

accounted for 15% of the total production with hydro-electric sources accounting for the remainder. By 1973 the thermal power share had risen to 25%. With increasing use of nuclear energy in thermal power plants, this upward trend will continue.

Total sales of secondary energy, i.e. for other uses than producing energy for sale, are apportioned as follows: 22% for residences and farms, 16% for commercial and institutional use, 33% for industry and 29% for transportation. However, each of the energy source components has its specialized markets. In the residential market oil and gas supply 80% of requirements and electricity, the rest. The commercial sector is supplied by oil and gas (75%) and the remainder by electricity. The energy used in transportation is essentially oil. In industry, oil and gas meet 63% of the energy demand, electricity 24% and coal 13%. The composition of the energy mix changes over time, with changing price and supply conditions, but no dramatic changes from this 1974 pattern are foreseen for the remainder of the decade.

Unusual circumstances made 1974 an eventful period in the management of the Canadian energy economy. The world oil price quadrupled. Oil reserves declined again as no new and readily accessible discoveries were reported. Prices for oil and natural gas in domestic and export markets were key issues. Exploration and development costs increased. Production was down slightly. Quadrupling oil prices, declining reserves and the increasing costs of exploration and development made 1974 an eventful period in the management of the energy economy. The changed circumstances involved export controls, export charges, import compensation, voluntary product price restraint, a single price for domestic production, the intervention of provincial marketing agencies, and the existence of an international energy agreement. Uranium and nuclear power required a new export policy, increased safeguards, and a searching appraisal of reserves. Coal became more important as a source of power. Electric power from hydro, oil, gas and nuclear sources faced vast expansion to meet future demand.

The government introduced several steps to adapt its energy policy to altered circumstances. To achieve greater self-reliance in oil there were short-term transportation measures and a long-term plan to extend the interprovincial pipeline system to Montreal.

A single price for crude oil for all Canadians after allowance for transportation differences was set. Measures were initiated to build a fiscal structure to ensure an equitable distribution of revenues among producers, consumers and governments and to leave the industry sufficient incentive to continue exploration and development. Others were designed to ensure that Canadian energy exports would be sold at competitive prices in the markets to which they were being delivered. An Energy Supply Allocation Board was created with the authority to allocate supplies in an emergency. A national petroleum corporation was set up to ensure, as far as possible, that the rate of development of Canadian petroleum resources would be in the national interest, and to negotiate abroad to secure imported oil on the best terms possible. Federal government assistance was proposed to expand the production of electricity based on nuclear sources and to facilitate a comprehensive interconnection of provincial utilities to ensure greater efficiency and security. An Office of Energy Research and Development was established to assess and co-ordinate activities. Assistance was offered to provinces to help complete an inventory of Canadian resources in uranium, coal, oil and natural gas and an Office of Energy Conservation was set up within the Department of Energy, Mines and Resources to develop and recommend a program of energy conservation and to co-ordinate efforts of agencies responsible for conservation.

## 13.2 Oil and gas

### 13.2.1 Reserves

**Oil.** At the end of 1974 Canada's proven reserves of recoverable conventional crude oil and natural gas liquids (propane, butanes and pentanes plus) amounted to 8.6 billion barrels (bbl), most of them in Alberta. The estimates do not include reserves attributed to the Athabasca tar sands or recently discovered reserves in frontier areas. Proven oil reserves showed a net decline for the fifth consecutive year and at current production levels were sufficient to supply oil for 11 years. Canada's ultimate potentially recoverable reserves, as estimated in 1973 by the Geological Survey of Canada, were placed at 99.2 billion bbl of oil and 782.9 trillion cu ft