

Minister of Trade and Commerce

**DOMINION BUREAU OF STATISTICS**  
**TRANSPORTATION DIVISION**  
**OTTAWA**

Dominion Statistician, HERBERT MARSHALL

Director, Transportation Division, G.S. Wong

CENTRAL ELECTRIC STATIONS

20-4910

DECEMBER, 1948

Month	Total Production			Consumption of Primary Power		
	1946	1947	1948 <sup>x</sup>	1946	1947	1948 <sup>x</sup>
	<u>Daily Averages</u> (Thousands of Kilowatt Hours)					
January	110,606	124,229	121,102	82,266	99,724	109,593
February	113,679	128,192	120,681	84,229	102,539	109,545
March	114,100	127,643	121,244	83,540	101,443	111,829
April	116,875	124,246	124,249	84,494	100,052	110,624
May	116,638	126,371	131,386	84,524	101,747	111,448
June	113,844	125,203	125,921	83,521	100,572	111,052
July	110,414	120,996	117,972	80,705	98,329	108,240
August	110,966	117,467	118,935	82,142	98,714	109,946
September	108,862	119,650	119,858	82,544	102,460	112,103
October	114,516	124,603	121,743	87,917	106,354	114,113
November	118,891	120,458	121,144	92,571	107,579	112,824
December	118,455	120,314	119,184	92,807	109,319	110,163
	<u>INDEX NUMBERS - Seasonally adjusted</u> (Average 1935 - 1939 = 100)					
January	151.8	170.5	166.2	169.1	200.2	220.0
February	152.9	172.5	162.0	173.2	205.5	219.2
March	155.6	174.1	165.4	174.7	206.8	227.9
April	164.2	174.5	174.5	179.1	207.4	229.3
May	166.5	180.3	187.5	181.1	213.1	235.4
June	164.5	180.9	179.1	178.7	210.3	232.2
July	168.2	184.4	179.8	179.5	213.0	234.5
August	164.3	173.9	176.1	177.6	209.3	233.1
September	155.2	170.6	171.0	171.8	209.0	228.7
October	155.3	169.0	165.1	176.3	209.1	224.4
November	154.0	156.0	156.9	182.8	208.1	218.4
December	158.3	160.8	159.3	188.6	217.3	219.0

**CENTRAL ELECTRIC STATIONS**

Month of DECEMBER, 1948  
(Thousands of Kw. Hrs.)

		T o t a l		Prince Edward Island	
		1 9 4 8	1 9 4 7	1 9 4 8	1 9 4 7
A.	Production - Hydraulic	3,550,796	3,615,163	7	22
B.	Thermal	143,900	114,568	1,663	1,585
C. (A+B)	Total	3,694,696	3,729,731	1,670	1,607
D. (C - E)	Primary	3,541,508	3,495,143	1,670	1,607
E.	Secondary	153,188	234,588	-	-
F.	Receipts from other Provinces	-	-	-	-
G.	Deliveries to " "	-	-	-	-
H. (I+J)	Exports to U.S.A. - Total (1)	138,202	125,154	-	-
I.	Primary	126,471	106,244	-	-
J.	Secondary	11,731	18,910	-	-
K. (C+F-G-H)	Consumption - Total	3,556,494	3,604,577	1,670	1,607
L. (K-M)	Primary	3,415,037	3,388,899	1,670	1,607
M.	Secondary	141,457	215,678	-	-
Cumulative Totals - January - December (x)					
N.	Production - Total	44,568,849	44,986,364	17,016	15,344
O.	Primary	41,958,541	38,752,503	17,016	15,344
P.	Secondary	2,610,308	6,233,861	-	-
Q.	Receipts from other Provinces	-	-	-	-
R.	Deliveries to " "	-	-	-	-
S.	Exports to U.S.A. - Total (1)	1,658,073	2,014,502	-	-
T.	Primary	1,351,752	1,376,985	-	-
U.	Secondary	306,321	637,517	-	-
V.	Consumption - Total	42,910,776	42,971,862	17,016	15,344
W.	Primary	40,606,789	37,375,518	17,016	15,344
X.	Secondary	2,303,987	5,595,344	-	-

		Ontario		Manitoba	
A.	Production - Hydraulic	1,020,251	949,222	197,078	190,089
B.	Thermal	11,009	1,033	2	3
C. (A+B)	Total	1,031,260	950,255	197,080	190,092
D. (C-E)	Primary	998,051	914,151	151,902	139,996
E.	Secondary	33,209	36,124	45,178	50,096
F.	Receipts from other Provinces	377,188	419,512	-	-
G.	Deliveries to " "	146	123	8,996	6,777
H. (I+J)	Exports to U.S.A. - Total (1)	73,838	83,929	-	-
I.	Primary	62,556	65,019	-	-
J.	Secondary	11,282	18,910	-	-
K. (C+F-G-H)	Consumption - Total	1,334,464	1,285,715	188,084	185,315
L. (K-m)	Primary	1,312,537	1,268,501	142,906	133,219
M.	Secondary	21,927	17,214	45,178	50,096
Cumulative Totals - January - December (x)					
N.	Production - Total	11,678,680	11,540,057	2,053,041	2,018,710
O.	Primary	11,016,304	10,309,856	1,609,095	1,497,853
P.	Secondary	662,376	1,230,201	443,946	520,857
Q.	Receipts from other Provinces	4,839,482	5,059,765	-	-
R.	Deliveries to " "	1,384	1,146	95,627	19,074
S.	Exports to U.S.A. - Total (1)	1,040,736	1,385,900	-	1,809
T.	Primary	736,255	751,575	-	1,809
U.	Secondary	304,481	634,325	-	-
V.	Consumption - Total	15,476,042	15,212,778	1,957,414	1,997,827
W.	Primary	15,118,147	14,616,900	1,513,468	1,476,970
X.	Secondary	357,895	595,876	443,946	520,857

(x) Revised

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Review of Electric Power Output, 1928 - 1948

During the past 20 years the power output of Central Electric Stations increased from 15.9 billion kilowatt hours in 1928 to a peak of 45.0 billions in 1947 and eased to 44.6 billions in 1948. The recession from 17.9 billions in 1930 to 15.9 billions in 1932 was more than regained in the next two years when it rose to 21.2 billions in 1934. From then until 1943 there was a steady increase with only one exception when the output declined by 5.7 p.c. in 1938 from 1937. The output for 1939, however, overcame this hesitation and showed an increase over 1937 output of 768 million kilowatt hours. The upward curve flattened off in 1944 and declined slightly in 1945, but for 1946 and 1947 it again continued to rise. The drop in 1948 of approximately 417 million kilowatt hours, or less than one p.c., was due almost entirely to the very light summer and early autumn precipitation over southeastern Canada, i.e., Ontario, Quebec, New Brunswick and Nova Scotia, resulting in a run off of only 60 p.c. of the 25 year average. This water shortage was relieved somewhat in November and December, but the demand for primary power in this area was still close to station capacity at the end of the year. The consumption of primary power, which is computed by deducting exports and consumption of secondary power from the total output (and consequently includes the line losses), followed output quite closely up to 1933 when the market for secondary power and the station capacity permitted larger sales of secondary power. For the following 6 years this secondary power output, which is used principally in steam boilers, continued heavy but with the imperative demand for firm power for use in plants producing munitions of war, it was reduced and the primary power consumption steadily approached the total output. With the easing of war requirements late in 1944 and still more so in 1945, primary power consumption dropped from 35.7 billion kilowatt hours in 1943 to 35.1 billions in 1944 and to 30.8 billions in 1945. There was a steady rise, however, to 31.1 billions in 1946 and up to 37.4 billions in 1947 and 40.6 billions in 1948.

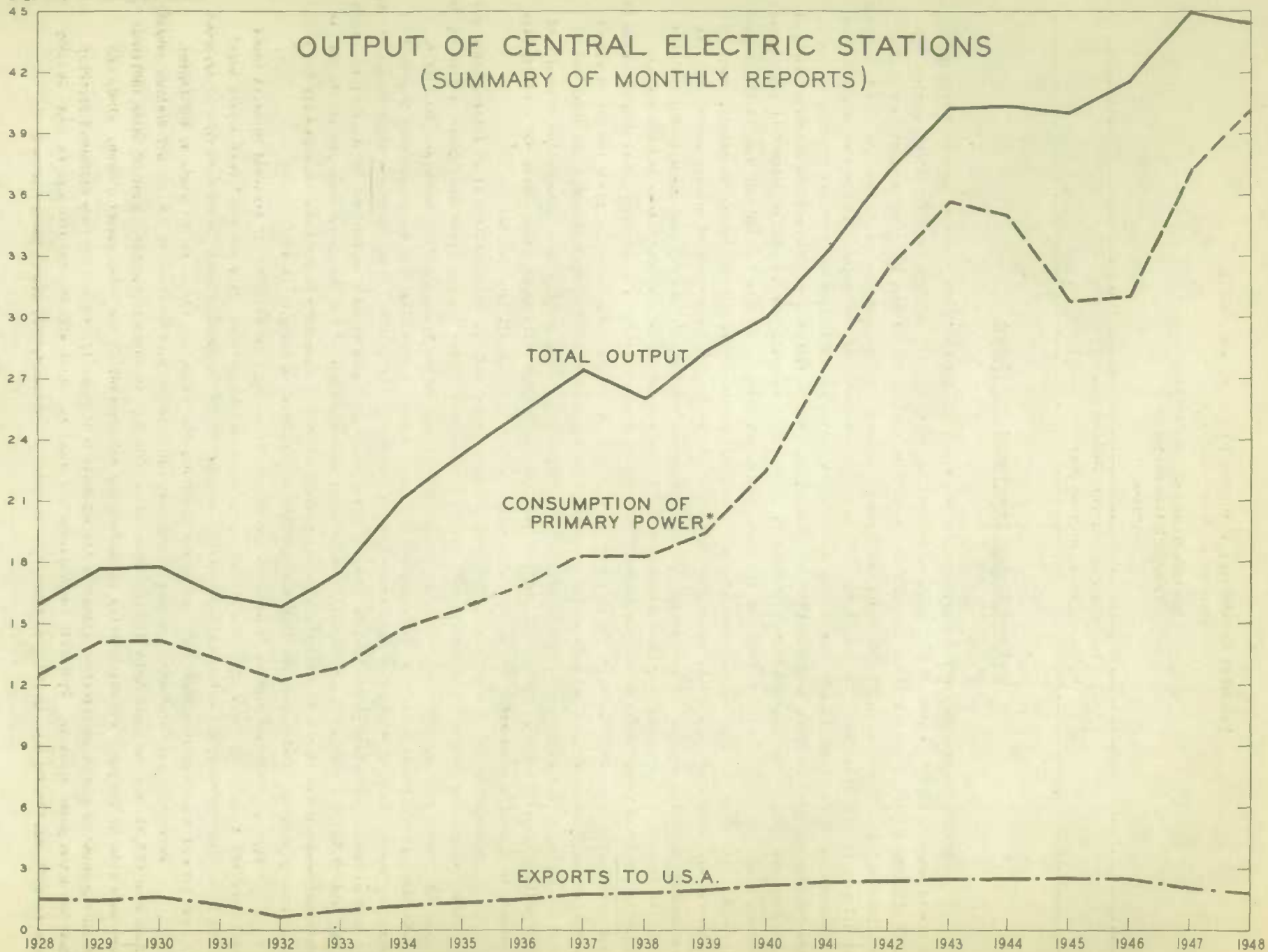
Secondary power is power delivered to the consumer as and when it is available. It is interruptible and in Canada the greater part of it is used by pulp and paper mills in electric boilers where short interruptions can be tolerated. Power stations on rivers, which are not regulated, such as the Niagara and St. Lawrence, are able to produce many more kilowatt hours with the equipment and water available when they have customers ready to accept secondary power. Thus, at night when the demand for firm power falls off, water, which otherwise would be wasted, can be used to produce secondary power. But in times of power shortages, such as were experienced in the closing months of 1948, some industries changed their operating schedules to take advantage of the low consumption periods during the night and weekends and thus used power which normally would be sold as secondary or surplus. Consequently the ratio of secondary power to total output was 13.9 p.c. in 1947 and declined to 5.9 p.c. in 1948.

During 1948 gross exports of power to the United States declined to 1,743,067 thousand kilowatt hours from 2,066,481 thousand in 1947. The drop was mainly in secondary deliveries. This was the lowest export total since 1936. One province, British Columbia, actually imported 70,752 thousand kilowatt hours more than it exported in 1948 through the interconnection with the Bonneville Power Administration system in the state of Washington.

During the year stations reporting output each month (which produce about 98 p.c. of all station output) added over 455,000 h.p. to their hydraulic equipment and 40,000 h.p. to thermal capacity. Some of these additions were made late in the year, and consequently the effect was not apparent in the total annual output. Also, the available water is always an important factor in the kilowatt hour capacity, which is a very different capacity from the horse power capacity. Hydraulic developments are under way which will add 355,000 h.p. in 1949, 664,000 h.p. in 1950 and 677,000 h.p. in 1951, to which will be added capacity in steam plants projected.



BILLIONS OF KILOWATT HOURS



\* OUTPUT LESS EXPORTS AND CONSUMPTION OF SECONDARY POWER.

# **CENTRAL ELECTRIC STATIONS**

Month of December, 1948  
(Thousands of Kw. Hrs.)

Nova Scotia		New Brunswick		Quebec		
1 9 4 8	1 9 4 7	1 9 4 8	1 9 4 7	1 9 4 8	1 9 4 7	
52,510	27,455	43,253	18,286	1,851,680	2,076,847	A.
51,100	31,454	19,685	18,844	185	103	B.
63,410	58,907	62,938	37,130	1,851,875	2,076,950	C.
63,410	58,907	60,986	37,130	1,779,257	1,828,801	D.
-	-	1,952	-	72,618	148,149	E.
-	-	689	821	206	251	F.
-	-	60	128	368,881	413,556	G.
-	-	4,631	1,301	55,185	54,998	H.
-	-	4,182	1,301	55,185	54,998	I.
-	-	449	-	-	-	J.
63,410	58,907	58,936	36,522	1,428,015	1,608,647	K.
63,410	58,907	57,433	36,522	1,355,397	1,460,498	L.
-	-	1,503	-	72,618	148,149	M.

## **Cumulative Totals - January - December (x)**

678,400	610,043	590,244	575,529	24,646,289	25,850,622	N.
678,400	610,043	583,284	568,305	23,151,780	21,377,719	O.
-	-	6,960	7,224	1,494,509	4,472,903	P.
-	-	7,624	6,902	3,103	2,646	Q.
-	-	1,719	1,500	4,751,479	5,047,593	R.
-	-	35,551	39,531	652,538	658,763	S.
-	-	33,711	36,339	652,538	658,763	T.
-	-	1,840	3,192	-	-	U.
678,400	610,043	560,598	541,400	19,245,375	20,166,912	V.
678,400	610,043	555,478	537,368	17,750,866	15,694,009	W.
-	-	5,120	4,032	1,494,509	4,472,903	X.

Saskatchewan		Alberta		British Columbia		
44,904	42,247	33,939	35,797	327,364	275,200	A.
51,012	28,498	37,711	25,848	11,533	7,200	B.
75,916	70,745	71,650	61,645	338,897	282,400	C.
75,916	70,745	71,650	61,645	338,866	282,181	D.
-	-	-	-	231	219	E.
-	24	2,981	3,514	-	-	F.
-	-	-	24	2,981	3,514	G.
-	-	-	-	4,548	- 15,074	H.
-	-	-	-	4,548	- 15,074	I.
-	-	-	-	-	-	J.
75,916	70,769	74,631	65,135	331,368	293,960	K.
75,916	70,769	74,631	65,135	331,137	293,741	L.
-	-	-	-	231	219	M.

## **Cumulative Totals - January - December**

789,480	748,947	717,501	635,764	3,398,198	2,991,547	N.
789,424	748,947	717,501	635,764	3,395,737	2,989,029	O.
56	-	-	-	2,461	2,318	P.
231	206	32,172	31,085	-	-	Q.
-	-	231	206	32,172	31,085	R.
-	-	-	-	- 70,752	- 51,501	S.
-	-	-	-	- 70,752	- 51,501	T.
-	-	-	-	-	-	U.
789,711	749,153	749,442	666,643	3,436,778	3,011,763	V.
789,655	749,153	749,442	666,643	3,434,317	3,009,445	W.
56	-	-	-	2,461	2,318	X.

### (1) Net Exports

Total gross imports from United States to B.C. Stns:	1948 Kw.hrs.	1947 Kw.hrs.
December	- 3,511,000	15,117,000
January - December	- 84,994,000	51,979,000



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CENTRAL ELECTRIC STATIONS

(Thousands of Kilowatt Hours)

PRODUCTION

Month	1 9 4 4	1 9 4 5	1 9 4 6	1 9 4 7	1 9 4 8 <sup>x</sup>
January	3,528,858	3,422,683	3,428,773	3,851,111	3,754,174
February	3,298,017	3,124,235	3,183,011	3,589,361	3,492,823
March	3,515,052	3,586,511	3,537,104	3,956,905	3,758,566
April	3,277,198	3,534,157	3,506,258	3,727,377	3,727,459
May	3,584,515	3,593,074	3,615,777	3,917,499	4,072,973
June	3,325,525	3,407,170	3,415,306	3,756,104	3,717,619
July	3,149,361	3,281,138	3,422,826	3,750,881	3,657,119
August	3,274,631	3,237,613	3,439,934	3,641,476	3,686,938
September	3,234,778	3,079,310	3,265,860	3,589,497	3,598,154
October	3,482,045	3,309,021	3,550,001	3,862,696	3,774,021
November	3,439,651	3,236,986	3,566,742	3,613,726	3,634,307
December	3,356,102	3,288,710	3,672,116	3,729,731	3,694,696
Total 12 months	40,465,733	40,100,608	41,603,708	44,986,564	44,568,849

EXPORTS TO THE UNITED STATES (Gross)

January	209,289	165,136	198,522	168,163	136,292
February	181,767	152,659	178,661	151,786	122,526
March	198,574	215,791	219,275	183,125	140,019
April	218,542	225,554	236,170	186,580	166,052
May	242,128	248,421	237,035	188,648	185,842
June	228,676	253,872	229,685	192,227	169,890
July	236,515	263,776	251,522	217,171	157,395
August	238,680	229,746	232,402	198,014	144,836
September	218,885	215,831	199,879	155,707	129,483
October	223,253	227,579	184,891	147,164	126,217
November	188,318	224,994	144,991	137,630	123,002
December	200,684	223,276	168,598	140,271	141,513
Total 12 months	2,585,311	2,646,435	2,481,631	2,066,481	1,743,067

CONSUMPTION OF PRIMARY POWER  
(Production less Exports and Secondary Power)

3,484,571

January	3,208,532	2,713,194	2,550,235	3,091,417	3,397,580
February	2,990,155	2,465,196	2,358,410	2,871,102	3,171,019
March	3,172,170	2,752,300	2,589,755	3,144,747	3,466,686
April	2,909,770	2,634,367	2,534,807	3,001,561	3,318,715
May	3,022,813	2,721,186	2,620,255	3,154,143	3,454,902
June	2,833,081	2,592,479	2,505,626	3,017,163	3,330,957
July	2,786,025	2,525,588	2,501,860	3,048,202	3,355,431
August	2,810,162	2,526,026	2,546,416	3,060,134	3,408,334
September	2,795,646	2,413,075	2,476,328	3,073,808	3,363,082
October	2,942,384	2,538,520	2,725,412	3,296,972	3,537,516
November	2,860,119	2,444,050	2,777,126	3,227,370	3,387,730
December	2,723,478	2,497,558	2,877,011	3,388,899	3,415,037
Total 12 months	35,054,335	30,823,539	31,063,240	37,375,518	40,606,787