

suburb of Montreal, will install 8,820 square feet of solar collectors to heat 18,000 gallons of water each day. The water is used in colour photo processing, and heating it accounts for 55 to 60

per cent of Etco's energy use. In all, one hundred or more solar projects, public and private, are underway in Canada.

Geothermal

Below the earth's surface—at depths ranging from 750 to 2000 metres—are many pools of boiling water.

The University of Regina, in Saskatchewan, is drilling a test well on its campus. If it proves practical, steam from the ground will provide heat for a new sports complex.

Reykjavik, Iceland, derives most of its heating power from hot springs, and the use of geothermal power is increasing rapidly. A Canadian oil-well-drilling team from the Westburne International Drilling Co. has been developing the Mahiao multi-well field on Leyte Island, 300 miles southeast of Manila, in the Philippines.

Geothermal drilling techniques are similar to

those used in oil fields, but the problems are different. When the well is sounded, it sends steam mixed with boiling water high into the air. The water is separated from the steam and re-injected into the ground. Each well has a cooling tower that is used to bring down the temperature of the drilling mud and prevent flash blow-outs.

A geothermal well is capable of producing 5 to 10 megawatts of electricity. They are usually found in young geological settings, and the Philippines, with more than 50 sites, is the biggest potential producer in the world. Canada expects to find productive wells in British Columbia and the Prairies.

The Mighty Atom

A discussion of nuclear energy—its uses, development, wastes, dangers and problems—brings reactions all its own. It is difficult to say anything about the subject without outraging someone, but we'll try.

There are two basic ways to convert atoms to energy—fission and fusion. Fission is what we have; there are eleven nuclear power reactors

CANDU system flow diagram.

now operating in Canada. Fission has well defined problems: the principal one is the disposal of radioactive wastes.

Fusion is what long-range scientists are working on now. Extraordinary technical problems must yet be solved, but some of the scientists directly involved believe fusion could be brought to commercial reality by the year 2025.

