

STATEMENT OF JOHN M. SULLIVAN, ADMINISTRATOR OF THE FEDERAL RAILROAD
ADMINISTRATION, BEFORE THE SENATE COMMITTEE ON COMMERCE, SCIENCE AND
TRANSPORTATION, SUBCOMMITTEE ON SURFACE TRANSPORTATION, CONCERNING
PROPOSED NORTHEAST CORRIDOR LEGISLATION.

February 29, 1980

Mr. Chairman and members of the Subcommittee, I appreciate the opportunity to testify on behalf of proposed legislation to authorize additional appropriations for the Northeast Corridor Improvement Project.

About a year ago you met to hear the results of the Department's Redirection Study, which had been initiated by Secretary Adams in January 1978. At that time the Department estimated an additional \$654 million and an extension of the schedule to late 1983 would be required for completion of the bulk of the work. We stated our intention to submit proposed legislation very shortly after a more thorough, in-depth review of the Redirected Program. We were optimistic at that time about our 1979 work program, but that optimism was based more on positive thinking than past performance.

Today, I have some good news. We have just completed by far the most successful season of track work in the Project's history. Track work is our largest program subsystem and vital to the achievement of 4R Act goals. This is proof of solid achievement, not just optimism. Construction activity is picking up, and our effectiveness in the track work area at the end of 1979 was measured by a 97 percent cost efficiency, (70 percent of

scheduled work completed for 72 percent of budgeted cost), as compared with a 69 percent cost efficiency in 1978 and a 47 percent cost efficiency in 1977. Despite this progress, a \$750 million authorization increase is essential if we are to complete the project satisfactorily, and work, especially on the north end, will continue through 1984 and, perhaps, into early 1985.

Rationale and Methodology of Determining \$750 Million

Since we have already transmitted our estimate of the need for additional funding in a letter to the Chairman of this subcommittee, dated December 7, 1979, and in proposed legislation, it seems appropriate to review the rationale and methodology by which we arrived at the \$750 million increase. The development of the revised cost estimate began with the Redirection Study. That study was oriented toward an evaluation of options and selection of a recommended program scope. It defined a set of features that would be needed to satisfy the mandated goals in light of projected 1990 demand.

Although done to a level of detail and realism far greater than previous estimates, the costs of the redirection effort were not defined as accurately and comprehensively as they have been during this past year. In that time, we have performed a complete review of not only the costs, but also of the content of the entire program that was discussed with you a year ago. The depth of this review was further dictated by the realization last summer that the recommended program would cost up to \$2.9 billion instead of \$2.4 billion. Faced with an increase of this magnitude, we felt that a reexamination of the basic planning premises

was called for.

A key ground rule was that potential improvements should be limited to those that were essential to meet system goals in 1985, particularly the explicit NECIP goals of the 4R Act. Implicit in this decision was the reconsideration of certain projects that were maintenance-oriented or that mainly depended on projected demand for the 1985-90 period. This last decision has effectively committed the Department to a policy of supporting Amtrak's future NEC capital needs to meet increased demand and to correct other specific items when necessary.

After measuring the revised costs of all elements of the recommended program in light of these ground rules, a \$2.5 billion program was judged to be a suitable limit of involvement in the NECIP under which the goals of the 4R Act could be met and Amtrak would have a system capable of expansion to meet future needs. This limitation was necessary to face up to the economic realities presented by increasing costs and to give recognition to the evolving capabilities of the principal participants in the management and execution of corridor improvements. I have included for the record, the letter that the Department sent to Senator Cannon and to the Chairman of this subcommittee this past December explaining the basis for the changes in our cost estimates and what various program levels would buy. I will now touch briefly on some of the key steps in the process by which we derived these costs.

First, the specific projects of the recommended program were analyzed and rescoped at a detailed engineering level, to assure ourselves that all remaining features were oriented toward achieving system goals.

Costs of all projects were then estimated in mid-1977 dollars, which were used as the base in all later cost calculations. The implementation of all projects was sequenced and scheduled, with critical regard for problems of track access and outage. Amtrak, closely assisted by DCP, played the lead role in developing these schedules. With the time frame established for accomplishing the work, DCP applied inflation factors to each project that had not been completed. Inflation factors were applied to the base mid-1977 cost to produce final current dollar estimates.

The results of our review, revision, and recalculation are summarized in a series of documents which were completed over this past year. We have brought copies with us for your inspection. These documents follow a progression from the conceptual definition of program element requirements provided in the System Performance Specification (SPS), through the Program Requirements Document (PRD), which describes in engineering detail the improvements needed to meet the SPS, the construction sequencing contained in the track availability schedules depicted in the so-called "Green Plan," to the Corridor Master Plan (CMP) which consolidates and summarizes project scope, schedule and cost.

We think that the planning and programming that has culminated in these documents represents a unique accomplishment in that, although railroads have been built elsewhere as straightforward engineering projects, none has attempted work of this dimension on a heavily used line where high speed intercity, commuter, and freight operations have to be maintained.

Project Scope and Benefits

The main features of the program resulting from the process I have just described are enumerated in attached tables which show the installed value by state for both the total program and the additional \$750 million. I have also attached a schedule that shows the present and future trip times we anticipate when the project is completed.

We have always considered the NECIP as providing benefits other than to the rail passenger. The use of electric traction reduces reliance on petroleum fuels and produces less noise and fewer air pollution effects than either diesel locomotives or other alternative transportation modes. The long-term socioeconomic benefits of the NECIP will be significant. It has been estimated that the employment during the construction period alone will be in excess of 30,000 person-years of labor, which should have a major impact on the local economies of the NEC cities and in the areas where NECIP procures materials and equipment. In addition, the operation of high speed rail service is expected to create approximately 3700 permanent jobs in 1990. NECIP construction is anticipated to have a continued strong positive effect on minority business enterprises.

The highest potential for induced development is expected in urban station areas where revitalization programs are underway or are contemplated by local authorities. Preliminary studies conducted by FRA in conjunction with the Coalition of Northeastern Governors (CONEG) have identified station-related urban development projects in the pipeline which exceed the cost of the NECIP in construction value.

As I mentioned earlier, the use of electric traction will eliminate the need for diesel locomotives from New Haven to Boston and by 1990 will permit the use of non-petroleum fuels for 85 percent of the power required in the south corridor and 60 percent in the north corridor.

Projections indicate that by 1990 there will be an annual net energy savings equivalent to 171,000 barrels of oil. This energy savings is all attributable to petroleum based products. On a per capita basis, NEC states have the lowest fuel consumption when compared with the rest of the country (table attached). While the country outside the NEC increased its fuel consumption during January-July 1979 by .3% over the first half of 1978, the NEC states reduced their consumption by 1.8% (table attached). With increased availability of public transit systems, such as the NECIP, the NEC energy dependency will further decline, thus helping those states and communities where high capacity transit systems are not economically feasible.

Future Maintenance and Operations

The improvements or requirements developed for the NECIP in the Redirection Study of January 1979 were those improvements thought necessary to meet the goals of the project through 1990 and give Amtrak a sound basis on which to meet expected demand. Any further scope reduction from these basic projects will have an impact on Amtrak's future capital and operating budgets.

Future track, signal, electrification, and structure projects would be expected to produce improvements in maintenance costs.

Our decision to reduce scope in the maintenance of equipment service facility area, which were minimal, should have little, if any, adverse effect on Amtrak's operating and maintenance costs until our forecasted demand actually starts to materialize. The need for additional MOW bases will depend upon the economics of the situation, such as increased ridership and resultant increased maintenance requirements. One side benefit of this approach is that Amtrak will have an opportunity to "live with" the five existing bases to determine whether any changes are needed in the design and equipping of additional future bases.

In the post-NECIP time frame Amtrak will continue to carry all operations and maintenance responsibilities of the NEC as they now do. These responsibilities will include development of annual capital improvement budgets that will include work currently planned for the post-NECIP time frame.

Converting Electrification in the South

We have reviewed the condition of the electrification system between New York and Washington and the circumstances surrounding the conversion of commuter cars and have determined that delaying the conversion to commercial power at a higher voltage will have no impact on achieving the mandated trip times in the near term. However, there is a clear limitation on the ability of the present system to provide the power capacity to service the projected 1990 demand for combined intercity, commuter and freight operations.

The decision to postpone the electrification conversion clearly recognized certain technical limitations in the existing 45 to 65 year-old system.

The catenary current limitation of approximately 1500 amps will curtail the length of trains scheduled to meet the trip time goals to about 7 or 9 cars. When ridership demands exceed this capacity, additional trains will be required. The total generation capacity of 25 Hz power is adequate to operate the projected system in the mid 1980's but any unexpected major component failure would probably result in all trains (Amtrak, commuter and freight) being operated temporarily at slower speeds during the rush hours. The total power demand during the peak hours has significantly increased over the years as approximately 300 new high performance commuter cars replaced older ones and the increased power demand of higher speed trains will add a further load to the electrification system designed for an earlier era.

In one respect the decision to delay the electrification conversion on the south end was a difficult one, for who doesn't prefer a new automobile to an overhaul job. The certainty of a significant impact on Conrail's and the commuter authorities' abilities to plan for and to adapt equipment and other facilities to the commercial power of the converted system convinced me that delaying this improvement would be more beneficial over the long run to all parties concerned. With respect to future planning on this point, Ted Lutz, the Administrator of the Urban Mass Transportation Administration, and I have agreed on a long term evaluation of the entire electrification system south of New York.

Amtrak Breakeven

We believe, based upon available data, that Amtrak will reach a breakeven point where revenues equal operating costs by approximately 1990. After

the initial traffic growth resulting from the high speed service itself, we have assumed that additional ridership will be attracted through growth in the economy and increasing disposable income in later years. Except for equipment, little additional cost is associated with the ridership growth. The recent rapid increase in gasoline prices would have a positive influence on ridership and thus on the likelihood of the project breaking even financially. You may wish to refer to Chapter 5 and the associated appendices of the Two-Year Report on the Northeast Corridor for some of the supporting analysis for this conclusion.

Relationships Between Users

It has been pointed out many times that the railroad we are working on is one that has developed over a long time into a heavily traveled multiple-user line. In 1979 Amtrak operated some 92 trains per day in the Corridor and carried about 11.2 million passengers. The suburban or commuter operators, exclusive of the Long Island Railroad, operated 489 trains per weekday, and Conrail operated approximately 100 through and local freights on an average day in 1979.

The relationship of various corridor users varies according to the geographic segment. Among the factors influencing this relationship are the size of the physical plant, the owner/operator, traffic flows and the types of traffic. Although there are a couple of notable exceptions, the current railroad configuration generally reflects today's traffic patterns, i.e., where the largest number of passenger, commuter and freight trains operate, there are three, four, or more tracks, and where there is less traffic, only two tracks exist. The current relationship

of the corridor traffic is basically a rail industry standard as far as priority of operations relating to passenger, commuter and freight traffic is concerned. The present corridor users coordinate their operation with the owner/operator of the particular segment of the corridor. To date the various traffic types are being adequately accommodated.

In the future more emphasis will be placed on the "goal" passenger train receiving operating priority. Recognizing this necessary emphasis and the requirements of commuter, other passenger, and freight trains, corridor planning has provided for improved physical plant, physical plant configuration changes, a new signal system, centralized traffic control on portions of the corridor, and communication improvements. To provide the best possible coordination of the corridor users, a Train Planning and Scheduling Unit has been established. This unit will produce the optimum operating schedules for all users under the prevailing conditions. The first schedule (timetable) produced by this group will be published in April 1980 to accommodate the traffic and the heavy improvement work scheduled for this year.

Responsibilities and Roles

You may recall, Mr. Chairman, that a year ago we reached an agreement with Amtrak on a Memorandum of Understanding that clarified the roles, responsibilities, and relationships of the main project participants. This MOU has helped immeasurably in smoothing the flow of planning and construction contracting on the project. At that time the major positions were defined with FRA responsible for the overall planning and execution of the NECIP; Amtrak as the major owner and operator as well as a prime construction contractor; and DCP as the consultant engineering firm under contract to FRA for planning,

design, program management support, and contract supervision and administration for FRA construction contracts.

During the course of the past year, Amtrak's role has been expanded to include a greater participation in construction activities. This has resulted from a desire by the Department to have Amtrak assume a greater responsibility for work related to the "live" railroad in which they were expected to provide a large amount of support. Amtrak's growth into a larger role is also consistent with their eventual assumption of full responsibility for future construction on the NEC in response to any increased demand and to carry out any improvements not considered a part of the NECIP.

Also in keeping with the shift of greater responsibility to Amtrak, DCP will be providing increased construction management support to Amtrak under provisions of a modification to the existing MOU and a companion agreement between DCP and Amtrak which has been agreed upon in principle by the parties involved. Both the revised MOU and the companion agreement should be executed within the near future.

The roles and responsibilities that have evolved during the past year find the FRA with reduced participation in the direct execution of construction on the "live" railroad while still exercising overall project management and control, establishing policy, preparing and presenting budgets, administering funds, and contracting for certain construction projects. As the project progresses towards completion, FRA's role will continue in budget and fund administration of the NECIP authorization. After that time, FRA will monitor the Amtrak capital and operating budgets related to any further corridor work.

As we are reporting to you today, we have settled on our recommended program content, a program that we feel confident will provide the system intended by the 4R Act. We have sharpened and improved the management of the project and through shifting of a greater share of responsibility to Amtrak, have established the basis for a smooth post-NECIP transition.

The significance of the NECIP, in terms of its contribution to national energy conservation objectives, lies in its capacity to accommodate intercity travel during energy emergencies, its ability to divert travelers from other modes more dependent on oil, and its ability to sustain a high level of personal mobility at a reasonable price which does not exacerbate the problem of inflation.

Thus, I would like to reiterate our judgment as to the enormous value of the project to the Northeast and to the nation; not only for the reasons I have just given, but also in fostering sorely needed economic development, and significantly enhancing the capability of one of the region's major alternative transportation modes.