## 2.—Central Electric Stations.

The development of the central electric power industry was greatly stimulated during the war by the urgent need of power for the manufacture of war munitions. In Table 5 will be found statistics of the number of central electric stations, capital invested, revenue from sale of power, total horse power, kilowatt hours generated and number of subscribers for the nine years ended 1925, together with the number of persons employed and the amount expended for salaries and wages.

**5.—Summary Statistics of Central Electric Stations, calendar years 1917-1925.**

| Years. | Number of stations.[1] | Capital invested. | Revenue from sale of power. | Total horse power. | Kilowatt hours generated. | Subscribers. | Persons employed | Salaries and wages. |
|---|---|---|---|---|---|---|---|---|
| | | $ | $ | | (000) | | | $ |
| 1917 | 666 | 356,004,168 | 44,536,848 | 1,844,571 | - | - | 8,847 | 7,777,715 |
| 1918 | 795 | 401,942,402 | 53,549,133 | 1,841,114 | - | - | 9,696 | 10,354,242 |
| 1919 | 805 | 416,512,010 | 57,853,392 | 1,907,135 | 5,497,204 | - | 9,656 | 11,487,132 |
| 1920 | 506 | 448,273,642 | 65,705,060 | 1,897,024 | 5,894,867 | 894,158 | 10,693 | 14,626,709 |
| 1921 | 510 | 484,669,451 | 73,376,580 | 1,977,857 | 5,614,132 | 973,212 | 10,714 | 15,234,678 |
| 1922 | 522 | 568,068,752 | 82,328,866 | 2,258,398 | 6,740,750 | 1,053,545 | 10,684 | 14,495,250 |
| 1923 | 532 | 581,780,611 | 91,141,296 | 2,423,845 | 8,099,192 | 1,112,547 | 11,094 | 14,784,038 |
| 1924 | 532 | 628,565,093 | 95,169,768 | 2,849,450 | 9,315,277 | 1,200,950 | 12,956 | 17,946,584 |
| 1925 | 563 | 726,721,087 | 102,587,882 | 3,569,527 | 10,110,459 | 1,279,731 | 13,263 | 18,755,907 |

[1] Excluding non-generating stations in 1920 and subsequent years.

**Equipment of Central Electric Stations.**—The primary power equipment of all central electric stations aggregated 3,569,527 h.p. in 1925. 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 over 95 p.c. of the total capacity, with steam turbines, steam reciprocating engines and internal combustion engines making up the remaining 5 p.c. Not included in the above were steam engines and internal combustion engines, with a capacity of 173,170 h.p. or 5·1 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 147 steam reciprocating engines installed in central electric stations in 1925, only 16 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 over 6,000 h.p., but there were only 43 steam turbines in the industry and these were confined to 20 stations, whereas the 710 water wheels and turbines averaged over 4,500 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 306 internal combustion engines in central electric stations in 1925, 191, or 62 p.c., were in Saskatchewan, 52 in Alberta, and 17 in Manitoba.

During 1925 the fuel stations produced 160,979,000 kilowatt hours at a cost for fuel of $1,736,961, or at an average of 1·08 c. 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 $529,275, but no record is available of its output of current.