

buildings average around 40 cents. Since Gulf Canada Square has two million square feet, that adds up to an annual saving of some \$600,000.

Its heating system is not solar—indeed, its outer skin blocks out most of the sunshine. It has neither furnaces nor conventional air conditioning.

The system is based on the fact that any building with a million or more square feet of space generates enough waste heat to supply its own energy needs. The heat comes from the body heat of its occupants, from light bulbs and copiers, typewriters and other electrical equipment.

In winter most large buildings have to cool interior space while heating their outer edges. At Gulf Canada Square (as at the pioneer Hydro Place complex in Toronto) heat generated in the interior is circulated throughout.

Insulation is very efficient. Patented silver-

treated, double-glass curtained walls reflect 85 per cent of solar heat with little colour distortion of natural light.

Air is distributed behind the outer walls. The buildings have a low-energy, high-quality, coffered lighting system. A fully integrated ceiling recycles the heat from the building through heat pumps to either cool or heat water in four 250,000 gallon storage tanks in the basement.

An operator at the central computer controls the system, and sensors monitor temperatures and adjust them automatically every twenty minutes.

In the Calgary system some 5,000 pounds of waste collected in the buildings are burned each day, providing enough additional energy to supply all the hot water needed in the buildings and to provide 33 per cent of the energy required to cool the buildings in the summer.



*Inside Gulf Canada Square*