

Central Heating and Power Plant, University of Toronto

By L. M. Askley, M. Can. Soc. C.E.*

The operation of central heating plants for the supply and distribution of heat over comparatively large areas has been successfully accomplished in certain instances by progressive municipalities. The private installation of such systems, however, is somewhat infrequent, due probably to absence of opportunity. Such an enterprise as that featured in the present article possesses exceptional interest not only because of magnitude and distances involved, but because of the consistent results which are justifying the wisdom of the undertaking.

THE buildings which comprise the University of Toronto are situated in extensive grounds, on west side of Queen's Park, in the city of Toronto. Bounded on the north by Bloor street, the west by St. George street, and the south by College street, the 21 buildings, as shown in plan, Fig. 5, present a problem of considerable magnitude and interest as regards the provision of a suitable heating system.

Previous to the year 1911-12, the widely scattered buildings were heated by several separate plants, the most of which were old and inefficient. Electric current for light and power was partly generated in these plants and partly purchased from supply companies. Con-

ditions, therefore, were such that the possible economies which could be effected through the installation of a central heating and power plant warranted such a procedure.

and the gradual reduction of costs ... the plant was put in operation is submitted as amply justifying the centralization arrangement as well as that of the equipment installed.

Power House

The location selected for the central plant was to the east of the Medical Building (4), and adjacent to the western end of the Ontario Legislative Building in Queen's Park. The power house building is for the most part underground, its flat roof being practically level with the pavement in the adjacent driveway in the park, from which the ground slopes down so that the west wall of the building is about eight or ten feet above ground level.

The main object in providing such a location was to facilitate the installa-



FIG. 2. INTERIOR OF POWER HOUSE ENGINE ROOM SHOWING CURTIS TURBO-GENERATOR IN FOREGROUND WITH ALLEN HIGH-SPEED UNIT IN REAR.

*Assistant Professor of Mechanical Engineering, University of Toronto.