

Energy Conservation and Substitution

An obvious way to lessen Canada's vulnerability to future upsets abroad is to reduce the need for light crude oil in our national energy system through conservation and oil substitution. The cost-effectiveness of conservation has been amply demonstrated in many applications over the last decade, and substitution is clearly feasible given Canada's natural gas reserves and other energy options.

- 6. The Committee supports conservation efforts by the Federal Government and recommends that these efforts be expanded, and that the Federal Government continue to encourage the substitution of other energy forms for oil.**

In testimony, the Committee was told that many conservation opportunities remain costing less than \$20 for each barrel of oil (or oil equivalent) saved. In contrast, per barrel of oil equivalent, new energy supplies from the Venture or Hibernia developments are now estimated to cost \$30 to \$35, new integrated tar sands production perhaps \$50 and new nuclear-electric generation up to \$60 or more.

Energy-conserving technologies and practices still promise major returns. The Federal Government should continue its leadership through setting standards, consumer information, judicious selection of demonstration and incentive programs, and by example in its own operations.

Energy is a significant cost component of business activity, whether in resource extraction, agriculture and food processing, manufacturing or transportation. Conserving energy not only benefits domestic consumers but also improves Canada's competitiveness in international trade. Most industrialized nations utilize energy with a greater degree of economic efficiency than does Canada.

Energy Alternatives

The present characteristics of Canada's energy system are substantially the result of the worldwide availability of conventional light oil, with its many appealing features as an energy commodity. Appropriate new energy sources, technologies and fuels must be found to replace our heavy dependence on oil in particular and fossil fuels in general.

The Committee is concerned about the recent cut-backs in research and development in support of longer-term evolution in our energy system. Canadian technology is at the forefront, for example, in developing vertical-axis wind turbines, exploiting forest biomass, electrolytic hydrogen production