Book Reviews

Energy Systems and Social Change

Energy and Transport. Historical Perspectives on Policy Issues. Papers from a conference, Houghton, Mich., Sept. 1981. GEORGE H. DANIELS and MARK H. ROSE, Eds. Sage, Beverly Hills, Calif., 1982. 288 pp. Cloth, $25; paper, $12.50. Sage Focus Editions, 54.

In the introduction to this valuable collection, George H. Daniels and Mark H. Rose suggest that our limited appreciation of the relation of energy to social change evidences America's long-shared belief in energy abundance. For as long as the idea of abundance remained entrenched, scholars and legislators, no less than the general public, exhibited surprisingly little interest in how energy systems reflected or reshaped the political, economic, and social configurations of society. The purpose of this volume is to remedy that deficiency. And to the degree that these essays examine the links between energy and transportation, exploring the connections to public policy and values, they make an important contribution to our still fragmentary knowledge. By focusing on the workings of energy systems within their broad cultural context many of these essays also offer much-needed models for further scholarship. Moreover, in providing historical perspectives on how politics, interest groups, and values impeded the formulation of coherent energy and transportation policy this collection supplies important case studies for policymakers.

A major theme that is approached from various perspectives is the question of energy transitions. George Basalla traces the recreation of modern energy myths: how first coal-fueled steam power, then hydropower, nuclear power, and most recently solar power have been successively celebrated as constituting an ideal cornucopian power source for beneficial social transformation. Although no single source has ever satisfied such expectations, similar claims, he finds, have been repeatedly propounded in the continuing resurrection of energy mystiques. The actual complex of constraints that in fact delayed widespread adoption of coal is examined in Martin V. Melosi's probing analysis of "Energy transitions in the nineteenth-century economy." Explaining the multiple reasons why this form of fuel eventually did achieve dominance in urban industrial America by the 1880's, Melosi, like Basalla, leads us to question the premise that any one source can be credited with rapid, primarily positive, social change.

In another challenge to popular myth that highlights the importance of energy efficiencies, Bonnie Maas Morrison presents national historical data revealing a 32 percent decline in household energy consumption from 1907 to 1980, correcting the notion that the shift away from wood and coal fuel, and the replacement of human energy by technologies of convenience, made the modernizing household more energy-intensive. Corlann G. Bush's technological assessment asks a different question: how did changes in energy affect a gender-based division of labor? Examining both household and agricultural technology on family farms in the Palouse region of Idaho and Washington, Bush finds that the transition to electricity in the home and diesel-powered mechanization on the farm after 1930 enhanced the male's economic role but brought a decline in the economic "crucialness" of females.

More than any other single phenomenon, the emergence of the car culture catalyzed the 20th-century transition to oil. From its introduction in 1910 to its institutionalization in the 1930's, the automobile became the vehicle, Warren J. Belasco argues, of a middle-class nostalgic quest for pre-modern libertarian values of personal choice and control. How, at the same time, the vertically integrated oil companies stimulated, serviced, and shaped the expanding car culture and growing dependence on oil is analyzed in August W. Giebelhaus's study "Petroleum refining and transportation," which focuses on corporate decisions in both the automotive and the oil industries to increase product demand. Similarly, Joseph A. Pratt points to the tactics devised by the American Petroleum Institute to promote industry interests and influence government in the decade after it was founded in 1919.

The major themes of this volume—business-government relations and the nature of the policy-making process—receive incisive treatment in John G. Clark's investigation of the interaction between different fuel industry interest groups and government agencies. Clark probes how the absence of a workable concept of the public interest led to government default in the management of inter-war fuel crises. The post-war reluctance of the federal government, a "cautious broker" between interest groups, to set goals for comprehensive coordinated national energy policy is also the subject of Jack M. Holl's examination of the Nixon administration's generally overlooked attempts, even before the 1973 embargo, to depart from this historic pattern. Edward W. Constant II considers an increasingly critical dimension of policy, the ways changing scientific information affects legal decisions. Constant's assessment of federal court validation of the much criticized Texas oil prorationing program raises significant questions about the connections between scientific inquiry, organized interests, and public policy.

Turning to the municipal level, Joel A. Tarr and Kenneth E. Koons, in a model case study, attribute the failure of mobile smoke emission controls to the political and economic primacy of the main offenders before 1950, the railroad corporations. Investigating the "incentive structure" for environmental regulation, they make clear that managerial inertia delayed conversion to cleaner, cost-effective diesel technology to replace coal-fueled steam engines until after World War II. Enlarging the context of urban analysis, Eugenie Ladner Birch explores the failure of professional city planners to resist or reverse the economically and politically determined pattern of proliferating urban expressways and radial arteries, which have become a cause of rather than a solution to air and space pollution.

In the concluding essay, Langdon Winner criticizes the "grand consensus" in energy studies for its singular preoccupation with efficient paths to economic growth. Winner calls for greater attention to the social implications of energy systems and consideration of the social contract underlying the choice of different energy "regimes."

In forcing our attention to the interdependence of energy and transportation in its broad social setting this volume is in many respects a pioneering effort. One hopes it will stimulate further research into the wide range of questions it addresses.

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