

A Strategy for Adequate Future World Energy Supply and Carbon Emission Control

Lightfoot, H.D.

Global Environmental and Climate Change Centre, McGill University

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Abstract

World concern has focused on rising levels of CO₂ in the atmosphere caused by burning fossil fuels. There is now evidence about supply problems of fossil fuels, especially oil for transportation. To evaluate the world energy situation and proposed solutions, we must understand: (1) how much primary energy is currently used world-wide and might be needed in 2100, (2) the forms of energy sources and end uses, (3) how important energy is to the welfare of people, and (4) from where new energy sources might come. This analysis shows that conservation and increases in energy efficiency extend fossil fuel reserves, and all of the renewable energies together are far too small to solve the world's energy supply problems. Only nuclear fission has the capacity to be the long term replacement for fossil fuels. Thus, conversion now to nuclear fission for Public Electricity and Heat Production, Canada's largest GHG emitter, can be an important step towards reducing carbon emissions and helping to ensure future energy supply.