

The long-lived gases would require reductions in man-made emissions of 60-80% to stabilise their concentrations at today's levels; methane would require only a 15-20% reduction.<sup>2</sup>

5.4 Capping Canada's greenhouse gas emissions at the 1990 level will therefore not be an adequate contribution to the ultimate solution of the global warming problem. Nor will achievement of the Toronto Conference target of a 20% reduction from 1988 levels by 2005. The Conference itself recognized that the latter could only be "an initial global goal".<sup>3</sup> The IPCC working group's assumptions in regard to stabilization of greenhouse gases by the middle of the next century included the following:

- Full phase-out of CFCs throughout the world and freezes on methyl-chloroform and carbon tetrachloride.
- Reductions in emissions of greenhouse gases from enteric fermentation in domesticated animals, rice paddies and fertilizer.
- Annual rate of improvement in energy intensity declines from an initial value of between 1.5% and 2.5% to a range of 1.1% to 1.8% during the last quarter of the next century; the average rate from 1985 through 2100 ranges between 1.2% and 1.9% per annum.
- Rapid development and penetration of renewable energy sources, encouraged in part by the global adoption of "carbon fees". Biomass energy represents 10 to 25 per cent of primary energy supply by 2025, depending on economic growth assumptions.
- Tropical deforestation ends by 2025, and about 1,000 million ha are reforested by 2100.<sup>4</sup>

5.5 These scenarios and assumptions are of course highly speculative. The indications of what may be required are nevertheless useful in guiding the research, development and policy formulation that will be needed in Canada and other countries in the years ahead.

## **B. REDUCING EMISSIONS FROM FOSSIL FUEL USE**

5.6 It is evident that, in the words of the Green Plan,

Canada's ability to meet its longer-term goal to reduce greenhouse gas emissions depends upon our ability to move to less carbon-intensive fuels.<sup>5</sup>

Canada needs to do this for other reasons as well: to reduce air pollution and, in the longer perspective, to move towards a sustainable pattern of resource use.

5.7 In achieving such changes, Canada is unlikely to "go it alone". For example, the Canadian Automobile Association's objective (para. 4.22) of automobiles that use alternate fuels is likely to involve vehicle fleets in the United States and the world as a whole. But Canada, as a major developed nation and also a major source of greenhouse gas emissions, has to be one of the pacesetters in altering our dependence on fossil fuels. We also have some problems in this regard that other countries do not share to the same extent, and that need to be addressed.