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Transportation

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DEPARTMENT OF TRANSPORTATION AGENCY TEAM REPORT

NATIONAL PERFORMANCE REVIEW

INTERNAL WORKING DOCUMENT -- NOT FOR DISTRIBUTION
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NPR TEAM MEMBERS: John Hwang, Karla Corcoran, Tom Talleur, Wayne Leiss,
Regina Begliutti, Randy Rupp

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Section I
Introduction

Introduction

The Department of Transportation (DOT) was established in 1967. Its role is to assure the coordinated and effective administration of transportation programs and to develop national transportation policies and programs. Today, DOT employs nearly 108,000 military and civilian employees and has an annual budget of \$36 billion. It is comprised of ten operating or "modal" administrations. Each of these modal administrations plays an important role in meeting the nation's transportation needs. Working together, these administrations strive to provide a truly "intermodal" American transportation system in which information, goods, services, and people travel safely and efficiently through the use of various modes of transportation.

Until recently, the modal administrations within DOT consisted of the: Federal Highway Administration (FHWA); Federal Aviation Administration (FAA); Federal Railroad Administration (FRA); United States Coast Guard (USCG); Saint Lawrence Seaway Development Corporation (SLSDC); Maritime Administration (MARAD); Federal Transit Administration (FTA); National Highway Traffic Safety Administration (NHTSA); and the Research and Special Programs Administration (RSPA). Most recently, with the passage of the 1991 Intermodal Surface Transportation and Efficiency Act (ISTEA), the Department established the Bureau of Transportation Statistics (BTS).

The Federal Highway Administration is involved in all aspects of the nation's highways, including research and development, planning, design, construction, operation, and maintenance. Through a program of federal grants, FHWA also assists state and local governments in the financing of highway and bridge projects.

The mission of the Federal Aviation Administration is provide a safe and efficient aviation system. FAA develops and operates the nation's air traffic control system for both civilian and military aircraft, and is the largest organization within DOT, employing approximately 53,000 people.

FRA's mission is to promote and enforce railroad safety nationwide. As part of this mission, the FRA administers financial assistance programs for certain freight and passenger railroads, and manages research, development, and demonstration projects aimed at achieving national railroad safety goals. FRA also represents the Secretary of Transportation on the

Amtrak Board of Directors.

The United States Coast Guard has a multi-mission role, which includes search and rescue, law enforcement, pollution response, and national defense. The USCG operates a fleet of over 1,500 vessels, 70 fixed wing aircraft, 140 helicopters and maintains over 450 shore facilities located throughout the 50 states. It is the second largest operating administration within DOT, with approximately 39,000 military and 6,000 civilian personnel.

The Saint Lawrence Seaway Development Corporation is a wholly-owned Government corporation created to construct, operate, maintain, and develop the Saint Lawrence Seaway. The Saint Lawrence Seaway is an international waterway extending from the Atlantic Ocean as far inland as Duluth, Minnesota, a distance of 2,342 miles. The Corporation is also responsible for navigation on the Saint Lawrence River from Massena, New York to Cape Vincent, New York, a distance of about 90 miles.

MARAD's mission is to promote the development and maintenance of an adequate, well-balance U.S. merchant marine and to ensure the availability of the necessary commercial vessels for sealift shipping to support the civilian economy in times of national emergency. MARAD also operates the United States Merchant Marine Academy in Kings Point, New York. This academy trains young men and women to become officers in the United States merchant marine.

The mission of the Federal Transit Administration is to provide assistance for comprehensive and coordinated mass transportation systems. FTA assists with the development of transportation facilities and equipment, encourages the planning and establishment of areawide mass transportation systems, and provides assistance to state and local governments to finance mass transportation systems.

NHTSA is responsible for conducting programs aimed at reducing injuries and fatalities resulting from motor vehicle crashes. NHTSA sets federal motor vehicle safety standards, automotive fuel economy standards, theft and bumper standards, and provides consumer information on motor vehicles and equipment. NHTSA also provides financial assistance to encourage and assist the states in the development and implementation of highway safety programs.

RSPA administers programs that cross modal lines. These programs include hazardous materials safety, pipeline safety, research and development, and emergency

preparedness. In addition, RSPA serves as the principal advisor to the Secretary on scientific and technical matters related to transportation.

The Bureau of Transportation Statistics was established by Congress in 1992. The role of BTS is to compile, analyze, and make accessible information on the nation's transportation systems.

The National Performance Review (NPR) and the Department of Transportation have worked together to develop innovative approaches to solving transportation needs, while at the same time, we have attempted to foster the goals of a truly safe and effective intermodal transportation system.

NPR has worked with DOT management, for example, to outline steps that can be taken immediately to facilitate an intermodal approach to program management and assure a coordinated approach to solving transportation problems. DOT is committed to streamlining management functions and is also examining the structure of its field offices to devise ways to better serve its customers. Other recommendations will reduce bureaucratic red tape by significantly simplifying the current method used to process any civil penalty violations for which the Department is charged with enforcing.

Through encouraging the use of innovative financing, the federal government can assist the states in leveraging the federal aid they receive and thereby generate additional private investment funds for state infrastructure projects. This approach, in turn, may reduce the need for future federal financial assistance and can be accomplished without any additional expense to the federal government.

By forming a government-owned corporation, the federal government can take advantage of market efficiencies and dynamics to improve the nation's air traffic control system. This recommendation will give the federal government the ability to quickly acquire the complex technological resources needed for air traffic control services while at the same time maintaining, or even improving, the safety of America's air traffic control system.

Other private sector efficiencies can be utilized to enhance aeronautical research and development. Through a recommended public-private consortium, the development of aeronautical communication systems can be accelerated. Working together in this manner would also ensure that these components were technologically compatible, and could be accomplished without any additional expense to government.

Free market incentives can also be used in both the trucking and maritime industries, and will result in substantially lower costs to both the federal government and consumers. By taking specific steps needed to deregulate the trucking industry, for example, it is estimated that the government can save at least \$25 million per year. Savings to consumers as a result of lower freight rates and improved service are estimated at between \$3 - 8 billion per year. Savings as a result of much-needed reforms in the maritime industry, such as eliminating the Jones Act restrictions, conference pricing, and cargo preference programs, are even more dramatic. It is estimated that cargo preference alone cost federal government agencies \$548 million in fiscal 1992, while elimination of the Jones Act could save consumers over \$20 billion.

Substantial savings can also be achieved through the recommended elimination of several highway demonstration projects. In many cases, these projects do not address critical federal needs or have not even been included in state transportation plans. Rescinding the funds for these wasteful projects will save the Federal Government nearly \$2.5 billion over the next five years.

Another recommendation focuses on the role of telecommuting in today's society. Telecommuting holds the promise of multiple positive benefits. By effectively promoting the use of telecommuting, the Federal Government can decrease congestion on our nation's highways, which in turn, will reduce noxious pollutants emanating from vehicle exhausts. DOT plans to begin a telecommuting program for its own employees and also plans to evaluate several private sector telecommuting projects. From the knowledge gained through these programs, other recommendations will be made to further enhance telecommuting options.

The implementation of recommendations, as well as others presented in this chapter, will save the Federal Government over \$ xxx billion over the next five years. Yet, these recommendations represent only the beginning steps toward a more responsive, cost-effective, and efficient Federal Government.

The Department of Transportation is committed to continually searching for new and innovative solutions to the nation's transportation needs, and seeks to create an environment where reinvention ideas can be continually nourished. It is this type of environment that holds the promise of generating new ideas to continuously provide, and improve upon, a

responsive, customer-driven government.

Section II

Issue Papers and Recommendations

Shifting from Red Tape to Results

MEASURING TRANSPORTATION SAFETY

Background

The current global transportation system is growing more complex and interdependent. To deal effectively with threats to transportation safety and opportunities to enhance it, DOT must take a more cross-modal perspective of the transportation system and the safety issues it presents. This view is supported by the Hazard report on Managing National Transportation Policy¹, the report of the Transportation Research Board on transportation data needs², and the Intermodal Surface Transportation Efficiency Act (ISTEA)³. Most importantly, it is a pervasive view among DOT customers⁴, who demand productive and economical allocation of resources to safety improvements.

Response to transportation system safety issues, such as controlling health care costs associated with transportation related fatalities and injuries, requires mechanisms for comparing the potential and actual effectiveness of actions across Federal departments as well as transportation modes. These mechanisms must encompass: identifying, understanding, and prioritizing potential transportation safety threats and enhancement opportunities; identification, analysis, and evaluation of alternative responses; implementation of the most desirable alternatives; and monitoring and feeding back the results of actions taken to shape future decisions as a contribution to the overall Federal responsibility for public health and safety.

DOT currently has not institutionalized such mechanisms. In fact, no attempt has been made within the Federal Government or DOT to provide an overall assessment of threats to public health and safety. While there are a number of steps that must be taken to create mechanisms to make such assessments and comparisons, development of common measures of safety and the data elements to support them, is essential. Without common measures and supporting data elements, DOT has a very limited basis on which to make cross-modal comparisons of effectiveness.

Recommendations

To begin the process of creating a basis for cross-modal comparisons of

effectiveness, the following actions are recommended:

- o That DOT, as the primary Government agency responsible for transportation safety, take the lead in developing and achieving agreement on common, governmentwide measures of safety.
- o That DOT should encourage other Federal agencies to join with DOT in an effort to increase standardization in data throughout the Government to support common measures of safety.
- o That DOT, as the primary Government agency responsible for transportation safety, become the benchmark for using the resulting common measures of safety to identify the safety actions that will offer the greatest and most economical safety improvements on a systemwide basis. This would include conducting regular analyses of health and safety data to help establish and assess priorities in policies and spending to improve health and safety; and, based on this analysis, make recommendations to Congress for budget and program legislation.
- o That, using its accomplishments as a model, DOT should assist other agencies involved in public health and safety to adopt a similar approach.
- o That in the interest of continuous data quality improvement, DOT lead establishment of user groups representing both internal and external customers to review all data elements being collected in the Federal Government, eliminate duplication and unnecessary data collection, and support the common measures of safety.

Implications

The commitment to developing common measures of safety will lead to a process in which the participants, both within and outside of Government, will broaden their perspective on transportation safety issues. Discussions and research will inevitably require that points of view be considered that currently are not. In addition, the process will help to focus attention on developing a clear vision of transportation safety within DOT and throughout the Government.

Actual achievement of a common definition of transportation safety will provide us with the capability to focus our data collection and analysis efforts more narrowly on issues and responses that have high safety improvement potential; to achieve, in actuality, more informed safety related decisions; to improved priority setting and more efficient budgeting of Federal

resources; and to a reduction in accidents, injuries, and associated health care costs.

Fiscal Impact

Quantitative assessment of fiscal impacts related to this recommendation is inappropriate before common measure(s) of transportation safety and the additional steps needed in order to realize fully the benefits of doing so are achieved. These benefits, however, will take the following form:

- o Consolidation of accident forms;
- o Reduction in field data entry requirements;
- o Elimination of unnecessary reports;
- o Improved data base management and efficiencies; and,
- o Reduction in analysis.

ENDNOTES

- ¹ Hazard, John L., Managing National Transportation Policy, 1988.
- ² Transportation Research Board, National Research Council, Data for Decisions, 1992.
- ³ P.L. 102-240, 1990
- ⁴ [Interviews]

STREAMLINING THE ENFORCEMENT PROCESS

Background

Several agencies within DOT process civil penalty violations against transportation related activities. Although the process varies a bit in each agency, there are two basic problems with the overall process: (1) the same process is followed regardless of the severity violation and (2) the same process is followed whether the violation is contested or not.

A new system which would continue to provide due process while offering flexibility in enforcement methods is needed. This system would expedite enforcement and reduce costs for industry and government. For example, a "citation" program could be instituted for certain violations. Inspectors would issue a "citation" on the spot with clear instructions on how to pay the penalty. Inspectors could apply more simple procedures to close the case rather than complete the current full enforcement process. If the fine is paid, which currently represents 40 percent of cases, no further action on the enforcement case would be made. If the ticket is contested, the inspector would follow a full case process and the case continues in the currently identified manner for informal and formal hearings.

Recommendations

1. The United States Coast Guard (USCG) should pilot test a ticket program for oil spills, commercial and recreational boating, and pollution prevention regulations at three trial Coast Guard offices.
2. The Federal Aviation Administration (FAA) should pilot a program for ticketing minor, noncontested infractions for first-time offenders. There would be no legal involvement unless the matter was not informally resolved. If informally resolved, there would not be a finding of violation. Pilot program would be tested in one region.
3. The Federal Highway Administration (FHWA) should establish a process that limits the level of documentation required until the violation moves to the formal hearing process.

Implications

Adopting a streamlined enforcement system would result in a reduction for industry and government in processing requirements and time for noncontested violations. Additionally, government resources could be relocated to focus on more complex cases.

Fiscal Impact

Overall fiscal savings will be in reduced workhours. In USCG, there should be significant reductions in the time necessary to process a civil penalty case and increases in the productivity of the inspectors.

The implementation of these recommendations in FAA is expected to save over 1 million annually in workload hours. Initially many hours saved could be used more valuably by reducing any backlog. Hours saved by the inspection workforce can be used to perform more inspections and to place more emphasis on the accident prevention programs.

Currently FHWA processes about 2,170 enforcement cases a year. About 8 percent of these cases are forwarded to the Regional Council for action. The remaining enforcement actions can be handled by a less detailed enforcement report. An estimated 15,968 hours of the safety investigator's time can be saved by eliminating the "non-value added" report writing. For the entire FHWA, this represents a savings of approximately \$300,000 per year. Safety specialists would be free to conduct more safety investigations or to devote more time and effort with the carrier in an accident prevention program.

Worksheet: Streamlining the Enforcement Process

Fiscal Impact for FHWA

Assumptions:

1. 2,029 cases were handled FY-92. A 7 percent projected increase for FY-93 would amount to 2,170.
2. It is estimated that 8 percent (or 174) of all cases go to the Regional Counsel.
3. Based on that 1,996 cases could use the streamlined process.
4. Approximately 8 hours per case could be saved by using the streamlined process (1,996 cases X 8 hours/case = 15,968 hours)
5. Estimating average Safety Specialist at \$19.00 per hour = \$303,392 (say

\$300,000)

Fiscal Impact for FAA:

For Delegation of authority:

Assumptions:

1. Great Lake data only
2. Penalties under \$1000 constitutes 25 percent of cases.
3. Penalties between \$1000 and \$10,000 constitutes 50 percent of cases.
4. 758 actions were used which is the number of violations for Great Lakes in FY-92.

For field delegation:

182 cases X 3 hours of GS-14 legal time (\$27) + 182 cases X 1 hour of RO Division review (\$27) + 182 cases by 1/2 hour of GS-5 administrative time (\$8.81) = \$20,456.

For regional office delegation

364 cases X 3 hours of GS 14 legal time (\$27) = \$29,484

For streamlining cases:

Assumptions:

1. Currently few penalties are paid uncontested.
2. Assume new delegation would result in the same 40 percent return as FHWA
291 cases X 10 hours reduced workload for GS-13 inspector (\$23) + 291 cases
X 2 hours of reduced administrative GS-5 support (\$8.81) = \$72,056.

In FY-92 Great Lakes accounted for approximately 10 percent of the enforcement workload. The total workload savings expected by Great Lakes would be approximately \$122,000. Multiplied by 10 if this were implemented nationwide, the increased savings would be 1.2 million.

USE CONSENSUS BUILDING APPROACH TO EXPEDITE TRANSPORTATION AND ENVIRONMENTAL DECISIONMAKING

Background

During the last two decades, over 40 Federal statutes, Executive Orders, and regulations have made the planning, design, and construction decisions for transportation infrastructure and other public works facilities most challenging. Special efforts are needed to accomplish coordination and conflict resolution with state and local governments and numerous Federal agencies (e.g., Environmental Protection Agency (EPA), U.S. Army Corps of Engineers (CORPS), U.S. Fish and Wildlife Service (FWS), U.S. National Park Service (NPS), National Marine Fisheries Service (NMFS), etc.). These agencies retain certain jurisdictional responsibilities (such as permitting or licensing) which can generate procedural duplication, waste resources, and delay project decisions if pursued sequentially and separately.

DOT has practiced, in some instances, a collaborative, problem-solving approach in the past. In 1987 and 1993, the Federal Highway Administration (FHWA) issued interagency guidance for grant recipients to expedite coordination and resolution of issues with all Federal agencies having potential jurisdiction over highway projects.

In 1988, FHWA jointly published with EPA, FWS, CORPS, and NMFS the Red Book "Applying the Section 404 Permit Process to Federal-aid Highway Projects." This was designed to merge FHWA environmental process and Section 404 Clean Water Permit Process. In 1992, the Red Book was adopted as official agency policy by DOT, EPA and the Army to expedite the implementation of Intermodal Surface Transportation Efficiency Act (ISTEA).

In 1992, DOT joined nine other Federal environmental resource and infrastructure agencies to establish a Coastal America Partnership to restore, preserve, and protect the Nation's coastal heritage. The partnership is designed to integrate the resources, expertise, and programs of Federal agencies with those of state, local government, business, and community groups.

Currently, FHWA, NMFS, CORPS, EPA and FWS are jointly sponsoring a 3-day course, "Practical Conflict Management: Skills to Resolve Highway/Wetland Issues," which is

designed for Federal and state staff and supervisors working with the NEPA and Section 404 Permit process and wetland issues. This course assists in facilitating a cooperative, problem-solving approach and identifying, assessing, and resolving agency positions and disagreements.

Recommendation

DOT should sponsor two or three demonstration projects designed to apply a problemsolving and consensus building approach to transportation project planning, development, and decisionmaking. The pilots should involve transportation infrastructure projects with more than one DOT operating administration. In addition, they should be designed so DOT, state, and local agencies work together from the initial planning stage of the project. Conflict resolution techniques, including use of a professional facilitator, should be used to assure that all parties recognize the importance of a broad variety of factors including economic development, creation of jobs, efficient use of energy and protection of the national and human environment. An evaluation plan should be incorporated into each demonstration project to assess lessons learned.

Implications

Decisions on transportation infrastructure must from the outset make sure all Federal requirements are met and strike a delicate balance between economic development, creation of jobs, energy efficiencies, and protection of the environment. Instead of a regulatory approach, the Executive Branch must initiate a problem-solving approach if infrastructure development and environmental protection and enhancement are to co-exist. The importance of shared decisionmaking among all parties must be the mode of operation no matter what the organizational culture of the agencies. All must come to the table to share in decisionmaking that is in the best overall public interest. These pilot projects would demonstrate how the problem-solving approach can work and expand upon the above mentioned DOT initiatives.

Fiscal Impact

DOT would reallocate existing training and travel funds to cover demonstration project expenses. In addition to demonstrating how a good government should work at the Federal

level, the pilot projects would demonstrate how to eliminate procedural duplication, effectively integrate decisionmaking, and employ the most efficient use of Federal resources. This would result in cost savings, as well as improved government efficiency.

Introducing Market Dynamics

ENCOURAGE INNOVATIONS IN AUTOMOTIVE SAFETY

Background

The current enabling legislation and rulemaking process of the National Highway Traffic Safety Administration (NHTSA) do not take into account the changed consumer market in which safety has become a sales advantage to manufacturers. Some regulations prohibit potential safety advances because technology and consumer preferences often change faster than can be accommodated by the rulemaking process. For example, a manufacturer with an innovative mirror system cannot introduce it without petitioning NHTSA to change its current rule. However, the cost and time required to assemble the needed justification and the average 2-year duration of the rulemaking process can inhibit manufacturers from introducing safety improvements. As a result, consumers have to wait too long before such improvements are introduced into the market. Although NHTSA can grant a temporary exemption from standards to help advance new safety systems, no more than 2,500 vehicles can be sold per year for each exemption granted. This number is too low to provide manufacturers with sufficient economic and marketing incentives and to allow extensive, real-world evaluations.

Recommendations

1. **Congress should raise the current 2,500-vehicle limit on exemptions in the NHTSA statute.** NHTSA should consider all factors that are relevant to expanding the exemption provision into a more effective mechanism for encouraging safety innovations. NHTSA should then determine what higher exemption authority is desirable and draft legislation which can be submitted at the beginning of the next session of Congress.
2. **Congress should authorize the agency to grant such exemptions after public notice and comment.** NHTSA should grant exemptions only after it is satisfied that a manufacturer will thoroughly evaluate the actual "on-road" benefits (or problems) of the exempted safety system. NHTSA should ensure that the manufacturers carry out the evaluation and should help them to do this.

Implications

We consider this proposal will:

- promote cooperation between government and industry;
- motivate industry to introduce new safety devices because of the economic advantage of selling innovative safety features;
- enhance support from industry and consumers for possible safety improvements; and
- introduce some safety advances to the marketplace sooner than might occur through lengthy, costly, and contentious rulemaking.

Fiscal Impact

Government's cost savings will be achieved through reduced research and evaluation costs, which will be shared with industry, and through reduced staff resources devoted to rulemaking.

STUDY USER FEES FOR INTERNATIONAL "OVERS"

Background

Under the Federal Aviation Act, several user fees accrue to the Airport and Airway Trust Fund (\$4.65 billion in 1992). The domestic ticket tax of 10 percent accounted for 86 percent of 1992 trust fund receipts. The freight waybill tax accounted for 5.4 percent, and 3.3 percent came from the aviation gas and jet fuel tax. Foreign carriers were exempt from all but the jet fuel tax until the 1970 Act subjected them to an international departure tax (now \$6 per passenger), which accounted for 5 percent of 1992 trust fund receipts.

Foreign aircraft operating to or from the U.S. pay user fees via the international departure tax of \$6 per passenger. However, each year 70,000 foreign commercial flights operating between two countries transit airspace for which the FAA provides navigational and separation services. However, since they do not land in the U.S., they pay no fees to the U.S.

In contrast, nearly all other countries impose "over" fees in airspace for which they provide air traffic control (ATC) services. Western Europe, Central America and West Africa use regional formulas to measure "units," then each country applies its own fee per unit. The Eurocontrol formula includes distance and aircraft weight: $\text{km}/100 \times \text{square root of } (.02 \times \text{maximum t/o weight in tons--MTOW})$. Assuming an MTOW of 760,000 pounds, fees in Europe average \$2.74 per mile, but go as high as \$3.32 in France, \$3.78 in Germany and \$5.13 per mile in the U.K. ¹

Most countries add passenger or departure fees, though they often are imposed by local authorities or privatized airport operators. In the U.K., "passenger service charges" apply to all domestic and international flights. As of April 1990, the peak-hour charge (09:00-15:30) at Heathrow was L12.1 (\$18.65). The fee in Paris was Ff 33.6 (\$6.13) on all flights. Most countries then add landing fees, bridge fees, parking fees, in-bound and out-bound en route fees, approach fees, etc. American Airlines estimates that a B-747 pays an average of \$4,000 in Paris and \$7,000 in Frankfurt just in passenger and airport fees.

These examples are important because they suggest the entire tax and fee structure to which U.S. carriers are exposed abroad. Debates about comparative tax structures usually get lost in semantics about what is a "tax" imposed by national governments, and what is a "fee" imposed by local authorities, who also provide tower and approach/departure services. Exactly who imposes which "tax" or which "fee" is irrelevant to the bottom line for a U.S. or foreign carrier.

A proposal to impose "over" charges will draw claims from foreign carriers that they pay more than their fair share into the trust fund. FAA's 1991 "Allocation and Recovery of Federal Airport and Airway Costs" estimated the \$6 fee recovers 115 percent of costs for all foreign flights; yet international overs were never part of the computation, and the figures are dated. The most recent detailed study was done in 1985; the 1991 report only updated 1985 data. Not only have international overs increased to 70,000 a year, but domestic aviation has changed substantially since 1985.

A study on the cost of "overs" and the option of applying direct fees for those flights could introduce the whole concept of direct user fees. Ideally, direct fees would function like price. Theory holds that price is the most efficient rationing tool in an economy; since price reflects the full cost of a good or service, only price can convey accurate information to producers and consumers about real costs. The self-interest that drives markets then may improve efficiency by making producers and consumers of ATC services responsible for the full costs of their decisions.

Still, foreign carriers will argue that such a fee violates International Civil Aviation Organization agreements against discriminatory charges, so the issue of "fair share" is at the heart of any proposed "over" fees. To address this issue authoritatively, the role of this traffic should be analyzed in a new cost allocation study.

In addition, the FAA and the United States must consider the effects that international "over" charges could have on U.S. dominance of international airspace. Since WW II, the U.S. has controlled half the world's airspace, including extensive, nonsovereign airspace in the Atlantic and Pacific. This gives the U.S. tremendous international influence in the field, and enables U.S. decisions to predominate on ATC technology and operating requirements.

Historical reasons, therefore, explain why the U.S. chose not to impose user fees on foreign carriers who transit airspace served by the FAA. Though many other coastal countries also serve international airspace and charge for such service, they do not enjoy the influence the United States enjoys.

Recommendation

DOT should conduct a new cost allocation study and use the results to determine: (1) whether foreign carriers who transit FAA airspace pay their fair share; and (2) whether and to what extent direct user fees (price) should be introduced. If warranted, DOT should suggest amendments to the Federal Aviation Act of 1958 .

Since this user fee would be different from those now in place, it would require a new collection mechanism. Most countries bill foreign carriers monthly, based on ATC flight strips. Brazil and others go a step further and use different rates for different regions. In short, billing is not a major issue. FAA has the technology in place to identify each aircraft, the aircraft type, distance or time in airspace, origin-destination airports, and so on. Therefore, the collection mechanism need not be cumbersome nor technically challenging, and should require only minimal start-up costs, with annual resources limited to a maximum of 2 or 3 FTE.

Implications

Depending on results of the cost allocation study, the use of price, perhaps in conjunction with some traditional, indirect charges, could place U.S. carriers on a more "level playing field" with foreign competitors by either resulting in a lower rate for the domestic ticket tax, or by ending a subsidy to foreign carriers who use FAA services on international "overs."

The debate then involves:

- o Determining whether the U.N. would demand a reallocation of international airspace, and whether other countries would want the responsibility.
- o Determining whether the rapid growth in this traffic denotes a new era in which the

historical rationale no longer prevails.

- o Determining whether foreign carriers really pay 115 percent of all costs incurred, including costs for over flights.
- o Determining how much marginal cost is incurred by these flights, or should the issue be a full allocation of capital and operating costs.

A cost allocation study could answer these questions, and could introduce the notion of pricing into our user fee structure, with all the connotations of efficiency, user responsibility and market information that price implies.

Fiscal Impact

A cost allocation study would require a one-time outlay of about \$400,000. If the study finds international overs have received free services, the fiscal impact would depend on the fee schedule selected. As an example, at 70,000 flights per year, a fee of \$1 per mile would raise \$80 million annually.

ENDNOTE

1. September 1992 fees and May 20, 1993 exchange rates

CONTRACT FOR LEVEL I AIR TRAFFIC CONTROL TOWERS

Background

The FAA currently operates 111 Level I towers, 14 temporarily closed towers and 27 contract towers. Experience with the contract tower program has shown that FAA can save money by contracting out Level I towers. In addition, some towers have failed to meet criteria, over an extended period, that justify continued operation. Those airports have aircraft operations which remain below the criteria for continuation, and they do not have unique operational requirements.

The FAA has well developed, separate criteria to determine when a new FAA air traffic control tower is to be established, whether it should be continued, and whether it should be decommissioned. Generally, Level I towers, or "low-Level" towers, are those towers whose average number of operations for the 183 busiest days per year do not exceed 34.99 per hour of operation.

Each Level I FAA tower is staffed with an average of seven to eight FAA controllers and costs the air traffic program an average of \$450,000 per year to operate. In contrast, the 27 FAA contract towers operate for an average cost of just \$250,000.

For those 27 contract towers, the FAA generally contracts with a local jurisdiction or a state authority to operate a tower. The jurisdiction then chooses to operate the tower directly, or contracts with a private firm who staffs and operates the tower. The FAA reimburses the jurisdiction for the cost of operating the tower. This operation is more cost effective for the FAA because the contractor has greater flexibility in the areas of staffing, salaries and employee benefits.

Discontinuing air traffic services or converting these towers to contract facilities will require up-front costs, including permanent change of station (PCS) moves by controllers to towers where controllers are needed more. Conversions to contract towers also will require up-front contract funds. Costs will vary by facility, depending on how many employees elect to retire, how many elect to move, the costs of each move.

Recommendations

The FAA should convert 99 Level I towers to contract operation. The FAA should also review the remaining FAA Level I towers for possible decommissioning.

Implications

Converting the 99 towers to contract towers will enable the FAA to realign its limited resources in a more efficient and effective manner. The program will require an estimated 2 to 3 years to recover conversion costs through employee attrition. At that point, the FAA will save approximately \$200,000 annually for each facility that is converted to a contract tower.

The program will require an estimated 667 PCS moves among the 815 FTE affected. The other 148 FTE are expected to choose retirement or termination rather than relocation. The 667 FTE will be transferred to other towers where they are needed. After a transition period, this will reduce future FAA requests for additional FTE among the controller workforce.

Fiscal Impact

The program would require up-front costs of \$48.6 million over a 4-year conversion period. Those costs will finance an estimated 667 PCS moves, plus contract start-up costs and tower decommissioning. However, thereafter, the program would save \$20 million annually from 99 contract towers.

CONTRACTING OUT 99 LEVEL I TOWERS ANNUAL COSTS & SAVINGS

	1994	1995	1996	1997	Total
Towers Newly Contracted	25	25	25	24	--
Cumulative contract Twrs	25	50	75	99	99

Total FTE					
Affected	203	206	206	200	815
Retirements/ Resignations	38	37	37	36	148
PCS Moves	165	169	169	164	667
<u>COSTS (\$M)</u>					
Contract					
Start-Ups	6.8	6.5	6.5	6.2	26.0
PCS Costs	5.6	5.7	5.7	5.6	22.6
Total Cost	12.4	12.2	12.2	11.8	48.6
Savings (\$200K per Tower)	5.0	10.0	15.0	20.0	50.0
Net Savings	(-7.4)	(-2.2)	2.8	8.2	1.4*

*Note: Net savings are \$20 million annually beginning in 1998.

INITIATE AERONAUTICAL TELECOMMUNICATION NETWORK PUBLIC-PRIVATE CONSORTIUM

Background

The United Nations' International Civil Aviation Organization (ICAO) has established ATN as the standard for future infrastructure in air/ground communications. The international objective is to ensure inter-operability among a diverse collection of air/ground and ground/ground communication systems, including satellite communications, very high frequency systems, Mode S, wide area networks and local area networks. These diverse systems then must be able to communicate with airborne flight management systems, airline operations computers, and air traffic control computers.

Systems currently in use will not be able to communicate without a universally adopted "black box" that processes information in the appropriate format for the respective systems. Air carriers would be the first market for compatible routers, but the system would gradually expand to a global network of airborne and ground-based users.

To make the ATN work efficiently, the critical link will be a large number of intermediate nodes, or "routers," that will act much like telephone switches by directing "calls" to specific receivers. The challenge is to ensure that the FAA and each of the major users develop compatible routers, and do so in an expeditious manner.

The traditional method of developing such technology would take one of two alternatives: (1) direct FAA R&D on a standard technology, after which the airlines and related industries would require substantial lead time to develop and start producing the routers; or (2) the industry would develop its own respective systems. Each traditional option has significant weaknesses. The FAA development model would add a minimum of 3 years to the entire process, while the private-sector model risks the development of several incompatible router technologies, severely reducing the potential system-wide benefits from ATN.

Instead, the FAA could foster a consortium among the airlines and possibly other interested parties as a new, cooperative approach to systems issues. The FAA could provide services in kind, R&D facilities and fiscal assistance through cooperative agreements with the

consortium. Note that those funds otherwise would be expended directly in-house to conduct FAA's R&D of an ATN router.

The private-sector partners could invest funds to research, validate and certify uniform technical standards for ATN, and then could produce or license the appropriate avionics equipment. The FAA then would use the validated technical standards as the basis for compatible ground-based FAA equipment. The private-sector partners could recover their costs from profits made on the sale of the final product, and the FAA would benefit from economies of scale and coordination early in the R&D into a major new system.

Recommendation

The FAA should pursue the creation of a public-private consortium under a cooperative agreement with industry, i.e., airlines and other appropriate parties.

Implications

A consortium would develop compatible systems at least 3 years more quickly than a model in which the FAA undertakes independent research, then disseminates a standard. Similarly, a consortium would assure the accelerated development of uniform validation standards and compatible technology among the various users. In addition, such a consortium could provide a useful model and learning experience for closer cooperation between the FAA and the aviation community in developing more technologically demanding systems in the future. Finally, the FAA would be advancing U.S. industry's competitive position as a leader in a new technology.

Fiscal Impact

The net fiscal impact on the FAA should be zero, or possibly a net savings. The FAA would expend funds through cooperative agreements with the consortium. However, the alternative is to expend at least as much and almost certainly more in a unilateral R&D effort.

CONGRESS SHOULD ESTABLISH A CORPORATION TO PROVIDE AIR TRAFFIC CONTROL SERVICES

Background

The Federal Aviation Administration (FAA) operates the most complex air traffic control (ATC) system in the world. With 22 en-route centers, 30 tracons, and 399 airport towers, it handles over 60 million take-offs and landings. The system also includes more than 2,000 navigational aids and a fleet of more than 40 aircraft to test and calibrate them.

Under Congressional appropriations and government procurement rules the Federal Aviation Administration (FAA) cannot field new (ATC) technology quickly and efficiently. This is best illustrated by the agency's implementation of the 1981 National Airspace System Plan, a ten year upgrade program that is more than ten years behind schedule and more than 125 percent over budget.¹ As a result, the ATC system is inefficient, its capacity is limited, and it is not as safe as it could be -- from 1983 to 1991, ATC errors caused or contribute to an average of 14 accidents annually.² In addition, personnel rules aggravate capacity problems by limiting the FAA's ability to pay relocation and training expenses and high-cost area pay differentials. These constraints make it impossible for FAA to efficiently provide ATC, but they are aggravated by the absence of competition. As with any monopoly, FAA lacks incentives for productivity and is slow to respond to customer needs.

In addition to raising the cost of ATC, these problems impose costly delays on the airlines and their passengers. The Air Transport Association estimates that the ATC delays cost the airlines approximately \$2 billion annually in personnel, equipment, and fuel costs; and cost their passengers an additional \$1 billion annually in time lost.³

Other countries have faced these same dilemmas and responded by establishing corporations to provide ATC. These countries include Great Britain (1971), New Zealand (1987), Australia (1988), Switzerland (1988), Sweden (19??), Germany (1993), Portugal (19??), Finland (1993), South Africa (1993), and Kenya (1994). Some of these corporations only provide ATC while others have regulatory and enforcement powers as well.

The experiences of New Zealand and Australia are particularly illustrative because their incorporations were recent and data on their progress is available. The real (inflation adjusted) cost of handling each flight in these counties dropped approximately 25 percent in

the five years following incorporation.⁴ During that same time, the real cost of handling each flight in the U.S. has risen more than nine percent.⁵ Of course, ATC in the U.S. is far more complex than in these or any other country, so their technological experiences are not directly relevant to our own. Nonetheless, their experiences illustrate the savings that can be achieved by exploiting the opportunities for management improvement that are available to a corporation but not to a government agency.

For an indication of the savings available through more effective exploitation of technological advances, large data processing and telecommunications firms are comparable to the U.S. ATC system because they are technologically similar. During the last five years, such firms (EDS, MCI and Sprint) have reduced their real, average unit costs by 70 percent.⁶ They achieved these savings by doing all of their systems engineering and custom software development in-house. This keeps the designers and operators close together and facilitates continuous evolution of their systems. When they judge new equipment to be cost-effective, they are not encumbered by the years-long government budgeting and procurement cycle. In contrast, the FAA contracts out virtually all of its engineering and software development. This makes system evolution piecemeal and adds long engineering procurement lead-times to long equipment procurement lead-times.

Quicker fielding of new technology will also improve ATC safety. Although U.S. ATC is quite safe and still improving, this record could be improved further through the more expeditious fielding of new technology.⁷ This will become even more critical in the future, as growing traffic bumps more frequently against capacity limits.⁸ In addition, relieving the FAA of its role as ATC operator would allow the agency to focus impartially on safety oversight. Although it could be argued that the recent ATC safety record is proof that the system is working fine and should not be changed, this is a short sighted analysis. Rather than waiting for problems to develop, incorporating ATC now is preventive medicine.

Proposals for creating a corporation to perform some or all of the FAA's functions have been discussed favorably for several years. The March 1993 report of the Competitiveness Policy Council says: "There is overwhelming consensus in the aviation community that the ATC system requires fundamental change if aviation's positive contribution to trade and tourism is to be sustained. . . . It is imperative that a process be launched to identify and adopt an appropriate organizational model for the air traffic control

system."⁹

The challenge has been to develop an alternative with effective incentives that replace the accountability currently created by the government laws and procedures. The National Commission to Ensure a Competitive Airline Industry outlined principles to guide the process called for by the Competitiveness Policy Council report.¹⁰ The National Performance Review has concluded that such alternatives have proven effective in analogous circumstances. The examples of COMSAT, the Synfuels Corporation, Australia and New Zealand, and the analyses done in the past all provide useful information to base the structure upon.

A government-owned, for-profit ATC corporation, with the Secretary of Transportation and representatives of the ATC customers on the board of directors, would create the required incentives. The FAA should continue as a government agency in the performance of all of its other functions: safety regulation and enforcement, research and development, and airport grant provider. In addition, the FAA would oversee the safety of the ATC system with whatever means it deemed necessary, including: rules, certification of equipment and procedures, licensing of personnel, inspections and enforcement. The corporation would charge the airlines directly for ATC services and would be paid by the FAA for providing services to other system users. The corporation would be freed of government budgeting, procurement and personnel rules, but it would be accountable to the public and to its customers through its board of directors. Implementation of this proposal requires further consultation with the stakeholders, analysis and development of statutory language.

Recommendation

The Secretary of Transportation should develop a detailed action plan and statutory language for the chartering of a government-owned U.S. ATC corporation with the Secretary of Transportation and the ATC customers represented on the board of directors. During this process, the secretary should consult with all of the stakeholders, including: the Department of Defense, the airlines, Congress, airport operators, general aviation operators, unions, and consumers. The secretary should structure the corporation so that safety is its highest priority and accountability through laws and rules is replaced with accountability through incentives and oversight by the FAA and, through its board of directors, by the Secretary of Transportation and the ATC

customers. This work should be completed in six months.

Implications

This recommendation should reduce the cost of ATC substantially, reduce costly delays by increasing system capacity, and equip the system to safely deal with growing air travel demands. While the benchmarks discussed above suggest a net savings of at least 30 percent, actual savings will be less because the FAA and the corporation will duplicate some safety functions. Nonetheless, savings of only 15 percent would exceed \$1 billion annually. More than two-thirds of FAA's 53,000 employees are directly or indirectly involved in ATC and most would be transferred from the federal payroll to the corporate payroll. This would achieve about a third of the reduction in federal personnel called for by Executive Order 12839, February 10, 1993.

About three-fourths of the FAA's \$9 billion budget goes for ATC. The airline ticket tax revenue equals about 60 percent the FAA budget and the airlines collectively impose about 60 percent of the cost of FAA operations, including ATC. If the ticket tax were reduced coincident with the corporation imposing direct user fees on the airlines, but before any reduction in system cost occurred, the ticket tax would be reduced from 10 percent to about 2.5 percent. This would allow the airlines to share future savings in proportion to the share of the system resources they consume, and a \$1 billion savings would reduce annual government expenditures by \$400 million and airline ATC costs by \$600 million.

Fiscal Impact

No savings would accrue upon initial incorporation, but the annual savings grow each year until it appeared fully in about five years. On the other hand, the corporation should be able impose direct user fees on the airlines after about two years. At that time, government revenues and expenses should drop in roughly equal proportions. In the following years, expenses should drop even as revenues remain the same. Assuming the incorporation at the beginning of 1995, the savings to the government should be as follows:

In Millions of Dollars				
1994	1995	1996	1997	1998

Revenues	\$ 0	\$ 0	\$ 0	\$ (4,050)	\$ (4,050)
Outlays	\$ 0	\$ 0	\$ (100)	\$ (4,130)	\$ (4,170)
Change in FTEs	0	35,000	35,000	35,000	35,000

[Impacts are shown from what the budget and FTEs would be without implementation of the recommendation. We assumed it would take the corporation two years to develop a mechanism for directly charging the airlines for ATC and that, of the predicted long-term savings of \$1 billion annually, there would be no savings the first year, 10 percent the second year, 20 percent the third year, and 30 percent the forth year. These savings are split 40 percent reduction in government outlays and 60 percent reduction in airline fees. Both inflation and system growth are assumed to be zero.]

Endnotes

[This section remains to be done.]

1.

2.reference

3.reference

4.reference

5.This increase does not include FAA facilities and equipment charges or depreciation.

6.reference

7.

8.reference

9.An independent federal advisory committee established in the Omnibus Trade and Competitiveness Act of 1988 reporting to both the President and the Congress.

10.reference

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 Should Be Amended To Permit States To Use Federal Aid As A Capital Reserve To Lever Investment In Infrastructure Projects

Background

The Intermodal Surface Transportation Efficiency Act of 1991 is one of the most important pieces of public works-related legislation passed by the Congress in many years. Enacted before the concept of reinventing government became widely known in the federal sector, it is a shift in policy indicating that the government sees it can catalyze, shape, and empower market-driven actions at the state and local level.¹

A major challenge facing state and local governments has been garnering the financial resources to respond to increasing demands for public services. Environmental regulation, congestion, urban sprawl, and land use planning, complicate the ability of state and local governments to devise intermodal solutions to transportation problems.² These factors also increase project costs. There are claims that the direct and indirect costs of motor vehicle usage will exceed revenues from users' fees by almost \$300 billion a year, or about five percent of the gross domestic product of the nation.³ The federal government estimates the cost to bring the existing highways and bridges to meet minimum standards is \$212 billion through the year 2011.⁴ The government also projects that it will cost \$77.8 billion to maintain transit systems.⁵ Shortfalls of about \$12.5 billion are projected from fuel and other highway-related taxes for the federal highway account through 1999. These factors will constrain the ability of the government to meet or increase the ISTEA's funding commitment to the states.⁶

Under ISTEA, the states are repaid for portions of project costs that are eligible uses of federal aid. This approach has historical, statutory roots and was effective, for example, to build the nation's Interstate Highway System (IHS). User fees in the form of fuel and other highway-related taxes paid for the IHS. A recent study declares however ". . . General federal tax revenues universally are considered to be insufficient to the task of new infrastructure investment in a period devoted to deficit reduction. . ." with respect to all categories of infrastructure projects.^{7 8} This contention is supported by other authoritative

sources, such as the Office of Technology Assessments 1991 study, *"Delivering the Goods: Public Works Technologies, Management, and Financing."*

During the 1980's, state and local governments learned to leverage their project capital to solve the financial hurdles posed by infrastructure projects. Leveraging occurs when a sponsor, such as a state government, uses capital to attract investment by one or more sources to increase the overall amount of funds available for the construction of projects. Congress began to recognize this trend when it passed the Clean Water Act of 1987. The Act required the Environmental Protection Agency (EPA) to phase-out EPA Title II construction grant programs in favor of revolving loan fund programs (EPA Title VI). This shift in federal policy authorized the states to capitalize state revolving funds (SRF) for sewerage projects. Under this arrangement, the states can award loans and provide other forms of financial assistance to local governments for water pollution control facilities. This effort is underway in 44 states and EPA's goal is to ensure that the SRF's become self-financing so that federal aid can be stopped by 1994.

The EPA outlayed \$6.8 billion in Title VI capitalization grants to the SRF's between 1989 and 1993. For every federal dollar of SRF capitalization grants, states are required to make a 20 percent match in funds. Annual appropriations are paid out on a quarterly basis through the automated clearing house.⁷ Eighteen of the 44 states involved in these programs are expanding the amount of funds available by leveraging EPA grant funds. This means that the states hold federal funds in capital reserve accounts to secure the issuance of state bonds. EPA sources report that these states enjoy a two to one or three to one investment leveraging ratio. This means, for example, that \$10 million in federal funds could generate \$20 to \$30 million in investment capital.

The creative uses and the variety of approaches available to an SRF to further revenue-generating public works projects is limited only by the imagination and ingenuity of those creating and managing the fund. For example, some states may capitalize their SRF's with federal grant funds and then hold the federal aid as a capital reserve to secure debt raised through bond initiatives.⁸ Investors are attracted to these projects because the reserve fund

helps increase the ratings on the debt thereby acting as a source of security to bondholders. Other states may combine federal and state equity shares with bond proceeds and loan out funds to a borrower so that the blended rate interest rate is below the market rate. These approaches expand the total amount of investment capital available to finance projects through bonds. The use of SRF's by the states in this manner could eventually reduce the need for federal aid while empowering the states to create self-financing projects.⁹ Table 1 diagrams some of the various methods available to the states for using federal aid to lever greater private investment.¹⁰

With respect to highway related projects, Section 1012 of the ISTEA held out promise for the creation of self-financing projects by the states.¹¹ For example, this section permits states to extend limited federal and state funds with private investments and recycle federal aid through loans co-funded with private investment. In the case of loans, ISTEA permits the states to retain the principal and interest amounts generated from projects provided they are obligated for other transportation projects.

Congestion pricing projects are a good example of initiatives that can yield both financial and social benefits to our nation. *Pricing affects behavior in the marketplace.* Congestion pricing is a traffic demand management tool. Studies show that the demand for many highways in our nation during peak periods of travel is time and place specific thereby causing congestion.¹² Congestion pricing initiatives demonstrate that users will pay fees to use an uncongested, high quality road which allows rapid travel, because drivers place a higher value on their time than they do on the cost of the fee.

A variety of studies demonstrate that congestion on our highways is an immutable fact of modern urban life. A recent report by the Department of Transportation noted ". . . There are substantial costs to the economy of the Nation as a result of congestion. A report by the Texas Transportation Institute, 1989 Roadway Congestion Estimates and Trends, July 1992, states that in 1989, the total cost of congestion for the 50 urban areas studied was approximately \$39.1 billion. Delay accounted for approximately 85 percent of this amount, while excess fuel consumption accounted for 15 percent. Eight of the top 10 urban areas had

total congestion costs exceeding \$1 million . . ."¹³ The traditional response to this problem has been to increase the capacity of our road systems. Unfortunately, increasing capacity will only lead to greater congestion.¹⁴

Several foreign countries have implemented congestion pricing projects. A program launched in central areas of Singapore in 1975 resulted in a 25 percent reduction in traffic during the period of 1976 through 1989.¹⁵ Estimates of the benefits exceed the costs.¹⁶ Officials in Singapore learned that simplicity is the key to success with these projects: they simply cordoned off an area around the city and required users to purchase a sticker that attaches to the windshield of a driver's car. A similar system was implemented in Hong Kong using Automatic Vehicle Identification (AVI) technologies.¹⁷ Norway uses a combination of congestion pricing methods and France is trying to reduce congestion on its major roads caused by city-dwellers returning from weekend trips. England is using this technique to deal with congestion in London and on major roads. In the United States, AVI technologies are employed for congestion pricing projects in the North Dallas Tollway and in New Orleans.¹⁸ Congestion pricing is also practiced in southern California and in other areas of the nation.¹⁹

Congestion pricing projects make the users of congested roads pay for the true costs (direct and indirect) for their use of our nation's transportation infrastructure. They also provide the states with the opportunity to attain benefits of social value such as reductions in pollution, noise, and congestion. They also allow the states greater control over their financial resources. AVI technologies provide the opportunity to make these projects simple to implement while transparent to the user. Further, they have the potential to reduce federal aid needs in the future—an important consideration for the Federal Government. Federal leadership is needed to further the application of pricing-based projects identified in ISTEA.²⁰

Some observers of transportation issues believe that the states have not taken full advantage of the provisions set forth in Section 1012 of the ISTEA. At least three factors support this perception. First, the new provisions of the ISTEA are not self-implementing and many state governments failed to enact the legislation needed to exploit them. For example,

the leveraging of grant funds to attract private investment for infrastructure projects is a new and unfamiliar approach for some states. Second, states with insufficient financial resources may not have been able to take advantage of the new flexibilities of the ISTEA given other urgent demands upon state resources. This means that states may have little incentive to exploit the new flexibilities offered by the ISTEA. Third, some industry representatives feel that further federal leadership is needed to empower the states to try the new financing mechanisms suggested in the ISTEA. In testimony before the Commission to Promote Investment in America's Infrastructure on October 9, 1992, William Allen, Senior Vice President of Parsons Brinkerhoff, Inc. said ". . .the market needs a champion, the federal government, to push these new approaches. . ."21

Recommendations

Congress should amend the ISTEA to:

(1) authorize grant recipients to use formula grant funds as a capital reserve to back debt financing to construct eligible surface transportation projects. Authorizing grant recipients to use formula grant funds would include either federally assisted projects or projects for which there will be no other federal assistance. The recipients would have the option to apply to the appropriate operating administration of the Department of Transportation for the authority to use federal aid apportionments in this regard, and, the appropriate operating administration will manage approved applications as projects. The use of federal aid as a capital reserve is subject to all other applicable federal requirements;

(2) authorize grant recipients to pool federal-aid in revolving fund's (RF) (including Federal-aid used as a capital reserve) for the specific purpose of leveraging financial investments for the construction of projects eligible under the ISTEA. Pooling

will allow grant recipients to market a portfolio of one class of projects (such as congestion pricing projects) to raise capital through investment such as bond issuances or referenda. Pooling spreads the risk across a number of projects, lowers the costs of borrowing, and makes a project portfolio more attractive to investors.

(3) the use of set-aside federal funds as capital reserves will be within the obligation limitations, if any, apportioned to the grant recipient.

Implications

This amendment to the ISTEA will yield a number of benefits. It will encourage and provide recipients with the *option* to use federal-aid funds as a lever to attract investment in more revenue-generating, self-financing, infrastructure projects meeting commercial grade investment criteria. This amendment covers surface transportation projects. Thus, it includes projects under Title III, the Federal Transit Act, should a mass transit authority wish to pursue a Special Assessment District or other initiative to finance a mass transit project.

This amendment represents a moderate shift in the current approach to these projects. It relies and builds upon the wealth of *programmatic* knowledge and experience gleaned by the Department of Transportation (DOT) and the state DOT's officials over the past decades while providing them with an opportunity to develop and extend expertise in innovative infrastructure financing techniques.

Projects generated pursuant to this amendment could reduce future needs for federal aid and result in *no outlays of federal funds for the projects affected* because the federal-aid funds will be set-aside as a capital reserve. Thus, as projects generate revenues the federal share will become unencumbered and may be de-obligated and reprogrammed for other uses.

These projects could generate revenues that will give states the flexibility to finance other worthy transportation projects that may not generate self-sustaining revenues.

Certain projects could yield benefits of social value, such as reductions in congestion,

pollution, and noise. This is particularly true with congestion pricing projects.

Revenue-generating projects will force users to pay a larger the true costs for their use of the transportation infrastructure. The generation of revenues could lead to offsets such as reductions in federal aid or real estate, sales, and other taxes that have been used traditionally to fund transportation programs.

Revenue-generating projects could generate more development in our country quickly. This would spur growth, create jobs, and meet some of the overall objectives of the Administration.²²

This amendment would empower recipients to enjoy similar flexibilities in financing transportation sector projects as they now enjoy with EPA related projects.

Finally, this amendment is a logical extension of the federal leadership already evident with the passage of the ISTEA. Presently, the federal aid share of projects is paid to recipients on a *cost reimbursable* basis. This amendment will be important to capital-starved grant recipients who require the alternative of using federal aid at the *inception* of projects to lever investment capital.

Fiscal Implications

This amendment to the ISTEA does not require *increased* funding. Rather, it requires only a redefinition of the manner in which federal aid apportionments may be used by grant recipients. Federal aid will not be subjected to greater risks than to which they are presently subjected.²³ The Department of Transportation will revise the guidelines governing the eligible and correct uses of federal aid by recipients. The DOT will also manage and evaluate the program. A variety of statutes exist under Title 18 and other titles of the United States Code to deal with those who would exploit vulnerabilities in federal aid programs.²⁴

Endnotes

1. David Osborne and Ted Gaebler, *Reinventing Government, How The Entrepreneurial Spirit Is Transforming The Public Sector* (New York: Addison-Wesley Publishing Inc. January 1992, Chapters One and Ten.

2. In this context, *Intermodal* refers not only to air, sea, and land transportation project planning options but, also to intra-modal options such as integrating land-based mass transit and highway project planning and financing decisions.
3. World Resources Institute Publications, P.O. Box 4852, Hampden Station, Baltimore, MD 21211, 800-822-0504.
4. U.S. Department of Transportation, Federal Highway and Transit Administrations, "The Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance", 1993, A Summary, p. 18.
5. Ibid, p. 23.
6. U.S. Congress, Senate Committee on Appropriations, Subcommittee on Transportation, "*Surface Transportation, Funding Limitations and Barriers to Cross-Modal Decision Making*," by Kenneth M. Mead, General Accounting Office, March 31, 1993.
7. This is an electronic funds transfer service funded by participating banks in the United States. The ACH is, for example, the mechanism used by many companies and private parties to pay bills using a microcomputer based money management program. In this latter case, instructions for the distribution of funds are communicated by modem.
8. The State of Oregon provides an interesting paradigm in this regard involving the creative uses of non federal capital. The state used \$435,000 in state lottery proceeds to secure \$20 million generated from a revenue bond issuance. The bond proceeds were given to the project sponsors for the construction of publicly owned drinking water projects. Revenues generated from the project were placed back into the SRF. The costs associated with this transaction were reduced because the secured funds lowered the bond financing rate.
9. The State of Washington legislature passed substitute House Bill 1006 entitled "*Public-Private Transportation Initiatives*," which will go into effect on July 1, 1993. This is a good example of how one state has dealt with creating an SRF.

10. From the Report of The Commission to Promote Investment in America's Infrastructure, *"Financing the Future"*, p. 26, courtesy of Kidder, Peabody & Co.
11. These provisions relate to congestion pricing and toll-road facility projects in sections 1012 and 1044 of the 1991 ISTEA, amending 23 U.S.C. 129.
12. Testimony of Professor Steven A. Morrison, Department of Economics, Northeastern University, at a hearing before the Senate Committee On Environment And Public Works, Subcommittee on Water Resources, Transportation, and Infrastructure, on *Congestion Pricing and Infrastructure Financing*, March 21, 1991.
13. U.S. Department of Transportation, *"The Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance, 1993, A Summary,"* p. 10.
14. From the Journal of Economic Perspectives, Volume 5, Number 1, Winter 1991 edition, *Efficient Transportation Infrastructure Policy*, by Clifford Winston.
15. Testimony of Professor Steven A. Morrison, Department of Economics, NorthEastern University, at a hearing before the Senate Committee On Environment And Public Works, Subcommittee on Water Resources, Transportation, and Infrastructure, on *Congestion Pricing and Infrastructure Financing*, March 21, 1991, p. 7.
16. Ibid, p. 8.
17. This involves attaching a device or a sticker vehicle that can be read by a scanner as a vehicle enters a road during a peak demand travel period.
18. From the Journal of Economic Perspectives, Volume 5, Number 1, Winter 1991 edition, *Efficient Transportation Infrastructure Policy*, by Clifford Winston.
19. *"Private Toll Roads: Acceptability of Congestion Pricing in Southern California"*, a paper submitted on June 23-24 1993 by Gordon J. Fielding, University of California at Irvine, at a Congestion Pricing Symposium

sponsored by the National Research Council, Transportation Research Board, at Washington, D.C.

20. The ISTEA created a congestion pricing pilot program which provides for up to 5 projects with a 3 year funding limitation for the Federal share (80 percent) of each project along with related spending outlay caps.

21. This commission was chartered by section 1081 of the ISTEA.

22. Set forth in *"Putting People First: How We Can All Change America, 1992"* by Bill Clinton and Al Gore.

23. The DOT will oversee the uses of federal aid in projects managed under these proposed amended sections of the ISTEA. A total breakdown of systemic controls and oversight responsibilities involving the federal and state governments coupled with no oversight from project investors would be necessary to cause a circumstance whereby the federal government would have to outlay funds for a non-existent or useless project.

24. Such as 18 USC 666, which provides criminal penalties for the theft or fraudulent diversion of federal funds co-mingled with other funds in grant programs.

FURTHER ECONOMIC DEREGULATION OF THE TRUCKING INDUSTRY

BACKGROUND

Transportation in the U.S. has been substantially deregulated: air cargo in 1977, airline passengers in 1978, and then substantial reforms -- but not complete deregulation -- of trucks and railroad freight in 1980. These reforms have been a tremendous success, especially in the case of air/rail/truck freight, saving an estimated \$20 billion per year in lower transportation costs and more reliable service.¹ They generated an estimated additional savings of over \$40 billion per year from inventory savings, as shippers have been able to use "just in time" inventory and manufacturing systems.² Moreover, this reform has all been accomplished with no deterioration in safety.

In the case of railroads and trucking, much economic regulation remains. For railroads, this regulation is still necessary to protect shippers who have no viable alternative but to use the one railroad that serves them. However, the remaining motor carrier regulation is an expensive, monumental paper chase, for both the industries and the public bodies that regulate them, with little discernible public benefit.

The most wasteful of these regulations are: (1) controls over entry into the industry; and (2) regulation of tariffs or fares. In these inherently competitive industries, the only entry criterion should center on protection of public safety, and rate regulation should be subject only to the antitrust laws. At this time, all motor common carriers who "hold themselves out" to serve the general public, e.g., United Parcel Service (UPS), must file all their tariffs with the Interstate Commerce Commission (ICC) and most state public utility commissions (PUCs). These rates are then generally subject to review and approval by these bodies.

First, when entry into the industry is controlled, new entrants must file complicated applications to the ICC and/or the state PUC. It usually takes an attorney or motor carrier practitioner to fill out the forms. In most cases, potential customers of the applicant carrier must fill out affidavits indicating that they would be prepared to use the applicant to transport their commodities if the application is approved.³ In many states, incumbent carriers are permitted to protest the application and demand an oral hearing. Protests such as these often result in the application being denied.

For example, it took United Parcel Service 19 years and 11 months to acquire the right to pick up and deliver small packages within the State of Texas, long after it had become an ICC-authorized interstate carrier. In Michigan, a small courier specializing in delivery of false teeth wanted to expand its 25-mile operating radius around Detroit to 50 miles; after other companies protested, it took a year of hearings, oral testimony from ten dental laboratory presidents, and 600 pages of documents before the courier's application was approved. Now this same courier is fighting to block the entrance of new competitors.

In the case of ICC applications and those of many other states, they are simply rubber-stamped. But whether the entry applications are rubber-stamped or protested and denied for years, the paperwork burden is large, expensive, and unnecessary.

Second, over 1.3 million new tariffs, i.e., collections of a carrier's rates, are filed at the ICC each year. Counting the old tariffs which are not canceled by new ones, ICC has hundreds of millions of tariffs currently on file. Personnel who process these tariffs and motor carrier entry applications account for roughly half of the ICC work force and budget. Tariff filing of the same kind is required at about 40 PUCs. UPS and other interstate carriers must file their tariffs at the ICC and at PUCs in all the regulated states in which they operate on an intrastate basis. It is a logistical nightmare for such carriers to secure approval from all the regulatory bodies so their rates can be consistent.

Not only is tariff filing expensive, it is unnecessary and troublesome. Shippers would strongly prefer to negotiate directly with carriers on the rates to be charged, rather than rely on general tariffs, and for years after deregulation, shippers did exactly that. Now, however, the courts are forcing those shippers to pay large sums of money as "undercharges", if their carriers failed to file those negotiated rates and subsequently went out of business. The Supreme Court ruled in 1990 that the tariff filing requirement overrides all questions of fairness and generally-accepted business practices, and the result is that such shippers must pay to the bankrupt carriers' trustees the difference between the carriers' filed rates and the rates that were individually negotiated but never filed. The sum at stake has been estimated at up to \$32 billion. This mess has also spawned thousands of legal cases in the ICC and bankruptcy and other courts.

ICC, pushed by members of Congress, is strongly considering to adopt an electronic tariff filing system costing an estimated \$15 million. Such an expenditure would simply be a

high technology improvement of an unnecessary activity, a total waste of money.

In addition to the waste mentioned above, economic burden can be reduced significantly. While the remaining ICC regulations are unnecessary and burdensome, the economic cost is probably not much more than the administrative costs of the agency and the carriers it regulates, because entry is relatively easy and rates are not regulated. Because of strict state control of entry and rates, however, intrastate carriers' rates are much higher than they would otherwise be, and a great deal of inefficient routing and empty trucks result. The economic burden is substantial in extra costs of goods and services to consumers in all states.

RECOMMENDATION

Congress should enact legislation to abolish: (1) all ICC controls over entry into the motor carrier industries of trucking; (2) all requirements that common carriers file their tariffs; and (3) all ICC regulation of tariffs that are developed within the boundaries established by the antitrust laws. This legislation should also restrict the ability of the states to regulate the non-safety-related activities of interstate motor carriers.

IMPLICATIONS

Eliminating the requirements for controls over entry into the trucking industry and the regulation of tariffs or fares will result in both administrative savings to the federal and state regulatory bodies and the regulated carriers, and economic savings to the Nation's consumers. The savings outlined are substantial and would require legislation. The savings from state deregulation would require a difficult congressional battle over preemption of states' ability to regulate the non-safety-related activities of interstate motor carriers. Although the savings to the federal government are not substantial, the savings to the customers and the public would be dramatic. Legislation to accomplish these reforms has been the subject of congressional debate in every congress since 1985.

It should be noted that motor carrier deregulation has been strongly opposed by organized labor, much of the for-hire trucking industry, and the state public utility commissions that regulate them. These groups argue that economic regulation is necessary to ensure safe trucking operations, "stable conditions" in the industry, and nondiscriminatory

service to all shippers, especially those in small, rural communities. The preponderance of relevant studies has failed to substantiate these claims. However, although there are about 500,000 new jobs in the trucking services industry, the Teamsters Union claims its members have lost jobs and that their pay has not kept pace with inflation. Trucking bankruptcies, which were a rarity before deregulation, now occur at about the same rate as other mainstream U.S. industries.

FISCAL IMPACT

Abolishing these regulations would produce savings on three levels. The savings to the ICC budget is estimated to be approximately \$25 million per year⁴; savings to the states would be about \$66 million per year⁵; and savings to the economy from lower freight rates and better service would be between \$3 - 8 billion per year⁶. These savings would begin to accrue immediately upon enactment, and the full amounts could be expected within one or two years.

	In Millions of Dollars				
	1994	1995	1996	1997	1998
Budget Authority	\$ 25.9	\$ 25.3	\$ 25.3	\$ 24.8	\$ 24.8
Outlay	\$ 25.9	\$ 25.6	\$ 25.0	\$ 25.0	\$ 25.0
Change in FTEs	(353)	(348)	(348)	(348)	(348)

ENDNOTES

1. Clifford Winston et al., *The Economic Effects of Surface Freight Deregulation* (Brookings Institution, Washington, D.C. 1990).
2. Robert V. Delaney, *The Disunited States -- A Country in Search of an Efficient Transportation Policy*, (Cato Institute, Washington, D.C., Policy Analysis No. 84, 1987).
3. U.S. Academy of Sciences, Transportation Research Board, "The U.S. Experience with Deregulation," by E. H. Rastatter and R. I. Stein, Washington, D.C., January 12, 1988.

4. Approximately half of the ICC budget is devoted to motor carrier regulation.
5. W. Bruce Allen, *The Impact of State Economic Regulation of Motor Carriage on Intrastate and Interstate Commerce*, DOT-T-90-12 (Washington, D.C.: U.S. Department of Transportation), p. 98.
6. The lower figure comes from Allen, *op. cit.*, page iii. The larger figure was developed in Gellman Research Associates, *The Economic Cost of Intrastate Trucking Regulations*, prepared for Federal Express Corp., 1990.

INCREASE FEDERAL AVIATION ADMINISTRATION FEES FOR INSPECTION OF FOREIGN REPAIR FACILITIES

Background

The Federal Aviation Administration (FAA) has certified 289 foreign repair stations around the world from which U.S.-registered aircraft may obtain repair services while abroad. Under international practice, the U.S. is responsible for ensuring the continued airworthiness of all U.S.-registered aircraft, regardless of who currently owns them or where they are based.

Besides fulfilling its responsibility to the international community, this program ensures that maintenance practices and spare parts on all U.S.-registered aircraft fully meet FAA safety standards. The FAA certification is valuable to the repair stations, but it also offers a direct safety benefit to U.S. operators on international flights. FAA certification of foreign repair stations also encourages and facilitates the sale of American-manufactured aircraft, as foreign buyers are assured they can obtain qualified repair services locally.

The FAA is required to perform a surveillance or recertification inspection of each repair station annually. FAA charges the station owners for direct time spent at the facility performing recertification inspections and for preparation of the inspection report, but not for travel costs or subsequent time spent to resolve problems. No fees are charged for surveillance inspections. FAA recovers approximately one-fourth of the certification inspection cost and none of the surveillance inspection cost. Additional administrative costs are incurred to run the international field offices. If certification fees were increased and surveillance fees were charged, FAA would be able to recover more of the cost of inspecting foreign facilities.

Furthermore, a recent audit by the Department of Transportation's Office of Inspector General (OIG) of FAA foreign inspections revealed that FAA did not have sufficient resources to adequately perform its inspection responsibilities. Charging fees more representative of the actual costs would assist FAA to be able to perform its required inspection responsibilities.

Recommendation

FAA should initiate rulemaking to increase the fees charged for certification and surveillance of foreign repair stations to ensure full cost recovery.

Implications

Increasing the inspection fees to cover the full cost of ensuring the safety of foreign repair stations will ensure that U.S. taxpayers are not subsidizing these services. In addition, full cost recovery will help ensure that there are sufficient funds for FAA to perform its inspection responsibilities.

Fiscal Impact

Full cost recovery will increase receipts from approximately \$400,000 to \$2 million annually.

	In Millions of Dollars				
	1994	1995	1996	1997	1998
Revenues	\$ 1.6	\$ 1.6	\$ 1.6	\$ 1.6	\$ 1.6
Outlays	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Change in FTEs	0	0	0	0	0

CONGRESS SHOULD DEREGULATE THE U.S. MARITIME INDUSTRY

Background

The Maritime Administration (MARAD) administers federal laws and programs designed to promote and maintain a U.S. merchant marine capable of meeting the U.S. shipping needs for both domestic and foreign commerce and national security. To accomplish its mandate, MARAD provides financial support to help U.S. ship operators compete with their foreign counterparts, promotes shipper patronage of U.S.-flag vessels, assists the maritime community in the development of transportation systems and equipment, and operates and supports training of mariners through educational and training facilities. Another government regulatory body, the Federal Maritime Commission (FMC), is responsible for ensuring that international shipping practices are non-discriminatory and provide an efficient and economic transportation system in the ocean commerce of the U.S. that is in harmony with and responsive to international shipping practices.

What is left of the U.S. maritime industry serves as a stark reminder of how economic regulatory policies by our government have failed to revitalize our merchant marine fleet. A snarl of regulatory policies and laws introduced over the past century now support a narrow constituency, heavily dependent upon government subsidy programs. These programs are described below.

The *Operating Differential Subsidy* (ODS) is paid by MARAD to shipping companies to offset the higher cost of operating a vessel in foreign trade under the U.S.-flag, compared to the costs of operating a vessel under a foreign-flag registration. The higher wage rates and fringe benefits of U.S. seafarers are the principal components covered by this subsidy program. To qualify for this subsidy, the operator must be a U.S. citizen who owns or leases ships competing for foreign trade. Operators are required to make their vessels available to the government in the event of a military emergency. The current ODS program expires in 2001. In a proposed maritime revitalization package, the Secretary of Transportation recommended to the President that the ODS program be extended. This program would span 1994—2003 and give operators \$2.5 million per ship per year in the first four years of the program. It would also give operators \$2.0 million per ship per year for the final six years. The total costs for the program will be about \$2 billion.¹

The ODS wage subsidies are often cited by critics as one of the major reasons that U.S.-flag vessels are not competitive with foreign-flag vessels. One source estimates that U.S. ship crews cost six times more than Third World crews.² Sources at the U.S. Navy's Military Sealift Command report that the DOD could save about \$2.5—\$3 million per ship if the ODS program were eliminated. The ODS subsidy also acts as a disincentive by not encouraging either seafarers or merchant marine officers to reduce their pay and benefits packages to remain more competitive

or to gain employment in the industry outside of the U.S. market. The ballpark salary for the Captain of an American flag vessel is about \$300,000—about a 30 percent higher salary than those received by Captains of non-U.S. Flag vessels³. Developments in technology have also hampered the ability of U.S. personnel to gain employment in the U.S. maritime market. Today's modern, computerized vessels require crew strengths ranging from 12-20 persons—a radical reduction from the number of crewpersons needed to handle a World War II vintage vessel.

Ironically, an article in the June 30, 1993 edition of the Washington Post related how two major U.S. shipping firms were re-flagging portions of their fleet to cut costs and make their firms competitive on the world market. The article noted that the carriers could achieve major savings by hiring lower paid foreign crews while avoiding a snarl of U.S. tax and safety related laws that contribute to the costs of the doing business under the U.S. flag.

The *Cargo Preference Subsidy Program* requires that at least 50 percent of all government-generated cargoes be shipped in U.S.-flag vessels. These costs are spread across the budgets of the Department of Defense, the Department of Agriculture (USDA), the Agency for International Development (AID), MARAD, the Export-Import Bank, and the Department of State. Certain foreign assistance programs sponsored by the USDA and AID require minimum shipments of 75 percent of aid on U.S. vessels. The total fiscal year 1994 budget for this program is \$598 million. Administrative costs are about \$704,000 for the USDA, AID, and MARAD.

The NPR issue paper, *Eliminate Cargo Preference, Including Ocean Freight Differentials*, argues that cargo preference is not especially cost effective. A USDA study shows that \$160 million would be saved by not shipping exports on U.S.-flag vessels. The savings stemming from the removal of this requirement could be used to increase the volume of sales or reduce the national deficit. Likewise, the DOD estimates that \$500 million would be saved by shipping with non-U.S.-flag carriers.

A *ship construction loan program* under Title XI of the Merchant Marine Act of 1936 authorizes MARAD to guarantee commercially placed construction loans and ship mortgages on vessels built in U.S. shipyards for operation in foreign or domestic trade. The fiscal year 1994 budget contains no money for this program. However, the Secretary's revitalization package proposes \$200 million for this program for fiscal years 1994 - 1996.⁴ However, the Secretary's revitalization package proposes \$673 million in subsidies over the next six years for shipbuilding subsidies.⁵

Another protectionist program for the maritime industry is the *Ocean Liner Conference System*. This system is operated by the FMC and costs consumers about \$2-3 billion per year. The NPR issue paper, *Eliminate the Ocean Liner Antitrust Exemption and the Enforcement of Compulsory Tariff Filings*, finds that abolishing the antitrust immunity will yield economic benefits for U.S. consumers. Savings will stem from reductions in shipping rates (about 15

percent), increases in revenues from higher sales volumes and, more U.S. exports and U.S. jobs.

Another subsidy program known as the *Jones Act* requires the use of U.S. built and crewed ships under the U.S. flag for the transport of maritime commerce between U.S. ports. The *Passenger Service Act of 1986*, levies a similar require on the transport of passengers on ocean liners. The NPR issue paper, *Eliminate the Jones Act and the Passenger Service Act of 1986 and Open Up the U.S.-Flag Requirements*, finds that eliminating the Jones Act would result in about \$20 billion in savings to the consumer. Further, eliminating the requirements of the Passenger Service Act of 1986 will improve the economy of Seattle, Washington, by an estimated \$30 million. Further, opening the U.S.-flag to foreign-built, owned, crewed, and repaired vessels should greatly enhance the size of the U.S. fleet and result in hundreds of additional jobs—a *true maritime revitalization program*.

MARAD officials cite that the major maritime laws cited above reconfirm the need for a strong merchant marine. They believe that each of these programs are necessary to revitalize the maritime industry *and* assure that sufficient U.S.-flag vessels exist for the national defense of America. MARAD officials vigorously extend arguments that a "command and control" approach to "row" instead of "steer" is the key to federal leadership of the industry to a financial recovery.

MARAD's underlying rationale for all of these heavily subsidized maritime programs is that they are needed to ensure the availability of a merchant fleet in the event of a sustained war effort. The principle unit supporting this need is the Ready Reserve Force (RRF). Maintained by MARAD, this fleet consists of 96 vessels that can be activated within 5 to 20 days. During the Persian Gulf War, 78 ships were activated. The Department of Defense has testified that the RRF activation was generally successful, meeting its mission and demonstrating its reliability.⁶

In addition to the RRF vessels, the U.S.-flag commercial vessels are supposed to provide sustained logistical support during military operations. During the Persian Gulf War, the DOD bought cargo capacity on the world spot market because it could not find enough U.S. shipowners willing to risk their tenuous hold on their marketshare to support the Gulf effort. *Only six* of the 59 (10 percent) U.S.-flag ships, with their all American crews, specifically subsidized for the purposes of national defense, *actually went* into the war zone in Saudi Arabia. An additional 38 (64 percent) subsidized vessels used their normal commercial route, which included using foreign-flag feeders, with foreign crews, to move goods to their final Persian Gulf destinations. In a large number of cases, the military needs coincide only on a limited scale with the commercial needs. For example, container ships, which dominate the international shipping and U.S. merchant fleet, are impractical for transporting tanks and other "Roll-on-Roll-off" military equipment. Generally, the most highly valued cargo—the troops—were moved to the Gulf by air as was much high-value, high-force weaponry.

MARAD officials argue that moving the RRF to DOD would be inconsistent with the management of emergency transportation, which is a civilian function (i.e., airlift, highways, rail, and sealift). They further believe that retaining RRF in MARAD will continue the civilian control of merchant shipping required to satisfy the priorities involving military operations and general economic support of the private sector under both normal and contingency situations. However, as noted above, only 75 percent of these ships *subsidized for defense purposes actually* participated in the Persian Gulf war—while DOD contracted for more than 200 foreign-flag vessels to meet mission requirements. MARAD also believes that transferring the RRF to DOD would result in a duplication of functions because the Department of Transportation (DOT) would still have responsibility for allocating all U.S. merchant shipping, to meet both military and civil requirements in wartime. MARAD contends that RRF costs would rise significantly if it was transferred to DOD because MARAD's cost-effective technology and procedures for maintaining ships in "cold iron" status for indefinite periods of time would not be used.

The RRF is under review by the DOD and a report is expected in September 1993. This report will address the number of vessels needed and whether the RRF operation should be transferred to DOD. MARAD officials believe that the study will support the retention of RRF in DOT. They also believe that the maritime industry would oppose the transfer of the RRF to DOD because they would perceive that these ships would compete with commercial ships for military cargoes. The industry would prefer consideration of a more viable active fleet as a better sealift alternative. However, as long as the defense cloak surrounds the maritime issue, the true problems and needs of the maritime industry cannot be dealt with on a unemotional basis.

The fate of the Maritime Industry has thus far been played out along the lines of what economists call the public interest theory. This theory asserts that the objective of regulatory policy is to maximize economic welfare by regulating to correct some form of market failure and, deregulating when the costs of regulation exceed the transaction costs of repealing it plus the cost of the remaining market failure⁷.

Both the MARAD and the maritime industry have demonstrated a propensity to fight for tightly regulated markets and continued public subsidies—in the face of overwhelming evidence that this approach does not work. It is clear that regulation of this industry is creating, not eliminating, inefficiencies in the marketplace. Champions of the current approach believe that regulation insulates American firms from price competition but, fail to accept that regulation is strangling their operations, raising their production costs, lowering their revenues, and stymieing the dynamics of the American industry.

The need for maritime policy reform is overwhelming. Several proponents of maritime reform contend that two sets of American maritime policies exist: one that makes the U.S. fleet inefficient; and the other, which partially offsets those inefficiencies. Current policy is a

hodgepodge of subsidies, protectionism, regulation, and taxation that is a mockery to sensible industrial policy.⁸ As one analyst states:

"The bottom line is that American maritime policy, for well over a hundred years, has essentially been to penalize companies for operating under the American flag. We have regulated, subsidized, protected, cartelized, cabotaged this industry to death. And we have built a Rube Goldberg complex of laws and rules and regulations -- some nine shelf feet worth -- that long ago lost any true relationship to the purposes they are said to promote."⁹

Proponents of maritime reform believe that continuing to tie the viability of the commercial fleet to the military benefits neither the maritime industry nor the military. They also believe that the oversight and control of defense-related maritime programs should be consolidated in DOD. This would allow military planners to ensure that this aspect is properly funded and operated while not allowing the maritime promotional programs to be tied to questionable defense arguments.

Thomas Huxley's quip that "*...Irrationally held truths may be more harmful than reasoned errors...*" suggests the extent to which regulatory activities have hampered the ability of the federal government to create effective, market-driven solutions to the industry's problems. Both industry and government officials hold on to the belief that continuing to "throw more money" at the U.S.-flag fleet will somehow correct market conditions. This perception is widespread in the industry and the executive and legislative branches of the federal government and clouds the ability of decisionmakers to deal with the issue creatively.

The savings that could accrue to U.S. taxpayers from deregulation of this industry, both through the elimination of programs and cost avoidances, are enormous. For example, by simply avoiding the revitalization package cited above, the cost avoidances cited below could be realized:

- ° Rejection the shipyard subsidy program will result in a *cost avoidance of \$673 million over the next three years.*
- ° Rejection of additional funding for the Title XI program will result in a *cost avoidance of \$200 million over the next three years.*
- ° Rejection of the operating differential subsidy program will result in a *cost avoidance of \$2 billion over the next 10 years.*

Recommendation

The U.S. is the largest and most dynamic national economy in the world—the national and the foreign balance of trade deficits notwithstanding. Twenty-six percent of the world's gross

national product (GNP) is represented by the United States and almost 12 percent of the world's exports. Ninety-five percent or nearly a trillion dollars of U.S. foreign trade moves by ship. For the American taxpayer and the U.S. economy to receive the full advantage of the benefits that can be derived from this trade, it is necessary to deregulate the maritime industry and allow free trade to dictate the supply and demand of the maritime industry.

(1) Congress should deregulate the Maritime Industry. Deregulation should include:

- (a) Opening the U.S.-flag registration to foreign built and repaired carrier lines, foreign investors, and foreign crews.
- (b) Increasing foreign competition on U.S. domestic trade by eliminating the Jones Act.
- (c) Fostering competition by not extending ODS beyond its current contract expiration dates.
- (d) Eliminating the shipping cartel exemptions under antitrust immunity managed by the FMC.
- (e) Eliminating the tariff-filing requirements of ocean liners with the FMC.
- (f) Reducing the costs of the sending government shipments overseas by eliminating cargo preference.

(2) The MARAD should be closed.

(3) The RRF should be transferred to the DOD.

Implications

Deregulation of this industry will create a number of benefits. The elimination of the various subsidies will reduce federal outlays which increase the deficit. Broad gains for the U.S. consumer and businesses will result over the long run because they will benefit from price competition and no longer have to pay prices for services that are far above marginal costs. These gains will partially offset short term labor and producer losses that will stem from the early stages of deregulation. There is no evidence to demonstrate that deregulation of this industry will not work. To the uninitiated, deregulation smacks of recession and the loss of jobs. One economist concludes that economic deregulation in the 1970s and the 1980s produced billions of dollars of benefits to consumers and small but positive benefits to producers ¹⁰. He further notes that in 1977, 17 percent of the U.S. GNP was produced by fully regulated industries. By 1988, after partial and complete deregulation of parts of the transportation, communications, energy, and financial industries, that total was cut to 6.6 percent of the GNP. While deregulation may result in

short term losses in the industry, larger corresponding gains will be realized by the U.S. consumer, including businesses. Competition will force US industry to become competitive in the world markets.

Opening the U.S.-flag up for registration by foreign carriers could increase the size of the fleet substantially and provide employment opportunities for American merchant marine officers and seamen not presently available.

Closing the MARAD and the MARAD academy will have little impact upon the maritime industry in the U.S. The Federal leadership demonstrated by both the executive and legislative branches has done little to bring the industry out of its current predicament.

Transferring the RRF to the DOD will place it where the alleged need exists. The DOD is in the best position to determine whether subsidies for the continued existence of the fleet are needed.

Fiscal Impacts

Cancelling the cargo preference subsidy will result in a *cost avoidance for fiscal year 1994 in the amount of \$600 million*. This will also result in an *annual stimulus to the economy or a reduction to the budget of \$160 million*.

Eliminating the 1984 Shipping Act law which authorizes conference pricing (legalized cartel activity) will provide a *\$2-3 billion stimulus to the U.S. economy each year*.

Repealing the Jones Act would result in a *stimulus of over \$20 billion to the economy*.

Closing MARAD would result in savings of about *\$80 million*. This includes the cost of the academy. The RRF costs about \$300 million per year to operate. This cost would be transferred to the DOD.

Endnotes

¹ U.S. Department of Transportation, "DOT Maritime Revitalization Program," Tab A, undated but current as of June 7, 1993.

² James Bovard, "Torpedo Shipping Protectionism," *Wall Street Journal* (November 26, 1991).

³ Ironically, a Navy Captain (rank O-6) is equivalent in rank to a GS-15 in the civil service. While in command of an Eisenhower class aircraft carrier, a Navy Captain is responsible for about 6,400 personnel, a nuclear weapons complement, and about 80 aircraft that are regularly engaged in dangerous air and sea operations around the clock.

⁴ Ibid.

⁵ Ibid.

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- ⁶ U.S. Congress, House Subcommittee on Seapower and Strategic and Critical Materials, testimony by Vice Admiral Francis R. Donovan, February 19, 1991.
- ⁷ "The Politics of Regulation" by Roger G. Noll, in Richard Schmanensee and Robert Willig eds. Handbook of Industrial Organization Volume 2, Amsterdam, North Holland, 1989a.
- ⁸ Allen R. Ferguson, *Reform Of Maritime Policy: Building Blocks for an Integrated Program*, Silver Springs, Maryland, July 1993, p. 1.
- ⁹ U.S. Congress, Subcommittee on Foreign Agriculture and Hunger, testimony by Rob Quartel, June 17, 1993.
- ¹⁰ "Economic Deregulation: Days of Reckoning for Microeconomists," by Clifford Winston, *Journal of Economic Literature*, forthcoming, 1993.

ELIMINATE THE CARGO PREFERENCE
AND
OCEAN FREIGHT DIFFERENTIAL SUBSIDIES

Background

Since the creation of the Maritime Administration (MARAD) in 1950, U.S. policy makers have tried to shield the U.S. merchant fleet from foreign competition to ensure, in part, the U.S. merchant fleets' existence in the event of a sustained national emergency. From the beginning, U.S. policy-makers assumed that *open competition* for the transportation of goods from U.S. ports would make the American fleet uncompetitive, increase our country's reliance on foreign carriers, and undermine the economic viability of our fleet.¹

Generally, U.S.-flag vessels are not competitive with foreign carriers because they are more expensive to operate.² This stems from requirements that these vessels must be built in the U.S., use U.S. built equipment, use U.S. employees, and meet a number of U.S. safety rules and tax laws.

Several laws specify that U.S. agencies ship at least half, and in some cases, all of their government cargo on U.S.-flag vessels. This is known as cargo preference. The Merchant Marine Act of 1970 officially established MARAD as the central authority for overseeing the administration of cargo preference programs.³

Principally, three laws and a resolution specify the cargo preference requirements:

-- The Cargo Preference Act of 1904 (P.L. 58-198) requires that all items procured for or owned by the military be carried exclusively on U.S.-flag vessels.⁴

-- Public Resolution 17 (46 App. U.S.C. 1241-1) requires that all cargos financed by the Export-Import Bank be shipped on U.S.-flag vessels. The resolution also provides that MARAD may waive the requirement and, by individual loan, permit 50 percent of the cargo to be shipped on the recipient nation's vessels.

-- The Cargo Preference Act of 1954 (P.L. 83-664) requires that at least 50 percent of all government-generated cargo be transported on privately owned U.S.-flag commercial vessels, to the extent such vessels are available at fair and reasonable prices.⁵

-- The Food Security Act of 1985 (P.L. 99-198) amended section 901 of the Merchant Marine Act of 1936 (P.L. 74-858) to increase from 50 to 75 percent the amount of

agricultural commodities that must be carried on U.S.-flag vessels. MARAD is required to reimburse the Department of Agriculture (USDA) for the differential shipping costs between the 50 and 75 percent. This portion of the Cargo Preference Program is called the Ocean Freight Differential Program.⁶

The government agencies shipping cargo subject to cargo preference requirements are: the USDA, the Department of Defense (DOD), the Agency for International Development (AID), the Export-Import Bank, and the Department of State.⁷ As outlined Table 1, these agencies, including MARAD, spent \$548 million on cargo preference in 1992.⁸

TABLE 1
CARGO PREFERENCE COSTS BY AGENCY, 1992-94
[Millions of Dollars]

	<u>1992</u>		<u>1993</u>		<u>1994</u>	
AGENCY	Obligations	Outlays	Obligations	Outlays	Obligations	Outlays
U.S. Department of Agriculture	\$117	\$117	\$135	\$135	\$106	\$106
Maritime Administration	51	51	51	51	50	50
Department of Defense	343	343	367	367	395	395
Agency for International Development	13	13	15	15	17	17
Export-Import Bank of the U.S.	25	16	27	20	30	24
Department of State 1	----	----	----	----	----	----

Total	\$548	\$539	\$595	\$588 *	\$598	\$592 *
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1. Estimate for costs related to transportation of preference cargo is less than \$5 million.

* Outlays are estimated for 1993 and 1994.

As is evident from this table, cargo preference is clearly an expensive subsidy: the total ocean freight differential expense of \$168 million (USDA and MARAD's costs) for fiscal year 1992 is equivalent to over \$1.5 million per year for each of the 110 vessels that carried USDA preference cargo. The total cost of cargo preference for all U.S. Government programs for fiscal year 1992 was \$548 million or \$1.37 million for each of the 400 ships in the entire U.S.-flag commercial fleet.

Cargo preference also adversely affects U.S. food aid shipments and agricultural exports. Because of requirements that federal agencies use U.S. vessels, bulk grains are shipped on tankers when bulk carriers are not available. Since tankers are designed for liquid cargos, filling these vessels with bulk grains makes them more difficult to load and discharge. As a result, commodity suppliers usually increase their prices by \$.50 to \$2 per metric ton if they must load bulk grain into a tanker. The increased commodity price then reduces the amount of U.S. commodities that foreign countries can buy with their fixed dollar allocation.

The additional costs imposed by cargo preference on agricultural products can be dramatic. For example, a recent shipment of grain loaded at New Orleans by U.S. flag vessels cost \$84.95 a ton. A similar shipment of grain loaded at Great Lakes ports on a Polish vessel was moved at \$26.00 a ton.⁹ The increased costs serve to make American agricultural exports less competitive on world markets.

Many supporters of cargo preference argue that it is necessary in order to ensure the viability of a U.S. merchant fleet for purposes of national defense. The DOD has testified that they support the U.S.-flag merchant marine through paying a premium on liner cargo. DOD recognizes that while the cargo preference laws may result in higher rates than global market conditions may offer, the premium may help maintain an active privately owned U.S.-flag commercial fleet and a corp of trained U.S. citizen merchant mariners available to support the DOD's wartime requirements. However, the Congressional Budget Office argued in 1988, that cargo preference laws are not a "cost-effective way to ensure adequate military shipping and shipbuilding capacity in the event of a major war."¹⁰ Furthermore, DOD

estimates that cargo preference will cost the agency an extra \$500 million to ship cargo in fiscal year 1993.¹¹

If the purpose of cargo preference is to help maintain an active U.S. merchant fleet, the program is not working. Between 1980 and 1987, the amount of government cargo transported on U.S. flagged vessels increased by 67 percent.¹² Despite this increase, the number of U.S. vessels decreased by 24 percent, and the number of merchant marine personnel decreased by about 31 percent.¹³ Active U.S. flag shipping capacity decreased by 6.5 percent.¹⁴ DOT has acknowledged "It is clear that Federal programs, *including cargo preference rules and direct subsidies*, have not succeeded in keeping the U.S. flag merchant marine viable and competitive in world trades. Many of the program provisions are anachronisms and an ill-advised burden on the Nation's merchant marine."¹⁵ [emphasis added]

MARAD officials, however, say the U.S. should subsidize its' fleet because many foreign countries give subsidies their own maritime fleets. Further, they contend that subsidies to the maritime industry should not be stopped because the U.S. subsidizes other programs for agricultural products and foreign aid. As evidence, they presented an April 1956¹⁶ report, which states

"[i]n general, legislation providing such cargo preference applies to cargo which would not be in existence except for the action taken by the United States Government and its Agencies which generated such cargo through Government loans, grants, guarantee of payment, acceptance of foreign currency, or the purchase of equipment and materials..."¹⁷

MARAD also believes that the major problem is that USDA has not instituted cost containment measure that would limit the costs of the cargo preference program. However, while enhancements could be made, cargo preference does not appear to be the most efficient way to ensure the existence of a U.S.-flag fleet in the case of a national emergency.

Recommendations

Congress should eliminate the cargo preference requirement.

Implications

Although originally designed to protect U.S. national security interests, today the cargo preference laws are little more than protectionist measures intended to shield the U.S. shipping industry from foreign competition. Cargo preference is not cost effective and its elimination would be consistent with U.S. representations to international trading partners to eliminate or reduce trade-distorting subsidies.

Elimination of these programs however, would result in elimination of a significant financial support to the ailing U.S. maritime industry and the short term loss of seamen jobs and shipyard employment in U.S.

Other advocates assert cargo preference contributes to the existence of a U.S. merchant marine, and as a result, there is diplomatic value in showing the U.S. flag at foreign ports. Because of exchange rate fluctuations, foreign subsidies and trade barriers, supporters believe that cargo preference should be used to assure that the U.S. share of both world shipping and agricultural trade are not further eroded.

Finally, supporters argue that the program has a positive multiplier effect on the U.S. economy by improving the U.S. balance of payments deficit and generating additional employment and tax revenues. However, no evidence could be found to support this assertion.

Fiscal Impact

In fiscal year 1994, \$598 million will be spent on cargo preference. The USDA estimates that the U.S. Government could save \$506,000 in administrative costs for salary and benefits for USDA and AID and eliminate 12 positions. For MARAD, the administrative savings would be three positions and \$198,000. If cargo preference was eliminated, administrative costs savings could be expected from other agencies, including DOD.

While elimination of cargo preference would not have a major impact on farm income and prices, USDA estimates that net farm income would be \$150 million higher because the money currently used to pay the higher shipping costs could be used to increase the volume of products sold.

The use of cargo preference may force countries to pay more for a commodity if U.S.-flag vessels are not available at competitive rates at the coastal range where the commodity is the cheapest. MARAD contends that the U.S.-flag vessels are not to be used primarily for military purposes during a national emergency but to maintain and support the civilian economy during a prolonged engagement.

Further, the average age of the dry bulk and tanker vessels used to carry cargo preference ranged in age from six to 47 years with an average age of 17 years old. In comparison, 67 percent of the world dry bulk vessels are less than 15 years old. Because of the age of the bulk and tanker vessels, there appears to be little potential for using those vessels for national security.

The quality of the commodity may also be affected. For example, tankers are not well-suited to carry corn because of corn's high susceptibility to breakage. Since the quality of the commodity is determined when the vessel is loaded, carriers should not be used which decrease the quality. MARAD does not favor of direct subsidies believing there would be no guarantee that the subsidies would be appropriated for more than one year.¹⁸ In the 1956 report, MARAD argued that this type of subsidy would require a determination of the net revenue from the cargo preference program to various segments of the U.S.-flag merchant marine and a continuing valuation of the net revenue obtained from hypothetical preference cargo to determine the direct subsidy amount.¹⁹

Since the cargo preference subsidy guarantees the availability of cargo for U.S.-flag vessels and represents about 14 percent of U.S.-flag liner revenues.²⁰ Supporters of this subsidy believe it is the key to the financial viability of U.S.-flag operators²¹. However, cargo preference comprises only about 3 percent of the total U.S. tonnage shipped. Thus, 97 percent of the U.S.

cargos are not subject to cargo preference laws.

Endnotes

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10. Rob Neenan et al., "Background Paper on The Impact of Cargo Preference," June 10, 1992. (Mimeograph)
11. Telephone interview with Wallace T. Sansone, Vice Commander, Military Sealift Command, July 22, 1993.
12. U.S. General Accounting Office, "U.S. Food Aid Exports: The Role of Cargo Preference," testimony by Allan I. Mendelowitz, June 17, 1993
13. Ibid.
14. Ibid.
15. U.S. Department of Transportation, *National Transportation Policy Report*, (Washington D.C. 1990) p. 67.

16. The only document concerning cargo preference furnished by MARAD was this 1956 report. The MARAD officials said it contained all the arguments concerning cargo preference and that nothing had changed since 1956.

17. U.S. Department of Commerce, *A Review of Direct and Indirect Types of Maritime Subsidies with Special Reference to Cargo Preference Aid*, Washington, D.C., April 1956, p. 13.

18. The 1956 maritime subsidy report argues that cargo preference is a direct subsidy because indirect subsidies do not clearly indicate the purpose for which the aid is granted, which results in the aid being larger than intended by Congress. As evidence the report cites Report No. 1584, 83rd Congress, Second Session, "...the Committee considers that cargoes constitute the most direct aid..."

19. U.S. Department of Commerce, *Maritime Subsidies*, p. 34.

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**ELIMINATE THE OCEAN LINER ANTITRUST EXEMPTION,
THE ENFORCEMENT OF COMPULSORY TARIFF FILINGS,
AND THE FEDERAL MARITIME COMMISSION**

Background

Since 1916, the U.S. has allowed domestic and foreign ocean liner carriers serving U.S. trade to participate in international shipping cartels known as "conferences." Many carriers are members of one or more ocean freight-rate conferences. Conferences are cooperative agreements among carriers to set rates and coordinate services with immunity from U.S. antitrust laws. Absent this exemption, the conferences would be illegal.

The 1984 Shipping Act automatically grants antitrust immunity on carrier cartels to fix shipping rates, capacity, schedules and service, including agreements to pool revenues or cargo provided, essentially, that they are filed with the Federal Maritime Commission (FMC). Carriers are also prohibited from discounting the tariffs by law. The FMC enforces the filed tariff rates and imposed fines of \$30 million on shippers and carriers in 1991.¹ This almost always occurred for discounting, not overcharges.²

In general, the purpose of the 1984 act was to provide for the nondiscriminatory common carrier of goods. Under the act, carriers are required to charge the same price to all shippers for the same volume of the same product, from the same point of origination to destination. Shippers of a different product, even though the same volume and same point of origination and destination, can be charged a different rate for the same quality of service. In addition, the act allows volume discounts through service contracts.³

Critics believe that conferences decrease competition and increase shippers' costs of liner transportation, thus reducing the volume of trade and the standard of living for both the U.S. and its trading partners. Shippers argue that the lack of rate competition and contract carriage increases their costs of imported manufacturing inputs, reduces their exports, and thereby reduces U.S. employment. The Department of Agriculture (USDA) reports that the lost domestic benefits are reflected by an "export multiplier" of 2.4, that is, each export dollar stimulates an additional \$1.40 of domestic business activity, which increases domestic employment. Rather than manufacture in the U.S. and depend on the cartels, one major shipper claims that the unavailability of confidential contracting (because of tariff filings)

could lead it to build smaller plants near its various foreign markets.⁴

Under the 1984 act, conferences can regulate or prohibit their members' use of service contracts. These contracts allow shippers to improve estimates of their transportation costs. They also provide carriers with the ability to identify their revenue stream. Using these contracts, exporters quote complete landed-cost prices to buyers in advance of product movement. In general, contracts allow shippers and carriers to form mutually beneficial long-term business partnerships to establish and maintain markets. However, in practice, all conferences restrict their members from individually entering into service contracts with shippers. In the case of a major U.S.-Pacific outbound conference, only one service contract had been executed over the last few years.⁵

The USDA reports that although general freight rate levels declined from 1984 to 1987, freight rates for many agricultural commodities increased significantly and, on some trade routes, have been quite volatile. Agricultural shippers have not been able to hedge against some of this rate volatility because very few service contracts have been written by conference carriers. For shippers, rate volatility or increases can complicate price quotations and directly affect market competitiveness. A survey of Pacific Northwest agricultural exporters found that 46 percent of the shippers lost sales due to freight rate fluctuations. Therefore, it is questionable whether conferences are promoting these types of constructive partnerships.⁶

The Shipping Act imposes significant costs on the U.S. without clearly serving its articulated goals, enhancing competition, or producing other benefits to the American economy. Pursuant to industry pressure, the act eliminates a prior requirement that FMC consider the public interest or the affect on competition.⁷ A study by the Advisory Commission on Conferences in Ocean Shipping indicates that conferences increase rates about 15 percent annually at a cost of \$2-3 billion to importers and exporters.⁸ The inefficiency of this subsidy is compounded because U.S. carriers account for about 20 percent of the U.S. trade.⁹ Thus, over 80 percent of the conference overcharge goes to foreign carriers.

Tariff filing and enforcement (TFE) is the means of enforcing conference pricing. In addition to the economic cost of preventing competitive discounts from cartel rates, TFE imposes administrative costs of \$12 million per year; \$7 million for the industry and \$5

million for the FMC.¹⁰ Proponents of the TFE contend that its benefits come largely from the role it plays in supporting common carriage principles of access and nondiscrimination. TFE is meant to be a procompetitive tool to restrain the cartel powers of conferences to discriminate among shippers. Generally, proponents say that TFE provides a balance between Congress' desire to allow conferences to operate to the benefit of carriers while protecting shippers from the potential abuse of this increased carrier market power, i.e. antitrust immunity.¹¹

TFE also promotes rigid pricing which prevents the market from clearing in an efficient manner during short-run swings in demand. An interesting irony of this "common carrier" and exemption contract system is that larger shippers tend to be able to negotiate some form of preference contracts. Thus, the most vulnerable shippers, those that are small, pays the highest prices.

The U.S. system of TFE is contrary to the law of virtually all its trading partners. Canada and Japan are the only countries that have any form of public tariff requirement, but neither penalizes discounting.¹²

The 1984 Act has three purposes: (1) to establish a nondiscriminatory regulatory process; (2) to promote a U.S.-flag liner fleet for national security; and (3) to harmonize the U.S. regulatory regime with international practices in the industry. The Justice Department contends that unreasonable discrimination cannot persist without market power. In the case of ocean shipping, market power would not exist absent legalized conference activity and antitrust immunity.¹³

Critics question the importance of the contributions of liner operators to national security. Ships with the highest commercial profitability do not have the greatest military value. The Department of Defense is reviewing the merchant ship requirements for defense and a report will be issued in September 1993. During the Persian Gulf War, according to Military Sealift Command data, containerships accounted for less than 30 percent of the total Desert Shield/Storm deployment. This was limited to regularly scheduled service for the delivery of general cargo and supplies,¹⁴ well after the initial deployment surge. Further, in a prolonged major war, industrial capacity expands to meet military requirements prompting logistic support.¹⁵

Concerning the issue of international comity, critics believe that the protection of less efficient carriers via the conference system constrains the rational development of the world's merchant marine in our global economy. Second, in early 1993, the Commission of the European Communities (EC) issued a Statement of Objections and announced an investigation against the Trans Atlantic Agreement, a superconference formed by 11 trans-Atlantic steamship lines in 1992 to cap westbound freighter capacity and to increase freight rates. The Trans Atlantic Agreement controls more than 80 percent of shipping on North Atlantic routes. This is the first time that countries other than the U.S. have applied anti-cartel restraints on conferences and may suggest a secular change in world-wide policy. The Trans Atlantic Agreement was not challenged under U.S. law. Further, the U.S. maritime law differs from that of major trading partners in other aspects, such as by mandating TFE. Therefore, the antitrust immunity argument does not appear to meet the comity test.¹⁶

The \$2-3 billion annual conference premium dwarfs the benefits of any contribution of rate conferences to national security needs, or even of larger promotional objectives. This is a disproportionately high cost for supporting an industry that employs roughly 30,000 people.¹⁷ The conference system benefits not only crews of the limited number of international U.S.-flag liner operators, but also foreign operators and crews. Most of the U.S. seamen are employed in the Jones Act trades and on vessels supporting cargo preference services. They are not eligible for conference system benefits and this suggests that the total seafarers who benefit from cartel pricing is less than 4,000. At 4,000 employees, the cost per job of the Shipping Act is about \$500,000 annually.¹⁸

Recommendations

1. Congress should amend the Shipping Act of 1984 to eliminate the antitrust immunity for ocean carrier conferences, including control of service contracts.

2. Congress should amend the Shipping Act of 1984 to eliminate compulsory tariff filing by ocean carriers and government enforcement of the filed rates (TFE).

3. The Federal Maritime Commission should be abolished. The primary functions of the FMC are to monitor conferences and accept, publish, and enforce tariff filings. Once these two functions are eliminated the remaining functions can be transferred as follows:

- Foreign Shipping Practices Act, Section 19, and domestic offshore trade rate-of-return responsibilities and personnel to the International Trade Commission. If the National Performance Review issue paper on Open the U.S.-Flag to Foreign Carriers and Eliminate the Jones Act and Repeal the Passenger Service Act of 1986 is accepted, then offshore trade rate-of-return responsibilities will no longer exist.
- Residual responsibilities for monitoring the behavior of any remaining rationalization agreements (an advanced form of integration that permit conference members to reach agreement on their sailing schedules and the shared utilization of equipment) along with any necessary personnel to the Department of Justice (DOJ). DOJ has testified that if the maritime industry followed market standards that many of the rationalization agreements would not be needed because they would be normal business practices.

Implications

The FMC contends that without the conference system the U.S.-flag carriers would require massive increases in subsidies or other non-market support because the removal of conferences would lead inevitably to carrier rate war. The result of the rate war would be that many carriers would leave the U.S. trade because U.S. carriers are in no position to face the revenue losses from the rate war. FMC believes that in the long run, the carriers with "deep pockets" (especially foreign carriers receiving subsidies from their governments) would survive, rather than the most economically efficient carriers. FMC hypothesizes that this will result in a highly concentrated group of foreign-flag carriers serving the U.S. They also believe that such a group could bring international pressure to bear to establish bi-lateral, monopolistic agreements for cargo carriage quotas. However, opponents point out that the barriers to entry are relatively small. Further, FMC believes that foreign governments inject a significant amount of non-market competition into international shipping because of the heavy subsidies they pay their ocean carriers. The FMC believes this will continue even if the U.S. abolishes antitrust immunity.¹⁹

FMC's arguments ignores the probability that, absent the conferences, the liner market

would be one where productive techniques and market demands available to incumbents are also freely available to potential entrants. If such a market would exist without conferences, the bilateral agreements that FMC hypothesizes would not materialize. Further, the FMC arguments assumes that U.S.-flag liners would not make regulatory changes to reduce labor and capital costs in order to be competitive. Finally, FMC's arguments ignores the effect of U.S. subsidization for construction and operating costs, which is believed to be greater than that of most other nations.

The economic benefit resulting from abolishing the antitrust immunity includes:

- reduction in shipping rates about 15 percent;
- increase in revenues from increase volume of sales because the \$2-3 billion in conference premium is not paid (e.g. elimination of hidden taxes on U.S. exports, imported raw materials and other manufacturing inputs for domestic industries, and the U.S. consumers); and
- more U.S. exports, therefore, more U.S. jobs.²⁰

The basic collective ratesetting functions of conferences would become illegal and would have to be discontinued without antitrust immunity. All price setting, even if the price is reasonable, would be prohibited. Likewise, agreements among competitors to restrict capacity would probably be illegal. The antitrust laws should present no obstacles to the normal activities of trade associations to discuss business trends, techniques and conditions in the industry.²¹

Repealing TFE could destroy or weaken the conference system to the extent that carriers would leave conferences due to competitive advantage. Also, eliminating TFE may open the doors to unfair competition by state-controlled carriers. ~~Also~~ ^{Further}, the Advisory Commission on Conferences in Ocean Shipping report indicated that eliminating TFE could re-institute relative immunity of foreign carriers under U.S. law for illegal rebating. On the other hand, TFE allows conferences to maintain rates above the competitive level; gives, at least limited, market power; introduces inefficiencies into the market through time delays needed to compile and administer tariffs; offers little protection from denial of access or unjust discrimination; and ^Jdoes not perform a unique service because other market mechanisms exist which provide shippers with accurate information about ocean freight

rates.²²

Fiscal Impact

The proposal to eliminate conference pricing is a budget-neutral way of increasing economic welfare and enhancing American competitiveness by reducing the cost of trade. Since the conference pricing results in indirect subsidies, the true cost of them is difficult to estimate. The premium is estimated at \$2-3 billion dollars and is paid by the consumer.

A draft USDA report sampling six commodity groups exported to three markets indicated that the minimum increase in total revenues of those agricultural exporters that would follow elimination of the market power of the conferences is estimated as \$239 million per year or 4.6 percent of revenues received from these exports. Adding the estimated increase in the volume of exports expected to follow from reduced delivered prices, the annual gain in agricultural revenues would total \$400 million, or 7.7 percent of the total revenue received. The draft also noted that the cartel premium accounted for about 18 percent of the ocean transportation costs.²³

An amendment of the 1984 Shipping Act to eliminate conference pricing will stimulate the economy. Further, if the U.S. removes conference pricing from U.S. trades, U.S. exporters may gain a competitive advantage because their foreign competitors would still be using conference pricing.

Eliminating TFE will also be budget neutral because the \$40 million in discounting penalties would no longer be collected but fines would be assessed for violations of the antitrust act. Also, the \$5 million in administrative costs would be saved at FMC. This would be offset to some degree by increased activities by the Antitrust Division in the Department of Justice.

The budget for FMC is \$21 million.

Endnotes

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19. Federal Maritime Commission, "Liner Conferences," Washington, D.C., April 23, 1993. (Draft.)

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**OPEN THE U.S.-FLAG TO FOREIGN CARRIERS
AND ELIMINATE THE JONES ACT
AND REPEAL THE PASSENGER SERVICES ACT OF 1986**

Background

Today, about 10 percent of all exports leave the U.S. ports on U.S.-flag ships. In the late 1960s, 23 percent of our exports left on U.S.-flag vessels. This decline in U.S.-flag vessels has occurred because it costs substantially more to operate a ship under the U.S.-flag and often, foreign-flag vessels offer more competitive rates. To assure the health of the U.S. merchant fleet, the Jones Act and the Passenger Service Act of 1986 require that domestic U.S. trade uses U.S.-flag vessels. The requirements for a U.S.-flag vessel are: U.S.-built, U.S.-repaired, U.S.-owned (if by a corporation, the majority interest must be held by U.S. citizens), and U.S. crewed.

Section 27 of the Merchant Marine Act of 1920, commonly referred to as the Jones Act, mandates that shipments between U.S. ports can be transported only on U.S.-flag.¹ The act has two purposes: (1) ensure the growth of the foreign and domestic commerce of the U.S. and, (2) to support national defense needs. Critics believe that the act is inefficient method of achieving these goals.

Jones Act shipping accounts for 50 percent of the capacity borne by privately-owned U.S. ocean-going vessels. Oil tankers account for the bulk of this protected trade. Vessels operating in trades protected by the Jones Act are prohibited from receiving operating and construction subsidies made to other U.S.-flag vessels engaged in foreign commerce. However, because they do not compete with foreign carriers for coastal shipments within the U.S. and its territories, they can and do charge exorbitant rates for carrying freight. Thus, the Jones Act raises the cost of domestic waterborne commerce and bars the entry of low-cost ships and operators into the U.S. market.

For example, the use of Jones Act carriers for seaborne coast-to-coast shipments via the Panama Canal have become prohibitively expensive. This has resulted in much cargo being transported by other, less expensive means (i.e. truck, rail, or air) or purchased from foreign sources where the product plus the transportation costs are less expensive than from U.S. sources. As a result, a West Coast lumber company may not be able to effectively

compete with Canadian products on the East Coast and, Pennsylvania steel producers may not be competitive with Japanese steel importers in California.²

A General Accounting Office report cited Jones Act restrictions on oil shipping as the proximate cause of a shortage in heating oil during severe cold on the East Coast in December 1989.³ This report noted that U.S. oil tankers cannot compete with far less expensive foreign tankers. Further, the American Petroleum Institute blames the Jones Act for increasing foreign oil imports in the Northeast. This market had been previously served by U.S. shippers from the Gulf Coast.

A Jones Act equivalent, the Passenger Services Act of 1986, requires the U.S. passenger cruise ship industry to use American-built and crewed ships. Thus, the U.S. passenger cruise ship industry has priced its services far beyond marginal costs. For example, most cruise ship services to Alaska originate from Vancouver rather than Seattle because they are priced less expensively from a non-U.S. port. A Port of Seattle estimate is that this restriction costs Seattle a minimum of \$30 million a year in lost tourist business. Likewise, tourist cruises between New York and Baltimore, Savannah, and Miami are non-existent because of the high costs.⁴

The U.S. and its territories and possessions are affected adversely by the lack of competition in the shipping industry because they cannot use trucks or rail to obtain merchandise from the continental U.S. Therefore, it is a small portion of the population that bears the largest share of the cost of subsidizing the Jones Act fleet. For example, the Governor of Guam reported that because of the Jones Act, very often the shipping rates are higher or out of proportion with those charged to ship the same cargo to Taiwan and Japan, 5,000 miles beyond Guam. In 1991, an average 20-foot container cost about \$1,594 to ship non-alcoholic beverages to Guam while the same container went to Japan on the same vessel for about \$1,100. The lower Japanese prices are a direct result of competition which does not exist under the Jones Act.⁵ In addition, the act raises the cost of exporting oil from Alaska to the continental U.S.⁶

A September 1991 study by the International Trade Commission (ITC) found that the Jones Act restrictions cost the U.S. between \$3.6 and \$9.8 billion annually.^{*} In addition, the

^{*} ^{*} All dollar values in the International Trade Commission study are in 1988 dollars.

study concluded that downstream production and employment effects are concentrated in two sectors: agriculture, forestry, and fisheries output is reduced by \$142 million, while mining and oil is reduced by about \$330 million. Further, each sector is estimated to lose about 1,000 (a total of 2,000) jobs due to the restrictions. Proponents of the Jones Act argue it generates \$635.6 million in profits annually for the cabotage sector. However, the ITC study found that this is at a welfare cost to consumers of between \$4.2 and \$10.4 billion annually. The study findings claim that to maintain an identical fleet without the restrictions on imports to domestic shipping services via the act, would cost approximately \$619.2 million annually through a direct subsidy. This compares favorably with the Jones Act, an indirect method of protection, which imposes annual costs on the U.S. economy of approximately \$5.9 billion at mid-range estimates.

The second purpose of the Jones Act is for national defense. This purpose covers three elements: the capability of the U.S. shipyards to construct vessels of the type and number needed; the ownership and operation of such vessels by U.S. citizens and registered under the U.S. laws; and sufficient numbers of U.S. citizens trained as officers and seamen to staff these vessels. During the Persian Gulf crisis, only one Jones Act ship was used while DOD contracted for more than 200 foreign flag vessels to perform sealift services.⁷

Shipyards are needed to produce vessels in the event of a protracted war. Since it currently takes well over a year to build ships in a U.S. shipyard, in an emergency, the U.S. should buy or charter existing vessels on the world market, or have ships built in foreign yards. Also, critics believe that the commercial fleet is not useful militarily and shipyards proficient at building commercial ships generally are not proficient at building military ships. Therefore, to believe a need for more domestic commercial vessels exists, assumes a great attrition of existing vessels needing replacement.⁸ Protecting the U.S. shipyards has resulted in higher cost vessels which are not competitive with foreign-built vessels.

In 1985, the Maritime Administration (MARAD) performed a comprehensive analysis of the merchant shipping capacity needed to support the U.S. economy in a global conflict in 1990. This study was updated in 1988 to include peacetime and war contingencies occurring in 1990, 1995, and 2000. Both studies, when combined with military sealift requirements estimated by the Department of Defense, quantify the total U.S. requirement for merchant shipping in wartime. The studies concluded that substantially less tonnage would be required

to support the civilian economy during wartime than during peacetime. This reflects the fact that during wartime, U.S. imports would be greatly curtailed or even cut off.⁹ Since it is well documented that currently an overage exists in U.S.-flag tonnage, the need for large scale shipyard mobilization appears remote.¹⁰

For national defense purposes, U.S. vessels are required to be owned and operated by U.S. citizens and documented under U.S. laws. This requirement does not recognize the "internationalization of investment and of people in American-based businesses."¹¹ The rationale for a majority U.S. interest is to assure the vessel would not be re-flagged in the event of an emergency. In wartime, however, the President can order the seizure of all ships in territorial waters. This latter argument does not appear justifiable, given the sizeable foreign investment in almost every field, including finance, industry and agriculture, involved in national defense efforts.

Finally, for national defense purposes, U.S.-flag vessels are required to be crewed by American citizens. Currently the U.S.-flag ships are operated under manning statutes of 1915 administered by the U.S. Coast Guard. A report from the National Research Council cites these statutes are archaic since they mandate crews that are 50 to 90 percent larger than those required by other industrialized countries. Also, the productivity of the crews is reduced because "cross-over" between departments is not allowed even though modern technology and foreign practice would permit such practices. Crew costs are the largest single operating cost for U.S.-flag vessels. In calendar year 1991, a Captain received about \$300,000 per year for his approximately six months at sea.¹²

Proponents of the Jones Act urge that restricting competition between U.S. ports to U.S.-flag vessels is not the problem. Rather, they cite the lack of flexibility in U.S.-flag requirement as the problem.

Captain Warren Leback, former Administrator of the MARAD, which is charged with enforcement of the Jones Act, in an article written in 1983 (before becoming an Administrator), concluded that the chief problem with the Jones Act fleet requirement was not that the cabotage law existed but with the U.S.-flag requirements. In this article, Captain Leback compares the maritime industry with other modes of competition including the rail, pipelines, motor carriers, and airlines. He concludes that the principal limitation on domestic ocean transportation and its difference from other modes of domestic transportation is the

limitation that vessels, unlike rail, motor, pipelines and air, cannot be built or repaired outside the U.S. He also notes in his comparisons that none of the other modes of transportation have requirements that they must be owned and operated by U.S. citizens or employ only U.S. citizens. Therefore, he believes that the U.S.-flag requirement should be opened to foreign-built vessels and less protectionistic to the U.S. shipyards.¹³

While many countries, including many of our trading partners have cabotage laws, virtually all of them permit administrative waivers to foreign flag ships if there is not a suitable national ship available. In the U.S., this flexibility does not exist except for national defense. During the Gulf War, this flexibility was exercised on January 16, 1991, when the President directed the Secretary of Transportation to waive enforcement of the Jones Act. This waiver allowed foreign vessels to move oil from Texas and Louisiana storage areas to refineries. Further, no other country has a requirement that the vessel be built in that country.¹⁴

Recommendations

- (1) **Open up U.S.-flag requirements.**
- (2) **Repeal the Jones Act.**
- (3) **Repeal the Passenger Service Act of 1986.**

Implications

By opening the U.S.-flag, unions would lose jobs in the short run, but over the long term, they will end up with many more jobs. When the Norwegians opened their flag, they added over 1,400 ships to their fleet, which translated into hundreds of additional jobs.¹⁵ Over the short run, jobs may be lost in the maritime industry due to the repeal of the Jones Act and the Passenger Service Act of 1986. In addition, U.S. crews may need to negotiate lower wages to help stimulate the industry and make it more competitive with foreign vessels. However, over the long run the maritime industry of the U.S. should become stronger as market forces take over.

Fiscal Impact

The act could be costing consumers \$17 for every \$1 of domestic shippers' profits.

Savings associated with repeal of the Jones Act is estimated to be \$20 billion or more, if the costs of shipping restrictions on Great Lake trade, foregone tax revenue, and indirect affects on smaller industries are included.¹⁶

ENDNOTES

1. Requirements for documentation under the U.S. flag include: U.S.-built, U.S.-repaired, U.S.-owned, and U.S.-crewed. To be U.S.-owned at least 50 percent of the stock of the corporation must be owned by U.S. citizens.
2. James Bovard, "Torpedo Shipping Protectionism," *Wall Street Journal* (November 26, 1991), p. ____.
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5. Joseph F. Ada, "Guam Is Hurt Badly By the Jones Act," *Journal of Commerce* (January 16, 1992), p. ____.
6. Allen R. Ferguson, "An Economist's View: Protecting the American Merchant Marine at the Expense of the American Economy," *The Jones Act: Does It Still Make Sense?*, The National Waterways Conference, Inc., Seminar Proceedings (Arlington, VA., November 6-8, 1989), p. 42.
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9. U.S. Department of Transportation, Maritime Administration, Office of Policy and Plans, *Economic Support Shipping* (Washington, D.C., October 26, 1988), pp. i and 18.
10. Peter J. Finnerty, "Growth of Commerce: The Impact of Domestic Offshore Trades on Science, Technology and Efficiency," *The Jones Act: Does It Make Sense?* p. 27.
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12. Ferguson, "Reform on Maritime Policy," p. 4.
13. Warren G. Leback and John W. McConnell, Jr., "The Jones Act: Foreign-Built Vessels and the Domestic Shipping Industry," paper presented to the annual meeting of *The Society of Naval Architects and Marine Engineers*, New York, November 9-12, 1983.

14. Allen I. Mendelsohn, "Cabotage Laws Around the World: An Appraisal," *The Jones Act: Does It Still Make Sense?*, The National Waterways Conference, Inc., Seminar Proceedings (Arlington, VA., November 6-8, 1989), pp. 14-15.

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16. Bovard, "Torpedo Shipping Protectionism."

Creating a Quality Management Culture

TELECOMMUTING

Background

Telecommuting substitutes the use of telecommunications for work travel. Telecommuting has been growing nationwide, but still represents only a relatively small proportion of work. Telecommuting can affect almost every company and organization in the Nation. While certain jobs are not amenable to telecommuting, most organizations have some employees that can telecommute. Rapid deployment of information technology will continue, and experience with the social, managerial, and other aspects of telecommuting will lead to the reengineering of jobs in ways that are now hard to imagine.

Telecommuting can occur from home or from telework sites relatively near residences. Most telecommuting occurs several days a week, with travel to the main work site for the remainder of the work week. Expanded telecommuting can contribute to reducing air pollution, as well as reducing congestion and energy consumption and enhancing safety.

The number of telecommuters is forecast to grow from 2 million in 1992 to between 7.5 and 15.0 million by 2002. These telecommuters would reduce vehicle miles of travel by 17.6 to 35.1 billion by 2002. Reductions in noxious pollutants would amount to 1.1 to 3.4 percent. With a more aggressive program, it would be possible to reach the higher range of these benefit estimates and perhaps exceed them.

Many of the public costs of telecommuting are eligible under the Intermodal Surface Transportation Efficiency Act of 1991. Additional costs would be incurred through research and development programs for demonstrations and monitoring and to provide technical assistance, training, and develop promotional materials.

The cost of building telework sites and equipping them as well as equipping homes for telework would be borne by individual companies and organizations. Operating costs would also be covered by the private sector for their employees.

In April 1993, the Department of Transportation (DOT) published a study of the transportation impacts, costs, and benefits of telecommuting. The report noted that needed information, particularly involving transportation-related behavior, can be acquired only with a special effort. Some DOT-sponsored research is already underway at universities.

Congress appropriated \$5 million to GSA to establish pilot telecommuting centers in southern Maryland, the Eastern Shore of Maryland and northwestern Virginia for use by Federal employees. GSA expects some 600 employees from 15 or more Federal agencies to have participated in the telecommuting center pilot project by the end of the 2-year effort in 1995.

Also, the Flexible Workplace Project, sponsored by the President's Council on Management Improvement, has been testing the feasibility and utility of flexible workplace arrangements for Federal employees. This project, managed by the Office of Personnel Management and the General Accounting Office, is designed to facilitate the implementation of pilot programs in Federal agencies. The undertaking has yielded good initial results in terms of productivity and reduced sick leave. Other factors being evaluated include employee productivity, changes in employee morale, motivation, and job satisfaction. Additional benefits being examined include changed requirements for office space, utilities, equipment, and parking.

These GSA's telecommuting centers and the Flexiplace pilots will advance the state of knowledge of telecommuting in the Federal sector.

Recommendations

1. DOT should further the state of knowledge of the potential for telecommuting and its transportation and environmental impacts by sponsoring additional research, namely, evaluations of telecommuting in the private sector and by implementing telecommuting for its own employees.

In the private sector, DOT should conduct case studies to evaluate telecommuting in cities where their plans are underway for promotion of telecommuting. DOT should select, plan, organize, and manage evaluation of the telecommuting public agencies as the recipient of grants or contracts to projects. DOT should commence a telecommuting program for employees beginning at Headquarters and expanding the program to the field as experience is developed. DOT should utilize the guidance and experience of the flexiplace pilots to implement telecommuting first for Headquarters employees and later extending its efforts to field employees. DOT should use the same criteria in evaluating telecommuting for private sector and for DOT employees. DOT should work with cognizant Federal agencies including

the Office of Personnel Management, the General Services Administration, the Environmental Protection Agency, and the Commerce Department in developing its evaluation plans. Criteria/topics **that should** be considered in order to gain a further understanding of the potential for telecommuting and its impacts on transportation-related behavior include modal change, vehicle miles traveled (VMT)/environmental changes, promoting sprawl, supervisor/employer satisfaction, employee satisfaction, employee problems, supervisor/employer cost effectiveness, employee cost effectiveness, and supervisor/employee job reengineering .

2. In research of private-sector telecommuting, DOT should pursue one of two options.

Under the first option, DOT would select one or more cities for case studies to evaluate telecommuting. Under this option, DOT could move quickly to select sites known to have telecommuting projects underway. Under the second option, DOT would publish a Request for Proposal from public agencies (e.g., a state, a state agency, or a metropolitan planning organization) for evaluations of planned telecommuting programs. Site selection under this option would be slower due to the competitive bid process. In either case, DOT would select a public agency or agencies as the contractor or grant recipient to plan, organize, and manage evaluation of telecommuting projects.

Implications

Telecommuting has pervasive effects throughout organizations that undertake it. Organizations need to learn to manage work forces that are geographically dispersed. Experience so far **has been** limited, but there are applications that can be studied and the results disseminated.

The case studies will advance the state of understanding of the potential for telecommuting, particularly its potential to affect transportation demand and air quality. The studies will also contribute to understanding of the many factors influencing the potential for telecommuting.

Fiscal Impact

There are no estimates of the cost effectiveness of telecommuting. The private sector is

expected to bear most of the costs but should also receive benefits in terms of improved productivity and employee satisfaction. Telecommuting has significant but unknown potential to reduce public costs such as maintaining and operating highways and increased air pollution. The case studies will aid in developing an understanding of the potential for telecommuting which will assist organizations, managers, and employees in understanding how to plan for telecommuting and how to anticipate the public and private costs and benefits of telecommuting.

The Intermodal Surface Transportation Efficiency Act of 1991 authorizes funds that can be used for a wide range of telecommuting activities. The Department is working with state and local governments and the private sector to disseminate relevant information and promote telecommuting. However, these efforts are limited. A more extensive program of demonstrations, technical assistance, and monitoring is needed to expand telecommuting so that it can make a significant contribution to reducing air pollution emissions. The case studies proposed here will enhance the Department's understanding of telecommuting and prepare it to promote telecommuting.

IMPROVE THE EFFECTIVENESS OF INTERMODAL TRANSPORTATION POLICY COORDINATION AND MANAGEMENT

Background

When Congress established the Department of Transportation (DOT) in 1966, it charged the department with the mission of establishing transportation policy to ensure the adequacy and safety of various modes of transportation in the country's overall transportation system. Twenty-seven years later, DOT needs to review the progress towards the accomplishment of that mission, its internal and intergovernmental coordination, organizational structures, and the strategic focus on and planning integrated approaches to the country's transportation needs. DOT needs to progress beyond a focus on the movement of people and goods by air, rail, highway, mass transit, or marine transport, and on the movement of information as well, to implement coordinated, intermodal approaches to national transportation policy.

In 1987, a Congressionally sponsored study by the National Council on Public Works Improvement reported that the most important conclusion to emerge from the study was the lack of intermodal coordination. It suggested that stronger central coordination was needed between federal, state and local governments and private entities to accomplish important national goals and policies. The Council expressed the view that:

"A federally centralized agency could provide direction and initiative for many intermodal activities for which only the federal government could take the lead. ... The primary objective of the agency would be to identify national intermodal needs and policies, and stimulate and promote intermodal transportation consistent with national objectives and policies."¹

John Hazard, a former DOT assistant secretary, came to similar conclusions in his 1988 analysis of national transportation policy management. While he believed that the functions affecting individual modes of transportation (e.g., air, rail, highway) were being performed well, he concluded:

"The interfaces between the modes are where the major lags and gaps in service are occurring. The lack of a clear and effective federal policy on intermodal coordination, terminals and services has contributed to the lags."²

Three years later, Congress wrestled with ways in which to more effectively address

national problems of inadequate and decaying infrastructure, public safety, congestion and deteriorating air quality in the country's surface transportation systems (i.e., rail, highway and mass transit). It decided to attempt a more integrated, "intermodal" approach to problems in surface transport with enactment of the "Intermodal Surface Transportation Efficiency Act of 1991" (ISTEA, or "the Act"). The ISTEA declared that:

"It is the policy of the United States Government to encourage and promote development of a national intermodal transportation system in the United States to move people and goods in an energy-efficient manner, provide the foundation for improved productivity growth, strengthen the Nation's ability to compete in the global economy, and obtain the optimum yield from the Nation's transportation resources."³

The ISTEA represented an important step in the evolution of national transportation policy. While it led to some advances in intermodal coordination, there are indications that much remains to be done to further the policy outlined in the statute. DOT needs to build upon it if it is to successfully lead future efforts to develop and maintain efficient, effective and integrated transport systems for the country's needs into the 21st century.

However, the department's current organizational structure does not lend itself to effective and efficient development and implementation of a coherent, integrated national transportation policy. DOT's principal operating units are highly independent administrations responsible for individual modes of transportation with separate constituencies. The legislation that created DOT designed assistant and associate secretary positions heading its major components to serve more as staff assistants to the Secretary, than as line managers with responsibility and authority to execute program responsibilities. These circumstances have combined with John Hazard characterized DOT's hierarchy as one comprised of "weak Assistant Secretaries" and "powerful modal administrators," with the central issue being "the ability of O(ffice of the) S(ecretary) and modal administrations to work together more effectively as members of a single department committed to improving the performance of the nation's transportation systems."⁴ In August 1991, the National Academy of Public Administration recommended the creation of a Surface Transportation Administration and a Transportation Safety Administration within the DOT, and it was not implemented.⁵

Following enactment of the ISTEA, the Department established two new components to assist in its implementation, including an Office of Intermodalism to coordinate federal

intermodal transportation policy. With no budget of its own and a small staff of less than ten employees, the Office lacks the requisite resources to implement the Act, and to direct and manage the development and implementation of a clear, national intermodal transportation policy. In this current administration, the Office's Director is designated also as the Deputy Associate Secretary of Transportation and should promote the Office's effectiveness.

The widely disparate organization and geographic dispersion of DOT field elements further impede efficient operational coordination of components responsible for individual transportation modes. All DOT administrations, except for its Bureau of Transportation Statistics, have field units. The administrations have little in common in terms of their organization. They variously divided into divisions, regions, districts, field offices or other operational units. There are over 250 regional, district or other field units throughout the country, plus training and research facilities, and approximately 400 control towers. Seldom are those offices of the respective administrations in the same buildings or even in the same cities.

DOT's vertical structure of semi-autonomous, fragmented and widely-dispersed administrations requires effective organizational linkages. As reported in a study by the Congressional Office of Technology Assessment, "[U]nless steps are taken to institutionalize an integrated, multimodal approach within DOT, the existing strongly segmented modal structure will continue to prevail."⁶ The department's highly segmented organizational style particularly calls for an integrated approach to strategic planning. One reason for enactment of the ISTEA by Congress was that:

"[T]he federal government has not developed a clear vision of -- (A) How the surface transportation of the 21st century will differ from the present; (B) How they will interface with each other and with other forms; (C) How such systems will adjust to changing American population pattern and life style;"⁷

DOT has the opportunity to review its organization and its ad hoc strategic planning process on whether or not they lead to fragmented, inefficient and wasteful program management practices. For example, the ISTEA authorized funding between 1992-1997 of a major air quality improvement initiative, involving highway and rail transportation, in the amount of \$6 billion. However, implementation of the air quality management initiative has resulted in duplication of effort by at least two affected DOT components, the Federal

Highway Administration (FHA) and the Federal Transit Administration. The duplication, in turn, has impeded DOT's effective coordination of air quality issues related to multiple transport systems, and produced confusion and frustration in affected state and local agencies.

Bureaucratic "finger-pointing" between the FHA and the Federal Rail Administration impedes coordination in the handling of the approximately 500 accidents at railroad and highway grade crossings each year. Multiple self-contained safety and inspection programs in the various DOT administrations also reflect a lack of coordination on cross-cutting safety and health issues.

DOT has undertaken some initiatives to facilitate increased integration of various modes of transportation. In the fall of 1992, the Department awarded six grants to fund development of Model State Intermodal Transportation Plans.⁸ However, DOT needs to do more to realize the goals of the ISTEA than simply encourage local planning initiatives. It should be exercising a leadership role in the systematic design of an integrated national intermodal transportation network.

Recommendations

- 1. DOT should institute a strategic planning process to promulgate national, integrated transportation policies.** DOT should establish a strategic planning process supporting the development of a fully integrated national transportation policy, with full consideration of the impact and potential applications of emerging trends (e.g., the "electronic highway" and telecommuting). National transportation policies developed through such a process should delineate the roles of federal, state and local government and affected non-governmental entities, with federal productivity agendas defined and provided to state and local governments and transportation customers.
- 2. The Secretary of Transportation should institute management and organization changes to achieve further operational efficiency and effectiveness.** First, DOT's Office of Intermodalism should do more than coordinate policies developed by other internal and external organizations. It should assume an active role in *the development of such policies*, exercise oversight responsibility over policy development organizations and participate in the formulation of their budgets. The Bureau of Transportation Statistics should develop performance measures for intermodalism, evaluate the effectiveness and efficiency of

intermodal transportation programs and systems, and provide analysis of evaluation to the Office of Intermodalism. DOT should review legislation to identify changes needed to enhance ISTEA so that projects are not primarily decided at the regional level. Specifically, Congress should enact on legislation to amend ISTEA to assure that significant *national* intermodal programs, vice regional or local projects, and associated projects (e.g., national corridors) are identified and supported.

Second, for efficiency and effectiveness, the Secretary of Transportation should direct the initiation of a "zero-based" review of DOT operations to identify activities (e.g., asphalt investigation) which might be conducted by state transportation agencies, vice DOT agencies.

Third, the Secretary should consolidate DOT field units in each state to facilitate delivery of its services to customers and to support intermodal transportation programs. The department could start the process with a pilot program in selected states, with an employee in each state designated to serve as "Coordinator for Intermodalism" for the state. The department should work with states and local planning organizations to improve their efficiency, effectiveness and use of federal funding for intermodal projects.

Fourth, DOT should adopt an integrated approach to transportation safety. DOT should lead other federal agencies in developing and achieving agreement on common, government-wide measures of safety. It should encourage other agencies to increase standardization in data to support common measures of safety. It is recommended that the process begins with surface transportation functions located in the National Highway Traffic Safety Administration, motor carrier safety functions in the FHWA and FTA, and safety operations in the FRA and the Offices of Pipeline Safety and Hazardous Materials in the Research and Special Projects Administration.

Finally, the Secretary of Transportation should review and report to the President on progress made to achieve intermodal transportation in one year.

Implications.

Implementation of the above recommendations would clarify the direction and focus of the national transportation system and the US transportation policy. An integrated approach to intermodalism would facilitate the delivery of an efficient, safe, effective and integrated transportation system to the American people and industries. Bureaucratic inefficiency would

be reduced, and funding obligation rate improved. The streamlining of the field offices should provide customers better service and project a more favorable image on service delivery. It would assist state and local transportation agencies to achieve effective and integrated transportation systems. It would assist Congress in dealing with transportation issues. No organizational realignment is proposed as it is the responsibility of the Secretary of Transportation to contemplate such an undertaking.

Fiscal Impact

The implementation of the above recommendations is a natural evolution of DOT. The management and administration of the department should not need any additional funding in its implementation. Organizational realignment is a prerogative of the Secretary of Transportation. It is not possible to estimate such fiscal impact now. Potential savings as an outcome of a well-coordinated policy may be extremely significant.

Endnotes

1. National Council on Public Works Improvement, *The Nation's Public Works: Report on Intermodal Transportation*, by Joseph S. Revis and Curtis Tarnoff (Washington, D.C., May 1987), p. ii.
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4. Hazard, pp. 120-122.
5. National Academy of Public Administration, *Organizing the Administration of Surface Transportation Policies and Programs to Meet National Needs* (Washington, D.C., August 1991).
6. U.S. Congress, Office of Technology Assessment, *Public Works Technologies Management, and Financing* (April 1991), p. 11.
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DEVELOP AN INTEGRATED NATIONAL TRANSPORTATION RESEARCH AND DEVELOPMENT PLAN

Background

Economists have seen the development of new technologies for maintaining and improving the nation's transportation infrastructure as keys to the productivity growth of the United States. The Federal Government has always played a key role in spurring this economic development through financing.¹ With the current federal deficit, federal support for public works, including the research and technology to improve them, has steadily dropped. Countless new technologies have been developed in national laboratories, universities and industry, which could be adapted to help address both the transportation condition and capacity problems. The technologies, however, are often expensive to acquire, test and adapt for transportation's use.

The transportation system is an integral part of America's future in both economic growth and competitiveness. While it is important to improve the infrastructure, DOT must assure that transportation supports the interests of environmental quality, energy conservation, safety, industry revitalization and human factor relationships. Coordination of research and development (R&D) is necessary to assure that these research and technology needs are effectively met.²

An analysis of transportation R&D resulted in two findings: (1) there is a lack of coordination of transportation-related research, including surface transportation R&D, which has led to little assurance that broad national goals are being met; and (2) within Department of Transportation (DOT), the appropriate organizational structure does not exist to assure that R&D programs address intermodal needs and capacity enhancing alternatives. These two findings stem from that fact that no national transportation plan and no single entity responsible for overseeing a plan exists.

Currently, many federal agencies, other than DOT, fund transportation-related R&D programs including: the Department of Energy (DOE)—energy conservation R&D; the Environmental Protection Agency (EPA)—primarily air quality and noise R&D; the Department of Commerce's National Institute of Standards and Technology (NIST)—standard setting R&D particularly in the building materials area; the Department of Defense' Corps of

Engineers—primarily involved in infrastructure R&D; NASA—aeronautics R&D; and National Science Foundation—basic research in materials and composite. Each federal agency with transportation-related research programs determines its priorities and needs and spends funds on R&D regardless of whether it is a priority transportation need. This is due in part to the lack of an integrated national transportation R&D plan.

This lack of integrated R&D planning for surface transportation was recognized in the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 [P.L. 102-240]. In Title VI of the Act, Congress found that "despite an annual expenditure in excess of \$10,000,000,000 on surface transportation and its infrastructure, the Federal Government has not developed a clear vision of...the role of federally funded research and development in assuring that appropriate transportation systems are developed and implemented."³ Congress found further that surface transportation research and development programs were fragmented and dispersed throughout government and needed to be strengthened and incorporated in an integrated framework within which a consensus of the goals of a national surface transportation research and development program could be developed.⁴

The act directed the Secretary of Transportation to develop an integrated national surface transportation research and development plan by January 15, 1993. Congress intended that all surface transportation R&D for DOT would be included in the plan and projects would be evaluated in accordance with the plan. In addition, the act directed the Secretary to consult with and use the expertise of other federal agencies.⁵ Unfortunately, ISTEA addressed only the need for transportation R&D planning for surface transportation and not the larger problem of the lack of R&D planning for all other transportation modes and multimodal planning.⁶

Eighteen months after passage of ISTEA, transportation-related research and technology development throughout the federal government is still not coordinated for surface transportation or the larger transportation arena which includes air, water, and intermodal transportation.⁷ For example, during a May 1993 meeting with the National Laboratories, DOT discovered that several of the labs were funding similar high visibility R&D efforts such as intelligent vehicle highway systems (IVHS) and magnetic levitation (maglev); yet, few of

the labs were funding low visibility infrastructure R&D, such as materials, composition, and corrosion.⁸

Additionally, accurate estimates still do not exist as to how much is spent on transportation-related research throughout the federal government.⁹ The Office of Management and Budget (OMB) in its *The Budget For Fiscal Year 1994* estimates that nearly \$2 billion is being proposed for civil transportation infrastructure R&D by the federal government. OMB defined this R&D as roads, bridges, and commuter systems as well as high speed rail, civilian aviation, IVHS, maglev systems, and techniques in assessing the expected life of existing civil transportation infrastructure.¹⁰ An OMB official as well as an official from the Office of Science and Technology Policy, however, stated that this \$2 billion estimate included only three agencies and was done without a comprehensive definition of what transportation-related R&D should include. The three agencies included in the estimate were:

NASA	\$1.100 million
DOT (Total R&D budget)	.790 million
NSF	<u>.032</u> million
	\$1.922 million ¹¹

Coverage of national goals by transportation-related R&D also appears inconsistent. For example, EPA has the mandate for carrying out the Clean Air Act amendments. This mandate could have a profound effect on transportation in metropolitan areas failing the ambient air quality standards; however, neither EPA nor DOT has a substantial research program to assist the transportation sector in meeting these mandates.¹²

The DOT is the President's primary advisor on transportation policy issues and therefore, should be the logical leader for coordinating transportation research. To effectively coordinate transportation-related research, DOT should have a more effective internal R&D infrastructure to be recognized by other federal departments as the transportation R&D leader.

In April 1993, the DOT Office of Inspector General (OIG) suggested that the department reassess its current R&D role and ensure it has adequate oversight and control over R&D activities.¹³ At present, DOT does not have a R&D focal point within the Office of the Secretary. At the 14 cabinet level departments, DOT is one of only five departments

[Labor, Health and Human Services, Treasury, Transportation, and Veteran's Affairs] which does not have an Assistant Secretary or a direct advisor to the Secretary for technology.¹⁴

DOT's R&D coordinator has been situated since 1977 in the Research and Special Programs Administration (RSPA). RSPA is one of the operating administrations and does not have the organizational clout to direct departmental activities and set priorities. In fact, it has little influence over the other operating administrations within DOT.¹⁵

RSPA chairs the R&D Coordinating Council established to provide oversight on the formulation and conduct of DOT's R&D programs. This structure does not provide the R&D coordinator with direct access to the Secretary that is necessary to fulfill the important role of a Research and Technology Advisor. Thus, it is difficult for those outside the department to determine who speaks for the Secretary on R&D matters. Because alternatives to current and future transportation patterns are not pursued in terms of intermodal connections and the department's focus on supporting short term objectives, the Congress of the United States, Office of Technology Assessment (OTA), in its *Delivering the Goods: Public Works Technologies, Management, and Finance*, recommended that DOT strengthen the R&D coordinating council and create an effective Secretary-level R&D coordinator.¹⁶

Another organizational problem results because DOT's multiple R&D programs are structured in terms of operational administrations, responsive to the direction of the modal administrators. Each administration has a separate R&D budget as well as R&D plans, Congressional and private sector constituency, and an advisory committee. Each modal administration has its own program and applied research is directed at a specific modal need. Most of the Federal Aviation Administration's (FAA) R&D program, for example, is directed toward improving air traffic control technology and the performance of air traffic controllers and pilots. The durability and performance of roads and bridges is the focus of the Federal Highway Administration's (FHWA) R&D program. While these are appropriate mission related R&D roles, the focus on specific modal needs ignores the intermodal linkages issues.¹⁷ A secretary-level R&D coordinator would assure that these intermodal linkages existed while allowing the modes flexibility in researching and developing their own modal needs.

ISTEA, in recognition of these problems, created an Office of Intermodalism and gave it responsibility for coordinating federal research on intermodal transportation.¹⁸ For fiscal

1994, however, the office has no budget and cannot conduct intermodal R&D without the cooperation and assistance of the individual operating agencies.¹⁹ Thus no mechanism exists for funding R&D issues which cuts across agencies and very little intermodal R&D occurs in DOT on how systems can best meet the broad national goals of ISTEA or other transportation needs.

Further, most of the federal research on the national goals occurs outside of DOT. According to OTA, DOT needs "to ensure that a substantial portion of their R&D resources address end-users' needs and to maximize the use of existing resources."²⁰ OTA, in its *Delivering the Goods* study, found that "[t]he lack of long-range and systems-oriented R&D has left DOT unprepared to address current national needs, such as transportation-related air quality issues and intermodal and urban capacity problems."²¹ The report noted that until recently, DOT agencies did not focus on human factors areas, including "human behavior, capabilities, and interaction with technologies that underpin the safety and efficiency of transportation systems."²² The OTA also found DOT does not spend any funds on R&D for trend analysis which would facilitate understanding human behavior (i.e., what would be required to make people use more public transit rather than private automobiles).

Without a R&D focal point in the Secretary's office and a more effective R&D organizational structure, no overarching R&D policy has been developed, R&D is not being measured by its desired outputs, intermodalism is not being addressed in R&D, and DOT's involvement in the design of a national communications policy may be lacking. Although a R&D policy document was issued in January 1991, it does not address these types of issues.²³ The development of an R&D policy would provide the framework to allow a review of the effectiveness across modes of technology transfer and sharing programs, output and utilization of the university research programs, technology implementation, and cooperative agreements with industry. The R&D policy could also address intermodalism (e.g. who handles RR grade crossing at a highway). Further, the policy could be developed to ensure the implications of information technology (i.e., telecommuting) are considered when R&D decisions are made.

OTA, in its study under a section titled "Public Works R&D--Almost an Oxymoron," found that federal R&D was targeted to specific problems of the funding agency which resulted in numerous, disparate projects. The study continued by stating that each DOT

agency funds R&D to carry out its mission while no agency has focused R&D on making the services more cost-effective and productive or on intermodal operations.²⁴

Currently, no departmental strategic plan exists to ensure funding of research in areas identified by the Secretary as priorities. In July 1987, the General Accounting Office (GAO) reported that DOT needed to link R&D activities with secretarial priorities and industry needs and strengthen management direction and oversight of R&D.²⁵ Because no strategic plan exists for the entire department, it is difficult for DOT as a whole or the individual operating modes to design an R&D plan that supports the department's strategic issues.

The fiscal 1994 budget report from the House Committee on Appropriations illustrates the need for a strategic R&D plan. The Committee stated that it was "not pleased with the state of the Coast Guard's research and development efforts" and as a result recommended a ten percent reduction to \$22.5 million. The Committee report cited a recent GAO report, which concluded that the Coast Guard did not have a clear definition of what constitutes R&D or a plan to establish R&D priorities throughout the Coast Guard. Because of the Committee's concerns, it directed the Coast to look at three specific R&D areas for fiscal 1994—the differential global positioning system, the cutter scheduling assistance program and satellite-track datum marker buoys.²⁶ Therefore, without a well formulated strategic plan, R&D projects are difficult to defend and Congress may be more prone to directing R&D in specific areas.

Once a comprehensive strategic plan is developed for the entire department, an R&D strategy can be devised which is pro-active rather than reactive and will place the Secretary in the position to provide strategic leadership and set general priorities. Further, the plan needs to include a review of the R&D portfolio to determine whether the mix of high risk (with potential high return, usually cutting-edge technology) verses no-risk (low tech) is appropriate.

Recommendations

- 1. DOT should examine the nation's transportation-related R&D portfolio and develop an integrated national transportation plan that considers specific transportation needs as well as intermodal transportation needs.**

The purpose of the examination would be to determine whether the broad national goals are being appropriately addressed. As an initial step, an inventory of existing federal (all departments and agencies) transportation-related programs including specific program goals, structure, and funding level should be developed.

2. The White House should establish a transportation-related R&D focal point within the federal government. There are several options:

- (a) **Charge DOT with leadership for transportation R&D.** Since DOT currently has only 41 percent of the known transportation-related R&D budget, DOT would need help in establishing its leadership and in ensuring cooperation from other federal agencies. The National Economic Council, the Office of Science and Technology Policy, and OMB could assist in establishing DOT's leadership in this arena. OMB, in particular, could help by not approving budget requests for transportation-related R&D unless the R&D project was a priority as established in the integrated national transportation R&D plan.
- (b) **Alternatively, OTA has suggested that existing agencies, such as NIST or the Federal Laboratory Consortium, or a new agency, such as the then proposed Advanced Civilian Technology Agency, could act as federal R&D coordinators.** According to OTA, this would provide a "systems- oriented management structure for public works R&D...aiming for comprehensive financial leveraging, management, and review."²⁷ However, these agencies would not have transportation as their primary focus as DOT would.

3. DOT should establish a R&D technology focal point in the Office of the Secretary. This person would represent the Secretary on R&D matters and should chair the R&D Coordinating Council to elevate its status and function. This R&D coordinator could be in the Office of Policy, the Office of Intermodalism, or a separate Assistant Secretary.

4. DOT should develop a department-wide R&D policy and an integrated strategic plan. The policy would provide the framework for decisions including intermodalism, technology transfer and sharing programs, output and utilization of the university research programs, technology implementation, and cooperative agreements with industry. Further, the R&D policy should also address DOT's involvement in the design of the national

communications policy. The strategic plan should consider intermodal needs as well as the specific mission oriented needs of the operating administrations and whether the mix of the R&D portfolio is appropriate.

Implications

These recommendations will result in a more coordinated and focused approach to transportation R&D throughout the federal government as well as within DOT. These changes should result in better information and ultimately, better solutions to the transportation infrastructure and other transportation problems. Further, these recommendations should allow DOT and the transportation sector to measure and achieve its articulated objectives and highest priorities.

If DOT is designated the leader in transportation R&D, the various departments and agencies will strongly resist. These agencies would prefer to continue to prioritize their R&D projects without consideration of the overall national transportation goals. The Office of Science and Technology Policy, National Economic Council and OMB will be key in establishing this leadership role in DOT.

The resistance to having a R&D coordinator within the Office of the Secretary may be strong because the agencies may fear a loss of power. The Secretary may be able to ameliorate this opposition by selling the benefits of having an advocate for R&D within the Secretary's office.

Fiscal Impact

This issue would have result in the avoidance of duplication and more efficient transportation R&D throughout the federal government. Because a good budget estimate does not exist for transportation-related R&D, the savings resulting from these changes cannot be quantified.

Endnotes

1. The Congress of the United States, Office of Technology Assessment, *Delivering the Goods: Public Works Technologies, Management, and Finance*, (Washington, D.C., 1991), p. 1.

2. U.S. Department of Transportation, *Moving America: New Directions, New Opportunities* (Washington, D.C., February 1990), pp. vi, vii and 104.

3. P.L. 102-240. Section 6009(a)(1).

4. P.L. 102-240. Section 6009 (a)(7).

5. P.L. 102-240, Section 6009(b).

6. Interview with Frank Penti, Acting Director, Office of Intermodalism, Department of Transportation, Washington, D.C., April 23, 1993.

7. Interview with Henry Kelly, Director (Technology), Office of Science and Technology Policy, Washington, D.C., June 29, 1993.

8. Interviews with Dennis Murphy, White House Fellow, Office of the Secretary, Department of Transportation, Washington, D.C., May 13 and June 7, 1993.

9. Telephone interview with Jack Fellows, Analyst, Special Projects, Office of Management and Budget, Washington, D.C., June 23, 1993.

10. Office of Management and Budget, *The Budget For Fiscal Year 1994* (Washington, D.C., 1993), p. 44.

11. Telephone interview with Jack Fellows, June 23, 1993.

12. Ibid.

13. Office of Inspector General, Department of Transportation, "Reporting Form for Each Significant Report for National Performance Review: Streamlining Research and Development in DOT," April 1993. (Proposal.)

14. Office of the Secretary, Department of Transportation, "Issue: Research and Technology Advisor to the Secretary," April 1993. (Draft.)

15. Ibid; and Interview with Dr. Richard John, June 3, 1993.

16. OTA, *Delivering the Goods*, pp. 220 and 237.

17. OTA, *Delivering the Goods*, pp. 222 and 227.

18. P.L. 102-240, Section 5002(c)(5).

19. Interview with Michael Huerta, Director, Office of Intermodalism, Washington, D.C., July 2, 1993.

20. OTA, *Delivering the Goods*, p. 237.

21. OTA, *Delivering the Goods*, (Washington, D.C., 1991), p. 220.

22. Ibid. p. 222.

23. U.S. Department of Transportation, *A Statement of U.S. Department of Transportation Research and Development Policy*, (Washington, D.C., January 1991), pp.1 and 2.

24. OTA, *Delivering the Goods*, pp. 34 and 222.

25. U.S. Comptroller General, *Department of Transportation: Enhancing Policy and Program Effectiveness Through Improved Management*, RCED-87-38 (Washington, D.C.: General Accounting Office, July 1987), pp. 215 and 216.

26. H. Rept. 103-149, p. 37.

27. OTA, *Delivering the Goods*, p. 238.

INFORMATION TECHNOLOGY MANAGEMENT IN THE DEPARTMENT OF TRANSPORTATION

Background

An information infrastructure consists of the hardware and software required to generate, store, display, manipulate and disseminate information. The pieces that comprise such an infrastructure are hardware for computing and communicating as well as the application software and the data. Recent Department of Transportation (DOT) Inspector General reports cite several information technology problems stemming from inefficient management of the information technology (IT) infrastructure within the DOT. These include the inability to adequately manage spare parts due to data problems, problems with National Radio Communication System (NARACS) integration, problems with safety and other data availability, an estimate that transit operators could save up to 50 percent in software development and procurement costs by exchanging software (i.e. using a software repository), Coast Guard stock inventory problems related to data, problems with interoperability between Consolidated Health Care System (CHCS) and Coast Guard systems, and the integration of aviation logistics systems.

In addition, the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 introduced an approach to transportation problems that emphasized the interrelationships of the surface modes of transportation, and allowed for some flexibility in funding for surface transportation modes. The inability to exchange information between modes is a barrier to ISTEA implementation. As long as there is an inability to exchange information between modes, it is more difficult for the DOT to integrate management of intermodal programs. The National Transportation Policy II (NTP-2) document of February 1990 recommended extending the use of electronic communication to foster intermodalism, centralizing communications by establishing a department-wide IT coordinating group, promoting information technology transfer between modes, improving the library facilities, increasing data accessibility, and ensuring hardware and software compatibility between modes.

Further, the loss of economies of scale resulting from fragmented requirements is costing the DOT the opportunity to modernize their current information infrastructure. For instance, if Federal Aviation Administration has leased a communications circuit that is not fully utilized to and from the same locations for which the Federal Highway Administration has leased an underutilized circuit, it is possible to lease a larger single communications line at a

savings. Existing funding could be used to buy additional needed hardware and software, or if additional or more modern equipment is not needed, funding could be reduced. Discussions with companies such as EDS, GTE, CSC, and Boeing revealed that they have realized a minimum savings of 30 percent annually from consolidating and modernizing their information infrastructure. Metrics compiled by the Assistant Secretary of Defense for Command, Control, Communications and Intelligence show that over seven years, eight companies reduced the cost per transaction in the information technology budget from 81 to 42 percent.

In "Technology for America's Economic Growth, A New Direction to Build Economic Strength", February 22, 1993, there is a commitment to ensuring the potential public users of data know what data exists and how to access it. Despite the recent creation of the Bureau of Transportation Statistics (BTS), data continues to be collected by every mode within the DOT. It is not even clear to DOT employees where they can get the data they need or if they should continue collecting it. This results in data being collected that is never used, in duplicative data collection efforts, and in poor decisions because the wrong data was used.

World class private corporations as big, and sometimes larger, than DOT (EDS is a \$6B annual IT operation) have all been able to improve the efficiency of their IT operations, save money, and use no additional investment beyond what they had currently projected by using the following model.

- 1) centralize assets and network management control,
- 2) consolidate, standardize, modernize, and integrate communications and computer hardware,
- 3) standardize software applications,
- 4) standardize data.

Information technology requires central policymaking in order to allow decentralized operations. All world class organizations manage IT centrally, and it is even more true as organizations move to decentralized processing.

The question is how can this model be tailored to the DOT. Companies, like Kodak and General Dynamics and General Motors that could not correct their information technology problems in-house have had to contract out their entire IT function or acquire another company to manage their IT function. Potential options for tailoring this model process are as follows:

- 1) Central management and decentralized operations. This implies central decision

making on architectures and standards, while day-to-day computing and installation operations would be carried out by the modes. Ideally, all IT architects, designers and network and software engineers would produce one architecture for the Department. The modes would retain the day-to-day computing, installation and maintenance operations.

2) Just standards. This is different from the option above in that only standards would be set centrally allowing the modes to not only operate their IT resources but to develop their own architectures as well. This is only slightly more than what is being done today. Since the ability to enforce the standards is key to making this work, the IRM organization within OST would have to have strong support from the Secretary to veto projects proposed by the modes.

3) All IT done centrally. This would require setting up a separate mode for IT. This option would require that all funding for information technology services be on a reimbursable basis to avoid a monopoly and to promote competition. This has the benefit of establishing accountability for both the customers and the IT organization. Central data processing is already an example of providing IT services on a reimbursable basis. This option most closely parallels the world class industry model, allowing for rapid accrual of benefits and savings. However, it meets with the most resistance within the DOT.

4) Contracting out. Companies like Kodak and General Dynamics who were unable to adapt their cultures to a central control of IT resources opted to contract out all their IT services.

5) Contracting out to another federal agency. This is a variation on the above option which would allow another federal agency to provide all IT services to DOT. In the case of FTS-2000 and, for many federal agencies, the payroll system operation is currently done by another agency.

Recommendations

DOT should centralize management of architectures, policies, standards, and acquisition planning and strategy for DOT information technology. Establish a temporary chief information officer (CIO) reporting to the Secretary of Transportation. Move OST(M-30), the Office of Information Resource Management under the CIO. This has the advantage of demonstrating the importance of providing interoperability by raising the visibility of the IRM organization within the Department. Funding would remain with the modes. Standards

and architectures would be developed by detailing necessary staff from the modes as needed. This has the advantage of ensuring that the modes' requirements are taken into account. The CIO would be the tiebreaker/decision maker on the standards, policy, architecture, acquisition strategy, data dictionary, etc. The modes would then ensure that they adhered to the plan in procuring equipment. The CIO as the IRM official could ensure compliance through delegation of procurement authority. Centralizing the planning, policymaking and strategy decisions should allow the Department to maximize any initiatives. In all cases shared systems and administrative or business systems should be tackled first. This allows for maximum improvements and savings.

The library services could also be realigned with M-30. This was recommended in NTP-2 as a way to facilitate intermodalism within the department. Since library services are often a traditional information resources management function, the library could be realigned with the rest of the IT functions.

Establish all information technology operations as fee for service. This would require that all funding for information technology services be on a reimbursable basis to avoid a monopoly and to promote competition. This has the benefit of establishing accountability for both the customers and the IT organization. Central data processing is already an example of providing IT services on a reimbursable basis within the DoT. The customer is responsible and accountable for the products of the IT support, thus they can decide the value of using these services. If IT services are provided at no cost to customers, resources are consumed without regard to the true cost of the service and all requirements have the same priorities. It is the responsibility of the IT provider to earn revenue thus they must monitor their costs and provide high quality service. A fee for service arrangement neutralizes the monopoly arguments, allows for performance measurement, and makes organizations compete. The organizations who are assigned operational responsibility for the network, data processing facility, or running a standard software application should be reimbursed by the customer.

DOT should establish a minimum number of consolidated and modernized data/voice network for DoT. This would promote communication between the modes as recommended by NTP-2. It would also allow for consolidation of communications requirements so that the DOT can take advantage of economies of scale. The architecture should do more than lash existing networks together. By developing an architecture for a

modern robust network, the department could not only communicate internally, but also communicate with the public and other federal, state and local agencies, which at the same time reduce operating costs of old networks and achieving economies of scale. The architecture should be developed by M-30. Additional personnel should be detailed to M-30 to carry out the architecture development effort. The architecture should address the role of radio frequency spectrum management. All users and applications should be moved on to a single network unless they can justify that they should retain their own networks for economic, security, or safety reasons.

DOT should establish a suite of standards for workstations and other data processing equipment. M-30 should establish the DoT standards for workstations etc. and develop a strategy for moving the department to those standards. Again, personnel from the modes should be detailed to work on this plan. The plan/standards should address a maximum time before each workstation will be replaced to ensure that the department keeps pace with technology.

DOT should consolidate and automate all central data processing operations. Some world class companies have consolidated their mainframe operations to achieve economies. Others, like Kodak and General Dynamics who were unable to adapt their cultures to consolidation of central processing opted to contract out all their IT services. EDS and GTE, who are moving into decentralized data processing will be converting their central processing operations to repositories.

DOT should continue to choose standard software applications for DOT functions. The financial systems are already being standardized. Other application software for functions that are performed by more than one mode should also be considered for standardization. These could include rulemaking and safety. This would solve the standardization, integration and interoperability problems cited by the IG. This not only saves software development costs but also saves software maintenance costs which historically are three times the cost of development. If only one system is developed and maintained it is much cheaper than developing and maintaining several. M-30 should set application standards once again with staff detailed from the modes as part of a team, while M-90 should help functional managers improve their business processes and oversee the development of standard systems.

DOT should develop a departmentwide data management strategy which enables

standardization of shared data through data repositories. Again this should be chaired by M-30 with representation from all the modes. This working group could begin immediately, however, most world class companies have had little success in moving the data element standardization and repository efforts forward until they have been able to minimize some of the variables from lack of interoperability of hardware and nonstandard software applications. Until the other efforts are well under way this should not be an area for additional investment. The following three actions are part of the above effort.

a) Begin the standardization of data within the DOT. Data element standards and a data dictionary will facilitate data sharing by letting the data user know precisely what the data element means. For instance, "fatality" is a statistic that has a different meaning among various modes. Data element standardization will provide for more efficient data collection, elimination of duplicative data collection, and ensure that data that is collected is not misused. This is a very big effort, therefore recommend that this effort begin with shared data and data that will reside on new systems.

b) Establish a focal point within the DOT to ensure that transportation data is made easily available to the public. The BTS was established through the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. Although BTS is responsible for providing data to the public, it is not the only organization within the department providing data to the public. As a result data is provided on a piecemeal basis.

c) Establish industry user groups. This would ensure that the customer perspective is taken into account and the commercial playing field is leveled.

Implications

The DOT has a very strong modal culture. This is the biggest barrier in making the changes proposed above. If the modes perceive that they are losing capability these recommendations could be very difficult to carry out. The second barrier is fear of investing to modernize. Often there is a tendency to continue to maintain the old equipment while in the information technology area, the costs for new and better equipment have been decreasing.

Fiscal Impact

The DOT information technology baseline is \$2.5-2.8B. The industry benchmark for

use as a test of reasonableness is a minimum of 30 percent reduction within eighteen to 36 months with no additional investment.

In Millions of Dollars

	1994	1995	1996	1997	1998
Budget Authority	\$ 0	\$ 0	\$ 200	\$ 300	\$ 400
Outlays	\$ 0	\$ 0	\$ 200	\$ 300	\$ 400
Change in FTEs	0.00	0.00	0.00	0.00	0.00

PROVIDE REEMPLOYMENT RIGHTS FOR MERCHANT SEAMEN

Background

Title XIII of the Merchant Marine Act of 1936 provides for the maritime education and training of U.S. citizens. One of the principal elements of this Act is to provide individuals with the skills needed for service in the merchant marine in the event of a war or national emergency. In the event of such a national crisis, it is the responsibility of the Maritime Administration (MARAD), to facilitate manning of the Ready Reserve Fleet (RRF).¹ This fleet is designed to provide sealift capability for military deployments or for other emergency shipping requirements.

Most recently, MARAD asked mariners for assistance in manning RRF vessels and other merchant ships during Operation Desert Storm/Desert Shield.² During Desert Storm, over 2,500 new shipboard jobs were created nearly instantaneously in order to activate and operate 79 RRF ships and the U.S. Navy's eight Fast Sealift Ships. However, the inability to find sufficient crew members contributed to the late activation of some RRF ships.³ One of the problems that may have led to the difficulties encountered in manning mobilization ships is the lack of reemployment rights for civilian mariners volunteering to serve aboard merchant ships during a national crisis. Current law does not provide these rights to merchant seamen if they voluntarily leave their private sector jobs to help man merchant marine vessels during a national emergency.

Many mariners may have desired to voluntarily serve during Desert Storm. They may have been prevented from doing so, however, because no guarantee existed that their private sector employment would be available upon their return. During World War II, such a reemployment guarantee existed for merchant mariners. However, these rights expired at the end of the war.

Reemployment rights for U.S. seamen was one of the principal recommendations based on the lessons learned during the Persian Gulf War. Since the end of Desert Shield/Desert Storm, principal government and industry sectors have strongly supported legislation to establish the authority needed to implement a reemployment guarantee for merchant mariners. Several proposals have been introduced and considered by Congress. In the present Congress

for example, H.R. 1109, introduced by Congressman Lipinski, was passed unanimously by the House of Representatives. MARAD strongly concurs with H.R. 1109 and hopes to support a similar bill in the Senate.⁴ Two years after the end of the Persian Gulf War, enacted legislation still does not exist which would provide reemployment rights to U.S. seamen.

Recommendation

All U.S. seamen should be guaranteed reemployment rights at their private sector jobs if called upon to serve during a war or national emergency.

Implications

One of the purposes behind the Merchant Marine Act of 1936 is to assure that sufficiently qualified U.S. citizens are available to man the merchant marine ships and to provide shoreside support during a war or national emergency. By guaranteeing reemployment rights, this recommendation will assist MARAD in providing crews with the ability to man ships that are mobilized during national emergencies.

Reemployment rights may present a hardship for an employer because it may be difficult to obtain an equally skilled worker to fill the interim position while the seaman is activated.

Fiscal Impact

This recommendation will not impact the federal budget.

Endnotes

1. Douglas, Carl and Meers, Christine, *Crewing the Merchant Marine for Mobilization*, (Presearch Incorporated, Arlington, Virginia 1991) p. VIII-8.
2. Ibid., p. E-2.
3. U.S. Department of Transportation and U.S. Department of Defense, *The Ready Reserve Force: Enhancing a National Asset*, (Washington, D.C. 1991) p. 6-11.
4. Krusa, C.E., "Legislation - For Reemployment Rights for Merchant Seaman," Maritime Administration, July 1993.

Now is the Time

ELIMINATE OR AUTOMATE ADMINISTRATIVE PROJECT REQUIREMENTS

Background

Under current procedures, customers of the Federal Highway Administration (FHWA) are required to execute many individual documents to initiate, track progress, receive progress and final payments, and close out Federal-aid projects. For instance, a state department of transportation typically would:

- o Complete a Request for Project Authorization form (PR-1240) and a Project Agreement form (PR-2) to initiate a project;
- o Request FHWA to concur in the award to a contractor and supply related Bid Price (PR-45) data;
- o Provide information on project status as the project progresses;
- o Submit a Modified Project Agreement form (PR-2A) to adjust the original project cost estimate to reflect changes based on contractor overruns/time extensions that are also reported to and approved by FHWA;
- o Furnish payment vouchers, Current Bill (PR-20), throughout the life of the project, requesting reimbursement for project costs; and
- o Forward various data relating to labor and material usage on the project (PR-47), completed by the contractor, and submit a final voucher to close out a project.

To obtain information needed to fulfill these requirements, many states must download information from their automated systems; manually prepare the required forms/reports/documentation; and send them to FHWA. FHWA reviews and keys the information into automated systems, and approvals or revisions are sent back to the state department of transportations. This process increases administrative cost and processing time for FHWA and its customers.

Recommendations

1. DOT should examine and reengineer current procedures, considering opportunities for automation to consolidate requirements.

2. DOT will initiate pilot tests in several states, possibly Florida, New Jersey, New York, Oregon, Pennsylvania, South Dakota, and Washington. Following system development, testing and evaluation, changes could be phased in on a nationwide basis.

Implications

The states would be able to make requests electronically to initiate projects, request reimbursement, and receive electronic approval after FHWA review. DOT's initial effort, being pursued as a reinvention lab, is focused on the Current Bill (PR-20), which could be submitted electronically by the state and approved through an electronic signature. The state would then receive an electronic fund transfer within a day of the submission. By expanding and building on the reinvention lab, DOT expects to eliminate, automate, or combine additional requirements to further reduce processing time and effort.

Fiscal Impact

As a result of the automation and electronic transfer of Forms 1240, PR-2, PR-2A, and PR-20, the following potential savings may result:

Projected FHWA 5-Year Savings

<u>FY 94</u>	<u>FY 95</u>	<u>FY 96</u>	<u>FY 97</u>	<u>FY 98</u>
\$60,000	\$120,000	\$180,000	\$240,000	\$300,000

NOTE: Savings assume a 20-percent increase each year in states electing to transmit these projects requirements electronically.

Savings will be based on reduced administrative costs such as processing time, filing, and storage. With the automation and/or elimination of other project requirements, additional savings to FHWA may accrue.

In addition, each state that elects to use the electronic billing/electronic signature process could save approximately \$100,000 or more in interest annually.

ENDNOTES

Public Law 102-240, Intermodal Surface Transportation Efficiency Act of 1991

23 C.F.R. Federal Highways

FISCAL IMPACT WORKSHEET

ISSUE: ELIMINATING OR AUTOMATING ADMINISTRATIVE PROJECT REQUIREMENTS

Recommendations

- o Examine and reengineer current procedures, and
- o Automate and consolidate requirements.
- o DOT will initiate pilot tests in several states:
 - Florida
 - New Jersey
 - New York
 - Oregon
 - Pennsylvania
 - South Dakota
 - Washington

Following system development, testing, and evaluation, we would phase in the changes on a nationwide basis.

Methodology

See attached Issue Paper

Implementation Approach

See attached Issue Paper

Fiscal Impact Table:

As a result of the automation and electronic transfer of Forms PR-124-, PR-2, PR-2A, and PR-20, the following potential savings may result:

Projected FHWA 5-Year Savings

<u>FY94</u>	<u>FY95</u>	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>
\$60,000	\$120,000	\$180,000	\$240,000	\$300,000

Note: Savings assume a 20 percent increase each year in states electing to transmit these project requirements electronically.

Savings will be based on reduced administrative costs such as processing time, filing, and storage. With the automation and/or elimination of other project requirements, additional savings to the FHWA may accrue.

In addition, each state that elects to use the electronic billing/electronic signature process could save approximately \$100,000 or more in interest annually.

Classification Information:

Function: Fiscal and Administrative Requirements

Subfunction: (if applicable):

Agency(ies):

Bureau(s):

Account(s):

ASSIGN OFFICE OF MOTOR CARRIERS FIELD STAFF TO IMPROVE PROGRAM EFFECTIVENESS AND REDUCE COST

Background

The principal method the Office of Motor Carriers (OMC) uses to gauge a motor carrier's compliance with the Federal Motor Carrier Safety Regulations (FMCSR) is a systematic review of the motor carrier's operations. This requires the gathering of information at the motor carrier's place of business, completing paper forms, reviewing the information, and computing the safety rating. During these on-site visits with motor carrier managers and their employees, the OMC staff provides them technical assistance on how to comply with the FMCSRs and improve the safety of their operations. OMC has taken steps to streamline the review process by taking advantage of laptop computers to save time as well as improve the accuracy and speed of data to customers, e.g., motor carriers, shippers, the insurance industry, and the motoring public. However, the on-site review process, normally performed by OMC's safety specialists who operate within state boundaries, is still people intensive, requiring a major investment in travel time and dollars. In fiscal 1993, OMC is expected to spend \$_____ on this effort.

The hardship on personal life of extended travel to remote locations can lead to staff reassignment requests, or experienced employees leaving their positions for careers elsewhere. Extended travel requirements pose both a quality of life issue for the employee and a cost issue for the agency as employees hired to fill the vacated positions require training and relocation expenses.

Implementing a system to match the data on individual motor carriers to a geographic information system (GIS) would allow field office managers to allocate staff efficiently to motor carriers, schedule motor carrier regulatory reviews in the most efficient manner, and optimize the use of travel funds and staff time.

Recommendations

- 1. The Office of Motor Carriers (OMC) should place a GIS in each regional office to merge many national-level data bases with the existing OMC motor carrier safety**

data sets. The GIS would provide the user with a computerized data base for a management system that allows the user to analyze and display the data geographically. The objectives are to maximize operational efficiency, improve program delivery, improve the stewardship of the motor carrier safety program, and normalize the ratio of carriers to safety specialists by examining alternative work sites

2. **A resource allocation model should be developed and integrated into the GIS so that regional managers can more efficiently allocate staff and travel budgets to areas of greatest need.** Using this system, program efficiency and effectiveness will be increased by assigning staff to work across state lines.

Implications

The OMC field managers will be able to optimize geographic assignments of staff, schedule carrier reviews in the most efficient manner, and virtually eliminate overnight travel requiring per diem payments for the onsite review of truck and bus companies' compliance with Federal safety regulations.

Fiscal Impact

This effort will be piloted in one of the nine OMC regions. Cost savings in that region are projected at approximately \$25,000 annually. It also is clear that the reduction in travel time will provide more time for reviews at the motor carrier's place of business, thus allowing the OMC field staff to review more carriers identified through the national data system as exhibiting a higher safety risk than carriers generally complying with the safety regulations.

ENDNOTES

1. The Federal Motor Carrier Safety Regulations are found at 49 CFR 390-399.

THE U.S. MERCHANT MARINE ACADEMY SHOULD BE CLOSED

Background

The U.S. Merchant Marine Academy (USMMA), is located in Kings Point, New York.¹ Its 82 acre campus lies on Long Island's north shore, about 20 miles east of New York City.² The Academy is operated by the Maritime Administration (MARAD), an agency of the U.S. Department of Transportation (DOT). The purpose of the Academy is to train young men and women as officers in the merchant marine and in the skills needed for a career in the maritime industry.³

The U.S. merchant marine is comprised of vessels, such as containerships, tankers, and tugboats, which are owned by U.S. companies and registered and operated under the American flag.⁴ The maritime industry also includes companies which own and manage the vessels, ports and terminals where cargo is handled; yards for construction and ship repair, and an array of other services including marine insurance underwriters, ship chartering firms, admiralty lawyers, engineering and research companies.⁵

The major cost of attending the Academy is borne by the Federal Government. There is no tuition fee and students are provided with quarters, meals, and basic medical and dental care.⁶ An employment obligation of five years is associated with the scholarship to the USMMA. This employment obligation commits graduates to work on either U.S. flag merchant ships, in maritime related jobs ashore, active duty in the military, or any combination of these three.⁷ Graduates are also commissioned in the U.S. Merchant Marine Reserve, which is part of the U.S. Naval Reserve, although no active duty requirement is imposed if graduates fulfill their obligation by working in the maritime industry.⁸ Graduates are also required to maintain a U.S. Coast Guard license as an officer in the merchant marine for at least six years following the date of graduation from the Academy.⁹

As part of the obligation associated with commissioning in the U.S. Navy Reserve, graduates are expected to serve, in the event of a national emergency, in shoreside maritime positions designed to support sealift readiness, as an officer aboard U.S. merchant ships, or on active duty if recalled by the Navy.¹⁰

Despite the existence of several government programs designed to support the maritime industry, the United States merchant marine fleet has been steadily declining in

recent years. In 1965, there were approximately 965 active U.S. flagged commercial ships.¹¹ The U.S. merchant marine fleet now numbers approximately 370 vessels and is projected to decrease to about 215 ships by the year 2000.¹² Sea-going positions aboard these ships are expected to continue to decline as companies buy and build ships with high-technology, labor saving innovations.¹³ In its recently completed strategic plan, the Academy noted that "the present level of sea-going billets would appear to be an optimistic, high-side estimate of employment opportunities in the year 2000. A more realistic estimate is for a smaller number of jobs."¹⁴

The continued shrinkage of the U.S. merchant marine fleet, as well as current efforts to reduce U.S. defense personnel and expenditures, calls into question the necessity of maintaining a federal academy devoted to the support of the maritime industry.

The USMMA has already recognized that its role in providing officers to man merchant marine vessels is becoming less relevant. The guidance received by the Academy in formulating their strategic plan stated that "the future of the Academy should not be tied to the existence of a sizeable U.S. flag merchant fleet."¹⁵ Other comments add that "while there is some economic justification for a U.S. flag fleet, the prevailing perception is that this is not viewed as terribly important."¹⁶

In response to the declining merchant marine fleet, the Academy has emphasized its role in national defense. The strategic plan states that "support of the U.S. merchant marine and the Academy depend upon national security arguments, which are subject to the military's interpretation as to its extent and rationale."¹⁷ Additional comments add that "...defense is the basic rationale for the Academy's existence..."¹⁸

The continued role of the Academy in supporting the defense of the United States is questionable. The Ready Reserve Fleet (RRF), for example, was activated in Operation Desert Storm for use in transporting materials to the Persian Gulf. This fleet consists of U.S. Government-owned cargo ships that would be used in the event of a national emergency.¹⁹ These ships provide sealift capability for military deployments or for other emergency shipping requirements.²⁰

During Operation Desert Storm/Desert Shield, the USMMA appealed to graduates to help man RRF vessels. Of 972 mailgrams sent to recent graduates (classes of 1986-90), asking them to consider activation, only 72, or about seven percent, responded.²¹

MARAD points to the lack of reemployment rights as a possible contributor to the poor response to the call-up associated with Operation Desert Storm. These rights would guarantee reemployment to individuals volunteering to serve temporarily as merchant seamen during a national crisis.²²

In addition, MARAD contends that many Academy graduates and midshipmen were already sailing aboard U.S. flagged commercial vessels during Desert Storm, and that these vessels performed a vital role by moving materials to the Persian Gulf.²³ However, while some eighty ships carried military goods to the vicinity of the war zone, only six actually transported military materials to Saudi ports.²⁴ Most vessels dropped their cargoes in Singapore, the United Arab Emirates, or Haifa, and then relied on foreign-flag vessels with foreign crews to complete their runs to Saudi Arabia.²⁵ The most highly-valued cargo--the troops--were moved to the Gulf almost entirely by air, as was certain other high-value, high-force, time-sensitive weaponry.²⁶ While Academy graduates may have performed admirably, the evidence suggests that the role played by the U.S. merchant marine fleet in the national defense, and therefore the need for Academy graduates for that purpose, is questionable.

MARAD also maintains that the role played by the Academy in national defense is not limited to just service aboard ocean-going vessels. MARAD cites the role of the maritime industry as a whole in providing defense-related services to the United States.²⁷ While this may be true, there are a myriad of other industries that provide defense needs and for which there are no federal academies devoted to their support. Furthermore, licensed marine officers are also produced by six state maritime schools: Great Lakes Maritime Academy; Northwestern Michigan College; Texas Maritime College of Texas A&M University at Galveston; California Maritime Academy; Maine Maritime Academy; Massachusetts Maritime Academy; and State University of New York Maritime College.²⁸ Additional officers are produced through industry and formal schools operated by maritime unions.²⁹

The defense rationale for the Academy is further blurred by the proposed implementation by MARAD of a Civilian Merchant Marine Personnel Reserve. This reserve would provide a pool of trained, experienced personnel to crew RRF vessels in the event of a large scale activation.³⁰ Participants in this reserve are initially expected to come from three sources: graduates of the various state maritime schools; experienced licensed or unlicensed mariners who have taken shoreside jobs; and junior unlicensed individuals with participation

linked to an entry-level training program.³¹ The successful implementation of this reserve program would eliminate the need for Academy graduates to be called upon to man RRF vessels.

Recommendations

The U.S. Merchant Marine Academy should be phased out over the next four years, with a goal of closing the Academy by 1998. Recruitment of additional students should end after the enrollment of the upcoming 1993-94 class.

Implications

Phasing out the Academy in this manner would allow students currently attending and those accepted for admittance to the 1993-94 academic year to complete their education at the Academy. The Academy will, however, face management challenges as the continued provision of academic services to fewer and fewer students is likely to become difficult.

The elimination of the Academy could result in fewer available graduates to fill maritime industry positions. However, if the need for additional trained maritime personnel should increase, state maritime schools, along with industry and union schools, should be able to expand their programs. MARAD could, if necessary, assist state schools in increasing their enrollments through augmenting existing MARAD programs, such as student incentive payments or direct financial aid. Other options may include extending reemployment rights to graduates of the state maritime schools as an incentive to serve aboard NDRF vessels or offering scholarships contingent upon accepting military or maritime service obligations. The elimination of the Academy may also help to increase enrollment at the state maritime schools.

The threat posed to national defense by the elimination of the Academy appears to be minimal. Current efforts to reduce U.S. military expenditures combined with the existence of various state maritime schools and the proposed creation of the Civilian Merchant Marine Personnel Reserve provide further evidence of this fact.

Fiscal Impact

This recommendation will result in a five year savings of approximately \$65 million dollars.

	In Millions of Dollars				
	1994	1995	1996	1997	1998
Budget Authority	\$ 0.00	\$ 5.0	\$ 12.0	\$ 20.0	\$ 30.0
Outlays	\$ 0.00	\$ 4.0	\$ 12.0	\$ 20.0	\$ 30.0
Change in FTEs	0.00	- 46.0	- 93.0	-139.0	- 230.0

Additional revenues could be realized if the 82 acre campus was sold. Although there has been no recent appraisal of the land's value, a 1979 appraisal set the value at \$100,000 per acre. Thus, sale of the land could generate an additional \$8 million.

Endnotes

1. U.S. Department of Transportation, *U.S. Merchant Marine Academy Catalog, 1990-91*, (Washington, D.C. 1990), p. 9.
2. Ibid.
3. Ibid., p. 6.
4. Ibid.
5. Ibid.
6. Ibid. p.89.
7. *The U.S. Merchant Marine Academy Catalog, 1990-91*, p. 13.
8. *The U.S. Merchant Marine Academy Catalog, 1990-91*, p. 89.
9. *The U.S. Merchant Marine Academy Catalog, 1990-91*, p. 13.
10. *Crewing the Merchant Marine for Mobilization*, p. E-2.
11. *Crewing the Merchant Marine for Mobilization*, p.1-2.

12. Ibid.
13. United States Merchant Marine Academy, *Strategic Plan: Towards the 21st Century*, (Kings Point, New York 1993), p.12.
14. Ibid.
15. Ibid., Appendix, p. A.
16. Ibid., Appendix p. B.
17. Ibid.
18. Ibid., Appendix p. F.
19. U.S. Department of Transportation and U.S. Department of Defense, *The Ready Reserve Force: Enhancing a National Asset*, (Washington, D.C. 1991) p. 3-1.
20. Ibid.
21. DOT internal document, Academy Desert Shield/Desert Storm Log,
22. *The Ready Reserve Force: Enhancing a National Asset*, p. 6-13.
23. Interview with Bruce Carlton, Director, Office of Policy and Plans; Acting Director, Office of Maritime Labor and Training, U.S. Department of Transportation, Maritime Administration, Washington, D.C., July 16, 1992.
24. Quartel, Rob, America's Welfare Queen Fleet, Regulation Summer 1991, p.62.
25. Ibid.
26. Ibid.
27. Ibid.
28. *Management Review of the United States Coast Guard Academy and the United States Merchant Marine Academy*, p. 21.
29. Ibid., p. 57.
30. *The Ready Reserve Force: Enhancing a National Asset*, p. 6-13.
31. Ibid.

Reduce Annual Essential Air Service Subsidy Expenditures

Background

The Essential Air Service (EAS) Program was created in 1978 to help small communities transition into a deregulated air transportation system. The program guaranteed air service for a 10-year period, subsidized where necessary, to generally smaller communities that might not otherwise receive scheduled air service. The program was scheduled to terminate on October 23, 1988; however, in December 1987, Congress passed the Airport and Airway Safety and Capacity Expansion Act of 1987 (Public Law 100-223), which extended and expanded the program for an additional 10-year period. Although this act prohibited subsidies for air service to communities less than 45 miles from a hub airport, no EAS point failed to qualify as a result.

In September 1989, the Department of Transportation (DOT) recommended that Congress amend the law to eliminate the subsidy to EAS points within the 48 contiguous states that were less than 70 highway miles from the nearest medium or large hub airport. Additionally, the DOT recommended that no subsidy be paid for any service to or from any such EAS point for which the per-passenger subsidy exceeded \$200. Congress gave DOT that authority for only one year.

In past years, the Subcommittee on Transportation and Related Agencies, Committee on Appropriations, U.S. House of Representatives has recognized that some geographically isolated communities may need federally subsidized air service and has recommended funding subject to limits on the amount of subsidy per passenger and the distance to the nearest alternate airport. However, the Omnibus Budget Reconciliation Act of 1990 specifically prohibited the use of per passenger subsidies or any other criteria for determining eligibility for the EAS program. In addition, to lock in continued funding for the program, the law stipulated that passenger facility charges, which provide additional funding sources largely for major airports, could not be approved unless the EAS program was funded at no less than the authorized level. The program has grown from a \$28.5 million appropriation in fiscal 1988 to \$38.6 million program in fiscal 1993 as a result of the 1987 law.

The subcommittee markup of the fiscal year 1994 departmental budget request.

recommended elimination of the program for a savings of \$38.6 million. On June 21, 1993, the Secretary of Transportation, in a letter to the Appropriations Committee appealing the fiscal 1994 DOT budget, took issue with total elimination of the EAS Program, stating:

The EAS Program serves a recognized role of ensuring air transportation in rural areas. If the program were eliminated, about 100 communities in the United States, including many in the State of Alaska, would lose all scheduled air service and the remainder of EAS-eligible communities (about 30) would suffer serious service cutbacks.

The subcommittee's recommendation to terminate this program resulted after many years of unsuccessful attempts to put reasonable limits on the subsidies spent in this program. For example in calendar year 1991, 19 of the 94 communities receiving subsidies had three or fewer average daily enplanements and eight of the 94 had a subsidy per passenger rate of \$200 or more. Additionally, 25 communities were located less than 75 miles from a hub airport. In calendar year 1992, nine locations, which together received more than \$3 million in subsidized flights, served an average of five or fewer passengers per day. Of the locations that received subsidized air service during that year, 23 percent were located within 75 miles of a hub airport. One community, located 60 miles from a hub airport, received subsidized flights costing the federal government an average of \$433 per passenger. In this case, an average of one passenger uses each EAS flight.

Although current legislation does not address the program's cost effectiveness, an evaluation by the DOT Office of the Inspector General (OIG) of calendar year 1992 EAS points, average enplanements, and subsidy per passenger indicates that the costs of the program may outweigh any benefits. One audit found that an EAS carrier operated 39 subsidized flights with no passengers on board and another 67 flights with only one or two passengers. In the OIG's opinion, communities that receive flights with five or fewer average daily enplanements or that are within 75 miles of another hub airport are not cost effective. If DOT's proposals to impose more stringent requirements on hub proximity and per-passenger subsidies had been adopted, 38 locations would have been eliminated from the program and the government would have saved over \$12.8 million during calendar year 1992. The DOT Inspector General has testified before Congress and repeatedly suggested to Congress and to the department that the program should be eliminated.

The subcommittee concluded that because of these actions, the EAS program has continued with no merit-based criteria and inadequate oversight. Given the extreme budgetary situation facing this country, the need to do a more effective job at making funding decisions based on merit, and the apparent inability to establish limits on the subsidies provided, the subcommittee recommends that the program be terminated.

Recommendations

Congress should amend the law to:

- (1) prohibit subsidies to EAS points within the 48 contiguous states that are within 70 miles of a hub airport;**
- (2) limit subsidies to no more than \$200 per passenger; and**
- (3) give DOT the authority to establish more restrictive criteria to reduce the cost of the program to fit appropriations.**

Implications

These recommendations will eliminate subsidized air service to those communities where subsidies cost the most and benefit the fewest passengers. Air service will continue to the most isolated communities. In addition, by allowing DOT to establish additional criteria, these recommendations ensure limited funds will be used where they are most beneficial.

Fiscal Implications

Adopting the 70-mile minimum, \$200 per passenger maximum criteria would eliminate about 28 EAS points and reduce program cost from \$38.6 million to \$27.0 million each year.

	In Millions of Dollars				
	1994	1995	1996	1997	1998
Budget Authority	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Outlays	\$ 11.6	\$ 11.6	\$ 11.6	\$ 11.6	\$ 11.6
Change in FTEs	0.00	0.00	0.00	0.00	0.00

THE FEDERAL AVIATION ADMINISTRATION SHOULD TERMINATE GRANT FUNDING FOR THE AIRWAY SCIENCE CURRICULUM PROGRAM AND COLLEGIATE TRAINING INITIATIVE FOR AIR TRAFFIC CONTROLLERS

Background

The Federal Aviation Administration (FAA) operates two post-secondary education programs: the Airway Science (AWS) Curriculum and Grants Program and the Collegiate Training Initiative for Air Traffic Controllers. From fiscal 1982 to fiscal 1993, approximately \$119 million was appropriated for these programs.

The AWS Program, initiated in 1982, was originally planned to stimulate high quality aviation curricula in universities and other post-secondary schools. This program's goals were to improve the aviation industry in the United States, increase access into the industry for minority students, and, generally, enhance the quality of the aviation curriculum in the nation's post-secondary schools. The program prepares students for employment in the industry and the FAA. The curriculum contains five areas of concentration: air traffic control specialist, electronics technician, general aviation operations inspector, general aviation maintenance inspector and computer specialist.

The program has achieved its goals. Institutions throughout the U.S. now offer various aviation curricula with no financial incentives from the FAA; the academic marketplace has verified the demand for such programs. In fact, the FAA never planned to provide financial assistance to schools or students. Since 1984, the FAA has spent a total of \$4 million on program administration, primarily for a consultant who reviews aviation programs at the various institutions. However, in 1982 Congress added grants to the AWS program. From fiscal 1982 to fiscal 1993, these grants totaled \$100 million for AWS buildings and equipment. The results of these expenditures are questionable. Regardless, the AWS curriculum is now self-sustaining and the FAA can phase out its involvement.

Despite its academic success, the program has not been a significant source of employees for the FAA. The FAA's goal was to hire up to 500 AWS graduates a year. This represented 20 to 30 percent of FAA's hiring actions for technical occupations targeted by the curriculum's five areas of concentration. Of the 8,542 employees the FAA hired between 1983 and the end of 1989, only 41 were graduates of the AWS program. Of these, 35 were

air traffic control specialists and six were aviation safety specialists. No electronics technician or computer specialist graduates were hired.

The Collegiate Training Initiative Traffic Controllers Program (CTI-ATC) was established in January 1991 to determine if post-secondary educational institutions could develop and validate selection processes and training curricula for air traffic control specialists. The FAA began the program by providing \$3 million to Hampton University for a pilot program. Later, four more schools successfully competed to get into the program without financial assistance.

The program enables post-secondary institutions to provide, at virtually no cost to the government, training that the FAA has always provided in the past. As of June 30, 1993, the FAA had hired 150 CTI-ATC graduates. Graduates may be placed directly at a field facility without completing the air traffic control specialist nonradar screening and training at the FAA Academy; for which the FAA would spend over \$20,000 for each new controller to reach the state of training provided by the colleges. These new hires alone represent a savings of \$3 million in training costs.

Additional grants are not required for this program to succeed. Of the five schools participating in the program, three have received no FAA financial assistance, one received a pilot program grant, and one received a \$10.7 million Congressionally directed grant. The only potential employer for air traffic control specialists is the FAA. The FAA had hired many graduates of these schools and has found no significant difference in the quality of graduates from the schools receiving grants and those from schools not receiving grants.

Recommendation

- 1. Congress should terminate the AWS and CTI-ATC grant programs and rescind unobligated grant funds.**
- 2. The FAA should phase out its active involvement in the AWS program.**

Implications

Universities and other post-secondary institutions will continue to offer high-quality AWS curricula without continued financial assistance from the FAA. The CTI-ATC program will continue to stimulate new ATC curricula and become a long-term source of partially-

trained air traffic controllers, reducing FAA's training costs.

Fiscal Impact

No new AWS or CTI-ATC grants have been requested by the FAA and none are included in the fiscal 1994 budget. Projected savings are from rescission of earlier grant balances that remain unobligated.

	In Millions of Dollars				
	1994	1995	1996	1997	1998
Revenues	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Outlays	\$ 45.4	\$ 0	\$ 0	\$ 0	\$ 0
Change in FTEs	0	0	0	0	0

ELIMINATE FUNDING FOR HIGHWAY DEMONSTRATION PROJECTS

Background

The Federal-Aid Highway Program is an umbrella term generally referring to all activities funded through the Federal Highway Administration (FHWA) and administered by the states' highway or transportation agencies.¹ As part of this program, the federal government provides assistance to various highway and bridge programs.

The Federal-Aid Highway Program is a reimbursable program, which means that the Federal Government reimburses states for costs actually incurred.² The amounts distributed to states represent lines of credit upon which states may draw as they advance federally assisted projects.³ FHWA distributes these funds to the states based on formulas and procedures prescribed by law.

In a departure from this formula-based distribution of funds, Congress often directs how certain funds are to be distributed by requiring that particular projects receive specific amounts of funding.⁴ Funding is provided on a project-by-project basis rather than through the normal highway program allocation process. These projects--called highway demonstration projects--are generally specific construction projects, ranging in scope from paving a gravel road to building a multi-lane highway.⁵ The federal share of funding for demonstration projects is 80 percent. The states are expected to match the remaining 20 percent share.⁶

Typically, there are two ways in which states receive funds that have been directed towards demonstration projects. The first is through an appropriations act that is passed by Congress. In an appropriations act, Congress appropriates an amount that can actually be used for the project.⁷ The second way is through the use of contract authority. Contract authority allows states to use previously authorized funds without further appropriation action by Congress.⁸ The funds are made available on the first day of the federal fiscal year at which time those funds can be obligated by the states. An obligation is defined as a commitment of the federal government to pay, through reimbursement to the states, the federal share of a project's eligible cost.⁹

The practice of directing federal highway funds to be spent on demonstration projects is increasing. In 1982, \$386 million was authorized for demonstration projects.¹⁰ In 1987, the Surface Transportation and Uniform Relocation and Assistance Act (STURAA) authorized

\$1.3 billion for 152 demonstration projects.¹¹ In 1991, the Intermodal Surface Transportation Efficiency Act (ISTEA) authorized an additional \$6.2 billion for 539 demonstration projects.¹²

Highway demonstration projects are proving to be problematic for several reasons. In 1991, the General Accounting Office (GAO) issued a report which examined the contributions of demonstration projects to the nation's overall highway needs.¹³ In this report, GAO presented a number of findings based on their audit of demonstration projects contained in STURAA. Specifically, GAO found that "most of the projects...did not respond to states' and regions' most critical federal-aid needs."¹⁴ GAO went on to state that in slightly over half the cases, the projects were not included in regional and state plans.¹⁵ Transportation officials generally omitted projects from their plans because these projects would provide only limited benefits.¹⁶ Of those that were identified in plans, the majority of those were listed without any identified federal and state funding sources.¹⁷ GAO also discovered that 10 projects, which were authorized \$31 million in demonstration project funds, would not have qualified for federal highway funding since the projects were for local roads not entitled to receive federal assistance.¹⁸

Demonstration projects are also proving to be costly to states as well. GAO noted that completion costs for the projects will greatly exceed authorized federal and state contributions and that state officials are uncertain how they will obtain the additional funds needed.¹⁹ GAO also discovered that if the funds authorized for demonstration projects in 1987 had instead been allocated to all states based on their percentage of federal-aid highway program funds received, 35 states would have received an equal or greater share of funds for transportation.²⁰ Finally, GAO found that, of the project funds they reviewed which had been authorized in 1987, only 36 percent had been obligated by the beginning of fiscal year 1991.²¹ In addition, for some projects, the funds may never be used since there has been no project activity since 1987.²² Further, there are no federal provisions that would allow for the cancellation or redirection of funds to other projects nor do states have the authority to redirect demonstration project funds to other transportation projects.²³

Recommendation

Congress should rescind all unobligated contract authority and all unobligated appropriations for every existing highway demonstration project. Since most of these

projects are not for critical federal-aid needs, these funds can be used more effectively in reducing the deficit.

Implications

Rescinding unobligated contract authority and appropriations would force all highway projects to compete for funding through the normal formula allocation process and through the comprehensive planning process prescribed in the ISTEA legislation. Demonstration projects that provide only limited benefits or that are not eligible for federal funding would be prohibited from receiving these funds, thus freeing up scarce funding for other projects.

There may be projects that are currently in progress which would need to be stopped if these funds were rescinded. In those cases, states would need to find alternative sources of funding to complete these projects. This may prove to be difficult, particularly if those projects were not otherwise included on state transportation plans or if the projects provided only limited benefits. However, if these projects are considered to be of merit, they should still compete well for funds through the normal planning and formula distribution process, and would therefore be likely to continue to receive funds.

Fiscal Impact

Assuming that all demonstration projects would be fully funded, this recommendation would result in a four-year reduction in outlays of over \$2.5 billion:²⁴

Dollars in Millions

Comparison to Baseline

Year	1994	1995	1996	1997	1998
Budget Authority	\$ 0.00	\$ 3,333	\$ 1,185	\$ 1,176	\$ 1,197
Outlays	\$ 0.00	\$ 186	\$ 675	\$ 834	\$ 891
Change in FTEs	\$ 0.00	0.00	0.00	0.00	0.00

Endnotes

1. U.S. Department of Transportation, *Financing Federal-Aid Highways*, (Washington, D.C.,

- 1992), p. 6.
2. Ibid., p. 12.
3. Ibid.
4. Ibid., p. 14.
5. U.S. General Accounting Office, *Highway Demonstration Projects: Improved Selection and Funding Controls are Needed*, (Washington, D.C. 1991) p. 1.
6. Ibid., p. 3.
7. DOT, *Financing Federal-Aid Highways*, p. 9.
8. Ibid.
9. Ibid., p. 17.
10. GAO, *Highway Demonstration Projects*, p. 1.
11. Ibid.
12. DOT, *Financing Federal-Aid Highways*, p. 6.
13. GAO, *Highway Demonstration Projects*, p. 1.
14. Ibid.
15. Ibid., p. 3.
16. Ibid., p. 4.
17. Ibid., p. 3.
18. Ibid., pp. 1-2.
19. Ibid., p. 6.
20. Ibid.
21. Ibid., p. 5.
22. Ibid.
23. Ibid.
24. Estimates provided by U.S. Office of Management and Budget, Transportation Branch.

UNOBLIGATED BALANCES

Background

The anticipated fiscal year 1992 and prior unobligated balance for earmarked Federal Transit Administration (FTA) New Starts and Bus Program is estimated at \$204 million. This large unobligated balance has accrued due to Congress earmarking Projects before they are ready to be implemented. The fiscal year 1993 appropriation for the FTA New Starts and Bus Program imposed a three-year limit on the availability of discretionary grants for previously earmarked projects. Thus, funds appropriated for fiscal year 1993, but not obligated within three years are to be made available for other projects. The House appropriation bill has adopted the same language for the fiscal year 1994 FTA New Starts and Bus Program appropriation. While this has the effect of reducing the number of projects that were earmarked before they were ready to proceed, it does not reduce the amount of funding available for these projects.

Recommendation

Congress should rescind balances for fiscal year 1992 and prior earmarked FTA New Start and Bus Program projects which remain unobligated on September 30, 1995. Projects that were earmarked in fiscal year 1992 or prior legislation, but which have not yet begun, that is, are at least three years behind schedule, should be reconsidered by the Congress. Reconsideration by the Congress would ensure that the project was still needed and that factors which led to Congressional earmarking of the project in the first place were still valid.

Implications

This alternative has not been considered by the Congress in fiscal year 1993 or in fiscal year 1994. The fiscal year 1993 language would allow earmarked projects that were ready to begin to use funding from those that are not yet ready to begin, while rescission reduces the amount of funding available for all projects, and requires projects to be reconsidered by the Congress in order to receive funding when they are ready to proceed

Fiscal Impact

In Millions of Dollars

	1994*	1995	1996	1997	1998
Budget Authority	\$ 204	\$ 0	\$ 0	\$ 0	\$ 0
Outlays	\$ 204	\$ 0	\$ 0	\$0	\$ 0
Change in FTEs	0.00	0.00	0.00	0.00	0.00

*Fiscal year 1992 and prior

ELIMINATE CERTAIN FEDERAL TRANSIT ADMINISTRATION NEW STARTS

Background

The Federal Transit Administration (FTA) currently has a cost-effectiveness index threshold for new starts, that is new mass transit projects, which is \$6 per new trip. Since the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA), Congress has increasingly demanded more than a single cost effectiveness measure to determine the worthiness of new transit projects. The FTA has begun to consider other indices and criteria that will take into account the other costs and benefits as required by section 3i of the FTA act as amended by the ISTEA, such as, environmental impact, operating efficiencies, congestion relief, and local factors.

In addition to grants for new starts, the FTA also subsidizes the operating costs of several mass transit systems. During the previous administration, operating subsidies were criticized for subsidizing inefficient transit systems, however, operating subsidies have been virtually capped since 1983. Thus in real terms, operating subsidies have declined. It appears that during the late 1970s and early 1980s there was evidence that the rise in operating subsidies was tied to wage increases for transit workers and rising fuel costs, recent studies indicate that operating performance has stabilized. In view of the local intermodal approach which is the intent of the ISTEA legislation, if the operating subsidies were further reduced and the funds redirected to recapitalize existing transit systems or more new projects, it is not clear what effect this would have on operating performance.

Further, the FTA, as part of the Bus Program, has criteria for the purchase of new buses or recapitalization. The criteria requires buses to be used for twelve years with twenty spare buses for every one hundred buses in the system. There have been studies done by the Inspector General stating that by increasing the life expectancy of buses and rail cars that the FTA could achieve savings. While mathematically that is the case considering only the recapitalization program, it has not been demonstrated that this would reduce costs for the entire transit system. The criteria do not take into account local factors such as, numerous stops versus long rides, inclement weather conditions, or road conditions. In fact, the specification of a life expectancy for rail cars and buses in effect limits the maintenance concepts that might be employed to save local riders money or to minimize environmental impacts.

These three programs are not reviewed together so that an objective determination can be made by the Department and a recommendation forwarded to the Congress which would optimize grants and subsidies for a particular locality. New criteria should be developed which would allow for such a review.

Recommendation

Congress should eliminate the fiscal year 1993 new start projects whose cost effectiveness index is more than double the current index threshold. In addition, because it is important to review grant criteria and program structure, the FTA should review its current indices and propose new criteria for jointly reviewing grants for new starts, operating subsidies and recapitalization grants. The proposal might include a new accounting system that would address depreciation of existing systems making that the basis for recapitalization. The proposal should include methodology for assessing operating costs together with the extension or creation of a system. The FTA should make its proposal with the fiscal year 1995 budget submission.

Implications

The FTA is not in favor of funding bad projects, however, new starts that are above the current cost effectiveness threshold may be very effective for the communities they will support. New criteria should be established so that this can be demonstrated in the context of cost/benefit criteria developed for that location and project. The recommendation eliminates the worst offenders of the current criteria, but should hasten the establishment of criteria that will allow for all relevant factors to be taken into account in the future.

Fiscal Impact

These projects were projects that were not recommended for earmarking in the fiscal year 1993 FTA 3J report, but were nevertheless earmarked by the Congress:

Chicago - Central

San Francisco - Airport

San Jose - Tasman

Boston - Piers

Kansas City - South
Portland - Hillsboro

In Millions of Dollars

	1993	1994	1995	1996	1997
Budget Authority	\$ 97.6	\$ 33.2	\$ 0	\$ 0	\$ 0
Outlays	\$ 97.6	\$ 33.2	\$ 0	\$0	\$ 0
Change in FTEs	0.00	0.00	0.00	0.00	0.00

The cost to complete these projects is an addiitonal \$1.66 billion, however, the additional funds have not been authorized by the Congress.

Section III

Department of Transportation Reinvention Activities

DEPARTMENT OF TRANSPORTATION REINVENTION ACTIVITIES

I. Summary of Reinvention Efforts

Shortly after being sworn-in as Secretary of Transportation, Federico Peña began meeting with Department of Transportation (DOT) employees in a variety of employee meetings and brown bag luncheons to elicit their views about what worked well and what needed improvement in the Department. By the time the President announced the National Performance Review in late March and the Vice President sent his letter of April 1 to all Cabinet officers, DOT had already laid the groundwork for employee involvement in the reinvention process.

The DOT Performance Review was formally inaugurated on April 26, 1993 with a day-long orientation session for over 150 team members from 15 DOT Performance Review teams. The participants were addressed by Secretary Peña, as well as by Bob Stone, David Osborne, and Billy Hamilton of the National Performance Review team. After learning about the reinvention philosophy, process, and products, the DOT team members began working full-time on reinventing DOT. They worked through the summer, proposing recommendations that would affect not only the Department, but which had applicability Governmentwide.

The 15 DOT Performance Review teams were comprised of nine agency teams and six cross-cutting teams. Each of the major DOT operating administrations--the United States Coast Guard, Federal Aviation Administration, Federal Highway Administration, Federal Railroad Administration, National Highway Traffic Safety Administration, Federal Transit Administration, Maritime

Administration, Research and Special Programs Administration, and the Office of the Secretary--formed a reinvention team. Each team was charged with developing recommendations for reinventing the way their operating administration does business. In addition, DOT had six cross-cutting teams in the areas of environment, safety, rulemaking, grants delivery, administration, and field activities. They examined issues that affect more than one DOT administration.

Each team placed particular emphasis on reviewing policies and practices at the point where they touched the public and DOT's customers: reexamining our customer's needs, reviewing how we interact with our customers, and considering more streamlined or cost-effective methods.

The DOT teams gathered information by talking with employees and managers, ~~by~~ meeting with individual customers and associations representing groups of customers, researching and analyzing issues, and examining previously completed studies and reports on pertinent issues. The teams presented their issues and recommendations to top DOT executives who worked closely with the teams to further define and refine the issues.

While the teams were working, the Department continued to gather reinvention ideas from employees. The Secretary announced the opening of two "800" numbers for employees to phone or fax their ideas for reinventing DOT. During the 6 weeks the "800" lines were open, employees called in over 500 ideas and faxed over 200 suggestions. All these recommendations were forwarded to the Secretary and the DOT Performance Review teams.

On May 11, the Vice President met with 100 DOT reinvention team members at DOT Headquarters and, with the Secretary, hosted a town meeting attended by over 200 employees. The event was broadcast live over DOT's closed-circuit television channel and transmitted by satellite to several field locations.

This town meeting was such a success that further meetings were scheduled. Melissa Allen, Deputy Assistant Secretary for Administration, and DOT's liaison to the National Performance Review held a town meeting for DOT employees in the Chicago area on May 26; and Mort Downey, the Deputy Secretary, held a town meeting for over 150 DOT senior executives on June 9. Videotapes of each of these meetings recorded the audience's ideas and suggestions which were then passed to the Performance Review teams for action.

Concurrent with internal efforts, DOT worked very closely with the National Performance Review counterpart team, sharing information, ideas, recommendations, and concerns. In addition to the issues which are included in this report, the DOT Performance Review teams worked many issues which will be included in a DOT companion report to be issued in Fall 1993.

II. Department of Transportation Reinvention Laboratories

DOT established three reinvention laboratories early in the Performance Review process. The United States Coast Guard Merchant Mariner Licensing and Documentation System (MMLD) is a proposed national data base system to automate the licensing of merchant mariners. Currently mariners are required to go to 1

of 17 independent regional examination systems to apply for licenses. Since the system depends on the physical transfer of records by mail, service is slow. Since it is a manual system, it is labor intensive, and accuracy is a concern. The proposed system will dramatically speed the review and approval of licenses and documents and will allow for the immediate replacement of lost licenses. It will also improve the accuracy of records, allow for easier checking of criminal records, improve management of merchant mariner resources during national emergencies, and better serve the American public by ensuring that mariners aboard U.S. vessels are properly accredited.

The Federal Aviation Administration (FAA) and Systems Users Interactive Participation and Cooperative Effort will create a partnership between FAA and system users to improve the overall effectiveness of the National Airspace System. The partnership will provide a tool for measuring customer satisfaction and overall system performance while maintaining safety. Through the partnership, FAA will implement a procedural policy change which permits aircraft to fly the most cost-effective or passenger-comfortable route, rather than a predetermined fixed route. This change is expected to result in savings of over 2 million pounds of jet fuel per month. Other efforts should result in increased capacity at selected airports and reduction of passenger delays. This cooperative venture displays the FAA's goal of producing positive results through teamwork with customers.

The Federal Highway Administration (FHWA) Electronic Signature Project will allow states and FHWA to sign and approve

documents for Federal-aid highway projects electronically, rather than relying on hard copy records. The many benefits of this new process include: shorter time between Federal authorization of a project and the start of actual construction; shorter time between Federal approval and the reimbursement of costs to the states, saving as much as a week; elimination of paper and storage at state, FHWA field, and Headquarters locations; faster and more accurate input of data by eliminating the need to reenter data; and immediate state access to FHWA electronic records.

Each of these laboratories was developed with significant customer involvement, and each demonstrates a new way of doing business that uses modern technology and is more customer-oriented, cost-effective, and time-saving.

III. Lessons Learned from the DOT Performance Review

While the performance review performed very well at DOT, there were lessons learned in process as well as in retrospect. One cannot underestimate the importance of very visible, high-level support from the outset. The Vice President's early visit with the Reinvention Teams and the town meeting hosted by the Vice President and the Secretary underlined the national scope of the effort for DOT employees and generated excitement to get involved.

In retrospect, we would have had even more meetings between the teams and key officials. Initially we were concerned about ensuring the teams felt unrestrained in their reinventing and not wanting to influence them. As it worked in practice, the interaction between the Reinvention Teams and many DOT

Administrators, Assistant Secretaries, SES members, and other key officials proved to be a good vehicle for generating new ideas, developing pros and cons, and defining other sources of data and client groups.

Another lesson learned was the importance of publicizing the DOT National Performance Review as quickly and as widely as possible. DOT used its monthly newsletter, its internal television channel, and all-employee notices to inform employees about the Performance Review, the town meetings, and the "800" numbers. The use of the latest technology excited employees and elicited many more ideas and recommendations in a shorter time than was estimated. It also made DOT employees feel an immediate part of the process, because instead of submitting written suggestions through lengthy channels they could immediately call or fax their ideas.

DOT Reinvention Teams initially sought to identify large scale recommendations that had either very large savings or even required extensive start-up costs. However, some of our best recommendations started out small in scale, ~~which might have~~ ^{with the potential for} significant, cumulative, long-term savings and/or increased efficiency and customer service. No idea ^{was} ~~is~~ too small in scope for this effort.

We also found that it was important for team members to work full-time on the review, relieving them of other duties. The task of reinventing required full concentration ^{and freedom} to schedule meetings and interviews.

IV. Synopsis of DOT Reinvention Activities

In just 4 months, 15 Performance Review teams working throughout the Department of Transportation have made recommendations that, if fully implemented, could initially save American taxpayers, state and local governments, and transportation industries millions of dollars each year.

The performance review process has yielded benefits for the Department far beyond those resulting from the specific report recommendations. The process has opened lines of communication between the Department and its customers and the public: just the idea of going to customers and asking their recommendations on how to serve them better has dramatically improved relations with them. DOT's customers are very excited about the reinvention process and ready to work with the Department on these and other issues. The process has also empowered DOT employees who now know that their ideas do count, that they will be heard, and that their contributions will be acknowledged. Finally, the process has helped senior departmental managers who now have more options to provide better and more innovative service at less cost in this era of tighter budgets.

The Performance Review is just the beginning of a continuing process to reinvent the way DOT serves the American people.

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Section IV

Fiscal Impact Summary

		OPTIONAL CHANGE IN REVENUES Numbers in Millions						
Ch. Ref.	Recommendation	Fiscal Year						Change in FTEs
		1994	1995	1996	1997	1998	5-YRS	
TR 1	Organizing DOT For Efficiency and Effectiveness	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 2	Create Government-Owned Corporation To Provide Air Traffic Control	\$0.0	\$0.0	\$0.0	(\$4,050.0)	(\$4,050.0)	(\$8,100.0)	(35,000.0)
TR 3	Amend ISTE A To Permit Use of Federal Aid as a Capital Reserve To Leverage Investment in Infrastructure Projects	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 5	Transportation R&D In the Federal Government	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 6	Information Technology Management in DOT	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 9	MARAD Academy	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(230.0)
TR 10	Reduce the Essential Air Service Subsidy	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 11	Eliminate FAA Higher Education Funding Programs	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 14	Eliminate Funding for Highway Demonstration Projects	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 15	Further Economic Deregulation of the Trucking Industry	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(348.0)
TR 21	Unobligated Balances	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 22	FAA Fees for Inspection of Foreign Facilities	\$1.6	\$1.6	\$1.6	\$1.6	\$1.6	\$8.0	0.0
TR 26	Eliminate Certain Federal Transit Admin New Starts	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 28	Deregulate the Maritime Industry	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(440.0)
TR 29	Eliminate Cargo Preference and Ocean Freight Differenti	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(15.0)
TR 30	Eliminate Federal Maritime Commission's Conference P	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(225.0)
TR 33	Merchant Seamans Reemployment Rights	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 35	Eliminate the Jones Act	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 34	Measure Transportation Safety	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 35	Streamline the Enforcement Process	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 36	Use Consensus Building Approach to Expedite Transportation	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 37	Encourage Innovations in Automotive Safety	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR	Study User Fees for International Overs	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 39	Contract for Level I Air Traffic Control Towers	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 40	Public - Private Consortium	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 41	Eliminate or Automate Administrative Project Requirem	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 42	Program Effectiveness and Reduce Cost	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 43	Telecommuting	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
Total, Department of the Transportation		\$1.6	\$1.6	\$1.6	(\$4,048.4)	(\$4,048.4)	(\$8,092.0)	(36,258.0)

DEPARTMENT OF TRANSPORTATION
FISCAL IMPLICATIONS SUMMARY

CHANGE IN BUDGET AUTHORITY
Numbers in Millions

Ch. Ref.	Recommendation	Fiscal Year						Change in FTEs
		1994	1995	1996	1997	1998	5-YRS	
TR 1	Organizing DOT For Efficiency and Effectiveness	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 2	Create Government-Owned Corporation To Provide Air Traffic Control	\$0.0	\$0.0	\$100.0	\$4,130.0	\$4,170.0	\$8,400.0	(35,000.0)
TR 3	Amend ISTEA To Permit Use of Federal Aid as a Capital Reserve To Leverage Investment in Infrastructure Projects	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 5	Transportation R&D In the Federal Government	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 6	Information Technology Management in DOT	\$0.0	\$0.0	\$200.0	\$300.0	\$400.0	\$900.0	0.0
TR 9	MARAD Academy	\$0.0	\$5.0	\$12.0	\$20.0	\$30.0	\$67.0	(230.0)
TR 10	Reduce the Essential Air Service Subsidy	\$11.6	\$11.6	\$11.6	\$11.6	\$11.6	\$58.0	0.0
TR 11	Eliminate FAA Higher Education Funding Programs	\$45.4	\$0.0	\$0.0	\$0.0	\$0.0	\$45.4	0.0
TR 14	Eliminate Funding for Highway Demonstration Projects	\$0.0	\$3,333.0	\$1,185.0	\$1,176.0	\$1,197.0	\$6,891.0	0.0
TR 15	Further Economic Deregulation of the Trucking Industry	\$25.9	\$25.3	\$25.3	\$24.8	\$24.8	\$126.1	(348.0)
TR 21	Unobligated Balances	\$204.0	\$0.0	\$0.0	\$0.0	\$0.0	\$204.0	0.0
TR 22	FAA Fees for Inspection of Foreign Facilities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 26	Eliminate Certain Federal Transit Admin New Starts	\$97.6	\$33.2	\$0.0	\$0.0	\$0.0	\$130.8	0.0
TR 28	Deregulate the Maritime Industry	\$25.6	\$38.6	\$45.9	\$49.6	\$54.5	\$214.2	(440.0)
TR 29	Eliminate Cargo Preference and Ocean Freight Differenti	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$250.0	(15.0)
TR 30	Eliminate Federal Maritime Commission's Conference P	\$2.9	\$7.9	\$12.8	\$18.3	\$20.4	\$62.3	(225.0)
TR 33	Merchant Seamen Reemployment Rights	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 35	Eliminate the Jones Act	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 34	Measure Transportation Safety	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 35	Streamline the Enforcement Process	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 36	Transportation	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 37	Encourage Innovations in Automotive Safety	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR	Study User Fees for International Overs	\$0.0	\$1.0	\$2.0	\$2.0	\$2.0	\$7.0	0.0
TR 39	Contract for Level I Air Traffic Control Towers	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 40	Public - Private Consortium	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 41	Eliminate or Automate Administrative Project Requirem	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 42	Program Effectiveness and Reduce Cost	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 43	Telecommuting	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
Total, Department of the Transportation		\$463.0	\$3,505.6	\$1,644.6	\$5,782.3	\$5,960.3	\$17,355.8	(36,258.0)

		CHANGE IN OUTLAYS Numbers in Millions						
Ch. Ref.	Recommendation	Fiscal Year						Change in FTEs
		1994	1995	1996	1997	1998	5-YRS	
TR 1	Organizing DOT For Efficiency and Effectiveness	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0
TR 2	Create Government-Owned Corporation To Provide Air Traffic Control	\$0.0	\$0.0	\$100.0	\$4,130.0	\$4,170.0	\$8,400.0	(35,000.0)
TR 3	Amend ISTEAs To Permit Use of Federal Aid as a Capital Reserve To Leverage Investment in Infrastructure Projects	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 5	Transportation R&D In the Federal Government	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 6	Information Technology Management in DOT	\$0.0	\$0.0	\$200.0	\$300.0	\$400.0	\$900.0	0.0
TR 9	MARAD Academy	\$0.0	\$4.0	\$12.0	\$20.0	\$30.0	\$66.0	(230.0)
TR 10	Reduce the Essential Air Service Subsidy	\$11.6	\$11.6	\$11.6	\$11.6	\$11.6	\$58.0	0.0
TR 11	Eliminate FAA Higher Education Funding Programs	\$45.4	\$0.0	\$0.0	\$0.0	\$0.0	\$45.4	0.0
TR 14	Eliminate Funding for Highway Demonstration Projects	\$0.0	\$186.0	\$675.0	\$834.0	\$891.0	\$2,586.0	0.0
TR 15	Further Economic Deregulation of the Trucking Industry	\$25.9	\$25.6	\$25.0	\$25.0	\$25.0	\$126.5	(348.0)
TR 21	Unobligated Balances	\$204.0	\$0.0	\$0.0	\$0.0	\$0.0	\$204.0	0.0
TR 22	FAA Fees for Inspection of Foreign Facilities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 26	Eliminate Certain Federal Transit Admin New Starts	\$97.6	\$33.2	\$0.0	\$0.0	\$0.0	\$130.8	0.0
TR 28	Deregulate the Maritime Industry	\$25.3	\$38.3	\$46.0	\$49.4	\$54.1	\$213.1	(440.0)
TR 29	Eliminate Cargo Preference and Ocean Freight Differenti	\$592.0	\$546.0	\$511.0	\$481.0	\$451.0	\$2,581.0	(15.0)
TR 30	Eliminate Federal Maritime Commission's Conference P	\$2.9	\$7.9	\$12.8	\$18.2	\$20.4	\$62.2	(225.0)
TR 33	Merchant Seamans Reemployment Rights	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 35	Eliminate the Jones Act	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 34	Measure Transportation Safety	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 35	Streamline the Enforcement Process	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 36	Transportation	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 37	Encourage Innovations in Automotive Safety							
	Transportation	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR	Study User Fees for International Overs	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 39	Contract for Level I Air Traffic Control Towers	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 40	Public - Private Consortium	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 41	Eliminate or Automate Administrative Project Requirem	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 42	Program Effectiveness and Reduce Cost	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
TR 43	Telecommuting	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.0
Total, Department of the Transportation		\$1,004.7	\$852.6	1,593.4	\$5,869.2	\$6,053.1	\$15,373.0	(36,258.0)