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## Energy for Man and Environmental Protection

Recently, the expansion of electric-power-generating capacity has been stopped or delayed at a growing number of points in the United States. These delays are a result of well-intentioned activities that have caused rising public anxiety about the environmental impact of the operation of electric generating stations and, particularly, of atomic generating plants. This concern has solid basis, and in the long run can prove to be socially beneficial.

But concern over environmental effects has now reached a point where those charged with the responsibility of maintaining the needed growth in the energy supply find themselves unable to carry on effectively. Progress on developing hydraulic energy sources is stalled due to concern for the landscape; management is inhibited from constructing fossil-fuel generating plants due to considerations of atmospheric pollution, and in some localities cannot either construct, or operate after construction, atomic energy sources because of concern about the release of radioactive substances to the atmosphere and to water. Another cause for delay is objection to the thermal pollution of the water bodies utilized to condense the exhaust steam. Because of delays in the installation of new generating capacity many major power grids are without comfortable reserves to meet emergencies. And if this opposition to expanding our electric energy supply continues, surely we are going to bring about a catastrophic situation. This we simply must avoid. The implication this carries for our national policy is clear. A major effort is called for to make possible continuing and expanding use of energy by man and to assure compatibility of this energy with a healthy environment.

Three distinct segments of our society need to join in this long-term effort. Foremost is the government of the United States. Through its legislative and executive branches it needs to give leadership in research to evaluate the effects of the polluting phenomena and to develop both remedial devices and alternatives such as new sources of energy (for example, controlled nuclear fusion), new methods of conversion, new methods of shielding, and new safety measures and devices.

The scientific and technological community has a vital role to play. It, above all others, is in a position to appreciate the importance to the future of our society of placing no obstacles in the way of providing adequate energy. And it must rise to the social challenge of achieving, through knowledge enhanced by research, compatibility between expanding use of energy and environmental health.

The managers of the energy-producing industries must assume their share of the heavy burden of responsibility for maintaining a clean environment, but they must do so without sacrificing efficiency, prudent investment, and responsibility for continuity of production. There is no real occasion for panic provided we set about the task with vigor and determination. Neither is there any need to doubt the feasibility of obtaining both increased energy for man and environmental protection. It may be difficult, but the two are, or can be made, compatible. —PHILLIP SPORN, *Member, National Academy of Sciences and National Academy of Engineering; former President (1947–61) of American Electric Power Co.*