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Increasing World Energy Supplies

Even were the Middle East conflict to end tomorrow, even were Israel to vanish, the world would not resume the relationships of early 1973. The oil-consuming nations have become aware of their vulnerability. The oil-producing and exporting countries have learned that they have the power to drive up the price for oil while making erstwhile great nations subservient.

Up to a point, the producing countries have justice on their side. Until recently, they received about $2 a barrel (42 gallons, or about 159 liters) for their nonrenewable resources. Western Europe and Japan enjoyed great prosperity, in part at the expense of the oil producers. A readjustment in relationships was inevitable. The price increases, which began to quicken 2 years ago, then had a doubling time of about 2 years. Recently, the doubling time has been on the order of weeks, and a news account says that the Russians sold a shipment of oil to the Danes for $30 a barrel. How far will the oil producers go? A price adjustment and more sparing use of energy is one thing. Economic chaos for Western Europe and Japan and hardship for other consuming nations is another. The situation could deteriorate to the kind of disaster that the Russians have longed for.

Prospects are grave enough to make it desirable for the United States urgently to consider how it might exercise world leadership.

For its part, the United States has enormous resources of industrial, technological and scientific capability. It also has oil shale and coal whose total potential is more than ten times that of the Middle East oil fields. Conventional U.S. sources of petroleum on land and on the continental shelves are substantial and could be expanded rather quickly if the social and financial climate were favorable. However, we should not assume the burden alone. The Canadians possess the great Athabasca Tar Sands, with oil potential perhaps twice that of the Arabs. The Japanese and the Western Europeans could contribute hardware and technological skills toward development of the Tar Sands.

A combination of rigorous conservation and additional sources of hydrocarbons could free the world of the threat of chaos and place limits on the price the oil-producing countries could exact. Even the prospect that the United States and others were moving decisively together would have a moderating effect on Arab behavior.

Such an effort would require the expenditure of $100 billion or more by industry and governments as well as superb organization. Given a performance comparable to our best in World War II, large additional amounts of hydrocarbons could be available in 2 or 3 years.

The technology for producing oil from the Athabasca Tar Sands is already tested. Costs are about $4 per barrel. Conventional earth-moving equipment is used to mine the oil sands. The crude oil is separated from sand by treatment with hot water. A vast increase in production would require leadership by the Canadians and suitable arrangements for providing the production equipment.

The development of the potential for very large additional hydrocarbon production in the United States would entail innovation. Underground retorting of the Green River Shale could permit large-scale production of oil with minimal environmental impact at costs of $4 a barrel or less.

To date, our approach to the energy problem has been self-centered and weak. We have talked of energy independence in 1980, and the Atomic Energy Commission has produced a report that is not even a blueprint for such a limited objective. We are capable of greatness, and we should demonstrate it.—PHILIP H. ABELSON