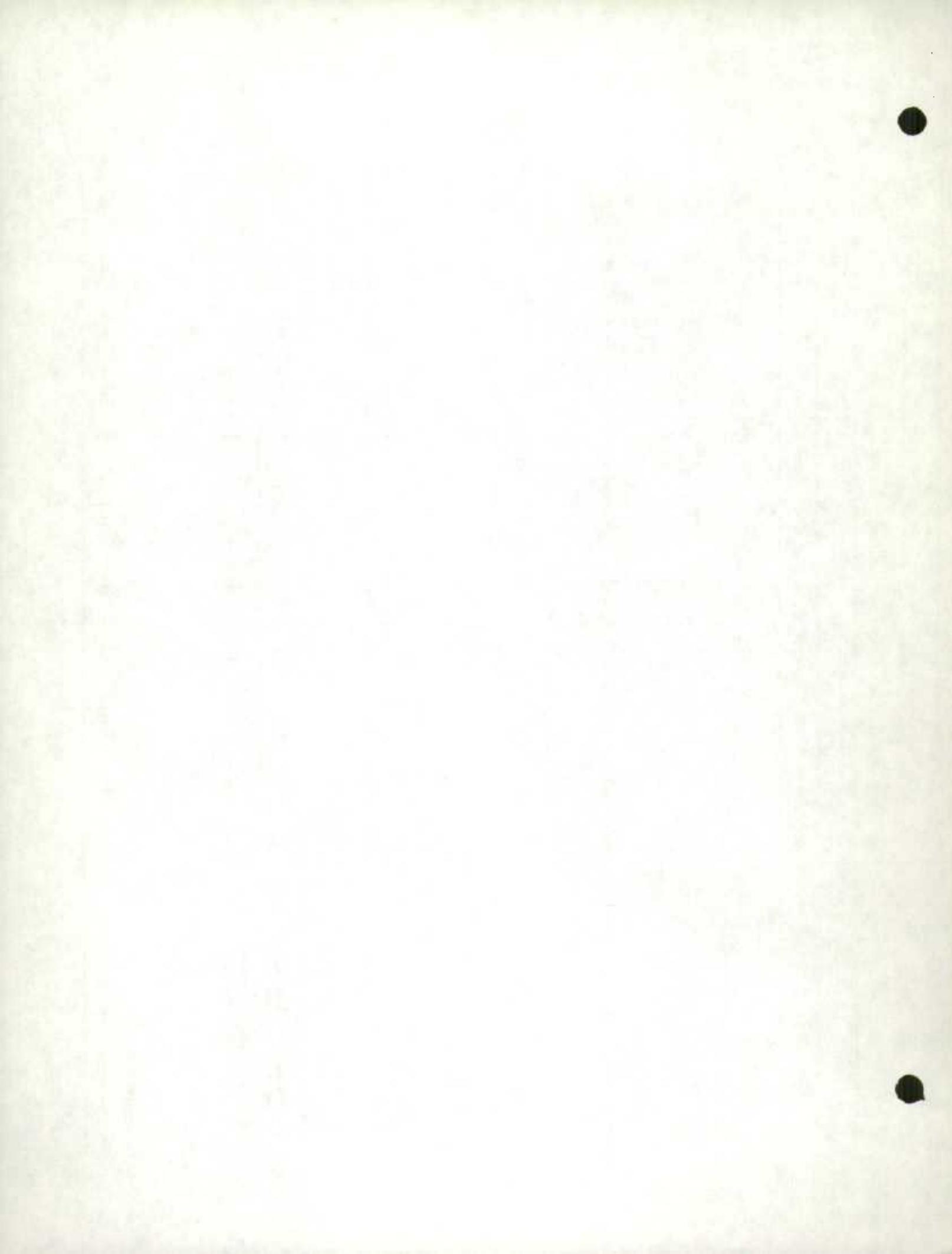


TABLE II. Capability and Firm Power Peak Load in British Columbia

Capability and peak load	Actual						Forecast				
	1958	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	2,356	2,689	2,692	2,779	2,968	3,748	4,168	4,186	4,537	5,042	5,042
2. Steam - Conventional )	498	643	664	840	1,019	-	1,019	1,027	1,027	1,027	1,027
3. Nuclear )	-	-	-	-	-	-	-	-	-	-	-
) .....	212	-	-	-	-	-	-	-	-	-	-
4. Internal combustion )	117	115	121	124	127	121	127	127	126	127	127
5. Gas turbine )	177	177	177	189	189	189	191	191	191	193	213
6. Total net generating capability .....	2,568	3,481	3,627	3,741	4,121	5,083	5,497	5,531	5,881	6,389	6,409
Receipts of firm power from:											
7. Other provinces .....	-	12	19	19	15	13	36	56	60	60	60
8. United States .....	-	-	-	100	180	110	-	-	-	-	-
9. Total receipts .....	-	12	19	119	195	123	36	56	60	60	60
Deliveries of firm power to:											
10. Other provinces .....	4	-	-	-	-	-	-	-	-	-	-
11. United States .....	-	-	-	-	-	-	-	-	-	-	-
12. Total deliveries .....	4	-	-	-	-	-	-	-	-	-	-
13. Total net capability (6 + 9 - 12) ....	2,564	3,493	3,646	3,860	4,316	5,206	5,533	5,587	5,941	6,449	6,469
<u>Peak loads:</u>											
14. Firm power peak load within province .....	1,935	2,886	3,058	3,421	3,647	3,951	4,369	4,684	4,925	5,179	5,417
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	1,935	2,886	3,058	3,421	3,647	3,951	4,369	4,684	4,925	5,179	5,417
17. Firm power peak load on province (12 + 16)	1,939	2,886	3,058	3,421	3,647	3,951	4,369	4,684	4,925	5,179	5,417
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	629	607	588	439	669	1,255	1,164	903	1,016	1,270	1,052

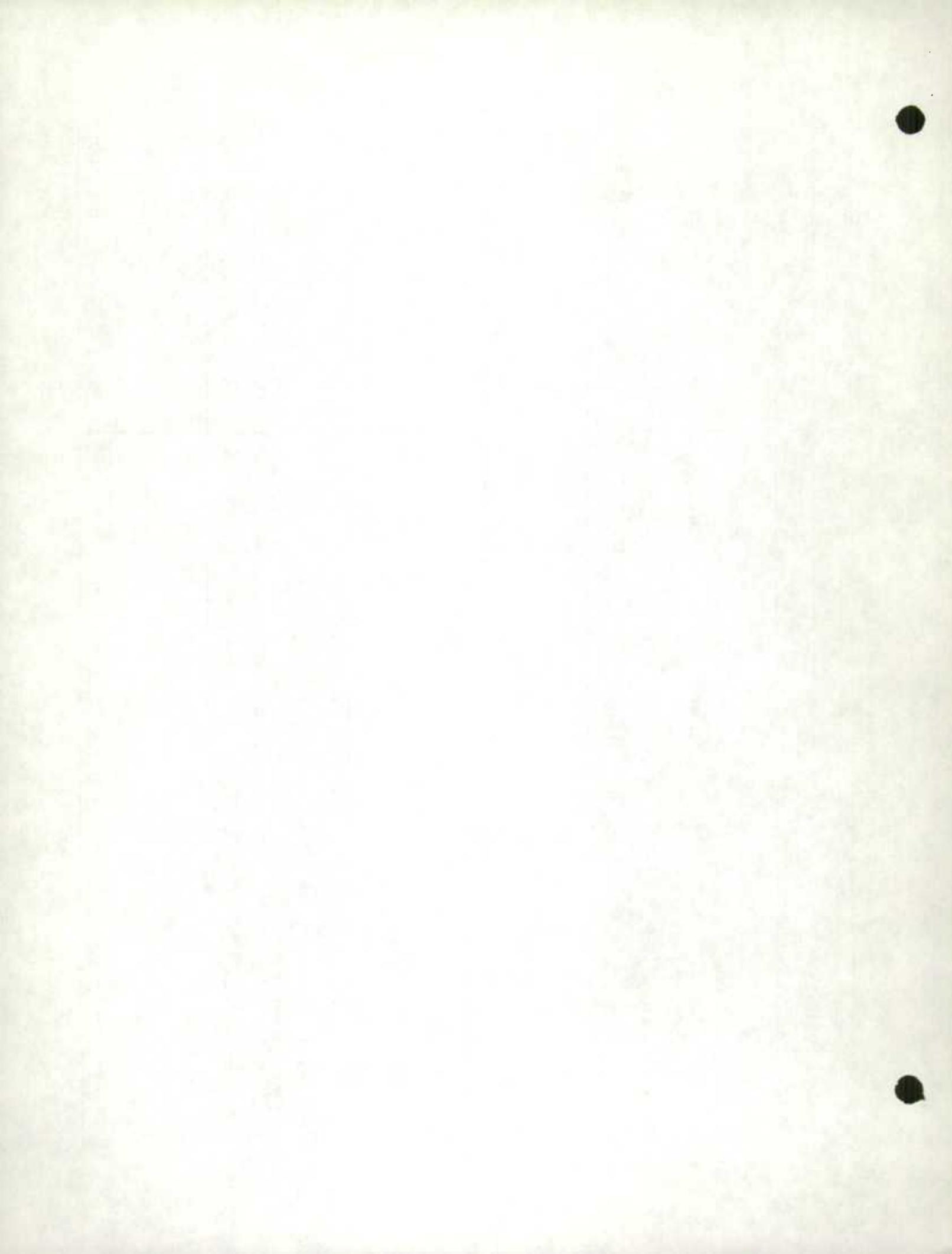


TABLE 12. Capability and Firm Power Peak Load in Yukon

Capability and peak load	Actual						Forecast				
	1958	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	27	27	29	28	17	18	27	27	27	27	27
2. Steam - Conventional )	-	-	-	-	-	-	-	-	-	-	-
3. Nuclear )	-	-	-	-	-	-	-	-	-	-	-
) .....	-	-	-	-	-	-	-	-	-	-	-
4. Internal combustion )	-	-	3	4	4	15	16	16	16	17	17
5. Gas turbine )	-	-	-	-	-	-	-	12	12	12	12
6. Total net generating capability .....	27	27	32	32	21	33	43	55	55	56	56
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) .....	27	27	32	32	21	33	43	55	55	56	56
<u>Peak loads:</u>											
14. Firm power peak load within province .....	18	15	16	17	14	17	34	39	43	46	49
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	18	15	16	17	14	17	34	39	43	46	49
17. Firm power peak load on province (12 + 16)	18	15	16	17	14	17	34	39	43	46	49
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	9	12	16	15	7	16	9	16	12	10	7

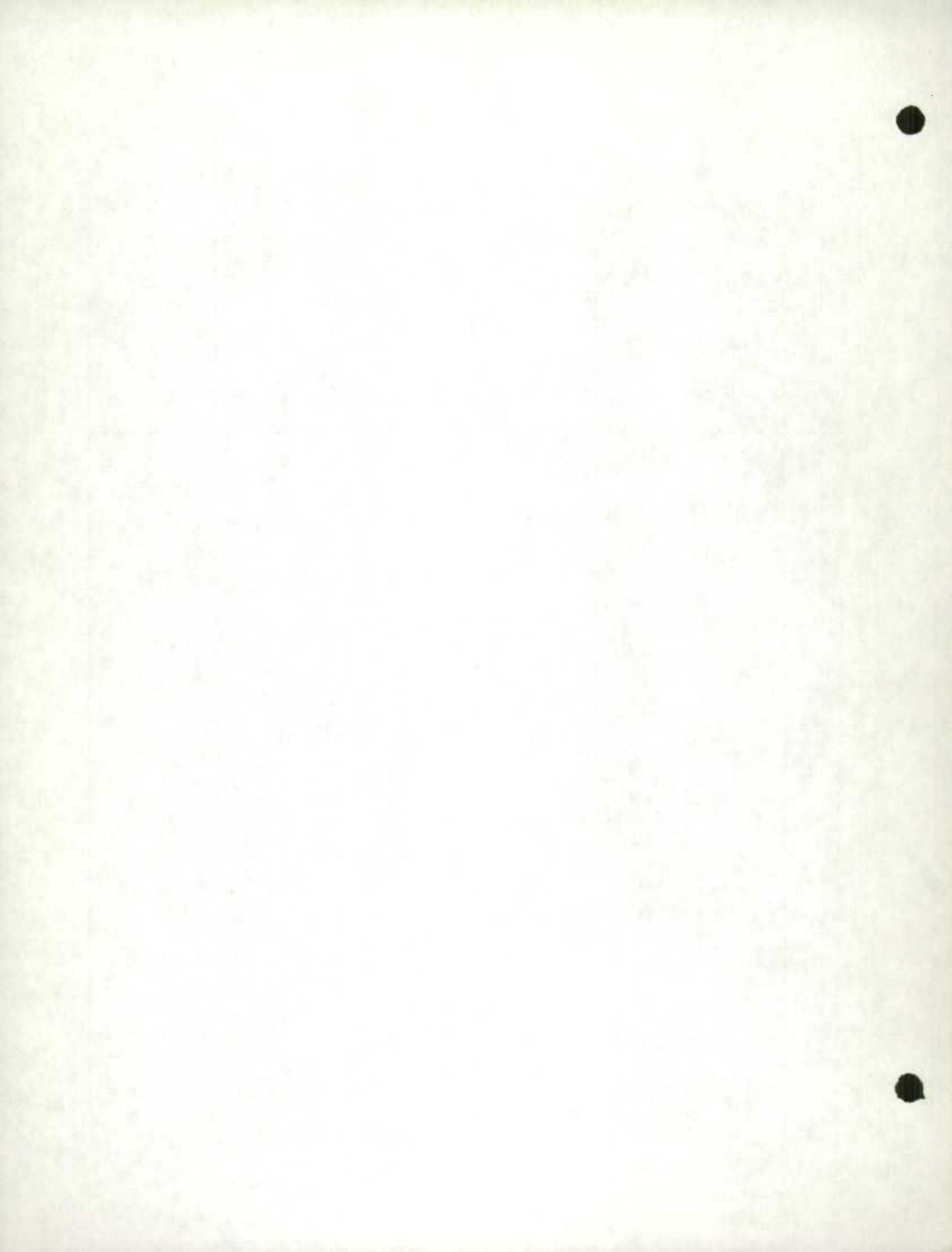


TABLE 13. Capability and Firm Power Peak Load in Northwest Territories

Capability and peak load	Actual						Forecast				
	1958	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
thousands of kilowatts											
<u>Capability:</u>											
Net generating capability:											
1. Hydro-electric .....	10	17	35	35	35	35	35	35	35	35	35
2. Steam - Conventional )		1	1	1	1	1	1	1	1	1	1
3. Nuclear )	-	-	-	-	-	-	-	-	-	-	-
4. Internal combustion )	3	13	9	10	10	13	20	26	30	30	35
5. Gas turbine )		2	1	1	1	2	-	-	-	-	-
6. Total net generating capability .....	13	33	46	47	47	51	56	62	66	66	71
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) ....	13	33	46	47	47	51	56	62	66	66	71
<u>Peak loads:</u>											
14. Firm power peak load within province .....	12	19	31	27	30	38	42	45	48	50	53
15. Indicated shortages .....	-	-	-	-	-	-	-	-	-	-	-
16. Total indicated firm power peak load within province (14 + 15) .....	12	19	31	27	30	38	42	45	48	50	53
17. Firm power peak load on province (12 + 16)	12	19	31	27	30	38	42	45	48	50	53
<u>Indicated reserve:</u>											
18. Indicated reserve (13 - 16) .....	1	14	15	20	17	13	14	17	18	16	18

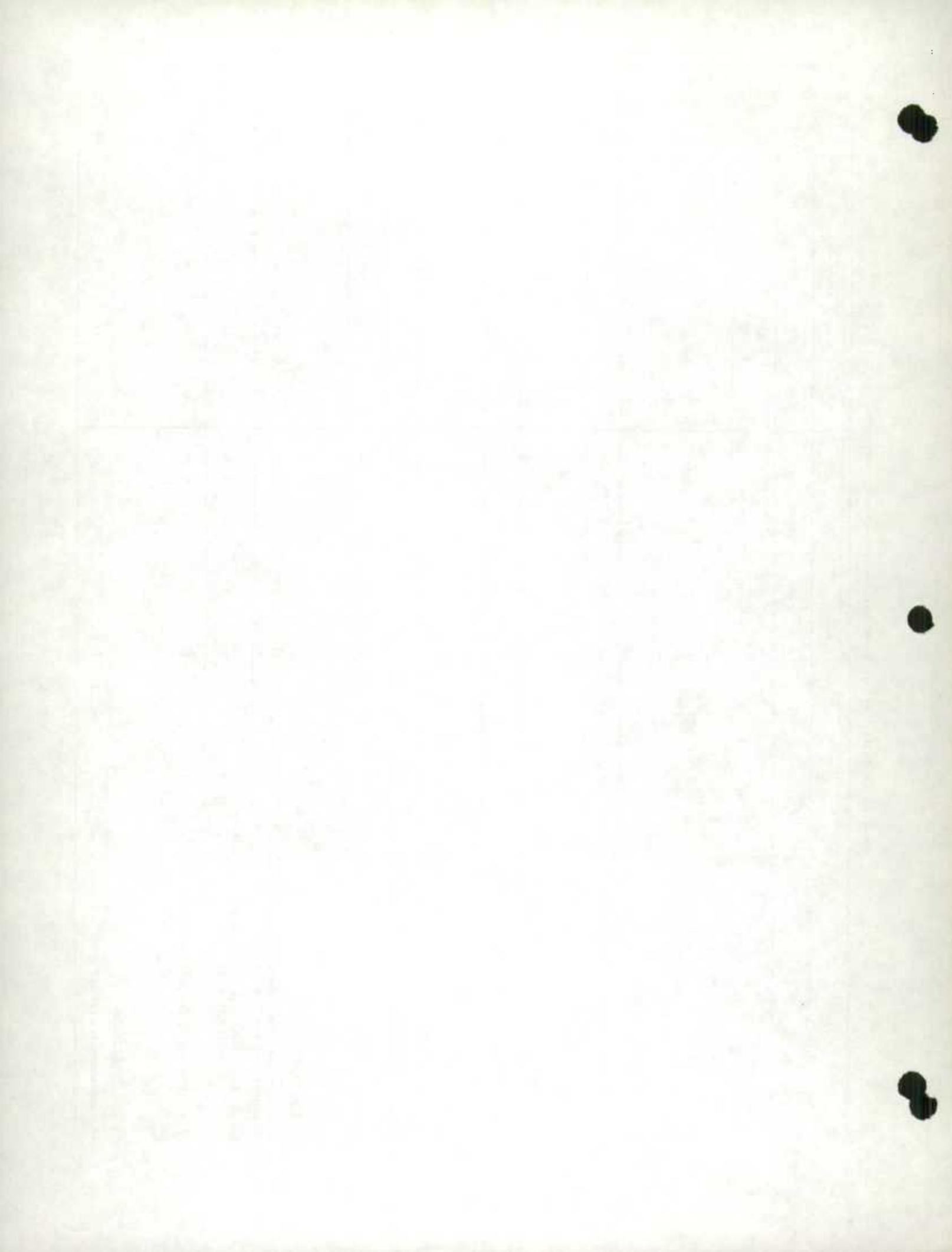


TABLE 14. Energy Requirements in Canada

Energy	Actual						Forecast				
	1958	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
millions of kilowatt-hours											
<b>Net generation by:</b>											
1. Hydro-electric .....	90,250	113,212	116,692	129,444	132,192 <sup>r</sup>	134,712	...	...	...	...	...
2. Steam - Conventional )		20,051	25,485	26,521	31,143 <sup>r</sup>	38,446	...	...	...	...	...
3. Nuclear )	141	120	161	163	859	...	...	...	...	...	...
4. Internal combustion )	6,507	574	504	632	671	650	...	...	...	...	...
5. Gas turbine )	282	313	376	615	684	...	...	...	...	...	...
6. Total net generation .....	96,757	134,260	143,114	157,134	164,764	175,351	...	...	...	...	...
<b>Receipts of energy from:</b>											
7. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...
8. United States:											
(a) Firm .....	..	6	4	133	1,363	1,417	2	2	1	1	1
(b) Secondary .....	..	2,971	3,573	2,922	2,779	2,713	...	...	...	...	...
9. Total receipts of energy .....	244	2,977	3,577	3,055	4,142	4,130	...	...	...	...	...
<b>Deliveries of energy to:</b>											
(a) Firm:											
10. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...
11. United States .....	1,264	835	633	613	634	740	832	963	995	885	887
(b) Secondary:											
12. Other provinces .....	...	...	...	...	...	...	...	...	...	...	...
13. United States .....	2,883	3,392	2,937	3,697	3,234	2,915	...	...	...	...	...
14. Total deliveries of energy .....	4,147	4,227	3,570	4,310	3,868	3,655	...	...	...	...	...
15. Total energy available (24 + 27 - 32) .....	92,854	133,010	143,121	155,879	165,038	175,826	...	...	...	...	...
16. Secondary energy delivered within province .....	5,615	3,671	4,072	4,226	2,409	1,809	...	...	...	...	...
17. Firm energy available within province (33 - 34)	87,239	129,339	139,049	151,653	162,629	174,017	189,600	202,248	216,624	231,135	246,335
18. Indicated shortage .....	-	-	-	-	-	-	-	-	-	-	-
19. Firm energy requirement within province (35 + 36) .....	87,239	129,339	139,049	151,653	162,629	174,017	189,600	202,248	216,624	231,135	246,335
20. Firm energy requirement on province (28 + 29 + 37) .....	88,503	130,174	139,682	152,266	163,263	174,757	190,432	203,211	217,619	232,020	247,222

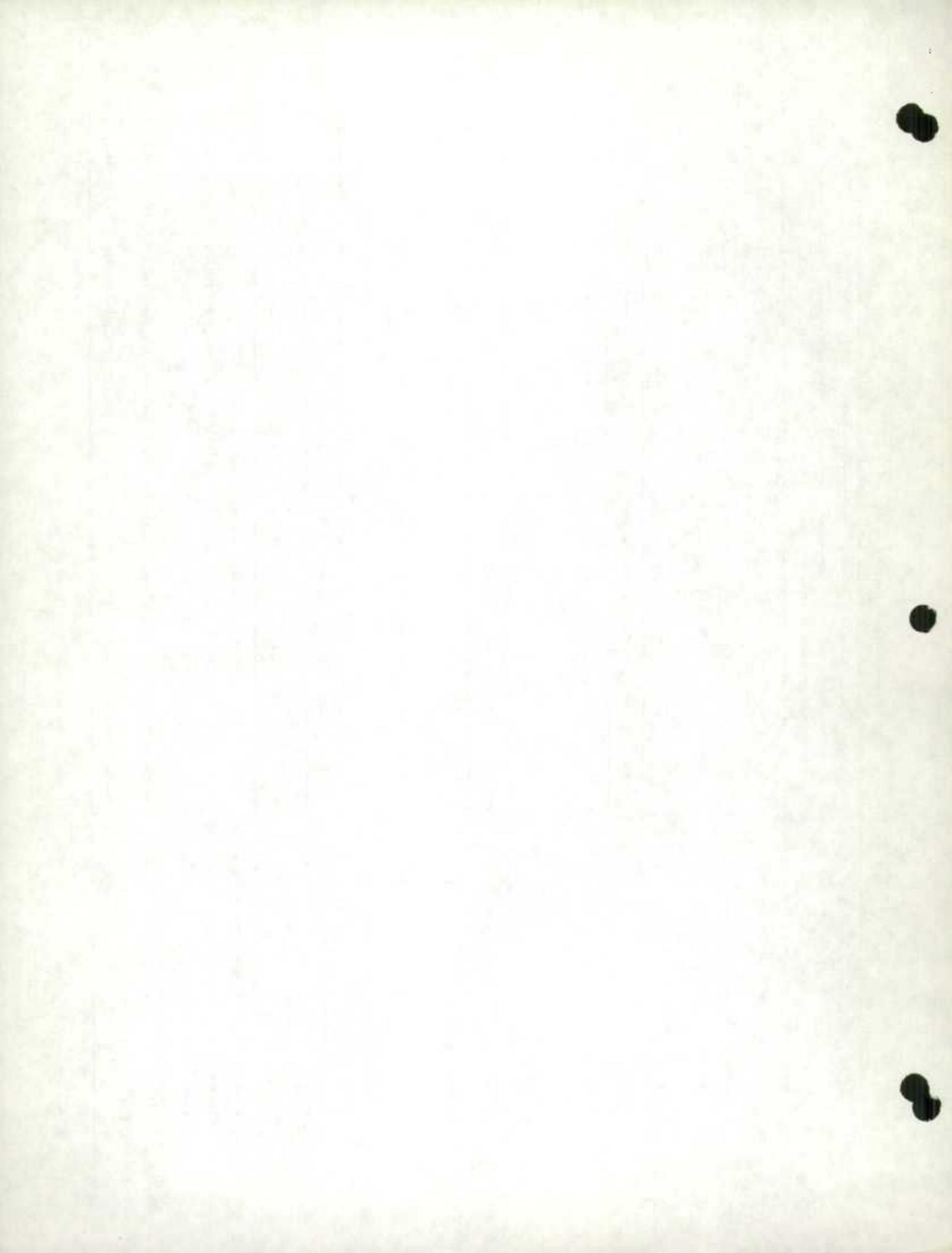


TABLE 15. Firm Energy Requirement within Provinces

Province	1958	1964	1965	1966	1967	1968	Forecast					Percentage change (compounded)		
							1969	1970	1971	1972	1973	1958 1968	1964 1968	1968 1973
millions of kilowatt-hours														
Newfoundland (including Labrador) .....	1,178	2,293	2,640	2,790	3,009	3,566	4,844	5,072	6,814	7,630	9,513	11.71	11.67	21.68
Prince Edward Island .....	63	124	136	140	161	175	190	213	240	270	303	10.76	8.99	11.64
Nova Scotia .....	1,552	2,301	2,466	2,648	2,830	3,122	3,531	3,774	4,105	4,369	4,650	7.24	7.93	8.29
New Brunswick .....	1,417	2,410	2,742	3,042	3,294	3,572	4,081	4,607	5,000	5,437	5,925	9.69	10.34	10.65
Quebec .....	32,342	47,081	49,227	53,365	56,850	59,240	63,505	67,449	70,957	74,807	78,381	6.24	5.91	5.76
Ontario .....	31,468	44,814	48,509	53,095	56,798	60,905	65,597	69,671	74,382	79,847	84,920	6.83	7.97	6.87
Manitoba .....	3,576	5,659	5,988	6,215	6,563	7,166	7,954	8,571	9,109	9,540	9,977	7.20	6.08	6.83
Saskatchewan .....	1,322	2,658	3,205	3,596	3,937	4,373	5,018	5,588	6,223	6,923	7,723	12.71	13.25	12.05
Alberta .....	2,624	4,987	5,499	6,068	6,713	7,663	8,614	9,397	10,483	11,488	12,627	11.31	11.34	10.51
British Columbia .....	11,579	16,849	18,444	20,455	22,228	23,958	25,929	27,508	28,888	30,380	31,850	7.54	10.10	5.86
Yukon .....	46	65	82	83	83	92	135	186	197	206	217	7.18	9.07	18.72
Northwest Territories .....	72	98	111	156	163	185	202	212	226	238	249	9.90	17.22	6.12
Canada .....	87,239	129,339	139,049	151,653	162,629	174,017	189,600	202,248	216,624	231,135	246,335	7.15	7.70	7.20

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