

BEFORE THE
HOUSE COMMITTEE ON TRANSPORTATION & INFRASTRUCTURE
SUBCOMMITTEE ON RAILROADS
HON. BOB FRANKS, CHAIRMAN

STATEMENT OF
THOMAS D. CROWLEY
ON BEHALF OF
THE WESTERN COAL TRAFFIC LEAGUE

HEARING ON THE CONDITION OF THE RAILROAD INDUSTRY

APRIL 22, 1998

Mr. Chairman, Members of the Subcommittee:

My name is Thomas D. Crowley. I am an economist and President of the economic consulting firm of L.E. Peabody & Associates, Inc. I have devoted a substantial portion of my professional career to railroad transportation matters. I append in Appendix A my Statement of Qualifications. That statement describes in detail my experience and expertise in the areas of rail transportation in general, and coal transportation in particular.

One of our firm's clients is the Western Coal Traffic League ("WCTL" or "League"). WCTL is an association comprised of

electric utilities that purchase and pay for the transportation of coal mined west of the Mississippi River. WCTL Members are listed in Appendix B to this statement. WCTL members currently ship in excess of 95 million tons of western origin coal yearly and their delivered coal costs are approximately \$2 billion annually. Since its formation in 1976, WCTL has actively participated in all major regulatory, judicial, and congressional proceedings involving western coal transportation.

I have been asked by WCTL to provide the Subcommittee with my views on the condition of the railroad industry. As this is a broad subject, I will address a few selected topics.

A. RAIL INDUSTRY CONCENTRATION
IS AT AN ALL-TIME HIGH

Since 1980, when the Staggers Act was passed, the Interstate Commerce Commission ("ICC") and its successor, the Surface Transportation Board ("STB"), have approved numerous rail mergers and other forms of rail acquisition. These approvals have included:

<u>Involved Railroads</u>	<u>Approval Date</u>
Grand Trunk Western; Detroit, Toledo & Ironton	1980
Burlington Northern ("BN"); St. Louis-San Francisco	1980
Chessie System; Louisville & Nashville; Seaboard Coast Line	1980
Grand Trunk Western; Detroit & Toledo Shore Line	1981
Guilford; Maine Central	1981

BN; Colorado & Southern; Fort Worth & Denver; Walla Walla Valley	1982
Union Pacific ("UP"); Missouri Pacific; Western Pacific	1982
Norfolk & Western; Southern	1982
Guilford; Boston & Maine; Delaware & Hudson	1983
Soo Line; Chicago, Milwaukee, St. Paul & Pacific	1985
Denver & Rio Grande Western; Southern Pacific ("SP")	1988
UP; Missouri-Kansas-Texas	1988
CSX; Richmond, Fredricksburg & Potomac	1991
Canadian Pacific; Delaware & Hudson	1991
BN; Atchison, Topeka & Santa Fe ("SF")	1995
UP; Chicago & Northwestern	1995
UP; SP	1996

As a consequence of these mergers, rail industry concentration is at an all-time high. For example, transportation of coal in the west is a virtual duopoly, with BNSF and UP controlling almost one hundred percent (100%) of coal originating in the western United States.

This level of concentration is illustrated using the Herfindahl-Hirschman Index ("HHI"). HHI is a standard used by the Department of Justice ("DOJ") to measure market concentration in mergers. By DOJ standards, an HHI greater than 1,800

signifies a highly concentrated market.¹ A market with a total duopoly would produce a 5,000 HHI. The HHI in the western coal marketplace, after the UP/SP merger, stands at 4,831.²

Eastern rail transportation is also far more concentrated today than it was in 1980. Indeed, if pending mergers are approved by the STB, rail transportation in the United States will be dominated by four (4) "mega" carriers: BNSF, UP, CSX and Norfolk Southern ("NS").

B. THE REMAINING MEGA-CARRIERS
ARE REAPING HUGE PROFITS

The rail industry has benefitted tremendously from the post-Staggers Act mega-mergers, and the industry's aggressive use of pricing and service freedoms accorded to it under the Staggers Act. I append in Appendix C a sampling of rail financial indicators comparing the financial position today of the four mega-carriers (BNSF, UP, NS and CSX) with the financial position of the 1980 iteration of these companies. These figures show that return on investment, net railroad operating income, and return on equity have soared since 1980, while debt as a percentage of capital has dramatically decreased. The financial power of the rail industry is further underscored by the industry's clout in the financial markets. UP, BNSF, CSX and NS

¹Horizontal Merger Guidelines, 57 FR 41552 (September 10, 1992).

²The development of this index figure is described in detail in my Verified Statement submitted as part of WCTL's March 29, 1996 Comments in the UP/SP merger case, Finance Docket No. 32760.

have had no trouble raising billions of dollars on Wall Street to finance their mergers.

In 1996, STB Vice-Chairman Owen made the following comments about the financial vitality of the rail industry:

- Class I freight railroads exceeded earnings per share estimates of independent financial analysts in 1995, they have posted sustained ton-mile growth over the past decade, and they have made remarkable and sustained productivity gains through rationalization of the work-force, fixed-plant and equipment.
- The president of the Association of American Railroads, which represents each of the Class I railroads party to this proceeding, repeatedly has spoken in public of "a new Golden Age" for railroads.
- A premium considerably in excess of market value is being bid for a portion of . . . Southern Pacific by . . . Conrail while a premium considerably in excess of market value is being bid for the entirety of . . . Southern Pacific by . . . Union Pacific.
- [B]urlington Northern-Santa Fe has announced a extraordinary 1997 capital-expenditure budget of almost \$2 billion.
- [C]onrail has increased its dividend in every year since its initial public offering in 1987.
- Since 1985, return on investment for Class I railroads has more than doubled, while return on equity nearly doubled and exceeded the industry's cost of capital in 1994.

Ex Parte No. 552, Railroad Revenue Adequacy -- 1995 Determination, 1 S.T.B.2d 167, 169-170 (1996) (footnote omitted).

I agree with Vice Chairman Owen's observations.

C. INCREASED CONCENTRATION HAS LED TO
DECREASED COMPETITION BETWEEN RAIL
CARRIERS AND SERVICE FAILURES

From an economic perspective, markets which are highly concentrated exhibit less competition. In a highly concentrated market, a seller can take various actions to avoid competition. The avoidance of competition can take several forms: overt collusion, conscious parallelism, or mere recognition of oligopolistic interdependence. In my opinion, the many post-Staggers Act rail mergers will not increase competition and, in all probability, will lead to the avoidance of price competition in both the west and the east.

Recent history in the western coal transportation markets teaches that western rail carriers have colluded when it suited their collective purposes, as is evidenced by the ETSI litigation.³ In the ETSI litigation, a Texas court concluded several major western railroads had actively colluded in violation of the antitrust laws to prevent ETSI from constructing a coal slurry pipeline. That pipeline, if it had been built, would have provided many western coal shippers with a competitive alternative to rail transportation from the Powder River Basin of Wyoming to their generating stations.

The railroad industry has maintained that, despite increases in concentration, average industry revenues per ton-mile have decreased since the Staggers Act became law in 1980, so

³ETSI Pipeline Project v. Burlington Northern, Inc., Civil Action No. B-84-979-CA, 1989 U.S. Dist. LEXIS 18796 (E.D. Tex., Jan. 5, 1989).

rail shippers should have no concerns about the current concentrated state of the rail industry. The railroads' argument is misleading. Average revenue per ton-mile has decreased since 1980. However, the rail industry has not willingly made rate reductions. Actual rate reductions that western coal shippers have obtained have been the result of actions vigorously opposed by the rail industry or individual members thereof, including the opening of the southern Powder River Basin, Wyoming coal fields to two-carrier service (opposed by BN); the development and application of the ICC/STB's Coal Rate Guidelines (opposed by the major railroads); and the construction (or threats to construct) second carrier access lines at captive utility generating stations (usually opposed by the incumbent rail carriers).

Today, some western coal shippers -- through hard-fought efforts -- enjoy competitive origin-to-destination rail service.⁴ As shown in Appendix D, the difference in pricing levels between coal shippers with and without competition is dramatic. For example, for shorter movements (under 600 miles), captive coal shippers⁵ pay rates are almost three times higher than rates on competitive movements.

Rail mergers have also caused substantial service disruptions. Today, the most obvious case in point is the UP/SP

⁴Origin-to-destination competition refers to a shipper's ability to transport coal from origin to destination by two or more different rail or rail/barge transporters.

⁵Captive coal shippers refers to coal shippers that must use a single rail carrier for some or all of their haul.

merger. That merger, which WCTL opposes, has produced huge service disruptions throughout the west. "Bigger" is not necessary "better" when it comes to providing service to the customer. The meltdown of the UP/SP network has caused severe problems for WCTL members.

WCTL members Lower Colorado River Authority ("LCRA") and the City of Austin, Texas ("Austin") service problems provide a representative example. LCRA/Austin are joint owners of the Fayette Power Project ("FPP"). The FPP, located near LaGrange, Texas, burns approximately 6.5 million tons of coal annually originating in the Southern Powder River Basin of Wyoming. UP transports this coal. WCTL reported to the STB last October that UP's deficient service had required LCRA/Austin to curtail coal burns at a cost to LCRA/Austin of over \$8 million:

FPP normally maintains a 50 to 60 day supply of coal in its coal stockpile. Unfortunately, because of the UP's deficient service, UP has delivered to the FPP approximately 750,000 fewer tons than requested this year under the UP/LCRA rail transportation contract. The result is that both FPP partners, the City of Austin and LCRA have been required to curtail their coal burns at FPP due to the low stockpile of coal inventory on hand. In the absence of such curtailments, the stockpile would be exhausted, or very close to exhausted today. The additional cost to the City of Austin and LCRA for generation of power with more expensive substitute fuels and for purchased power is approximately \$8 million to date. For each trainload of coal that must be offset with non-coal fired generation or power purchases, the additional cost ranges from approximately \$400,000 to over \$500,000.

WCTL Comments in Ex Parte No. 573, Rail Service in the Western

United States, at 8 (filed October 23, 1997).

Overall, WCTL estimated earlier this year that UP's service deficiencies had caused its members to incur "tens of millions of dollars" in additional costs:

In the aggregate, UP's service problems have caused tens of millions of dollars in added costs for WCTL members, who have been forced to turn to much more expensive fuels and/or purchased power to make up for the coal delivery shortfalls caused by UP's deficient service. WCTL members' coal inventories continue to be too low. While members had hoped to have discontinued expensive coal displacement/replacement strategies by now, they have been forced to continue such strategies as a result of UP's continuing service problems and the need to try to rebuild stockpiles for the summer peak demands.

WCTL Comments in Ex Parte No. 573, Rail Service in the Western United States, at 11 (filed February 20, 1998).⁶

UP's post-merger service problems continue. These problems affect not only coal shipments but virtually all commodity shipments on the UP. The merger of the UP and SP, as a recent Wall Street Journal report aptly observed, has led to "the largest shipping breakdown in U.S. rail history." Wall Street Journal at A3, February 27, 1998.

⁶WCTL has also emphasized in its filings in Ex Parte No. 573 that current western rail service problems have not been limited to UP customers, as UP's service problems have spilled over to BNSF coal transportation operations, as well. See id. at 11-12.

D. INCREASING COMPETITION.

As this Subcommittee is undoubtedly aware, many rail shippers, including WCTL, support increased rail competition. WCTL recently filed comments in the STB's Ex Parte No. 575 proceeding urging the STB to promote intramodal competition. WCTL specifically asked the STB to overturn its Bottleneck Decision, and to modify its competitive access regulations to allow increased use of terminal trackage rights and reciprocal switching. WCTL also presented a legislative proposal requesting the congressional amendment of Title 49 to allow increased competitive access, on a case-by-case basis, under STB supervision. WCTL's Comments in Ex Parte No. 575, Review of Rail Access and Competition Issues (filed March 26, 1998).

The railroad industry has attacked proposals put forward by WCTL, and others, to increase competition. The railroads argue that increasing competition will destroy the gains made by the industry after the Staggers Act, prevent the industry from having sufficient revenues to invest in infrastructure, and ultimately bankrupt the industry.

I disagree. Increasing competition will not kill the rail industry. There is nothing intrinsic in the economic structure of the rail industry that prevents the industry from surviving in a competitive marketplace. If captive traffic is opened to competition, railroads will exist in a marketplace that is made up of the following four economic conditions:

Efficiency - By incorporating efficiencies into its operations, a railroad will maintain and possibly enhance its market share. The inefficient railroad will be replaced by a more efficient entrant into the rail market.

Cross Subsidy - The existing railroads will have to be more aware of their cost of providing service when setting rates in order to avoid and/or eliminate traffic that they currently handle at rate levels that are below costs.

Profit Maximization - The existence and cost structure of the inter-/intramodal competitors will have to be understood in order for a railroad to maximize profits on existing traffic that it handles and in order to maintain or enhance its market share. Stated differently, as rail rates decline volume should increase which translates to increased market size for the rail industry.

Competition - A firm will enter a market when generated revenues (rates) are sufficient to cover its costs, attract capital and provide a sufficient return to its stockholders. A firm will exit a market when the opposite is true.

Moreover, today's rail industry is generally viewed as having two distinct parts, i.e., the large Class I railroads and the so-called "shortline" operators. Each part of the rail industry evaluates road and equipment property investment in a similar manner. Since before the Staggers Act, the large Class I railroads have either abandoned economically unwanted or unneeded roadway track and related facilities, or sold them to shortline operators. The net result is a rail industry that is made up of a few large, efficient rail systems and a number of smaller, efficient connecting shortline railroads.

In the rail industry, investment in equipment is portable or transferable, i.e., locomotives, cars, etc. can be readily moved between goods and services. There is no economic incentive for a railroad to maintain road or equipment property assets on its books that are not needed or do not provide an adequate return on investment. Therefore, in the normal course of doing business, the railroads are already shedding economically unwanted and unneeded assets.

My actual experience in the coal transportation marketplace confirms that competition will not bankrupt the rail industry. BNSF and UP compete on some coal movements originating at mines located in the Powder River Basin of Wyoming. I have seldom seen rates for this "competitive" traffic fall below 160 percent of the carrier's variable costs. Rates that exceed costs by 60 percentage points reap large returns for the involved carriers, earning them substantial monies to invest in infrastructure and to pay a competitive return to their shareholders.

In summary, increased competition will not bankrupt the railroad industry; it will simply make railroads compete, rather than allowing them to continue to exploit captive shippers.

* * * *

On behalf of WCTL, I thank the Subcommittee for the opportunity to participate in this important hearing.



STATEMENT OF QUALIFICATIONS

My name is Thomas D. Crowley. I am an economist and President of the economic consulting firm of L. E. Peabody & Associates, Inc. The firm's offices are located at 1501 Duke Street, Suite 200, Alexandria, Virginia 22314.

I am a graduate of the University of Maine from which I obtained a Bachelor of Science degree in Economics. I have also taken graduate courses in transportation at George Washington University in Washington, D.C. I spent three years in the United States Army and since February 1971 have been employed by L. E. Peabody & Associates, Inc.

I am a member of the American Economic Association, the Transportation Research Forum, and the American Railway Engineering Association.

The firm of L. E. Peabody & Associates, Inc. specializes in solving economic, marketing and transportation problems. As an economic consultant, I have organized and directed economic studies and prepared reports for railroads, freight forwarders and other carriers, for shippers, for associations and for state governments and other public bodies dealing with transportation and related economic problems. Examples of studies I have participated in include organizing and directing traffic, operational and cost analyses in connection with multiple car movements, unit train operations for coal and other commodities, freight forwarder facilities, TOFC/COFC rail facilities, divisions of through rail rates, operating commuter passenger service, and other studies dealing with markets and the transportation by different modes of various commodities from both eastern and western origins to various destinations in the United

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States. The nature of these studies enabled me to become familiar with the operating and accounting procedures utilized by railroads in the normal course of business.

Additionally, I have inspected both railroad terminal and line-haul facilities used in handling various commodities, and in particular unit train coal movements from the Powder River Basin to various utility destinations in the midwestern and western portion of the United States. These field trips were used as a basis for the determination of the traffic and operating characteristics for specific movements of coal, both inbound raw materials and outbound paper products to and from paper mills, crushed stone, soda ash, aluminum, fresh fruits and vegetables, TOFC/COFC traffic and numerous other commodities handled by rail.

I have presented evidence before the Interstate Commerce Commission ("ICC") in Ex Parte No. 347 (Sub-No. 1), Coal Rate Guidelines - Nationwide which is the proceeding that established the methodology for developing a maximum rail rate based on stand-alone costs. I have submitted evidence applying the ICC's stand-alone cost procedures in "Coal Trading,"^{1/} "DP&L,"^{2/} "Westmoreland"^{3/}, and WTU^{4/} along with other proceedings before the ICC.^{5/}

^{1/} ICC Docket No. 38301S, Coal Trading Corporation v. Baltimore & Ohio Railroad, et al., ("Coal Trading").

^{2/} ICC Docket No. 38025S, The Davton Power and Light Company v. Louisville and Nashville Railroad Company ("DP&L").

^{3/} ICC Docket No. 38301S (Sub-No. 1), Westmoreland Coal Sales Company v. Denver and Rio Grande Western Railroad Company, et al., ("Westmoreland").

^{4/} STB Docket No. 41191, West Texas Utilities Company v. Burlington Northern Railroad Company ("WTU").

^{5/} ICC Docket No. 40224, Iowa Public Power and Light Company v. Burlington Northern Railroad Company; ICC Docket No. 37029, Iowa Public Service Company v. Burlington Northern, Inc.; ICC Docket No. 39386, The Kansas Power and Light Company v. Burlington Northern Railroad Company and Union Pacific Railroad Company; ICC Docket No. 38783, Omaha Public Power District v. Burlington Northern Railroad Company; Docket No. 36180, San Antonio, Texas, Acting By and Through Its City Public Service Board v. Burlington Northern Railroad Company, et al; ICC Docket No. 41185, Arizona Public Service Company and PacifiCorp v. The Atchison, Topeka and Santa Fe Railway Company ("APS").

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Moreover, I have developed numerous variable cost calculations utilizing the various formulas employed by the ICC for the development of variable costs for common carriers, including Burlington Northern Railroad Company,^{6/} with particular emphasis on the basis and use of Rail Form A. I have utilized Rail Form A costing principles since the beginning of my career with L. E. Peabody & Associates Inc. in 1971.^{7/}

I have also analyzed in detail, the Uniform Railroad Costing System ("URCS") and presented the results of my findings to the ICC in Ex Parte No. 431, Adoption of the Uniform Railroad Costing System for Determining Variable Costs for the Purposes of Surcharge and Jurisdictional Threshold Calculations. I have been involved in the URCS process, either directly

^{6/} The following two (2) cases are examples of litigation before the ICC where I developed and presented Burlington Northern Railroad Company's variable costs of handling unit coal trains. These two cases involve the most detailed examination of the variable cost of moving coal in unit train service of any proceeding thus far brought before the ICC. The first example involved the variable cost of service evidence I presented on behalf of the City of San Antonio, Texas in ICC Docket No. 36180, San Antonio, Texas, Acting By and Through its City Public Service Board v. Burlington Northern Railroad Company, et al., 1 I.C.C. 2d 561 (1986) ("San Antonio"). In that case, the ICC extensively analyzed the variable costs for a unit train movement of coal on the Burlington Northern Railroad Company from the Powder River Basin, Wyoming to San Antonio, Texas. Also I presented the variable cost of service evidence in ICC Docket No. 38783, Omaha Public Power District v. Burlington Northern Railroad Company 3 I.C.C. 2d 123 (1986) ("OPPD"), in which the ICC developed the variable costs for the unit train movement of coal from the Powder River Basin, Wyoming to Arbor, Nebraska on the Burlington Northern Railroad Company. In San Antonio, the ICC found that the variable cost of service as of the first quarter of 1984 was \$12.62 per ton, just 46 cents higher than my cost calculation of \$12.16 per ton and substantially lower than Burlington Northern Railroad Company's calculation of \$17.54 per ton. In OPPD, the ICC determined variable cost for the first quarter of 1985 was \$5.31 per ton, just 11 cents higher than my calculation of \$5.20 per ton, and substantially lower than Burlington Northern Railroad Company's calculations of \$6.53 per ton.

^{7/} Rail cost finding has been the cornerstone of this firm. Dr. Ford K. Edwards the senior partner of the firm Edwards & Peabody*, was the major architect in the development of Rail Form A. Mr. Peabody carried on this tradition of innovative cost finding until his retirement in 1983. Mr. Peabody's work included participation in the Tennessee Valley Authority's ("TVA") computerization of Rail Form A. Mr. Peabody was a member of a committee of transportation consultants which was organized to assess the TVA procedure in order to make available more complete and simplified input data for the Rail Form A computer program.

* Subsequent to the retirement of Dr. Edwards in 1965, the firm name was changed to L. E. Peabody & Associates, Inc.

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or indirectly, since the first interim report of the contractors was released. Throughout this process, I have consistently asked for and reviewed the support and workpapers underlying the different developmental stages of the formula. I received and presented comments in February 1982 on the ICC's Preliminary 1979 Rail Cost Study. In December 1982, the ICC released the Uniform Rail Costing System, 1980 Railroad Cost Study which I reviewed along with the workpapers supporting that study and the entire developmental stage of URCS which was the basis for my Ex Parte No. 431 comments.

I have frequently presented both oral and written testimony before the Interstate Commerce Commission, Surface Transportation Board, Federal Energy Regulatory Commission, Railroad Accounting Principles Board, Postal Rate Commission and numerous state regulatory commissions, federal courts and state courts. This testimony was generally related to the development of variable cost of service calculations, fuel supply economics, contract interpretations, economic principles concerning the maximum level of rates, implementation of maximum rate principles, and calculation of reparations, including interest. I have also presented testimony in a number of court and arbitration proceedings concerning the level of rates and rate adjustment procedures in specific contracts.

I have participated in every major ICC rulemaking proceeding since the mid-seventies, including each phase of Ex Parte 290 (Sub-No. 2), (Sub-No. 4), (Sub-No. 5) and (Sub-No. 7). On a number of occasions my predecessor, L. E. Peabody, Jr., and I have submitted evidence

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to the Commission concerning the determination of the Rail Cost Adjustment Factor ("RCAF") and the need for a productivity adjustment to properly reflect the change in railroad costs.^{8/}

Since the implementation of the Staggers Rail Act of 1980, which clarified that rail carriers could enter into transportation contracts with shippers, I have been actively involved in negotiating transportation contracts on behalf of coal shippers. Specifically, I have advised utilities concerning coal transportation rates based on market conditions and carrier competition, movement specific service commitments, specific cost-based rate adjustment provisions, contract reopeners that recognize changes in productivity and cost-based ancillary charges. In particular,

^{8/} L. E. Peabody, Jr.'s Verified Statement, Ex Parte No. 290 (Sub-No. 2), Railroad Cost Recovery Procedures, July 17, 1980; L. E. Peabody, Jr.'s Verified Statement, Ex Parte No. 290 (Sub-No.-2), Railroad Cost Recovery Procedures, August 20, 1980; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 2), Railroad Cost Recovery Procedures, January 9, 1981; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 2), Railroad Cost Recovery Procedures, July 9, 1982; L. E. Peabody, Jr.'s Verified Statement, Ex Parte No. 290 (Sub-No.4), Railroad Cost Recovery Procedures -- Productivity Adjustment, October 25, 1982; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 4), Railroad Cost Recovery Procedures -- Productivity Adjustment, February 11, 1985; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 4), Railroad Cost Recovery Procedures -- Productivity Adjustment, March 28, 1985; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 2) Railroad Cost Recovery Procedures, March 12, 1986; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 2) Railroad Cost Recovery Procedures, March 12, 1987; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 4), Railroad Cost Recovery Procedures -- Productivity Adjustment, December 16, 1988; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 4), Railroad Cost Recovery Procedures -- Productivity Adjustment, January 17, 1989; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 7), Productivity Adjustment-Implementation, May 26, 1989; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 4) and Ex Parte No. 290 (Sub-No. 7), Railroad Cost Recovery Procedures -- Productivity Adjustment, June 1, 1989; Thomas D. Crowley's Verified Statement, Ex parte No. 290 (Sub-No. 5) (89-3), Quarterly Rail Cost Adjustment Factor, June 13, 1989; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 7), Productivity Adjustment -Implementation, June 26, 1989; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No.4), Railroad Cost Recovery Procedures - Productivity Adjustment, August 14, 1989; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No.4), Railroad Cost Recovery Procedures - Productivity Adjustment, August 29, 1989; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 5) Quarterly Rail Cost Adjustment Factor, September 18, 1989; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 7), Productivity Adjustment Implementation, April 5, 1991; Thomas D. Crowley's Verified Statement, Ex Parte 290 (Sub-No. 2) Railroad Cost Recovery Procedures, November 9, 1992; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 2), Railroad Cost Recovery Procedures, November 30, 1992; and, Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 7) Productivity Adjustment - Implementation, January 7, 1994.

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I have advised utilities on the theory and application of different types of rate adjustment mechanisms for inclusion in coal transportation contracts.

I have been actively engaged in negotiating coal supply contracts for various users throughout the United States. In addition, I have analyzed the economic impact of buying out, brokering, and modifying existing coal supply agreements. My coal supply assignments have encompassed analyzing alternative coals to determine the impact on the delivered price of operating and maintenance costs, unloading costs, shrinkage factor and by-product savings.

I have been, or am currently, involved in the negotiation of transportation or coal supply contracts for over forty (40) utilities which burn coal or lignite produced in the west. These utilities purchase coal or lignite produced in Colorado, Illinois, Missouri, Montana, New Mexico, North Dakota, Oklahoma, Texas, Utah and Wyoming. Generating stations operated by these utilities are located in the following nineteen (19) states: Arizona, Arkansas, California, Colorado, Illinois, Iowa, Kansas, Louisiana, Minnesota, Mississippi, Missouri, Nebraska, Nevada, North Dakota, Oklahoma, Oregon, Texas, Wisconsin, and Wyoming.

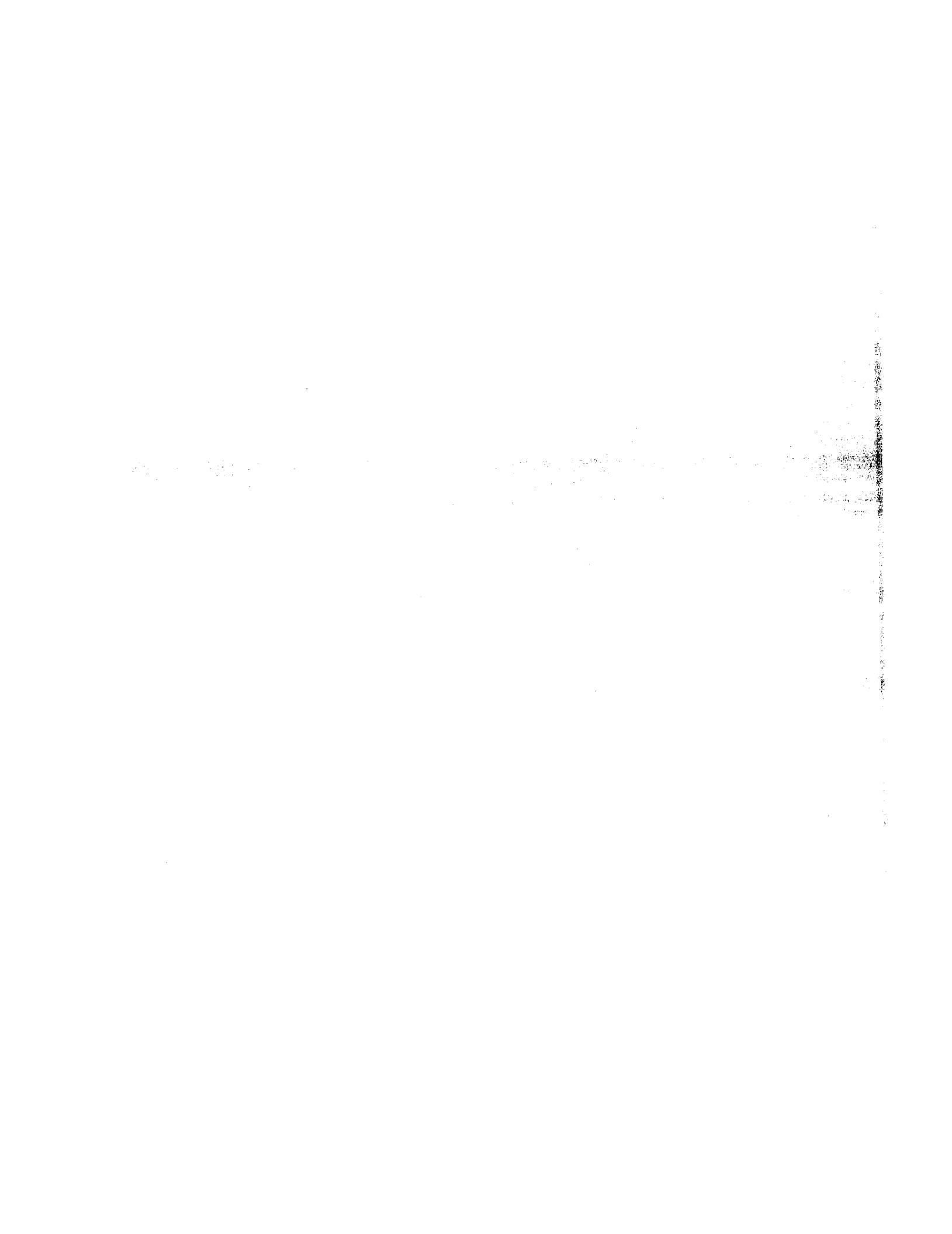
As a result of assisting coal users in the eastern and western portions of the United States, I have become familiar with operations and practices of the rail carriers that move coal over the major coal routes in the United States as well as their cost and pricing practices.

I have developed different economic analyses for over sixty (60) electric utility companies located in all parts of the United States, and for major associations, including American Paper Institute, American Petroleum Institute, Chemical Manufacturers Association, Coal Exporters

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Association, Edison Electric Institute, Mail Order Association of America, National Coal Association, National Industrial Transportation League, the Fertilizer Institute and Western Coal Traffic League. In addition, I have assisted numerous government agencies, major industries and major railroad companies in solving various economic problems.

I have participated in various proceedings involved with the division of through rates. For example, I participated in ICC Docket No. 35585, Akron, Canton & Youngstown Railroad Company, et al. v. Aberdeen and Rockfish Railroad Company, et al. which was a complaint filed by the northern and midwestern rail lines to change the primary north-south divisions. I was personally involved in all traffic, operating and cost aspects of this proceeding on behalf of the northern and midwestern rail lines. I was the lead witness on behalf of the Long Island Rail Road in ICC Docket No. 36874, Notice of Intent to File Division Complaint by the Long Island Rail Road Company.



Appendix B

WESTERN COAL TRAFFIC LEAGUE MEMBERS

Arizona Electric Power Cooperative, Inc.

Central Louisiana Electric Company, Inc.

Central and South West Services, Inc.

City Public Service Board of San Antonio

Colorado Springs Utilities

Fayette Power Project, Austin, Texas

Houston Industries, Inc.

Kansas City Power & Light Company

MidAmerican Energy Company

Minnesota Power

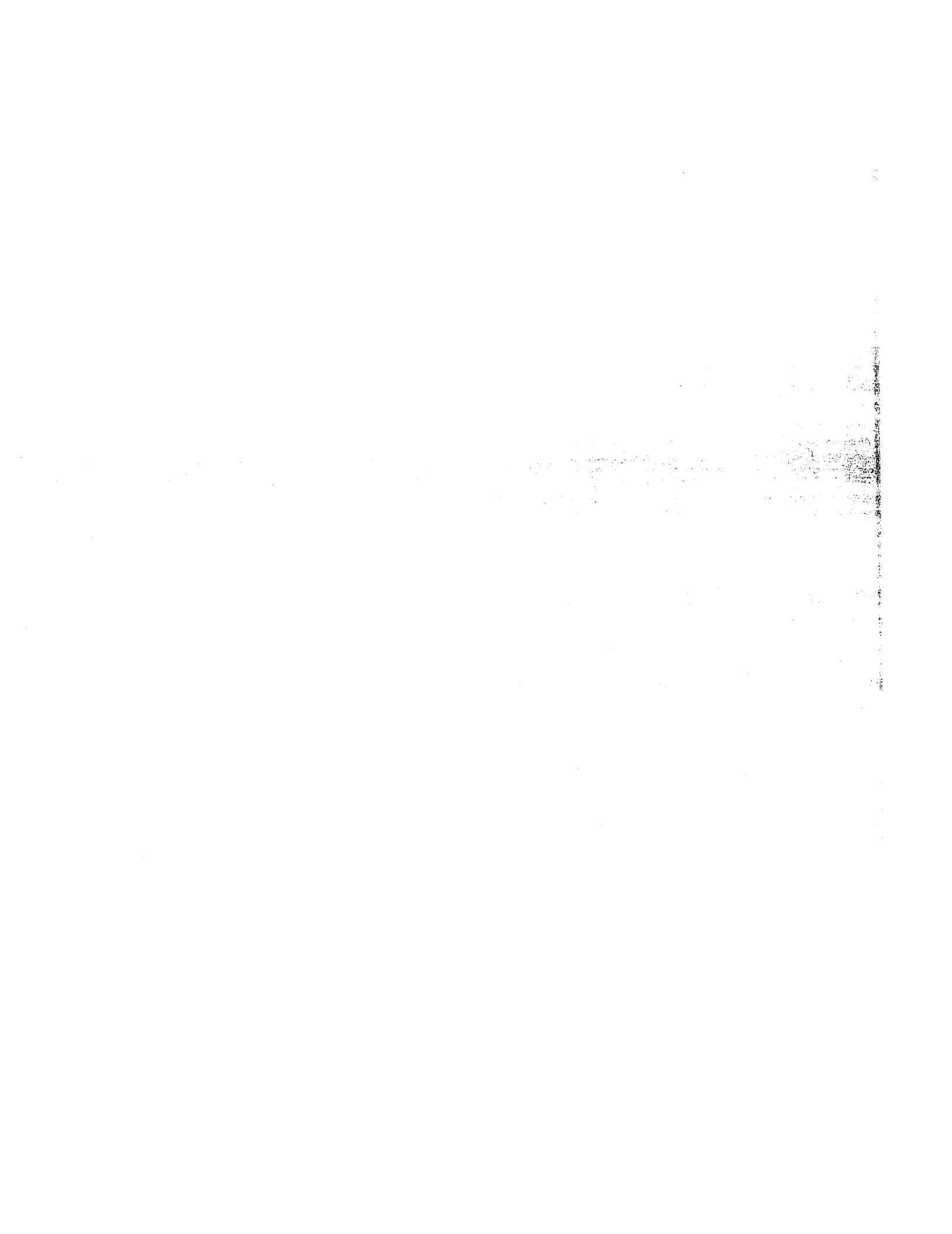
Nebraska Public Power District

Omaha Public Power District

Unitrain, Inc.

Western Resources, Inc.

Wisconsin Public Service Corporation



Financial Health Of Major Class I Railroads

<u>Carrier/Measure</u>	<u>1980 1/</u>	<u>Current</u>	<u>Percent Change</u>
(1)	(2)	(3)	(4)
1. BNSF			
a. Return On Investment	5.8%	8.8%	52%
b. NROI (Millions)	\$173	\$1,100	536%
c. Return On Equity	8.75%	10.8%	23%
d. Debt as a Percentage Of Capital	36%	13%	-64%
2. UP			
a. Return On Investment	9.6%	8.2%	-15%
b. NROI (Millions)	\$214	\$1,000	367%
c. Return On Equity	10.3%	17.1%	66%
d. Debt as a Percentage Of Capital	26%	21%	-19%
3. NS			
a. Return On Investment	9.9%	12.5%	26%
b. NROI (Millions)	\$122	\$800	556%
c. Return On Equity	13.1%	13.5%	3%
d. Debt as a Percentage Of Capital	32%	10%	-69%
4. CSX			
a. Return On Investment	9.3%	8.9%	-4%
b. NROI (Millions)	\$71	\$600	745%
c. Return On Equity	9.3%	12.0%	29%
d. Debt as a Percentage Of Capital	19%	17%	-11%

1/ Values Represent BN (Line 1), UP (Line 2), Southern (Line 3) and C&O (Line 4)

**DIFFERENTIAL IN WESTERN COAL RAIL
RATES WITH AND WITHOUT COMPETITION**
(Mills Per Revenue Ton-Mile)

<u>Category</u> (1)	<u>Moves Less Than 600 Miles</u> (2)	<u>Moves Greater Than 600 Miles</u> (3)
1. Competitive Moves	10.5	8.9
2. Captive Moves	28.8	13.2

Source: FERC Form 423 data and other publically available documents