Policy Issues in State Rail Planning
John W. Fuller, Wisconsin Department of Transportation

Recent federal legislation has given a major stimulus to rail transportation planning. Virtually every state is now preparing its own rail plan. It is argued that such state rail plans should be produced in a multimodal context and should attempt to address critical policy issues in transportation. A list of 10 critical policy issues was prepared by the Transportation Research Board, but to date federal legislative focus, administrative rules, and state rail plans have been much more narrowly conceived. This focus must be broadened if state rail plans are to meet emerging policy needs.

Railroads in the United States have been suffering a long decline that began before World War II. The reduction in their relative traffic share and the erosion of profitability of the rail industry have been fully chronicled and analyzed (1, 2, 3). Recent insolvency of the Penn Central Transportation Company and other eastern railroads, therefore, came as no surprise to many. Today, as a predictable consequence of past government policy, present traffic conditions, and worsened operating capabilities of their railroad plants, several major midwestern railroad firms are in a precarious financial state. Continuation of these trends will only lead to the demise of the industry as an important part of the transport sector.

In contrast to the hands-off approach of previous decades, government took substantial direct action to subsidize the railroads in the 1970s and provided the sole means by which a high level of rail service is being retained in the eastern states. Eastern dependence on rail movements at a time of general economic recession, coupled with uncertainty and fear of the results of reorganization under bankruptcy, was sufficient to initiate federal and state rail support. Government action meant, primarily, short-term payment of operating losses followed by long-term financing as a lender of last resort. Although government support came initially in the East, the realization that rail transport is an interconnected, nationwide system has opened the door to government financing throughout the country. The Rail Passenger Service Act of 1970 also played a role, but the key instruments for action were the Regional Rail Reorganization (3R) Act of 1974 and the Railroad Revitalization and Regulatory Reform (4R) Act of 1976.

Just preceding and concurrent with passage of the 3R and 4R acts, unprecedented federal rail planning effort took place; the private sector rail firms had always done any necessary financial or market development planning for themselves as a general matter of normal business operation.

The chief products of planning efforts by the Federal Railroad Administration (FRA), the U.S. Railway Association, and the Rail Services Planning Office involved rail system restructuring and the rationalization of high-density rail branch lines (4, 5, 6, 7).

As a basis for comment on federal planning, and to meet the requirements of the 3R Act for rail subsidy funds, approximately 17 eastern and midwestern states began their own rail planning efforts in 1973 and 1974. Initial state rail plans were completed in December 1975 and revised and updated on August 1, 1976. According to a federal ruling, further revisions will be made annually in August. Since the original midwestern and northeastern states entered rail planning, these planning activities have spread to virtually every one of the contiguous states.

A national rail planning effort is now well in hand, and we are moving from a first substantial experience with restructuring the rail sector, toward a level of government involvement in railroad management and operations that has been unknown in this country since 1920 when the railroads were returned from federal control during World War I to private operation. Now is a logical time to step aside from such detailed concerns as the appropriate data and methodology for rail planning, the measurement of primary and secondary impacts of branch-line abandonment, or the calculation of elements of subsidy determination, and to focus on the policy issues that should be faced in state rail planning.

Each state should ask what future role its railroads should play in freight and passenger transport. Other questions we must ask are: Should present rail technology continue indefinitely? To what extent are railroads in competition with other forms of transportation? Is rail financing a private sector responsibility or a public requirement? If the public must pay, how are the sums to be raised, and who will benefit from these expenditures? What is the role of the state in railroad safety and economic regulations? Because such policy issues seem to be glossed over more often than not by state planners newly charged with rail responsibilities, this paper will present a set of rail policy issues, describe state planning requirements under the 4R Act, and evaluate how well these important policy issues are being handled in state rail planning.

RAIL POLICY ISSUES

In 1976 the Transportation Research Board’s executive committee developed a list of transportation issues it considered to be the most critical for the near future (8). With some adjustment to fit the nature of the rail mode, these policy issues can be discussed as basic to the state rail planning process.

Energy Efficiency in Transportation

There appears to be no national issue of more immediate and pervasive importance to transportation than that of minimizing the use of energy, especially petroleum. Railroads are generally portrayed as more energy efficient than highway and air transport but less than water and pipeline transport. This is a simplistic notion because certain rail operations, such as ones typified by light density branch-lines, may be large users of energy compared with motor carriers (9). Likewise, railroads are not as energy efficient in moving people as they are in moving freight. However, for high-volume movements railroads need not rely on the internal combustion engine; they can use electrification. If state policy is to promote energy efficiency, how does achieving such a goal enter a state rail plan?

Transportation and the Environment

Air, water, and noise pollution can be produced by railroad operations. General national and state policy is to minimize the generation of pollution by the transportation modes. A rail planning process can weigh alternatives to determine the relative effects on the physical and social environments of rail movements compared with other modes. For some states, the movement of western coal by unit train can be compared with a pipeline alter-
Transportation Safety

Although the railroad is our most general common carrier, track conditions may be so poor that rail movement of certain hazardous materials is unwise. On the other hand, to avoid densely populated areas and to isolate hazardous cargo, it might be desirable to improve special sections of the rail system and, through regulation, to shift hazardous materials to the railroads. Safety can also be an issue concerning passenger trains running on poorly maintained track or grade crossings. While full grade separation between railroads and highways could be desirable if safety is accorded a very high priority, such possibilities as line consolidation and train scheduling to prevent conflict are alternatives for rail planners to investigate.

Intergovernmental Responsibility for Transportation Systems

Should states be the primary subnational focus for rail planning? States differ tremendously in area, interests, government powers, and other attributes related to rail transportation. Rail systems commonly traverse state boundaries, thus making regional compacts or close coordination necessary for such significant actions as revising mainline configurations. Which division of responsibility between states and the federal government is best? The question of intergovernmental relations extends to local government units that may have direct interests in rail services or may even actually operate short lines or maintain rail stations. Which should be the lead government agency, and how should each unit be involved in a planning process?

Transportation, Land Use Control, and City Form

Railroads shaped the geography of many American cities and greatly influenced the distribution of industry throughout the country. The present rail system operates in a broad sense to permit regional competition and on the small scale to divide neighborhoods. The effect of railroads on land use remains quite strong. Therefore, depending on whether city form is a concern in a particular state, urban rail relocation may be a major study item for state rail planners. Because of railroad influence on regional growth, every state rail plan should investigate the effects of changed rail services on export industries that engage in production for regional and national markets.

Improvement of Existing Nonurban Transportation Facilities

The issue is in part how to efficiently use present systems in lieu of expanding. This raises the question of whether, and so to what extent, rail transport is competitive with other forms of transportation. The answer is likely to be found only by detailed examination of city pair markets, by investigating present and potential flows of goods and movements of people. From another standpoint, the issue is one of measuring excess capacity in railroading. If capacity can be reduced by branch-line abandonment, yard consolidation, and mainline mergers, then lower cost rail transport might result. Likewise, cost reductions can occur if excess capacity can be put to work by offering prices that cover operating costs and make some contribution toward capital recovery. A rail plan should be sure to investigate the extent of scale economics and economies of utilization, and the extent to which any such economics might be offset by a loss of competition.

Transportation System Performance Criteria and Design Standards

Before improving existing facilities or making investments in new railroad track, yards, or equipment, investment analysis methods must measure the effectiveness of the various proposed expenditures. Analyses should be performed regardless of whether the investments are made with public or with private resources. In the foreseeable future the federal, state, or local funds that may be spent on the railroads will be limited. With a 1.2 percent rate of return in 1975 (11, p. 20), the railroads are able to generate very little private capital. Any state rail plan must determine which level of service or what economic return will accrue from the application of these limited funds.

Financing Requirements and Alternatives for Transportation Systems and Services

Are railroads to be treated as public goods, or should rail users continue to provide the great majority of rail revenue needs? The pricing of rail services for users is a complicated issue that depends for resolution on the allocation of railroad costs, public treatment of competing modes, and determination of the extent to which value of service pricing can continue in the industry. If the public is to finance some or many railroad operations as public goods, tax sources need to be found. Perhaps, as Secretary of Transportation Adams has suggested, the federal government should be considered a lender of last resort for all transportation right-of-way capital needed (12, p. 5).

On the other hand, transit has only recently escaped the capital bias problems of such a public policy. Moreover, right-of-way subsidy through low-interest loans may not be sufficient to bring about desired public purposes and can create inequalities from different modes' production functions or different mixes of capital and operating expenses. Any state rail plan will have to resolve funding sources, amounts, and controls if rail services are to be supported in part by state and local government. In a broader sense, states will have to decide whether they wish to aid all the competing modes of transportation, even in some "balanced" way, because of the stimulus given to production of transport services rather than other goods and services generated by the economy.

Effects of Transportation Regulations

Extensive economic regulation of rate and service competition has been cited as a major reason for the poor performance of the rail industry. Regulation takes place at the state level as well as under federal statutes. Should state rail plans analyze the impact of varying state regulatory controls? Regulation is said to stifle innovation. How, then, might innovation and change in
railroading be encouraged through regulatory revision? Because regulation of interstate rail rates has sometimes been applied as a protective device for a state’s industry, the removal of state rate regulation should be analyzed to see if it would have broad effects on industrial location and employment.

Transportation System Maintenance Technology and Management

The challenge of developing a transportation system, such as the building of the railroads, seems to encourage the quick advances in technology needed to put the system in place. Maintenance of that system, however, attracts less interest and encourages less innovation. Making an established rail system work better through joint usage, support of intermodalism, and coordination is difficult, but these issues cannot be neglected by state rail planners.

The Transportation Research Board’s 10 critical issues, of course, do not cover everything. State rail plans should probably be even more comprehensive than the above discussion would suggest. For example, the 10 issues relate only tangentially to labor and management relations in railroading. The evident need, however, is for state rail plans to be concerned with addressing and resolving as many of these critical policy matters as are important to each individual state.

Let us now turn to a review of what state rail plans must encompass under present federal laws.

STATE RAIL PLANS

The 3R and 4R acts, taken together, constitute the most far-reaching legislative changes made in the past 50 years regarding railroads. In addition to authorizing $2.1 billion for the Consolidated Rail Corporation startup costs, $1.75 billion for Northeast Corridor passenger trains, $1.6 billion in loan guarantees plus redeemable preference shares for nationwide rehabilitation programs, and $125 million for rail commuter services, the 4R Act revises Interstate Commerce Commission procedures and institutes a large number of studies. However, none of these activities mandates the input of states, nor do six of the seven substantive titles of the 4R Act require comprehensive transportation planning as a basis for execution or implementation. (Title I contains policy statements and definitions; Title IX requires studies and contains miscellaneous provisions.)

Title VIII—local rail service continuation—is the one portion of the 4R Act that calls for state plans. It establishes a national rail service assistance program for freight lines, through which states can direct funds in accordance with an approved plan to keep abandoned services in operation for 5 years. Some $300 million are authorized for rail operating subsidy, line purchase or rehabilitation, and "the cost of reducing the costs of lost rail service in a manner less expensive than continuing rail service." In order for states to receive funds, the law requires a state to "establish an adequate plan for rail services in such state as part of an overall planning process for all transportation services in such state." These state planning requirements of the 4R Act differ from the 3R Act only in ordering the rail plan to be part of an overall planning process. Earlier versions of the 4R Act were worded so as to make the rail plan part of an overall state transportation plan.

FRA Requirements for State Rail Plans

The rules and regulations under which the 4R Act is administered by the FRA interpret congressional direction for an adequate state rail plan in considerable detail. The requirements may be summarized as follows (13).

1. Rail plans are to be based on a comprehensive, coordinated, and continuing process for all transportation services in the state. Participation in the process by the public and adjacent states is mandated.

2. States are to explain the philosophical framework guiding development of the plan and to specify the planning process used, giving particulars as to state rail policy and objectives, data, assumptions, methodology, and special problems or considerations.

3. The state rail system is to be mapped and classified. Services and traffic are to be described. A broad overview of all services is anticipated, but concentration is expected to focus primarily on services eligible for subsidy.

4. For lines eligible or potentially eligible for subsidy, detailed freight flow, revenue, cost, plant equipment, and demand information is to be provided. Effects of abandonment on the state’s transportation needs are to be analyzed. Relative economic, social, environmental, and energy costs and benefits involving alternative rail services or modes are to be calculated; competitive effects and potential operating economies are to be investigated. Pros and cons of all alternative projects are to be described.

Narrow Focus of State Rail Plans

Although the general federal requirements for the urban transportation planning process common to all modal administrations of the U.S. Department of Transportation are repeated in the rail plan regulations, the chief focus of the plans is on potential projects for subsidy funding. Only for those lines where funds might be applied are full analyses to be made. Lines not eligible for subsidy, rail bottlenecks, and rail services generating substantial shipper dissatisfaction are not matters for detailed study. Although this focus is defensible given the nature of the 4R Act, the result is to segment state rail interests and to prevent the comparison of subsidy-eligible projects under Title VIII with other potential rail investments. Only a very few of the critical rail policy issues discussed earlier are covered by the FRA planning requirements.

CONCLUSIONS

At this stage in federal and state rail planning, conclusions about the applicability of various planning methods, the need for particular data, the cooperative institutional framework in which planning will take place, or even the end results of having begun a rail planning process are purely speculative. Yet, it is clear that rail planning has been envisioned as short-run in terms of the planning horizon and narrow in scope from the standpoint of approaching rail industry revitalization, largely in regard to branch-line changes. It is equally clear that such a narrow focus neglects addressing at least 10 critical policy issues. Ideally, a more broadly based plan and planning process would describe how a state can attain input efficiency and generate superior technology and therefore create a better product—improved rail transport services. The key concerns of utilizing excess rail capacity and equalizing competitive opportunity among the modes of transportation would be resolved in the all-mode context of the state.

If state rail plans do not become more broadly based to encompass critical policy issues, rail planning will suffer the worst possible fate: It will become superfluous
and have little policy impact. Rail planning has advanced too far in the few short years of its existence not to meet this further challenge.

ACKNOWLEDGMENTS

The opinions expressed in this paper are mine alone and do not necessarily express the views of the Wisconsin Department of Transportation or any other institution or person with which I am affiliated. The efforts of the following people in developing Wisconsin's Rail Plan are gratefully recognized: Leigh Boake, William Hyman, Mark Keaton, and Mark Wolfgram. I also wish especially to thank James C. Nelson of Washington State University, who first introduced me to the full range of issues, problems, and prospects in railroad transportation.

REFERENCES


Publication of this paper sponsored by Committee on State Role in Rail Transport.

Current State Rail Planning and Research Needs

William R. Black, School of Public and Environmental Affairs, Indiana University

The major problems of the railroad branch-line subsidy program are identified. An alternative program that utilizes rail and motor carriers is proposed. This alternative appears to be more efficient from economic, environmental, and energy perspectives. Other research areas related to state rail branch-line planning include areas of competition, shipper roles, liability risk, taxation, prioritization and the identification of alternatives, state role in rail traffic generation, structure of management incentive fees, and labor cost issues at the microlevel. Other problems presented are in areas of freight forecasting, rail patron credibility, energy utilization and environmental pollution, transportability of products, and highway impacts at the microlevel.

The origin of what has come to be called state rail planning has been presented by Kinstlinger (1), Fuller (2), and others (3, 4). The process itself grew out of the bankruptcy of seven eastern railroads and the federal legislation enacted to cope with that problem. The purpose of this paper is to evaluate present state rail planning and what its future field will be. A number of significant research needs will be presented. First, however, two major problems related to state rail planning must be identified, because they are so large in scope that they are either accepted as given or ignored.

TWO MAJOR PROBLEMS

The first major problem is that there are rail lines being operated under subsidy that should not be. Specifically, most companies that now use subsidized rail service do not need it. They do need transportation, but the motor carrier sector could provide the service at a lower total cost than the rail sector does. The term "cost" as it is used here is broadly defined and incorporates social, environmental, energy, and economic components.

The second major problem is that no one appears to be looking at the rail situation as part of the total national picture. Apparently we do not have the bureaucratic or organizational ability to integrate the disparate visions into a single scene. If we did, we would not be either abandoning more than 4830 km (3000 miles) of rail line this year or subsidizing another 4025 km (2500 miles). In a period of concern over energy consumption, it is unreasonable to remove rail lines from service; at the same time, it is unnecessary to operate branch-line service if trucking is more efficient.

Although the former says we are subsidizing too much and the latter too little, the problem is not insoluble.