Equipment of Central Electric Stations.—The primary power equipment of all central electric stations aggregated 4,173,349 h.p. in 1927. 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 95.2 p.c. of the total capacity, with steam turbines, steam reciprocating engines and internal combustion engines making up the remaining 4·8 p.c. Not included in the above were steam engines and internal combustion engines with a capacity of 145,047 h.p., or 4.5 p.c. of the total power capacity, installed as auxiliary or standby equipment in hydro-electric stations.

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 134 steam reciprocating engines installed in central electric stations in 1927, only 15 in number, or about 11 p.c., were over 500 h.p. The steam turbines averaged over 2,000 h.p., with 6 units averaging 7,000 h.p., but there were only 61 steam turbines in the industry and these were confined to 27 stations, whereas the 759 water wheels and turbines averaged 5,237 h.p.

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

Of the 399 internal combustion engines in central electric stations in 1927 244, or 61 p.c., were in Saskatchewan, 87 in Alberta and 24 in Manitoba.

During 1927 the fuel stations produced 202,525,000 kilowatt hours at a cost for fuel of $1,955,272, an average of 0.97 ct. per kilowatt hour. This production was, however, less than 2 p.c. of the total output, hydro-electric stations producing over 98 p.c. The auxiliary equipment in hydraulic stations consumed fuel valued at $342,416 and produced 20,693,879 k.w. hours.

5.—Equipment of Central Electric Stations, 1927.

NOTE.—K.V.A. means Kilo-volt-amperes.

Provinces.	Number of Power Plants.	Water Wheels and Turbines.			Steam Engines, Steam Turbines and Internal Combustion Engines.			Dynamos.		
		No.	Capacity.	Average Capacity.	No	Capacity.	Average Capacity.	No.	Capacity.	Average Capacity.
			h.p.	h.p.		h.p.	h.p.		K.V.A.	K.V.A.
Prince Edward Island	10	8	299	37	7	3,053	436	14	2,922	209
Nova Scotia	44	39	32,540	834	41	24,360	594	81	46,146	570
New Brunswick	21	14	25,160	1,797	27	11,018	408	41	28,632	698
Quebec	109	264	1,758,755	6,624	11	4,020	365	267	1,466,865	5,491
Ontario	128	329	1,547,218	4,703	11	1,056	96	327	1,241,553	3,797
Manitoba	29	30	254,925	8,498	44	8,291	188	73	207,491	2,842
Saskatchewan	158	-	–	–	279	74,022	265	270	61,672	228
Alberta	81	16	33,520	2,095	143	68,679	480	154	82,685	537
British Columbia	47	57	322,695	5,660	30	3,778	126	88	241,221	2,741
Yukon	2	2	10,000	5,000	1	60	60	4	6,030	1,507
Total	**629**	**759**	**3,975,012**	**5,237**	**594**	**198,337**	**334**	**1,318**	**3,385,227**	**2,568**
Auxiliary Plant Equipment	-				91	145,047	1,594	80	121,863	1,523

Provincial Distribution of Electrical Energy.—The distribution by provinces of the electrical energy generated in central electric stations throughout Canada is shown in Table 6 for the calendar years 1924, 1925, 1926 and 1927. In the latter year nearly 85 p.c. of the total generated electrical energy was produced in the leading industrial provinces of Ontario and Quebec. From Table 7 it is seen