

Remarks on Rail Transportation of Energy Resources

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1. Overview of railroad industry and regulation
 - a. Rapid expansion in late 19th century
 - b. Price complexity and market power suspicion led to Interstate Commerce Act of 1887
 - c. Largely regulated industry until 4R Act of 1976 and Staggers Act of 1980
 - d. Prices since 1981 have mainly declined and load share has increased
 - e. Current challenges in own costs (primarily fuel), major coal customer effects, and regulation affecting crude oil market
2. Basic railroad economics
 - a. Highly capital intensive
 - b. Costs are nonlinear
 - c. Limitations of existing infrastructure and congestion effects
 - d. Coal represents large fraction of tonnage (~40%) and railroads provide approximately 70% of electric power usage
 - e. Crude oil is a small but increasing component
 - f. Public externalities: Accidents, pollution, noise, right-of-way interference
3. Policy impacts
 - a. Direct
 - i. Taxes: relative impact largely from fuel
 - ii. Regulation: Safety (e.g., equipment, labor), general fair practice
 - iii. Subsidies: largely not present (e.g., lines are privately held)
 - b. Customers
 - i. Electric power utilities: emission regulations on coal, potential of carbon taxes, renewable portfolio standards
 - ii. Exporters: impact on European and Asian trade
 - c. Competition
 - i. Taxes and subsidies for trucking
 - ii. Pipeline regulation: construction and pricing
4. Coal issues
 - a. Decreasing utility demand

- b. Increasing variability in usage (more “shoulder” than baseload)
 - c. Decreasing contract periods
 - d. Uncertainty over future policies
 - e. Softening Chinese demand and potential increased gas competition
5. Crude oil issues
- a. Rail car specification regulation tightening
 - b. Limitations on hauling speeds
 - c. Competitive impacts
6. Alternative energy uses
- a. Battery transport from renewable production (e.g., wind/solar farms) to consumption centers
 - b. Reduces needs for new electricity transmission
 - c. Enables renewable growth
7. Key issues for policy considerations
- a. Nonlinear cost impact could mean disproportionate effect from reduced coal consumption
 - b. Revenue impact may decrease competition and increase market power opportunities
 - c. Need for monitoring regulatory impacts and spillover effects
 - d. Crude oil hauling regulation requires careful consideration of the costs of alternatives
 - e. Use of rail for alternative energy transport requires further study