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National Research Council of Canada – a review of some of the year's activities

The National Research Council (NRC) is an independent national research agency established by Parliament to undertake, assist and promote scientific and engineering research in furthering Canada's development. Besides providing support to university researchers and to certain projects in industry, NRC operates ten laboratory divisions as well as the Canada Institute for Scientific and Technical Information.

The Report of the President 1976-1977 *contains a review of the research in progress at the Council. Some of the highlights follow:*

Magdalen Islands windmill

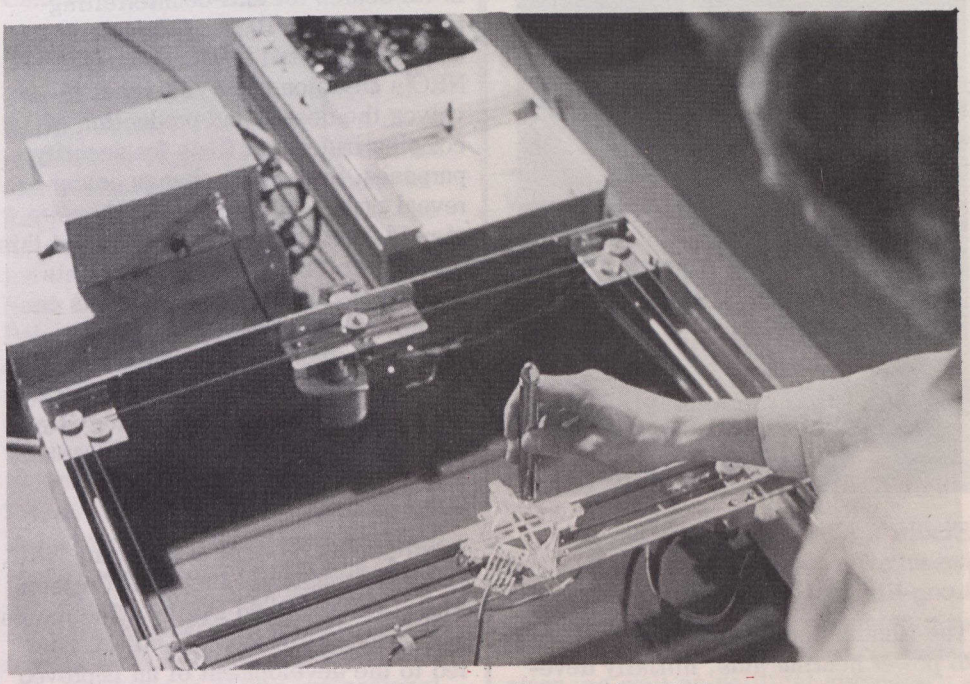
The windmills developed by NRC's Low Speed Aerodynamics Laboratory, with their looped blades mounted on a vertical axis, have attracted world-wide attention as a promising way of tapping the wind's energy. Their feasibility is now being tested in a large-scale experiment on the Magdalen Islands, where Hydro-Quebec's new vertical axis wind turbine will feed electricity into the local power grid. Rated at 200 kW, this prototype wind generator is the most powerful in existence. The NRC research team that helped in the design expect its annual energy output will save 40,000 gallons of diesel fuel, which up to now has been the only way of providing energy at this remote site.

Wind displacement device

As part of a co-operative project with the University of Toronto and Environment Canada, a laser device developed by NRC has been installed in the CN Tower, Toronto, to monitor displacements of the tower by the wind. A laser beam projected up a shaft in the tower serves as a fixed reference for a sensing device that produces a signal proportional to displacement of the tower relative to the beam. This signal, together with wind data, is stored in a computer for subsequent analysis of the tower response.

Tunnelling technology

The Division of Building Research, in co-operation with Canadian consulting



Wind displacement device now installed in Toronto's CN Tower.