

There are some interesting factors affecting the relative per capita consumptions of electricity from central electric stations in Canada and the United States. An abundant supply of low-priced coal in the industrial area of the United States, and no coal but an excellent supply of water power in the central provinces of Canada, tend to favour the generation of power in central stations in Canada more than in the United States. Again, the pulp and paper industry is proportionately a smaller industry in the United States than in Canada. While the average consumption for domestic use is twice as high in Canada as in the United States, the total consumption for domestic or residential use is about 8 p.c. of the total output of central electric stations for Canada and 15 p.c. for the United States.

4.—Summary Statistics of Central Electric Stations, calendar years 1917-34.

Year.	Number of Stations. ¹	Capital Invested.	Revenue from Sale of Power. ²	Total Horse Power. ³	Kilowatt Hours Generated.	Cus-tomers.	Persons Em-ployed.	Salaries and Wages.
		\$	\$	h.p.	(000)	No.	No.	\$
1917.....	666	356,004,168	—	1,844,571	—	—	8,847	7,777,715
1918.....	795	401,942,402	43,908,085	1,841,114	—	—	9,696	10,354,242
1919.....	805	416,512,010	47,933,490	1,907,135	5,497,204	—	9,656	11,487,132
1920.....	506	448,273,642	53,436,082	1,897,024	5,894,867	894,158	10,693	14,626,709
1921.....	510	484,669,451	58,271,622	1,977,857	5,614,132	973,212	10,714	15,234,678
1922.....	522	568,068,752	62,173,179	2,258,398	6,740,750	1,053,545	10,684	14,495,250
1923.....	532	581,780,611	67,496,893	2,423,845	8,099,192	1,112,547	11,094	14,784,038
1924.....	532	628,565,093	74,616,863	2,849,450	9,315,277	1,200,950	12,956	17,946,584
1925.....	563	726,721,087	79,341,584	3,569,527	10,110,459	1,279,731	13,263	18,755,907
1926.....	595	756,220,066	88,933,733	3,769,323	12,093,445	1,337,562	13,406	19,943,000
1927.....	629	866,825,285	104,033,297	4,173,349	14,549,099	1,381,966	14,708	22,946,315
1928.....	601	956,919,603	112,326,819	4,627,667	16,336,518	1,464,005	15,855	24,946,820
1929.....	587	1,055,731,532	122,883,446	4,925,555	17,962,515	1,555,883	16,164	24,831,821
1930.....	587	1,138,200,016	126,038,145	5,401,108	18,093,802	1,607,766	17,857	27,287,443
1931.....	559	1,229,988,951	122,310,730	5,706,757	16,330,867	1,632,792	17,014	26,306,956
1932.....	572	1,335,886,987	121,212,679	6,343,654	16,052,057	1,657,454	15,395	23,261,166
1933.....	575	1,386,532,055	117,532,081	6,616,006	17,338,990	1,666,882	14,717	21,431,877
1934.....	573	1,430,852,166	124,463,613	6,854,161	21,197,124	1,660,079	14,974	21,829,491

¹ Excluding non-generating stations in 1920 and subsequent years. ² Revised to exclude duplications.

³ Not including auxiliary plant equipment which is included in installation shown in central electric stations in Table 7 of the Manufactures Chapter, pp. 424 and 425.

Equipment of Central Electric Stations.—The main-plant primary power equipment of all central electric stations aggregated 6,854,161 h.p. in 1934. This included water wheels and turbines, steam reciprocating engines and turbines, and internal combustion engines. The hydraulic power machines greatly predominated over the other prime movers, providing 96 p.c. of the total capacity, with steam turbines, steam reciprocating engines and internal combustion engines making up the remaining 4 p.c. Not included in the above were steam engines and internal combustion engines with a capacity of 207,431 h.p., or 2.9 p.c. of the total power capacity, installed as auxiliary or standby equipment.

Central electric stations that have no water power, but are operated by steam and internal combustion engines, are on the whole small stations. Of the 59 main-plant steam reciprocating engines in central electric stations in 1934, only 8 in number were over 500 h.p. The steam turbines averaged approximately 4,400 h.p. with 16 units averaging 10,000 h.p., but there were only 58 steam turbines in the industry and these were confined to 22 stations, whereas the 805 water wheels and turbines averaged 8,150 h.p., including 3 at 65,000 h.p. and 2 at 66,000 h.p. each.

The majority of the fuel-using stations are primarily for lighting purposes, using the cheapest fuel procurable, generally local coal. In the Prairie Provinces bituminous and lignite coals are used for the steam engines, and gasolene, oil distillates and producer gas for the internal combustion engines.