

VIII

THE ROLE OF EDUCATION AND COMMUNICATION

Development of technology to convert coal to liquid fuel requires addressing numerous technologic and economic problems on a broad front. This will involve industry, the universities, the energy laboratories both private and governmental, and other sectors of the economy. Certain segments of the overall problem could best be dealt with by industry, while others are in areas served by the universities. In all cases, an active program of university-research institute-government-industry cooperation is of the utmost importance.

A further need is for a broader understanding of the situation with regard to availability of energy. While there is growing awareness, few people appreciate the implications of the facts that the capacity for domestic production of petroleum and natural gas is declining at a time when petroleum imports represent nearly 45 percent of consumption and are increasing steadily or that the United States cannot maintain its national well-being while depending upon foreign sources for significant portions of its energy.

The universities are involved in training personnel for research on and for the operation of large-scale synthetic fuel plants. Engineers and scientists at all levels are now in short supply in the energy field, and it is expected that this shortage will grow. The universities are the country's sole means to supply the fundamental training required in these technologies. Such training will be greatly enhanced if federal funding for university research related to coal liquefaction and coal gasification were substantially increased. This would provide both the research base for student training at the M.S. and Ph.D. levels and stimulate staff research work, which results in better instruction at all levels.

A strong cooperative effort involving both universities and industry will be needed if the synthetic fuels industry is to evolve fully. A great deal of fundamental information that may have direct bearing on innovative process development can be derived in the university community. On the other hand, scale-up to the process development level can best be done by industry. The involvement of both these sectors will be required if the nation's domestic supplies of energy from coal are to be increased.

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