

guaranteed by CMHC in return for an insurance fee. In 1977, loans were approved for \$18.1 million, relating to 2,474 loans.

Insulation programs. During 1977, under federal government direction, CMHC established two new programs for energy conservation in residential dwellings. The home insulation program was instituted in February in Prince Edward Island and Nova Scotia, two provinces particularly affected by rising energy costs. In September, the Canadian Home Insulation Program (CHIP) was initiated; this program applied to older housing in all areas of Canada except Prince Edward Island and Nova Scotia, although it was not until December 1977 that Quebec and Alberta agreed to participate. CMHC administers a special fund of \$40.3 million established for CHIP. In 1977 some 109,800 applications for grants were approved and \$14.4 million advanced.

Research and development

14.2.3

Policy development work undertaken in 1977 related to issues associated with ongoing CMHC programs and also to alternative means of achieving housing objectives nationally. The existing social programs of the NHA and NIP received special attention.

The corporation's research program continued to study technological innovations in the housing field. Support was also given to investigations into land market problems, new ways of meeting housing needs in rural and northern areas, special requirements of the handicapped, and the problems of the mobile housing industry.

The professional standards and technology sector took over the work of the former development group of the corporation in 1977 in developing technological innovations for housing. This group analyzes the problems of standards relating to community development and housing design to ensure their consistent and effective application under the NHA. It also helped develop standards for solar heating equipment and plans for research and development of solar energy for space and hot water heating.

Work relating to waste disposal and treatment continued on a demonstration plan, known as the Canadian water energy loop (CANWEL), in a Toronto apartment building. This is a project funded by CMHC to determine the feasibility of converting domestic sewage into usable water, and turning solid waste to energy. Toward the end of 1977, a municipal experimental CANWEL plant at Vaudreuil, Que. was completed and began trial operations.

Demonstration projects

14.2.4

CMHC plays a major role in developing and demonstrating innovative solutions to community and housing problems. The objective of the corporation's demonstration program is to plan and have built attractive communities and reasonably priced homes in a variety of urban settings. It is intended that such accommodation will be built by the private sector, including non-profit and co-operative groups.

The projects test and evaluate various designs and plans, and examine alternative means of financing, tenure, service and other aspects of development. CMHC co-operates closely with provincial and local authorities within whose jurisdiction the projects are situated. A Maryfield demonstration community in Charlottetown, PEI is a medium-density development of affordable houses designed to conserve land and energy in contrast to the sprawl of bungalows on large lots. A Woodroffe demonstration community in Ottawa, Ont. provides a mix of housing types and preserves the traditional advantages of suburban living while increasing land use efficiency and improving access to shops and other services. LeBreton Flats, a new community in the Ottawa inner city, was designed to house families of mixed incomes in eight different pilot units, each incorporating a solar heating system for hot water and supplementary space heating. A Fournier demonstration community in Hull, Que. is designed to revitalize a neighbourhood by building some 850 new housing units, a community shopping and recreation area, and a park and open spaces on the shoreline around the development. A Revelstoke, BC demonstration community where both home-ownership and rental accommodation will be available includes such other innovations as a road system that minimizes snow clearance for the municipality and a technique for reducing heating requirements.