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## The H.R. 776 Energy Legislation

The long-awaited energy legislation that recently passed in the House of Representatives by 381 to 37 met a cool reception in the media. The bill, H.R. 776, is complex, and a printout occupies 1350 pages. The legislation, shaped by nine major committees, includes more than 250 sections. Hundreds of topics are treated, some of which are trivial. Relatively neglected were effective methods of insuring future supplies of liquid fuel and effective means of reducing emissions of CO<sub>2</sub>.

The nation faces long-term problems occasioned by diminishing domestic production of petroleum and by the need to pay for increasing imports of oil. Demand for liquid hydrocarbons and amounts of CO<sub>2</sub> emissions could be reduced quickly by a substantial tax on gasoline and diesel fuel. But this possibility was shunned by the legislators.

Instead of seriously tackling the problem of increased domestic supplies of transportation fuels, the authors of the bill sidestep it by establishing desirable goals while not providing practical methods of reaching them. A prime example of a dubiously achievable goal is "the development of technologies to increase recoverable oil resources cost effectively by approximately 76,000,000,000 barrels of oil by the year 2010, compared to 1991 levels of recoverable reserves." The bill authorizes an average of \$70 million per year for 5 years to foster achievement of the goal. That sum is minuscule in comparison to what the petroleum industry spends. Currently the industry allocates about \$30 billion per year to domestic exploration and production; a considerable fraction of this has been directed to achieving enhanced production from known fields. Despite these efforts, production of oil is slated to decline from a present 2.5 billion barrels per year to about 2.0 billion barrels per year 8 years hence. The 30 largest oil companies have made clear their estimate of prospects in the United States by shifting their efforts to foreign areas. They now spend 60 percent of their funds for exploration and development abroad. Many are diminishing domestic efforts and cutting staffs. Provisions of H.R. 776 to ban exploration of offshore and arctic areas are speeding departure of expertise.

A laudable bit of prose in H.R. 776 follows: "The Congress finds that increased use of renewable energy—(1) has the potential to meet 50 percent of the energy needs of the United States by 2030; (2) would reduce impacts on human health, air quality, ecosystems, and reduce the potential for global warming; (3) would rely on secure domestic resources and improve the balance of trade by reducing energy imports...."

Later in its text H.R. 776 contains the following: "Specific goals for producing ethanol from biomass shall be to—(1) reduce the cost of alcohol to 70 cents per gallon by 1997." Current cost of obtaining alcohol from grain is about \$1.20 per gallon. If much more grain were used than at present, cost of feedstocks would rise. In order to obtain important amounts of alcohol use of cellulosic biomass would be required. For this purpose H.R. 776 authorizes a beginning annual expenditure of \$20 million per year and a total of \$170 million for 5 years. The funds would be used to provide financial assistance to several joint ventures in order to develop commercial scale alcohol from biomass technology. The amount of funds authorized for alcohol is tiny compared to those authorized in H.R. 776 for some other, less-important activities.

The legislation sets a U.S. goal that 10 percent of automotive fuel requirements will be met by alternative fuels in the year 2000 and 30 percent in 2010. The term "alternative fuel" means "methanol, ethanol and other alcohols...; natural gas; liquefied petroleum gas; hydrogen; electricity...." The bill requires that up to 50 percent of new federal fleet vehicles use alternative fuels by 1998, and it encourages use of alternative fuels in privately owned fleets. The overwhelming majority of automobiles are owned by individual voters. How will they react?

Some of the many topics that received attention in H.R. 776 included nuclear reactors, uranium isotope separation, exportation of coal, domestic use of coal, energy efficiency standards for appliances, and conservation of energy in federal buildings. The following appears in two places in the legislation: "The Secretary [of Energy], in consultation with the Administrator of the General Services Administration and the Administrator of the Environmental Protection Agency, will conduct a study of...the life cycle costs and benefits to the Federal Government of replacing all existing toilets, urinals, shower heads and faucets in buildings owned by the Federal Government...."

Philip H. Abelson

# Science

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