

Introduction

Report of the Committee on Health and Environmental Effects of Increased Coal Utilization

The National Energy Plan announced by President Carter on April 29, 1977 proposed a significant increase in the utilization of the vast domestic deposits of coal to replace the dwindling supplies of oil and natural gas, and increasingly expensive oil from foreign sources, to meet national energy needs. At the same time, in recognition of possible adverse health and ecological consequences of increased coal production and use, the President announced that a special committee would be formed to study this aspect of the National Energy Plan.

The Committee on Health and Environmental Effects of Increased Coal Utilization was chaired by Dr. David P. Rall, Director of the National Institute of Environmental Health Sciences, National Institutes of Health, DHEW. The other members of the Committee, all distinguished scientists and scholars from various parts of the United States, were Dr. Stanley Auerbach, Director of the Environmental Sciences Division of the Oak Ridge National Laboratory; Dr. Sheldon Friedlander, Professor of Physics of the California Institute of Technology; Dr. Marcus Key, Professor of Occupational Medicine of the University of Texas; Dr. Norton Nelson, Director of the Institute of Environmental Medicine of New York University Medical Center; Dr. Monroe Newman, Professor of Economics of Pennsylvania State University; Dr. Gordon Orians, Director of the Institute of Environmental Studies of the University of Washington; Dr. Donald Rasmussen, Director of the Appalachian Pulmonary Laboratory in Beckley, West Virginia; Dr. Adel Sarofim, Professor of Chemical Engineering of the Massachusetts Institute of Technology; and Dr. Carl Shy, Director of the Institute of Environmental Studies of the University of North Carolina.

The Committee held a series of public meetings

during November and December 1977 to review a number of special papers on particular problems associated with increased coal utilization. These papers, which were prepared by scientists of the U.S. Environmental Protection Agency, the Department of Energy, the HEW National Institute for Occupational Safety and Health, and the National Institute of Environmental Health Sciences, New York University, and Vanderbilt University, provided essential background information for the deliberations of the Committee and are published in this volume. One paper entitled "Transport and fate of gaseous pollutants associated with the national energy program" by A. P. Altshuler et al. will be published in a later volume of EHP. The Committee's report, which was completed in December, 1977 and made public in January, 1978, is also included in this volume.

The Committee's basic finding was that it is safe to proceed with plans to increase the utilization of coal if the following environmental and safety policies are adhered to:

- Compliance with Federal and State air, water and solid waste regulations
- Universal adoption and successful operation of best available control technology on new facilities
- Compliance with reclamation standards
- Compliance with mine health and safety standards
- Judicious siting of coal-fired facilities

The Committee concluded that, even with the best mitigation policies, there will be some adverse health and environmental effects from the dramatic increase in coal use. However, these will not impact all regions and individuals uniformly. The Committee identified six major areas of uncertainty and concern requiring further investigation if the nation is to

minimize undesirable consequences of increased coal utilization now, and in the future. Two critical health issues of concern are air pollution health effects and coal mine worker health and safety. Two critical environmental issues of concern are global effects of carbon dioxide in the atmosphere and acid fallout. Two additional important issues of concern are trace elements in the environment and reclamation of arid land. These issues are discussed in more

detail in the report of the Committee.

Finally, because of the inadequate data and methodology used in the study of these matters, the Committee strongly recommended the establishment of an improved national environmental data collection, modeling and monitoring system.

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Guest Editor