

U.S. DEPARTMENT OF TRANSPORTATION
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20590

STATEMENT OF JOHN W. INGRAM, FEDERAL RAILROAD ADMINISTRATOR,
BEFORE THE HOUSE SUBCOMMITTEE ON TRANSPORTATION AND AERONAUTICS
OF THE HOUSE INTERSTATE AND FOREIGN COMMERCE COMMITTEE,
REGARDING THE TRANSPORTATION REGULATORY MODERNIZATION ACT --
H.R. 11826, MONDAY, MARCH 27, 1972.

Mr. Chairman and Members of the Subcommittee:

I am pleased to have the opportunity of appearing before you today to present the views of the Department of Transportation on certain portions of H.R. 11826. Appearing with me today are Dr. Alan McAdams, Senior Staff Economist, Council of Economic Advisors, and Dr. George Eads, Special Economics Assistant to the Assistant Attorney General, Antitrust Division, Department of Justice.

H.R. 11826 states that "The Secretary of Transportation, within one year following the effective date of this act, shall establish and promulgate rules and regulations concerning the establishment of a uniform cost accounting method by carriers subject to this part. Such rules and regulations shall prescribe the elements of cost to be included in determining the carrier's variable and fully allocated cost." My testimony will concentrate on some of the concepts and factors that the Secretary will use in prescribing the elements of cost to be included in determining the carrier's variable and

fully allocated costs. These cost standards are central to the rate-making portions of the Act which would require that the variable cost to the carrier providing the service be an absolute rate minimum in all cases.

The economic justification for this requirement is that any rate below variable cost would provide a partial free ride for the shipper which is contrary to the National Transportation Policy. Any rate above variable cost not only covers these expenses but makes a positive contribution to the carrier's overhead and profits. For variable cost to yield the results desired as a rate minimum, it should include all those costs for the carrier that change with the provision by the carrier of an additional block of service. All these costs that do not change with the provision of this service--and thereby would be incurred whether or not the firm provided service--are considered to be fixed costs with respect to this service.

Using variable costs as a rate minimum is intended, among other things, to: (1) allow each carrier to compete for traffic on the basis of its own characteristics such as the degree of utilization of its plant and equipment, and its efficiencies, traffic characteristics, services, competitive environment, etc.; (2) encourage more effective management with respect to the pricing in accordance with the economic cost of producing the service and the conditions of demand for that service; (3) protect against the uneconomic effects of pricing

below variable cost; and (4) minimize the impact of regulation on competitive business management consistent with the protection of the public interest. This clearly implies that variable cost incurred in providing any service may be different for different carriers. While these principles apply to all modes, the remainder of my testimony will deal specifically with the railroads.

The importance of accurate cost information to the railroad industry goes beyond costing for the ratemaking limits contained in the Regulatory Modernization Act. Accurate economic costs constitute a major portion of the solution to a variety of problems facing the industry, including slow and erratic service, car shortages and poor financial conditions. In order to demonstrate the impact of the development of economic costs on these and other problems, it is illustrative to consider the major aspects of railroad operations.

The railroads are involved in the movement of weight and volume through space in order to create time and place utility for the commodity being transported. The provision of rail service requires three basic capital elements: the car, the locomotive, and the way (or track) plus the attendant facilities (terminal facilities, administration offices, etc.). The production of service using these facilities also requires the use of labor, materials, and supplies. Similarly, the analysis of railroad costs requires attention to each of these factors individually and as a whole. Conversely,

efficiency in production requires control over each factor of production and the costs associated with its use. A major aspect of the problems facing the railroads today is the lack of control over the productive facilities and the failure to properly account for the economic cost of producing rail services.

In determining the variable cost related to a specific movement, at least the following cost categories must be taken into account: terminal, switching, interchange, line haul, special service and overhead costs, all of which may vary directly with the additional service provided. Each of these categories may in turn be broken down into components of labor, material, equipment, and facilities. The degree to which costs vary depends on a variety of factors. For example, line haul costs are influenced by the length of the train, the weight hauled per train and per axle, the effect of track quality on train speed, energy consumed in hauling, the terrain over which the track is laid, and so on. The variable overhead would include those costs which may be charged to an overhead account within the accounting system, but which actually vary with the additional service provided. An example would be the installation of new signal equipment made necessary by the introduction of a unit train. The cost of the new equipment is a variable component of overhead in this situation. A similar analysis applies to the other operations mentioned above.

Each of the above factors would also be affected by a utilization--capacity factor. This factor is necessary to account for the capacity which a railroad must maintain in order to meet its obligations of service; costs which are incurred in addition to the operating, or "running" costs of the railroad.

To illustrate, let me give you a non-railroad example that is close to home -- the capacity-utilization costs associated with providing taxi service here in Washington. The running cost of a taxi (including a return on capital) might be as low as 12-15 cents per mile. To this must be added the cost of the driver. Quite obviously the rates charged by the taxi cab are greatly in excess of this amount. Where does the remainder go? Not to profit, according to the complaints we hear from the cab drivers. Instead it goes to pay for the cost of having enough taxis cruising the streets so that one will be passing in front of the Rayburn Building in need of a fare at the precise time you wish to hail a cab. It may be that to assure this, a rate three times the total running cost of a cab could be required, and that cabs, on the average, would be looking for fares 2/3 of the time. "Good service" requires that a lot of capacity be available. And capacity costs money. The higher the rate, paid for using the cab, the more the capacity that will be offered and the easier it would be to catch a cab. The lower the rate, the more difficult it would be. The same is true with railroads

(or other carriers). Cars must be empty and available in order for a shipper to ship when and where he wants. And that costs money.

Capacity costs are influenced by a number of factors. The basic principle for determining the influence of those factors is implied by the question: To what degree does total cost of providing capacity change with the provision of an additional block of service? Asked in this way the question leads to the following principles. First, in relation to the quantity of total service demanded in the system:

- (a) If service is to be provided when the total demand on the system is low, the impact on total costs of providing additional service is relatively small.
- (b) During periods of average total demand on the system, the impact on total costs of providing additional service is of average magnitude.
- (c) During periods of peak demand the impact on total costs is large. Additional plant and equipment must be purchased, or some service currently provided must be cut back to provide for the new.

Second, with respect to the predictability of demand:

- (d) Service which is known to be required and whose payment is guaranteed by the shipper, leads to a lesser increase in total costs than unpredictable demands (no safety margin for the unexpected

is necessary).

And finally with respect to the quality of service provided:

- (e) Very rapid service to one customer with guaranteed delivery time can imply the need for stand-by equipment for the carrier, the need to slow service elsewhere in the system in order to provide rapid service to the one customer, etc. Slower service to others in the system may imply added capacity costs -- equipment is tied up for a longer period in delivering the same goods -- and these costs are rightly attributable to the more rapid service.
- (f) If a shipper agrees that his service can be interrupted in favor of other customers, it might cost less to supply service to him.

It is apparent that these principles are applicable to all carriers that have a stated service obligation. However, there are additional factors which must be taken into account when dealing with the railroads.

The freight car is both the primary factor of production and the factor over which the railroads have the least control. The physical control of freight cars is divided among three entities: the owning railroad, other railroads and the shipper. Thus in costing this factor of production, each of these entities must be considered.

While little can be done immediately to improve the extent to which a railroad has control over its own cars, charges for the use of these cars by other than the owning railroad can be made to reflect the economic cost of making those cars available to the railroad system.

The shipper has control of the freight car for loading and unloading. For these purposes, the railroad allows the shipper a certain amount of "free time" to get the job done. Retention of the car beyond this time results in an extra charge to the shipper call "demurrage." The minimum demurrage rate should be set equal to the cost to the railroad of not being able to use that car. In other more precise words, that rate should be the opportunity cost to the railroad of not being able to employ the car in alternative revenue producing uses.

The opportunity cost depends, as you might expect, on the opportunities available to the railroad to use the car. The cost can assume three general levels depending on the conditions of demand for cars. Under normal conditions of demand the cost to the railroad is equal to the cost of finding or providing another car -- that is, the long-run marginal cost of owning a car. During periods of slack demand, the opportunity cost may be low, even very low -- the railroad couldn't do much with the car even if it had been released by the shipper. An economist would call this the short-run marginal cost of owning the car. Finally, in periods of peak demand, the

opportunity cost is the long-run marginal cost of owning the car or the revenue foregone because the car was unavailable for load, whichever is greater.

The development of demurrage rates that reflect the above opportunity costs will not directly enhance railroad control over their cars, but the railroads will be properly compensated regardless of whether the car is retained by the shipper or released to the railroad. The car will earn its keep for the owning railroad no matter where it is.

The second condition under which a railroad loses control of its cars is when these cars are on the lines of another railroad. There is a "per diem" charge for both the time and mileage use of the car by a foreign railroad. This per diem rate should be based on the long-run marginal cost of owning and maintaining the car. The per diem rate should provide no incentive for a healthy railroad to use another railroad's cars rather than owning and operating its own--again, because the cars would be fully compensated for while on another carrier's system.

The above analysis of car related costs is somewhat simplified. Both per diem and demurrage are subject to a variety of regulations which would also have to be reconsidered in light of the establishment of economic charges. Furthermore, the above analysis applies most specifically to free-running equipment although the concepts must be implicitly applied to the assigned service equipment also.

The development of these costs will require specific consideration of the car type, degree of utilization (as well as the impact on costs of increased or decreased utilization) and the useful economic lives of the equipment. This calculation must be based on the current cost of replacing the car's capacity. The use of replacement cost instead of the presently used original cost may require phased introduction. The secretary will consider this possibility when developing the cost procedures pursuant to passage of the bill.

Another consideration is the differential of service, which is represented by, but not limited to, such factors as guaranteed versus interruptible service on the part of the railroad, guaranteed timing of shipments by the shipper, and frequency of shipment. Each degree of service has different cost implications. The best way to visualize differential service is to compare it with the level of shipments and the costs this implies. From this level, the railroad should be able to offer a greater or a lesser degree of service. An example might be a guarantee on the part of the shipper that he will ship a specific quantity on a given day each week. This would reduce carrier costs if such knowledge allows the railroad to provide precise capacity more efficiently. On the other hand, guaranteed rapid delivery by the railroad may imply higher costs.

The implementation of this approach to costing will result in two major changes. First, the utilization of the equipment will improve with a consequent reduction in overall railroad costs. Second, the available fleet capacity will increase as a result of the development of an economically optimum size car fleet. The primary impact will be an enhanced ability to satisfy shipper demands.

In summary, the variable cost measure must relate to the total railroad operation -- freight cars, terminal services, line haul services and administration -- taking into consideration the costs of each service level and rate of utilization. Only by identifying and specifically including each of these elements in the variable cost measure can the railroads and shippers make economic decisions with respect to alternative methods of operation, and their corresponding levels of service and rates.

The accurate identification of the economic variable cost of supplying railroad services will have several impacts. First, it will enable the railroads to identify areas where efficiency can be improved under existing technology with a consequent reduction in costs. Second, the cost of supplying different levels of service will be identifiable, which will

facilitate the establishment of rates that reflect those differences. Third, the impact of improvements in utilization on variable costs can be ascertained and reflected in the rate levels. Fourth, all railroad rates would more accurately reflect the economic variable cost of supplying the service.

Cost analysis of the type described above is not unique. In fact, it is commonplace, and the applicability to the railroad industry is clear. The concepts have been applied in a variety of industries and also some of the more successful railroads. However, costing in accordance with the concepts described above will require the implementation of some methodologies not now universally used in the railroad industry. Similarly, in order to obtain the necessary information, it will be necessary to improve the accounting and data collection procedures now in use. However, the improved costing will indicate where improvements in existing operating technique, utilization, and service levels can be made; and market oriented rates will replace a rigid rate structure. The shipper will benefit from rates that reflect the cost of supplying the services and improved service levels. The Nation will benefit from improved efficiency in the use of resources both in transportation and industry.

Thus far, I have concentrated on the rate floor contained in the bill. Now let me turn briefly to the rate ceiling.

The upper rate limit contained in the Regulatory Modernization Act, which applies where there is no alternative effective competition, is 150 percent of fully allocated costs. The purpose of this provision is to protect the captive shipper from excessive rates while, at the same time, allowing the carrier to retain a significant amount of rate-making freedom.

The total cost of the firm can be broken down into variable costs, which are those costs that change with the level of output (and which were discussed above) and constant costs, which are those costs that are unaffected by the level of output.

Fully allocated cost is equal to variable costs plus an appropriate share of overheads and other constant costs. There are many ways to define an "appropriate" share. However, the spirit of this legislation implies that a pro rata share of constant costs is the appropriate share to use in this case.

Some portion of the constant costs may be incurred on behalf of certain types of services, in which case those costs should be allocated only to those services. For example, railroad-owned coal wharves cause the railroad to incur some constant cost, but those costs should be allocated only to coal shipments and not to all rail traffic.

The proposed bill states that fully allocated cost shall be calculated on the basis of the standard weight shipments for the commodity loaded in the standard equipment used for the transportation of such commodity or commodities. This point requires some further amplification. Operating costs vary by size of car and by loading weight. If the Act were interpreted to mean that a rate could be no greater than 150 percent of fully allocated cost for all car sizes and weight loadings, the railroad would have an incentive to use inefficiently small equipment. For example, in moving from a smaller to a larger car, although costs would be reduced, the rate ceiling would have to be reduced by 150 percent of any such cost reduction. Such a disincentive is clearly undesirable.

Therefore, we propose to interpret the standard weight provision as the minimum published tariff weight. The permissible mark-up above fully allocated cost would be 50 percent of fully allocated cost at this minimum tariff weight. To determine the rate ceiling for any other tariff weight, this mark-up would be added to the fully allocated cost at all higher tariff weights. This interpretation would retain the desired incentive for the railroad to use the most efficient equipment to move the traffic while still protecting the shipper from having to bear an unacceptable share of attached expenses.

Mr. Chairman, that completes my prepared statement. I will be happy to answer any questions the Committee may have.