

INTRODUCTION

The development of near- to mid-term strategies for reducing our dependence on imported oil and natural gas is a major energy need of the United States. Displacing such imports with renewable domestic energy sources is a strategy that has generated significant popular and legislative interest. Gasohol in particular has become a focus of national attention, and it is to this subject that this report is addressed.

Gasohol is a mixture of one part ethyl alcohol (ethanol) and nine parts unleaded gasoline. Although automobiles could be designed to operate on alcohol alone, for the foreseeable future the most economic use of ethanol is as an octane booster in gasoline. And of the synthetic liquid fuels from biomass, only ethanol can be produced with technology that is commercially available in the United States.

Although ethanol cannot by itself solve our energy problems, it may contribute to what must be a combination of national energy strategies. This report will place this contribution in perspective and clarify the role that gasohol may be expected to play in our energy future. Methanol has not been included because the technology for producing it from biomass is not commercially available at present and an adequate consideration of the resource base for methanol production would greatly expand the scope and complexity of the report. Methanol fuel, however, will be included in a later report on Energy from Biological Processes.

In this report, references are given as numbers in parentheses, with a full reference list at the end of the report. With the exception of the contractor report on Federal Bioenergy Programs, the various OTA contractor reports cited in the reference list will not be available for public distribution until the final report on Energy from Biological Processes has been released.