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## Continuing Increase in Use of Energy

Consumption of energy is the principal source of air pollution, and energy production, transportation, and consumption are responsible for an important fraction of all our environmental problems. Use of energy continues to rise at the rate of 4.5 percent per year. Even if fuel supplies were infinite, such an increase could not be tolerated indefinitely. But fuel supplies are not inexhaustible, and this combined with the need to preserve the environment will force changes in patterns of energy production and use.

Our economy has been geared to profligate expenditure of energy and resources. Much of our pollution problem would disappear if we drove 1-ton instead of 2-ton automobiles. Demand for space heat and cooling could be reduced if buildings were properly insulated. Examples of needless use of electricity are everywhere. Promotional rates and advertising tend to encourage excessive consumption.

Slowing down the rate of increase in use of energy will not be easy. Public habits of energy consumption will not be quickly altered, and a sudden change in the rate of growth of energy consumption would cause major additional unemployment.

Most people are at least somewhat aware that their consumption of various forms of energy adds to pollution. Yet despite all the publicity and exhortations, little effect has been noted in overall energy consumption. Increase in use of energy has not abated. Some signs of impact can be detected. Sales of smaller automobiles have increased somewhat. However, the rate of increase of "clean" electricity was 6 percent last year in spite of brownouts and the economic recession. Consumption of natural gas in the production of electricity rose 11 percent, reflecting in part a desire to use cleaner fuel.

A major factor in the burgeoning use of energy is its low price—one that does not take into account all the costs to society. In the generation of electric power from coal and oil, millions of tons of sulfur dioxide are released, which cause billions of dollars worth of damage to health and property. We are consuming rapidly, at ridiculously low prices, natural gas reserves that accumulated during millions of years. Prices for energy should reflect their full cost to society. The Nixon Administration's proposed tax on sulfur in fuel should be enacted. The rate structure for electric power should be modified to discourage excessive use. A substantial increase in the price of natural gas, including a new federal tax, would diminish waste of this resource. Taxes on automobiles should increase sharply with weight and horsepower.

Measures to cut excessive use of energy are likely to come only after a long time, if ever. We should face the possibility that increased consumption of energy will continue and prepare to meet that possibility. Atmospheric pollution is not an inevitable consequence of production of energy. In the use of fossil fuels, production of sulfur dioxide is not an essential by-product. Destruction of the environment is not a necessary consequence of strip mining. Pollution from almost every method of producing and utilizing energy could be sharply attenuated either through better practices or through development of new methods. In view of the importance of energy to society, present expenditures on research and development related to energy are small and these are not well apportioned. Two areas that particularly merit increases in support are thermonuclear research and development of pollution-free means of using coal for electricity, liquid fuels, and methane.—PHILIP H. ABELSON