

Mike Beedell

Old egg-beater style of windmill revived by NRC engineers. Tests revealed this was an efficient way of harnessing energy.

ferent types of windows, insulation and air conditioning, ventilation and lighting systems are all being tested.

A few years ago NRC engineers revived an old egg-beater style of windmill with blades which rotate around a vertical axis. Wind tunnel testing revealed that this was an efficient way of harnessing energy, and a full-scale windmill was made. Two models have been connected to an electrical system and are producing electricity. A number of companies have built commercial models along the same pattern.

Hydrogen is a very important substitute for our rapidly depleting oil and natural gas resources, but at present it is both dangerous and difficult to use. NRC chemists are studying its thermodynamic properties and developing solid compounds in which it can be stored and used more safely and easily than in the gaseous form.

The NRC is also co-ordinating a national program of technological development geared toward controlled nuclear fusion, which would guarantee an inexhaustible supply of energy.

Environment

Among its achievements relating to the surveillance of environmental contamination is the NRC's precise technique by which airborne lasers are used to detect oil spills. The laser beam sweeps the terrain under the flight path, and the instruments on the aircraft analyze the reflected beam and determine what kind of substance has been spilt. This technique holds great promise for oil

exploration, and for controlling the spread of oil spills at sea.

Some of NRC's research projects have developed to the point where they have given birth to separate organizations as important as the NRC itself. For example, Atomic Energy of Canada Limited, the creator of the CANDU reactor, was formed in 1952 as a result of an NRC-co-ordinated nuclear project during the Second World War.

Medicine

Many NRC initiatives have a direct influence on the individual. For example, patients suffering from structural abnormalities of the ear can now be examined by means of an instrument developed with the financial assistance of the NRC. It enables physicians to obtain certain information without surgery.

The NRC also assisted in the invention of small discs containing pancreatic tissue that can be implanted in diabetics to eliminate the need for daily injections of insulin.

Finally, the motors in many of the cars driven by today's drivers were checked on the assembly line by laser and optical inspection systems developed with NRC assistance.

For further information, please contact National Research Council, Public Relations and Information Services, Building M-58, Montreal Road, Ottawa, Ontario, Canada. K1A 0R6.

Environmental plan aids Indonesia

A project for environmental human resource development in Indonesia, to be co-ordinated through Dalhousie University in Halifax, Nova Scotia, will be funded by the Canadian International Development Agency (CIDA). The total cost is estimated at over \$5 million, of which CIDA will contribute \$2 516 704 and the government of Indonesia \$2 480 000.

The undertaking is unique in two respects: this is the first purely environmental program of such scope and size; and Canada is the first donor country to respond to the government of Indonesia's major program for environmental planning and management. Its objective is to expand the numbers and capabilities of Indonesians required for environmental management.

In the first place, a corps of university, government and private sector personnel

will be trained and licensed in environmental impact assessment. Over the three-year phase, links will be formed between Canadian universities and Indonesia university environmental study centres.

Dalhousie University has been instrumental in the planning and pilot phases of several Indonesian centres. A special feature of the program will be the training of environmental lawyers to administer new Indonesian environmental laws. Other activities include graduate education for Indonesians at Canadian universities, assistance to non-governmental organizations in Indonesia for environmental education, and a national meeting to bring together key Indonesian and Canadian environmental leaders.

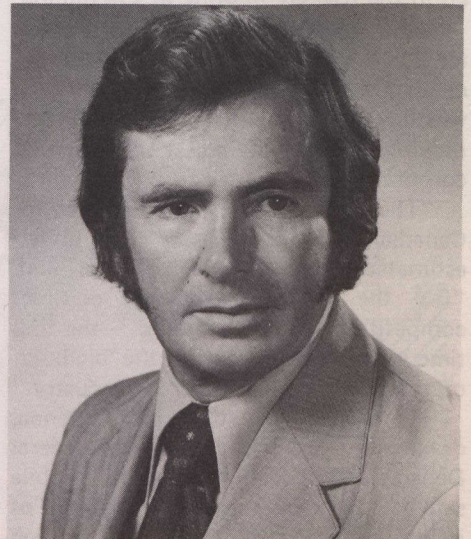
Order of Canada awards

Canada's disarmament ambassador, two former Cabinet ministers and a painter are among 68 Canadians appointed by the governor general to the Order of Canada, the country's highest distinction.

J. Alan Beesley, Canada's ambassador and permanent representative to the United Nations Committee on Disarmament in Geneva, will be invested as an officer of the order at a ceremony in April.

Gordon Bennet, a former Cabinet minister in the Prince Edward Island government, Mitchell Sharp, a former Liberal Cabinet minister, and wildlife artist Robert Bateman have also been appointed officers of the order.

Lorraine Monk of Toronto, a photographer and David Macdonald Stewart of Montreal have been elevated within the order from members to officers.



J. Alan Beesley