Canada party to international energy research agreements

Canada became a participant on May 22 in several international research projects dealing with biomass energy technology, enhanced recovery of oil, coal/oil fuel mixtures, fluidized bed combustion and energy-efficient buildings, with the signing of agreements by Canadian officials at the governing board meetings of the International Energy Agency (IEA) in Paris.

Oil technology

The first collaborative project in oil technology to be undertaken under IEA auspices will be co-ordinated by the Department of Energy, Mines and Resources. It involves the development of technology for enhanced recovery of oil from currently exploited wells, to improve the yield from the world's resources, which now averages only about 30 per cent of the oil-in-place. Research will be conducted by the Petroleum Recovery Institute of Calgary, an independent research organization receiving financial support from the province of Alberta and the Federal Government, as well as the oil industry. Canada's contribution will be in the areas of sulphur dioxide and carbon dioxide flooding, as well as polymer and surfactant processes. Other countries participating in the exchange of information will be Austria, the Federal Republic of Germany, Japan, Norway and the United States.

Coal projects

The Department of Energy, Mines and Resources will also co-ordinate Canada's co-operative international efforts in two areas of coal technology – coal/oil mixtures and fluidized bed combustion.

Coal/oil mixtures would permit reductions in the amount of oil used in firing existing utility and industrial boilers originally designed to burn only oil. Under a statement of intent to undertake research, Canada and the United States will begin studies to determine the feasibility of retrofitting one oil-burning boiler in a facility of the New Brunswick Electric Power Commission and one in New England, to demonstrate the technology.

Canada and six other countries have signified their intent to co-ordinate their plans for constructing and testing experimental plants using the atmospheric fluidbed combustion principle. Fluidized bed combustion holds the promise of improving the efficiency of coal burning while limiting the emission of sulphur and nitrogen oxides, major pollutants from the conventional burning of coal. Participating with Canada are Denmark, Italy, the Netherlands, Norway, Sweden and Switzerland.

Canada has also signed a new statement of intent to undertake research concerning control of nitrogen oxide emissions from coal combustion. Participation will be co-ordinated jointly by Environment Canada and the Department of Energy, Mines and Resources.

Wood energy

In the field of biomass energy, Canada signed an existing implementation agreement to establish a biomass-conversion technical information service. The National Research Council will be the main Canadian agency in international exchanges of technical information on ways to extract useful energy from materials such as wood and agricultural products.

Buildings research

The National Research Council is also co-ordinating Canada's participation in the design and construction of energy-efficient buildings, under the auspices of the IEA's conservation/buildings and community systems agreement. Canada will participate directly in two new projects under this agreement. It will co-operate with Belgium, Britain, Switzerland and the United States in the monitoring of a fully instrumented commercial building, located in Britain; the data will be used to check the accuracy of various computer programs used to predict energy consumption in commercial buildings. In a second project, Canada will co-operate with Britain, Denmark, Italy, the Netherlands, Sweden, Switzerland and the United States to set up an air-infiltration centre, also located in Britain, which will develop standardized techniques for measuring the airtightness of buildings; the data will be used to determine effective ways to control air-leakage, which can account for as much as half of the energy losses from high buildings.

Canada also used the occasion of the ministerial level meeting in Paris to announce that it had earlier signed an agreement to participate in the development of advanced heat pumps that would use natural gas as a fuel source. The National Research Council is co-ordinating Canada's participation in the feasibility studies.

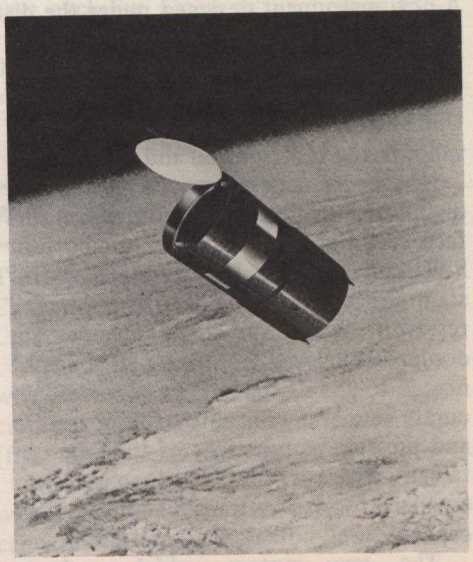
Canada is already a participant in a number of IEA research agreements related to coal, thermonuclear fusion, nuclear safety, conservation, hydrogen-from-water, and biomass, wind, wave and solar energy.

The International Energy Agency's energy research, development and demonstration program is a co-operative effort by 20 nations to reduce excessive dependence on diminishing oil resources. Co-operation reduces effort, saves time and money, and reduces the high risks involved in the introduction of new energy technologies.

Satellite contract

Telesat Canada has awarded the largest single contract in its nine-year history and its first for spacecraft from a Canadian prime contractor.

Telesat President D.A. Golden announced on May 15, the award of the $78.6-million contract for its *Anik D* communications satellites to SPAR Aerospace Limited of Toronto.



Artist's conception of Anik D.

The contract calls for the delivery of two, 24-channel satellites operating in the 6/4 GHz frequency band, the first of which is scheduled to be launched by the Shuttle system from Cape Canaveral, U.S.A. in the first half of 1982.

The *Anik D* satellites will replace the 6/4 GHz channels on *Anik A-3*, which will reach the end of its normal design life