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## Whither the Price of Oil?

Virtually all the experts agree that the price of petroleum will drop. But uncertainty prevails about how much it will fall or when. This is a trillion-dollar matter. The world's economy grew vigorously in the decades before the first big rise in the cost of oil in 1973–1974. The world has experienced inflation and recession since the further rise in 1978–1979.

A major lesson of the past decade is that in the short term (a year) demand for petroleum is inelastic. The price increases of 1978–1979 had little immediate effect on consumption. However, since 1979 profound changes have occurred in the availability and use of hydrocarbons. Consumption of oil has dropped while production in countries other than those of the Organization of Petroleum Exporting Countries (OPEC) has increased. As a result, OPEC countries are selling only about half as much oil as they did in 1978, and they have a large idle capacity. The incremental cost of producing additional barrels of oil in many instances is of the order of a dollar or two or less. Countries in or out of OPEC that urgently need money will tend to increase production, shaving the price if necessary, to sell their oil. Since in the short term demand is quite inelastic, the probability is substantial that a chaotic downward price movement will occur. Through strenuous efforts the cartel may be able to slow the move, but this would only lead to a continuing decrease in the use of oil and a longer period of price instability. After 5 to 10 years of lower prices, demand will probably increase substantially, and production capacity for oil will fall due to gradual exhaustion of wells. The stage would then be set for increasing prices.

However, the circumstances that made possible the great increases of the 1970's are not likely to return soon. For example, since 1978 imports of petroleum and its products into the United States have dropped from 8.4 million to about 4.5 million barrels of oil a day. Part of this decrease is due to recession, but most is due to conservation, greater energy efficiency, and substitution of other energy sources for oil. Initial responses to higher fuel prices were followed by more enduring changes. Homes were insulated. The energy efficiency of industry was gradually improved. New automobiles and airplanes require less fuel. Efforts to achieve greater energy efficiency will not be stopped by small changes in the price of oil.

In the United States, and especially in Western Europe, substantial quantities of oil were burned merely to make heat. Often, as in the generation of electricity, coal can be employed. Its energy cost is usually far less than that for oil. A decade ago, 2.1 million barrels of oil a day were burned in the United States to make electricity. Now less than 1 million barrels a day are used, and the trend is downward as more coal-fired and nuclear plants come on line. The forest products industry has curtailed its use of oil and instead is burning wood wastes. Home heating oil faces future competition from electrically driven heat pumps. Another factor leading to less consumption of petroleum is that refiners now obtain more gasoline and heating oil from a barrel of crude oil. What was once burned as cheap residual oil is now being converted to premium products.

The momentum of efforts to reduce consumption of oil in the United States is considerable. It will not be stopped quickly. A drop in price to \$20 a barrel would have little effect on the competition of oil with coal. However, it would affect the market for natural gas. Some gas might be replaced by oil. Research and development related to alternative energy sources would be further curtailed and exploration for gas and oil would be slowed, leading to later shortages. But for the shorter term, a drop in price to \$10 or less a barrel would be required to make a substantial change in U.S. consumption of oil. In other countries, circumstances differ. For example, in Western Europe, coal is relatively more expensive than it is here. Oil would compete successfully at about \$20 a barrel. But on a worldwide basis, a short-lived drop in the price of oil to \$15 a barrel or less is a lively possibility.—PHILIP H. ABELSON