

## Section 4.—Power Generated from Fuel

**Industrial Use of Fuel.**—Fuel is used quite generally throughout the industrial field for the generation of power by means of steam- and internal-combustion engines. It is also used for the heating of plants, and for providing the heat necessary to some manufacturing processes. The most important industries where heat is applied to materials to facilitate or accomplish a desired transformation are: foundries and machine shops; brick, tile, lime and cement works; petroleum refineries; the glass industry; distilleries; food preparation plants; rubber goods industry; etc. The figures of Table 22 cover fuel used for such heating purposes, as well as for power; they do not include fuels that constitute the raw materials to be transformed, such as coal in the coke and gas industries and crude petroleum in the refining industry. Electricity used in metallurgical processes, such as in the electrolytic refining of non-ferrous metals, is also excluded.

The value of fuel consumed in the manufacturing and mining industries in 1942 showed an increase of 65.9 p.c. over 1940. Of the 1942 fuel account, the requirements of Ontario cost 47.1 p.c. of the total, of Quebec 30.4 p.c., of British Columbia 7.1 p.c. and of Nova Scotia 5.7 p.c.

The iron and its products group used 21.9 p.c. of the fuel consumed by manufacturing industries, wood and paper products 21.0 p.c., non-metallic mineral products 16.6 p.c., non-ferrous metal products 14.4 p.c. and vegetable products 9.6 p.c.

**Gas.**—In southwestern Ontario gas comes from natural gas wells, from light end gases sold by a Sarnia company which draws from a refinery in that city, and from the coke plants of the steel city, Hamilton. With the advent of greatly increased industrial activity in the Niagara Peninsula and the southern half of southwestern Ontario, the normal Ontario consumption of about 10,000,000,000 cu. ft. of natural gas per year rose to nearly 13,000,000,000 in 1940. At that time some natural gas fields completely played out, and others showed signs of exhaustion. At this peak capacity, insufficient gas was available to continue supplying industrial requirements and at the same time provide enough for household use.

When a crisis appeared imminent in 1942, the Power Control of the Department of Munitions and Supply arranged for the installation of new manufacturing facilities. These new facilities included some propane plants and a new coke oven and gas plant at Hamilton. Thirty-six ovens were completed by the spring of 1943, but even this added capacity was not enough and 18 more ovens were installed. With the completion of the 18 additional ovens in December, 1943, the situation eased somewhat.

As a result of these various measures to expand production, the annual output of gas in southwestern Ontario rose by about 4,000,000,000 cubic feet.