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The Energy Crisis: The Need For Antitrust Action and Federal Regulation

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SPECIAL PROJECT

The Energy Crisis: The Need For Antitrust Action and Federal Regulation

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I. INTRODUCTION

The energy industry faces a crisis—an energy shortage that may not be alleviated for a number of years. Unlike the transitory regional supply shortages of the past, the present crisis is far more pervasive, threatening the industrial and economic progress of the nation. Authorities have predicted that this energy gap, spurred on by the convergence of a variety of circumstances affecting the delicate balance of supply and demand, will have collateral consequences that stagger the imagination, including sharp buyer competition for scarce fuel supplies and spiraling consumer prices for basic fuel services. The very existence of the crisis raises many grave questions. What factors caused the shortage? Will the energy industry be able to meet the burgeoning demand in future years? What action must be taken to avoid further crises? What can the federal government do under the existing laws and regulations to meet future energy problems? None of these questions admit to a categorical answer, but they do suggest the need for a comprehensive national energy policy that can help insure a constant fuel supply to meet the nation's expanding energy needs. The purpose of this Special Project is to analyze the current fuel markets and to investigate the antitrust and regulatory questions created by a decade of increasing concentration and interfuel combination. The Project will seek to identify actual and potential problem areas and suggest possible solutions within the antitrust and regulatory framework.

Although primary responsibility rests with the industry to solve the existing crisis, responsible government action must be taken to avert similar problems in the future. If, for example, lively competition in the market place will answer future fuel needs, then definite antitrust measures should be taken immediately. In this regard, the trends in economic concentration in the fuel industry will be pointed out, together with the antitrust implications of these trends. Other avenues of government action also are available, primarily in the form of government regulation. The Project will examine the possible forms of regulation that could be employed, including interagency coordination, consolidation of regulatory authority, and development of new regulatory agencies.

II. THE ENERGY CRISIS AND ITS CAUSES

The severe fuel shortages in 1970 poignantly demonstrated the serious problems that beset our present system of fuel supply. Unfortunately, the causes of this shortage are more obscure than its

result. Yet these causes must be explored before any remedial action can be properly directed toward eliminating further shortages in the supply of fuel. This portion of the Project is designed to sketch-in the background of the shortage and briefly detail its causes. The exploration of these causes serves as the basis for the corrective actions suggested throughout the Project.

A. The Nature of the Energy Crisis

Without question, a severe fuel shortage exists in the United States. The demand for fuel has far outstripped the supply, leaving a considerable energy "gap." Consumption of energy in the United States has grown at an annual compound rate of 3.1 percent since World War II.[1] Even this figure obscures the more recent increases in energy consumption. Between 1965 and 1969, the annual compound rate jumped to 5.0 percent.[2] The overall increase in the need for energy is reflected by rising demands for individual fuels, such as residual fuel oil, whose growth rate, increasing at an annual compound rate of 2.7 percent from 1960 to 1964, leaped to 7.1 percent from 1966 to 1968.[3] Dramatic increases in demand are pronounced for other fuels as well. Natural gas, a fuel that has gained popularity because of new pollution standards, faces a demand that will outstrip available supplies by 50 percent in 1980.[4] Even at present consumption, proved natural gas reserves can meet demands for only thirteen years.[5]

The coal shortage is similarly acute. In 1970, demand outstripped supply by ten million tons.[6] Moreover, demand has exceeded supply in seven of the last ten years. The impact of this shortage has been particularly devastating to the nation's steam-electric generating plants, which consume 54 percent of the annual coal production.[7] During the

1. NATIONAL ECONOMICS RESEARCH ASSOCIATES, INC., COMPETITION IN THE ENERGY MARKETS, AN ECONOMIC ANALYSIS 3 (1970) [hereinafter cited as COMPETITION IN THE ENERGY MARKETS].

2. *Id.* The per capita consumption of energy was 42.5% higher in 1969 than in 1947. Although the consumption of energy per dollar of the gross national product declined from 1947 to 1966, in the last 3 years this figure appears to be increasing, indicating that energy consumption is keeping pace with the growth in the economy. In terms of barrel equivalents, the annual per capita consumption of oil has increased from 39 barrels in 1950 to 49 in 1965. In 1980, this figure will be equal to 69 barrels. Wall Street J., Oct. 5, 1970, at 1, col. 5 (S.W. ed.).

3. COMPETITION IN THE ENERGY MARKETS, *supra* note 1, at 8. The annual growth rate at the present time is nearly 12%. Mayer, *Why the U.S. is in an "Energy Crisis,"* FORTUNE, Nov. 1970, at 76.

4. Wall Street J., Oct. 5, 1970, at 1, col. 5 (S.W. ed.).

5. *Id.*

6. *Id.*

7. NATIONAL COAL ASS'N, 1966 BITUMINOUS COAL FACTS 76-77 [hereinafter cited as 1966

past three consecutive years, coal consumption, including domestic demand and coal exports, has exceeded the supply, causing consumers to draw down their reserve supplies.[8] Nationally, for example, this shortage meant that the average power company in April 1970 could only maintain a 54-day coal stockpile, well below the typical 75- to 90-day reserve considered necessary to provide service during peak loads.[9] Some electric utilities have experienced even more difficulty maintaining sufficient coal stockpiles. During the summer of 1970, the Tennessee Valley Authority (TVA) had only a ten-day reserve of coal at full burn, with some plants having only a five-day supply.[10] In addition, receipts of coal averaged only 80 percent of the amount scheduled for delivery under long-term contracts.[11] Uranium is the only fuel source that is not presently in short supply. Even this exemption may be short-lived, however, since the Atomic Energy Commission has predicted that the 204,000 tons of existing reserves capable of being enriched and supplied are not sufficient to meet projected needs through 1980.[12]

The normal response of a competitive market to an increase in demand is a commensurate increase in supply. In the face of a phenomenal expansion in the need for energy, however, domestic production has remained relatively stagnant. In the coal market, for example, it was estimated that a ten million ton shortage will remain in 1970.[13] Likewise, the current supply base of natural gas is barely sufficient to continue service to existing customers,[14] and the present

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BITUMINOUS COAL FACTS]. In 1965, for example, electric utilities consumed 242,729,000 tons of coal, out of a total noncaptive production of 413,368,000 tons in that same year.

8. COMPETITION IN THE ENERGY MARKETS, *supra* note 1, at 10.

9. BUS. WEEK, Apr. 18, 1970, at 27. In only one month, between March and April 1970, the average stockpile dropped from a 60-day supply to a 54-day supply. *Id.*

10. Letter from Aubrey J. Wagner, Chairman of the Tennessee Valley Authority, to Congressman Richard Fulton, Sept. 21, 1970, on file in the *Vanderbilt Law Review* office. In his letter, Chairman Wagner pointed out that invitations to bid on coal supply contracts, which would require the development of new mines, have been virtually ignored. As a result, TVA has been purchasing nearly all the coal bid to them, on short-term or medium-term contracts.

11. *Id.*

12. COMPETITION IN THE ENERGY MARKETS, *supra* note 1, at 12. It has been estimated that by 1980, 35% of electric energy generated will be produced by nuclear fuel. Consequently, new uranium enrichment facilities and improvement of existing facilities will be required by 1980, necessitating capital investment of $600-800 million. JOINT COMM. ON ATOMIC ENERGY, 91ST CONG., 1ST SESS., SELECTED MATERIALS CONCERNING FUTURE OWNERSHIP OF THE AEC'S GASEOUS DIFFUSION PLANTS 3 (Comm. Print 1969) [hereinafter cited as SELECTED MATERIALS].

13. Wall Street J., Oct. 5, 1970, at 1, col. 5 (S.W. ed.); *Hearings Before the Subcomm. on Special Small Business Problems of the House Select Comm. on Small Business,* 91st Cong., 2d Sess. 44 (1970) [hereinafter cited as *Hearings*] (statement of Herbert Stein, Council of Economic Advisors).

14. COMPETITION IN THE ENERGY MARKETS, *supra* note 1, at 6; Wall Street J., Oct. 5, 1970, at 1, col. 5 (S.W. ed.).

increase of six percent per year in natural gas demand signals significant supply shortages in the future.[15] Domestic production of residual fuel oil also is insufficient to meet demands; consequently, 94 percent of the oil consumed on the east coast must be imported.[16]

Because of these shortages, intense buyer competition for available supplies has developed, with resulting increases in the price of fuel. Nationally, bituminous coal prices rose an average of 56 percent in the first half of 1970, while oil prices to utilities increased at a 48 percent annual rate during the same period.[17] In terms of price, the shortage caused an increase from 2.28 to 3.34 dollars per barrel for crude oil during a five-month period in 1970.[18] In addition, spot contract rates in some areas climbed as high as thirteen dollars a ton for coal.[19] At TVA's Widows Creek Plant, for example, the per ton price of coal has increased from slightly in excess of four dollars in 1968 to nearly nine dollars by mid-year 1970.[20] Overall, TVA estimated that 60 million dollars in increased expenses for 1970 was reflected in the cost of coal.[21] The additional 100 million dollars of revenue needed to meet these increasing costs has been supplied by the consumers of TVA power, who have had to absorb a 23 percent rate hike.[22]

B. Short-Range Contributors to the Energy Crisis

Obviously, the increase in fuel prices is the classical result of demand outstripping supply. In order to assess the performance of the energy industry, it is necessary, therefore, to determine the reason for the

15. *Hearings, supra* note 13, at 166 (statement of Hollis M. Dole, Assistant Secretary for Mineral Resources, Department of the Interior). This increase in demand is twice the amount that the United States has been able to import from Canada. Mr. Dole predicted that gas consumption will drop substantially below the annual 6% increase because of the consistent inability of the supply to meet the demand. *Id.*

16. Wall Street J., Oct. 5, 1970, at 1, col. 5 (S.W. ed.).

17. *Id.*

18. NEWSWEEK, Oct. 12, 1970, at 95, col. 3. On the east coast spot market, the cost of residual fuel oil averages $4.10 per barrel as compared with a cost of $2.20 only a year ago. Mayer, *supra* note 3, at 77, col. 1.

19. FORBES, Oct. 15, 1970, at 80, col. 1. The price rise generally has been less spectacular in the electric utility market. The cost of coal rose from $6.02 f.o.b. the plants in 1968 to an estimated $6.50 in 1970. This points out the limiting effect the long-term contract has on prices. *Hearings, supra* note 13, at 44 (statement of Herbert Stein, Council of Economic Advisors).

20. Letter from Aubrey J. Wagner, *supra* note 10.

21. TVA Press Release (July 17, 1970). Duke Power Company's cost per million BTU for coal has risen from $0.28 in 1968 to $0.30 in 1969, to $0.35 in March 1970, and then to $0.38 a month later. It was estimated that the cost would reach $0.42 by the end of 1970. Washington Post, Aug. 24, 1970, at A16, col. 2.

22. *Id.*

disparity between supply and demand at current price levels. Authorities have advanced a multitude of factors to answer the supply question. Of course, the tremendous increase in the demand for energy underlies the entire shortage problem, but the real question is why is the energy industry unable to meet this increased demand, especially in light of the abundant fuel resources still available in the United States. Because these untapped fuel reserves, with the possible exception of natural gas, are still plentiful, the present shortage may properly be called artificial. As of January 1, 1970, there existed 29,631,862,000 barrels of estimated proved reserves of crude oil in the United States alone.[23] Furthermore, proved reserves of natural gas amounted to 275,108,835 million cubic feet in 1970,[24] and reserves for all types of coal, including proved and unproved reserves with a zero to 6000 foot overburden, were estimated at 3,210,060 million tons.[25] These resources are believed sufficient to last 800 to 1000 years at present consumption rates. With these vast reserves, what factors have produced the shortage?

One of the primary reasons advanced for the fuel shortage is the new pollution standards in effect in most major communities. These standards typically require the use of low-sulphur fuels, such as natural gas, residual fuel oil, or low-sulphur coal to reduce the sulphur oxide emissions of major fuel consumers.[26] The suddenness of the conversion to these fuels has not given producers adequate time to seek new sources of supply; furthermore, the shortage of low-sulphur fuels is compounded by the slow increase in domestic production of these products.[27] Residual fuel oil, for example, is considerably less valuable to petroleum companies than higher-priced fuels such as gasoline,[28] and, therefore, it is

23. NATIONAL COAL ASS'N, 1970 BITUMINOUS COAL FACTS 69 [hereinafter cited as 1970 BITUMINOUS COAL FACTS].

24. *Id.*

25. *Id.* at 68. At present, proved recoverable reserves equal 380 billion tons. It is estimated that the total recoverable reserves amount to 1,605 billion tons. *Id.* at 9.

26. The increase in demand for residual (heavy) fuel oil is evidenced by the 18% increase in sales by Humble Oil and Refining Company in 1969. STANDARD OIL COMPANY OF NEW JERSEY, 1969 ANNUAL REPORT 10.

27. *Hearings Before the Subcomm. on Administrative Practice and Procedures of the Senate Comm. on the Judiciary*, 91st Cong., 2d Sess. 62 (1970) (statement of John N. Nassikas, Chairman of the Federal Power Commission). Furthermore, the problem is compounded since the largest reserves of low-sulphur coal are located in the Western States, far from the areas of high coal consumption in the eastern portion of the United States. *Id.*

28. In the New England area in 1968, residual prices per barrel f.o.b. plant varied from a high of $5.04 to a low of $1.74. NATIONAL COAL ASS'N, 1969 STEAM-ELECTRIC PLANT FACTORS 3-5 [hereinafter cited as 1969 STEAM-ELECTRIC PLANT FACTORS]. This price can be contrasted with the average retail price per *gallon* of gasoline which ranges from $0.34 to $0.42. Thus a 42-gallon barrel of gasoline would cost between $16 to $20.

not normally produced in quantities sufficient to meet demand.[29] This forces domestic users to seek their supply from foreign markets and exposes them to the uncertainties inherent in foreign trade. Reliance on foreign sources whose supply may depend more on international relations than consumer demand further increases the possibility of additional fuel shortages in the future.

Oil import quotas also have been attacked as a major contributor to the fuel shortage. Through these quotas, imports of petroleum products are limited to encourage domestic production. Critics claim, however, that this policy deprives domestic users of inexpensive foreign petroleum supplies, forcing them to bid for scarce and more expensive domestic production. In residual fuel oil, which is in shortest supply, this problem has been partially alleviated by a lifting of the quotas for the eastern seaboard and midwestern portion of the country.[30]

The coal industry itself is partially responsible for the fuel shortage. In the mid-1960's, when plans called for 53 percent of all proposed steam-electric generation facilities to be powered by nuclear fuel,[31] the coal industry overestimated the popularity and reliability of atomic energy and discontinued exploitation of new coal reserves. By 1968, however, 63 percent of proposed generation facilities were to be powered by conventional fossil fuels because developmental problems had arisen in the use of nuclear fuels.[32] Not only did the number of generation facilities requiring fossil fuels increase, but many nuclear facilities failed to become operational on schedule. The net result of the combination of these factors has been an unanticipated increase in the need for coal. Since it generally takes two to three years for a coal mine to achieve operational status, this increase in the demand for coal has remained unsatisfied. It also has been claimed that increased exportation of coal to overseas markets—raising total exports to an estimated 60 million tons in 1970[33]—has contributed to the shortage. Even though the coal industry produced an additional 30 million tons of coal in 1970, ten million tons of this additional production were exported.[34] This exported

29. *See* note 6 *supra*.

30. *Hearings, supra* note 13, at 206 (statement of George A. Lincoln, Director of the Office of Emergency Preparedness).

31. FORBES, Nov. 15, 1968, at 55-58.

32. *Id.*

33. Mayer, *supra* note 3, at 77. Exports in 1969 were 56,234,000 tons or approximately 10% of production. 1970 BITUMINOUS COAL FACTS, *supra* note 23, at 54.

34. *Hearings, supra* note 13, at 44 (statement of Herbert Stein, Council of Economic Advisors). Additionally, labor difficulties in 1969 resulted in the loss of 20 million tons of coal production. Mayer, *supra* note 3, at 160.

coal, approximately eleven percent of the national production, consists primarily of high-priced metallurgical coal, which is sold to foreign customers at prices that greatly exceed those domestic users are willing to pay.[35] The economic effect of this export policy, however, may extend beyond the primary consumers of metallurgical coal. Coal producers, because of higher profit margins, may tend to utilize future capital outlays to expand production of metallurgical coal rather than the lower priced coal now consumed by the utilities. Moreover, the new pollution standards are forcing utilities to compete directly for this low-sulphur metallurgical coal, which results in further competition for scarce supplies.

The concomitant of increased exportation has been the lack of adequate transportation facilities to move existing fuel supplies. This problem has been especially acute in the coal industry. In transporting coal to piers for shipment overseas, hopper cars may be idle for up to six weeks awaiting unloading. As many as 20,000 to 30,000 cars, some merely awaiting overseas bidders, may be tied up at a pier at any one time.[36] In addition, the tankers necessary to move oil to the United States from foreign sources have been in short supply, causing spot tanker rates to double in the last two years.[37]

The primary cause of the shortage of natural gas has been the failure to exploit known domestic reserves. Producers contend that profit incentives are not sufficient to stimulate the development of new natural gas wells because of price ceilings set by the Federal Power Commission;[38] significantly, in 1968, consumption of natural gas exceeded new gas discoveries for the first time.[39] Some authorities

35. *Hearings, supra* note 13, at 44 (statement of Herbert Stein, Council of Economic Advisors).

36. FORTUNE, Nov. 1970, at 77. The Interstate Commerce Commission has taken steps to alleviate the hopper car shortage by doubling the demurrage charge for all cars standing idle in loading or unloading zones. Additionally, in a joint statement entitled "The Fuel Situation for the Winter of 1970-71," released on September 29, 1970, Paul McCracken, Chairman of the Council of Economic Advisors, and George A. Lincoln, Director of the Office of Emergency Preparedness, indicated that the ICC will require that general service cars be diverted to movement of coal and that hopper cars be returned within a specified period.

37. Mayer, *supra* note 3, at 76. The closing of the Suez Canal and the break in the Trans-Arabian pipeline have resulted in the increased use of tankers and in their consequent short supply. This has increased sixfold the tankerage required. *Id.*

38. Charles S. Mitchell, chairman and chief executive officer of Cities Service Company, has stated that the real reason for the natural gas shortage is the "unrealistic regulatory practices" in natural gas production. He claimed that unrealistically low prices have created the dilemma of greatly expanding markets while reducing profit incentives for discoveries of more natural gas. Wall Street J., Oct. 7, 1970, at 16, cols. 2-3 (S.W. ed.).

39. NEWSWEEK, Oct. 12, 1970, at 95, col. 3.

suggest, however, that natural gas producers have nothing to lose by delaying natural gas development and forcing a price increase from the FPC.[40] The effectiveness of this alleged stalling tactic has been partially borne out in the present compromise being developed by the FPC, which allows producers to impose a six cent increase over the rate recommended by a recent FPC investigation.[41]

C. *The Market Structure—A Long-Range Contributor to the Energy Crisis*

In addition to the short-range contributors to the energy crisis, some critics have charged that economic concentration in the fuel industry is the primary cause of the crisis.[42] This charge is based on the recent acquisitions of large coal-producing facilities and vast uranium reserves by major oil companies. In essence, the charge is two pronged: (1) the "energy companies" are deliberately withholding production of fuels to drive up prices and improve profit margins; and (2) heavy concentration eliminates the element of competition as a price regulator in the market.

The first contention is questionable. The fuel industry has increased financial outlays in some areas of coal production. Continental Oil, for example, has nearly tripled capital outlays by Consolidation Coal, its wholly owned subsidiary, in the three years it has operated the corporation.[43] The contention has more credence in the area of oil and natural gas production, since oil companies have considerably reduced their capital spending plans. Current estimated capital expenditures are

40. *See* COMPETITION IN THE ENERGY MARKETS, *supra* note 1, at 6.

41. BUS. WEEK, Nov. 11, 1970, at 24, col. 2. Furthermore indications that the industry's tactics are effective came from a recent FPC statement issued after the FPC ended its moratorium on rate increases. The statement said the policy change was prompted by the energy shortage and the "indications of cost increases which have affected the amounts of funds devoted to the industry's exploratory effort." Wall Street J., Oct. 28, 1970, at 5, col. 1 (S.W. ed.).

42. The electric utility industry has been most vocal in this charge. Aubrey J. Wagner, Chairman of the Tennessee Valley Authority, has charged that coal companies are deliberately holding back supplies for a higher profit margin and that prices for fuel supplies have greatly increased in the wake of mergers in the fuel industry. Nashville Tennessean, Oct. 8, 1970, at 1, col. 3; *see* BUS. WEEK, Nov. 21, 1970, at 52, col. 2. As a result of these charges, the Federal Trade Commission has launched an investigation of the antitrust implications of these mergers. Wall Street J., Oct. 14, 1970, at 12, col. 1 (S.W. ed.). Furthermore, the Tennessee Electric Cooperative Association, representing 22 Tennessee cooperatives, voted unanimously to file an antitrust suit against the oil and coal conglomerates and the United Mine Workers Union. Nashville Tennessean, Oct. 22, 1970, at 1, cols. 2-3.

43. Wall Street J., Oct. 20, 1970, at 19, cols. 1-2 (S.W. ed.). Howard Hardesty, senior vice president of Continental Oil, stated that Consolidation Coal has opened 15 new mines in this same period. He claims that if other producers had done the same, there would he a 150 million ton annual surplus of coal supplies. *Id.*

50 million dollars below spending in 1969[44] and 390 million dollars below recent Department of Commerce estimates.[45] Although these figures do not conclusively demonstrate a collusive production slowdown, they do indicate an unusual spending program in light of present fuel shortages. Furthermore, petroleum companies already have announced that natural gas exploration and production will lag because of low profit incentives.[46]

The second criticism—that heavy concentration eliminates the element of competition as a price regulator—presents more complex considerations. The development of "total energy" companies through the acquisition of formerly competitive fuels represents a classic horizontal integration problem. Critics of oil-coal combinations point out that this integration violates the principles and the spirit of antitrust policy and eliminates price regulation found in the competitive market, giving the petroleum companies actual, or at least potential, control over the nation's fuel resources. The result, they claim, will be an emphasis on higher priced fuels, with little or no incentive to reduce prices or manufacture lower cost fuels. These critics also assert that the spectre of monopoly will grow more ominous due to the virtual absence of regulation of the fuel industry.

A charge of this nature against an industry that is the virtual backbone of the American economy merits further investigation. Considered with the multitude of other factors allegedly contributing to the present fuel shortage, it appears that the fuel industry has become a behemoth, incapable of self-regulation and insensitive to the needs of the domestic market. The mere existence of a shortage indicates that the industry needs structural and regulatory changes to make it more responsive to market demand.

1. *Effects of Market Concentration in the Fuel Industry.*—Competition, the mainstay of the nation's economic system, may be viewed as regulation of business activity through the market. The theory of competition operates on the assumption that firms are driven by their own self-interest—the desire to earn profits.[47] In the market, this self-interest is expressed by attracting the customer to the goods and services that a firm provides. In order to earn dependable profits in a

44. OIL AND GAS J., Sept. 14, 1970, at 44. This spending estimate is still above the $5.25 billion invested in plants and equipment in 1968.

45. *Id.*

46. *See* notes 39-41 *supra* and accompanying text.

47. The free enterprise system itself depends on personal incentives, rewarding efficiency and penalizing inefficiency. M. MASSEL, COMPETITION AND MONOPOLY 5 (1962).

competitive market, a particular firm will be compelled to make a more attractive offer to the customer, either through price or product differentiation, or through any other factors that may cause the customer to select the firm's product over its competitor's.[48] Thus, the customer is in a position to exert influence over the market conduct of competing businesses through his power to select from a number of competing products. If the competitive system functions properly, the customer influence will cause the market conduct to be production oriented as well as profit oriented.

In a purely competitive market, the price of a particular product is established by the convergence of supply and demand. A single seller, servicing only a small percentage of the market, is powerless to affect substantially the price of his product by either increasing or decreasing his output. This competitive market structure is altered, however, as the firms producing the product become smaller in number and more oligopolistic. Since a few firms control a large portion of the market in an oligopolistic industry, each of them is very sensitive to the impact that the other firms' actions will have on its business. Thus, if one firm raises its price for a product and if other firms producing similar products do not act accordingly, the firm raising its price will receive a reduced market share. A price decrease that is *met* by the firm's rivals, on the other hand, will not increase the leader's market share but will reduce its profits.[49] To assure his market share and profits, the oligopolist will instead use such devices as seller's agreements, price leadership, and tacit collusion. Using these methods the oligopolist can, by subordinating the public's interest to his desire to maximize profits, establish market price at a monopoly level without the risk of unilateral price change.[50] For these and other reasons, the antitrust policy of the United States has long discouraged oligopolistic concentration. In some industries, the Government has employed the Sherman[51] and Clayton Acts[52] to break up large blocks of power and re-establish a competitive market

48. Price, for example, will usually be the determinative factor in the choice of homogeneous agricultural products, since the consumer will have no other basis to select a supplier. The automobile industry, however, presents a good example of product differentiation competition. Characterized by price leadership, this industry attracts the customer through offerings of performance and style.

49. *See generally* C. WILCOX, PUBLIC POLICIES TOWARD BUSINESS 116-36 (3d ed. 1966).

50. W. FELLNER, COMPETITION AMONG THE FEW (1949); G. STOCKING & M. WATKINS, MONOPOLY AND FREE ENTERPRISE 85-109 (1951). *Contra,* W. BAUMOL, BUSINESS BEHAVIOR, VALUE AND GROWTH 27-82 (1959).

51. 15 U.S.C. §§ 1-7 (1964).

52. 15 U.S.C. §§ 12-27, 44 (1964).

structure,[53] but in others it has imposed comprehensive regulations in an attempt to eliminate the undesirable side effects of concentration.[54]

Economists measure changes in the concentration of a market by means of a concentration ratio.[55] This ratio compares either the absolute size or the production of the top four or eight enterprises in a market—CR-4 or CR-8—to the total output of the market. When the largest eight or fewer firms account for 33 percent or more of the total market output, the structure of the market is generally considered oligopolistic.[56] Measured in terms of the national market and relevant regional markets,[57] there is an overall trend toward concentration in the fuel industry. As indicated by table A,[58] this trend is manifested in the coal industry by a movement toward fewer but larger companies.

TABLE A

TREND TOWARDS LARGE FIRMS IN THE COAL INDUSTRY
Percent Produced by Various Tonnage Groups

Tonnage range	1949	1960	1965	1966	1967	1968
1,000,000 & over	50.46	64.87	68.14	68.94	70.22	71.57
100,000 to 999,999	31.69	22.13	22.49	21.93	22.28	21.21
under 100,000	17.85	13.00	9.37	9.13	7.50	7.22
total tons (million)	438	415	515	534	552	545

53. *See* notes 84-106, 204-09 *infra* and accompanying text.

54. *See* note 385 *infra* and accompanying text.

55. Since the absolute size of a particular firm is irrelevant to market control, other factors must be introduced to reflect the portion of control a particular firm or firms have over the market. The concentration ratio is used for this purpose. In essence, concentration deals with "numbers modified by inequality." Adelman, *Monopoly and Concentration: Comparisons in Time and Space*, in THE ECONOMICS OF ANTITRUST: COMPETITION AND MONOPOLY 45-46 (R. Low ed. 1968).

56. The market is said to be a "Type Two" oligopoly if the CR-8 is greater than 33% but less than 50% and the remainder of the market is unconcentrated. The market is said to be a "Type One" oligopoly if the largest 8 firms account for at least one-half of the total market sales, and the top 20 firms account for 75% of these sales. In a "Type One" oligopoly recognition of interdependence is highly probable. C. KAYSEN & D. TURNER, ANTITRUST POLICY—AN ECONOMIC AND LEGAL ANALYSIS 25-27 (1959).

57. There are many bases from which concentration ratios can be computed, including total assets, sales, number of employees, and total production. Although sales most accurately reflect market power, total production in an extractive industry is an equally valid measure. This is true since among the larger firms there will be little difference between amounts realized from a given quantity of production. *See* R. MOYER, COMPETITION IN THE MIDWESTERN COAL INDUSTRY 65 (1964). Concentration ratios based solely on the national market are somewhat misleading because they do not take into account the limited market area of a particular producer. The regional ratio provides a more reliable figure since it shows the percentage of control held by a producer in the area where he effectively competes.

58. This table is based on computations from data provided by MINING INFORMATIONAL SERVICES, 1970 KEYSTONE COAL INDUSTRY MANUAL 645-47, 470-640 [hereinafter cited as 1970 KEYSTONE COAL INDUSTRY MANUAL].

During the period from 1949 to 1968, there was a 42.4 percent decrease in the number of companies producing more than one million tons of coal. Concentration in the coal industry also is reflected by the high national and regional concentration ratios. In 1969, the four largest coal companies accounted for 31.13 percent of the total national production and 36.25 percent of national noncaptive production.[59] In addition, as table B indicates,[60] the regional ratio of the largest four coal producers to total regional production ranges from 31.5 percent to 100 percent.

TABLE B

REGIONAL CONCENTRATION IN THE COAL INDUSTRY

Region	Total Bituminous Production (1969)	Concentration Ratio (CR-4)
Middle Atlantic	78,375,000	37.62%
East North Central	134,681,000	54.55%
West North Central	10,134,000	71.83%
South Atlantic	173,921,000	32.29%
East South Central	127,650,000	31.50%
West South Central	2,045,000	79.75%
Mountain	20,000,000	43.08%
Pacific	70,000	CR-2 = 100%
National	550,000,000	31.13%

Concentration in the petroleum industry also is apparent from national and regional concentration ratios. In 1959, Kaysen and Turner concluded that the eight largest petroleum producers dominated 52 to 56 percent of the nationwide market. When regional concentration data was computed, the market share of the eight largest firms varied from 48 to 99 percent.[61] The Federal Trade Commission also has acknowledged this trend. A report prepared by the Commission's Bureau on Economics documents the increasing degree of concentration within the industry and concludes that this aggregation of power will profoundly affect the country's entire energy industry in the future.[62]

59. *Id.* at 470-640.

60. *Id.* The Middle Atlantic region includes Maryland, New York, and Pennsylvania; the East North Central region includes Illinois, Indiana, Ohio, Michigan, and Wisconsin; the West North Central region includes Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota; the South Atlantic region includes Delaware, District of Columbia, Florida, Georgia, North Carolina, South Carolina, Virginia, and West Virginia; the East South Central region includes Alabama, Kentucky, Mississippi, and Tennessee; the West South Central region includes Arkansas, Louisiana, Oklahoma, and Texas; the Mountain region includes Arizona, Colorado, Montana, Nevada, New Mexico, Utah, and Wyoming; and the Pacific region includes California, Oregon, and Washington.

61. C. KAYSEN & D. TURNER, *supra* note 56, at 283-84.

62. FEDERAL TRADE COMM'N, ECONOMIC PAPERS 1966-69, at 190 (1969).

2. *Methods to Mitigate the Effect of Market Concentration.*—An oligopolistic fuel producer could be prevented from charging near-monopoly prices by the entry of new producers into the market or by the existence within the market of substitute fuels. Yet when fuels do not compete—when they are not interchangeable—the entry of substitute products into the oligopolist's market is virtually eliminated, leaving only the threat of potential new entrants as a price limiting factor. In addition, if barriers to entry are high, the oligopolistic producers are free to charge all the market will bear, maintaining their market dominance while forcing the consumer to pay monopoly prices.[63]

(a) *Interfuel competition.*—When fuels are competitive, the potential for substitution of fuels acts as an important deterrent to profit maximization by giving the consumer an element of price control through product selection. Thus, although price competition between producers of a particular fuel may be lessened and although barriers to entry may remain high, competition between produeers of alternative fuels will continue. A producer of oil, for example, must remain close to the prevailing market price in order to keep substitute fuels such as coal and gas from making inroads in his share of the market where the fuels compete.

Even this restraint upon the oligopolist may be eliminated, however, if the few firms that control an industry obtain control over substitute products as well. Onee competition between substitutes is destroyed, the consumer can no longer influence prices through product selection. In the extreme, if all competing fuels were owned by one firm, the consumer would have no choice but to deal with that firm. As indicated in table C,[64] this accumulation of economic strength is occurring in the overall fuel market through the acquisition by large petroleum companies of leading coal producers and coal reserves.

63. When barriers are high, the existing producer can maintain his market share by setting his prices just below the level at which entry would be attractive to a potential producer. This result occurs since a lower profit margin is required to stay in business than to enter a new business.

64. 1970 KEYSTONE COAL INDUSTRY MANUAL, *supra* note 58, at 647. The significance of these figures is demonstrated in the following table, based upon pages 470-636 of the Keystone manual, which reveals on a regional basis the percentage of noncaptive coal production controlled by petroleum interests.

TABLE C

PETROLEUM ACQUISITIONS IN THE COAL INDUSTRY

Parent	Producer	1969 Tonnage	1969 Rank
Continental Oil	Consolidation Coal	60,904,000	1
Occidental Petroleum	Island Creek Coal	30,348,797	3
Standard (Ohio)	Old Ben Coal Company	11,997,405	9
Gulf Oil	Pittsburg & Midway	7,615,597	13
Total Tonnage		110,865,799	

Hence, not only do a few petroleum companies presently dominate that industry, but they are fast gaining control of other fuel industries as well—industries that once acted as price regulators by providing the consumer with a choice of fuels. Today, the impact of this power pyramid is directly felt in those areas where it is possible for coal and oil to compete. In the future, its effects surely will be nationwide, not only in terms of prices, but bigness itself. This "bigness" creates the power in a few firms to exclude competition or control price; whether exercised or not, this power can create stagnation and inefficiency within the market.

The evils of interfuel mergers often are not readily apparent because fuels clearly do not compete in certain well-known uses.[65] The

PERCENTAGE OF NONCAPTIVE COAL PRODUCTION CONTROLLED BY PETROLEUM INTERESTS ON A REGIONAL BASIS

Region	Noncaptive Production	Petroleum-Controlled Production	Percent
Middle Atlantic	41,214,075	7,252,695	17.60%
East North Central	130,431,051	31,195,308	23.92%
West North Central	8,615,685	2,514,858	29.19%
South Atlantic	152,476,215	38,654,316	25.35%
East South Central	112,013,540	21,760,361	19.43%
West South Central	2,045,000	6,000	0.29%
Mountain	13,650,685	1,112,566	8.15%
Pacific	70,000	0	0.00%
National (approximately)	460,516,251	102,496,104	22.25%

Petroleum companies control 23.44% of the nation's coal production while the regional control factor varies from 0.0% in the Pacific region to 29.19% in the West North Central region. The combination of these oligopolistic industries confers on the total energy company the power to dominate regional fuel markets, especially in the submarkets where oil and coal are substitute fuels.

65. Statistical evidence indicates, in fact, that petroleum products are beginning to dominate the nation's energy markets. Coal's share of the nation's total energy requirements fell from 67% to 20% from 1920 to 1969. During this same period, crude petroleum's share rose from 15% to 34% and natural gas's from 4% to 32%. In uses where coal was competitive with other fuels, coal's share of the market declined from 59.7% in 1939 to 29.9% in 1969 on a BTU basis. In this same market, the share for natural gas increased from 8.9% to 41.4%. 1970 BITUMINOUS COAL FACTS, *supra* note

transportation field, for example, is dominated by petroleum products. Similarly, fuel demand is captive in the home heating market, in which the consumer can only use the fuel for which his home is adapted.[66] In other uses, however, fuels are virtually interchangeable. In the electric utility industry,[67] for example, many steam-electric plants are now able to burn any of the three major fuels with a minimum of time and expense wasted in conversion.[68]

23, at 53, 55. In fact, one of the only markets coal has been able to dominate is the metallurgical coke market. R. MOYER, *supra* note 57, at 48.

66. Naturally, in those uses that are captively controlled by a fuel, cost is a relatively unimportant factor. Cost, however, as it affects the long-range growth of sales, may still be determinative.

67. In the electric utility industry, demand is elastic in the long run since price will be crucial both in initial fuel choice and in conversion of existing equipment to take advantage of lower price fuels. This is especially true since fuel costs amount to almost 60% of kilowatt-hour charge for electricity. R. MOYER, *supra* note 57, at 57.

68. The extent of these convertible plants was shown in a study of 7 states in the West North Central region of the United States—an area where coal occupies 52% of the market while gas serves 47%. In the following table, based on computations from 1969 STEAM-ELECTRIC PLANT FACTORS, *supra* note 28, at 17-26, it was found that plants that burn only coal account for 20% of the total generating capacity, while those generators with the capacity to burn 2 or 3 fuels comprise approximately 67% of generating capacity.

PLANTS HAVING COAL AND MULTIPLE FUEL BURNING CAPACITIES

	Coal Only		Coal and Other Fuels		Total All Plants	
State	Cap.*	Gen.**	Cap.*	Gen.**	Cap.*	Gen.**
Iowa	444.4	1,528.4	2,284.9	9,668.0	2,729.3	11,196.4
Kan.	0.0	0.0	1,202.2	4,527.1	3,019.4	12,461.4
Minn.	1,198.9	5,186.9	2,043.6	9,373.8	3,275.5	14,607.1
Mo.	1,145.8	5,772.1	3,055.0	12,457.6	4,320.8	18,285.1
Neb.	0.0	0.0	1,217.2	4,233.6	1,530.7	5,212.3
N.D.	585.0	2,640.1	100.0	510.7	687.0	3,150.8
S.D.	40.0	107.5	108.4	353.8	163.9	462.0

* Capacity—Thousands of kilowatt-hours
** Generation—Millions of net kilowatt-hours

Although 86% of the net generation of electricity in this region for 1968 was produced by plants that *could* burn coal, only 57% of this generating capacity in kilowatt-hours was actually produced by coal. When it is taken into account that 24% of this 57% consumption is represented by plants that could *only* burn coal, the effects of competition in those plants capable of burning more than one fuel is even more pronounced. In the same time period, for example, natural gas accounted for 42% of generation, only 2% of which is represented by gas-captive plants. The average cost per BTU during this period in this region, as burned, was $0.276. The comparative figure for gas was $0.254. By way of contrast, in the East North Central region, where 98% of the net generation in 1968 was produced by plants with the capacity of burning coal, this fuel accounted for 90% of total net generation. Although 80% of this generation represents captive coal users, the portion of the remaining generation produced by coal in multifuel plants is higher in this region than in the West North Central.

On a regional basis alone, the study revealed that in New England, 35 of 54 plants were

The electric utility industry also provides a workable basis from which the effects of various fuel policies may be evaluated. The industry serves as a link between the consumer and the fuel industry by passing fuel costs, which are the largest factor in operating expense,[69] directly to the consumers. If generating facilities are located in geographic regions where the delivered cost of the various fuels is substantially the same to the utility, competition between these fuels results in the benefits being passed directly to the consumer of the electricity.[70] In Kansas, for example, the comparative average cost, per million BTU, of fuel burned in plants with a dual capacity was 23.7 cents for gas and 25.1 cents for coal.[71] Consequently, during the period that these prices existed, 75 percent of the consumption by BTU was generated by gas and only 24 percent was produced by coal.[72]

(b) *Potential entrants into the market.*—When interfuel mergers occur in the already concentrated coal and oil markets, the competitive element of product substitution is destroyed, and the potential entry of new producers becomes the only factor limiting oligopolistic control. This factor, however, can be eliminated by high barriers to entry.[73] The entrance of a firm into a market requires either the creation of new

convertible; in the Mid-Atlantic region, 41 of 89 plants were convertible, including 29 coal burning plants located in Pennsylvania, which is a primary coal producing state; in the East North Central region, 36 of 185 plants were convertible; in the West North Central region, 135 of 191 plants were convertible; in the South Atlantic region, 55 of 117 plants were convertible; in the East South Central region, 14 of 46 plants were convertible; in the West South Central region, 64 of 122 plants were convertible; in the Mountain region, 51 of 77 plants were convertible; and in the Pacific region, 38 of 43 plants were convertible. These figures are taken from 1969 STEAM-ELECTRIC PLANT FACTORS, *supra* note 28, at 3-46, 99.

69. In C. PHILLIPS, THE ECONOMICS OF REGULATION 131 (1965), the author presents $R = O + (V - D) r$ as a standard rate formula: R = total revenue required; O = operating costs; V = gross value of all property; D = accrued depreciation on all property; and r = the rate of return. Operating costs comprise the largest variable, and fuel costs are the largest single factor in operating expenses.

70. This is the concept of the geographically limited market wherein the producer of a particular fuel can remain price-competitive with both the producers of the same fuel and producers of substitute fuels that are in the same "product" market. The limits of the geographic market are usually defined in terms of transportation costs. A producer whose transportation costs are high, for example, must offset this cost with lower production costs if his geographic market is to be contiguous with the geographic market for a producer with lower transportation costs. If he cannot lower his production costs, then his high transportation costs will constrict his market to those geographical limits where he can remain price-competitive.

71. 1969 STEAM-ELECTRIC PLANT FACTORS, *supra* note 28, at 19-20.

72. In Connecticut, oil burned in dual capacity plants cost an average of $0.26 per million BTU and accounted for 72% of the total energy by BTU, while coal costing $0.33 produced 27% of the total energy generated by these plants. The high percentage figure for oil probably can be accounted for by the relatively easy access to foreign residual oil through nearby ports. 1969 STEAM-ELECTRIC PLANT FACTORS, *supra* note 28, at 3-4..

73. *See* note 63 *supra* and accompanying text.

facilities for production or the adaptation of existing facilities to a new use. In the case of fuel industries, the acquisition of sufficient reserves, the initial development costs, and the heavy mechanization necessary to take advantage of scale economies require the investment of substantial amounts of money. Additionally, the firm that can overcome the capital requirements will be handicapped because it lacks market outlets, a sales force, and established good will. Furthermore, initial transportation problems may be difficult, if not impossible, to overcome—especially in the petroleum industry.[74] Even coal producers, if faced with developing the coal pipeline and the unit train, may encounter substantial transportation barriers.[75] Long-term contracts, usually made with electric utilities and ranging from ten to thirty years, also may impede entry into the fuel industry. To be awarded a long-term contract, a producer must have sufficient production to provide for all the needs of the consumer. Thus, a producer seeking to enter this market must make substantial capital outlays in order to attain sufficient production capacity to acquire the security of a long-term contract.[76] Furthermore, since most major consumers are already obligated under long-term contracts, these agreements clearly restrict potential entrance into the fuel market. Two examples of the importance of these contracts to a producer are Consolidation Coal, the nation's largest coal company, which has 75 percent of its production tied up in long-term contracts, and Peabody Coal, the second largest producer, which has 80 percent of its coal committed to these contracts.[77] With such high cost barriers to entering the fuel industry, the profit margin must be substantial in order

74. Although it costs only $0.50, or about 15% of wellhead cost, to move a $3.30 barrel of crude oil from Louisiana to New York, the high costs of constructing pipelines are often prohibitive to the potential entrant. Since this method of transportation allows unit costs of operation to decrease inversely with utilization of the line, the established firm has significant cost advantages merely by utilizing an existing pipeline. *See Hearings, supra* note 13, at 43 (statement of Herbert Stein, Council of Economic Advisors); M. DE CHAZEAU & A. KAHN, INTEGRATION AND COMPETITION IN THE PETROLEUM INDUSTRY 69 (1959).

75. Transportation costs for coal comprise a large portion of delivered cost and perhaps account for the fact that coal markets have been limited to those areas with the greatest access to prime coal mines, such as the eastern portion of the country. Although this market may expand in the future because of new methods of transportation, such as the unit train and the coal slurry pipeline, both of these methods require a large initial capital outlay. The Southern Pacific Company, for example, is currently engaged in constructing a coal pipeline from Kayenta, Arizona, to Davis Dam, Nevada, a distance of 273 miles. The total cost is estimated at $35 million. N.Y. Times, July 5, 1969, at 24, col. 3. *See also* FEDERAL POWER COMM'N, NATIONAL POWER SURVEY 61 (1964) [hereinafter cited as POWER SURVEY]; 1970 BITUMINOUS COAL FACTS, *supra* note 23, at 63; H. PERLOFF, E. DUNN, E. LAMPARD, & R. MUTH, REGIONS, RESOURCES, AND ECONOMIC GROWTH 323 (1960).

76. R. MOYER, *supra* note 57, at 131.

77. FORBES, Oct. 15, 1970, at 80.

to attract new producers. Although an existing firm can raise prices to a level that may produce considerable extra profit, the price still may not be sufficiently high to attract new entrants.

Market forces, therefore, cannot be relied upon to alleviate the concentration problem and its actual and potential suppression of competition in the American fuel industries. Giant petroleum and coal firms are already powerful enough within their own industries to prevent competitors from effectual interference with their market control. Fortunately, some regional interfuel competition still exists due to the substitutability of the various fuels. The imminent synthesis of petroleum products from coal will further alleviate the noncompetitive pressures within each of these industries. The advent of efficient coal transportation, moreover, will enable producers to break out of circumscribed markets and extend the benefits of interfuel competition to even more consumers. The present trend toward merger between the producers of substitute products, however, will create a concentration of power that is not limited to a single industry or region, but one that will encompass the national fuel market and eliminate even product substitution as a price regulator. These "total energy" combines apparently are anticipating technological advances that will engender greater competition in the fuel market and are using them to solidify their control through concentration on a nationwide level.

America's traditional solution to concentration and suppression of competition has been through antitrust legislation. Possible application of the laws to the fuel industry raises several questions. Are the present laws adequate? Are they desirable? What alternatives to these laws are available? And finally, what should be this country's national fuel policy and how should it be enforced?

III. Use of Antitrust Laws To Restore Competition in the Energy Market

American antitrust laws reflect a strong commitment to economic freedom by recognizing that optimum use and efficient allocation of resources can best be obtained under competitive conditions.[78] These statutes seek to promote competition by preserving a large number and variety of decision-making units in the economy to insure innovation, experimentation, growth at a stable rate, and equitable distribution of income. Perpetuation of this competitive structure makes possible the

78. Dep't of Justice, Report of the White House Task Force on Antitrust Policy at I-1 (1969) [hereinafter cited as White House Report].

maximum choice of products at lower cost and permits the movement of resources into fields of greatest economic return.[79]

Any trend toward greater economic concentration is inimical to this antitrust policy. A highly concentrated industry confers upon its constituent members market power that may be used to set prices and outputs in order to maximize the profits of the industry and short-circuit the role of competition.[80] Section 2 of the Sherman Act[81] and section 7 of the Clayton Act[82] are the principal antitrust statutes used to combat an anticompetitive market structure. As corrective devices for economic concentration, these statutes should have the advantage of encouraging self-regulation without continuous government intervention and control. Antitrust statutes, of course, are not a complete panacea for market concentration problems. Lengthy and expensive litigation, evidentiary problems, and inadequate remedies are just a few of the imperfections that limit the effectiveness of present antitrust laws. This section of the Special Project will investigate the efficacy of employing current antitrust statutes against economic concentration in the fuel industries. The first portion of this section, dealing with the Sherman Act, is concerned primarily with the Act's applicability to present and future intrafuel concentration. The second segment focuses for the most part on the Clayton Act implications of the recent interfuel combinations.

A. Application of the Sherman Act to the Energy Market

Prior to passage of the Sherman Act in 1890, the public admired large industrial enterprises, naively believing that any increase in size meant corresponding increase in efficiency.[83] With this public support, rapid expansion was easily accomplished through mergers, which

79. *Id.*

80. C. KAYSEN & D. TURNER, *supra* note 56, at 104-05.

81. 15 U.S.C. § 2 (1964) provides: "Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with the foreign nations, shall be deemed guilty of a misdemeanor . . . ."

82. 15 U.S.C. § 18 (1964) provides: "No corporation engaged in commerce shall acquire, directly or indirectly, the whole or any part of the stock or other share capital and no corporation subject to the jurisdiction of the Federal Trade Commission shall acquire the whole or any part of the assets of another corporation engaged also in commeree, where in any line of commerce in any section of the country, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly."

83. H. THORELLI, THE FEDERAL ANTITRUST POLICY 71, 111 (1955). Between 1859 and 1889, with the development of industrialism, the number of wage earners in manufacturing increased 300% and the economic return increased almost 500%. U.S. CENSUS BUREAU, HISTORICAL STATISTICS OF THE UNITED STATES, 1789-1945, at 179, 234 (1949).

increased the economic power of a few large manufacturing combinations.[84] The public's admiration soon waned, however, due to the predatory practices and cutthroat methods of competition typified by the activities of enterprises like the Standard Oil Company.[85] As public reaction against "trusts" and "monopolies" heightened, it became clear that congressional action was necessary to deal with the tendency of monopolistic enterprises to "crush out" competition.[86] The answer was the Sherman Antitrust Act, which contains two fundamental provisions: Section 1 prohibits contracts, combinations, and conspiracies in restraint of trade;[87] section 2 makes it illegal to monopolize or attempt to monopolize any part of interstate commerce.[88]

Big business immediately labelled the Act vague, impractical, innocuous, and unenforceable.[89] Indeed, actions of the Department of Justice and the courts during the first ten years following passage of the Act seemed to confirm the optimism of the trust and business leaders.[90] Lack of funds, absence of administrative leadership in the antitrust field, and the general ill-preparedness of the Department of Justice to assume the complicated administration of the Act were responsible for decisions limiting the effectiveness of the new law. In the *Sugar Trust* case,[91] for

84. H. THORELLI, *supra* note 83, at 72-85. *See also* R. CAVES, AMERICAN INDUSTRY: STRUCTURE, CONDUCT, PERFORMANCE 57 (2d ed. 1967).

85. The Standard Oil enterprise obtained preferential treatment from railroads, engaged in several "unfair practices" against competing pipelines, participated in local price cutting to suppress competition, set up bogus independents, and was guilty of industrial espionage. Standard Oil Co. v. United States, 221 U.S. 1 (1911).

86. E. KINTNER, AN ANTITRUST PRIMER 12 (1967).

87. 15 U.S.C. § 1 (1964) provides: "Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal . . . ."

88. *See* note 81 *supra.*

89. This attitude probably accounts for the fact that the statute was passed, with only one dissenting vote, by a Congress elected on the Republican high-tariff platform. 1 S. WHITNEY, ANTITRUST POLICIES 5 (1958). In legal circles, the statute was greeted by a variety of responses. An article in the *Harvard Law Review* shortly after the Sherman Act became law contained the following passage: "It is impossible now to say what the effect of the Act, as interpreted by the courts, will finally be . . . . [T]here are grave doubts whether, indeed, there can be any construction of it such as to render it constitutional. . . . But one conclusion, upon the whole, can be reached. The Act is necessarily vague . . . and like words, therefore, have been used to express it." Dana, *"Monopoly" Under the National Antitrust Act,* 7 HARV. L. REV. 338, 355 (1894).

90. Between 1890 and 1903, only 23 public cases were instituted under the Sherman Act, and the vast majority of these were handled in a haphazard, half hearted manner by the Justice Department. Five of the 23 cases were in the coal production and distribution industry. H. THORELLI, *supra* note 83, at 589-90.

91. United States v. E.C. Knight Co., 156 U.S. 1 (1895) (through stock purchases in a number of sugar companies, American Sugar Refining Company had gained control of the vast majority of the sugar refineries in the United States).

example, the Supreme Court, by establishing the artful distinction between manufacture and commerce,[92] so limited the Act that manufacturing monopolies went uncontrolled and unpunished.[93] Thus, despite the new legislation, the nation experienced a "consolidation craze," during which the number of new combinations nearly tripled, and total authorized capital stock quadrupled.[94]

A stock market panic in 1903, prompted by a series of spectacular trust failures, again signaled the public's withdrawal of confidence in the efficacy of large-scale combinations.[95] Armed with public opinion, special congressional funds for antitrust enforcement,[96] and the new power to grant immunity to persons testifying or producing evidence in antitrust cases,[97] the Justice Department launched a vigorous attack on the Northern Securities Company[98] which culminated in the first major case under the Sherman Act. In *Northern Securities Co. v. United States*,[99] the Supreme Court upheld the conviction of the company and its directors for violating section 2. By its decision, the Court overruled the idea that constitutional provisions relating to freedom of contract and rights of property could be invoked in support of attempts to monopolize.[100] Although the *Northern Securities* decision spelled the end of section 2's impotency, it failed to establish any guidelines for the

92. *Id.* at 13; *see* H. THORELLI, *supra* note 83, at 598-99.

93. The Government presented its case in a manner that precluded any attempt by the Court to reach a more incisive conclusion. H. THORELLI, *supra* note 83, at 598-99.

94. *Id.* at 294-304. "Between 1890 and 1897 there were 84 new combinations with total authorized stock capital of $1 billion; but between 1898 and 1902 there were 189 new combinations, with capital of $4 billion." *Id.* at 294.

95. H. THORELLI, *supra* note 83, at 560.

96. H.R. Res. 372, 57th Cong., 2d Sess., 36 CONG. REC. 411-12 (1903). "For the purpose of enforcing the antitrust laws of the United States, and to enable the Attorney General to prosecute suits . . . , the sum of $500,000 . . . ; to be expended under the Attorney General . . . ." *Id.* Although this appropriation may seem small by present standards, it was twice as large as the annual appropriation for the entire administration of the Justice Department at that time. *See* H. THORELLI, *supra* note 83, at 561.

97. "[N]o person shall be prosecuted or be subject to any penalty or forfeiture for or on account of any transaction, matter, or thing concerning which he may testify or produce evidence, documentary or otherwise, in any proceeding, suit, or prosecution under said acts. . . ." H.R. Res. 372, 57th Cong., 2d Sess., 36 CONG. REC. 412 (1903).

98. This era of "trust busting" was initiated by a press release from the Attorney General indicating the intention of the Government to begin proceeding against the Northern Securities Company. N.Y. Times, Feb. 20, 1902, at 1, col. 3.

99. 193 U.S. 197 (1904). In this case, the Government proceeded against not only the largest holding company yet established, but also 3 individual defendants who personified the popular idea of "big business" and "high finance": J. Pierpont Morgan, Edward H. Harriman, and James J. Hill.

100. *Id.* at 332; *see* Langdell, *The Northern Securities Case Under a New Aspect*, 17 HARV. L. REV. 41 (1904) (discussion of the circuit court opinion).

Act's future application. In subsequent years, courts still have not developed standards based on the impact of monopolistic activity on the market structure, but instead have adopted a case-by-case approach to section 2, conditioning the violation upon the individual anticompetitive behavior of the firms involved.[101] Section 2 has been described, much like the due process clause of the Constitution,[102] as an open mandate to the courts rather than specific legislation designed to deal with a specific problem. Thus, section 2 has never gained the definitional accuracy necessary for consistent application. Furthermore, although the section may be an open mandate to the courts, it has not been efficiently exercised on a market-wide basis in the absence of instigation by the Justice Department.[103]

It cannot be said that the reasoning and result of one court's application of section 2 to an industry in a given situation would necessarily apply to another industry in a similar situation. Instead, the trier of fact must make ad hoc judgments on economic issues guided by the section's general standards and broad policy goals and colored by political considerations.[104] Many times these issues exceed the trier's capacity to evaluate because they involve subjective determinations of motive and intent—which are elusive and only marginally relevant to the central issue of market structure—and indirect measurement of competitive behavior through an evaluation of performance.[105] This ad hoc approach has expanded the scope and complexity of Sherman antitrust suits and has made decisions less like precedents and more like pieces of a jigsaw puzzle that cannot be fitted correctly into a single pattern.[106] The structure of the fuel industries, therefore, must be measured by each relevant principle before the potential effectiveness of the Act's regulatory power in this area of intrafuel concentration can be evaluated.

1. *The Standard Oil Principle.*—In 1911 the Supreme Court in *United States v. Standard Oil Co.*,[107] ushered in a new era of antitrust

101. *See* Austern, *Problems and Prospects in Antitrust Policy-I*, in PERSPECTIVES ON ANTITRUST POLICY 10 (A. Phillips ed. 1965).

102. *See* R. CAVES, *supra* note 84, at 58.

103. *See generally id.* at 65-68.

104. WHITE HOUSE REPORT, *supra* note 78, at 1-6. *See also Sections 1 and 2 of the Sherman Act Generally: Developments at Large and Portents of Things to Come*, 37 ANTITRUST L.J. 657, 661-62 (1967-68) (panel discussion—statement by Victor H. Kramer).

105. WHITE HOUSE REPORT, *supra* note 78, at 1-6.

106. Judge Wyzanski used this apt metaphor in describing the problems of precedent he faced in applying the Sherman Act to the United Shoe Monopoly. *See* United States v. United Shoe Mach. Corp., 110 F. Supp. 295, 342 (D. Mass. 1953), *aff'd per curiam*, 347 U.S. 521 (1954).

107. 221 U.S. 1 (1911).

enforcement by establishing the "rule of reason" in an attempt to give some uniformity to the application of the Sherman Act. The Government decided to prosecute Standard Oil under both sections of the Sherman Act, believing that its predatory activities clearly violated section 1[108] and that if any industry had achieved the dimensions necessary to violate section 2, it was Standard Oil.[109] The Government's beliefs were well founded. Standard of Ohio had managed to dominate the entire petroleum industry by pressuring competitors either to join the enterprise or be driven out of business by losing preferential rates and rebates from the railroads controlled by Standard.[110] By the turn of the century, when Standard of New Jersey was established as a holding company to replace the Standard of Ohio trust, the organization began to control other forms of oil transport, such as pipelines, until it effectively dominated 90 percent of the petroleum industry.[111] Because of these factors, the trial court awarded a verdict to the Government, emphasizing monopoly and the intent to monopolize rather than the alleged unfair practices.[112] On appeal, the Supreme Court upheld the judgment and announced the celebrated "rule of reason" as the standard against which the literal sanctions of the Sherman Act were to be weighed. Much simplified, this rule read into the Sherman Act the word "unreasonable" as modifying "restraint of trade" in section 1,[113] making only "unreasonable" restraints of trade reachable under the Act. Although the rule of reason may have given some uniformity to the application of section 1, it also may have had a negative effect on the potential application of the Act, and section 2 in particular, to the kind of concentration found in the fuel industry today. By conditioning the Act's application upon a finding of unreasonableness, the Court emphasized examination of business behavior rather than the structure of the industry as a test of monopoly under section 2. Since the statutory language of section 1, and not section 2, deals directly with the reasonableness of business behavior, the Court, in essence, was hinging a violation of section 2 upon the finding of a section 1 violation.[114] Thus,

108. *See* notes 85 & 86 *supra* and accompanying text.

109. 221 U.S. at 71-77 n.1.

110. 1. STELZER, SELECTED ANTITRUST CASES: LANDMARK DECISIONS 3 (3d ed. 1966).

111. *Id.* at 4.

112. United States v. Standard Oil Co., 173 F. 177, 191 (E.D. Mo. 1909).

113. Justice White argued that words in a statute must be presumed to have their common law meaning in the absence of contrary evidence. In the case of the Sherman Act, common law precedents gave validity to the theory that only unreasonable restraints of trade were to be prohibited. 221 U.S. at 51. Justice Harlan dissented, emphasizing the trouble the courts would have deciding which restraints were reasonable. *Id.* at 187-91.

114. This concept was actually enunciated in United States v. Columbia Steel Co., 334 U.S.

under the *Standard Oil* rationale, an industry probably will not be in violation of section 2, despite its control of the market, unless the court finds that it engaged in unreasonable anticompetitive behavior leading to the acquisition or maintenance of its monopoly power.[115] Since the Supreme Court has designated certain behavior illegal "per se" under section 1,[116] the Antitrust Division of the Justice Department generally has been unwilling to expend its limited funds and manpower on cases not involving per se violations because it is much harder to obtain convictions in those areas.[117] The "reasonableness" test, therefore, has limited utility in dealing with monopolistic conditions in most modern industries because many corporations of monopolistic or oligopolistic proportions can either avoid or conceal this per se behavior and escape the Sherman Act's sanctions altogether.[118] These problems can be demonstrated readily in the fuel industry. It would be difficult, for example, to find evidence substantiating the many rumors and indications that coal producers deliberately conspire to break delivery contracts and withhold coal from the market to force higher prices.[119] It is just as unlikely that the major oil companies could be convicted of "price fixing" even though their crude oil prices fluctuate with surprising uniformity.[120] These kinds of activity are inevitable results of

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495, 525 n.24 (1948), and United States v. Griffith, 334 U.S. 100, 106 (1948). *See also* Arant, *Section 2 of the Sherman Act*, 37 ANTITRUST L.J. 643, 644-45 (1967-68).

115. Unfortunately, the *Standard Oil* opinion seems to have relegated § 2 to a supplemental role. "And a consideration of the test of the second section serves to establish that it was intended to supplement the first and to make sure that by no possible guise could the public policy embodied in the first section be frustrated or evaded." 221 U.S. at 60. This theory has been confirmed by the Justice Department's reliance on § 1. *See* notes 116 & 118 *infra* and accompanying text.

116. *E.g.*, Timken Roller Bearing Co. v. United States, 341 U.S. 593 (1951) (holding any scheme of market division illegal per se); International Salt Co. v. United States, 332 U.S. 392 (1947) (establishing the per se illegality of certain tying arrangements); United States v. Socony-Vacuum Oil Co., 310 U.S. 150 (1940) (applying the term "per se" to a flat rule of illegality for price fixing); United States v. Trenton Potteries Co., 273 U.S. 392 (1927) (convicting the defendant of price fixing without regard to the reasonableness of the price, the good intentions of the parties, or the actual raising or lowering of the prices).

117. For a detailed discussion of this area and its recent developments see Flinn, Parsons, Poul, Snell, & Weber, *The Per Se Rule*, 38 ANTITRUST L.J. 731 (1968-69).

118. "Corporations are extremely aware of the implications of their actions if they have any sizeable share of the market and are well advised by council . . . . [I]t is very difficult . . . to find evidence of the sort that frequently was found in the earlier Section 2 cases." *Hearings on H.R. 13 Before Subcomm. No. 6 of the House Comm. on Small Business*, 89th Cong., 1st Sess. 33 (1965). The Chief Public Counsel of Legislation Section, Antitrust Division of the Department of Justice, testified before a House Committee that the reason the Government had not brought more cases under § 2 from 1955 to 1965 was that "it is getting more and more difficult to prove violations of § 2." *Id.*

119. *Hearings, supra* note 13, at 143-44 (statement of Aubrey J. Wagner, Chairman of the Tennessee Valley Authority).

120. Wall Street J., Nov. 12, 1970, at 3, col. 1 (S.W. ed.).

the monopoly power that exists within the two industries.[121] Neither these devices nor the anticompetitive conditions in which they thrive, however, can be eliminated by a principle that conditions the application of section 2 on the behavior of a few firms rather than on the market structure that has triggered this behavior. Fortunately, later cases have indicated that section 2 was not entirely undermined by *Standard Oil*.[122]

2. *The Alcoa Principle.*—In *United States v. Aluminum Co. of America*,[123] the Second Circuit established a legal principle governing single firm monopolies that is in sharp contrast with the section 2 requirements developed by *Standard Oil* 35 years earlier.[124] Alcoa clearly held a dominant position in the aluminum market,[125] but it was a position resulting from internal growth rather than from any predatory activity, apparent wrongdoings, or elimination of competitors. It did not exert its power to extract more than a fair profit from the consumer, nor did it have a specific intent to exclude potential competitors.[126] Despite these facts, the court found that Alcoa's continued occupation of the market could have resulted only from a persistent determination to maintain control.[127] Reasoning that the intended objective of the Sherman Act is to preserve an industrial organization of small competitive units,[128] the court concluded that the maintenance of a single firm monopoly was sufficient to bring the company within section 2 despite Alcoa's good faith.[129]

The majority's diminished concern with predatory practices and its emphasis upon concentration and potential to control suggests a

121. *See generally* Comment, *Making the Oil Industry Competitive—Problems and Solutions: I*, 5 HOUSTON L. REV. 315 (1967-68).

122. United States v. United Shoe Mach. Corp., 347 U.S. 521 (1954); *see* notes 123, 125-30, 138-46 *infra* and accompanying text; United States v. Aluminum Co. of America, 148 F.2d 416 (2d Cir. 1945).

123. 148 F.2d 416 (2d Cir. 1945). In this case, the circuit court was the court of last resort since the Supreme Court did not have a quorum of 6 justices qualified to hear the case.

124. *See* notes 107-15 *supra* and accompanying text.

125. Alcoa was found to control 90% of the aluminum market. 148 F.2d at 424.

126. *Id.* at 427. *See generally* Note, *Monopolizing Under Section 2 of the Sherman Act*, 30 U. PITT. L. REV. 715, 717 (1968-69).

127. Although the court was willing to admit that Alcoa might originally have been the "passive beneficiary" of a monopoly because of the involuntary elimination of competition by operative economic forces, Alcoa's "continued and undisturbed control did not fall undesigned into its lap; obviously it could not have done so." 148 F.2d at 431.

128. *Id.* at 427. The court emphasized that the purpose of maintaining a system of small firms dependent on their own skill for success was not only for economic reasons, but also for its "indirect social and moral effect."

129. "'Alcoa' meant to keep, and did keep, that complete and exclusive hold upon the ingot market with which it started. That was to 'monopolize' that market, however innocently it otherwise proceeded." *Id.* at 432.

standard that could bring oil and coal industries within the scope of section 2 if applied on a multifirm basis. The majority opinion showed this heightened interest in market structure by intimating that a market share of 65 percent would be sufficient to satisfy the "monopoly power" requirement of section 2.[130] This statement can be supported by basic economic theories.[131] Many economists feel that if the eight largest firms in a given industry control 33 percent or more of the market, the structure of the market is oligopolistic and generates the same problems, such as price inflexibility, as those created by a single firm monopoly.[132] In 1969 the eight largest coal producers accounted for more than 50 percent of the nation's coal production and for up to 100 percent in some regional markets.[133] In addition, the eight largest oil companies supplied about 54 percent of the nationwide oil market, while their regional market concentration varied from 48 to 99 percent.[134] It would appear that "monopoly power" as defined by the *Alcoa* rationale, exists in both of these industries—if not on the national level, then clearly in certain regional markets.[135] This "monopoly power" is no less damaging because it is vested in several firms rather than in a single firm such as Alcoa.

Unfortunately, the impact of the *Alcoa* theory has been sharply curtailed by the reluctance of most courts to accept the Second Circuit's broad prohibition of individual monopoly.[136] Furthermore, no court has been willing to extend the single firm monopoly concept to multifirm "monopoly power" without a clear showing of conspiracy.[137] As a result, it is unlikely that the potential of the *Alcoa* principle will be fully realized as a basis for attacking the continued concentration in the oil and coal industries.

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130. *Id.* at 424.

131. *See* C. KAYSEN & D. TURNER, *supra* note 56, at 107.

132. *See* note 56 *supra*.

133. These figures were compiled from 1970 KEYSTONE COAL INDUSTRY MANUAL, *supra* note 58, at 365, 647.

134. *See* note 56 *supra* and accompanying text.

135. One should note that under present Sherman Act application the market need not be nationwide. A product or service can be effectively monopolized although provided by different firms in different areas of the country, if buyers in one area are prevented by transportation or other barriers from shopping among the firms. *See* Posner, *Natural Monopoly and Its Regulation*, 21 STAN. L. REV. 548 n.1 (1969).

136. *E.g.*, Times-Picayune Publishing Co. v. United States, 345 U.S. 594 (1953) (allowing defendants to escape liability under § 2 because there had been no showing of the required intent); United States v. Columbia Steel Co., 334 U.S. 495 (1947) (recognizing that percentage of market is not the decisive question in determining whether a monopoly exists); *see* Cox, *Competition and Section 2 of the Sherman Act*, 27 ABA ANTITRUST SECTION 72, 80 (1965).

137. COX, *supra* note 136, at 81.

3. *The United Shoe Case: A Compromise.*—In *United States v. United Shoe Machinery Corp.*,[138] a federal district court modified *Alcoa's* broad approach by providing that a violation of section 2 will not occur unless a firm or firms with monopoly power have engaged in practices that, though regarded as legal, have restricted the opportunities of actual and potential competitors.[139] The case arose because United Shoe, which controlled 80 percent of the shoe machinery market, would offer its products only on long-term leases that included free repair service and more favorable terms if eventual replacement were by a United machine. These leases forced United Shoe's potential competitors to establish prohibitively expensive repair services, seriously deterred consumers from disposing of a United machine and acquiring one from a competitor, and prevented the creation of a second-hand market, which would have acted as an unwanted check on United Shoe's leasing price.[140] The court found that these practices created unnatural barriers that excluded potential competitors from the market and furthered the dominance of a particular firm.[141]

Relying considerably on the reasoning in *Alcoa*, the court in *United Shoe* established a two-step approach. To follow this approach, a court must initially examine the level of market concentration to determine whether monopoly power exists. The court then must determine if the dominant firm or firms are engaging in any activity that perpetuates this power.[142] Many courts prefer this approach since it is less expansive than the *Alcoa* principle, but is still sufficiently inclusive to reach companies sharing monopoly power.[143]

(a) *The petroleum industry—state prorationing.*—Although the individual firm monopoly presented in the *United Shoe* case does not exist in the oil industry, the court's rationale still can be applied. Taken as a group, the largest oil producing firms have a tight oligopolistic structure that has created a highly concentrated market on a regional

138. 110 F. Supp. 295 (D. Mass. 1953), *aff'd per curiam*, 347 U.S. 521 (1954).

139. *Id.* at 343.

140. *See generally*, C. KAYSEN, UNITED STATES V. UNITED SHOE MACHINERY CORPORATION (1956).

141. "They are contracts, arrangements, and policies which, instead of encouraging competition based on pure merit, further dominance of a particular firm. In this sense, they are unnatural barriers. . . ." 110 F. Supp. at 344-45.

142. *See* Cox, *supra* note 136, at 82 n.33. *See also* 110 F. Supp. at 343 n.1.

143. Under this approach, a company that controls a very high market percentage would face a presumption of monopolization under § 2, but a company possessing a somewhat lower percentage of the market would at least have to have the power of price control to exclude competitors. 110 F. Supp. at 343 n.1.

and, to some degree, a national basis.[144] The market control power vested in these major oil companies is itself probably sufficient to satisfy the liberal *Alcoa* test. The industry's culpability is increased by the kind of activities the industry uses to maintain market control[145]—activities that cannot be reached through section 1[146] and therefore do not fall within the confines of *Standard Oil*. These activities, however, may be sufficient to satisfy the *United Shoe* rationale.[147]

A clear example of the industry's practices can be observed in the 29 oil-producing states that have established commissions to regulate the amount of crude oil that can be produced within the state in a given period of time.[148] These state commissions, originating under the auspices of the oil companies, are staffed largely by past executives in the oil industry.[149] A typical example is the Texas Railroad Commission, which has been described as "the most powerful state administrative agency in the United States;"[150] this agency alone controls or regulates motor carriers, railroads, pipe lines, gas utilities, and close to one-half of the nation's oil.[151] These agencies set production "allowables" according to "nominations" from the major crude oil producers and purchasers. Thus, in effect, the oil companies tell the agencies how much crude oil they require in any 30-day period, and production is balanced accordingly.[152] Ostensibly designed as a conservation measure, the purpose of this prorationing system in reality has been to regulate the supply of oil available to the market, controlling, within limits, the price paid for oil. The Bureau of Mines obligingly facilitates the control of the regional and national markets by furnishing detailed data regarding monthly estimates of "the amount of oil of each state which it is anticipated the total market will require during the forthcoming period."[153] Although this prorationing practice would appear to be open

144. *See* notes 56 & 61 *supra* and accompanying text.

145. *See* notes 152 & 163 *infra* and accompanying text.

146. *See* note 155 *infra* and accompanying text. Section 1, however, has been used to attack restraints of trade at the retail gasoline end of the industry in the form of tying arrangements, price fixing, and market allocation.

147. 110 F. Supp. at 342.

148. *See generally* Note, *Administrative Regulation of Petroleum Production*, 59 HARV. L. REV. 1142 (1946).

149. Lobel, *Red, White, Blue & Gold: The Oil Import Quotas*, WASHINGTON MONTHLY, Aug. 1970, at 11.

150. Walden, *Antitrust in the Positive State*, 41 TEXAS L. REV. 741, 778 (1963).

151. *See* Davis & Wilbern, *Administrative Control of Oil Production in Texas*, 22 TEXAS L. REV. 149 (1944).

152. *See* BUS. WEEK, Nov. 7, 1970, at 54, col. 1.

153. Walden, *supra* note 150, at 780.

to a section 1 attack on several grounds,[154] the federal government has tacitly exempted the activity through the 1933 Connally Hot Oil Act,[155] which makes it illegal to transport oil produced in excess of state allowables across state lines. The Senate Small Business Committee appropriately summed up the prorationing activities in the following manner: "No single item is in itself controlling; taken together they form a perfect pattern of monopolistic control over oil production, the distribution thereof among refiners and distributors, and ultimately the price paid by the public."[156] In essence, state agencies, under the purview of the oil industry leaders, are creating results that, if privately arranged, would violate the Sherman Act.

Although prorationing probably is not subject to direct Sherman Act attack,[157] it has the effect of maintaining the power to monopolize required by the *United Shoe* court for a violation of section 2. In practice, prorationing enables the major companies to maintain monopoly power and exclude competition by setting prices at a level that may be high enough to produce substantial profits, but not sufficiently high to attract new entries. It is not necessary for a practice that "maintains" the power to monopolize to be illegal, so long as it fosters the illegal result. This standard was demonstrated in both the *Alcoa*[158] and the *United Shoe*[159] cases when perfectly normal, prudent, nonpredatory business practices were censured as activities that helped maintain a monopolistic structure within a given industry. Consequently, the two requirements held, in *United Shoe*,[160] to be necessary for a section 2 violation are present in the oil industry: the power to monopolize and the presence of practices that maintain this power.

(b) *The coal industry—long-term contracts.*—Although the coal industry has not enjoyed the governmental favors granted the oil

154. On its face, this activity falls within either the § 1 "price-fixing" concept or one of the § 1 "division of market" or merger violations. *See* Keane, *Section 1 of the Sherman Act*, 37 ANTITRUST L.J. 632, 634 (1968).

155. 15 U.S.C. §§ 715-715m (1964).

156. S. REP. No. 25, 81st Cong., 1st Sess. 13 (1949).

157. The principal cases in this area seem to indicate that the state agencies are not subject to federal antitrust laws. A judicially created exemption can be presumed from Eastern R.R. Presidents Conference v. Noerr Motor Freight, Inc., 365 U.S. 127 (1961), which justified the antitrust exemption on the basis of need for uninhibited communication to state agency officials, and Parker v. Brown, 317 U.S. 341 (1943), which created an antitrust exemption in order to preserve noninterference with state regulation.

158. *See* note 123 *supra* and accompanying text.

159. 110 F. Supp. at 343-45.

160. *Id.* at 342-45.

industry,[161] the leading coal firms also have developed practices that effectively maintain market control and create barriers for new entries into the industry.[162] The use of long-term contracts, for example, is a well established exclusionary device in the industry.[163] These contracts, ranging from 10 to 30 years, have a dual exclusionary effect. First, a new producer seeking entry into the coal market must make substantial capital outlays to attain immediately a production capacity sufficient to fulfill these long-range requirement contracts.[164] Secondly, a potential new entrant into the market is faced with a highly restricted group of customers since most coal consumers are already obligated under these contracts.[165]

There is an interesting parallel between long-term coal contracts and the ten-year leases on which the court focused its attention in convicting the United Shoe Company. The court pointed out that United Shoe's leases were normal and natural because they were "honestly industrial."[166] Although this kind of activity was a long-standing tradition in the industry, it "represented something more than . . . the employment of those techniques . . . which a competitive society must foster."[167] Like the prorationing activities in the oil industry, the long-term contracts in the coal industry represent the kind of unnatural barrier prohibited by the section 2 principle established in *United Shoe*.

4. *The Theory of Shared Monopoly.*—The exclusionary practices used by the fuel industry will violate section 2 only if the shared monopoly power prevalent in this industry fits within the individual monopoly standard enunciated in *United Shoe*.[168] It is submitted that the same considerations and economic reasons that prompted section 2's

161. *See* Walden, *supra* note 150, at 780. The protection devices that have aided the oil industry include: (1) tax incentives that have sustained the industry since 1926; (2) the prorationing system that has kept surplus crude oil off the market since 1933; and (3) the import quotas that have insulated domestic producers from foreign pressures for the past decade. BUS. WEEK, May 17, 1969, at 99.

162. An obvious result of these high barriers to entry is the failure of the nationwide production of coal to keep pace with expanding consumption. *Hearings, supra* note 13, at 145-46. (statement of Aubrey J. Wagner, Chairman of the Tennessee Valley Authority).

163. *Id.*; *see* R. MOYER, *supra* note 57, at 130-37 (1964); FORBES, Oct. 15, 1970, at 80. *See also* Nashville Tennessean, Oct. 8, 1970, at 1, col. 3.

164. R. MOYER, *supra* note 57, at 131-32.

165. *Id.* at 132.

166. United States v. United Shoe Mach. Corp., 110 F. Supp. 295, 344 (D. Mass. 1953); *cf.* United States v. Aluminum Co. of America, 148 F.2d 416, 431 (2d Cir. 1945). For an interesting comment on this phraseology see Cox, *supra* note 136, at 72, 79 (1965).

167. 110 F. Supp. at 344.

168. The principles previously discussed were developed in the context of an application of § 2 to a single firm monopoly.

application to individual monopoly power in *United Shoe* exist in a shared monopoly situation. In both instances, price competition tends to lessen, price-cost margins increase, inefficiency and misallocation of economic resources often occur, and technological progress is considerably slowed.[169] The only real difference lies in how the power is exercised. In an individual monopoly, one firm can unilaterally use its market control without interference from other producers. Firms sharing monopoly power, on the other hand, must operate with express or tacit collusion to exercise the same power effectively. Although there is always the danger that one firm may refuse to help exercise this power, the probability that it will be exercised is sufficient to merit sanctioning the aggregation of shared monopoly power. Thus when each of the companies effectively sharing monopoly power has engaged in conduct that unnecessarily excludes competitors or otherwise maintains monopolistic conditions, it is logical and appropriate to charge each with having individually "monopolized" in violation of section 2. "Each has obtained and maintained monopoly power—real, though shared—to which factors other than skill, foresight, industry, and the like have contributed."[170]

The Supreme Court in *American Tobacco Co. v. United States,*[171] had an opportunity to decide whether individual and shared monopoly power warrant similar antitrust treatment. The case involved the activities of three totally separate companies that together controlled nearly 68 percent of the national cigarette market.[172] There was no evidence of any actual conspiracy or other section 1 violation that would have brought the companies within the *Standard Oil* principle.[173] Although the Court recognized that the evils inherent in an individual monopoly also exist when the power to control is in a few,[174] it refused to apply a rationale similar to *United Shoe* to the shared monopoly, adopting instead an "implied conspiracy" theory.[175] Instead of looking at market concentration,[176] to find a section 2 violation, the Court determined that the three defendants had acted in a closely parallel

169. *See* Turner, *The Scope of Antitrust and Other Economic Regulatory Policies*, 82 HARV. L. REV. 1207, 1225-31 (1969).

170. *Id.* at 1231.

171. 328 U.S. 781 (1946).

172. The 3 major defendants in this action were American Tobacco Company, Liggett & Myers Tobacco Company, and R.J. Reynolds Tobacco Company.

173. R. CAVES, *supra* note 84, at 63.

174. American Tobacco Co. v. United States, 328 U.S. 781, 787-89 (1946).

175. Cox, *supra* note 136, at 73.

176. *See* notes 132-35 *supra* and accompanying text.

fashion "*as if* they were taking full account of their influence on one another and on the market."[177] By taking this approach, the Court was attacking the kind of behavior that results from effectively shared monopoly power rather than attacking the power itself.

After the Court had assessed fines in *American Tobacco,*[178] the three defendants retained the same high market concentrations[179] and presumably the same conscious parallelism. The Justice Department, however, has never attempted to prevent these further "violations" in the cigarette industry because they essentially consisted of a few firms taking one another's presence into account. This conduct could hardly be avoided as long as the industry retained the same concentrated structure. The ineffectiveness of the Court's approach is indicated by the small number of courts that have used the "implied conspiracy" theory to attack the shared monopoly problem in other concentrated industries.[180]

Today, "consciously parallel" noncompetitive activity, particularly pricing, continues unchallenged in most tightly structured oligopolies.[181] This anticompetitive behavior is manifested in the fuel industries by the uniformity in crude oil price changes[182] and by the steadily rising costs and consistent contract breaches in the coal companies' dealings with the electric utility industry.[183] The majority's refusal in the *American Tobacco* case to prohibit the exercise of shared monopoly power without using a conspiracy concept as a crutch is typical of the kind of approach that has allowed the continued development of market concentration in a number of industries. There is no apparent reason, however, for not applying the exclusionary conduct rule of *United Shoe* to shared monopoly power when this conduct is sufficient to cause a single firm monopoly to violate section 2.[184] Until American courts bring the law on shared monopoly in line with the law on individual monopoly, the Sherman Act will be of little use in combatting the concentration that has developed in fuel industries.

5. *Potential Effect of Applying Sherman Act Remedies to the Fuel Market.*—While the *American Tobacco* case indicates a failure to

177. R. CAVES, *supra* note 84, at 63.

178. A total of $15,000 in fines was assessed for § 2 violations in *American Tobacco.*

179. R. CAVES, *supra* note 84, at 63.

180. *Id.*

181. The automobile and soap industries are typical examples of this.

182. Wall Street J., Nov. 12, 1970, at 3, col. 1-2 (S.W. ed.).

183. *Hearings, supra* note 13, at 144-45 (statement of Aubrey J. Wagner, Chairman of the Tennessee Valley Authority); Nashville Tennessean, Oct. 8, 1970, at 1, col. 3.

184. Turner, *supra* note 169, at 1230-31.

deal effectively with shared monopolies, it also suggests more complex problems that could arise if section 2 were used to correct market structure in a shared monopoly.[185] Today, most action taken under the Sherman Act is directed toward the general regulation of conduct or behavior, and little effort is made to reorganize market structure. This results from the fear that divestiture or dissolution of large industrial enterprises might do more harm to the economy than a settled, albeit concentrated, industry. In the fuel industries this fear is particularly applicable because any effective use of the Sherman Act against intra-fuel competition might disable the industry to the point where the existing energy crisis would be preferable to the chaos that would accompany large divestitures by the major oil and coal companies.[186] The debilitating effect that Sherman Act restructuring might have on the fuel industries is graphically illustrated by the effect that a series of Sherman Act decisions had on the anthracite coal industry. From 1907 until 1955, a group of eight so-called "line companies" controlled the anthracite market.[187] Like the controlling firms in the present bituminous coal industry, these companies shared 80 percent of the anthracite industry before a series of adverse decisions in 1920.[188] Although these cases clearly had stopped attempts to monopolize, it is questionable whether they reduced the existing concentration by any measurable amount because five years after these Sherman Act decisions,[189] the defendants' market share had only decreased to 72 percent. On the other hand, the anthracite industry's contribution to the country's energy supply dropped from 12.3 percent in 1917, to 5.8 percent in 1939, and then to only 2.1 percent by 1954.[190] Interestingly enough, the line companies' share of this market dropped sharply after the time when the impact of the antitrust decisions should have been felt, from 72 percent in 1925 to 46 percent in 1955.[191] Although many factors caused this decline, the most obvious was the encroachment of competing fuels into the anthracite market. Most authorities concluded that the real reasons for this increased penetration were the high coal

185. *Id.* at 1231 n.45.

186. *See* McDermott, *The Shift in Antitrust Objectives and its Impact on the Oil and Gas Industry*, in 19th S.W. LEGAL FDN. OIL & GAS INST. 117 (1968).

187. They were called "line companies" because they were all railroad-connected. 2 S. WHITNEY, ANTITRUST POLICIES 57 (1958).

188. The Department of Justice attempted to sever the railroad-coal connections in United States v. Lehigh Valley R.R., 254 U.S. 255 (1920), and United States v. Reading Co., 253 U.S. 26 (1920).

189. *See* 2 S. WHITNEY, *supra* note 187, at 66.

190. *Id.* at 69.

191. *Id.* at 66.

prices caused by the continued monopolistic structure of the industry and the unaggressive attitude of the line companies in dealing with this outside competition.[192] If the apparently noncompetitive pricing of anthracite was a major factor in the industry's decline, it may indicate that the Sherman Act was the ultimate cause of the decline. By stopping the continued growth and control of the industry's leaders, the Court may well have taken away their incentive to improve the quality of their product. The line companies may have been satisfied to squeeze what they could out of a dying industry by holding their monopoly prices while reinvesting their returns in other areas.[193]

Would today's bituminous coal industry respond similarly to antitrust restrictions? Two parallel factors exist between the two situations: (1) control of the industry by a few large companies;[194] and (2) a struggle to maintain the industry's share of the fuel market against increasing encroachment by substitute fuels.[195] If the growth of major companies within the bituminous industry is blunted by Sherman Act enforcement, these companies might not be willing to continue to invest the funds and resources necessary for aggressive competition in the national fuel market. Furthermore, since a large number of controlling coal companies have been taken over by firms in the competing oil industry,[196] it is likely that future capital outlays in the coal industry will be redirected toward development of synthetic petroleum products,[197] leaving immediate coal consumers in a short supply, high price crisis.[198]

In a different sense, the oil and gas industries present the same sensitivity to antitrust discipline. It is clear that extraordinary pressures exist in the fuel industry to enlarge market control.[199] As a result, the large oil companies have expanded by acquisition, merger, and consolidation within the existing fuel market structure, and the number of competitors has rapidly diminished.[200] Since the fuel industries until recently have been able to satisfy the gross demand at reasonable prices,[201] there has been understandable reluctance to restructure fuel

192. C. FRASER & G. DORIOT, ANALYZING OUR INDUSTRIES 399, 407-09 (1932).

193. *See* note 118 *supra* and accompanying text. The condition became so hopeless that when 27 firms, practically the whole industry, were indicted on price-fixing charges to which they pleaded nolo contendere, the judge set fines of around $750 because of the "desperate and deplorable" state of the industry. 2 S. WHITNEY, *supra* note 187, at 73.

194. *See* text accompanying note 133 *supra.*

195. *See* note 65 *supra.*

196. *See* note 64 *supra* and accompanying text, and note 316 *infra. See also*, FORBES, Oct. 15, 1970, at 80, cols. 1-3.

197. *See* note 242 *infra.*

198. *Id.*

199. McDermott, *supra* note 186, at 142.

200. *Id.* at 141.

201. *Id.* at 139.

markets. Problems resulting from the growing fuel oligopolies have been quickly camouflaged beneath antitrust exemptions and tax advantages.[202] Thus, the oil and coal industries have been allowed to feed upon themselves—at first consuming the weak or failing units and then the healthy, economically stable companies of smaller size[203] until it has reached a point where section 2 relief is unfeasible. This is particularly true in the oil industry in which any attempt at this time to force divestiture of a smaller, merged oil corporation would merely weaken the controlling oil corporation without producing an alternative to take up the slack in market supply, since the divested company probably would have become too dependent on the finances and resources of its "divorced" parent to continue existing as a separate market force.

It appears, therefore, that although a strong legal argument can be made for the application of section 2 of the Sherman Act to the fuel industries, no practical relief could be gained by this effort. Section 2 has become a rusty and dull regulatory tool in the area of oligopolistic industry. Its application now is more likely to bludgeon the fuel industries to death than cut out the malaise that afflicts them.

B. Application of the Clayton Act to the Energy Market

As originally enacted, the antimerger provision of the Clayton Act was ineffective because it was interpreted to proscribe only stock acquisitions, not asset acquisitions, and was limited to horizontal mergers.[204] In 1950, Congress, viewing with alarm the rising level of economic concentration that resulted from corporate acquisitions and mergers,[205] broadened the Clayton Act to include asset acquisitions and

202. *See* W. LOVEJOY & P. HOMAN, ECONOMIC ASPECTS OF OIL CONSERVATION REGULATION 276-78 (1967); Lobel, *supra* note 149, at 10; Mead, *The System of Government Subsidies to the Oil Industry*, 10 NATURAL RESOURCES J. 113 (1970); Walden, *supra* note 150, at 774, 779-81; BUS. WEEK, May 17, 1969, at 99, col. 2.

203. *See* Comment, *supra* note 121, at 325. *See generally* E. ROSTOW, A NATIONAL POLICY FOR THE OIL INDUSTRY 12, 67-69; BUS. WEEK, May 17, 1969, at 99.

204. Clayton Act § 7, Ch. 323, § 7, 38 Stat. 731-32 (1914), *as amended*, 15 U.S.C. § 18 (1964) provides: "That no corporation engaged in commerce shall acquire, directly or indirectly, the whole or any part of the stock or other share capital of another corporation engaged also in commerce, where the effect of such acquisition may be to substantially lessen competition between the corporation whose stock is so acquired and the corporation making the acquisition, or to restrain such commerce in any section or community, or tend to create a monopoly in any line of commerce." This section was interpreted to apply only to stock, not asset acquisitions, thus emasculating the statute. Thatcher Mfg. Co. v. FTC, 272 U.S. 554 (1926); *see* I. Stelzer, *supra* note 110, at 56.

205. S. REP. NO. 1775, 81st Cong., 2d Sess. 3 (1950); Note, *Determining the "Line of Commerce" Under Section Seven of the Clayton Act*, 18 VAND. L. REV. 1506, 1508-09 (1965); *see* Brown Shoe Co. v. United States, 370 U.S. 294, 315 (1962).

brought vertical and conglomerate as well as horizontal acquisitions within the scope of the statute.[206] In amending section 7 of the Clayton Act, Congress intended to halt, in their incipiency, mergers and acquisitions that might substantially lessen competition or tend to create a monopoly in any line of commerce. Congress wanted to protect small business as an important competitive factor in the market by preventing the anticompetitive effects of corporate mergers before they achieved the monopolistic proportions necessary to violate the Sherman Act.[207] In order to reach section 7 violations in their initial stages, Congress conferred enforcement jurisdiction on the Department of Justice and the Federal Trade Commission.[208] In addition, the FTC was granted broad investigatory and rule making authority in order to discover violations of the antimerger provision.[209]

The purpose of the following section is to analyze mergers and acquisitions within the basic energy or fuel market with reference to the policies and principles of section 7 of the Clayton Act. The mergers are analyzed in terms of their horizontal and conglomerate characteristics,

206. Clayton Act § 7, 15 U.S.C. § 18 (1964), *formerly* ch. 323, § 7, 38 Stat. 731-32 (1914) provides: "No corporation engaged in commerce shall acquire, directly or indirectly, the whole or any part of the stock or other share capital and no corporation subject to the jurisdiction of the Federal Trade Commission shall acquire the whole or any part of the assets of another corporation engaged also in commerce, where in any line of commerce in any section of the country, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly."

207. "The purpose . . . is to limit future increases in the level of economic concentration resulting from corporate mergers and acquisitions. . . . The enactment of the bill will limit further growth of monopoly and thereby aid in preserving small business as an important competitive factor in the American economy." S. REP. No. 1775, 81st Cong., 2d Sess. 3-4 (1950). The intent here, as in other parts of the Clayton Act, is to cope with monopolistic tendencies in their incipiency and well before they have attained the effects that would justify a Sherman Act proceeding. *See* United States v. General Dynamics Corp., 258 F. Supp. 36, 60 (S.D.N.Y. 1966).

208. Clayton Act § 15, 15 U.S.C. § 25 (1964) provides: "[A]nd it shall be the duty of the several United States attorneys, in their respective districts, under the direction of the Attorney General, to institute proceedings in equity to prevent and restrain such violations." Federal Trade Commission Act § 5, 15 U.S.C. § 45(a)(6) (1964) provides: "The Commission is empowered and directed to prevent persons, partnerships, or corporations . . . from using unfair methods of competition in commerce. . . ."

209. Federal Trade Commission Act § 6, 15 U.S.C. § 46 (1964) provides in part:
"The commission shall also have power—

(a) Investigation of corporations.

To gather and compile information concerning, and to investigate from time to time the organization, business, conduct, practices and management of any corporation engaged in commerce. . . ."

. . .

(g) Classification of corporations; regulation.

From time to time to classify corporations and to make rules and regulations for the purpose of carrying out the provisions of Sections 41-46 and 47-58 of this title."

and an assessment of the anticompetitive effects in each category is attempted. Following this assessment, the public devices for staying further concentration in the energy market are examined, and suggestions for possible private actions seeking treble damages are outlined.

1. *Horizontal Aspects of the Petroleum Industry's Acquisition of Coal and Atomic Energy Resources.*—The application of section 7 of the Clayton Act, as amended, is limited to mergers or acquisitions that may substantially lessen competition in any line of commerce in any section of the country.[210] Since the horizontal merger is the most obvious threat to competition, it is the kind of acquisition most often challenged under section 7.[211] A horizontal merger or acquisition occurs when a corporation acquires all or part of the stock or assets of a competitor.[212] The anticompetitive effects of this merger are apparent. As the enterprises in direct competition are merged, the number of competitors in the market is reduced, the size of the remaining firms in the market is increased, and the disadvantages inherent in the oligopolistic market begin to emerge.[213]

Since a horizontal merger is not a per se violation of section 7, the particular facts of each acquisition must be examined.[214] In statutory terms the proposed merger must exhibit potential anticompetitive effects in a line of commerce in any section of the country before it will violate section 7. The initial determination, therefore, is whether the acquiring and acquired enterprises compete in the same product and geographic

210. *See* Brown Shoe Co. v. United States, 370 U.S. 294, 321-22 (1962).

211. *See, e.g.*, United States v. Pabst Brewing Co., 384 U.S. 546 (1966) (horizontal merger of 2 competing breweries held violation of § 7); United States v. Von's Grocery Co., 384 U.S. 270 (1966) (horizontal merger of food store chains violated the Clayton Act); United States v. Philadelphia Nat'l Bank, 374 U.S. 321 (1963) (horizontal merger of competing banks was enjoined). Before reaching the substantive issues, § 7 of the Clayton Act requires compliance with the following jurisdictional prerequisites. Both the acquiring and acquired enterprises must be corporations; all the participating corporations must be engaged in interstate or foreign commerce; the transaction must be an acquisition as defined by the Clayton Act; the transaction must involve the acquisition of corporate assets or stock; and if the transaction is an asset acquisition, the acquiring corporation must be subject to the jurisdiction of the FTC. 15 U.S.C. § 18 (1964); *see* J. VON KALINOWSKI, ANTITRUST LAWS AND TRADE REGULATION § 11.07[1] (16A Business Organizations 1969).

212. *See* Brown Shoe Co. v. United States, 370 U.S. 294, 334 (1962); B. BOCK, MERGERS AND MARKETS 49 (5th ed. 1966).

213. McDermott, *supra* note 186, at 139-40.

214. "[W]hile providing no definite quantitative or qualitative tests by which enforcement agencies could gauge the effects of a given merger to determine whether it may 'substantially' lessen competition or tend toward monopoly, Congress indicated plainly that a merger had to be functionally viewed, in the context of its particular industry." Brown Shoe Co. v. United States, 370 U.S. 294, 321-22 (1962).

markets. It is only within this context that the nature of the competition between the enterprises and the probable anticompetitive effect of the merger can be ascertained.[215]

(a) *The product market.*—On initial observation, coal, residual fuel oil, and uranium appear to be highly dissimilar products that are "not in the same line of commerce."[216] Indeed, early decisions in federal district courts indicated that the product market would be narrowly defined, and if two products could be distinguished on any reasonable basis, they would be classified into separate lines of commerce.[217] The net effect of these decisions on horizontal mergers was to limit the scope of section 7 to corporations producing substantially identical products. In 1962, however, the Supreme Court, in *Brown Shoe Co. v. United States*,[218] expanded the definition of a product market to include all products that are reasonably interchangeable or are close substitutes for one another. In addition, the Court cited several potentially significant factors that may define relevant submarkets[219] within a product market. These factors include: (1) public recognition of the submarket as a separate economic entity; (2) peculiar uses and characteristics of the product; (3) unique production facilities; (4) distinct customers and prices; (5) susceptibility to price fluctuations; and (6) specialized sellers.[220] Applying these factors in *Brown Shoe*, the Court rejected the

215. "Because Section 7 of the Clayton Act prohibits any merger which may substantially lessen competition 'in *any* line of commerce,' . . . it is necessary to examine the effects of a merger in each such economically significant submarket. . . ." *Id.* at 325; *see* Bernhard, *Divergent Concepts of Competition in Antitrust Cases*, 15 ANTITRUST BULL. 43 (1970).

216. Although the balance of this section attempts to define this phrase, in short, suppliers are said to be in the same line of commerce if their products compete to fill the needs of the same customers.

217. *See, e.g.*, United States v. Continental Can Co., 217 F. Supp. 761 (S.D.N.Y. 1963), *rev'd*, 378 U.S. 441 (1964) (holding metal containers and glass containers were produced in separate lines of commerce).

218. 370 U.S. 294 (1962).

219. Although the concept of reasonable interchangeability of use allows the functional product market to be broadened, the concept of submarket is used to contract the market in which 2 suppliers compete. If 2 competitors compete in only a portion of what is generally thought to be a larger product market, then market share, concentration, and other relevant factors will be distorted if the larger market figures are used. When the plaintiff in an antitrust action contends that a horizontal merger by producers of substitute products is anticompetitive, he, therefore, is faced with the dilemma of having to allege a broad product market for the purpose of including the products in the same line of commerce while attempting to narrow the submarket so that the market share and concentration data will reflect the true state of competition in the submarket.

220. 370 U.S. at 325. At one time corporations could minimize the anticompetitive effects of a merger by including within the relevant product market as many substitute products as possible. This practice was curtailed by *Brown Shoe*, which set forth criteria to define relevant submarkets, thus narrowing the scope of inquiry. Robinson, *Antitrust—Horizontal and Vertical Mergers Under the Sherman and Clayton Acts*, 36 U.M.K.C.L. REV. 75 (1968).

contention that the relevant product markets of the acquiring and acquired companies were medium priced and lower priced shoes respectively and held that the appropriate submarkets were those of men's, women's, and children's shoes. By defining the relevant submarket in terms of age and sex, the Court pointed out that the two companies were direct competitors since the shoes produced by them were in the same product submarkets. If, as Brown Shoe had contended, the submarkets had been defined in terms of medium priced shoes in one submarket and lower priced shoes in another, the companies apparently would not have been substantial competitors within the meaning of section 7.

The criteria enunciated in *Brown Shoe* are relevant for determining in which lines of commerce two companies within the same industry compete. A slightly more complex problem is raised, however, by the interindustry consolidations involving petroleum, coal, and uranium interests. The Supreme Court first defined an interindustry product market in *United States v. Continental Can Co.*[221] In 1956, Continental Can Company acquired Hazel-Atlas Glass Company, uniting the nation's second largest producer of metal containers with the third largest producer of glass containers. The district court applied the factors enunciated in *Brown Shoe* and determined that metal containers and glass containers were not in the same line of commerce.[222] The court recognized that there was overall interindustry or intercommodity competition, but did not find the reasonable cross-elasticity of demand[223] it considered crucial for a violation of section 7. Rejecting this decision, the Supreme Court held that the concepts of reasonable interchangeability of use or cross-elasticity of demand were not intended to limit the application of section 7 solely to competition between identical products.[224] Although the Court acknowledged that glass and metal containers have different characteristics that may make one more desirable or suitable for a particular use than the other despite a price differential, it refused to allow these factors to obscure the nature of the interindustry competition and found *Brown Shoe* inapplicable to interindustry acquisitions. The Court ultimately defined the product market in terms of the "end use" of metal and glass containers, seeking

221. 378 U.S. 441 (1964), *rev'g* 217 F. Supp. 761 (S.D.N.Y. 1963).

222. 217 F. Supp. 761 (S.D.N.Y. 1963).

223. Cross-elasticity of demand attempts to measure the degree to which dissimilar products are substitutes for one another. The demand for products A and B, for example, is said to be highly cross-elastic if a rise in the price of product A will cause customers to begin purchasing substitute product B.

224. 378 U.S. at 453; *see* Note, *supra* note 205.

to bring the product market concept as close as possible to functional competitive reality. Recognizing that glass and metal are not competitive for all end uses, the Court held that complete interindustry competitive overlap is not necessary. The Court then faced the dilemma that in defining the product market broadly in terms of end uses, many other products, such as plastic and aluminum containers, would be competitors, thus reducing both the market share of the merged corporation and the anticompetitive impact of the merger under section 7. It found, however, that the broad product market definition did not negate the existence of a submarket in which only glass and metal containers are competitors. In reaching the conclusion that the merger would substantially lessen competition and thus violate section 7, the Court stated: "[T]hough the interchangeability of use may not be so complete and the cross-elasticity of demand not so immediate as in the case of most intraindustry mergers, there is over the long run the kind of customer response to innovation and other competitive stimuli that brings the competition between these two industries within section 7's competition-preserving proscriptions."[225]

To judge the antitrust significance of petroleum corporations' interest in coal and uranium, the product markets in which coal, oil, and uranium compete must first be delineated according to the principles established in *Brown Shoe* and *Continental Can*.[226] It should be remembered that as a result of recent petroleum company expansion into the coal industry, three major petroleum companies—Continental Oil Company, Occidental Petroleum Corporation, and Standard Oil Company of Ohio—now produce twenty percent of the nation's coal supply.[227] In addition, twelve American petroleum companies account for fourteen percent of uranium production and control an estimated 45 to 80 percent of the known nuclear fuel reserves.[228]

(i) *Present product substitutability.*—The most important product market in which petroleum companies[229] compete with producers of coal and uranium consists of supplying residual fuel oil for

225. 378 U.S. at 455.

226. *See* notes 217-25 *supra* and accompanying text.

227. Mayer, *supra* note 3, at 75. In addition, the author indicates that oil companies, including Humble Oil and Refining Company, are acquiring huge reserves of coal in the West. *Id.* at 159. For further discussion of the coal-oil mergers see note 64 *supra* and accompanying text.

228. Mayer, *supra* note 3, at 159 (estimated 45%); BUS. WEEK, Nov. 7, 1970, at 54 (estimated 80%).

229. Residual oil is an oil refinery by-product of the processes that extract valuable oils and remove the solids. It is the only fuel oil used in substantial quantities in the United States. POWER SURVEY, *supra* note 75, at 57.

steam-electric generating plants, which produce most of the power generated in the United States.[230] Not only is there immediate competition when a particular electric utility selects the primary fuel to be consumed in a new generating unit, but this competition, at least between oil, coal, and natural gas, may continue throughout the life of the facility.[231] This on going competition is possible since many steam generating plants now have the capability of converting their boilers to burn natural gas, coal, or residual fuel oil.[232] If supplies of all three fuels are available in a geographic area,[233] therefore, a generating unit with multiple fuel burning capacity can retain the ability to bargain effectively with competing suppliers by utilizing short-term supply contracts.[234] Since fuel costs comprise a large portion of the cost of generating electricity, the relative delivered price of fuel per BTU is a major factor in the selection of a fossil fuel for use in these plants. In many locations, the suppliers of these fuels are close competitors and a price reduction for any one fuel may spur competitive reductions in other fuel prices.[235] This competition has been so fierce that the National Coal Association has charged that petroleum companies "dump" residual fuel oil onto the steam-electric generation plant market in order to undercut coal and simultaneously charge higher prices in other oil markets.[236] Competition with nuclear fuels, on the other hand, is in the long-range planning stages only, since generation plants designed to consume nuclear fuels usually cannot be converted to burn natural gas, coal, or oil.[237] The Federal Power Commission has concluded that interfuel competition will intensify in the future, particularly in the higher fuel cost areas, where improvements in fuel transportation and reductions in nuclear power costs should lower fuel prices. Nuclear technology also is expected to set a continually lowering cost target that the fossil fuels will be forced to meet.[238]

230. Miller, *Competition and the Public Interest in the Interstate Gas and Electric Industries*, 55 IOWA L. REV. 570, 578 (1970); *see* COMPETITION IN THE ENERGY MARKETS, *supra* note 1, at 16.

231. Note 68 *supra*.

232. POWER SURVEY, *supra* note 75, at 53; *see* H. PERLOFF, E. DUNN, E. LAMPARD, & R. MUTH, *supra* note 75, at 323.

233. *See* notes 252-58 *infra* and accompanying text.

234. Miller, *supra* note 230, at 578.

235. Prices at which fuels become competitive are relative. The competitive price of coal is usually less than the competitive price of natural gas or residual oil because of the greater initial investment required for a coal burning facility. In 1964, the average price per million BTU was $.35 for residual oil, but only $.15 for coal. POWER SURVEY, *supra* note 75, at 54, 58.

236. 1966 BITUMINOUS COAL FACTS, *supra* note 7, at 22.

237. *See* Address by Wilfred E. Johnson, Fifth Intersociety Energy Conversion Engineering Conference, Sept. 22, 1970, *reprinted in* 38 VITAL SPEECHES 29, 31 (1970).

238. POWER SURVEY, *supra* note 75, at 54.

Because residual fuel oil and coal are close substitutes in the market that supplies steam-electric power generating plants, at least one FTC decision has concluded that demand for the products is cross-elastic.[239] Although the interindustry competition in the fuel market is not as sharply defined as the intra-industry competition that exists between two producers of the same fuel, the nature of the competition among coal, residual fuel oil, natural gas, and uranium producers in supplying electric utilities seems sufficient to constitute a single product market within the meaning of *Continental Can*.[240]

(ii) *Potential product competition.*—In addition to the present competition among coal, oil, natural gas, and uranium at the steam-electric generation level, further competition between coal and oil may be feasible within the coming decade.[241] This competition will be the result of a new process that converts coal into petroleum products. Although oil produced from coal was sold as an illuminant as early as the 1850's, the expense of the conversion process rendered coal oil commercially impractical. Recently, however, Consolidation Coal Company, now a subsidiary of Continental Oil, and Hydrocarbon Research, Inc., with support from the Department of the Interior, have undertaken substantial research and development projects investigating the commercial feasibility of producing synthetic petroleum products from coal.[242] Pilot studies indicate that the production of synthetic fuels, including gasoline, from coal may be commercially reasonable by 1975 and may be a substantial factor in the nation's fuel market by 1980.[243] The nation's coal industry thus has the potential capability of producing synthetic petroleum products that could compete effectively with natural petroleum products, even in captive petroleum markets. Furthermore, the proximity of the nation's major coal reserves to areas of high fuel consumption can only enhance the competitive potential of synthetic petroleum.[244] It is likely, therefore, that oil and coal will become direct

239. *In re* Kennecott Copper Corp., BNA A.T.R.R. a-5 (FTC Mar. 8, 1970) (report of hearing examiner).

240. *See* notes 224-25 *supra* and accompanying text.

241. Netschert, Book Review, 14 ANTITRUST BULL. 629 (1969).

242. U.S. DEP'T OF THE INTERIOR, UNITED STATES PETROLEUM THROUGH 1980, at 71-78 (1968) [hereinafter cited as PETROLEUM THROUGH 1980]. The Consolidation Coal Company method dissolves coal in a liquid that itself is produced from coal through a prior process. Ash and the less reactive parts of the coal are filtered out and the remaining extract is hydrogenated to produce a high quality synthetic crude feedstock. The Hydrocarbon Research, Inc., process includes suspension of coal in recycle oil that is fed directly to a high-pressure hydrogenation vessel. An additional hydrogen treatment produces gasoline. *Id.* at 72.

243. *Id.* at 74.

244. *Id.*

competitors in all aspects of the petroleum market within this decade. In assessing the degree of competition within a product market, this potential competition is a vital factor.[245]

(b) *The geographic market.*—The second statutory prerequisite in determining the anticompetitive effects of a merger is the delineation of a geographic market or section of the country where the enterprises compete.[246] Even though two corporations produce products that are identical or close substitutes for one another, they are not competitors if they do not offer their goods within the same geographic region to the same customers. This geographic market may be defined broadly in terms of a nationwide market or narrowly in terms of a city or other small geographic area.[247] To ascertain the anticompetitive effects of a merger, the Supreme Court, in *Brown Shoe,* established a flexible test for defining the geographic market. The Court held that the statutory phrase "in any section of the country,"[248] requires that a geographic market must correspond to the commercial realities of the industry and must be economically significant. In other words, the proposed merger must be one that will substantially lessen competition within the geographic area of actual effective competition.[249] In *United States v. Pabst Brewing Co.*,[250] the Supreme Court further clarified the meaning of the term "geographic market." Pabst Brewing Company, the nation's tenth largest brewery, had merged with Blatz, the country's eighteenth largest brewer, to form an enterprise that was the fifth largest producer of beer. The merged companies produced only 4.49 percent of the industry's total nationwide sales, but in the three-state region of Wisconsin, Illinois, and Michigan, the combined enterprises accounted for 32 percent of beer sales. As a result, the anticompetitive effects of the

245. *See* United States v. Penn-Olin Chem. Co., 378 U.S. 158 (1964) (merger with a potential competitor held anticompetitive); Adler, *Frontier Issues in Merger Doctrine*, 39 ABA ANTITRUST L.J. 118, 120 (1969).

246. Brown Shoe Co. v. United States, 370 U.S. 294, 336-37 (1962); Note, *United States v. Von's Grocery Co., 384 U.S. 270 (1966), and United States v. Pabst Brewing Co., 384 U.S. 546 (1966)—Competition and the Geographic Market Under Section 7 of the Clayton Act*, 62 NW. U.L. REV. 58 (1967). The 1950 amendment substituted the present language "in any section of the country" for the phrase "in any section or community." Clayton Act § 7, ch. 323, § 7, 38 Stat. 731 (1914), *as amended*, 15 U.S.C. § 18 (1964). Apparently, the purpose of this change was to make it clear that Congress was not concerned with mergers between small enterprises in the same community. *See* S. REP. NO. 1775, 81st Cong., 2d Sess. 3 (1950).

247. *Compare* United States v. Von's Grocery Co., 384 U.S. 270 (1966) (a single city), *with* United States v. Aluminum Co. of America, 377 U.S. 271 (1964) (nationwide).

248. Clayton Act § 7, 15 U.S.C. § 18 (1964).

249. Brown Shoe Co. v. United States, 370 U.S. 294 (1962); *see* E. SINGER, ANTITRUST ECONOMICS 252 (1968).

250. 384 U.S. 546 (1966), *rev'g* 233 F. Supp. 475 (E.D. Wis. 1964).

merger could be demonstrated easily in the limited geographical area where the companies were substantial competitors prior to the merger, even though the anticompetitive effects in the nationwide market were not as apparent. Reversing the district court's determination that the three-state area was not the relevant geographic market, the Supreme Court held that the merger may have a substantial anticompetitive effect somewhere in the United States.[251]

(i) *Present geographic market overlap.*—The high costs incurred in transporting natural gas, coal, and residual fuel oil limit the geographic markets or regions where these fuels can compete as suppliers to steam-electric generating plants.[252] The market for nuclear fuels, on the other hand, is not regionalized since the small quantity of uranium needed in a single plant renders its transportation costs negligible. Although the general trend is for coal to dominate the fuel market east of the Mississippi River and for natural gas and residual oil to control the market west of the Mississippi,[253] there are recognizable regions in which coal, oil, and natural gas do compete. In general, the regional areas that presently enjoy fuel competition are the Northeastern states, New England, the Midwest, and the Mountain regions. In New York, for example, 53 percent of the steam-electric generating plants utilize coal and 47 percent use oil or natural gas, and in Iowa 51 percent utilize coal and 49 percent natural gas or oil.[254]

(ii) *Potential expansion of geographic market overlap.*—The long-range trend indicates that transportation costs for natural gas, coal, and residual oil will decline, enlarging the regions where the fuels are competitive.[255] Furthermore, when the coal pipeline and unit train[256] achieve widespread use, coal should be able to invade regions presently dominated by oil and natural gas.[257] In addition, when the process for

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251. *Id.* at 549.

252. *See* H. PERLOFF, E. DUNN, E. LAMPARD, & R. MUTH, *supra* note 75, at 323-25. *See also* COMPETITION IN THE ENERGY MARKETS, *supra* note 1, at 8.

253. POWER SURVEY, *supra* note 75, at 53-54.

254. 1969 STEAM-ELECTRIC PLANT FACTORS, *supra* note 28, at 7-8, 19-20. The percentages of coal as opposed to oil and natural gas consumed by steam-electric generation plants in the Northeast and New England include: Connecticut, coal 46%, oil & gas 54%; Massachusetts, coal 32%, oil & gas 68%; New Jersey, coal 46%, oil & gas 54%; Pennsylvania, coal 91%, oil & gas 9%; and Rhode Island, coal 15%, oil & gas 85%. Comparable percentages in the Midwest and Mountain states include: Colorado, coal 62%, oil & gas 38%; Minnesota, coal 61%, oil & gas 39%; Missouri, coal 79%, oil & gas 21%; South Dakota, coal 57%; oil & gas 43%; and Utah, coal 43%, oil & gas 57%. *Id.* at 3-4, 5-6, 9-10, 39-40, 21-22, 23-24, 25-26, 41-42.

255. POWER SURVEY, *supra* note 75, at 54.

256. *See* text accompanying note 75 *supra.*

257. Coal pipelines are now commercially feasible. At least one pipeline, which will transport coal 273 miles from northeastern Arizona to a power plant in southern Nevada, was scheduled for

converting coal into oil becomes operational, petroleum corporations and coal companies will be direct competitors in the nationwide distribution of petroleum products.[258]

(c) *Anticompetitive effects of horizontal mergers within the energy market.*—In 1963, Gulf Oil Corporation initiated the trend toward petroleum and coal mergers with its acquisition of a relatively small coal producer, Pittsburg & Midway Coal Mining Company. This merger would have gone unnoticed if it had not been emphasized by three later acquisitions of large coal companies by petroleum interests.[259] In 1966, Continental Oil bought Consolidation Coal Company, now the largest coal company, which produces eleven percent of the total United States coal production. Subsequently, Occidental Petroleum acquired Island Creek Coal Company and Standard Oil Company of Ohio purchased Old Ben Coal Corporation.[260] Several of the major oil companies also have been acquiring a large percentage of domestic coal reserves,[261] primarily in the Midwest and Western regions.[262] Similarly, petroleum interests have acquired an estimated 45 to 80 percent of the known uranium reserves.[263] Although the acquisition of coal and uranium reserves and the longstanding natural gas holdings probably do not have direct section 7 significance,[264] they do emphasize both the degree of and trend toward concentration in the overall energy market.

Having defined the relevant product and geographic markets in which the fuels compete, the task remains to determine the anti-competitive effects of horizontal mergers in the energy market. This determination will be made largely from an analysis of the various facts about the acquiring and acquired corporations and the competitive structure of the market, using guidelines suggested by the Supreme Court, the Department of Justice, and the Federal Trade Commission.

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completion in 1970. The coal pipeline will affect interfuel competition because it provides a means of lowering the transportation cost for coal and provides the possibility of utilizing coal in areas that were previously inaccessible. COMPETITION IN THE ENERGY MARKET, *supra* note 1, at 76; *see* note 254 *supra* and accompanying text.

258. *See* note 242 *supra* and accompanying text.

259. *See* note 64 *supra* and accompanying text and note 316 *infra.*

260. BUS. WEEK, Nov. 7, 1970, at 54-55.

261. CONCENTRATION IN THE ENERGY MARKET, *supra* note 1, at 27; *see Hearings on Antitrust Problems in the Energy Field Before the Subcomm. on Antitrust and Monopoly of the Senate Comm. on the Judiciary,* 91st Cong., 2d Sess. 3 (1970).

262. BUS. WEEK, Nov. 7, 1970, at 54-55.

263. *See* Mayer, *supra* note 3; BUS. WEEK, Nov. 7, 1970, at 54-55.

264. Both the acquiring and acquired enterprises must be corporations to invoke § 7. If the reserves are being acquired through acquisitions of stock or assets of other corporations, the jurisdictional prerequisites are satisfied. If the reserves are acquired from individuals or partnerships, however, § 7 is ineffective. Presently, it is not clear how the reserves are being acquired.

(i) *Judicial guidelines.*—In a suit to enjoin or dissolve a merger or acquisition, it is not necessary to prove that the merger will substantially lessen competition, but only that the merger's effect *may be* substantially to lessen competition. The Supreme Court has defined the statutory phrase "may be substantially to lessen competition"[265] to mean a probable, not a certain, deterioration of competition.[266] The phrase "may be" also reflects congressional intent to reach anticompetitive mergers in their incipiency, before any substantial damage is done to the market.[267] In assessing the effects of a merger, the courts look not only to the quantitative factors of the merging enterprises—sales, market share, and ranking of the acquired and acquiring corporations—but also to qualitative factors that characterize the market. In general, these qualitative factors include the present level of concentration in the industry, the trend toward this concentration or oligopoly, the ease of entry of new firms into the market, the ability of the smaller firms in the market to compete with the larger ones, and the degree to which potential competition is being eliminated by the merger.[268]

(I) *Market share test.*—The Supreme Court first applied these principles to a horizontal merger in *United States v. Philadelphia National Bank.*[269] The Court considered the share of the market controlled by the merged enterprise as the most important factor in judging the validity of the merger. Specifically, it found that the merger would result in one bank controlling 30 percent of all commercial banking in a four-county geographical area. Since commercial banking

265. Clayton Act § 7, 15 U.S.C. § 18 (1964).

266. "Congress used the words '*may be* substantially to lessen competition' . . . to indicate that its concern was with probabilities, not certainties." Brown Shoe Co. v. United States, 370 U.S. 294, 323 (1962).

267. "The intent here, as in other parts of the Clayton Act, is to cope with monopolistic tendencies in their incipiency and well before they have attained such effects as would justify a Sherman Act proceeding." S. REP. NO. 1775, 81st Cong., 2d Sess. 4-5 (1950).

268. J. VON KALINOWSKI, *supra* note 211, § 19.01; *see, e.g.*, United States v. Penn-Olin Chem. Co., 378 U.S. 158 (1964) (an essential factor in weighing the anticompetitive effect of the transaction is the degree of potential competition between the enterprises); United States v. Philadelphia Nat'l Bank, 374 U.S. 321 (1963) (the degree of concentration in the industry is an important factor in weighing the effects of the merger); Brown Shoe Co. v. United States, 370 U.S. 294 (1962) (usually the most important consideration is the share of the market that would be controlled by the merged enterprise).

269. 374 U.S. 321 (1963). The Supreme Court had enunciated the factors to be used in judging the effects of a merger in Brown Shoe Co. v. United States, 370 U.S. 294 (1962). This case, however, involved significant vertical as well as horizontal factors. The analysis of the horizontal factors, therefore, was weakened.

already was becoming more concentrated as an industry, the Court held that the merger violated section 7, and further said:

> Specifically, we think that a merger which produces a firm controlling an undue percentage share of the relevant market, and results in a significant increase in the concentration of firms in that market, is so inherently likely to lessen competition substantially that it must be enjoined in the absence of evidence clearly showing that the merger is not likely to have such anticompetitive effects.[270]

On similar facts, the Court invalidated the merger of two banks in *United States v. First National Bank & Trust Co.*[271] In support of this holding, the Court found that the combined banks would control 50 percent of the market, substantially lessening competition among existing banks. It also recognized that this large market share probably would remain stable due to the difficulty of entry into the market by new banks.

The market share test also has been used to judge the validity of interindustry mergers. In *United States v. Continental Can Co.*,[272] for example, the Court found that the merger between Continental Can, which accounted for one-third of all cans produced in the United States, and Hazel-Atlas, which manufactured 9.6 percent of all glass containers, was anticompetitive since the merger raised Continental's market share in the combined glass-tin market from 21.9 percent to 25 percent in an already concentrated industry. The Court rejected Continental Can's contention that the kinds of containers produced by the two companies were not, for the most part, in actual competition. Since there was interindustry competition between some of the companies' products, the Court held that the merger did foreclose actual competition.

(II) *Industry concentration test.*—In addition to the market share test, increasing emphasis has been placed on the degree of market concentration as a test of the anticompetitive effects of a merger. One of the basic reasons cited by Congress for the 1950 amendment of section 7 was a desire to protect the small businessman by stemming the growing tide of economic concentration.[273] The highly concentrated or oligopolistic industry is characterized by a few large enterprises producing the bulk of the industry's products. These corporations often act noncompetitively for their mutual benefit, curtailing price

270. 374 U.S. at 363; *see* Robinson, *supra* note 220.

271. 376 U.S. 665 (1964). Although this case was decided under the Sherman Act §§ 1, 2, 15 U.S.C. §§ 1, 2 (1964), analysis of the anticompetitive effects also seems relevant to the § 7 question.

272. 378 U.S. 441 (1964). For a discussion of the factual context of the case and definition of the relevant product market see notes 221-25 *supra* and accompanying text.

273. S. REP. No. 1775, 81st Cong., 2d Sess. 3 (1950).

competition to the detriment of the competitive system.[274] Since a horizontal merger inevitably results, to some degree, in greater industrial concentration, any merger within a concentrated industry is suspect. In *United States v. Von's Grocery Co.*,[275] for example, the Supreme Court invalidated a merger between two grocery chains even though the new firm had only a 7.5 percent share of the Los Angeles retail grocery market. The decision that the merger was anticompetitive rested upon the Court's analysis of a long and continuous trend in the market toward fewer individually owned competitors. To support its analysis that the market was becoming more concentrated, the Court relied not on increases in the concentration ratio,[276] but on the overall decline in the number of small competitors.[277]

The Court relied in part on a similar market analysis in *United States v. Pabst Brewing Co.*,[278] to invalidate the Pabst Brewing-Blatz Brewing Company merger. Although the combined market share of the two corporations in a nationwide market would have been only 4.49 percent, the decline of competitors in the market—from 714 in 1934 to 229 in 1961—indicated increasing market concentration. Pabst had conceded the trend toward concentration, but contended that it was irrelevant since it had not resulted from previous mergers. The Court held, however, that the degree of concentration, whatever its cause, is a vital factor in judging the anticompetitive effect of a merger.

In *Brown Shoe Co. v. United States*,[279] the Court relied on the traditional concentration ratio to assess the degree of concentration in the American shoe market. When Brown Shoe, producing 4.0 percent of the nation's shoes, acquired Kinney's, producing 0.5 percent, the combined market share of the consolidated firm was less than 5.0 percent of the total market. Nevertheless, the Court determined that the merger would probably lessen competition substantially. The Court considered the shoe market concentrated since the four largest firms produced approximately 23 percent of the nation's shoes in an industry

274. *See* C. KAYSEN & D. TURNER, *supra* note 56, at 44-45; Mayer, *supra* note 3.

275. 384 U.S. 270 (1966), *noted in* 14 U.C.L.A.L. REV. 653 (1967).

276. The concentration ratio is typically the ratio of the goods produced by the largest 4 or 8 firms compared with total production in the industry. *See* notes 56-58 *supra* and accompanying text.

277. Between 1950 and 1961, for example, the number of single store owners declined from 5,365 to 3,818. By 1963, 3 years after the merger, the total had dropped to 3,590. The Court also noted that the number of chain stores in Los Angeles had risen during the same period from 96 to 150 and that the market had a history of mergers and acquisitions.

278. 384 U.S. 546 (1966). *See generally* Greenhut, *An Economic Theory for Use in Antitrust Cases*, 7 HOUSTON L. REV. 318 (1970).

279. 370 U.S. 294 (1962).

that had a history of growth through mergers and acquisitions. The Court recognized that control of five percent of a market resulting from merger might not be anticompetitive but added, "If a merger achieving 5% control were now approved, we might be required to approve future merger efforts by Brown's competitors seeking similar market shares. The oligopoly Congress sought to avoid would then be furthered. . . ."[280]

(ii) *Administrative guidelines.* — In addition to the guidelines established by the judiciary, the Department of Justice, which initiates the majority of suits under section 7, has recently established criteria for judging the anticompetitive effects of a horizontal merger. The Department has indicated that it will challenge any merger in a highly concentrated market[281] in which the acquiring and acquired companies each account for four percent of the market. As the market share of the acquiring firm increases, the respective market share of the acquired corporation necessary to show the anticompetitive effect decreases. If the acquiring corporation dominates fifteen or even ten percent of a highly concentrated market, for example, the acquired firm need only control one percent or two percent respectively, to provoke a Department of Justice challenge. When the market is less highly concentrated, the respective shares of the acquiring and the acquired company must be somewhat greater than the figures mentioned above.[282] A stricter test is applied when there is a definite trend toward greater concentration in the industry.[283]

In addition to the market share criteria, two situations are likely to

280. *Id.* at 343-44; *see* Phillips, *Some Implications of the Supreme Court's Antimerger Decisions*, 21 Sw. L.J. 429 (1967).

281. The Department considers a market highly concentrated for this purpose if the largest 4 firms account for 75% or more of the market share. J. VON KALINOWSKI, ANTITRUST LAWS AND TRADE REGULATION, App. 1C, at 113 (16B Business Organizations 1970).

282. In a market in which the shares of the 4 largest firms amount to less than 75%, the Department will ordinarily challenge mergers between firms accounting for, approximately, the following percentages of the market:

Acquiring Firm	Acquired Firm
5%	5% or more
10%	4% or more
15%	3% or more
20%	2% or more
25% or more	1% or more

Id. at 114.

283. A trend toward concentration is considered to be present when the aggregate market share of any grouping of the largest firms in the market has increased by approximately 7% or more over a period of time extending from any base year 5-10 years prior to the merger up to the time of the merger. *Id.*

be challenged by the Department regardless of the market share involved: (1) the acquisition of a competitor if the acquisition is particularly disruptive to the industry or eliminates an unusually competitive factor in the market, and (2) the merger of a substantial enterprise with a firm that possesses an unusual competitive potential, such as a new patent or production process. These guidelines reflect the increasing concern of the Department of Justice with the adverse competitive effects produced by excessive market concentration. This concern is also mirrored by FTC merger guidelines established for the textile and food distribution industries.[284] Unfortunately, however, the Commission has not established similar guidelines for mergers within the energy market.

(iii) *Application of guidelines to energy market.* — In assessing the anticompetitive effects of oil and coal mergers, several complex problems arise that are not fully explored in the case law or Department of Justice guidelines. While the problem of defining the relevant product and geographic markets has been treated earlier,[285] the task remains to analyze the ability of section 7 to cope with growing energy market concentration. The first major problem is the lack of adequate statistical information delineating the market shares of merging oil and coal corporations. This lack of information results principally from the treatment of oil and coal as statistically separate industries rather than as members of an integral energy market. The following examples compiled from available sources merely indicate suppression of competition in sample states. In 1969, Continental Oil supplied 1.2 percent of the total petroleum needs in Illinois,[286] while Consolidation Coal accounted for 9.4 percent of the coal mined in Illinois during the same year.[287] The effects of the Consolidation Coal-Continental Oil merger can be demonstrated through scrutiny of the market that supplies energy to steam-electric generating facilities in Illinois. Since ten of the state's 42 generation facilities are equipped to burn either coal or residual fuel oil,[288] the merger was anticompetitive to the extent that the ten multifuel facilities lost an independent alternative fuel supplier as a result of the combination. The same inferences can be drawn from the Pittsburg & Midway Coal-Gulf Oil merger in the geographic market of Kansas. Pittsburg & Midway produces approximately 78 percent of the

284. J. VON KALINOWSKI, *supra* note 281, App. 1C, at 3.
285. *See* notes 216-51 *supra* and accompanying text.
286. NATIONAL PETROLEUM NEWS—MID-MAY FACTBOOK ISSUE 143 (1970).
287. 1970 KEYSTONE COAL INDUSTRY MANUAL 476-78.
288. 1969 STEAM-ELECTRIC PLANT FACTORS, *supra* note 28, at 9-11.

state's coal,[289] and Gulf maintains 135 retail outlets in Kansas.[290] Although only four of the 34 steam-electric generation facilities burn coal and oil alternatively,[291] an oil-coal merger tends to foreclose competition in this market. Although these figures do not reveal the combined share of the merged corporations' electric utility market, they are indicative of the problem.

The second significant factor in determining the anticompetitive effect of a horizontal merger, the degree of concentration in the market, is more easily verifiable in the energy market. Concentration can be measured either as a ratio of the output of the largest several suppliers to total production in the market or as a showing of a significant decline in the number of independent enterprises in a line of commerce.[292] The oil industry can presently be characterized as oligopolistic, with regional concentration ratios of the largest eight enterprises ranging from 48 to 99 percent.[293] Furthermore, the total number of independent oil jobbers is declining.[294] Similarly, the coal industry is tending toward concentration. On a nationwide basis, the four leading coal companies in 1969 produced 31.13 percent of the nation's coal, while regional concentration ratios ranged from 31.5 percent to 100 percent.[295] In addition, petroleum companies' acquisition of coal and uranium reserves will result in greater centralization of control of the nation's energy resources.

In analyzing the market effect of a horizontal acquisition, the Department of Justice has stressed that it will scrutinize any merger in which the acquired firm is the owner of a new process or patent. Continental Oil's acquisition of Consolidation Coal seems to fit squarely within this proscription since Consolidation Coal is conducting extensive research in the synthetic petroleum field and has the potential of becoming a major producer of synthetic petroleum within the decade.

2. *Conglomerate Aspects of Petroleum Corporations' Acquisitions of Coal and Atomic Energy Sources.* —Even if the horizontal aspects are disregarded, oil and coal mergers still may have sufficient anticompetitive consequences to be challenged under section 7 as conglomerate mergers. The pure conglomerate acquisition occurs when

289. 1970 KEYSTONE COAL INDUSTRY MANUAL 493.

290. NATIONAL PETROLEUM NEWS—MID-MAY FACTBOOK ISSUE 64 (1970).

291. 1969 STEAM-ELECTRIC PLANT FACTORS, *supra* note 28, at 19.

292. *Compare* Brown Shoe Co. v. United States, 370 U.S. 294 (1962), *with* United States v. Von's Grocery Co., 384 U.S. 270 (1966).

293. C. KAYSEN & D. TURNER, *supra* note 56, at 284.

294. BUS. WEEK, Nov. 7, 1970, at 54.

295. *See* Tables A-C, *supra*. *See also* Wall Street J., May 14, 1971, at 8, col. 2 (S.W. ed.).

two corporations that have no discernible economic relationship merge.[296] There are two variants of the pure conglomerate combination—the product extension merger and the geographic market extension merger. The Supreme Court has defined a product extension acquisition as one in which the products of the acquired company are complementary to those of the acquiring company and may be produced with similar facilities, marketed through the same channels in the same manner, and advertised by the same media.[297] Similarly, a geographic extension merger occurs when the acquired and acquiring firms produce the same or substantially similar products but market the products in different geographic areas.[298] In essence, all variants of conglomerate mergers generate the same kinds of potential anticompetitive effects. Those proscribed effects include: (1) Elimination of potential competition; (2) generation of reciprocal dealings;[299] and (3) entrenchment of one enterprise in a market previously characterized by many competitors.[300] The first and third factors are the most relevant to acquisitions within the energy market.

(a) *Elimination of potential competition.* — Like the horizontal merger, the anticompetitive effects of a conglomerate merger must be assessed within a defined geographic and product market.[301] If a corporation is permitted to eliminate a potential competitor by a merger or acquisition, competition in a given line of commerce may be lessened

296. B. BOCK, *supra* note 212, at 140-41; Turner, *Conglomerate Mergers and Section 7 of the Clayton Act*, 78 HARV. L. REV. 1313, 1315 (1965).

297. FTC v. Procter & Gamble Co., 386 U.S. 568 (1967) (invalidating merger between Procter & Gamble, manufacturer of detergents, and Clorox, leading manufacturer of bleach).

298. United States v. El Paso Natural Gas Co., 376 U.S. 651 (1964) (ordering El Paso Natural Gas to divest itself of the stock of Pacific Northwest Pipeline Corp.).

299. Reciprocal dealings have been defined as "the favoring of one's customers in purchasing commodities sold by them. Suppose, for example, that Industry A sells product A to Industry B, which sells product B to Industry C. If a firm in Industry C acquires a firm in Industry A, it is possible that the firms in B will now patronize the A-C conglomerate in buying product A, either because of the overt pressure by A-C or simply in order to curry A-C's favor." Turner, *supra* note 296, at 1386-87. The Supreme Court has recognized that "[a] threatened withdrawal of orders if products of an affiliate cease being bought, as well as a conditioning of future purchases on the receipt of orders for products of that affiliate, is an anticompetitive practice." FTC v. Consolidated Foods Corp., 380 U.S. 592, 594 (1965).

300. These effects have been cast into 5 categories: (1) the acquired firm may be operated at low cost as part of the conglomerate, forcing competitors in the acquired firm's market out of business; (2) a diversified firm may charge an abnormally low price in its new line of commerce, forcing out competitors; (3) a conglomerate merger may raise barriers to entry and cause small companies to reduce the vigor of competition because of the intimidating size of the conglomerate; (4) the merger may eliminate potential competition; and (5) conglomerate mergers may lead to reciprocity. Turner, *supra* note 296, at 1322-23.

301. *See* FTC v. Procter & Gamble Co., 386 U.S. 568 (1967).

within a geographic region. This anticompetitive effect was recognized by the Supreme Court in *United States v. El Paso Natural Gas Co.*[302] At the time El Paso acquired Pacific Northwest Pipeline Corporation, El Paso was the only distributor of out-of-state natural gas in California, the relevant geographic market. Since Pacific Northwest was one of two major pipelines serving the trans-Rocky Mountain states, the Court concluded that the past efforts of Pacific Northwest to enter the California market, although unsuccessful, remained a powerful influence on El Paso's business practices.[303] The lessening of potential competition also was a factor in invalidating the merger between Procter & Gamble and Clorox.[304] Since Procter & Gamble was the most likely entrant into the bleach market and would have remained on the periphery, preventing Clorox from utilizing its market power, the merger reduced present competition in the liquid bleach market. The Department of Justice guidelines dealing with the validity of conglomerate mergers also recognize the importance of potential competition as a factor in judging the effect of a merger.[305]

Anticipated technological advances in the coal industry will result in potential, if not actual, competition between petroleum and coal corporations in at least two lines of commerce. First, development of the coal pipeline will enable coal producers to compete in geographic markets now dominated by petroleum and natural gas. This geographic expansion can occur in the markets of fuel supply to steam-electric generating plants.[306] Secondly, all coal companies will be potential entrants into all petroleum markets, at least in those areas where coal is accessible,[307] when the coal-to-oil conversion process becomes commercially practical. The recognition of this second area of potential competition is of particular significance when analyzing the merger of Continental Oil Company and Consolidation Coal Company. Since

302. 376 U.S. 651 (1964).

303. *Id.* at 659.

304. *See* FTC v. Procter & Gamble Co., 386 U.S. 568 (1967).

305. The Department of Justice has indicated that it will normally challenge any merger between a likely entrant into the market and any of the following: (1) a firm with 25% of the market; (2) either of the 2 largest firms in a market when the largest 2 firms dominate 50% of the market; (3) any of the 4 largest firms when the top 8 control 75% or more of the market, providing the merging firm controls 10% of the market; and (4) any of the 8 largest if the 8 largest control 75% and either the merging firms' share is not insubstantial and there are no more than one or 2 likely entrants, or the merging firm is a rapidly growing firm. J. VON KALINOWSKI, *supra* note 281, App. 1C, at 121-22.

306. *See* notes 229-38 *supra* and accompanying text.

307. Since the coal conversion process is predicted, at least initially, to be expensive, synthetic petroleum products would be most competitive in areas in which coal is readily available. PETROLEUM THROUGH 1980, *supra* note 242, at 71-78.

Consolidation is the leading corporation in the research and development project aimed at converting coal into synthetic petroleum products,[308] its absorption into the Continental Oil complex eliminated whatever competition might have existed between Continental Oil petroleum products and Consolidation Coal's synthetic petroleum. In the future, Continental Oil and other petroleum companies involved in the production of coal will not have to face competition from synthetic petroleum when setting policy for research and development, investment, and pricing. Consequently, competition in the energy market will inevitably be suppressed.[309]

(b) *Entrenchment of a dominant industry.*—The second applicable anticompetitive factor induced by conglomerate petroleum and coal combinations is the entrenchment of a dominant industry in a market filled with relatively small competitors. In *FTC v. Procter & Gamble Co.*,[310] the Supreme Court, relying in part on the entrenchment or "deep pocket" theory, determined that Procter & Gamble's merger with Clorox would reduce overall competition in the liquid bleach market. The Court reasoned that adding the financial resources of Procter & Gamble to the strong position of Clorox in the bleach market would raise the barriers to entry and discourage active competition among the firms in the bleach industry due to fear of retaliatory measures by Procter.[311] As this case indicates, the rationale behind the "deep pocket" theory is that an acquiring corporation with large assets gives a superior competitive advantage to the acquired company when competitors of the acquired company do not have similar financial resources.[312] The Court of Appeals for the District of Columbia, in *Reynolds Metals Co. v. FTC*,[313] invoked the "deep pocket" theory to invalidate a merger between Reynolds Metals and Arrow Brands, Inc., a distributor of floral aluminum. The court concluded that Arrow's absorption into Reynolds

308. *Id.* at 72.

309. *See* Netschert, *supra* note 241, at 648.

310. 386 U.S. 568 (1967).

311. The Court noted that both the liquid bleach and detergent markets were highly concentrated. For example, in the bleach market the largest 4 firms control 80% of the market, with Clorox, the leading firm, controlling 48.8%. In addition, Procter & Gamble would add assets of $500 million to those of Clorox in a bleach market, which, although oligopolistic, was still filled with many small competitors.

312. For a detailed discussion of the "deep pocket" theory see Davidow, *Conglomerate Concentration and Section Seven: The Limitations of the Anti-Merger Act*, 68 COLUM. L. REV. 1231 (1968); Turner, *supra* note 296; Note, *Conglomerate Mergers: The Attack on Diversification*, 25 U. PITT. L. REV. 683 (1964); Note, *Conglomerate Mergers Under Section 7 of the Clayton Act*, 72 YALE L.J. 1265 (1963).

313. 309 F.2d 223 (D.C. Cir. 1962) (vertical merger).

gave Arrow an immediate competitive advantage over smaller rivals.[314] The existence of the "deep pocket" created the possibility that Arrow could sell at prices equal to or lower than cost and thus undercut smaller competitors. It has been observed that *Reynolds Metals* comes close to standing for the proposition that any acquisition by a large corporation of a business in a competitive market made up of small enterprises violates section 7, because it is presumed that the merger will lead to predatory pricing and to improvement of the acquired firm's facilities beyond the reach of the small competitors.[315]

The "deep pocket" theory can be readily applied to mergers between petroleum and coal companies.[316] As a general rule, petroleum corporations are among the nation's largest enterprises,[317] competing in a highly concentrated market.[318] The coal industry, on the other hand, is largely made up of many small, independent producers.[319] For example, when Occidental Petroleum, the nation's forty-fourth largest manufacturing enterprise, with assets exceeding 2,200,000,000 dollars[320] acquired Island Creek Coal Company, presently the third largest coal producer with only 112,660,000 dollars of premerger assets,[321] the latter gained a potential competitive advantage over its smaller rivals in the coal market.[322] Other coal companies also have found "deep pockets" in the petroleum industry.[323] Consolidation Coal in 1965 had assets of only

314. The court determined that the relevant line of commerce was floral aluminum with a market nationwide in scope. There were only 8 firms in the market with Arrow controlling 33%. *Id.* at 225.

315. Zimmerman, *The Federal Trade Commission and Mergers,* 64 COLUM. L. REV. 500, 514 (1964).

316. These mergers include Gulf's acquisition of Pittsburg & Midway Coal Mining Co., Continental's purchase of Consolidation Coal Co., Occidental's merger with Island Creek Coal Co., and Standard Oil of Ohio's acquisition of Old Ben Coal Corp. BUS. WEEK, Nov. 7, 1970, at 54-55.

317. According to *Fortune*'s directory of the nation's 500 largest corporations, Continental Oil is the thirty-fifth largest corporation when ranked by assets, Gulf ranks tenth, Occidental ranks forty-fourth, and Standard Oil of Ohio ninety-seventh. FORTUNE, May 1970, at 182.

318. Kaysen and Turner have concluded that the petroleum industry nationwide is oligopolistic. The largest 8 petroleum firms dominate between 52-56% of the nationwide market. When the concentration data for various regions of the country are broken down, the market share of the largest 8 firms varies regionally from 48-99%. C. KAYSEN & D. TURNER, *supra* note 56, at 283-84.

319. H. RISSER, THE ECONOMICS OF THE COAL INDUSTRY 9 (1958).

320. 1970 MOODY'S INDUSTRIAL INDEX 2230.

321. 1966-67 MOODY'S INDUSTRIAL INDEX 1233.

322. Occidental Petroleum Corp., [1967-1970 Transfer Binder] TRADE REG. REP. ¶ 18,797 (FTC 1969).

323. In addition to the examples cited in the text, Gulf Oil's acquisition added $8,104,824,000 to the assets of Pittsburg & Midway Coal Mining Co. *See* NATIONAL PETROLEUM NEWS—MID-MAY FACTBOOK ISSUE 31 (1970). Similarly, Standard Oil of Ohio added $1,553,591,000 to Old Ben

446,136,728 dollars[324] as compared with Continental Oil's premerger assets of more than 1,679,473,000 dollars.[325] This disparity in size is further accentuated when it is realized that Consolidation is the nation's leading producer of coal in a market that, although currently decentralized, is tending toward concentration, as evidenced by the decline in total number of independent producers.[326] As a result, Continental Oil and Consolidation Coal, with combined assets exceeding 2.9 billion dollars, compete in a market with a few other oil-coal combinations and a large number of independent producers.

In addition, there is at least a suggestion that Consolidation Coal, through its "deep pocket" Continental Oil, is indulging in predatory practices. In *South-East Coal Co. v. United Mine Workers of America,*[327] plaintiff, a small coal producer, proved a conspiracy between Consolidation Coal, UMW, and others to skew labor prices to force small independent coal producers out of business. Although the point was not raised in the case, Consolidation's merger with Continental Oil was anticompetitive to the extent it provided the incentive or the financial resources to carry out the conspiracy. Even though there is nothing to suggest that other coal companies with "rich parents" in the oil industry are engaging in similar activities, these companies still have acquired increased potential to act anticompetitively.

The Department of Justice has specifically indicated that it will investigate and possibly challenge the acquisition of any leading firm in a concentrated or rapidly concentrating market where the effect may be to further entrench or increase the market power of the acquired firm. The Department is particularly concerned with a merger that creates a large disparity between the size of the acquired firm and the remaining firms in the same line of commerce.[328] This concern apparently applies to the situation created by the oil and coal mergers. Furthermore, the Attorney General of the United States has indicated that the Justice Department is likely to challenge any merger of one of the 200 leading manufacturing firms with any leading producer in any concentrated industry.[329] Since all

Coal Corp. with premerger assets of only $34,147,646. *Id.; see* 1966-67 MOODY'S INDUSTRIAL INDEX 1238.

324. 1966 MOODY'S INDUSTRIAL INDEX 1288.

325. FORTUNE, July 1966, at 232. Continental's present total assets exceed $2,896,616,000. FORTUNE, May 1970, at 184.

326. For a discussion of the decline of independent competitors in the market as an index of concentration see note 277 *supra* and accompanying text.

327. 434 F.2d 767 (6th Cir. 1970).

328. J. VON KALINOWSKI, *supra* note 281, App. 1C, at 124.

329. Address by Attorney General Mitchell, Georgia Bar Association, June 6, 1969, *reprinted in* 35 VITAL SPEECHES 592 (1969).

the oil-coal mergers have involved petroleum companies that are among the leading 200 manufacturers and since coal is a concentrating industry, the energy market mergers seem to fall squarely within the Attorney General's standards. These facts have led one economist to conclude that the inaction of the Justice Department is "inexplicable . . . as interfuel mergers and acquisitions proliferate."[330]

3. *Public and Private Remedies.* — As the foregoing discussion indicates, the acquisition of coal companies by petroleum interests raises substantial questions of antitrust policy. The problems of antitrust enforcement, however, remain to be investigated. The following sections will survey public and private antitrust remedies and discuss the appropriateness of their application to the energy market.

(a) *Public remedies.* —Congress has vested enforcement of section 7 of the Clayton Act concurrently in the Department of Justice and the Federal Trade Commission.[331] The Justice Department has the power to investigate the legality of a given merger and the authority to seek a decree in federal district court enjoining a merger or an order requiring the divestiture of the acquired corporation.[332] The FTC has similar investigatory power and may, after a hearing, compel divestiture. Moreover, the FTC may have the power to issue a restraining order to prevent a merger.[333]

To isolate mergers with possible anticompetitive consequences, the Commission in 1969 first promulgated rules that require premerger notification. If the merger involves corporations with combined assets in excess of 250,000,000 dollars,[334] detailed financial reports must be filed with the Commission. This innovation should provide the Commission with a greater ability to detect illegal combinations.

The ability of the agencies to utilize post-acquisition evidence in demonstrating the anticompetitive effect of a merger is the final weapon in the public remedies arsenal. Under the "backward sweep" doctrine, it is not necessary to judge the legality of the merger on facts existing on the date of the merger. Instead, it may be determined by the status of the market when the suit is brought.[335] Since the Clayton Act statute of

330. Netschert, *supra* note 241, at 651.

331. *See* note 208 *supra* and accompanying text.

332. Clayton Act § 15, 15 U.S.C. § 25 (1964) provides: "[A]nd it shall be the duty of the several United States attorneys, in their respective districts, under the direction of the Attorney General, to institute proceedings in equity to prevent and restrain such violations."

333. FTC v. Dean Foods Co., 384 U.S. 497 (1966), *noted in* 66 MICH. L. REV. 142 (1967).

334. *See* O'Brien, *The Federal Trade Commission's Pre-Merger Notification Requirements*, 14 ANTITRUST BULL. 557 (1969).

335. United States v. E.I. du Pont de Nemours & Co., 353 U.S. 586 (1957) (successfully

limitations does not run against the Government, a merger may be challenged at any time if subsequent events indicate that it was anticompetitive. It is evident, therefore, that to the extent oil-coal mergers are in restraint of trade or tend to create a monopoly, they may be challenged by the Department of Justice or FTC. In view of the broad statutory definition of an illegal merger and the judiciary's history in upholding Department of Justice or FTC determinations that a merger may lessen competition,[336] section 7, if vigorously enforced, could provide a partial solution to energy market concentration.

(b) *Private remedies—the treble damage action.*—Section 4 of the Clayton Act[337] provides that any person who has been injured in his business or property by anything forbidden in the antitrust laws may maintain an action for treble damages in federal district court. The private treble damage action has two principal goals: (I) To insure vigorous enforcement of the antitrust laws; and (2) to provide redress for private injury.[338] The recognition of the private right of action for the violation of section 7 is important because the merger, while causing injury, might not involve violation of the Sherman Act.[339] To maintain an action for treble damages under the Clayton Act, the plaintiff must prove that: (I) The antitrust laws have been violated; (2) plaintiff has suffered an injury to his business or property that can be described in terms of money damages; and (3) a causal nexus exists between the defendant's wrongdoing and the plaintiff's loss.[340]

(i) *Recognition of the private cause of action.*—Since section I of

challenging in 1957 the 1917 acquisition of General Motors stock by du Pont). *See also* Bork, *Anticompetitive Enforcement Doctrines Under Section 7 of the Clayton Act*, 39 TEXAS L. REV. 832, 840-42 (1961); Note, *Postacquisition Evidence and Section 7 of the Clayton Act: A Study in Judicial Legislation*, 36 U. CIN. L. REV. 434 (1967).

336. Justice Harlan has characterized the Supreme Court's approach to § 7 cases as res ipsa loquitur. FTC v. Procter & Gamhle Co., 386 U.S. 568, 581 (1967) (Harlan, J., concurring).

337. 15 U.S.C. § 15 (1964) provides: "Any person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws may sue therefor in any district court of the United States . . . and shall recover threefold the damages by him sustained, and the cost of suit, including a reasonable attorney's fee."

338. Minnesota Mining & Mfg. Co. v. New Jersey Wood Finishing Co., 381 U.S. 311 (1965) (affirming determination that action by FTC tolls the statute of limitations, tacitly assuming the existence of a private cause of action under § 7); Kinnear-Weed Corp. v. Humble Oil & Ref. Co., 214 F.2d 891 (5th Cir. 1954), *cert. denied*, 348 U.S. 912 (1955) (dismissed for failure to allege sufficient facts).

339. To prove violation of § 1 or § 2 of the Sherman Act, plaintiff must prove a combination, contract, or conspiracy in restraint of trade or attempt to monopolize. 15 U.S.C. §§ 1, 2 (1964); *see* Stein, *Section 7 of the Clayton Act as a Basis for the Treble-Damage Action: When May the Private Litigant Bring his Suit?*, 56 CALIF. L. REV. 968, 979-80 (1968).

340. Continental Ore Co. v. Union Carhide & Carbon Corp., 289 F.2d 86, 90 (9th Cir. 1961); Highland Supply Corp. v. Reynolds Metals Co., 245 F. Supp. 510, 512 (E.D. Mo. 1965).

the Clayton Act[341] defines section 7 as part of the antitrust laws of the United States, it logically follows that section 4 provides a private treble damage action against one who has violated section 7. Many courts, however, have refused to recognize the right of the private litigant to maintain this cause of action. These courts have reasoned that any award of damages under section 7 would be purely speculative[342] since it would be concerned with probable or future restraints of trade or tendencies to monopolize by merging corporations rather than with actual restraints or injuries to trade. Additionally, it has been argued that the mere violation of section 7 could not be the proximate cause of injury to an individual's business or property.[343] Since the 1969 decision in *Gottesman v. General Motors Corp.*,[344] however, several courts have recognized a private right of action arising solely from the violation of section 7. In *Gottesman,* the Second Circuit, reversing a district court decision that a threatened restraint is not compensable, reasoned that if the threatened loss ripens into reality, a cause of action exists. Finding that a merger may directly injure a private party or set in motion events that will later do so, the court concluded that the private litigant should have a chance to prove an injury by reason of the violation.[345] The Second Circuit, the Fifth Circuit,[346] and a series of district court decisions[347] now acknowledge this right. The Eighth Circuit, however, has been hesitant to enforce a private cause of action under section 7.[348]

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341. 15 U.S.C. § 12 (1964).

342. *E.g.,* Highland Supply Corp. v. Reynolds Metals Co., 245 F. Supp. 510 (E.D. Mo. 1965); Bailey's Bakery, Ltd. v. Continental Baking Co., 235 F. Supp. 705 (D. Hawaii 1964); Gottesman v. General Motors Corp., 221 F. Supp. 488 (S.D.N.Y. 1963), *rev'd,* 414 F.2d 956 (2d Cir. 1969). *See also* Independent Iron Works, Inc. v. United States Steel Corp., 322 F.2d 656 (9th Cir. 1963).

343. Highland Supply Corp. v. Reynolds Metals Co., 245 F. Supp. 510 (E.D. Mo. 1965). *Contra,* Dailey v. Quality School Plan, Inc., 380 F.2d 484 (5th Cir. 1967) (holding employee discharged following merger could maintain right of action based on § 7); Julius M. Ames Co. v. Bostitch, Inc., 240 F. Supp. 521 (S.D.N.Y. 1965) (holding right of action for violation of § 7 exists, but only if plaintiff's injury was incurred substantially contemporaneously with the merger).

344. 414 F.2d 956 (2d Cir. 1969), *rev'g* 221 F. Supp. 488 (S.D.N.Y. 1963).

345. Plaintiffs filed a stockholder's derivative action against General Motors Corp. and E.I. duPont de Nemours & Co., relying on a Supreme Court decision that du Pont's acquisition of General Motors stock was a vertical integration that violated § 7.

346. *See* Dailey v. Quality School Plan, Inc., 380 F.2d 484 (5th Cir. 1967).

347. *E.g.,* Dole Valve Co. v. Perfection Bar Equip., Inc., 311 F. Supp. 459 (N.D. Ill. 1970); McKeon Const. v. McClatchy Newspapers, 1970 Trade Cas. 88,810 (N.D. Cal. 1969); Metropolitan Liquor Co. v. Heublein, Inc., 1970 Trade Cas. 88,878 (E.D. Wis. 1969); Kirihara v. Bendix Corp., 306 F. Supp. 72 (D. Hawaii 1969); Western Geophysical Co. of America v. Bolt Associates, Inc., 305 F. Supp. 1251 (D. Conn. 1969); Sam S. Goldstein Indus., Inc. v. Botany Indus., Inc., 301 F. Supp. 728 (S.D.N.Y. 1969).

348. *See* Highland Supply Corp. v. Reynolds Metals Co., 327 F.2d 725 (8th Cir. 1964).

(ii) *Standing of the private litigant.* —Since an action for treble damages for the violation of section 7 has been recognized in some jurisdictions, it becomes important to ascertain what classes of private litigants have standing to maintain the action.[349] The court first must determine if the injury is proximately related to the merger because the chain of events causally related to the merger may extend indefinitely.[350] In *Kirihara v. Bendix Corp.*,[351] plaintiff, the exclusive distributor of Fram oil filters, was stripped of his exclusive franchise after Bendix acquired Fram Corporation. He alleged that the merger proximately caused a large business loss. Recognizing that there was a right of action for the violation of section 7, the federal district court ruled that plaintiff, in addition to proving the causal nexus between the merger and the injury, had to show that he was within the "target area" of the alleged violation. To be within the target area, the plaintiff "must be one of the components of the competitive infra-structure of the relevant market involved in complaint . . . and the effect of such injury upon that component must validate the reasonable probability that a substantial anti-competitive effect upon the viability of competition in *that* market will flow from the condemned acquisition."[352] This apparent requirement that the plaintiff be a competitor of either the acquired or the acquiring corporation to have standing to maintain a treble damage action for the violation of section 7 has found support in other cases.[353] A recent case, however, indicates that this view is not unanimous. In *Metropolitan Liquor Co. v. Heublein, Inc.*,[354] plaintiff alleged that defendant Heublein's merger with Vintage Wine, Inc. had deprived it of the exclusive right to sell a particular brand of Vintage's wine because defendant had granted similar franchises to several other liquor dealers in its market area after the merger. Despite the similarity in facts with the *Kirihara* case, the district court refused to grant defendant's motion to dismiss, holding that the plaintiff should be permitted to prove any damages it may have suffered even though it was not a direct competitor of the new combination. In the court's opinion, the plaintiff must prove

349. Standing is the device by which a court can determine whether the injury alleged is one that is compensable under the law.

350. Pollock, *Standing to Sue, Remoteness of Injury, and the Passing-On Doctrine*, 32 A.B.A. ANTITRUST L.J. 5 (1966).

351. 306 F. Supp. 72 (D. Hawaii 1969).

352. *Id.* at 90.

353. *E.g.*, McKeon Const. v. McClatchy Newspapers, 1970 Trade Cas. 88,810 (N.D. Cal. 1969); *see* Dole Valve Co. v. Perfection Bar Equip., Inc., 311 F. Supp. 459, 462 (N.D. Ill. 1970); Rayco Mfg. Co. v. Dunn, 234 F. Supp. 593, 597 (N.D. Ill. 1964).

354. 1970 Trade Cas. 87,878 (E.D. Wis. 1970).

only that its injuries were proximately caused by the merger,[355] thus broadly defining the target area.

The requirement that the plaintiff show that he is within the "target area" protected by the antitrust laws is an appropriate device for screening out meritless claims before the defendant is compelled to gather unusually expensive and voluminous economic evidence to rebut the plaintiff's claim. As demonstrated by the *Metropolitan Liquor* case, however, the *Kirihara* requirement that that plaintiff be a competitor ignores some classes of compensable injury. It is submitted that the target area test as applied under the Sherman Act would be a more adequate device for screening out the improbable plaintiff. This test, similar to traditional tort law formulations of proximate cause, allows the plaintiff to maintain a cause of action if the defendant should have been able to reasonably foresee the injury to the plaintiff resulting from the illegal act.[356] The adoption of this test in section 7 cases would require the court to look at some important additional factors, including the intent of the merging parties and the degree to which the plaintiff's injury is directly related to the merger. As a result, wholly frivolous claims would be screened out without adopting the rigid requirement that the plaintiff be a competitor of the acquired or acquiring corporation. Moreover, since Clayton section 7 actions and claims arising under the Sherman Act are frequently joined, this test would simplify the definition of "target area."

(iii) *Statute of limitations and effect of prior decrees in favor of the Government.*—In addition to the standing requirement, the plaintiff faces both the four-year statute of limitations[357] and the probability of being deprived of his section 5 right to have prior antimerger judgments for the government given prima facie weight in the private action. There is controversy over the question of when a right of action accrues under section 4. The four years may begin to run on the date of the illegal act;[358] one decision suggests that the cause of action accrues only when the

355. *Id.* at 87,880; *see In re* Multidistrict Private Civil Treble Damage Antitrust Litigation Involving Motor Vehicle Air Pollution Control Equip., 1970 Trade Cas. 89,254, 89,256 (C.D. Cal. 1970), *noted in* 24 VAND. L. REV. 126 (1970) (concluding in a Sherman Act action that in interpreting the phrase "'injured in his business or property *by reason of anything* forbidden in the antitrust laws' . . . plaintiffs may fail in their proof, but until then, they should be given the benefit of employing 'any available remedy to make good the wrong done.'").

356. *See* Twentieth Century Fox Film Corp. v. Goldwyn, 328 F.2d 190, 220 (9th Cir. 1964). *See also* Karseal Corp. v. Richfield Oil Corp., 221 F.2d 358 (9th Cir. 1955).

357. Clayton Act § 4b, 15 U.S.C. § 15 (1964).

358. Stein, *supra* note 339, at 982.

plaintiff first suffers injury,[359] and one court has determined that the cause accrues daily and the plaintiff is entitled to recover damages for injury for the period of four years next preceding the filing of the suit.[360] Since the injury resulting from an illegal merger is a continuing one, it is suggested that the latter rule is proper.

Section 5 of the Clayton Act[361] provides that an antitrust judgment in favor of the Government is prima facie evidence of the antitrust violation in a private action. Since section 7 is violated on the showing of a mere probability that there has been a restraint of trade, the court in *Gottesman v. General Motors Corp.*,[362] reasoned that although the prior judgment for the Government is not prima facie proof of the injury to the private plaintiff, it should be given substantial evidentiary value.

(iv) *Injuries from interfuel mergers.*—It is evident from the foregoing discussion that there are several classes of persons who may suffer compensable injury under section 7 from a coal-petroleum merger. Independent coal producers and independent oil companies are directly within the target area as defined by *Kirihara* since they are components of the competitive infra-structure. Within the circle of foreseeability but outside the *Kirihara* target area are steam-electric generation plants that may pay higher fuel prices because of lessening competition within the energy market. In addition, there is the consumer who must suffer the consequences by paying higher fuel prices that are passed on by the utility company. All of these classes of plaintiffs may utilize the class action and all but the consumer would seem to have sustained compensable injuries. Unfortunately, statements in several cases that require the private plaintiff to sustain injury different from that sustained by the public in general would seem to bar an action by the individual consumer of electricity.[363] Thus, under present case law the consumer may fall outside any definition of target area.

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359. *See* Sam S. Goldstein Indus., Inc. v. Botany Indus., Inc., 301 F. Supp. 728 (S.D.N.Y. 1969).

360. Highland Supply Corp. v. Reynolds Metals Co., 327 F.2d 725, 732 (8th Cir. 1964).

361. 15 U.S.C. § 16 (1964) provides in part:

"A final judgment or decree heretofore or hereafter rendered in any civil or criminal proceeding brought by or on behalf of the United States under the antitrust laws to the effect that a defendant has violated said laws shall be prima facie evidence against such defendant in any action or proceeding brought by any other party against such defendant under said laws or by the United States under section 15a of this title, as to all matters respecting which said judgment or decree would be an estoppel as between parties thereto . . . ."

362. 414 F.2d 956 (2d Cir. 1969).

363. *E.g.*, Sam S. Goldstein Indus., Inc. v. Botany Indus., Inc., 301 F. Supp. 728, 734 (S.D.N.Y. 1969); Clune v. Publishers' Ass'n, 214 F. Supp. 520, *aff'd*, 314 F.2d 343 (2d Cir. 1963) (Sherman Act); *see* Blaski v. Inland Steel Co., 271 F.2d 853, 854 (7th Cir. 1959); Dole Valve Co. v. Perfection Bar Equip., Inc., 311 F. Supp. 459 (N.D. Ill. 1970).

C. *Analysis of the Application of Antitrust Laws to the Fuel Market.*

Optimum operation of the American free enterprise system should produce socially desirable results including efficient utilization of available natural resources, overall economic progress and stability, and equitable distribution of income.[364] To achieve these ends, the free enterprise system depends upon open and vigorous market competition. Antithetical to this competitive system, however, is the growing trend toward concentration or oligopoly evidenced by the tendency of a few large enterprises to dominate an entire industry, an event made possible in part by the modern merger movement. The oligopolistic market confers on its constituent members the power, whether utilized or not, to set prices and outputs, thus maximizing profits and subverting the role of competition in market regulation.[365] Although the theory of oligopoly is controversial and here somewhat oversimplified, its thrust is that oligopolies tend to blunt price competition. Compared to nonoligopolistic industries, oligopoly prices tend to be higher, more rigid, and less responsive to economic change. The competition that is diverted from prices is allowed to turn to sales effort and elaboration of service with wasteful and often unstable results.[366] With competition suppressed, the nation's economic goals become more difficult to attain, and the interests of the corporate giant are placed above the interests of the public. It can be argued that high market concentration is justified because of the greater economies of scale enjoyed by oligopolistic industries. Two authorities, however, maintain that all the technical economies of scale are achieved at the plant, not at the firm level.[367] Consequently, it would be the size of the plant and not the size of the total enterprise that determines whether all economies of scale are achieved. Moreover, the *Task Force Report on Antitrust Policy* has observed that a significant degree of efficiency in production is not dependent on existing high levels of concentration. This conclusion is illustrated by the many small enterprises that are able to remain competitive with dominant firms that do not exercise their oligopolistic power.[368] It has been determined, for example, that some manufacturing enterprises need only five percent of the market to attain maximum

364. C. KAYSEN & D. TURNER, *supra* note 56, at 11.

365. *See* notes 47-50 *supra* and accompanying text.

366. Edwards, *Large Enterprises and Antitrust Policy*, in PUBLIC POLICY TOWARD COMPETITION 12 (National Industrial Conference Bd. monograph 1962).

367. C. KAYSEN & D. TURNER, *supra* note 56, at 6.

368. WHITE HOUSE REPORT, *supra* note 78, at II-10.

efficient production.[369] Similarly, there is no evidence that the concentrated industries are more active in research and development than the more competitive industries.

Since an oligopoly tends to frustrate desirable economic objectives and does not benefit society sufficiently to justify its existence, many oligopolistic market structures have been attacked through antitrust laws or government regulation. Surprisingly, however, the intra- and interfuel oligopolies that presently exist have been virtually immune from either of these governmental regulatory devices.[370] Whether this de facto invulnerability is a result of governmental inertia, political influence, or other debilitating factors is a difficult question and perhaps unanswerable. The important point is that this nation must recognize that it is confronted with the possibility that the bulk of its most vital resources may be controlled by a few corporate giants—a fact more real than imaginary.

1. *Disadvantages of Antitrust Remedies.*—Assuming that governmental impotency can be surmounted, what methods are appropriate to interdict the growing fuel merger movement? Traditionally, antitrust remedies have been used to abate market concentration. These statutes, however, are fraught with numerous disadvantages that may render them inappropriate for use in the energy market. The inadequacy of available remedies under the Sherman and Clayton Acts is the most obvious drawback of present antitrust legislation. If these acts were vigorously enforced, the judiciary could enjoin all future intra- and interfuel mergers, compel divestiture of the acquisitions that have already occurred, and resolve the fuel conglomerates into smaller units. Although competition is usually fostered by numerous small competitive units in the market, the energy industry does not necessarily fit into the typical pattern. In fact, stringent application of antitrust statutes to dismantle intrafuel concentration might destroy rather than preserve the energy industry. Since the extraction, processing, and refining of mineral resources often require large capital expenditures, small diversified units may be inefficient. Similarly, American firms, if broken into smaller units, would be at a competitive disadvantage in dealing with international fuel producers. If Standard Oil of New Jersey, for example, were divided judicially into ten or fifteen smaller units, it is not certain that competition would be fostered. The disruption caused by divestiture actually might worsen the present fuel crisis. Compounding these

369. G. STIGLER, THE THEORY OF PRICE 223 (3d ed. 1966).

370. Walden, *supra* note 150, at 780.

disadvantages, antitrust divestment and dissolution orders would be an ad hoc, fragmented approach to solving the nation's fuel problems, which at best could only result in chaos.

Another serious disadvantage in enforcing the antitrust laws is the overwhelming expense required to mount a multipronged attack on existing concentration and illegal combinations. In 1965, at the height of the merger movement, the Justice Department and the FTC could muster only a total of 27 antimerger complaints.[371] Antitrust litigation is expensive, not only for the Government, but also for those fuel companies forced to defend protracted antitrust suits. In addition to the expense, antitrust cases are notorious for consuming vast amounts of judicial time between initial complaint and final resolution. The average litigated civil antitrust action brought by the Department of Justice, for example, consumes 59 months, and if the case is considered by the Supreme Court, it averages 70 months.[372] Similarly, the average litigated restraint of trade action filed by the FTC consumes 61 months if the case is judicially reviewed.[373] When a small, closely knit group of corporations controls resources as indispensable to the nation as the basic fuels, the prospect of judicial relief in 60 to 70 months is not comforting.

It also has been suggested that the agencies charged with enforcement of the antitrust laws tend to move hesitantly against the economically and politically powerful petroleum industry.[374] This observation receives some support from the present status of antitrust investigations in the fuel industry. Although a year has elapsed since the fuel crisis first gained national attention,[375] the FTC has confessed that its investigation of the energy market has not progressed beyond the blueprint stage.[376] Moreover, the Department of Justice has stated that recent price increases have not led to an increase in antitrust investigation of energy industries.[377] It is also interesting to note that Attorney General John Mitchell has recognized the need for an

371. BUREAU OF ECONOMICS, FEDERAL TRADE COMM'N, ECONOMIC PAPERS 1966-69, at 35 (1969).

372. Posner, *A Statistical Study of Antitrust Enforcement*, 13 J. LAW & ECON. 365, 377 (1970).

373. *Id.* at 379.

374. *See* R. ENGLER, THE POLITICS OF OIL 397 (1961).

375. *See Hearings on Antitrust Problems in the Energy Field Before the Subcomm. on Antitrust and Monopoly of the Senate Comm. on the Judiciary*, 91st Cong., 2d Sess. (1970).

376. Nashville Tennessean, Mar. 3, 1971, at 41, col. 1.

377. CCH TRADE REG. REP. No. 500, Jan. 11, 1971, at 7 (statement by Richard W. McLaren, chief of the Antitrust Division of the Department of Justice).

appropriate energy policy and has promised that if problems arise from anticompetitive activities in any fuel market, suitable antitrust action will be taken.[378] In contrast to Mitchell's broad statement, Richard W. McLaren, chief of the Justice Department's Antitrust Division, has stated that it is not the policy of the Nixon Administration to use the threat of antitrust investigation to combat price increases. Mr. McLaren conceded, however, that anticompetitive agreements between enterprises in the energy market generally would be subject to the same antitrust standards applicable to firms in other fields.[379] The situation is effectively summarized by noting that antitrust laws have little real nexus with the major source of market power, "[a]nd there would be a measure of agreement that present enforcement attacks the symbols of market power and leaves the substance."[380]

2. *Proposed Use of Antitrust Remedies.*—Although antitrust remedies have numerous disadvantages, their use would be appropriate in certain circumstances to promote competition in the energy market. First, the Sherman and Clayton Acts should be used to prohibit future concentration within the petroleum, coal, and natural gas industry, but they should not be used to reduce present levels of concentration within a particular fuel industry.[381] This approach has the advantage of allowing existing American fuel enterprises to utilize economies of scale and to compete effectively with foreign fuel companies while prohibiting any further concentration within the fuel market. Secondly, since the potential anticompetitive effects generated by the petroleum-coal mergers do not seem to be counterbalanced by any public policy considerations or substantial economic advantages, the Justice Department and Federal Trade Commission should immediately initiate litigation pursuant to section 7 of the Clayton Act to compel Continental Oil, Gulf, Standard Oil of Ohio, and Occidental Petroleum to divest their coal producing subsidiaries, and any future interfuel mergers should be enjoined.

The enforcement of the Sherman and Clayton Acts could bring

378. CCH TRADE REG. REP. No. 499, Jan. 5, 1971, at 3 (statement of Attorney General Mitchell).

379. CCH TRADE REG. REP. No. 500, Jan. 11, 1971, at 7.

380. *See* J.K. GALBRAITH, THE NEW INDUSTRIAL STATE 188 (1967).

381. Should the recommendations of the White House Task Force on Antitrust Policy be enacted into law, the Sherman Act's application to the fuel industry would be eased. The relevant portion of the recommendations, embodied in the proposed Concentrated Industries Act, would make the relevant markets and market shares of the concentrated industry the sole question for determination under the Act. In this manner, the FTC and the Justice Department could avoid having to prove anticompetitive behavior in order to show a violation of the Sherman Act by the shared monopoly. WHITE HOUSE REPORT, *supra* note 78, at A-1 to -15.

about substantial long-run benefits. If, for example, Continental Oil were required to divest itself of Consolidation Coal, the coal industry could independently push forward the development of synthetic petroleum and thus, within the decade, become an effective competitor with the petroleum industry.[382] Similarly, if petroleum interests are prevented from gaining substantial control of the nuclear fuels market, nuclear energy could maintain long-term competition with petroleum and coal, at least in the fuel market for electric generating facilities. Moreover, if the increase in energy market concentration could be halted, minimum regulatory techniques could be employed to preserve the requisite competition.[383]

IV. Federal Regulation Affecting the Supply of Energy

Although the Sherman and Clayton Acts should assure that the nation's energy policy is not distorted by the market impact of giant interfuel combines, these statutes must be supported by additional regulation to insure competition. The following section will analyze the current state of regulation in the fuel industry and examine the effectiveness of present regulatory techniques to insure competition and curb concentration in the energy market. It is beyond the scope of this Project to detail the morass of state and federal regulation affecting the flow of energy. The following discussion, however, is intended to be indicative of existing regulatory problems.

A. Inconsistency in Federal Regulatory Policy

The basic goal of all federal economic regulation of the fuel industries is the elimination of the evils of oligopoly. There is, however, a fundamental inconsistency in the methods used to pursue this goal. In the regulation of some fuel industries, the federal government entirely rejects oligopoly as a market structure and designs regulations to encourage competition.[384] In other fuel industries, however, oligopoly is accepted as a fait accompli, and regulatory efforts are aimed at

382. Petroleum Through 1980, *supra* note 242, at 74.

383. *See* notes 463-502 *infra* and accompanying text.

384. This kind of regulation, which is generally termed "indirect," includes promulgation of standards and fiscal intervention. Promulgation of standards includes congressional enactments that rely upon the judiciary for definition. The court-prosecutor system, characteristic of both the Sherman and Clayton Acts, is generally included within this category. McFarland, *Landis' Report: The Voice of One Crying in the Wilderness*, 47 Va. L. Rev. 373, 422 (1961). Fiscal intervention includes government expenditures in procurement activities, management of monetary policy, control of tax, interest, and exchange rates, and sales of government stockpiles. *See generally* C. Kaysen & D. Turner, *supra* note 56.

minimizing the effects of concentration by imposing detailed rules and restrictions on marketing procedures.[385] This inconsistency may be seen more clearly by comparing the methods used to regulate the coal industry with those used to control the natural gas industry. In the natural gas industry, the Federal Power Commission regulates the transportation of gas through pipelines,[386] sets wellhead and citygate prices,[387] and, in some instances, controls the industry's retail market.[388] In the coal industry, on the other hand, the Government has traditionally sought to foster competition. Extensive investigations by the Federal Trade Commission during and after World War I concluded that the coal industry was competitive and should retain that posture.[389] This seemingly inconsistent approach may be attributable to the lack of centralized federal control over the fuel industries.[390] The existing diffusion of power creates a regulatory system that tolerates inconsistent and conflicting policies, fosters static and unresponsive control, and remains ill-informed about the very subjects of its authority. Unless this system is re-examined and perhaps restructured, it cannot promise to insure the availability of energy resources necessary to meet the nation's future requirements at a reasonable cost and in a timely manner.

1. *Effect of Specific Regulations on the Coal Industry.*—The federal government has fashioned schemes to promote competition in the coal industry. The industry itself has sought to broaden the geographical markets in which coal may effectively compete[391] by financing research designed to increase the efficiency of coal slurry pipelines.[392] Similarly, the Government has assisted this effort by funding several projects aimed at increasing the coal industry's product market by developing a method

385. The comprehensive rules and procedures established by independent commissions and executive agencies are generally termed "direct" regulations. *See generally* Loevinger, *Regulation and Competition as Alternatives,* 11 ANTITRUST BULL. 101, 104-05 (1966); Welch, *The Effectiveness of Commission Regulation of Public Utility Enterprises,* 49 GEO. L.J. 639 (1961).

386. Natural Gas Act of 1938, 15 U.S.C. § 717 (1964).

387. *See* notes 420-26 *infra* and accompanying text.

388. *See, e.g.,* Alabama-Tennessee Natural Gas Co. v. FPC, 359 F.2d 318 (5th Cir. 1966) (Commission's refusal, at termination of long-term contract, to certify substitute supplier when the only alternative gas supply was from another interstate pipeline, held valid, thereby requiring distributor to continue dealing with original supplier).

389. *See, e.g.,* N. LEONARD, THE STRUCTURE OF AMERICAN INDUSTRY 34-35 (W. Adams ed. 1950).

390. "[T]here is no single Federal agency to carry out total energy policy to attain a balanced national objective of efficient and productive utilization of our total energy resources." *Hearings, supra* note 13, at 124 (statement of John N. Nassikas, Chairman, Federal Power Commission).

391. *See* note 75 *supra* and accompanying text.

392. *See* N.Y. Times, May 15, 1969, at 81, col. 3 ($1.8 million government contract to synthesize coal); Wall Street J., July 14, 1969, at 23, col. 6 ($8.1 million government contract to build a plant to convert coal into pipeline gas).

to convert coal into other desulphurized fossil fuels.[393] Recent legislative proposals also acknowledge the desirability of a competitive coal industry. One bill, introduced in the 91st Congress,[394] would require the Tennessee Valley Authority (TVA) to place "a fair proportion of the purchases and contracts [for coal] made by the TVA with small business concerns."[395] This bill is designed to benefit the small coal companies, which comprise the most competitive sector of the industry, by increasing their capacity to compete in contract procurement with the larger coal-oil combinations. Although this contract procurement assistance is only regional in scope, it has been suggested that this plan could be implemented on a national scale through agencies like the Department of Defense[396] and the General Services Administration,[397] which are authorized to operate similar programs.

Despite this apparent desire to maintain a competitive structure in the coal industry, certain regulatory programs are clearly anticompetitive in effect. The Coal Mine Health and Safety Act of 1969[398] is one example. The Act was designed to reduce the frequency of mining accidents and to eliminate occupational lung disorders. To achieve these goals, Congress established stringent safety requirements affecting day to day coal mine operations and provided stiff penalties for their violation.[399] Unfortunately, the anticompetitive effects of the statute were not determined prior to its passage. Small mine operators immediately recognized that the Act's exacting standards[400] were both economically and technologically unfeasible in a small coal mine.[401]

393. Atlantic-Richfield, Continental Oil, and FMC Corporation are currently operating facilities, under federal grants, to extract synthetic oil from coal. Mayer, *supra* note 3, at 75.

394. H.R. 19,694, 91st Cong., 2d Sess. (1970).

395. 116 CONG. REC. 9304 (daily ed. Oct. 14, 1970) (remarks of Congressman Evins). Congressman Evins also called upon the FTC to "investigate and report upon the monopolistic concentration of ownership in these vital and important areas of our economy." *Id.*

396. *Id.*; Small Business Act of 1953, § 212, 15 U.S.C. § 637 (1964).

397. 116 CONG. REC. 9304 (daily ed. Oct. 14, 1970) (remarks of Congressman Evins); Commission on Government Procurement Act, 41 U.S.C. §§ 251-60 (Supp. V., 1970) (establishing the Commission on Government Procurement).

398. Coal Mine Health and Safety Act of 1969, 30 U.S.C.A. §§ 801-960 (1971).

399. Fines provided in the Act vary according to the nature of the violation and increase significantly if the same violation is detected upon a later inspection. Upon the first violation, for example, a mine operator who allows an "imminently dangerous" situation to proceed unchecked incurs a $500 fine. The penalty increases to $1500 for a second violation, and to $3000 for a third violation. Procedures Under the Federal Coal Mine and Safety Act of 1969, 35 Fed. Reg. 7181-82 (1970).

400. The interim mandatory dust standard has been set at 3.0 mg. of coal dust per cubic meter of air. According to § 202(b)(4), coal companies, which believe that they cannot comply with this standard, are permitted to request a public hearing before the Interim Compliance Panel. 35 Fed. Reg. 11296 (1970).

401. National Coal Ass'n Bull., *Why Is Coal in Very Tight Supply?*, at 3.

Despite Government contention that the Act would have only a slight effect on the industry, 1830 notices of penalty were issued, and thirteen small mines were directed to close after only ten days and 234 inspections.[402] Nonetheless, the Government has repeatedly defended the Act, pointing out that only small mines have been seriously affected and that total coal production has not declined. Although this analysis is probably accurate, it ignores the broader impact of the Act on the market structure of the coal industry.[403] More than 20 percent of our national coal production is controlled by petroleum interests.[404] These larger companies can afford to pay fines incurred under the Act since they can rely on the vast asset reserves of their parent petroleum corporations. The smaller, independent coal firms, however, do not have this financial backing and, therefore, are most burdened by the Act. Congress recently recognized the anticompetitive effects of this Act, and its solution was to propose an amendment providing a period of grace during which a company may cure a violation without paying a penalty.[405] This amendment will not solve the problem, however, since many small coal producers cannot afford either the fine or the new equipment. Since both options require large expenditures by the offending company, the Act is clearly detrimental to competition in the coal industry.

The Coal Mine Health and Safety Act is a product of regulatory tunnel-vision. Although its thrust is directed toward a specific problem and its provisions deal squarely with this problem, the drafters failed to calculate its impact upon anything but the specific problem. Neither the committee that drafted the legislation nor the Department of Interior undertook the responsibility of protecting competition in the coal industry. Evidently, they assumed that other authorities—the Justice Department or the FTC—had this responsibility. Unfortunately, this

402. Franklin, *Coal Loss Slight Under New Law,* N.Y. Times, Apr. 19, 1970, at 87, col. 5.

403. Although only 3 mines were closed by direct government action during the first week of enforcement, in Tennessee alone 89 mines voluntarily ceased production in order to avoid inspections that they believed would be financially disastrous. Franklin, *Mine Owners Say Law Imperils Coal Production,* N.Y. Times, Apr. 12, 1970, at 39, col. 3.

404. *See* note 64 *supra* and accompanying text.

405. S. 3788, 91st Cong., 1st Sess. (1970). It has been urged that if fines cannot be significantly reduced the larger companies should at least be denied tax advantages such as the opportunity for tax-free reorganization, the percentage depletion allowance, and the capital gains treatment of royalties, they receive under the present system. Indeed, some legislators place blame for the energy crisis primarily on faulty tax policy. Former Senator Albert Gore has maintained that tax laws encourage concentration of economic power and has advocated limiting tax-free exchanges of corporate stock to situations in which the product corporation would have assets of less than $50 million. 116 Cong. Rec. 13,764-66 (daily ed. Aug. 19, 1970).

syndrome is not uncommon in federal fuel regulation.[406] The failure of federal agencies to anticipate the potential anticompetitive effects of much needed regulations is a natural byproduct of decentralized regulation of the energy industry. As governmental control of the industry becomes more diffused, the number of failures will increase—a danger for which there is no "built in" remedy. Although each regulation may pertain to different industry functions, the adverse effects on the industry tend to be mutually reinforcing. When combined with the trend toward interfuel concentration initiated by the oil interests, these regulations may indeed be too much for the small producers to bear. Surely, if similar trade restraining tendencies were caused by private enterprise, the Government's own antitrust laws could validly be invoked.[407]

2. *Effect of General Regulations on the Coal Industry.*—Regulatory tunnel-vision is largely the result of an agency's focus on a specific problem in a specific fuel industry, disregarding the broader impact on the energy industry as a whole. A similar problem is frequently encountered on a larger scale when government regulation is aimed not at particular functions, but at general industry performance. The ease with which the side effects of dissimilar regulations complement each other to suppress competition is aptly demonstrated by state and federal efforts to improve the environment and by federal regulation of fuels that compete with coal.

(a) *New pollution standards.*—Although the current concern over environmental quality has affected the entire power industry, the impact upon the coal industry has been especially severe. State and local regulations applicable to most large cities prohibit the burning of coal that contains more than a small percentage of sulphur by weight.[408] The

406. The Department of Transportation is currently proposing what appear to be voluminous minimum safety standards for gas pipelines. The authority for these proposals is granted in the Natural Gas Pipeline Safety Act of 1968, § 3(b), 49 U.S.C. § 1673(b) (Supp. V, 1970). Similar to the Coal Mine Health and Safety Act, both the Natural Gas Pipeline Safety Act and the proposed regulations are comprehensive in nature and could prove to be a heavy burden on the pipeline industry. The purpose of the Act is to remove hazards to both life and property in the "design, installation, inspection, testing, construction, extension, operation, replacement, and maintenance of pipeline facilities." 49 U.S.C. § 1672(b) (Supp. V, 1970). The Act negatively reinforces compliance. If steps are not immediately taken to remove hazards, a penalty of $1000 per day, not to exceed a total of $200,000 for any "related series of violations," is imposed. *Id.* § 1678.

407. *See* text accompanying note 156 *supra.*

408. Those state and local governments in the eastern United States that restrict the sulphur content of fossil fuels are: Washington, D.C.; Jacksonville, Florida; Chicago, Illinois; Maryland; Boston, Massachusetts; Cleveland, Ohio; New Jersey; Metropolitan New York; Philadelphia, Pennsylvania; and Virginia. All except Chicago and Cleveland limit sulphur content to 1% by weight. These cities respectively restrict sulphur content to 1.8% and 2% by weight. *Hearings, supra*

relative scarcity of the required low-sulphur coal makes it costly for the industry to comply with these strict requirements.[409] The impact of this environmental concern is felt throughout the coal industry[410] since no one has devised an inexpensive desulphurization process. The small competitive coal firms are most detrimentally affected, however, since they lack the financial resources necessary to seek out or produce low-sulphur coal.

(b) *Promotion of nuclear energy.*—Regulation of fuels competing with coal presents the most patent example of regulatory tunnel-vision. Lack of foresight in formulating long-range energy objectives is particularly apparent in the atomic power industry,[411] since competition with nuclear fuel is virtually impossible where nuclear energy has acquired a portion of the electric utility market.[412] Electric utilities became infatuated with nuclear energy as a power source during the mid-1950's. Not only did Government emphasize the ultimate supremacy of atomic power as an energy source, but large government subsidies for nuclear research and development indicated that nuclear power would be less expensive than conventional fossil fuels despite its high initial cost. These factors persuaded a significant portion of the electric industry to

note 13, at 123 (statement of John Nassikas, Chairman, Federal Power Commission). Moreover, in furtherance of the purposes of the Clean Air Act and the National Environmental Policy Act of 1969, the President stated that it was the policy of the federal government to "provide leadership in the nationwide effort to protect and enhance the quality of our air and water resources." Exec. Order No. 11,507, 35 Fed. Reg. 2573 (1970), 42 U.S.C. § 4331 (Supp. V, 1970).

409. Pursuant to the Clean Air Act §§ 107(b), (c), 42 U.S.C. §§ 1857(c)(2)(b), (2)(c) (Supp. V, 1970), the National Air Pollution Control Administration (NAPCA) has issued the following reports: (1) Air Quality Criteria for Hydrocarbons (NAPCA Pub. No. AD-64, 1964); and (2) Control Techniques for Hydrocarbons and Organic Solvent Emmissions from Stationary Sources (NAPCA Pub. No. AD-68, 1964). Pursuant to the Clean Air Act § 108(c)(1), 42 U.S.C. § 1857(d)(2)(b) (Supp. V, 1970), these standards are ultimately distributed to state air quality control boards that must file a letter of intent with the Secretary of Health, Education and Welfare indicating that the state will implement and enforce these standards. These reports indict high sulphur coal as being the largest polluter, in terms of particulate emmissions, at stationary facilities.

410. Indeed, environmental impact is not limited to fossil fuels. "Of the 55 atomic power plants in the active stage of construction in the United States today, 12 have been stopped or blocked from producing power by environmental lawsuits." 116 CONG. REC. 14,507 (daily ed. Aug. 28, 1970) (remarks of Senator Church).

411. Since standards that permit or command increased production of one competing fuel will naturally depress production by other competitors, the effect upon fossil fuels of large government spending to promote nuclear development should have been foreseen.

412. Use of nuclear power is preemptive with respect to fossil fuels because nuclear plants are not generally convertible to burn fossil fuels. Moreover, "[t]here would be little or no incentive for the conventional equipment manufacturers, the fossil fuel producers, and the transporters of fossil fuels to make an effort to improve their technology and reduce costs, if they are warned in advance that whatever their efforts the federal government will guarantee the advantage of their nuclear competition." *Why is Coal in Very Tight Supply, supra* note 401 at 2.

begin constructing nuclear power plants. Despite the serious threat atomic energy poses to other energy resources, the federal government still spends only seven percent as much on coal research as it does to promote and develop atomic energy.[413] While coal companies have suffered because they lack the independent finances necessary to develop the technology to desulphurize economically their product, federal expenditures for nuclear research have fostered the development of various antipollution devices that enable atomic plants to comply fully with environmental demands.[414] Moreover, recent amendments to the Atomic Energy Act, which purport to expedite licensing procedures,[415] promise to make it increasingly difficult for related fossil fuel industries to remain competitive with atomic fuel. Although nuclear power accounts for only four percent of the total electricity generated in the United States today, by 1990 this figure is expected to increase to more than 50 percent.[416] Thus, not only do small fuel producers face stiff competition from expanding multi-fuel concerns, but they also are confronted with a total market that is being rapidly constricted by government promotion of the atomic energy industry.

B. Regulatory Inertia

Occasionally, an entire regulatory scheme is misdirected. This problem is easily corrected if the misdirected regulations were designed to promote competition, since increasingly strict regulatory measures may be adopted.[417] When comprehensive industry regulation has been imposed upon a market that would operate more efficiently through competition, however, it is more difficult to remedy the situation. Strict industry regulation often perpetuates itself[418] despite the widespread

413. National Coal Ass'n Release (Sept. 11, 1970) (statement of James R. Garvey vice president, National Coal Association).

414. Note, *Legal Control of Thermal Pollution*, 2 NATURAL RESOURCES LAW. 1 (1969); Note, *Cold Facts on Hot Water: Legal Aspects of Thermal Pollution*, 1969 WIS. L. REV. 253.

415. These new rules are designed to "expedite the licensed operations of facilities needed for the generation of electric power without adversely affecting the public health and safety." 35 Fed. Reg. 16687 (1970) (these rules would amend 10 C.F.R. pts. 2, 50 (Supp. 1970)).

416. 116 CONG. REC. 15,404 (daily ed. Aug. 28, 1970) (remarks of Senator Church).

417. Although an incorrect initial choice to promote competition may result in short-run inefficiency if the economy is one of scale, at least the Government will have the opportunity to make this choice again and again as it becomes increasingly difficult to sustain competition. For a discussion of the Government's success in making the initial choice see Lovejoy, *Regulation of Business: The Need for a Public Utility Concept*, 3 S. TEX. L.J. 292 (1958); Phillips, *Toward an Improved Regulatory Climate*, 70 PUB. UTIL. FORT. 881 (1962); Posner, *supra* note 135, at 548.

418. At least one writer has observed that "a regulatory scheme is likely to generate interests that make deregulation extremely difficult." Cramton, *The Effectiveness of Economic Regulation: A Legal View*, 54 AM. ECON. REV. 182, 191 (1964). *See also* G. Hale & R. Hale, *Competition or*

belief that as competition increases regulation should decrease.[419] Moreover, even when commission regulation is correctly imposed, agencies often respond too slowly to changing economic conditions.

1. *Agency Failure To Initiate Change in its Own Structure.*—The Federal Power Commission's regulation of independent natural gas producers exemplifies this institutional inability or unwillingness to effect self-change. The Natural Gas Act of 1938 gave the FPC jurisdiction over the "sale in interstate commerce of natural gas for resale."[420] In effect, the Commission was empowered to control the price charged by pipeline companies to local distributors—citygate price—but could not regulate the price charged by producers to pipeline companies—wellhead price.[421] Control over wellhead prices was subsequently added to the FPC's jurisdiction by the Supreme Court in two steps. First, with Commission backing, the Court extended federal regulatory jurisdiction in this area to integrated gas producers.[422] Secondly, despite FPC protests, the Court, in *Phillips Petroleum Co. v. Wisconsin,*[423] directed the Commission to regulate independent producers. The FPC opposed this second step on the ground that it was ill equipped to determine rates for the large number of independent producers. Nevertheless, the Court held that since consumer rates depend to some extent upon wellhead prices, the Government must control these prices in order to establish reasonable rates.[424] The independent producers, unhappy with rate regulation, lobbied for change. Their efforts, however, were unavailing. The Harris-Fulbright bill,[425] for example, which would have negated the *Phillips* decision, was ultimately vetoed by President Eisenhower.[426]

It has been alleged that the present tight supply of natural gas is artificial, created by the independent producers as a protest against strict

Control: The Chaos in the Cases, 106 U. PA. L. REV. 641, 683 (1958); Miller, *A Needed Reform of the Organization and Regulation of the Interstate Electric Power Industry,* 38 FORDHAM L. REV. 635 (1970); Morton, *Creative Regulation,* 39 LAND ECON. 367, 371-72 (1963).

419. *See, e.g.,* Nelson, *The Role of Competition in the Regulated Industries,* 11 ANTITRUST BULL. 1 (1966); Phillips, *supra* note 417; Trebing, *What's Wrong with Commission Regulation?,* 65 PUB. UTIL. FORT. 660 (1960).

420. 15 U.S.C. § 717(a) (1964).

421. This was accomplished by the Act's specifically exempting producers and gatherers of natural gas from federal control. *Id.* § 717(b).

422. Colorado Interstate Gas Co. v. FPC, 324 U.S. 581 (1945). This decision benefited the consumer since the ultimate price of natural gas was decreased as the price charged to affiliated pipeline companies by producers was reduced.

423. 347 U.S. 672 (1954).

424. *Id.* at 684.

425. S. 1853, 84th Cong., 1st Sess. (1955).

426. *See* 102 CONG. REC. 2793 (1956).

FPC control. If this view is correct, these producers evidently feel that the creation of artificial shortages is the most expedient method to force rate increases from the FPC and to regain control of the market. When these acute shortages became painfully obvious in the midst of the 1970 brownouts and blackouts, Senator Tower of Texas suggested that "[t]he most important reason for the decline [in the production of natural gas] has been 15 years of chaotic regulation by the Federal Power Commission."[427]

The basis of the complaints by the independent producers and by Senator Tower is best understood by examining the FPC's powers. As a concomitant to price determination, the Commission is authorized to alter rates previously established between the producer and the pipeline company when the total situation renders prices unreasonable.[428] Morcover, when circumstances dictate, the FPC may prescribe the size of the retail market, and when public necessity so demands, the Commission may require the producer to perform according to a contract even after the contract has expired.[429] Thus, "[o]nce the producer contracts to sell and commits his gas to the pipeline company, he does not know: first, the price he will receive; second, how long he will receive any price set by the contract or the Commission; third, how much gas he must deliver; and fourth, how long he must maintain deliveries."[430] Thus, if gas reserves are larger than claimed, the present gas shortage may represent an organized protest by independent gas producers designed to secure some measure of contract sanctity and a lessening of strict government control. The question, then, is whether this extensive regulation is necessary.[431]

Numerous analyses of the gas market have concluded that competition among independent producers is feasible. Three major characteristics of this market have been recognized as likely to sustain competition in the absence of FPC supervision: (1) the relatively low concentration within the industry; (2) the possibility that interconnecting

427. 116 CONG. REC. 14,379 (daily ed. Aug. 27, 1970). Senator Tower also noted that representatives of the gas industry blame the FPC established price ceilings for supply problems within the industry.

428. Natural Gas Act of 1938, § 5, 15 U.S.C. § 717(d)(b) (1964).

429. FPC v. Hunt, 376 U.S. 515 (1964); Alabama-Tennessee Natural Gas Co. v. FPC, 359 F.2d 318 (5th Cir. 1966).

430. 116 CONG. REC. 9023 (daily ed. Oct. 9, 1970) (remarks of Congressman Pickle). It was further noted, however, that return to an unregulated market was extremely unlikely due to political considerations. *See also*, Miller, *supra* note 230.

431. One author has pointed out that the conduct of gas producers indicates that they want to compete. Demsetz, *Why Regulate Utilities?*, 11 J. LAW & ECON. 55 (1968). He suggests that a system of competitive bidding could replace all utility regulation.

pipeline systems could expand a geographic market so that it would be virtually impossible for one producer to dominate a geographic area; and (3) the easy entry into the independent producer market.[432] Competition would provide an incentive for increased production and encourage the exploration and the working of new wells.[433] The desirability of terminating federal regulation in the gas industry becomes even more clear when it is realized that the initial decision to regulate wellhead prices was not made by an expert board of commissioners familiar with the industry, but by a court relatively unschooled in complex public utility problems. Indeed, those closest to the industry opposed government control from the outset.

Ideally, the commission charged with regulating an industry should be the first to sense that all is not well, and change should be initiated before the effects of the problem are noticed by the public. With respect to gas producer regulation, however, it seems that everyone recognizes the problem except the FPC. Although some legislators have suggested that the present regulatory schemes should be modified to give producers the freedom to enter binding contracts,[434] the FPC has taken no steps since its initial protest in 1954 to relinquish its control over production agreements. Even if the Commission disagrees with the propriety of completely forfeiting its regulatory control, however, the evidence certainly seems sufficient to justify at least a slight abatement of control in order to test market performance. The absolute failure of the FPC to graft market flexibility onto the regulatory mechanism should warn policy planners that until existing regulatory agencies become capable of this flexible response, they should not be entrusted with the administration of the nation's total energy resources.[435]

2. *Agency Failure To Alter Policies in Response to Changing*

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432. *See, e.g.*, C. PHILLIPS, THE ECONOMICS OF REGULATION 638-39 (1965).

433. In addition, the FPC would be relieved of determining rates of independent producers, which greatly outnumber producer-pipeline affiliates. The absence of this responsibility might contribute to the elimination of regulatory delay and perhaps make commission regulation more responsive to changing economic demands. The outstanding disadvantage of competitive production is that gas prices on the consumer level might rise. This tendency, however, would be partially offset to the extent discovery keeps pace with demand. Moreover, prices have consistently increased under the present regulatory framework, and stand to increase even further given the current reluctance of producers to operate under strict FPC control.

434. 116 CONG. REC. 9023 (daily ed. Oct. 9, 1970) (remarks of Congressman Pickle). Mr. Pickle pledged to introduce "contract sanctity" legislation shortly after the opening of the Ninety-Second Congress.

435. "[I]f regulation ever did become rigid and inflexible—it could then become a straight jacket, a stagnation process which would not be in the interests of either the public or the regulated companies." Welch, *The Evolution of Utility Regulation*, TELEPHONY, June 6, 1964, at 34. *See also* Turner, *supra* note 169, at 1207, 1232.

Conditions.—Regulatory inertia also is evidenced by the slow response of most agencies to obvious problems within their jurisdictions. It was not until after the coal shortage reached crisis proportions, for example, that the Interstate Commerce Commission attempted to expedite coal deliveries to electric plants by doubling its demurrage charge for railroad hopper cars standing idle at loading zones.[436] Although this ICC action demonstrates that the Commission can respond to defined public pressures,[437] the necessity for this action was at least partially due to the Commission's failure to recognize at an earlier date the short supply of hopper cars and its possible effects upon the coal industry. Whether preventive regulation might have forestalled the coal shortage is now a moot issue, but the broader problem of whether federal commissions on the whole are able to detect flaws in their regulatory mechanisms early enough to avert gross harm still persists. This insensitivity to incremental change in market conditions is widely regarded as a primary disadvantage of commission regulation.[438]

C. *Ineffective Regulations*

In addition to the problems caused by regulatory policies that conflict with each other, are wrongly imposed, or are unresponsive to changing conditions, regulations sometimes simply do not work. In some instances, provisions which appear viable at the planning stage prove impractical when applied to an industry. In other instances, the

436. 35 Fed. Reg. 11402 (1970). Service Order No. 1043 stipulated that it would expire of its own weight unless otherwise modified or changed at 11:59 P.M. on September 30, 1970. On September 30, 1970, the expiration date was extended to December 31, 1970. 35 Fed. Reg. 15295 (1970). On December 11, 1970, the expiration date was further extended to June 30, 1971. 36 Fed. Reg. 772 (1971).

437. It is interesting to note that on August 25, 1970, a resolution was submitted in the Senate calling for the Committee on Interior and Insular Affairs to conduct a study concerning the coal shortage. S. Res. 457, 91st Cong., 2d Sess. (1970). Of 5 probable causes singled out as worthy of specific investigatory attention, the first was the inadequate number and availability of railroad hopper cars to transport coal. The 4 other possible causes were: "(2) [T]he effect of the Federal Coal Mine Health and Safety Act of 1969—including the unavailability of coal mining equipment required for compliance with the Act—on mine closings and loss of coal production and on the increased costs of coal; (3) the increasing exportation of coal from the United States to foreign markets; (4) the existing shortage of manpower needed for operating the nation's coal mines and the lack of adequate training program for miners; and (5) the growing concentration of ownership of the nation's sources of coal supplies among a few large operators who own and operate competing sources of energy . . . ." 116 CONG. REC. 14,200 (daily ed. Aug. 25, 1970).

438. *See* Phillips, *supra* note 417, at 882-83. The author considers this malfunction an inherent defect in the regulatory process and lists 5 resulting adverse effects: (1) it hampers the progress and efficiency of the regulated industry; (2) it prevents the public from receiving the benefits for which regulation was imposed; (3) it is "costly" in terms of human energy and in legal and managerial expenses; (4) it may "postpone or even deny justice"; and (5) it causes further delay.

inability of planners to obtain information concerning regulated firms has resulted in imprecise, unworkable regulations. When unworkable regulations are combined with regulatory inertia, the problem becomes acute; ineffective regulations are not swiftly replaced or redrafted, but may linger and be mistakenly relied upon long after their inefficacy is widely recognized. If government regulation is designed to replace competition, failure of the system to achieve its goal will result in an unchecked concentrated industry whose injurious characteristics are not contained. The expanding consequences of this shortcoming are particularly apparent in the atomic energy industry. An entire series of amendments and revisions of the Atomic Energy Act were based on regulatory safeguards that have since proved unworkable.

1. *Inability To Rectify Unworkable Regulations.*—The Atomic Energy Act of 1946 gave the federal government almost complete control over every facet of nuclear development and the Atomic Energy Commission, created to carry out this program, was vested with complete control over all nuclear material and nuclear production facilities.[439] In 1954, the original Act was significantly amended to allow a greater degree of private control in the nuclear energy field.[440] Although the Government maintained strict ownership of fissionable material, it permitted the private sector to construct and operate production and utilization facilities subject only to AEC licensing requirements.[441] In 1964, the Act was further amended to authorize private ownership of nuclear materials.[442] Today, therefore, subject to AEC licensing requirements, the private sector is able to control both the material and the means to produce atomic energy.

Although the 1954 amendments sanctioned private participation in nuclear resource development, it also provided safeguards against possible abuse of the newly acquired privilege by large energy firms. Section 105(b) of the Act directs the AEC to "report promptly to the Attorney General any information it may have with respect to any

439. Act of Aug. 1, 1946, ch. 724, §§ 4(c)(1), 5(a)(2), 60 Stat. 755 (codified at 42 U.S.C. §§ 2061(a), 2073 (1964)).

440. Act of Aug. 30, 1954, ch. 1073, §§ 101, 103, 68 Stat. 919, *amending* 42 U.S.C. § 1804(c) (1952) (codified at 42 U.S.C. § 2133 (1964)).

441. Complete AEC management of federal responsibilities also was diluted by the 1954 Act. Direct control of various atomic energy functions was granted to such agencies as the Commissioner of Patents, the Federal Radiation Council, the Defense Department, the Department of Justice, and the Civil Service Commission. 42 U.S.C. §§ 2021(h), 2037, 2135, 2165, 2181 (1964).

442. Act of Aug. 26, 1964, Pub. L. No. 88-489, § 4, 78 Stat. 602, *amending* 42 U.S.C. § 2073 (1964) (codified at 42 U.S.C. § 2073 (Supp. V, 1970)). This Act repealed 42 U.S.C. § 2072, which provided that all special nuclear materials vested immediately in the Government upon discovery.

utilization of special nuclear material or atomic energy which appears to violate or to tend toward the violation of [antitrust laws] . . . or to restrict free competition in free enterprise."[443] Section 105(c) further provides that before any commercial license can be issued under section 103, the AEC must provide the Attorney General with information concerning whether the proposed license would "tend to create or maintain a situation inconsistent with the antitrust laws. . . ."[444] The Justice Department then is given 90 days in which to pass on the application, and during this time the AEC may not issue the license.[445] In theory, society should benefit from these preventive measures. Not only would constant vigilance allow the detection of anticompetitive trends at their inception, but licenses could be denied before a great amount of money is expended on construction. In practice, however, the fact that the nation's largest oil companies are fast becoming the principal holders of uranium is prima facie evidence that these provisions have not worked. Although seventeen years ago the problem of potential concentration in the nuclear field was specifically recognized, the remedies then proposed have not worked, are not working, and most importantly, are not being restructured so that they might work. Indeed, the recently proposed liberal licensing requirements, and the possibility that federally operated enrichment plants will be sold to private enterprise when government leases expire[446] only threaten to increase the power of multi-fuel firms.

2. *Inability To Obtain Precise Information.*—The failure of the AEC antitrust provisions to prevent oligopolistic growth has been attributed to the inability of the Department of Justice to obtain licensing information.[447] Without this information, the Justice Department is virtually unable to accurately predict future anticompetitive trends. This disclosure of information concerning the affairs of large corporations is vital to the regulatory process. In order for a regulatory body to make rational decisions, to avoid bureaucratic delay, and to carry out congressional mandates, it must have access to basic information. Without these facts, even the most efficient and vigorous agencies cannot be expected to solve problems with precision, and even the most carefully planned regulations can be nothing more than guesswork.

443. 42 U.S.C. § 2135(b) (1964).
444. *Id.* § 2135(c).
445. *Id.*
446. SELECTED MATERIALS, *supra* note 12, at 417-25.
447. Donnem, *Antitrust Aspects of Facility Licensing*, in 1 CCH ATOM. EN. L. REP. ¶ 3572 (1969).

Attempts to provide regulatory agencies with the information they need, however, have not always been successful. The Natural Gas Information Act, for example, has never been enacted into law despite repeated proposals.[448] If passed, the Act would require gas producers not only to report discoveries but also to strictly account for gas reserves.[449] This information might well enable the FPC to formulate a clearer picture of the natural gas industry and perhaps aid it in determining whether wellhead prices should be regulated. The circuity of administrative information gathering procedures also frustrates efforts to formulate precise regulations. The Office of Management and Budget (OMB), for example, is charged with the duty of evaluating agency information requests. In performing this function, the OMB has often vetoed searching and necessary agency inquiries and frequently has converted requests for specific information into questionnaires too general to inform adequately the agency involved.[450] In order to determine rate structures, for example, the FPC drafted a form that required electric utilities to account for "consultative" costs, such as public relations, accounting, and legal expenses.[451] The OMB objected that this form was too burdensome to the electric industry. The weaker

448. S. 3900, 91st Cong., 2d Sess. (1970). This bill was again introduced on June 2, 1970. *See also* 116 CONG. REC. 8195 (daily ed. Sept. 15, 1970) (remarks of Senator Metcalf).

449. Many members of Congress have recently expressed the belief that the shortage of natural gas is artificial, that it is a ruse perpetrated by the industry to secure higher rates, and that once the rates are increased, tight supplies will miraculously loosen. One Congressman has pointed out, for example, that a similar tight fuel supply existed throughout the winter of 1969-70, but that after the price of heavy fuel oil had increased nearly 50%, the needed oil was found. 116 CONG. REC. 9314 (daily ed. Oct. 14, 1970) (remarks of Congressman Evins). Similarly, Congressman Fulton has stated that "this shortage is artificial, that this increase in demand could have been anticipated months, even years ago, that it was anticipated but rather than increaseing the supply of fuel it was deliberately held steady. . . . The pap put out for public consumption . . . is just a smoke screen . . . to cover up the real reason behind the fuel shortage." 116 CONG. REC. 9095 (daily ed. Oct. 9, 1970). If this act is passed, these and other Congressmen will not have to speculate.

450. Under the Federal Reports Act of 1942, § 3, 5 U.S.C. § 139a(d) (1964), the Director of the Bureau of the Budget is "authorized . . . to make a determination as to whether or not the collection of any information by any Federal agency is necessary for the proper performance of the functions of such agency . . . ." The Auditing and Accounting Act of 1950, 31 U.S.C. § 66b(b) (1964), further provides that the Secretary of the Treasury is authorized to "reorganize accounting functions . . . [to] eliminate accounting procedures . . . in order to [establish] . . . a unified system of central accounting and reporting on the most efficient and useful basis."

451. Before agency information requests can be distributed, they must first be approved by the OMB. Ralph Nader, testifying before the Senate Subcommittee on Intergovernmental Relations, expressed a widely held opinion that "[i]t is quite clear that the Bureau of the Budget, or the Office of Management and Budget, as it is now called, has control over the Khyber Pass of information procurement in the Federal Government." 116 CONG. REC. 9209 (daily ed. Oct. 14, 1970) (remarks of Senator Metcalf). *See also* 116 CONG. REC. 9216 (daily ed. Oct. 14, 1970) (remarks concerning article by Vic Reinerier, Executive Seeretary to Senator Metcalf).

version that was eventually passed requires the reporting of outside payments of more than 10,000 dollars for companies that gross over 2.5 million dollars annually. Payments above 5,000 dollars must be reported for companies that gross over one million dollars annually.[452] Thus, while the FPC is allowed to detect large and even some moderate expenditures, smaller payments go unnoticed. In the aggregate, these expenditures could become significant and should be available to a commission charged with protecting the public interest.

D. Proposals for Regulatory Reform.

Federal efforts to regulate the fuel industry have led to an unhealthy proliferation of regulatory authorities. The diffuse nature of federal regulation makes it difficult to deal with new problems without creating new regulatory agencies. The creation of each agency, however, merely compounds the very problem that made its creation necessary. Perhaps the multitude of agencies is an outgrowth of a typical regulatory phenomenon: each seeks to undo the side effects of others, yet each produces side effects that others must undo. Amid the jumble of conflicting aims, one thing is clear—if federal regulation is to provide adequate energy resources for the future, these regulations must be carefully planned with respect to their effects, not only upon individual fuels, but upon the total energy industry as well.

Most recent attempts at regulatory reform, however, have been fashioned after the energy industry itself. As fuels have become increasingly interchangeable, the reforms have sought to establish a corresponding interchange between the agencies that regulate these fuels. Generally, attempts to coordinate energy policy have banded together diverse local, state, and federal agencies into a conglomerate regulatory structure. The FPC, for example, has instituted a procedure whereby Commission officials and personnel of appropriate state commissions are able to work in conjunction with regional reliability councils—agencies directly responsible for the in-the-field regulation of utilities on a daily basis—in an effort to coordinate the work of all three organizations.[453] Similarly, the Office of Emergency Preparedness has established the Interagency Power and Energy Committee, which is composed of representatives of seven federal agencies and is designed to coordinate energy regulation on a policy level.[454] Although these interim

452. 116 CONG. REC. 9209 (daily ed. Oct. 14, 1970) (remarks of Senator Metcalf).

453. *Hearings, supra* note 13, at 117 (statement of John N. Nassikas, Chairman Federal Power Commission).

454. The Committee consists of representatives from the Atomic Energy Commission,

measures may be necessary, they promise only limited long-term advantages. First, there is no mechanism to insure that productive suggestions from these exchanges of ideas will be implemented. Each agency is still the ultimate authority within its own realm and can be expected to oppose any action that would divest its authority. Secondly, these coordinating committees only consolidate a small portion of the total number of agencies whose functions affect the fuel industry. Thus, although interchange and cooperation between government agencies is desirable, current efforts may be too limited in scope to secure coordinated control of total energy resources.

As a method of avoiding conflicts of policy, some proposals have suggested that an explicit affirmative duty be imposed upon existing agencies to interrelate their functions with those of other agencies. The proposed Electric Power Environmental Policy Act,[455] for example, purports, under the direction of the FPC,[456] to merge total electric control with environmental objectives. Section 14(a) "requires that all Federal departments and agencies seek to correlate the administration of their laws governing . . . electric power resource matters so as to facilitate an integrated decision by the Federal certifying agency . . . ."[457] Although this approach may be more effective than a mere coordinating committee, adequate electricity and a clean environment are only two of the numerous national interests that require unitary control. While the policy behind this Act is desirable, it seems unlikely that the Act's format could be utilized as a solution to the overall problem. A comprehensive act of this nature would have to include so many separate interests that it probably would be impossible to manage. As one observer has noted, "[A] more direct, time-saving answer might be found in a statutory reorganization of the interstate electric power

Department of Health, Education and Welfare, Department of the Interior, Federal Power Commission, Interstate Commerce Commission, Office of Emergency Preparedness, and the Office of Science and Technology. The Office of Science and Technology has recently completed a study of long-range elctric utility expansion. This investigative committee was comprised of representatives from the Atomic Energy Commission, Council on Environmental Quality, Department of the Interior, Federal Power Commission, Department of Health, Education, and Welfare, Rural Electrification Administration, and the Tennessee Valley Authority. Among other things, this group recommended "preconstruction review" by a committee with local, state, and federal representation of all future utility expansion.

455. S. 4421, 91st Cong., 2d Sess. (1970).

456. Although the Act purports to centralize all administrative functions within the FPC, the Commission is empowered to delegate its responsibilities concerning nuclear plants to the Atomic Energy Commission.

457. S. 4421, 91st Cong., 2d Sess. § 41(a) (1970).

industry, a redrafting of the spheres of regulatory responsibility, and a reallocation of regulatory resources."[458]

A recently proposed bill, which would establish a National Commission on Fuels and Energy,[459] is perhaps the most promising attempt to provide a successful system of fuel regulation and, consequently, it has gained extensive congressional support.[460] The purpose of the Commission would be to "make a full and complete investigation and study of the energy demands and of the fuels and energy resources . . . of the United States."[461] Based on this study, the Commission would "recommend those programs and policies which are most likely to insure, through maximum use of indigenous resources, that the Nation's rapidly expanding requirements for low-cost energy will be met, and in a manner consistent with the need to safeguard and improve the quality of the environment."[462] The Commission is not simply a statutory reorganization of energy regulation. It is rather a proposal that acknowledges the need to approach total energy requirements—including fossil, synthetic, and nuclear fuels, and the environmental consequences of their production and use—on a comprehensive basis. It is hoped the Commission would be able to isolate the policies that must be adopted by the various regulatory agencies in order to efficiently manage the nation's energy resources. Once the objectives and the alternative means of achieving them are made clear, the Government will have to decide whether a total energy policy should be administered by a single regulatory agency.

V. Recommendations for Regulating the Fuel Market

Before basic fuel services can be effectively supplied to the nation, a multitude of factors must be coordinated and a myriad of national priorities must be considered. A successful method of allocation not only must provide for the extraction, transportation, distribution, and sale of energy products, but it also must reinforce other national interests, such as concern over pollution, safety, and diverse national security objectives. Unquestionably, the present system of generating national fuel plans and priorities has failed to accomplish these goals. A consistently adequate fuel supply is still lacking, and most measures

458. Miller, *supra* note 418, at 663.

459. S. 4092, 91st Cong., 2d Sess. (1970).

460. Introduced on July 16, 1970, the bill currently has more than 60 cosponsors. 116 Cong. Rec. 17,833 (daily ed. Oct. 13, 1970) (remarks of Senator Randolph).

461. S. 4092, 91st Cong., 2d Sess., § 2(a) (1970).

462. *Id.*

aimed at its achievement frustrate rather than foster related national goals.

This lack of a discernable national fuel policy lies at the heart of the energy crisis. The unworkable nature of the present regulatory structure, which has resulted in conflicting policy objectives and overlapping jurisdictions, ultimately can be traced to amorphous national fuel goals. In view of the importance of energy resources, this country should establish a consolidated fuel agency that would be accountable for a comprehensive ordering of fuel priorities after considering the competing interests of both the public and the industry. Only when overall fuel planning is undertaken can the country accurately predict fuel needs and develop a commensurate fuel supply. The precise regulatory directives by which this goal may be implemented are a secondary consideration. Initially, Government must choose a conceptual foundation upon which specific policies will be based. Barring complete government ownership, the remaining choice is between regulated monopoly and free competition.[463] These alternatives, however, are not mutually exclusive. A system of federal regulation could be designed to operate within the competitive framework.[464]

Generally, pervasive commission regulation is not compatible with competition, and it is beneficial to the economy only when competition does not or cannot produce advantageous results.[465] In these situations, comprehensive commission regulation can be a substitute for competition by allocating resources, setting rates, determining profits, and restraining the effects of monopoly. Commission regulation, however, often effectively destroys chances for future competition. Independent commissions frequently usurp the managerial functions of regulated firms[466] and drain an industry's potential for innovation and

463. *See generally* Lovejoy, *Regulation of Business: The Need for a Public Utility Concept*, 3 S. TEX. L.J. 292 (1958); Phillips, *supra* note 417 at 881. Posner, *supra* note 135, at 548. *But see* Loevinger, *supra* note 385, at 104.

464. "Economists who believe that regulation is superior to public ownership, almost unanimously recommend that a greater reliance be placed on competitive forces." C. PHILLIPS, *supra* note 69, at 735.

465. Kaysen and Turner have recognized 3 situations in which competition does not operate in the public interest: "(a) [s]ituations in which competition, as a practical matter, cannot exist or survive for long, and in which, therefore, an unregulated market will not produce competitive results. (b) [s]ituations in which active competition exists, but where, because of the imperfections in the market, competition does not produce one or more competitive results. [and] (c) [s]ituations in which competition exists, or could exist, and has produced or may be expected to produce competitive results, but where in light of other policy considerations competitive results are unsatisfactory in one or more respects." C. KAYSEN & D. TURNER, *supra* note 56, at 189-90.

466. C. PHILLIPS, *supra* note 69, at 737-38. *See also* Trebing, *What's Wrong With Commission Regulation?*, 65 PUB. UTIL. FORT. 738 (1960).

improvement. Competition, on the other hand, requires the initiative of dynamic management for stable growth. Independent commissions also generally bar free entry into the industry,[467] possibly stimulating concentration,[468] but commissioners fail to realize that the efficiency of competition increases directly with increasing numbers of competitors. Moreover, since these commissions tend to become "industry-minded,"[469] an independent commission might serve only to concentrate control of fuel regulation in the hands of the regulated. A purely competitive structure, however, would be equally undesirable. In the absence of all governmental restraint, multifuel firms could continue to accumulate vast power. The temptation to manipulate the market for purposes far removed from the consumer's needs would be difficult to resist in these circumstances. Thus while some form of federal direction of the fuel industry is needed, it is clear that neither traditional commission regulation nor pure competition can provide the delicate balance needed to obtain adequate fuel service for the country.

A. Peripheral Market Regulation

Peripheral market regulation (PMR) is proposed as a method of federal market supervision that would seek to insure an adequate national fuel supply without incorporating the disadvantages inherent in comprehensive governmental regulation or ungoverned competition. Since the premise of peripheral market regulation is that competition can best allocate energy resources, the Department of Justice and the Federal Trade Commission first should re-establish four separate competing fuel industries through the application of the antitrust laws. This step, detailed previously,[470] should halt further concentration within the various fuel markets and should allow petroleum and coal to compete in these markets. Once the competitive market is assured, a National Fuel Board should be established and charged with implementing the three phases of PMR: (1) Minimum Supply Quotas—the guarantee of a fuel supply adequate to meet the country's fuel needs; (2) Planning—formulation of a national fuel plan; and (3) Research and Development—coordination of expenditures to equate present and future competitive positions of the various fuels through coordinated technological advancement.

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467. *See generally* Nelson, *The Role of Competition in the Regulated Industries*, 11 ANTITRUST BULL. 1 (1966).

468. Schwartz, *Crisis in the Commissions*, in THE POLITICS OF REGULATION 23 (S. Krislov & L. Musolf eds. 1964).

469. *Id.* at 25.

470. *See* notes 381-83, *supra* and accompanying text.

This form of regulation is termed "peripheral" because the only market intervention consists of establishing proper supply quotas. So long as each industry complies with its quota, the National Fuel Board should allow competition to regulate the market. By limiting the Board's actions to the initial stages of the marketing process—the supply of fuel—competitive forces will set prices and allocate resources.

1. *Supervision of Supply.*—The overriding objective of PMR is to assure an adequate fuel supply within a competitive framework. Although competition can provide the necessary resource allocation and price determination, its performance in producing sufficient fuel has been inadequate. PMR will affect the market in two ways—through domestic production quotas and through import-export quotas. Furthermore, limiting the National Fuel Board's power to these minimal regulatory devices avoids the dominance of the market structure that is often the result of government regulation. Rudiments of these devices are present in today's regulatory structure for crude oil. The power to set domestic crude oil production quotas is now vested in state governmental regulatory agencies under various prorationing statutes.[471] In addition, the federal government, through the Mandatory Oil Import Program, has controlled imports of crude oil since 1959.[472]

State prorationing was designed ostensibly as a fuel conservation measure to prevent wasteful production of crude oil.[473] Under the prorationing system, state agencies allot to each oil well a portion of the total production quota, which is determined on the basis of short-term fuel consumption demands.[474] These agency decisions are enforced through the Connally Hot Oil Act,[475] which prohibits interstate transportation of oil produced in excess of state quotas. Existing evidence, however, tends to show that the so called conservation purpose

471. *See generally* Railroad Comm'n v. Rowan & Nichols Oil Co., 310 U.S. 573, *decision amended*, 311 U.S. 614 (1940); Champlin Ref. Co. v. Corporation Comm'n, 286 U.S. 210 (1932); Williams, *Conservation of Oil and Gas*, 65 HARV. L. REV. 1155, 1159-63 (1952).

472. Presidential Proclamation No. 3279, 24 Fed. Reg. 1781 (1959). *See generally* Kellam, *Regulation of Oil Imports*, 1961 DUKE L.J. 175.

473. The first state prorationing regulations, developed during the Depression, grew out of the great waste from excess production in Oklahoma City and the east Texas oil fields. Without any controls, the companies tapping the same pool of oil would try to get the jump on each other. They would pump oil as fast as possible, many times reducing the natural pressures needed to extract the oil, to such a point that oil reserves became unrecoverable. Prorationing statutes were initially passed to prevent this wasteful production. *See* Williams, *Relationship between State and Federal Government with Respect to Oil and Gas Matters*, 19th S.W. LEGAL FDN. OIL & GAS INST. 239, 248 (1968). *See also* Comment, *supra* note 121, at 318-19.

474. *See* H. WILLIAMS, R. MAXWELL & C. MEYER, OIL AND GAS, CASES AND MATERIALS 631-32 (2d ed. 1964); Comment, *supra* note 121, at 318.

475. 49 Stat. 30 (1935), *as amended* 15 U.S.C. §§ 715-715(m) (1958).

of the agencies is a facade designed to prevent surplus oil production that might lower crude oil prices.[476] Moreover, no prorationing agency has been able effectively to anticipate and evaluate the effect of production quotas set by other prorationing authorities.[477] Attempts by the Bureau of Mines to coordinate state prorationing decisions also have proved largely fruitless;[478] thus it seems unlikely that these agencies themselves could institute a unified fuel plan.

The crude oil import-export program has much the same effect as the prorationing regulation. At present, imports of oil are restricted to an amount that is equivalent to 12.2 percent of domestic demand in the area east of the Rocky Mountains.[479] This figure, set in 1959, has remained at a low level despite fuel oil shortages throughout the east coast.[480] The quota system, designed to encourage domestic production for reasons of national security,[481] has instead granted domestic companies subsidies worth approximately 600 million dollars a year by allowing them to import oil costing two dollars a barrel but worth approximately three dollars and ninety cents after it clears customs.[482] Although the goals of these regulatory schemes may have been laudable at their incipiency, they have become misdirected through the pressures exerted by oil interests. State prorationing has been reduced to a system to prevent any oil firm from producing sufficient fuel to drive down fuel prices. The import-export scheme complements prorationing by

476. "[O]ne of the most important consequences of prorationing has been the stabilization of the price of petroleum products." H. WILLIAMS, R. MAXWELL, & C. MEYERS, *supra* note 474, at 81; *see* ATT'Y GEN. NAT'L COMM. ANTITRUST REP. (1955). Comment, *supra* note 121, at 319; Comment, *Proration of Petroleum Production*, 51 YALE L.J. 608 (1942); BUS. WEEK, May 17, 1969, at 104, cols. 1 & 2.

477. *See* E. ROSTOW, *supra* note 203, at 36, 41-42.

478. The Interstate Oil Compact, initially approved by Congress in 1935, functioned as an agency of coordination, information, and policy guidance for its 29 member states in its early years. Recently, however, the Commission has acted principally in an advisory capacity, and its services have been attributable to voluntary adoption of its recommendations by member states rather than to compulsion. This has allowed the Commission to become an informal discussion group for the purpose of stabilizing or fixing the price of oil. In turn, this has led to inefficient allocation of production quotas and an unnecessary burden on the Commission. W. LOVEJOY & P. HOMAN, *supra* note 202, at 46-47; H. WILLIAMS, R. MAXWELL, & C. MEYERS, *supra* note 474, at 80 n.11; *see* Kahn, *The Combined Effects of Crude Oil in the United States*, 10 NATURAL RESOURCES J. 53, 57-60 (1970). *But see* Leach, *The Interstate Oil Compact: A Study in Success*, 10 OKLA. L. REV. 274 (1957).

479. *See* Lobel, *supra* note 149, at 10, col. 2; BUS. WEEK, May 17, 1969, at 99, col. 3.

480. *See* W. LOVEJOY & P. HOMAN, *supra* note 202, at 123-25; Williams, *supra* note 473, at 258. Certain exemptions to the quota, however, have increased the percentage of oil imported in the last 2 years. *See* N.Y. Times, Dec. 23, 1970, at 35, 41; Wall Street J., Dec. 23, 1970, at 2 (S.W. ed.).

481. *See* W. LOVEJOY & P. HOMAN, *supra* note 202, at 124; Lobel, *supra* note 149, at 10, col. 1. *See also* Kellam, *supra* note 472, at 175.

482. Lobel, *supra* note 149, at 10, col. 2; BUS. WEEK, May 17, 1969, at 99, col. 3.

protecting domestic producers from the influx of lower priced foreign oil. So long as these conditions are maintained, competition cannot be fostered in the fuel industries.[483]

Unlike petroleum production, natural gas distribution is controlled by comprehensive federal regulation. Under the Natural Gas Act, the Federal Power Commission has authority to set wellhead prices, specify terms of sale, and certify transportation facilities.[484] Although the Commission's jurisdiction does not extend to the actual gathering and production of gas, its present power to set wellhead prices removes any possibility for competitive self-regulation.[485] In contrast, the only existing control of coal production is a cooperative sales agency that is concerned more with efficient marketing by its members than with control of competition.[486] Obviously, there is no consistent regulation of energy production nor any justification for the unequal treatment of the various fuel industries.

The system of petroleum price maintenance, enforced by government sanction, and the regulatory dominance of the natural gas market must be eliminated before PMR can operate effectively. Erasing this patchwork of anticompetitive regulation, however, requires two preliminary steps. First, the Federal Power Commission should be divested of all control over natural gas, and state agencies should be deprived of their prorationing function.[487] Secondly, the power to regulate the development, production, conservation, and supply of all fuels must be vested exclusively in the National Fuel Board. With this power, the National Fuel Board could begin to regulate the supply of petroleum, natural gas, coal, and nuclear fuel to the national market.

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483. "Taken together [state prorationing and import quotas] form a perfect pattern of monopolistic control over oil production, the distribution thereof among refiners and distributors, and ultimately the price paid by the public." S. REP. No. 25, 81st Cong., 1st Sess. 13 (1949); *see* Burck, *U.S. Oil: A Giant Caught in Its Own Web,* FORTUNE, Apr. 1965, at 202.

484. Natural Gas Act, 52 Stat. 821, *as amended* 15 U.S.C. § 717 (1958). *See generally* Note, *FPC Regulation of Independent Producers of Natural Gas*, 75 HARV. L. REV. 549 (1962).

485. *See* Williams, *supra* note 473, at 246, 250-53. *See generally* Miller, *Competition in Regulated Industries: Interstate Natural Gas Pipelines*, 47 GEO. L.J. 224, 255 (1958).

486. The National Recovery Administration from 1933 to 1935, and the Bituminous Coal Acts of 1935 and 1937 laid down minimum price schedules for the industry, but the actual effect of these schedules on the coal market was slight; they were soon dropped, leaving the Depression-born Appalachian Coal Agency as the only coordinating mechanism in the coal industry. *See* 1 S. WHITNEY, *supra* note 187, at 395-410.

487. "The oil and gas so produced is essential to the national security, the national economy, our whole industrial complex, and the social order. By far the largest part moves in interstate commerce. Because of this, the development, production, and conservation of oil and gas is peculiarly and extremely susceptible to federal intervention and control. I do not think that anyone would question that Federal Government could, within its constitutional authority, take over the regulation of the production and conservation of oil and gas." Williams, *supra* note 473, at 245-46.

Although the Board will adopt measures similar to state prorationing and import-export quotas for all fuels, these programs would be implemented with a view toward providing an adequate supply of fuel and not toward the maintenance of prices or market dominance. Once this adequate supply of fuel is assured, fuel producers will be compelled by competitive and economic pressures to allocate the fuel to meet the nation's fuel needs. A brief sketch of the possible range of Board actions will illustrate the function of peripheral market regulation.

(a) *Petroleum.*—The Board's primary tool in regulating the supply of petroleum will be the establishment of domestic production quotas and allocation of the quotas among various fuel producers. Since one characteristic of the fuel crisis has been the persistent lack of adequate fuel oil supplies, the Board could set domestic quotas to balance fuel needs against dwindling domestic reserves. If the Board finds that the nation's energy needs cannot be satisfied with domestic production, it could permit foreign oil to be imported to correct the deficiency. This importation of cheaper foreign oil also would help instill further competition in the oil market. The Board additionally could discourage overproduction, which dangerously depletes domestic reserves, by prohibiting interstate transportation of oil produced in excess of established quotas. Furthermore, should a supplier fail to comply with the quota, then the unproduced share of the quota could be permanently reassigned to other producers.

(b) *Coal.*—Export quotas rather than import quotas would be of primary importance in supervising the supply of coal. Currently, the country has vast coal reserves that should last for 800 to 1,000 years at present rates of consumption.[488] Thus the Board would be more concerned with assuring proper allocation of the coal produced than with limiting production. Accordingly, domestic production quotas could be determined on a long-range basis commensurate with the long-term contracts prevalent in the coal industry. To guarantee that domestic production would be properly allocated, the Board could prevent exportation of coal to lucrative foreign markets until this country is provided with a sufficient supply of coal. Limiting exports also might serve as a deterrent to the present epidemic of contract breaking by major coal producers.

(c) *Natural gas.*—Inadequate production of natural gas has stemmed from two possible factors: (1) A concerted slowdown of

488. At present, proved recoverable reserves equal 380 billion tons. It is estimated that the total recoverable reserves amount to 1,605 billion tons. *See* 1970 BITUMINOUS COAL FACTS, *supra* note 23, at 9.

production to increase natural gas prices; and (2) a severe shortage of domestic natural gas reserves.[489] The first cause can be eliminated by the imposition of domestic production quotas. In determining these quotas, the National Fuel Board would have to consider many of the same factors that influence oil production quotas, primarily natural gas needs and gas conservation. The impact of the second factor could be minimized by allowing the importation of natural gas from foreign sources.[490]

2. *Collateral Promotion of Competition.*—Although inadequate fuel supply was a major contributor, many other factors combined to produce recent fuel shortages. In some areas of the country, for example, coal producers who mined sufficient coal were unable to market the fuel because of inadequate transportation facilities.[491] Similarly, government promotion of atomic energy led to cutbacks in coal production; consequently, when the development of atomic energy proved to be an expensive, problem plagued task, the public was forced to turn to the scarce supplies produced by a declining coal industry.[492] If a coordinated system of fuel planning and government sponsored research and development had been undertaken, many, if not most, of the causes of the fuel shortage could have been foreseen and averted. Accurate forecasts of the transportation facilities needed to move coal might have enabled the Interstate Commerce Commission to provide economic incentives to railroad companies to facilitate the movement of coal hopper cars. Likewise, a more balanced research and development effort in the competing coal and atomic fuels industries might have improved coal's status as an efficient competitor.

To alleviate these unnecessary contributors to the fuel shortage, the National Fuel Board should be empowered to develop a comprehensive national fuel plan including the coordination of government research and development. This plan should be implemented with the objective of maintaining and improving the competitive position of each fuel within the energy industry.

(a) *Planning.*—The provision of basic fuel services has been impeded by numerous conflicting national priorities. Fuel conservation, new environmental standards, and national security are examples of the

489. Wall Street J., Oct. 5, 1970, at 1, col. 5 (S.W. ed.).

490. At present, for example, Canada is allowed to supply only 3% of the nation's natural gas consumption. *Hearings, supra* note 13, at 166 (statement of Hollis M. Dole, Assistant Secretary for Mineral Resources, Department of the Interior).

491. FORTUNE, Nov. 1970, at 76-77.

492. FORBES, Nov. 15, 1968, at 55-58.

external pressures that affect the supply of fuel. Although each of these national concerns should be considered and will continue to affect fuel production, there is no need for their effect to be totally unpredictable. Further fuel shortages can only be averted when each separate objective is coordinated by a comprehensive fuel plan. The quota system serves as an illustration of the Board's future planning function.

The import quota program was designed, not with a view to the needs of the consumer or to other factors shaping fuel demands, but solely as a national security measure.[493] As a result of this single-policy focus, less expensive and plentiful fuel has been denied to the American consumer, who must bid for scarce domestic supplies.[494] Yet the import system has been virtually unassailable, even in the face of a fuel crisis. Furthermore, by limiting petroleum imports, domestic reserves are being depleted, creating the danger that reserves will be insufficient if an emergency should arise that cuts off fuel imports. Likewise, the rapid depletion of domestic reserves caused by the withholding of foreign oil guarantees future fuel crises if foreign oil becomes unavailable because of increased demand overseas.[495] These potential dangers could be eliminated by a comprehensive fuel planning scheme. Instead of promoting a misdirected national security motive, import quotas would be utilized primarily to assure an adequate fuel supply. In determining import quotas, the National Fuel Board could consider all relevant factors, including fuel needs, interfuel competition, national security, and fuel conservation.

The conflicting national priorities are only one example of the collateral factors affecting the fuel supply. There are numerous other similarly conflicting priorities. These include: (1) The need for a favorable balance of payments and the shortages caused by exporting domestic coal; (2) the oil depletion allowance and its encouragement of domestic oil depletion; and (3) the vast federal subsidies of atomic energy research and development and the lack of spending in the area of coal research even though coal reserves exceed reserves of fissionable material. To harmonize these disparate objectives, the Board would have to compile all the data concerning the national fuel supply, including production, imports, exports, transportation, and distribution. Among the numerous tasks that the Board would then face is the determination of the effect that current import quota levels have on the depletion of

493. *See* note 30, *supra* and accompanying text.

494. *Id.*

495. *See* Lobel, *supra* note 149, at 15-17. *See also* BUS. WEEK, May 17, 1969, at 99; Nashville Tennessean, Oct. 8, 1970, at 1, col. 3.

domestic reserves and, in turn, the effect of domestic depletion on future fuel demands should foreign fuel supplies become unavailable. The Board also would be able to analyze the impact of import quotas on domestic fuel prices and competitive conditions in the fuel industries.

The information gathered by the Board would have the additional advantage of facilitating fuel planning by the industry and Government. Since projected fuel needs and programs would be available to the public, for example, a fuel producer would be able to foresee the fuel needs for a given area in light of the various pressures affecting the fuel supply in that region. In addition, other government agencies that directly affect the supply of fuel would have a ready source of information concerning the country's fuel needs. The Interstate Commerce Commission, for example, would be able to predict more accurately the number of hopper cars necessary to move fuel supplies to their markets and could avert future transportation shortages. In turn, the National Fuel Board would have to establish liaison with these agencies to facilitate interagency coordination.

(b) *Research and development.*—In addition to the National Fuel Board's planning function, it is suggested that the concept of peripheral market regulation include supervising research and development in non-nuclear fuels. Presently, federal research grants that may have direct impact on the energy market are administered by a myriad of governmental agencies, usually without regard to the competitive consequences that a particular grant may produce. If all federal research and development expenditures were administered by the National Fuel Board, however, a plan for uniform competitive technological growth could be implemented. This suggestion has been prompted by recent reports that five major petroleum companies, including Continental, Gulf, and Humble, are seeking to develop the synthetic petroleum process.[496] While research and development in the area of the conversion of coal to petroleum products is essential, it may be wiser from a policy viewpoint to allow the coal industry itself to develop the synthesis process. This arrangement would help assure viable competition in the future between petroleum and coal derivative products and could be carried out with a minimum of difficulty. If the policy decision were made that separate development of synthetic petroleum is desired, federal research and development money would be allocated exclusively to the coal industry. This arrangement would certainly not halt an oil company's expansion into the synthetic petroleum market, but by

496. Wall Street J., Mar. 17, 1971, at 23, col. 5 (S.W. ed.).

providing needed capital, it would place the coal industry on a competitive par with other members of the fuel market. For the present, the technical development of nuclear energy should remain the project of the Atomic Energy Commission. As nuclear fuel plays an increasingly dominant role in the nation's fuel market and as technical advances in its usage make it a lower risk fuel, the regulation of atomic energy should be shifted to the National Fuel Board in order to insure its proper integration with fossil fuels as an energy source.

B. Procedural Implementation

Before the National Fuel Board can perform its peripheral market regulatory function, procedures must be adopted so that the objectives can be accomplished. The problem is to adopt both formal and informal proceedings in which the Fuel Board can formulate a national policy, set the requisite quotas, and provide an opportunity for the constitutent members of the market to have a voice in the rule making process consistent with procedural due process.

In establishing the National Fuel Board, the congressional enabling act should define carefully the powers of the Board to prevent government dominance of the market. The statute should give appellate courts a standard by which to judge the Board's actions by specifying that regulation of the periphery of the market is designed to promote competition. In addition, the enabling act should set forth qualifications for Board membership that would exclude persons who are subservient to the regulated industries. This selectivity in the choice of Board members should prevent interested industries from controlling the Board and alleviate one of the major problems with present regulatory schemes.[497]

For convenience of analysis, the proposed functioning of the Board is divided into two categories: (1) the policy formulation phase—development of a unified approach to the regulation of the supply of fuels to all markets; and (2) the operational phase—the initial allotment of available quotas among the enterprises in the fuels market and the reallocation of the quota of a particular enterprise if its production levels do not comport with the expectations of the Board.

The first function is essentially a legislative one and includes, in addition to general policy formulation, the month-by-month determination of the proper amounts of fuel to be produced in a geographic region and the quantities of fuel to be imported and

497. Schwartz, *supra* note 468, at 23, 24-25.

exported.[498] These determinations will have to be made largely on the basis of past experience and results of surveys conducted by the Board staff. To accomplish this function, the Board will have to rely on sophisticated economic analysis of the fuel requirements for each section of the country. After the data is accumulated, the Board should be in a position to set and publish the monthly quotas. Because of the short-range nature of these decisions, it is recommended that the time consuming adversary hearing not be employed as the short-run quotas are established, but that the fuel industries be encouraged to submit written briefs setting forth their assessment of regional fuel requirements.[499] This procedure seems to satisfy the traditional concept of procedural due process. As Professor Davis has observed: "The method of trial is never appropriate except when facts are in dispute. When the disputed facts are adjudicative, a trial is normally required by due process. When the only disputed facts are legislative, a trial may or may not be convenient, but it is probably never required by due process."[500] Since the determination that the Board will be making in this phase of its functioning is strictly prospective, its policy conclusions will be legislative in nature.[501]

The second kind of determination that the Board will make involves the reallocation of existing production or import-export permits held by the individual enterprises that constitute the petroleum, coal, or natural gas industries. As outlined above, if a firm's production or importation does not meet the expectations of the Board during an appropriate period of time, a procedure must be adopted to reassign the unused portion of the quotas. It is suggested that a formal adversary proceeding be used since the issues presented will be adjudicative in nature[502]—was

498. Presently, the Bureau of Mines furnishes detailed data regarding monthly estimates of the amount of oil that it is anticipated the total market will require from each state. Walden, *supra* note 150, at 741, 780.

499. "After notice required by this section, the agency shall afford interested persons an opportunity to participate in the rule making through submission of written data, views or arguments with or without opportunity to present the same orally in any manner; and, after consideration of all relevant matter presented, the agency shall incorporate in any rules adopted a concise general statement of their basis and purpose . . . ." Administrative Procedure Act § 4, 5 U.S.C. § 1003(b) (1964). *See also* Brown, *Public Service Commission Procedure—A Problem and a Suggestion*, 87 U. PA. L. REV. 139 (1938).

500. 1 K.C. DAVIS, ADMINISTRATIVE LAW TREATISE § 7.06, at 432 (1958); *see* Gonzales v. United States, 348 U.S. 407, 412 n.4 (1955).

501. "Legislative facts do not usually concern the immediate parties but are general facts which help the tribunal decide questions of law and policy and discretion." 1 K.C. DAVIS, *supra* note 500, § 7.02, at 413.

502. "Adjudicative facts are the facts about the parties and their activities, businesses, and properties . . . adjudicative facts are roughly the kind of facts that go to a jury in a jury case." *Id.*

the quota complied with? Was there a reasonable excuse for the inadequate production? "A party who has a sufficient interest or right at stake in a determination of governmental action should be entitled to an opportunity to know and to meet, with the weapons of rebuttal evidence, cross-examination, and argument, unfavorable evidence of adjudicative facts, except in the rare circumstance when some other interest, such as national security, justifies an overriding of the interest in fair hearing."[503]

Of course, the determinations made by the Board in both phases of its operation will be subject to review by the appropriate federal courts of appeals. It is suggested, however, that the administrative orders should become effective while appeals are pending, and the appellate courts should be specifically denied jurisdiction to enjoin enforcement of the orders. If a court found that a Board decision was clearly erroneous, it could retroactively restore the injured party to its prior position; meanwhile, the Board could function without being delayed by numerous appeals.

C. Conclusion

Proposed adoption of peripheral market regulation is merely a recognition that competition alone will not assure the country of an adequate fuel supply. Although the literature that has grown out of past fuel crises is replete with allegations that fuel producers have artificially created fuel shortages in order to preserve high profit margins, the oligopolistic market structure cannot be isolated as the sole cause of the present fuel crisis. There is, in fact, substantial evidence that supply shortages have resulted from a multitude of factors—such as new environmental standards—wholly unrelated to the oligopolistic market structure. The promotion of competition through peripheral market regulation is not intended as implied support of those who indict the fuel producers for the shortage. Instead, it is a recognition that competition, channeled by minimal regulation, is the best method of solving the fuel shortage problem. The goal of peripheral regulation is competititon and not governmental dominance of the market place.

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503. *Id.* at 412.