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Singing the Coal Train Blues: The ICC, Railroad Coal Hauling Rates, and National Energy Policy Student Symposium - Selected Issues Concerning Increased Coal Use.

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**SINGING THE COAL TRAIN BLUES: THE ICC,
RAILROAD COAL HAULING RATES, AND NATIONAL
ENERGY POLICY**

SUZANNE B. LANGFORD

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I. INTRODUCTION

[I]n the final analysis, the role of coal in the national energy future will depend ultimately not upon labor, capital, or technology, and certainly not the availability of the resource itself; but upon public policy. Public policy is the ultimate legal dimension of coal as it will determine the extent to which it will be employed for the benefit of the public.¹

The establishment of an economically effective coal transportation system is foremost among the considerations presented by federal commitment to increased coal utilization by electric utilities and industry.² In-

1. Address by Carl E. Bagge, President, National Coal Ass'n, delivered to Houston Law Review Energy Conference (Mar. 16, 1978), *published in* 15 Hous. L. Rev. 1081, 1088 (1978).

2. See Powerplant and Industrial Fuel Use Act of 1978, Pub. L. No. 95-620, § 102(b), 92

creased utilization of coal assumes the deliverability of the resource to points of consumption. The link between national energy and transportation policies is axiomatic; transportation programs must be developed in a manner consistent with attainment of the objectives of energy self-sufficiency under the National Energy Plan.

The nation's railroads, the predominant coal hauling mode, are the focal point of the transportation phase of the coal cycle.³ The transportation industry moves 600-700 million tons of coal annually.⁴ The rail share of coal traffic in 1975 was 65 percent or 418 million tons.⁵ Physical and economic qualifications attendant to long distance transport of bulk commodities to diverse geographical markets secure the position of railroads as the major

Stat. 3291, 42 U.S.C.A. § 8301(b) (West Supp. 1978); EXECUTIVE OFFICE OF THE PRESIDENT, ENERGY POLICY AND PLANNING, THE NATIONAL ENERGY PLAN xii, 63-65 (1977). The National Energy Plan calls for an increase in coal production by more than 67 percent to over one billion tons by the year 1985. EXECUTIVE OFFICE OF THE PRESIDENT, ENERGY POLICY AND PLANNING, THE NATIONAL ENERGY PLAN 84 (1977). Expedient coal conversion derives impetus from taxation provisions regarding continued consumption of oil and gas by utilities and industrial plants, as well as prohibitions against the use of these fuels in new electric utility plants and major industrial installations. *Id.* at 65-66. The Powerplant and Industrial Fuel Use Act of 1978 (the Fuel Use Act) embodies the proposals of the National Energy Plan on coal utilization in new electric powerplants and industrial installations. See Fuel Use Act, §§ 102, 201-202, 211-214, 42 U.S.C.A. §§ 8301, 8311-8312, 8321-8322 (West Supp. 1978). The Fuel Use Act also restricts, through mandatory and discretionary prohibitions, the use of natural gas and petroleum as primary energy sources in existing powerplants and major fuel burning installations. *Id.* §§ 301-314, 42 U.S.C.A. §§ 8341-8354.

3. See UNITED STATES DEP'T OF ENERGY, FINAL ENVIRONMENTAL IMPACT STATEMENT, FUEL USE ACT ¶¶ 4.1, 5.1 (1979) (DOE/EIS-0038); CONGRESSIONAL RESEARCH SERVICE FOR SENATE COMM. ON ENERGY AND NATURAL RESOURCES AND SENATE COMM. ON COMMERCE, SCIENCE, AND TRANSP., 95TH CONG., 2D SESS., S. PUB. NO. 95-15, NATIONAL ENERGY TRANSPORTATION, Vol. III 57-60 (Comm. Print 1978) [hereinafter cited as SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III].

4. See SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 58, Table 1.

5. See SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 58, Table 1. Statistics from 1975 reveal that 12 percent (79/648 million tons) of coal transported was carried by truck, 11 percent (69/648 million tons) by barge, and one percent (8/648 million tons) by slurry pipeline. SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 58, Table 1. Eleven percent (74/648 million tons) of the coal produced was depleted in mine-mouth generating plant use. SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 58, Table 1. See also PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 195 (1979) (GPO No. 281-412/34) (coal transportation by mode, 1968-1976). The percentage of coal production carried by rail has decreased moderately since 1968. See PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 195 (1979) (GPO No. 281-412/34) (73 percent in 1968, 64 percent in 1976) (annual rate of decline approximately one percent). The most significant variance among other modes of transportation occurred in coal consumption at mine-mouth generating plants. *Id.* The proportionate amounts of coal carried by truck and barge remained relatively uniform. *Id.* See generally CONGRESSIONAL RESEARCH SERVICE FOR SENATE COMM. ON ENERGY AND NATURAL RESOURCES AND SENATE COMM. ON COMMERCE, SCIENCE, AND TRANSP., 95TH CONG., 2D SESS., S. PUB. NO. 95-15, NATIONAL ENERGY TRANSPORTATION, Vol. I 34-55 (Comm. Print 1978) [hereinafter cited as SENATE REPORT ON ENERGY TRANSPORTATION, Vol. I].

means of coal transportation in the future.⁶ The National Energy Plan proposes an annual level of coal production of 1.2 billion tons by 1985.⁷

6. See UNITED STATES DEP'T OF ENERGY, FINAL ENVIRONMENTAL IMPACT STATEMENT, FUEL USE ACT §§ 5.1, E.2.4 (1979) (DOE/EIS-0038); SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 57. The most viable modes of effective long-distance coal transport are railroads, barges and ships, and coal slurry lines. Cost factors and environmental variables, as influenced by geographic features of regions to be serviced, are the major components affecting the competitive advantage of each mode. See SENATE REPORT ON ENERGY TRANSPORTATION, Vol. I, *supra* note 5, at 40-55. The economic advantage of water transport, which offers rates typically about 20 percent below rail rates, is offset by the limited routes serviceable by water. See SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 93-94. Geographic considerations restrict bulk traffic transport to waterways in the East, primary areas of service being the Great Lakes region and inland river territories of the Mississippi-Gulf Coast system. See UNITED STATES DEP'T OF ENERGY, FINAL ENVIRONMENTAL IMPACT STATEMENT, FUEL USE ACT § E.2.4.2 (1979) (DOE/EIS-0038); SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 91-97. Coal slurry pipelines present a transportation alternative significant in the economic advantages offered by low operating and maintenance costs. See UNITED STATES DEP'T OF ENERGY, FINAL ENVIRONMENTAL IMPACT STATEMENT, FUEL USE ACT § E.2.4.3 (1979) (DOE/EIS-0038); SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 495-504. While initial capital investment in construction of slurry pipelines is high, the slurry mode offers a rate structure free of inflationary variable costs. See UNITED STATES DEP'T OF ENERGY, FINAL ENVIRONMENTAL IMPACT STATEMENT, FUEL USE ACT § E.2.4.3 (1979) (DOE/EIS-0038). The major restrictions on slurry development are procurement of requisite right-of-way easements and acquisition of adequate water supplies for the coal slurry mixture. See SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 498-504. The majority of proposed slurry pipelines are to be located in the arid West, an area where the water requirements issue is a major inhibiting force to slurry development. See UNITED STATES DEP'T OF ENERGY, FINAL ENVIRONMENTAL IMPACT STATEMENT, FUEL USE ACT, Fig. E.15 (1979) (DOE/EIS-0038); SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 500-02. The trucking industry does not present competition in long distance transport of coal. See UNITED STATES DEP'T OF ENERGY, FINAL ENVIRONMENTAL IMPACT STATEMENT, FUEL USE ACT §§ 5.1.1.2-.1.2.1 (1979) (DOE/EIS-0038); SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 30-38. Because of statutory restrictions on gross vehicle weight, imposed to minimize consequential road damage, and the comparatively limited capacity per load, trucks are environmentally and economically unsuited for long-distance coal transport. See SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 23. Trucks are the major mode of short-haul coal movement. SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 29-30. In addition to providing an essential link in the transportation chain, trucks are utilized for coal transport in areas of short production surface mines, such as the Appalachian fields, where heavy capital investment in rail, barge, or slurry systems is not practical, and in coal reserve areas not otherwise served by bulk hauling modes. See SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 29-34. See generally *Ex Parte* No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal, 345 I.C.C. 71, 94-105 (1975) (movement of coal by water, truck, and rail from production source); INTERSTATE COMMERCE COMM'N, A STUDY TO PERFORM AN IN-DEPTH ANALYSIS OF MARKET DOMINANCE AND ITS RELATIONSHIP TO OTHER PROVISIONS OF THE 4-R ACT, INTERIM REP. II, VI-32 to -40 (1979) (prepared by Kearney Management Consultants) (analysis of most efficient coal transport system; breakdown on basis of points of production and use); PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 192-207 (1979) (GPO No. 281-412/34) (specific data; tables, charts, maps).

7. EXECUTIVE OFFICE OF THE PRESIDENT, ENERGY POLICY AND PLANNING, THE NATIONAL

Attainment of this base level would result in a proportionate increase in rail transport to over 780 million tons.⁸ Moreover, the railroad and coal industries are interdependent, inasmuch as the freight revenues generated by coal traffic represent a significant portion of the rail industry's receipts.⁹ National figures indicate that coal accounted for 29 percent of total rail traffic originated in 1975, contributing 13.4 percent of freight revenue received by Class I railroads in 1975.¹⁰ Because of the integral role of the railroads in the transport of coal from source to market and the key position of coal traffic among the industry's revenue generating commodities, the emphasis on increased utilization of coal, as contained in the National Energy Plan and mandated under the Powerplant and Industrial Fuel Use Act, provides the rail transport system with a significant means for financial growth.¹¹ Stated simply, public utilities and industry are dependent

ENERGY PLAN 84 (1977); *cf.* SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 57-58 (studies forecasting 1985 production levels below 1.2 billion figure; projected production range between 988 million and 779 million tons).

8. The projected increase in transport volume is calculated on the basis of the 65 percent market share figure provided by 1975 transport data, assuming a 1.2 billion ton production base. *See* SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 58-59. The growth rate projected by annual production levels of 1.2 billion tons in 1985 would result in an average annual increase in rail traffic of less than seven percent. SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 58-59; *cf.* SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 58 (production level of 779 million tons, average annual increase at less than four percent; production level of 998 million tons, average annual increase at less than five percent). *See generally* PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 195 (1979) (GPO No. 281-412/34) (coal production, 1968-76).

9. *See* UNITED STATES DEP'T OF ENERGY, FINAL ENVIRONMENTAL IMPACT STATEMENT, FUEL USE ACT ¶ 5.1.1.1 (1979) (DOE/EIS-0038).

10. *Id.* ¶ 5.1.1.1; *cf.* UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 16 (1978) (1976 data reflecting revenue contribution of 19.9 percent). A Class I railroad is one having an annual revenue of over ten million dollars. UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 12 (1978).

11. *See* UNITED STATES DEP'T OF ENERGY, FINAL ENVIRONMENTAL IMPACT STATEMENT, FUEL USE ACT ¶ E.2.4.1 (1979) (DOE/EIS-0038); SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 57-60. *See generally* UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 10-63 (1978) (industry status; causes of railroads' unstable financial situation); SENATE REPORT ON ENERGY TRANSPORTATION, Vol. I, *supra* note 5, at 36-55 (historical background on coal transportation). New concepts in coal transportation by rail, developed and placed into operation in the 1960's under the unit-train system, allow a greater volume load per shipment to be transported with greater efficiency. *See Ex Parte* No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal, 345 I.C.C. 71, 111-17 (1975) (unit-train and trainload concept). The unit-train system consists of "a solid train of rail cars operated in shuttle service under load from origin and delivered intact to an industry at destination." *Id.* at 114. Under the unit-train method of transport, coal movement by rail has resulted in heavier car loads being moved over longer distances. *Compare* UNITED STATES DEP'T OF ENERGY, FINAL ENVIRONMENTAL IMPACT STATEMENT, FUEL USE ACT ¶ 5.1.1.1 (1979) (DOE/EIS-0038), *citing* OFFICE OF RAIL SYSTEMS ANALYSIS & PROGRAM DEV., FED. R.R. ADMINISTRATION, UNITED STATES DEP'T OF TRANSP., 1973 CARLOAD WAYBILL STATISTICS (1973)

upon the railroads for the transportation of coal supplies, whereas the railroads are dependent upon the revenue generated by coal traffic for financial stability.

Railroads, as common carriers, are subject to federal regulation by the Interstate Commerce Commission (ICC), under the Interstate Commerce Act.¹² Thus, the regulatory philosophy of the ICC serves as the foundation for policy decisions concerning coal transport by rail. The ratemaking provisions of the Railroad Revitalization and Regulatory Reform Act of 1976 (the 4-R Act)¹³ furnish standards and guidelines to be followed in the establishment of just and reasonable rates.¹⁴ This comment will address the role of the ICC in the implementation of rail tariffs equitable to the interests of both rail carriers and the ultimate consumers of transported commodities.¹⁵

II. RAILROAD RATE REGULATION

A. *The Role of the ICC—Historical Perspectives*¹⁶

The Interstate Commerce Commission (Commission) was founded as an independent regulatory agency in 1887, the primary function of which was regulation of the nation's railroads in the public interest.¹⁷ Impetus for the

(TD-1) (average carload/car of 76.6 tons, 1970; average hauling distance/car of 290 miles, 1973) with UNITED STATES DEP'T OF ENERGY, FINAL ENVIRONMENTAL IMPACT STATEMENT, FUEL USE ACT ¶ 5.1.1.1 (1979) (DOE/EIS-0038), citing OFFICE OF RAIL SYSTEMS ANALYSIS & PROGRAM DEV., FED. R.R. ADMINISTRATION, UNITED STATES DEP'T OF TRANSP., 1976 CARLOAD WAYBILL STATISTICS (1976) (TD-1) (average carload/car of 85.8 tons, 1976; average hauling distance/car of 318 miles, 1976).

12. See Revised Interstate Commerce Act, 49 U.S.C.A. §§ 10102(3),(4),(17),(18),(23), 10501(a)(1), 10701 (West Supp. 1979). See generally UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 49-51 (1978) (railroad regulation; ratemaking policies of ICC).

13. The Railroad Revitalization and Regulatory Reform Act of 1976, Pub. L. No. 94-210, 90 Stat. 31 (codified in scattered sections of 45 U.S.C. (1976), 49 U.S.C.A. (West Supp. 1979)) [hereinafter cited as the 4-R Act].

14. The 4-R Act, §§ 202, 205, 49 U.S.C.A. §§ 10701, 10704 (West Supp. 1979) (previously codified at 49 U.S.C. §§ 1, 15, 15a). See generally UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 114-31 (1978) (role of the ICC in rate regulation).

15. See generally UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 114-31 (1978).

16. See HOUSE COMM. ON INTERSTATE AND FOREIGN COMMERCE, FEDERAL REGULATION AND REGULATORY REFORM, H.R. DOC. NO. 95-134, 95th Cong., 1st Sess. 329, 330-44 (1977); B. SCHWARTZ, THE ECONOMIC REGULATION OF BUSINESS AND INDUSTRY 17-20, 31, 57-61, 579, 593-95, 1007-09, 1393-97 (1973); Statutory Comment, *The Railroad Revitalization and Regulatory Reform Act of 1976: Improving the Railroad's Competitive Position*, 14 HARV. J. LEGIS. 575, 575-79 (1977).

17. See The Cullom Act, ch. 104, 24 Stat. 379 (1887) (current version at 49 U.S.C.A. § 10701 (West Supp. 1979)). Authority to delegate regulation of interstate commerce was vested in Congress by the commerce clause of the Constitution. U.S. CONST. art. I, § 8, cl. 3 ("power

development of government control was occasioned by the railroads' emergence as a natural monopoly over intercity travel at the end of the nineteenth century.¹⁸ In the exercise of its responsibility to insure that rates be "just and reasonable," the Commission was empowered to establish maximum and minimum allowable rates.¹⁹ Railroads were required to file

to regulate commerce . . . among the several states"). The philosophy of the Commission is best described in the "Rule of Ratemaking," found at section 10704 of the Revised Interstate Commerce Act. *See* 49 U.S.C.A. § 10704 (West Supp. 1979) (previously codified at 49 U.S.C. § 15a(2)). The essential elements of the policy are that the interest of the affected carrier and the public interest in an adequate and economical transportation system represent the primary considerations in a determination of "just and reasonable" rates. *Id.* § 10704; *cf.* 49 U.S.C.A. § 10701 (West Supp. 1979) (previously codified at 49 U.S.C. § 1(5)) (codification of section one of The Cullom Act; source of "just and reasonable" rate concept).

18. *See* SENATE COMM. ON COMMERCE, RAILROAD REVITALIZATION AND REGULATORY REFORM ACT OF 1976, S. REP. NO. 94-499, 94th Cong., 1st Sess. 2-14 (1975), *reprinted in* [1976] U.S. CODE CONG. & AD. NEWS 15-29 [hereinafter cited as S. REP. NO. 94-499, LEGISLATIVE HISTORY OF THE 4-R ACT]. Legislative initiative for the establishment of governmental regulation of the railroads can be briefly chronicled as follows.

State enactment of railroad regulation arose from the momentum of the Granger movement. Affirmance of the legislation by the Supreme Court, in the *Granger Cases*, was based on the reasoning that railroads, because of their fundamental role in the economy, were impressed with a public interest and therefore susceptible to regulation. *See generally* Johnson & Highsmith, *Munn v. Illinois (1877): A Centennial Evaluation*, 44 I.C.C. PRAC. J. 618 (1977) (the Granger Movement).

Initial judicial recognition of state regulation was sharply curtailed by the Supreme Court's holding, in the *Wabash* case, that the states could not regulate interstate commerce. *See Wabash, St. L. & P. Ry. v. Illinois*, 118 U.S. 557, 577 (1886) (regulation held "national in character"); *cf.* *Munn v. Illinois*, 94 U.S. 113, 135 (1877) (regulation of grain elevators "domestic concern"; state regulations with indirect effect on interstate commerce allowed).

Congressional response to the *Wabash* case resulted in the creation of the Interstate Commerce Commission as an independent regulatory agency, with the authority to determine and establish "just and reasonable" rate levels and to order the annulment of rates adjudged above a maximum reasonable level. *See* The Cullom Act, ch. 104, §§ 1, 11, 15, 24 Stat. 379, 383-85 (1887) (current version at 49 U.S.C.A. § 10701 (West Supp. 1979)).

The resources and jurisdiction of the ICC were expanded and clarified through additional legislation to assure effective ratemaking power over railroad commerce. *See* 1910 Mann-Elkins Act, ch. 309, § 12, 36 Stat. 552 (codified in scattered sections of 49 U.S.C.) (authority to suspend rates; burden of proof on carrier); Hepburn Act of 1906, ch. 3591, § 4, 34 Stat. 589-90 (codified in scattered sections of 49 U.S.C.) (authority to condemn unjust rates, set maximum reasonable rates upon finding rate illegal; orders of Commission binding on carriers, subject to judicial review). *Compare* I.C.C. v. Alabama Midland R.R. (Maximum Freight Rate Case), 168 U.S. 144, 162 (1897) (although Commission could declare a rate illegal, it could not set maximum reasonable rate level) *with* Revised Interstate Commerce Act, 49 U.S.C.A. §§ 10704, 10707 (West Supp. 1979) (ICC authorization to suspend rates and set maximum rates) (previously codified at 49 U.S.C. §§ 13(1), 15(1)(7)). *See generally* HOUSE COMM. ON INTERSTATE AND FOREIGN COMMERCE, FEDERAL REGULATION AND REGULATORY REFORM, H.R. Doc. No. 95-134, 95th Cong., 1st Sess. 329, 330-37 (1977).

19. *See* Transportation Act of 1920, ch. 91, § 418, 41 Stat. 485 (codified in scattered sections of 49 U.S.C.) (minimum rates and rate prescription); Hepburn Act of 1906, ch. 3591, § 4, 34 Stat. 589 (codified in scattered sections of 49 U.S.C.) (maximum rates); The Cullom

notice with the Commission of every change in rates between any two points or for any commodity.²⁰ Additionally, the Commission could suspend any change that it suspected to be unjust or unreasonable.²¹ The burden was on the railroad to prove the rates were allowable.²² Any rate subsequently determined unjust or unreasonable was deemed unlawful.²³

The social and economic objectives that provided the incentive for rate-making regulation were implemented under a "cross-subsidization" approach to ratemaking policy.²⁴ Cross-subsidization, as a rule of ratemaking, emerged from the theory of value of service pricing.²⁵ Lower rail rates were levied on relatively low cost bulk items such as agricultural and mining commodities while higher rates were allowed on higher valued items such as manufactured goods.²⁶ Thus, railroad ratemaking policy, under value of service pricing, was based primarily on such non-cost factors as market demand and socio-economic considerations. A corollary to the Commission's restriction of rate increases under the cross-subsidization rationale arose with the adoption of "umbrella ratemaking" policies, by which rail rate decisions were rendered that prevented the railroads from reducing rates when such posed a threat to the position of intermodal competition.²⁷

Act, ch. 104, § 1, 24 Stat. 379 (1887) (current version at 49 U.S.C.A. § 10701) (just and reasonable rates).

20. 49 U.S.C. § 6(3) (1976) (originally enacted as The Cullom Act of 1887, ch. 104, Pt. I, § 6, 24 Stat. 380).

21. *Id.* § 15(7) (originally enacted as Mann-Elkins Act of 1910, ch. 309, § 12, 36 Stat. 552). A rate was subject to suspension for being too high, to the detriment of the shipper, or too low, to the detriment of intermodal competition. See Statutory Comment, *The Railroad Revitalization and Regulatory Reform Act of 1976: Improving the Railroad's Competitive Position*, 14 HARV. J. LEGIS. 575, 584 & n.50 (1977).

22. Interstate Commerce Act, 49 U.S.C. § 13(1) (1976) (current version at 49 U.S.C.A. § 10707(e) (West Supp. 1979)).

23. *Id.* § 15(7) (originally enacted as The Cullom Act of 1887, ch. 104, Pt. 1, § 15, 24 Stat. 384). If a rate was found to have been too high, refunds had to be made to any shipper who could prove payment of the unlawful rate. See *Baltimore & O.R.R. v. United States*, 279 U.S. 781, 785 (1929).

24. See UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 50, 130-31 (1978); Francese, *Legal, Legislative and Institutional Obstacles to the Development of Consistent National Energy and Transportation Policies*, 11 NAT. RESOURCES LAW. 569, 574-75 (1978), citing UNITED STATES DEP'T OF TRANSP., STUDY OF FEDERAL AID TO RAIL TRANSPORTATION, § 902, V-5 to -28 (1977).

25. See Francese, *Legal, Legislative and Institutional Obstacles to the Development of Consistent National Energy and Transportation Policies*, 11 NAT. RESOURCES LAW. 569, 574-75 (1978), citing UNITED STATES DEP'T OF TRANSP., STUDY OF FEDERAL AID TO RAIL TRANSPORTATION, § 902, V-5 to -28 (1977).

26. See *id.*

27. See UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 50, 130-31 (1978); Statutory Comment, *The Railroad Revitalization and Regulatory Reform Act of 1976: Improving the Railroad's Competitive Position*, 14 HARV. J. LEGIS. 575, 589-91 (1977). See generally 49 U.S.C.A. § 10101 (West Supp. 1979) (previously codified as preamble to 49 U.S.C. § 1) (National Transportation Policy: originally enacted

With the exception of remedial legislation enacted at the end of the First World War,²⁸ the focus of congressional mandates and ICC rulings was directed at ensuring moderate shipping rates and protecting intermodal competition, with slight regard for allocation of a fair return on capital investment in the computation of railroad rates.²⁹ As the authority and role of the ICC expanded, proportionate concern with revenue adequacy diminished.³⁰ The Commission failed to utilize its position for reconciliation of the needs of railroads to earn revenues adequate to sustain a fair rate of return with the needs of the public to receive economic and efficient transportation service.³¹

B. Impact of Economic Regulation Under the Interstate Commerce Act³²

Twentieth century technological and economic advancements in the

as National Transportation Act of 1940, ch. 722, § 1, 54 Stat. 899). The Commission drew support for its umbrella ratemaking philosophy from the following key phrases of the Transportation Policy: "[to be] administered so as to recognize and preserve the inherent advantages of each [mode]; . . . [to prevent] destructive competitive practices." National Transportation Act of 1940, ch. 72, § 1, 54 Stat. 899 (current version at 49 U.S.C.A. § 10101 (West Supp. 1979)); see *Ingot Molds, Pa. to Steelton, Ky.*, 326 I.C.C. 77, 85 (1965), *rev'd sub nom. Louisville & N.R.R. v. United States*, 268 F. Supp. 71, 82-83 (W.D. Ky. 1967), *rev'd sub nom. American Commercial Lines v. Louisville & N.R.R.*, 392 U.S. 571, 589-90 (1968).

28. See Transportation Act of 1920, ch. 91, 41 Stat. 456 (current version at scattered sections of 49 U.S.C.). During the period of federal control of the railroads, railroad property substantially depreciated. The Transportation Act of 1920 represented a congressional commitment to revitalization of the nation's railroads through changes in governmental regulation. The Act instructed the Commission to consider the railroads' revenue needs and to exercise its ratemaking power to insure that railroads as a group would receive a fair return on the fair value of investment. *Id.* § 422. The fair value, fair return language of the Act was removed with the passage of the Emergency Transportation Act of 1933. See Emergency Railroad Transportation Act of 1933, ch. 41, § 205, 48 Stat. 220. With regard to ratemaking, the Emergency Transportation Act substituted the more general revenue need language, presently found at section 10704 of the Revised Interstate Commerce Act. See 49 U.S.C.A. § 10704 (West Supp. 1979) (previously codified at 49 U.S.C. § 15a).

29. UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 119 (1978); accord, HOUSE COMM. ON INTERSTATE AND FOREIGN COMMERCE, FEDERAL REGULATION AND REGULATORY REFORM, H.R. DOC. NO. 95-134, 95th Cong., 1st Sess. 329, 337 (1977) (ICC regulations trend from antimonopoly to anticompetitive).

30. See UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 119 (1978); S. REP. NO. 94-499 at 11-15, LEGISLATIVE HISTORY OF THE 4-R ACT, *supra* note 18, at 24-25.

31. See UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 119 (1978); cf. 49 U.S.C.A. § 10704 (West Supp. 1979) (originally enacted as National Transportation Act of 1940, ch. 722, § 10(e), 54 Stat. 912) (rule of ratemaking: due consideration to effect of rates on movement of carrier traffic as well as public interest).

32. Six interrelated factors can be identified as causative elements of railroads' current economic condition: technological advancements of competitive modes; public support through funding of competitive modes; changing market conditions; restrictive regulatory climate; poor management policies in area of development; and, insufficient internal funds.

manufacturing and transportation industries acted as natural deterrents to the monopolistic position of the railroads.³³ Additionally, federal policy favoring the development of auto, trucking, barge, and airline technologies significantly affected the relationship of the rail industry with its competitors.³⁴ Total economic regulation of the railroad rate structure debilitated the railroad industry's ability to adjust to changing market conditions.³⁵ Railroad rate regulation failed to assure adequate industry profits, leading to deferred maintenance and delayed capital expenditures for roadway and equipment which further inhibited the ability of the railroads to provide service, resulting in additional losses of traffic and revenue.³⁶ In 1974, with eight railway companies in bankruptcy proceedings, the severe financial position of the nation's railroads posed a serious threat to the national

See generally Johnson, *The Railroad Revitalization and Regulatory Reform Act of 1976*, 45 I.C.C. PRAC. J. 27, 30-31 (1978), *citing* I UNITED STATES RY. ASS'N, PRELIMINARY SYSTEM PLAN TO FINAL SYSTEM PLAN (1975).

33. *See* UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 40-48 (1978); SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 55 (increase in vehicular and aeronautical shipping).

34. *See* UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 45, 48 (1978); S. REP. NO. 94-499 at 2-3, LEGISLATIVE HISTORY OF THE 4-R ACT, *supra* note 18, at 15-17; Statutory Comment, *The Railroad Revitalization and Regulatory Reform Act of 1976: Improving the Railroad's Competitive Position*, 14 HARV. J. LEGIS. 575, 576-77 (1977). Indicative of the general absence of federal support is the total lack of government promotion, specific to railroad and pipeline industries only, in the form of public expenditures to improve rights-of-way and facilities. S. REP. NO. 94-499 at 3, LEGISLATIVE HISTORY OF THE 4-R ACT, *supra* note 18, at 16.

35. *See* UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 39, 49-51 (1978). Railroads represent the only totally regulated transportation system. *Id.* at 49; *see* Interstate Commerce Act, 49 U.S.C. § 1(a) (1976) (current version at 49 U.S.C.A. § 10107 (West Supp. 1979)) (railroads subject to regulation irrespective of service commodity); *cf.* Natural Gas Act of 1938, ch. 556, 52 Stat. 821, 15 U.S.C. § 717 (1976) (amended 1978) (interstate pipelines subject to federal price controls on natural gas); Interstate Commerce Act, 49 U.S.C. § 2(c) (1976) (current version at 49 U.S.C.A. § 10107 (West Supp. 1979)) (inland waterways subject to regulation when transport "under common arrangement" with railroads). Thus, the rail industry has been placed in competition under rate levels strictly regulated by the government. Intermodal competition of the railroads, in contrast, has been subject to less comprehensive regulatory control. *See* 121 CONG. REC. H12,753 (daily ed. Dec. 17, 1975) (remarks of Rep. Anderson) (recognizing competitive disabilities that result from railroad freight at 100 percent regulation, truck freight at 40 percent regulation, water carrier freight at seven percent regulation). *See generally* UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 49-52 (1978) (government regulation of the railroads: rate regulation; entry and exit regulation; car service regulation; labor regulation; safety regulation; environmental regulation).

36. UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 50 (1978) (under cross-subsidization and umbrella ratemaking railroad rates not set in accordance with cost analysis standards); *see Ex Parte* No. 310, Increased Freight Rates and Charges, 1975, Nationwide, 349 I.C.C. 555, 591-625 (1975) (cross-subsidization to aid depressed industries); Rail & Barge Joint Rates, 270 I.C.C. 591, 619 (1948) (railroads not allowed to lower rates under umbrella ratemaking).

transportation system.³⁷ In the wake of such pending disaster the 4-R Act was enacted.³⁸

C. The Role of the ICC Under the Railroad Revitalization and Regulatory Reform Act of 1976: Maximum Rate Deregulation

An express purpose of the 4-R Act is the restoration of financial stability to the railway industry through ratemaking and regulatory reform.³⁹ The Act recognizes that rate regulation evolved from antimonopoly mandates to competitive strictures, and that neither are appropriate measures to ensure a sound national transportation policy.⁴⁰ Section 205 of the Act provides an entirely new ratemaking rule, refocusing attention on adequate return in the setting of rates.⁴¹ Revenue levels established by the Commission must take into consideration and assure railroads a fair return on capital, providing for the recovery of current costs of debt and equity capital.⁴²

37. See UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 21 (1978); S. REP. NO. 94-499 at 1-8, LEGISLATIVE HISTORY OF THE 4-R ACT, *supra* note 18, at 14-21. See generally The Regional Rail Reorganization Act of 1973, Pub. L. No. 93-236, 87 Stat. 985 (1974); Rail Amendments of 1976, 45 U.S.C. §§ 701-794 (1976).

38. The Railroad Revitalization and Regulatory Reform Act of 1976, Pub. L. No. 94-210, 90 Stat. 31 (codified in scattered sections of 45 U.S.C. (1976), 49 U.S.C.A. (West Supp. 1979)). See generally S. REP. NO. 94-499 at 1-8, LEGISLATIVE HISTORY OF THE 4-R ACT, *supra* note 18, at 14-21. Various provisions of the 4-R Act have been recodified under the Revised Interstate Commerce Act of 1978. See Revised Interstate Commerce Act, Pub. L. No. 95-473, 92 Stat. 1337 (1978) (codified as 49 U.S.C.A. §§ 10101-11710 (West Supp. 1979)).

39. The 4-R Act, § 101(a)(1), 45 U.S.C. § 801(a)(1) (1976).

40. If railroads are to regain lost traffic, or even to retain present traffic, they must be able to lower their rates, innovate new services, and respond to new and changing circumstances. If railroads are to increase their revenues and attract the resources necessary to revitalize the industry, they must be free to raise their rates in a timely fashion, free from regulation in markets sufficiently competitive to prevent abuses of monopoly power. . . . Less restrictive rate regulation is essential

S. REP. NO. 94-499 at 11, LEGISLATIVE HISTORY OF THE 4-R ACT, *supra* note 18, at 25.

41. See The 4-R Act, § 205, 49 U.S.C.A. § 10704(a)(2) (West Supp. 1979) (previously codified at 49 U.S.C. § 15a) ("Adequate Revenue Levels"). The need for a renovation of the Commission's cost analysis system was recognized by the Senate Commerce Committee, reflecting congressional concern as to the justiciability of previous cross-subsidization and umbrella ratemaking approaches. See S. REP. NO. 94-499 at 52, LEGISLATIVE HISTORY OF THE 4-R ACT, *supra* note 18, at 66; HOUSE COMM. ON INTERSTATE AND FOREIGN COMMERCE, RAILROAD REVITALIZATION AND REGULATORY REFORM ACT OF 1976, H.R. REP. NO. 94-725, 94th Cong., 1st Sess. 70 (1975) (express intention that variable cost determination reflect direct operating expense). See also The 4-R Act, § 307, 49 U.S.C.A. § 11142 (West Supp. 1979) (previously codified at 49 U.S.C. § 20(3)) (regulations to be issued prescribing uniform cost based on operating and non-operating revenue accounts, direct and indirect costs).

42. See The 4-R Act, § 205, 49 U.S.C.A. § 10704 (West Supp. 1979) (previously codified at 49 U.S.C. § 15a). Implementing this provision, the ICC adopted a new policy of minimum and maximum rate regulation, costing, and revenue adequacy analysis designed to assure rate revenue need would be considered in specific as well as general rate increase proceedings. See

The conceptual framework of rate regulation is restructured in section 202(b).⁴³ Ratemaking flexibility is promoted by a policy substituting competitive market forces for regulatory control.⁴⁴ Under section 202(b), Commission regulation of maximum rate levels is allowed only when the railroad publishing the rate increase is found to have "market dominance" over the service affected.⁴⁵ The Act defines market dominance as "an absence of effective competition from other carriers or modes of transportation, for the traffic or movement to which a rate applies."⁴⁶ The market dominance test is not an ultimate regulatory standard. The test is instead to serve as a threshold criterion to signal the need for appropriate regulation into areas where the public interest needs protection.⁴⁷ Under regulations implementing the test⁴⁸ a presumption of market dominance arises upon demonstration of any one of three situations: (1) seventy percent or more of the involved traffic has been handled by the carrier during the preceding year; (2) the tariff exceeds the cost of providing the service by

Ex Parte No. 338, Standards and Procedures for the Establishment of Adequate Railroad Rate Revenue Levels, 358 I.C.C. 844, 853-54 (1978). Two concepts of significance emerge from the decision: (1) when possible, rates will be set at a level sufficiently above cost to provide for an allotment on recovery of fixed costs; (2) rates are not to be structured on the basis of allowing an equal proportionate recovery on fixed costs across the industry; factors of market demand and competition operate to make rates service specific. *Id.* at 853-54.

43. See The 4-R Act, § 202(b), 49 U.S.C.A. §§ 10701, 10709 (West Supp. 1979) (previously codified at 49 U.S.C. § 1(5)); Allen, *Status Report on the Ratemaking Reforms of the 4-R Act: A Review of the Section 202(g) Studies*, 46 I.C.C. PRAC. J. 192, 193 (1979) (comparison of ICC and Department of Transportation studies on the effects of section 202). Other ratemaking reforms of consequence are found at sections 206 (capital incentive rates), 207 (commodities exempt from regulations), and 208 (rate bureau restrictions). The 4-R Act, §§ 206-208, 49 U.S.C.A. §§ 10505, 10706, 10729, 11703 (West Supp. 1979); see UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 114-15, 118-25 (1978); Statutory Comment, *The Railroad Revitalization and Regulatory Reform Act of 1976: Improving the Railroad's Competitive Position*, 14 HARV. J. LEGIS. 575, 584-616 (1977).

44. See S. REP. NO. 94-499 at 46-49, LEGISLATIVE HISTORY OF THE 4-R ACT, *supra* note 18, at 60-64. The concept of rate flexibility is introduced by the new section 1(5), found at section 202(b): "in truly competitive markets railroads will have freedom . . . to raise prices as they choose in order to maximize revenues." S. REP. NO. 94-499 at 47, LEGISLATIVE HISTORY OF THE 4-R ACT, *supra* note 18, at 61.

45. See The 4-R Act, § 202(b), 49 U.S.C.A. § 10709 (West Supp. 1979) (previously codified at 49 U.S.C. § 1(5)).

46. The 4-R Act, Pub. L. No. 94-210, § 202(b), 90 Stat. 35 (1976); *cf.* 49 U.S.C.A. § 10709 (West Supp. 1979) (language amended). "Under this definition the publishing carrier need not have monopoly power. Rather, the test will be whether the market itself is sufficiently competitive to insure just and reasonable rates." S. REP. NO. 94-499 at 47, LEGISLATIVE HISTORY OF THE 4-R ACT, *supra* note 18, at 61.

47. See S. REP. NO. 94-499 at 47, LEGISLATIVE HISTORY OF THE 4-R ACT, *supra* note 18, at 61.

48. See Requirements and Procedures Relating to a Determination of Market Dominance with Regard to Rates Challenged as Unreasonably High, 49 C.F.R. § 1109.1(g)(1)-(3) (1978).

sixty percent or more; or (3) a substantial investment in rail facilities has been made by the affected shipper.⁴⁹ Thus, while the ICC is now equipped with a set of standards and guidelines by which to measure the need for regulation, reconciliation of the needs of the railroads to earn sufficient revenue to restore financial stability with the needs of the public to be assured an economically affordable transportation system makes regulatory assessment difficult.⁵⁰

III. THE COAL TRANSPORTATION CYCLE: ECONOMIC PERSPECTIVES OF THE UTILITY INDUSTRY

The new philosophy of rate regulation encompassed in the ratemaking and revenue sections of the 4-R Act has a significant bearing on the economics involved in the utility industry's conversion to coal.⁵¹ To meet the rise in market supply and demand under projected growth figures, the nation's rail transportation system will move larger loads of coal longer distances.⁵² The railroads presently have no effective competition to long

49. *Id.* The market dominance regulations promulgated by the ICC were challenged in the courts by the railroad industry and the Departments of Justice and Transportation. See *Atchison, T. & S.F. Ry. v. ICC*, 580 F.2d 623, 625-26 (D.C. Cir. 1978). A group of electric utilities contended the opposite. *Id.* at 626. The court upheld the Commission's rules, largely as a matter of "deference and deferral" to the attempted implementation of a new concept in ratemaking. *Id.* at 640. However, the court remanded the cost presumption for clarification of the 160 percent figure. *Id.* at 640; cf. *Railroad Rate Regulation Implementation by the ICC: Hearings Before the Senate Comm. on Commerce*, 95th Cong., 2d Sess. 51-54 (1978) (statement of Daniel O'Neal, Chairman of the ICC) (market dominance).

50. See S. REP. NO. 94-499 at 47, LEGISLATIVE HISTORY OF THE 4-R ACT, *supra* note 18, at 61 (market dominance test not ultimate regulatory standard but threshold criterion). Much of the effect of the regulatory philosophy embodied in the 4-R Act is contingent upon the Commission's construction of the economic terms set as guidelines for appropriate cost analysis of adequate revenue returns. See The 4-R Act, §§ 202(b), 205, 49 U.S.C.A. §§ 10701, 10704, 10709 (West Supp. 1979) (previously codified at 49 U.S.C. § 15). See generally Price & Berardino, *Defining Economic Terms Used in the Railroad Revitalization and Regulatory Reform Act*, 9 TRANSP. L.J. 133 (1977). As recognized during a Senate hearing on the regulations advanced under the Commission's market dominance formula, "the only reliable indication of restrictiveness of the Commission's rules is actual experience." *Railroad Rate Regulation Implementation by the ICC: Hearings Before the Senate Comm. on Commerce*, 95th Cong., 2d Sess. 77 (1978) (statement of William H. Dempsey, Pres., Ass'n of American Railroads).

51. See The 4-R Act, §§ 202(b), 205, 49 U.S.C.A. §§ 10701, 10704, 10709 (West Supp. 1979) (previously codified at 49 U.S.C. § 15) (regulations to assist rail industry in attaining adequate revenue levels to permit the raising of debt and equity capital). Compare *Ex Parte* No. 338, *Increased Freight Rates and Charges*, 358 I.C.C. 1, 13 (1978) (rates to be set at higher level to contribute to fixed costs, where possible) with *Ex Parte* No. 310, *Increased Freight Rates and Charges*, 1975, *Nationwide*, 349 I.C.C. 555, 591-625 (1975) (coal among commodities exempted from rate increases; rates held down on industries in need of assistance; cross-subsidization).

52. Rail traffic is predicted to increase to 780 million tons in 1985, an 80 percent increase in coal traffic by rail from 1975 figures. See UNITED STATES DEP'T OF ENERGY, FINAL ENVIRON-

distance bulk commodity traffic in the western sector.⁵³ The monopoly position of the railroads in the West is significant; this region contains over fifty percent of the nation's demonstrated coal reserves.⁵⁴ The utility industry, in certain geographic regions a captive shipper of western coal, must bear the burden of increases in rail transportation costs licensed under the theoretical maxims of railroad revitalization.⁵⁵ Because of the inherent dominance of railroads in transporting bulk commodities over long distances, it is predicted that a substantial amount of coal traffic by rail will continue to be regulated.⁵⁶ The ICC is thus placed in a pivotal role in the determination of economically allowable transportation rates on coal traffic, which will impact directly upon the utility industry and ultimately upon the public.⁵⁷

A. Market Supply and Demand—Western Coal Reserves

Coal's dominant position in the achievement of energy self-sufficiency under the National Energy Plan is a function of the abundance of domestic coal reserves.⁵⁸ The bulk of coal presently in production originates from

MENTAL IMPACT STATEMENT, FUEL USE ACT ¶¶ 5.1-.1.1.1 (1979) (DOE/EIS-0038); SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 57-60.

53. See SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 460.

54. See 2 ENERGY INFORMATION ADMINISTRATION, UNITED STATES DEP'T OF ENERGY, ANNUAL REPORT TO CONGRESS: DATA 98-103 (1978).

55. See SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 441-46. See generally UNITED STATES DEP'T OF ENERGY, FINAL ENVIRONMENTAL IMPACT STATEMENT, FUEL USE ACT ¶¶ 5.1-.1.1.3, E.2.4-.2.4.3 (1979) (DOE/EIS-0038).

56. The ICC has estimated that 55.3 percent of coal rail tonnage would meet the 70 percent share test for market dominance. Applying the 160 percent variable cost presumption, the Commission has identified approximately two percent of steam bituminous coal as being market dominant. Under the substantial investment test, especially significant with respect to coal, given large shipper investment in loading and unloading facilities and cars, steam bituminous coal was shown to be about 25 percent market dominant. See Francese, *Legal, Legislative and Institutional Obstacles to the Development of Consistent National Energy and Transportation Policies*, 11 NAT. RESOURCES LAW. 569, 579, *citing* ICC, IMPACT OF THE 4-R ACT RAILROAD RATEMAKING PROVISIONS 26 (1977). *But cf.* Lone Star Indus. v. Atchison, T. & S.F. Ry., 359 I.C.C. 647, 648-49 (1979) (complaint on market dominance dismissed: shipper must demonstrate a lack of effective competition that includes rail carriers as well).

57. Because of federal commitment to increased utilization of coal, as presented under the National Energy Plan, the regulatory standard embodied in the market dominance test is particularly appropriate. See S. REP. NO. 94-499 at 47, LEGISLATIVE HISTORY OF THE 4-R ACT, *supra* note 18, at 61. See also EXECUTIVE OFFICE OF THE PRESIDENT, ENERGY POLICY AND PLANNING, THE NATIONAL ENERGY PLAN 27 (Apr. 29, 1977) (fifth principle of the National Energy Plan: "The United States must solve its energy problems in a manner that is equitable to all regions, sectors and income groups.").

58. See EXECUTIVE OFFICE OF THE PRESIDENT, ENERGY POLICY AND PLANNING, THE NATIONAL ENERGY PLAN xii (Apr. 29, 1977) (preface). Coal represents 90 percent total fossil fuel reserves, accounting for 18 percent fuel source consumption; oil and gas represent less than eight percent total fossil fuel reserves, accounting for 75 percent fuel source consumption. *Id.* at xii. A basic premise of the proposal for increased energy self-sufficiency is correction of the

coal reserves contained in three major provinces:⁵⁹ the Appalachian fields, extending from Pennsylvania to Alabama (the eastern province); the Midwestern Plains fields of Illinois, Indiana, and Western Kentucky, and the Southwest (the interior province); and the Northern Great Plains fields of Montana, Wyoming, Idaho, and the Dakotas, combined with the Rocky Mountain fields of Utah, Colorado, Arizona, and New Mexico (the western province).⁶⁰ Coal has been a regional fuel, both in terms of production and consumption, despite its national reserve base.⁶¹ Early nineteenth century

imbalance between available reserves and consumption. *Id.* at xii.

The physical characteristics and primary markets for each type of coal are as follows: (1) *Bituminous coal*—produced in all coal reserve regions, high heat content (11,500-13,500 Btu/pound), variable sulphur content (.07-3%); shipped to three primary markets—steam generating plants of electric utilities, coking mills of steel companies, and export terminals; (2) *Sub-bituminous coal*—produced only in western province, moderate heat content (8,000-10,000 Btu/pound), low sulphur content (<1%); shipped to steam generating plants of electric utilities; (3) *Lignite*—produced in North Dakota and Texas, low heat content (approx. 7,000 Btu/pound), low sulphur content (.07-1%); because of high moisture content and danger of combustibility, cannot be transported long distances or stored; typically consumed at points near actual mine mouth; (4) *Anthracite*—produced in Pennsylvania, high heat content (approx. 13,000 Btu/pound), low sulphur content (<1%); used mainly in small residential and commercial furnaces and boilers. See *Ex Parte* No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal, 345 I.C.C. 71, 318-22, 328, 332 (1975); INTERSTATE COMMERCE COMM'N, A STUDY TO PERFORM AN IN-DEPTH ANALYSIS OF MARKET DOMINANCE AND ITS RELATIONSHIP TO OTHER PROVISIONS OF THE 4-R ACT, INTERIM REP. II, VI-35 to -40 (1979) (prepared by Kearney Management Consultants); PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 68-69, 72-73 (1979) (GPO No. 281-412/34).

59. Coal is found in 31 states and mined in 26. PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 66 (1979) (GPO No. 281-412/34); see *Ex Parte* No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal, 345 I.C.C. 71, 81-82 (1975) (listing remaining coal resources by state (1967); coal production by state (1972)). Demonstrated mineable reserves per regional distribution as of January 1, 1976 are as follows: Appalachia, 111,622 million tons; Midwest, 104,502 million tons; West, 221,558 million tons. See PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 67, 71 (1979) (GPO No. 281-412/34).

60. See *Ex Parte* No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal, 345 I.C.C. 71, 80, 118-27 (1975); PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 67, 69, 86-93 (1979) (GPO No. 281-412/34). Regional distribution of coal reserves by class is as follows:

	BITUMINOUS	SUB-BITUMINOUS	LIGNITE	ANTHRACITE
EASTERN PROVINCE	93%	-0-	1%	6%
(% U.S. TOTAL)	(24%)	(-0-)	(3%)	(98.3%)
INTERIOR PROVINCE	97%	-0-	3%	<1%
(% U.S. TOTAL)	(22%)	(-0-)	(10%)	(1.3%)
WESTERN PROVINCE	11%	76%	13%	<1%
(% U.S. TOTAL)	(54%)	(100%)	(87%)	(.4%)

PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 69, 72 (1979) (GPO No. 281-412/34).

61. See SENATE REPORT ON ENERGY TRANSPORTATION, Vol. I, *supra* note 5, at 36-55 (historical development of coal industry, production, and utilization). In 1974 four of the five top states in both production and consumption were located in the Great Lakes-Appalachian

development of Pennsylvania anthracite deposits, stimulated by industrial growth in the Northeast, presaged the Appalachian region's development as the center of the coal industry.⁶² As coal production and consumption on a national level increases, economic, technological, and environmental factors favor a shift in production to the western region.⁶³ Coal deposits in the western province, accounting for approximately 53.5 percent of total United States coal reserves,⁶⁴ are particularly desirable for development for three reasons: (1) the physical characteristics of the coal beds are conducive to development by lower cost surface mining methods;⁶⁵ (2) the sulphur content of the coal is, on the average, lower than that of the coal reserves of the interior and eastern provinces, a feature attractive to utility industries because of the lower levels of sulphur dioxide produced in the combustion phase;⁶⁶ and (3) the majority of coal reserves in the region are

region. SENATE REPORT ON ENERGY TRANSPORTATION, Vol. I, *supra* note 5, at 35. See generally 3 ENERGY INFORMATION ADMINISTRATION, UNITED STATES DEP'T OF ENERGY, ANNUAL REPORT TO CONGRESS: FORECASTS 154, 157 (1978) (coal production by region: history and projections through 1995).

62. See SENATE REPORT ON ENERGY TRANSPORTATION, Vol. I, *supra* note 5, at 36-37.

63. Availability of certain grades of coal is limited by regional distribution of reserves. Anthracite deposits, concentrated in the Pennsylvania area (98 percent of United States total deposit) are of extremely limited availability. See PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 72 (1979) (GPO No. 281-412/34). See also *Ex Parte* No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal, 345 I.C.C. 71, 318, 328-32 (1975). Lignite deposits, produced in North Dakota and Texas, are not suitable for long distance transportation because of the combustible nature of the coal. See PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 68 (1979) (GPO No. 281-412/34). Coal price determinants of method of mining and labor make coal produced from the eastern, and to a lesser extent, interior regions unattractive to utility markets not situated in close proximity to production centers. See *id.* at 116-17. Eastern coal reserves are primarily deep (18 percent surface; 82 percent deep) with fairly thin seams (three to six feet); interior coal reserves include more surface mineable coal (28 percent surface; 72 percent deep) with seams of four to ten feet; western coal reserves are largely surface mineable (41 percent surface; 59 percent deep) with thick seams (20 to 100 feet). See *id.* at 66, 75, 104. Environmental constraints, as imposed under the 1970 and 1977 amendments to the Clean Air Act, significantly affect the utility industry's discrimination of optimal coal supply source. See Clean Air Act Amendments of 1977, Pub. L. No. 95-95, 91 Stat. 685, 42 U.S.C. §§ 7401-7642 (Supp. I 1977); Clean Air Amendments of 1970, Pub. L. No. 91-604, 84 Stat. 1676, 42 U.S.C. §§ 1857, 1858 (1970). Attainment or maintenance of ambient air quality standards under the National Ambient Air Quality Standards are best facilitated by utilization of low-sulphur, sub-bituminous coal, produced only in the western province. See generally Moyer, *The Role of Coal: Problems and Policies*, 18 NAT. RESOURCES J. 761, 766-67 (1978).

64. SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 441; PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 71-72 (1979) (GPO No. 281-412/34). See generally Leisenring, *Western Coal—The Sleeping Giant*, 19 ROCKY MTN. MIN. L. INST. 1, 5-6 (1974) (distribution of coal deposits in Montana, North Dakota, and Wyoming).

65. SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 441-43; cf. PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 116-17 (1979) (GPO No. 281-412/34) (operating and investment cost comparison on underground and surface mining operations).

66. SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 441, 443-46. *But*

located on federal lands that have been leased to mine developers at less than fair market prices.⁶⁷ Original coal-rail systems, constructed to serve the coal fields and major industrial markets of the East, created a flow pattern of east to west coal traffic.⁶⁸ As coal production and consumption on a national level increases, the quantity and availability of the western reserves will result in a shift in point of origin distribution from east to west,⁶⁹ with additional coal demand projected to be particularly high in the Southwest.⁷⁰ Western coal production is projected to increase anywhere from 250 to 600 percent in the 1975-1985 growth period, with its market share expected to reach a level of 32 to 43 percent of total national production.⁷¹ Coal consumption by electric utilities, which accounted for 76 percent of total coal consumed by the industrial sector in 1978, is projected to increase at an annual rate of seven percent through 1980.⁷² Under these

see Truitt & Abeles, *Coal-Fired Electric Generating Facilities: Impediments Under Federal Environmental Legislation*, 11 ST. MARY'S L.J. 609, 627 (1980). The Environmental Protection Agency has recently adopted final regulations mandating full scrubbing equipment installation on all plants coming on line after 1985, regardless of type of coal burned. See 44 Fed. Reg. 33580 (June 22, 1979). Under the New Source Performance Standards regulations all utilities are required to install control technology on new generating facilities, thus eliminating sulphur content as a criterion in coal selection. See *id.* This development could result in a shift in demand to the high Btu, high sulphur coal produced in the East. See also SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 446; PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 48-49 (1979) (GPO No. 281-412/34) (projected shifts in regional utility coal demand due to compliance with air emission regulations, 1985).

67. SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 441, 446-48; see PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 76-81 (1979) (GPO No. 281-412/34). See generally Federal Coal Leasing Amendments Act of 1975, Pub. L. No. 94-377, 90 Stat. 1083 (1977) (codified in scattered sections of 30 U.S.C.) (leasing of federal lands regulated); 16 NAT. RESOURCES J. 1033-37 (1976) (federal coal reserves leasing policy under Mineral Leasing Act of 1920).

68. See SENATE REPORT ON ENERGY TRANSPORTATION, Vol. I, *supra* note 5, at 47-49, Figs. 3-7 (maps documenting coal movements by rail).

69. See 3 ENERGY INFORMATION ADMINISTRATION, UNITED STATES DEP'T OF ENERGY, ANNUAL REPORT TO CONGRESS: FORECASTS 153-56, 233 (1978); SENATE REPORT ON ENERGY TRANSPORTATION, Vol. I, *supra* note 5, at 133.

70. See 3 ENERGY INFORMATION ADMINISTRATION, UNITED STATES DEP'T OF ENERGY, ANNUAL REPORT TO CONGRESS: FORECASTS 153, 232 (1978). The regional consumption growth is projected to be dominated by the Southwest, which had the lowest consumption level in 1977, but is forecast to have the highest level in 1995. *Id.* at 233. Industrial demand for coal is projected to center around utility and industrial sectors in Texas, Arkansas, Oklahoma, and Louisiana. *Id.* at 233.

71. PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 94-95 (1979) (GPO No. 281-412/34) (citing production estimates from NAT'L COAL ASS'N, STUDY OF NEW MINE ADDITIONS AND MAJOR EXPANSION PLANS OF THE COAL INDUSTRY (1976)); see 3 ENERGY INFORMATION ADMINISTRATION, UNITED STATES DEP'T OF ENERGY, ANNUAL REPORT TO CONGRESS: FORECASTS 232-33, Table 13.3 (1978) (coal distribution by region); SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 449-58 (prospectus on western coal development).

72. See 3 ENERGY INFORMATION ADMINISTRATION, UNITED STATES DEP'T OF ENERGY, ANNUAL REPORT TO CONGRESS: FORECASTS 230 (1978) (projecting annual growth rate between 6.8 and

prospective figures, western rail transport of coal is estimated to increase 300 to 400 percent.⁷³

B. Expansion of Railroad Coal Movement Capacity in the West

The ability of the western railroads to handle the increase in coal traffic is largely dependent upon the availability of adequate trackage to accommodate the probable number of trains between coal producing points and coal consumers.⁷⁴ Because of the regional development of the coal-rail industry from points of eastern origin, the tracks in the West are newer and in better condition than the older tracks in the Northeast.⁷⁵ Maintenance of the western tracks has also been superior to that of the East, due to the stronger financial position of the western rail industry.⁷⁶ Midwestern and western rail lines, however, will require an extensive upgrading of tracks, as much of the rail was originally constructed for hauling grain and is too lightweight for extensive coal traffic.⁷⁷ Additionally, as the bulk of western

8.3 percent); 2 ENERGY INFORMATION ADMINISTRATION, UNITED STATES DEP'T OF ENERGY, ANNUAL REPORT TO CONGRESS: DATA 93, Table 37 (1978) (consumption of coal by end-use sector, 1948-1978). See generally ENERGY INFORMATION ADMINISTRATION, UNITED STATES DEP'T OF ENERGY, MONTHLY ENERGY REVIEW 22, 55 (Aug. 1979) (14.5 percent increase in consumption of coal, nationwide, May 1978 to May 1979).

73. PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 196 (1979) (GPO No. 281-412/34); see UNITED STATES DEP'T OF ENERGY, FINAL ENVIRONMENTAL IMPACT STATEMENT, FUEL USE ACT, Table 5.1 at 5-2 (1979) (DOE/EIS-0038), citing UNITED STATES DEP'T OF TRANSP., RAIL TRANSPORTATION REQUIREMENTS FOR COAL MOVEMENT IN 1980 (1976) (323 percent increase; 1974 traffic at projected 1980 figures); SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 460-61 (projected increase of 406 percent under National Energy Plan objectives of 1985 production level, 345 million tons).

74. SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 462-63. See generally UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 21-27 (1978) (deferred maintenance and rail plant condition); SENATE REPORT ON ENERGY TRANSPORTATION, Vol. I, *supra* note 5, at 58-59 (relative track conditions).

75. SENATE REPORT ON ENERGY TRANSPORTATION, Vol. I, *supra* note 5, at 58-59; accord, UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 25 (1978).

76. See UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 27, Fig. 1-7 (1978) (percent expenditures of deferred maintenance on track, per region, 1975; western district, 65 percent); SENATE REPORT ON ENERGY TRANSPORTATION, Vol. I, *supra* note 5, at 58 (western rail economy). See generally UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 22, Fig. 1-5 (1978) (rate of return on net investment, total operating revenue of Class I Railroads, 1975); SENATE REPORT ON ENERGY TRANSPORTATION, Vol. I, *supra* note 5, at 64, Table 8 (financial data on top 15 coal-carrying railroads).

77. UNITED STATES DEP'T OF ENERGY, FINAL ENVIRONMENTAL IMPACT STATEMENT, FUEL USE ACT, 5-3 (1979) (DOE/EIS-0038); see SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 462-63. See also *Ex Parte* No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal, 345 I.C.C. 71, 125-27 (1975) (lack of industrial development in Montana and Wyoming), citing UNITED STATES DEP'T OF COMMERCE, UPPER MISSOURI RIVER REGION, A SOCIOECONOMIC PROFILE (1972).

coal deposits is situated in areas that have undergone little prior agricultural or industrial development, rail access to newly developed coal mines is fairly limited, necessitating construction of spur lines connecting mine sites along major coal formations with existing railroad main lines or branch lines.⁷⁸ Several major railroads, Burlington Northern and Union Pacific in particular, have planned construction of approximately 700 miles of new coal track, primarily in the western states.⁷⁹ Collateral to the expansion of rail lines is the necessity of acquiring rights-of-way over the areas of proposed development, many of which cross federal and Indian lands.⁸⁰ Supplemental numbers of rolling stock will be required as production levels increase.⁸¹ Translating necessary renovations of the western rail system into price quotations results in projected levels of capital expenditures of eight to twelve billion dollars for necessary expansion facilities to meet 1985 projected demands.⁸² Investment assessments estimate a required four to seven billion dollar consignment to the addition and replacement of hopper cars and locomotives.⁸³ Calculations of the cost of upgrading existing western and midwestern rail lines range from four to five

78. See Falk & Chais, *The Applicability of Section 1(18) of the I.C.C. Act to Rail Line Construction in Western Coal Regions*, 45 I.C.C. PRAC. J. 175, 180 (1978).

79. See UNITED STATES DEP'T OF ENERGY, INTERREGIONAL COAL TRANSP. TASK FORCE, FOSSIL ENERGY, MOVING A NATIONAL RESOURCE: A COMPENDIUM ON INTERREGIONAL COAL TRANSPORTATION 5-5 to -6 (1978); Falk & Chais, *The Applicability of Section 1(18) of the I.C.C. Act to Rail Construction in the Western Coal Regions*, 45 I.C.C. PRAC. J. 175, 182-90, 193, app. A (1978) (1,088 miles of planned and prospective new rail construction).

80. See UNITED STATES DEP'T OF ENERGY, INTERREGIONAL COAL TRANSP. TASK FORCE, FOSSIL ENERGY, MOVING A NATIONAL RESOURCE: A COMPENDIUM ON INTERREGIONAL COAL TRANSPORTATION 5-5 to -6 (1978).

81. See SENATE REPORT ON ENERGY TRANSPORTATION, Vol. I, *supra* note 5, at 57-58; SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 461. See also UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 29-33 (1978) (general condition of rolling stock equipment).

82. See SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 464-65, citing Richard J. Barber Assoc., *The Railroads, Coal & The National Energy Plan: An Assessment of the Issue* 57 (1977); PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 198-99 (1979) (GPO No. 281-412/34); cf. UNITED STATES DEP'T OF ENERGY, FINAL ENVIRONMENTAL IMPACT STATEMENT, FUEL USE ACT, Table 5.2 at 5-3 (1979) (DOE/EIS-0038) (planned railroad investment, 1980 coal demand, approximately three billion dollars).

83. See SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 464, citing Richard J. Barber Assoc., *The Railroads, Coal & The National Energy Plan: An Assessment of the Issue* (1977); PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 198-99 (1979) (GPO No. 281-412/34); cf. UNITED STATES DEP'T OF ENERGY, FINAL ENVIRONMENTAL IMPACT STATEMENT, FUEL USE ACT, Table 5.2 at 5-3 (1979) (DOE/EIS-0038) (planned railroad investment, 1980 coal demand, approximately 1.6 billion dollars). Cost per 100-ton hopper car, as used in unit-train transport of western coal, ranges from \$25,000 to \$30,000. SENATE REPORT ON ENERGY TRANSPORTATION, Vol. I, *supra* note 5, at 57. Diesel locomotives, used almost exclusively in coal movements by rail, are priced between \$450,000 and \$500,000. SENATE REPORT ON ENERGY TRANSPORTATION, Vol. I, *supra* note 5, at 57; PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 199 (1979) (GPO No. 281-412/34).

billion dollars.⁸⁴ As concluded in a survey report on western rail growth, "clearly, aside from the financial aspects, the industry can obtain the equipment necessary to meet the expanded traffic demands."⁸⁵ While it is predicted that railroads should be able to obtain necessary rolling stock, by issuance of equipment trust certificates, leasing, or purchase of equipment by producer/shippers, the financing of track expansion is more difficult to obtain.⁸⁶ Because track and rights-of-way cannot be sold or repossessed, the nature of the investment, deriving its value from the financial condition of the company, requires railroads to be able to offer competitive returns.⁸⁷ Thus, railroad profits must improve, either to attract additional equity investors or to make the debt affordable.⁸⁸

It is within the province of the ICC, under the rate structure reforms presented by the 4-R Act, to effectuate tariff policies that allow such a level of profit to the western railroads.⁸⁹ Although the lack of a viable mode of competition in the West at present is conclusive on the issue of market dominance over coal traffic, the monopolistic position of the railroads does not preclude an allowance for substantial profit return in the Commission's determination of just and reasonable rates.⁹⁰ Section 205 expressly provides for the establishment of revenue levels adequate to permit both economic profit and raising of needed equity capital.⁹¹ Equally applicable to the

84. See SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 465, citing Richard J. Barber Assoc., *The Railroads, Coal & The National Energy Plan: An Assessment of the Issue 57* (1977); PRESIDENT'S COMM'N ON COAL, *COAL: A DATA BOOK 198-99* (1979) (GPO No. 281-412/34).

85. Manalytics, Inc., *Transportation Capacity of the Existing Rail and Barge Network, 1985 and Beyond 6* (Electric Power Research Institute, Palo Alto, California), *quoted in* SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 461.

86. See SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 464.

87. SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 464. See generally Richard J. Barber Assoc., *The Railroads, Coal & The National Energy Plan: An Assessment of the Issue 48* (1977) (3.6 percent rate of return on investment in 1976), *cited in* SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 465.

88. SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 463-65.

89. See The 4-R Act, §§ 205, 206, 49 U.S.C.A. §§ 10704(a)(2), 10729 (West Supp. 1979) (previously codified at 49 U.S.C. § 15).

90. See The 4-R Act, § 202(b), 49 U.S.C.A. § 10709 (West Supp. 1979) (market dominance not presumptive of unreasonableness); S. REP. No. 94-499 at 47, LEGISLATIVE HISTORY OF THE 4-R ACT, *supra* note 18, at 61 (market dominance not to be ultimate regulatory standard; determinative of Commission's jurisdiction to pass upon reasonableness of rates); *Railroad Rate Regulation Implementation by the ICC: Hearings Before the Senate Comm. on Commerce*, 95th Cong., 2d Sess. 51 (1978) (statement of Daniel O'Neal, Chairman of the ICC) (market dominance test is a jurisdictional test). See generally 49 C.F.R. § 1109.1(g)(1)-(3) (1978) (market dominance regulations promulgated by the ICC); ICC, *IMPACT OF THE 4-R ACT RAILROAD RATEMAKING PROVISIONS 26* (1976) (market dominance on coal).

91. See The 4-R Act, § 205, 49 U.S.C.A. § 10704 (West Supp. 1979) (previously codified at 49 U.S.C. § 15a) (adequate revenue levels); S. REP. No. 94-499 at 52, LEGISLATIVE HISTORY OF THE 4-R ACT, *supra* note 18, at 66 (emphasis on present and future revenue levels);

financial considerations presented by the need for tremendous capital expenditures in the western rail system is the newly created rate incentive for capital investment section of the Act.⁹² Section 206 allows for the filing of a new rate whenever implementation of the affected service would require a total capital investment of one million dollars or more.⁹³ Substantive and procedural means are thus available for full cost allocation passthrough of the financial burden of rail expansion.⁹⁴ Implicit in any approved rate change, however, is the additional consideration of impact upon the shipper and the public.⁹⁵ The need for a balancing of interests is patent in the establishment of the coal rate structure.⁹⁶

IV. RAILROAD COAL RATE STRUCTURE

A. Observance of Differentials in the Rate Structure

Many complex factors influence the calculation of railroad rate tariffs on coal.⁹⁷ Among the criteria involved in the determination of rates is the type of car shipment employed; single-car rates, multiple-car rates, train-load rates, and unit-train rates vary on the basis of number of cars required in a shipment and extent of commitment to a continuous shipment cycle.⁹⁸

cf. Ex Parte No. 338, Standards and Procedures for the Establishment of Adequate Railroad Rate Revenue Levels, 358 I.C.C. 844, 853-54 (1978) (railroad rates to be set above cost; contribution allowed on fixed costs).

92. *See Ex Parte* No. 327, Rate Incentives for Capital Investments, 353 I.C.C. 760, 760-86 (1976) (procedural regulations for carriers filing rates under section 206); The 4-R Act, § 206, 49 U.S.C.A. § 10729 (West Supp. 1979); S. REP. NO. 94-499 at 52, LEGISLATIVE HISTORY OF THE 4-R ACT, *supra* note 18, at 66-67.

93. *See* The 4-R Act, § 206, 49 U.S.C.A. § 10729 (West Supp. 1979) (previously codified at 49 U.S.C. § 15).

94. *Compare* The 4-R Act, § 202(b), 49 U.S.C.A. § 10709 (West Supp. 1979) (jurisdiction upon finding of market dominance; burden of proof upon carrier) *with* The 4-R Act, § 206, 49 U.S.C.A. § 10729 (West Supp. 1979) (jurisdiction upon carrier's filing; burden of proof upon shipper).

95. *See* The 4-R Act, § 101(b)(1), 45 U.S.C. § 801 (1976) (congressional policy: balance needs of carriers, shippers, and public); S. REP. NO. 94-499 at 14, LEGISLATIVE HISTORY OF THE 4-R ACT, *supra* note 18, at 27-28 (problems of potential inflation and consumer protection; ratemaking revisions to assist railroads for public interest as a whole).

96. *See* The 4-R Act, § 101(b)(1), 45 U.S.C. § 801 (1976); S. REP. NO. 94-499 at 14, LEGISLATIVE HISTORY OF THE 4-R ACT, *supra* note 18, at 27-28; *cf. EXECUTIVE OFFICE OF THE PRESIDENT, ENERGY POLICY AND PLANNING, THE NATIONAL ENERGY PLAN 27* (Apr. 29, 1977) (fifth principle: energy measures equitable to all regions, sectors, and income groups).

97. *See Ex Parte* No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal, 345 I.C.C. 71, 75, 77-78 (1975). *See also* *Ayrshire Collieries Corp. v. United States*, 335 U.S. 573, 592-93 (1949) ("The economics of the bituminous coal industry have baffled even the experts.").

98. *See Ex Parte* No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal, 345 I.C.C. 71, 111-18 (1975); SENATE REPORT ON ENERGY TRANSPORTATION, Vol. I, *supra* note 5, at 68-69. Single-car rates are published based on tonnage requiring the use of one car only. *Ex Parte* No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal,

Under annual volume and concentration rate concepts, the quantities hauled are subject to further differentiation in rates depending on stipulated annual volume supply terms and total tonnage delivered per single point of destination.⁹⁹ The variant of geographic flow of traffic is accounted for by rate distinctions predicated on the relationship of region of origin to destination area.¹⁰⁰ A "base group" rate is set on coal transportation from all mines within the boundaries of a given ratemaking region.¹⁰¹ Regional adjustment on transportation moving outside the base group area is calculated on the basis of predetermined destination rate groups, as established by freight rate territory designations.¹⁰² Seven basic freight rate structures are published, connecting the grid of five ratemaking regions of origin with seven destination territories.¹⁰³ Multiple additional factors, such as delivered price necessary to meet the cost of competing fuels or competing modes of transportation, and the need or desirability of extending service from the standpoint of overall railroad operations in an area, further reflect upon the economics of the rate structure.¹⁰⁴ Placed in the perspective of western coal movement, a Commission report has predicted that by 1980 more than 85 percent of domestic coal traffic would move under annual volume, concentration, trainload or unit-train service tar-

345 I.C.C. 71, 106 (1975). Multiple-car rates are applied where tonnage requires the use of two or more cars but does not suffice for an entire trainload, and under contract terms calling for single shipment from specific point of origin to specific point of destination. *Id.* at 106. Trainload rates are published based on tonnage sufficient to make up an entire train, under shipment agreement to transport loads on an unpredetermined continuously scheduled cycle. *Id.* at 106. Unit-train rates are published on traffic moving by a system of interlocked coal cars, the service dedicated to a specific shipper under a regulated continuously scheduled cycle. *Id.* at 106.

99. See *Ex Parte* No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal, 345 I.C.C. 71, 107-10 (1975). Annual volume rates and concentration rates are used mainly as a competitive tool of rail carriers, a method by which substantially lower rates are offered irrespective of car-tonnage per shipment rate publication. See *id.* at 107-08.

100. See *id.* at 118, 128. See generally *id.* at 132-224.

101. See *id.* at 118-27 (base group characteristics of ratemaking regions). The United States is divided into five ratemaking regions: the Appalachian Region, containing 73 origin rate groups; the Illinois-Indiana-Western Kentucky Region, containing 14 origin rate groups; the Great Plains-Southwestern Region; the Rocky Mountain-Upper Missouri River Region, containing 57 origin rate groups; and the West Coast Region. See *id.* at 119, 121, 124, 127 (maps) (data not provided on rate groups in Great Plains-Southwestern and West Coast Regions).

102. See *id.* at 118, 128. See generally *id.* at 132-224. The nation is divided into seven freight rate territories: New England Territory; Trunk Line Territory [N.E.]; Central Freight Association Territory [Mid-N.E.]; Southeastern Territory; Southwestern Freight Bureau Territory; Western Trunk Line Territory [Mid-West]; and Transcontinental Freight Bureau Territory. *Id.* at 129 (map).

103. See *id.* at 132-224 (freight rate structure combined with service tariff differentials for each territory); SENATE REPORT ON ENERGY TRANSPORTATION, Vol. I, *supra* note 5, at 68-73.

104. See *Ex Parte* No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal, 345 I.C.C. 71, 313-18 (1975) (Commission's conclusions on coal rate structure).

iffs, with production and distribution of western coal expected to increase dramatically.¹⁰⁵

B. Basic Rate Formula

The basic formula for rate prescription contains two elements: variable costs, generally defined as those costs that vary with change in output, and fixed, or constant costs, which represent relatively immutable expenses of maintaining operations, regardless of output.¹⁰⁶ Variable costs plus fixed costs equal fully allocated costs.¹⁰⁷

Determination of appropriate revenue yield and cost of service for a particular tariff requires a complex allocation of fixed and variable costs and inputs for all various factors which are derivative of fully allocated cost.¹⁰⁸ For comparison purposes fully allocated costs are shown on three bases: ton and ton mile, car and car mile, and dollar basis.¹⁰⁹ Development

105. *Id.* at 107, 210-14. The Commission, in its ultimate findings, ordered a formal investigation be entered into for a determination of maximum and minimum rate scales on coal traffic originating west of the Mississippi. *Id.* at 372; see *Ex Parte* No. 347, Western Coal Investigation—Guidelines for Railroad Rate Structure (ICC) (served May 17, 1978) (institution of proceedings for development of general policy concerning western coal tariffs).

106. See *Ex Parte* No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal, 345 I.C.C. 71, 226 (1975). See generally Price & Berardino, *Defining Economic Terms Used in the Railroad Revitalization and Regulatory Reform Act*, 9 *TRANSP. L.J.* 133, 136-47 (1977) (in-depth discussion of variable costs; economic, accounting, and railroad concepts of cost). "Variable costs consist of: (1) the variable portions of freight operating expenses, rents and taxes (excluding federal income taxes), and (2) the variable portion of the cost of capital, excluding any allowance for federal income taxes." *Ex Parte* No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal, 345 I.C.C. 71, 226 (1975). Among specific factors considered in determining variable cost are gross ton mile (GTM), locomotive unit mile, crew, train mile, inspection, train supplies and expenses, switching, carload claims, clerical, station clerical, loss and damage, helper service, locomotive capital, and caboose capital. *Burlington N. v. United States*, 555 F.2d 637, 643 n.6 (8th Cir. 1977). See generally *Rules to Govern Assembling & Presenting Cost Evidence*, 337 I.C.C. 298, 428 (1970). Fixed costs are composed of (1) the constant portions of the freight operating expenses, rents, and taxes (excluding federal income taxes), and (2) the constant, or remaining portion of "the cost of capital." *Ex Parte* No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal, 345 I.C.C. 71, 226 (1975). See generally Price & Berardino, *Defining Economic Terms Used in the Railroad Revitalization and Regulatory Reform Act*, 9 *TRANSP. L.J.* 133, 136-37 (1977).

107. *Rules to Govern Assembling & Presenting Cost Evidence*, 337 I.C.C. 298, 308 (1970).

108. See *Ex Parte* No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal, 345 I.C.C. 71, 226-28, 278-80 (1975).

109. *Id.* at 226. The Commission has developed Rail Form A costs, based on regional or carrier averages, to provide a common base for determinations of the adequacy of freight service costs for classes of railroads. See *Rules to Govern Assembling & Presenting Cost Evidence*, 337 I.C.C. 298, 335-36, 415-21; INTERSTATE COMMERCE COMM'N, A STUDY TO PERFORM AN IN-DEPTH ANALYSIS OF MARKET DOMINANCE AND ITS RELATIONSHIP TO OTHER PROVISIONS OF THE 4-R ACT, INTERIM REP. II, at III-15 (1979) (prepared by Kearney Management Consultants). Comparative rate data are also utilized for direct comparison of going rates on the same commodity in the same or in similar territories, in relation to distances, revenue per car, car-

of constant unit costs per ton and ton mile, and car and car mile is accomplished by apportioning expenses and cost of capital associated with distance costs from expenses and costs of capital associated with non-distance expenses and dividing by figures representative of the aggregate service entailed in distance and non-distance operations.¹¹⁰ Allocated constant costs are converted to constant cost per net ton and added to variable cost per net ton to produce the fully allocated cost per net ton for each basis.¹¹¹ The dollar basis figure is multiplied by the applicable regional ratio to produce fully allocated cost per ton, reflecting adjustments made to territorial average costs as a function of transportation characteristics of the area.¹¹² Traditionally the Commission has evaluated the results of these intricate computations in terms of the amount that the rate contributes to the carrier's fixed costs, and generally has not considered the rate of return concept in determining the reasonableness of rates.¹¹³

C. Rate Formula Revised: Revenue Adequacy Under the 4-R Act

The basic rate structure of coal freight tariffs is not affected by the ratemaking reform provisions of the 4-R Act.¹¹⁴ Rather, what is dictated under the Act is a change in analysis of the components of fully allocated cost.¹¹⁵ Section 205 requires consideration be given not only to present levels of operating and capital funds but also to future levels of capital expenditure necessary for the maintenance of service.¹¹⁶ Under the author-

mile and ton-mile, variations in traffic density, and peculiarities in transportation which affect transportation costs generally. *Burlington N. v. United States*, 555 F.2d 637, 641-42 (8th Cir. 1977), *citing* Salt Cases of 1923, 92 I.C.C. 388, 410 (1924); *see* *Big River Indus., Inc. v. Aberdeen & R.R.*, 329 I.C.C. 539, 544 (1967); *Chicago Bd. of Trade v. Illinois Cent. R.R.*, 329 I.C.C. 529, 533 (1967). Another method of coal rate comparison is accomplished by weighing a particular rail system's total allocated costs and net revenue yield against the Uniform Freight Classification maintained by the railroads. *See Ex Parte* No. 270 (Sub-No. 4), *Investigation of Railroad Freight Rate Structure Coal*, 345 I.C.C. 71, 278-80 (1975). *See generally id.* at 313-18 (1975) (conclusions on bituminous rate structures).

110. *See id.* at 226.

111. *Id.* at 226. *See also id.*, Table 53 at 229-38.

112. *See id.* at 226-28.

113. *See Ex Parte* No. 271, *Net Investment—Railroad Rate Base & Rate of Return*, 345 I.C.C. 55, 60 (1974) (determination based on "a revenue need" rather than a specific need for a definite rate of return); *cf.* *Public Serv. Comm'n v. Great N. Ry.*, 340 I.C.C. 739, 750 (1972) (cross-subsidization approach).

114. *See* The 4-R Act, § 202(b), 49 U.S.C.A. § 10709 (West Supp. 1979) (amending 49 U.S.C. § 15). Under section 202(b) the Commission is directed, in its determination of just and reasonable rates, to insure against the inclusion of any cost of service or collateral expenses not directly related to the specific service provided under the rate in question. *Id.* *See generally* S. REP. No. 94-499 at 47, *LEGISLATIVE HISTORY OF THE 4-R ACT*, *supra* note 18, at 61 (function of section 202(b); rate flexibility).

115. *See* The 4-R Act, § 205, 49 U.S.C.A. § 10729 (West Supp. 1979) (amending 49 U.S.C. § 15a) (adequate revenue levels).

116. *See id.*; S. REP. No. 94-499 at 52, *LEGISLATIVE HISTORY OF THE 4-R ACT*, *supra* note 18, at 66.

ity of this section, the Commission has instituted *Ex Parte* 338, a rulemaking proceeding to develop and promulgate reasonable standards and procedures for the establishment of adequate railroad rate levels.¹¹⁷ *Ex Parte* 338 provides for independent rate proceedings aimed at making a contribution toward improved earnings of the affected carrier.¹¹⁸ This policy, allowing for rate increases which provide revenue returns above fully allocated costs, is distinguishable from traditional general rate increases, which were designed as cost-justified measures based on the need of a carrier to recover expense increases.¹¹⁹ Justification for setting rates above fully allocated costs, generally submitted as "revenue improvement," is further delineated under concepts of capital incentive pricing and differential pricing.¹²⁰ Capital incentive rates, allowing for inclusion of fixed costs above those allocated on the basis of existing investment expenditures, are based on the reasoning that the additional amount more adequately represents investments necessary for continued service, and creates an incentive for growth.¹²¹ Differential pricing is predicated upon recognition of the necessity of pricing services on some commodities above full cost to compensate for competitive traffic revenues set below fully allocated costs.¹²²

Cost analysis under the standards provided in *Ex Parte* 338 has resulted in an alteration of the basic rate formula.¹²³ Two additional elements,

117. See *Ex Parte* No. 338, Standards and Procedures for the Establishment of Adequate Railroad Rate Revenue Levels, 358 I.C.C. 844, 845 (1978).

118. See *id.* at 847; cf. Standards and Procedures for the Establishment of Adequate Railroad Revenue Levels, 49 C.F.R. § 1109.25 (1978) (importance of and calculation as to revenue adequacy figure in both general and individual rate increase proceedings).

119. See *Ex Parte* No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal, 345 I.C.C. 71, 334-37, 372 (1975); cf. *Ex Parte* No. 338, Standards and Procedures for the Establishment of Adequate Railroad Rate Revenue Levels, 358 I.C.C. 844, 851 (1978) (no differentiation between "cost recoupment" and "earnings improvement" proceedings). See generally INTERSTATE COMMERCE COMM'N, ANNUAL REPORT TO CONGRESS 42 & nn.17 & 18 (1977) (five percent general rate increase to offset increased labor costs; four percent general rate increase to offset escalating costs).

120. See *Ex Parte* No. 338, Standards and Procedures for the Establishment of Adequate Railroad Rate Revenue Levels, 358 I.C.C. 844, 853-54, 856, 858-59, 895-96 (1978).

121. *Id.* at 858-59; accord, e.g., *Ex Parte* No. 327, Incentive Rate on Coal—Hayden, Colorado to Kings Mill, Texas, No. 36936 at 33-34 (ICC) (served Jan. 17, 1979); *Ex Parte* No. 327, Incentive Rate on Coal—Cordero, Wyoming to Smithers Lake, Texas, No. 36608 at 24, 27, 34 (ICC) (served Nov. 30, 1977); *Ex Parte* No. 327, Incentive Rate on Coal—Gallup, New Mexico to Cochise, Arizona, 357 I.C.C. 683, 698-99 (1977); cf. The 4-R Act of 1976, § 205, 49 U.S.C.A. § 10729 (West Supp. 1979) (amending 49 U.S.C. § 15a) ("revenue levels should . . . permit the raising of needed capital, . . . insure retention and attraction of capital necessary"). But cf. *Ex Parte* No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal, 345 I.C.C. 71, 372 (1975) (conclusion: increased rates on coal not sufficient inducement for necessary capital investment).

122. See *Ex Parte* No. 338, Standards and Procedures for the Establishment of Adequate Railroad Rate Revenue Levels, 358 I.C.C. 844, 853-54 (1978).

123. See *San Antonio v. Burlington N.*, 361 I.C.C. 482, 486, 496-97 (1979), appeal docketed *sub nom.* *San Antonio v. United States*, No. 78-2051 (D.C. Cir. Sept. 25, 1978); *Ex Parte*

descriptively labeled "fixed plant additive" and "revenue adequacy factor," have been added above fully allocated cost.¹²⁴ The inclusion of a fixed plant additive is calculated to recognize and allocate capital costs resulting from new construction and improvements to the rail system necessary for continued service.¹²⁵ The additive is designed to compensate carriers for those investments and, thus, more accurately reflect actual costs imposed by the service.¹²⁶ The necessity of assigning incremental expenses of plant capacity expansion a position apart from fully allocated costs derives from the principle that an asset is not includable in a carrier's rate base until dedicated to public use.¹²⁷ The revenue adequacy factor represents the supplemental amount determined by the Commission as necessary to produce sufficient revenue to meet the needs of the proponent carrier system.¹²⁸ The revenue need level of a rail system is derived from a percentage figure representing after-tax rate of return on debt and equity capital, and is predicated upon the Commission's findings of revenue adequacy among carriers on a district and national basis as developed in a separate proceeding.¹²⁹ The revenue adequacy factor, representing some increment above fully allocated cost directed at promoting a system-wide level of revenue adequacy, is the embodiment of differential pricing in the basic rate formula.¹³⁰ The net effect of the Commission's interpretation of the revenue

No. 338, Standards and Procedures for the Establishment of Adequate Railroad Rate Revenue Levels, 358 I.C.C. 844, 895-96 (1978).

124. See *San Antonio v. Burlington N.*, 361 I.C.C. 482, 496-97 (1979), *appeal docketed sub nom.* *San Antonio v. United States*, No. 78-2051 (D.C. Cir. Sept. 25, 1978); Memorandum, Report of Chairman of Subcommittee on Oversight and Investigation of the Committee on Interstate and Foreign Commerce, Investigation: Escalation of Railroad Tariffs for Hauling Coal 1-2 (Apr. 9, 1979).

125. See *San Antonio v. Burlington N.*, 361 I.C.C. 482, 486 (1979), *appeal docketed sub nom.* *San Antonio v. United States*, No. 78-2051 (D.C. Cir. Sept. 25, 1978); *cf. Ex Parte* No. 338, Standards and Procedures for the Establishment of Adequate Railroad Revenue Levels, 358 I.C.C. 844, 894-96 (1978) (rate of return standard; determination of cost of capital); *Ex Parte* No. 327, Incentive Rate on Coal—Cordero, Wyoming to Smithers Lake, Texas, No. 36608 at 10-17 (ICC) (served Nov. 30, 1977) (cost of service, revenue need, cost of capital); *Ex parte* No. 327, Incentive Rate on Coal—Gallup, New Mexico to Cochise, Arizona, 357 I.C.C. 683, 698-99 (1977) (cost of capital, fixed plant investment).

126. See *San Antonio v. Burlington N.*, 361 I.C.C. 482, 486 (1979), *appeal docketed sub nom.* *San Antonio v. United States*, No. 78-2051 (D.C. Cir. Sept. 25, 1978).

127. See *Burlington N. v. United States*, 555 F.2d 637, 645 (8th Cir. 1977), *citing* *Dayton-Goose Creek Ry. v. United States*, 263 U.S. 456 (1924).

128. See *San Antonio v. Burlington N.*, 361 I.C.C. 482, 496 (1979), *appeal docketed sub nom.* *San Antonio v. United States*, No. 78-2051 (D.C. Cir. Sept. 25, 1978).

129. See *id.* at 496; *Ex Parte* No. 353, Adequacy of Railroad Revenue (ICC) (served Dec. 5, 1978), *aff'd*, *Ex Parte* No. 353, Adequacy of Railroad Revenue at 3 (served March 27, 1979).

130. See *San Antonio v. Burlington N.*, 361 I.C.C. 482, 495-96 (1979), *appeal docketed sub nom.* *San Antonio v. United States*, No. 78-2051 (D.C. Cir. Sept. 25, 1978); *cf. Ex Parte* No. 338, Standards and Procedures for the Establishment of Adequate Railroad Rate Revenue Levels, 358 I.C.C. 844, 853-54 (1978) (cross subsidization of rail system recognized; revenue contribution to fixed costs where market conditions favorable).

adequacy provisions of section 205 of the 4-R Act has impacted on the utility industry in the form of substantially higher coal prices.¹³¹ Inasmuch as escalating coal prices will cause coal to be less economical as a baseload fuel as compared to oil and natural gas, a conflict emerges between railroad revitalization and the coal conversion provisions of the National Energy Plan.

V. INTERACTION BETWEEN NATIONAL ENERGY AND RAILROAD RATEMAKING POLICIES—THE SAN ANTONIO CASE

A basic tenet of the National Energy Plan is that the imbalance between reserves and consumption should be corrected by shifting industrial and utility consumption from oil and gas to coal and other abundant energy sources.¹³² This principle was expressly affirmed under provisions of The National Energy Act.¹³³ A transportation cost sensitivity study performed by the Department of Energy demonstrated the impact of increased transportation cost on decline in total consumption and shifting of production between regions.¹³⁴ Utilities constrained in the use of oil and gas as baseload fuels under the Powerplant and Industrial Fuel Use Act are allowed exemption from the proscriptions when an alternative fuel supply is not available except at a cost that "substantially" exceeds the cost of using imported petroleum.¹³⁵ Present ratemaking policies, allowing rail revenue on western coal at profit margins high above cost, adversely affect national energy policies as utility industries seek more cost competitive fuel bases

131. See ENERGY INFORMATION ADMINISTRATION, UNITED STATES DEP'T OF ENERGY, MONTHLY ENERGY DATA REPORT: COST AND QUALITY OF FUELS FOR ELECTRIC UTILITY PLANTS, Tables 1 & 2 (Apr. 1979). Compare *Ex Parte* No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal, 345 I.C.C. 71, 92-93 (1975) (average rail rates, 1931-1972) with 3 ENERGY INFORMATION ADMINISTRATION, UNITED STATES DEP'T OF ENERGY, ANNUAL REPORT TO CONGRESS: FORECASTS 233 (1978) (delivered coal prices to electric utility sector, history and projections, 1977-1995). Increases in transportation rates range between 20 and 60 percent above 1976 rates. Memorandum, Report of Chairman of Subcommittee on Oversight and Investigation of the Committee on Interstate and Foreign Commerce, Investigation: Escalation of Railroad Tariffs for Hauling Coal 1 (Apr. 9, 1979). See generally INTERSTATE COMMERCE COMM'N, ANNUAL REPORT TO CONGRESS 34-36 (1978) (rate proceedings); INTERSTATE COMMERCE COMM'N, ANNUAL REPORT TO CONGRESS 41-47 (1977) (rate proceedings).

132. EXECUTIVE OFFICE OF THE PRESIDENT, ENERGY POLICY AND PLANNING, THE NATIONAL ENERGY PLAN xii (Apr. 29, 1977).

133. See Fuel Use Act, § 102, 42 U.S.C.A. § 8301 (West Supp. 1978); Energy Tax Act of 1978, Pub. L. No. 95-618, tit. III (to be codified in scattered sections of 26 U.S.C.). See generally STAFF OF SENATE COMM. ON ENERGY AND NATURAL RESOURCES, 96TH CONG., 1ST SESS., THE NATIONAL ENERGY ACT, 3, 13, 20-22 (Comm. Print 1979).

134. See 3 ENERGY INFORMATION ADMINISTRATION, UNITED STATES DEP'T OF ENERGY, ANNUAL REPORT TO CONGRESS: FORECAST 235-37 (1978).

135. See Fuel Use Act, §§ 211(a)(1), 212(a)(1)(A)(ii), 42 U.S.C.A. §§ 8311(a)(1), 8312(a)(1)(A)(ii) (West Supp. 1978).

or markets.¹³⁶ High transportation costs on coal may thus frustrate the national energy policy on two levels: reduction of imports¹³⁷ and promotion of coal conversion.¹³⁸ Furthermore, escalating transportation prices, when passed on to the consumer, obstruct federal policy on energy price inflation.¹³⁹ The financial impact of railroad ratemaking policies on utility industries and the disproportionate results yielded by the Commission's costing methodology is placed in perspective by an examination of the energy situation facing San Antonio, Texas.¹⁴⁰

In the early 1970's, as a result of escalating oil and natural gas prices, the municipally-owned San Antonio utility constructed a \$250 million coal-fired electric generating plant and entered into a 20-year contract for the supply of coal from mines in Campbell County, Wyoming, the objective being to assure low cost electricity to San Antonio's ratepayers.¹⁴¹ Burlington Northern Railroad submitted quotations of a proposed rate of \$7.90 per ton for the coal movement in July 1973, reaffirmed by letter in March 1974.¹⁴² Subsequent to a revised quotation of \$11.09 per ton issued in May 1974 by Burlington Northern, San Antonio filed a complaint with the Commission, seeking prescription of a maximum just and reasonable rate for the service.¹⁴³ In its report and order issued in October 1976, the

136. See NEWSWEEK, Sept. 3, 1979, at 52-53. See also M. BAUGHMAN & D. KAMAT, FINANCING THE FUTURE GROWTH OF THE ELECTRIC POWER INDUSTRY 62-66, 70 (1978) (Pol. Study No. 4) (available through Center for Energy Studies, Univ. of Tex. at Austin) (average national prices, including transportation markup, on coal, gas and oil; operation and maintenance costs per primary energy source).

137. See NEWSWEEK, Sept. 3, 1979, at 53 (South African, Polish, and Australian coal markets as feasible supply sources). See also 3 ENERGY INFORMATION ADMINISTRATION, UNITED STATES DEP'T OF ENERGY, ANNUAL REPORT TO CONGRESS: FORECASTS 235-37 (1978) (increased transportation costs; decline in total consumption; shifts in regional production).

138. See Fuel Use Act, §§ 211(a)(1), 212(a)(1)(A)(ii), 42 U.S.C.A. §§ 8311(a)(1), 8312(a)(1)(A)(ii) (West Supp. 1978); 3 ENERGY INFORMATION ADMINISTRATION, UNITED STATES DEP'T OF ENERGY, ANNUAL REPORT TO CONGRESS: FORECASTS 235-37 (1978) (increased transportation costs; decline in total consumption).

139. See EXECUTIVE OFFICE OF THE PRESIDENT, ENERGY POLICY AND PLANNING, THE NATIONAL ENERGY PLAN 27-28 (Apr. 29, 1977). The National Energy Plan cautioned that energy industries should not be allowed to reap large windfall profits as a result of circumstances not associated with the marketplace. *Id.* at 27.

140. See NEWSWEEK, Sept. 3, 1979, at 52-53. See generally *Burlington N. v. United States*, 555 F.2d 637, 639-48 (8th Cir. 1977); *San Antonio v. Burlington N.*, 361 I.C.C. 482, 482-83, 485-98 (1979), *appeal docketed sub nom. San Antonio v. United States*, No. 78-2051 (D.C. Cir. Sept. 25, 1978).

141. See *Burlington N. v. United States*, 555 F.2d 637, 639 (8th Cir. 1977); H. COOPER, R. MIKSAD & E. FRUH, ENERGY & ENVIRONMENTAL ANALYSIS OF A PROPOSED COAL HAUL RATE INCREASE 5 (1978) (Env't Study No. 5) (available through Center for Energy Studies, Univ. of Tex. at Austin); San Antonio City Public Service Board, Freight Rate Proceedings 1 (Aug. 2, 1979).

142. See *Burlington N. v. United States*, 555 F.2d 637, 639 (8th Cir. 1977); San Antonio City Public Service Board, History of Coal Freight Rates to San Antonio (Aug. 2, 1979).

143. See *Burlington N. v. United States*, 555 F.2d 637, 639 (8th Cir. 1977); *San Antonio*

Commission prescribed a maximum reasonable rate, based on fully allocated costs, of \$10.93 per ton and shipments of coal were commenced.¹⁴⁴ Under three general rate increases granted for revenue improvement, the coal tariff rose to \$12.42 per ton in June 1978.¹⁴⁵ As a result of the reopening of Burlington Northern/San Antonio rate base proceedings, a rate base of \$16.12 per ton was prescribed, representing fully allocated costs and fixed plant additive, effective December 1978.¹⁴⁶ A general revenue improvement rate increase of 5.5 percent, issued two weeks later, resulted in a rate adjustment level to \$17.01 per ton.¹⁴⁷ By decision rendered on Burlington Northern's appeal of the Commission's order of December 1978, a rate base of \$17.23, representing fully allocated cost, fixed plant additive, and a seven percent revenue adequacy factor, was established, effective June 4, 1979.¹⁴⁸ Additionally, general rate increases for fuel costs totaling a 3.6 percent adjustment have been made thus far.¹⁴⁹ Because of the

City Public Service Board, Freight Rate Proceedings 1-2 (Aug. 2, 1979).

144. See *San Antonio v. Burlington N.*, 355 I.C.C. 405, 418 (1976); *San Antonio City Public Service Board, History of Coal Freight Rates to San Antonio* (Aug. 2, 1979); *San Antonio City Public Service Board, Freight Rate Proceedings 1-2* (Aug. 2, 1979).

145. See *Ex Parte* No. 349, Increased Freight Rates and Charges, 1978, Nationwide (ICC) (decided June 17, 1978) (four percent general increase on coal service); *Ex Parte* No. 343, Nationwide Increased Freight Rates and Charges, 359 I.C.C. 312, 312 (1977) (five percent revenue improvement general increase); *Ex Parte* No. 336, Increased Freight Rates and Charges—1977 (ICC) (served Dec. 22, 1976) (four percent revenue improvement general increase). See generally INTERSTATE COMMERCE COMM'N, ANNUAL REPORT TO CONGRESS 36 (1978); INTERSTATE COMMERCE COMM'N, ANNUAL REPORT TO CONGRESS 42-43 (1977).

146. See *San Antonio v. Burlington N.*, 359 I.C.C. 1, 18 (1978), *appeal docketed sub nom. San Antonio v. United States*, No. 78-2051 (D.C. Cir. Sept. 25, 1978). Petitions for review of the Commission's orders in docket no. 36180, the San Antonio case, have been filed in the Court of Appeals for the District of Columbia, as follows: San Antonio, through its City Public Service Board, Docket No. 78-2051; the State of Texas, Docket No. 78-2216; Burlington Northern and other railroads, Docket No. 78-2307; and the Department of Energy, Docket No. 78-2224. Brief for Petitioner at 3, *San Antonio v. United States*, No. 78-2051 (D. C. Cir. Oct. 1, 1979). The Department of Energy withdrew its petition in August 1979. *Id.* at 3. The remaining actions were consolidated under order of the Court of Appeals for the District of Columbia, dated December 5, 1978 and January 2, 1979. *Id.* at 3.

147. See *Ex Parte* No. 357, Increased Freight Rates and Charges, Nationwide—Eight Percent, 359 I.C.C. 740, 742 (1978).

148. See *San Antonio v. Burlington N.*, 361 I.C.C. 482, 483, 496-97 (1979), *appeal docketed sub nom. San Antonio v. United States*, No. 78-2051 (D.C. Cir. Sept. 25, 1978); *San Antonio City Public Service Board, Freight Rate Proceedings 4-5* (Aug. 2, 1979).

149. See *Ex Parte* No. 311B, Increased Freight Rates and Charges—1979 (ICC) (decided July 25, 1979) (one percent general rate increase: fuel cost); *Ex Parte* No. 311A, Increased Freight Rates and Charges—1979 (ICC) (decided July 7, 1979) (1.4 percent general rate increase; fuel cost); *Ex Parte* No. 311, Increased Freight Rates and Charges—1979 (ICC) (decided June 5, 1979) (1.2 percent general rate increase; fuel cost). Commission approval of a 7.8 percent average general rate increase for western rail traffic was granted in early October 1979. *Wall St.J.*, Oct. 8, 1979, at 6, col. 4. "Because of competitive pressures," the general rate increase was not applied to the Burlington Northern—San Antonio line service. Applica-

high investment cost incurred in the construction of coal-base generation systems, including capital expenditures on the purchase of hopper cars and spur lines to the plant, the delivered cost of coal must be available at moderate prices to make operation of the generation unit price competitive.¹⁵⁰ A rate base in excess of \$18.00¹⁵¹ makes coal less cost competitive than fuel oil and the continued operation of a coal-fired generating plant less price competitive.¹⁵² Economic analysis of the situation reveals considerable elasticity in the use of coal by San Antonio to unit-train tariff levels.¹⁵³ Implementation of the \$18.00 plus base rate is projected to result in a twenty-four percent decrease in coal consumption by 1982, and a concurrent seventeen percent increase in oil consumption, assuming maximum utilization and minimum cost of nuclear power at the South Texas Nuclear Project.¹⁵⁴ The energy situation faced by San Antonio, and its resolution, has implications for a proportionate share of southwestern utility industries¹⁵⁵ and to a representative share of utility shippers across the

tion of previously approved fuel cost increases established an effective rate of \$19.04, as of October 1979. Interview with Arthur Von Rosenberg, Planning Mngr. of City Public Services of San Antonio, Texas, in San Antonio (Jan. 16, 1980).

150. See PRESIDENT'S COMM'N ON COAL, COAL: A DATA BOOK 196-97 (1979) (GPO No. 281-412/34). See generally M. BAUGHMAN & D. KAMAT, FINANCING THE FUTURE GROWTH OF THE ELECTRIC POWER INDUSTRY 70 (1978) (Pol. Study No. 4) (available through Center for Energy Studies, Univ. of Tex. at Austin) (operation and maintenance costs: coal, gas, oil, nuclear, and gas turbines; 1975-2000).

151. See San Antonio City Public Service Board, Freight Rate Proceedings 4 (Aug. 2, 1979); San Antonio City Public Service Board, History of Coal Freight Rates to San Antonio (Aug. 2, 1979). The rate base set under May 23, 1979 proceedings, when subjected to the 1.2 percent fuel cost rate increase under *Ex Parte* No. 311, is elevated above \$18.00. See San Antonio City Public Service Board, Freight Rate Proceedings 4 (Aug. 2, 1979).

152. See Brief for Intervenor Dep't of Energy's Statement of Fact and Argument, San Antonio v. Burlington N., No. 36180 at 2 (ICC) (May 23, 1979) ("at a unit-train tariff level of between \$15.64 and \$18.23, it becomes cheaper to burn all oil") (based on testimony of Frank D. Haines, Chief of the Power Supply Planning Branch Office of Utility Systems, Economic Regulatory Administration, Dep't of Energy).

153. See *id.* at 2 (based on testimony of Frank D. Haines, Chief of the Power Supply Planning Branch Office of Utility Systems, Economic Regulatory Administration, Dep't of Energy); cf. 3 ENERGY INFORMATION ADMINISTRATION, UNITED STATES DEP'T OF ENERGY, ANNUAL REPORT TO CONGRESS: FORECASTS 235-37 (1978) (proportionate relationship between rising transportation costs and declining consumption levels). See generally H. COOPER, R. MIKSAD & E. FRUH, ENERGY & ENVIRONMENTAL ANALYSIS OF A PROPOSED COAL HAUL RATE INCREASE 5-10 (1978) (Env't'l Study No. 5) (available through Center for Energy Studies, Univ. of Tex. at Austin) (generating capacity of electric power plants in San Antonio).

154. See H. COOPER, R. MIKSAD & E. FRUH, ENERGY & ENVIRONMENTAL ANALYSIS OF A PROPOSED COAL HAUL RATE INCREASE 6-10 (1978) (Env't'l Study No. 5) (available through Center for Energy Studies, Univ. of Tex. at Austin); cf. 3 ENERGY INFORMATION ADMINISTRATION, UNITED STATES DEP'T OF ENERGY, ANNUAL REPORT TO CONGRESS: FORECASTS 235-37 (1978) (decline in consumption by 11 million tons from 1,465 million tons consumed on the basis of a 4.5 percent (\$0.23/ton) increase in transportation cost).

155. See 3 ENERGY INFORMATION ADMINISTRATION, UNITED STATES DEP'T OF ENERGY, ANNUAL REPORT TO CONGRESS: FORECASTS 153, 232 (1978) (industrial demand for coal projected

nation, consumers of western coal.¹⁵⁶

VI. CONCLUSION

The ultimate goal of government regulation of the rail industry has always been to insure the development, coordination, and preservation of an adequate national transportation system.¹⁵⁷ The railroad industry, as viewed from a national perspective, warrants the expansive application of liberal revenue standards, as set out in the 4-R Act, and implemented under the Commission's restructuring of the basic rate formula.¹⁵⁸ Regional considerations of supply and demand on certain commodities may, however, precipitate rail tariffs that are counterproductive to a sound economic transportation policy. An application of this hypothesis is well documented by the current levels to which western coal tariffs have been allowed to rise in the name of "railroad revitalization."¹⁵⁹ A fundamental conflict is presented by strict adherence to the revenue adequacy provisions of the 4-R Act, inasmuch as allowance of higher rail tariffs impacts to the detriment of the consumer of rail services. The conflict is amplified by a national commitment to the increased consumption of coal, a corollary to which is a national commitment to an equitable system of transportation of the fuel. The National Energy Plan submitted that prices for energy should be reasonably uniform to prevent economic dislocations and unjustified variation in consumer costs.¹⁶⁰ The nexus between the rail and coal industries mandates a greater sensitivity be given to the cost impact

to center around utility and industrial sectors in Texas, Arkansas, Oklahoma, and Louisiana). At present there are three additional steam generating plants constructed for utilization of bituminous coal as a baseload fuel in Texas. See S. SPAW & J. LEDBETTER, ENERGY REQUIREMENTS FOR AIR POLLUTION ABATEMENT EQUIPMENT IN TEXAS 116-17 (1978) (Env't'l Study No. 6) (available through Center for Energy Studies, Univ. of Tex. at Austin). Litigation has developed over the Commission's rate setting policies in Houston, where one such generator is located. See *Houston Lighting & Power Co. v. United States*, 606 F.2d 1131, 1136 (D.C. Cir. 1979).

156. See *San Antonio v. Burlington N.*, 361 I.C.C. 482, 495 (1979), *appeal docketed sub nom. San Antonio v. United States*, No. 78-2051 (D.C. Cir. Sept. 25, 1978) (differential pricing, under formula allocating revenue need factor on basis of system-wide operations, to be applied to similarly situated shippers of other commodities). See generally *Ex Parte* No. 357, *Increased Freight Rates and Charges, Nationwide—Eight Percent*, 359 I.C.C. 740, 741 (1978) (poor overall condition of carriers on nationwide basis; .063 percent nationwide rate of return on investment).

157. The National Transportation Policy, 49 U.S.C.A. § 10101 (West Supp. 1979); S. REP. NO. 94-499 at 14, LEGISLATIVE HISTORY OF THE 4-R ACT, *supra* note 18, at 27.

158. See UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 39-78, 113-136 (1978).

159. See *San Antonio v. Burlington N.*, 361 I.C.C. 482, 496-97, *appeal docketed sub nom. San Antonio v. United States*, No. 78-2051 (D.C. Cir. Sept. 25, 1978).

160. EXECUTIVE OFFICE OF THE PRESIDENT, ENERGY POLICY AND PLANNING, THE NATIONAL ENERGY PLAN 28 (1977).

of rail transportation on the energy consumers if the conflict is to be resolved without the necessity of recourse to further legislative action.¹⁶¹

161. At present, pending legislation suggests allowance of long-term contract rates, not susceptible to rate increases, as a means of alleviating the rate structure imbalance developed under revenue adequacy standards. See SENATE COMM. ON COMMERCE, SCIENCE, AND TRANSP., RAILROAD TRANSPORTATION POLICY ACT OF 1979, S. REP. NO. 96-470, 96th Cong., 1st Sess. 17-18, 24-26, 54-55 (1979). Contract rates are not expressly prohibited under the Interstate Commerce Act and have been allowed to a limited extent on some traffic systems. UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 121 (1978); SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 477-78; see, e.g., *Ex Parte* No. 336, Increased Freight Rates and Charges—1977, at 2, 3 (ICC) (served Dec. 22, 1976) (unit-train rate agreement); Contract Rates on Rugs and Carpeting from Amsterdam, New York, to Chicago, 313 I.C.C. 247, 251 (1961) (cost-of-service reflected in rate agreements); Coal to New York Harbor Area, 311 I.C.C. 365, 366 (1961) (volume rate agreement). See generally *Ex Parte* No. 270 (Sub-No. 4), Investigation of Railroad Freight Rate Structure Coal, 345 I.C.C. 71, 107-110 (1975) (unit-train, volume and concentration rate agreement concepts). However, challenged guaranteed rates have been declared unlawful *per se* where the agreement has been construed as constituting a destructive competitive practice. Guaranteed Rates From Sault Ste. Marie, Ontario, Canada, to Chicago, Ill., 315 I.C.C. 311, 321-23 (1961); Contract Rates on Rugs and Carpeting from Amsterdam, New York, to Chicago, 313 I.C.C. 247, 252-53 (1961); *cf.* Coal to New York Harbor Area, 311 I.C.C. 355, 371 (1961) (allowance of agreed rate not precedent-setting). Thus, recognition of the lawfulness of service agreements represents an important alteration in rate-making policy, allowing effective costing methodology by carrier/shipper negotiation reflecting service cost resulting from long-term shipment commitments in addition to traditionally recognized volume and unit-train considerations, of benefit to shipper and carrier alike. See UNITED STATES DEP'T OF TRANSP., A PROSPECTUS FOR CHANGE IN THE FREIGHT RAILROAD INDUSTRY 121-22 (1978); SENATE REPORT ON ENERGY TRANSPORTATION, Vol. III, *supra* note 3, at 477-79; *cf.* 43 Fed. Reg. 58190 (Dec. 13, 1978) (policy statement of Commission; supportive of long-term contract rates). *But see Railroad Deregulation Act of 1979: Hearings on S. 796 Before The Subcomm. on Surface Transp. of the Comm. on Commerce, Science, and Transportation*, 96th Cong., 1st Sess. 1381 (1979) (statement of Arthur Von Rosenberg on behalf of the Western Coal Traffic League) (contract rates not practical solution for captive shippers).