

THE USE OF COAL IN THE INDUSTRIAL, COMMERCIAL, RESIDENTIAL, AND TRANSPORTATION SECTORS DECEMBER 1988

PURPOSE

This report was prepared to determine what opportunities and impediments existed for the increased use of coal and coal-derived fuels in the non-utility sectors. The study spanned from mine mouth to end user fuel delivery and waste removal. A broad overview of energy use in each major non-utility sector was blended with a review of technologies, challenges, and opportunities applicable to that sector.

The report explores three broad policy issue areas which impact on increased utilization of coal. These are national energy security, environmental and regulatory concerns, and public opinion. Finally, the report provides an in-depth look at material handling and waste disposal, and cites examples of the use of coal in the international non-utility sector. Preparation of this report included the use of an expert in public opinion and a review of the work in these sectors by the California Energy Commission.

FINDINGS

Petroleum products represent the single largest fuel source in this country, with the transportation industry consuming nearly two-thirds of the oil used. Coal is this country's most certain and predictable fossil fuel resource, yet it is the least used in the non-utility sectors. Natural gas and electricity are the most significant forms of energy used in the industrial, commercial and residential sectors, while liquid fuels from petroleum are the predominant form of energy in the transportation sector.

The most feasible method of penetrating the non-utility sectors is to convert coal into liquids and gas to avoid equipment and infrastructure changes. This will necessitate the continued proving of clean coal technologies that can compete over the long term, both from an environmental and an economic standpoint. In addition to developing economically competitive ways to convert coal into liquids and gases, opportunities exist for the use of coal as chemical feedstocks and co-generation in the industrial sector and as district heat and co-generation in the commercial sectors. The biggest problem with expanding the use of coal in the non-utility sectors is the negative public perception that exists. This must be overcome by education and positive public information. Finally, increased coal use in the non-utility sectors can overcome concerns of national security, can help to reduce dependence on the use of imported oil, and can improve the nation's balance of payments.

RECOMMENDATIONS

The following steps are proposed for consideration by the Secretary of Energy.

- Study the methods of producing alternative transportation fuels from coal in order to provide direction, and to demonstrate possible competitive liquid fuels derivable from coal.
- Continue to support research and development in the conversion of syngas to liquid, coal to gas, and coal to liquid.
- Convene a work group to develop a substantial public outreach program to improve the perceptions and attitudes relating to coal.
- Encourage federal agencies to use coal in public facilities.
- Evaluate the current regulatory impediments to the use of coal, and evaluate the use of economic incentives that would increase the use of coal.

- Stimulate interest in the commercial sector to use more district heating and cooling systems, and evaluate international programs on the use of coal in non-utility sectors.