

Heretofore, a fair proportion of the thermal generating capacity was operated at extremely low rates of load factor, particularly in small stations serving isolated communities and as standby to hydro facilities. However, progressive increase in load and need for firmer output is making it economical to install larger and more efficient thermal units, essentially in the larger stations serving widespread system demands. Here, the capacity is provided mainly by steam-motivated turbo-alternators, the largest of which are capable of generating a kilowatt-hour with as little as two-thirds of a pound of coal. From 1954 to 1959, 16 gas-turbine-driven generating sets with capacities of from 8,400 to 30,000 kw. were installed in Western Canada. These sets have the advantage of low first cost and extreme flexibility, and are well suited for peaking operations in an integrated system.

Section 3.—Electric Power Statistics

Electric power statistics presented in this Section are based on reports of all electrical utilities and all industrial establishments that generate energy regardless of whether or not any is sold, and therefore show the total production and distribution of electric energy in Canada. Utilities are defined as companies, commissions, municipalities or individuals whose primary function is to sell most of the electric energy which they have either generated or purchased. Industrial establishments are defined as companies or individuals that generate electricity mainly for use in their own plants.

The current series of electric power statistics dates back only to 1956. Earlier reports, entitled "Central Electric Stations", were concerned solely with the electrical utility industry and hence excluded statistics relating to power produced by industrial establishments for their own use, although power sold by such establishments was included.

The figures of total water and thermal power generated for the years 1943-55 shown in Table 7 are compiled on the old basis, figures for 1956 are shown on both bases for comparative purposes, and those for later years are on the new basis.

7.—Electric Energy Generated, by Type of Station 1943-59, and by Province 1958 and 1959

Year and Province or Territory	Generated by—		Total '000 kwh.	Year and Province or Territory	Generated by—		Total '000 kwh.
	Water Power	Thermal Power			Water Power	Thermal Power	
	'000 kwh.	'000 kwh.			'000 kwh.	'000 kwh.	
1943.....	39,660,312	819,281	40,479,593	1952.....	57,023,530	2,385,668	59,409,198
1944.....	39,553,352	1,045,427	40,598,779	1953.....	58,926,462	3,934,465	62,860,927
1945.....	39,131,020	999,034	40,130,054	1954.....	62,572,316	3,364,124	65,936,440
1946.....	40,692,395	1,044,592	41,736,987	1955.....	69,478,003	3,432,589	72,910,592
1947.....	42,273,167	1,151,632	43,424,799	1956.....	73,524,583	4,479,770	78,004,353
1948.....	41,070,095	1,319,586	42,389,681	1956 ¹	81,839,968	6,543,333	88,383,301
1949.....	42,779,199	1,639,374	44,418,573	1957 ¹	83,373,220	7,668,860	91,042,080
1950.....	46,624,218	1,869,500	48,493,718	1958 ¹	90,509,200	6,975,089 ¹	97,484,289 ¹
1951.....	52,955,002	1,896,842	54,851,844	1959 ¹	97,039,830	7,573,734	104,613,564
1958¹				1959¹			
Nfld.....	1,340,843	70,329	1,411,172	Nfld.....	1,370,826	77,812	1,448,638
P.E.I.....	537	62,497	63,034	P.E.I.....	340	70,802	71,142
N.S.....	645,600	917,142	1,562,742	N.S.....	679,450	970,592	1,650,042
N.B.....	1,023,020	589,662	1,612,682	N.B.....	1,115,835	697,400	1,813,235
Que.....	43,418,062	217,506	43,635,568	Que.....	44,621,143	232,783	44,853,926
Ont.....	28,012,573	1,238,807	29,251,380	Ont.....	32,386,820	991,331	33,378,151
Man.....	3,113,166	139,584	3,252,750	Man.....	3,580,427	62,816	3,643,243
Sask.....	568,480	1,347,716	1,916,196	Sask.....	587,366	1,512,312	2,099,678
Alta.....	990,457	1,737,298	2,727,755	Alta.....	842,259	2,255,207	3,097,466
B.C.....	11,254,743	627,960	11,882,703	B.C.....	11,701,239	671,978	12,373,217
Yukon and N.W.T.....	141,719	26,318 ¹	168,037 ¹	Yukon and N.W.T.....	154,125	30,701	184,826
Canada, 1958..	90,509,200	6,975,089¹	97,484,289¹	Canada, 1959..	97,039,830	7,573,734	104,613,564

¹ New series, see immediately preceding text.