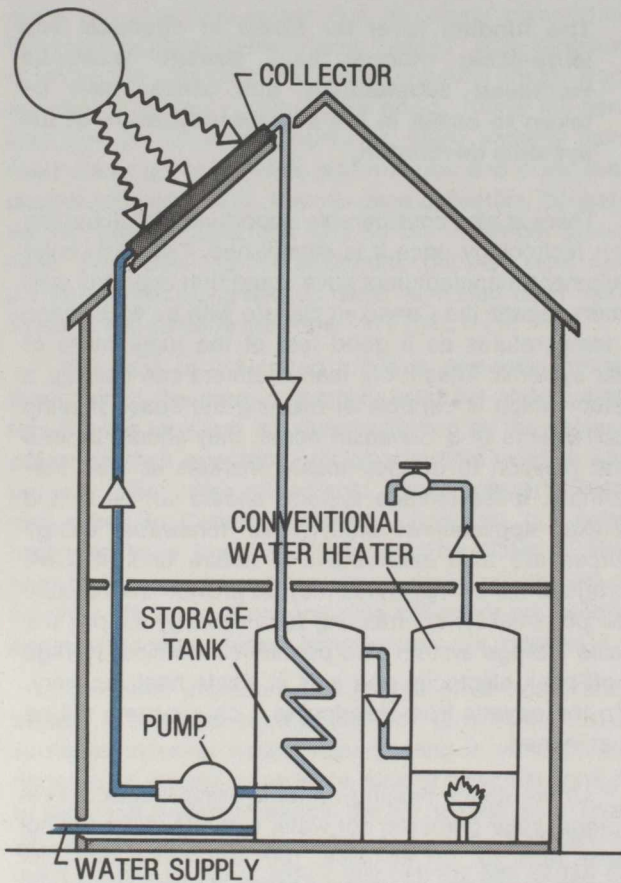


bility standards for active systems. However, a careful balance is required in which standards must be developed to instill consumer confidence in solar equipment but not to the extent that those standards stifle improvements in design. The National Research Council is already working with the solar industry on the establishment of standards for solar systems and the Committee believes that this effort should proceed as quickly as possible.

Figure 6-30: A DOMESTIC SOLAR WATER HEATING SYSTEM



A number of witnesses suggested that the solar market in Canada will not develop until financial incentives are offered to consumers, to offset the economic barriers already noted. To date, incentives have been aimed primarily at establishing solar equipment manufacturers so that reliable, tested equipment will be available when the market develops. The best known of these programs are PASEM and PUSH.

PASEM (Program of Assistance to Solar Equipment Manufacturers) was set up to encourage the early estab-

lishment of a viable Canadian solar industry through a series of cost-sharing agreements. A national competition was held among solar equipment manufacturers, and ten companies were chosen to participate in shared-cost contracts with the Federal Government to produce solar heating systems and components and to establish production and marketing capabilities. A total investment of \$3.9 million has been made, of which the Federal Government's share has been \$3.6 million.

The other aspect of fostering the growth of a solar industry is market development and, therefore, the Federal Government set up the PUSH program (Purchase and Use of Solar Heating). In this program the Government itself became the initial market for solar heating equipment and is slated to buy \$125 million worth of hardware by 1984. The program experienced difficulties in the federal bureaucracy which led to delays in orders being placed.

Despite the delays, however, projects worth over \$10 million had been proposed, designed or were under construction in 1980 and more have been approved for 1981. There are installations in every province, on Post Offices, federal administrative buildings, conference centres, schools, airport buildings, correctional centres and recreational complexes. Also under the auspices of PUSH, the Department of Public Works (which administers both PASEM and PUSH) has chosen nine buildings to be fitted with complete solar systems by firms which were awarded contracts under PASEM. PUSH funds have been approved for up to \$100,000 per project.

In another effort to demonstrate the use of solar energy, the installation of solar systems for hot water heating has been approved for 75 federal buildings. All of these systems are to be complete, ready-to-install packages, which are more attractive to the general public than custom-built systems (which are viewed as "experimental" rather than "operational"), and it is hoped that such demonstrations will develop packages suitable and acceptable for widespread domestic use.

These programs appear to be having their desired effect, but the major criticism which has been levelled at the plan is that the Federal Government has been virtually the only customer. With no concurrent market development in the private sector, the companies which have expanded under these initiatives face the prospect of bankruptcy when the program ends in 1984. Clearly incentives to the consumer would help establish a private sector demand, but a certain amount of caution should be used in this regard. In the United States, early incentives led some consumers to buy equipment which was not well-designed or tested. This experience with equipment which came onto the market too quickly through the pull of increased demand has not been good for the solar industry's reputation.