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Mr. Chairman, I am pleased to appear before this Committee to discuss the use of construction and repair programs for public facilities to alleviate unemployment. As the Congress meets for its post-election session, it faces both high unemployment and a growing awareness of the need to rebuild elements of our aging public infrastructure. These dual concerns have prompted proposals to expand federal infrastructure programs as a means of providing for their long-term financing while simultaneously expanding short-term employment opportunities.

There is little doubt that we must develop a long-term plan to improve the national infrastructure. But we must keep in mind that such a program can have only limited, short-term effects in reducing the serious unemployment caused by the current recession. My remarks today discuss these issues in terms of three points:

- o National infrastructure needs and the issues involved in addressing them;
- o The use of public works projects to increase employment; and
- o Specific options for promoting employment through infrastructure programs.

ADDRESSING THE NATION'S INFRASTRUCTURE NEEDS

In recent months, the problem of deteriorating and inadequate public facilities--roads, bridges, water provision and treatment facilities, airports,

and mass transportation--has gained considerable attention. The infrastructure problem reflects a pattern of declining real government spending in most of these areas. Many public facilities are aging or obsolescent and have suffered from deferred maintenance. In some regions, existing capacity is inadequate to serve future growth. Yet all these needs occur as constrained federal, state, and local budgets appear to preclude major new investments and repairs.

There can be no single definition of national infrastructure "needs." Needs are, in fact, conditional on the desired quality of public services and the demand for public services as determined by prices or fees. But inadequate public facilities pose real costs to the economy. In 1980 airport delays cost the major airlines \$1 billion alone (not counting the value of lost passenger time). Truck travel on a poor road costs 36 percent more than travel on a good one. The city of Boston is said to lose 43 percent of its water supply through cracks in distribution mains. Thus, regardless of precisely how needs are defined, sizable national needs exist. A summary of such needs would include the following:

- o Repairing the Interstate Highway System and other federal-aid highways and completing the Interstate System might cost federal, state, and local governments \$27.7 billion annually between now and 1990.
- o Annual investments of \$1.5 billion would be needed to relieve congestion at the nation's airports, and comparable investment levels would be necessary to upgrade and expand the nation's air traffic control system.

- o Total rehabilitation and replacement for the nation's water treatment and distribution systems could cost \$100 billion or more through the year 2000. Adding new systems where population and economic growth warrant could add \$40-\$50 billion to this figure.
- o Wastewater treatment, as mandated by EPA regulations, could cost \$139 billion to service over the period 1980-2000.
- o The Corps of Engineers estimates that \$12.3 billion would be needed for channel improvements, locks, dams, and other inland navigational improvements through 2013.

In the absence of timely repairs or needed new construction, the economic costs of inadequate facilities will increase. Moreover, if improvements are deferred, the costs of correcting the problems will grow as roads, sewers, or water mains deteriorate further and eventually require replacement rather than repair.

In the face of these growing costs, it is imperative to devise a long-run plan to improve our infrastructure. Such a plan could take a variety of forms, and could involve federal, state, and local governments in both project selection and financing. But any such program must address two major questions: which projects will be undertaken and how will they be paid for? The notion that the user pays helps answer both questions. Infrastructure projects produce a flow of goods and services (such as potable water, lower-cost highway transportation, or protection from flood) that benefit specific, often local, groups of users. Thus, infrastructure investments often can be financed through appropriate charges for these benefits,

or user fees, such as water rates, highway taxes, or airport landing fees. Beyond providing a source of infrastructure finance, user fees also can help guide public investment toward its correct level and content. The willingness of users to finance infrastructure through fees charged for the resulting benefits is the truest test of the need for, and appropriateness of, individual infrastructural investments.

The imposition of user fees is not a complete solution to the problem of infrastructure financing, however. Some states and municipalities might not be able to borrow enough up-front capital to begin projects that user fees ultimately would finance. Moreover, in some cases--notably that of urban mass transit--self-sustaining user fees might not be feasible, but the regional benefits created by the project might warrant supplementary user fees with subsidies from general revenues. But, despite these exceptions, the principle of user financing is the cornerstone of an efficient infrastructure program.

USING AN INFRASTRUCTURE PROGRAM TO REDUCE UNEMPLOYMENT

Unemployment has risen sharply during the past year, reaching a 40-year high of 10.4 percent in October 1982, with almost 11.6 million persons searching for work. While CBO's economic forecast expects economic

recovery in 1983, the employment outlook in the near future is not promising. Joblessness may still rise somewhat from present levels, and current signs do not point to a rapid rebound in employment when recovery does take hold. The rate of economic recovery forecast by the CBO in September, for example, implies a decline of only about one percentage point in unemployment from its peak to the end of 1983, and a total decline of less than two percentage points by the end of 1984.

Programs designed to repair elements of our national infrastructure have been suggested as a means to improve the employment picture. One important point that we should keep in mind, however, is that any short-term program to stimulate employment would have only a limited impact on the overall unemployment rate. A substantial reduction in unemployment will come only from broad-based economic growth. In addition, the use of an infrastructure program to promote employment raises several specific questions:

- o How quickly could infrastructure-related employment be increased?
- o Would infrastructure labor requirements match the unemployed?
- o How should infrastructure programs be financed?

How Quickly Could Infrastructure-Related Employment Be Increased?

The speed with which infrastructure projects could be started varies

considerably among the types of work involved. Considerable time is needed for the engineering design of new sewer systems, airport expansions, or new highway construction or expansion. Once designed, more time is consumed in contracting these tasks to private engineering and construction firms. It can take over two years to develop and design major highway, transit, or sewer projects, and actual construction can take an additional two to seven years. Thus, these major projects cannot be thought of as "countercyclical"--the recession may be over before their employment effects are felt.

Other infrastructure projects--for example, the repair and maintenance of roads, water mains, and sewers--require less design and contracting time, and may be more appropriate as a source of rapid employment stimulus. Thus, the Congress must determine the extent to which it will choose these shorter-term projects to promote employment rather than long-term investment considerations.

An additional timing consideration concerns the form of legislation designed to promote infrastructure investments. While the Congress may wish to consider new legislation to finance long-term infrastructure projects (such as an Infrastructure Bank or block grants), any such new institution or funding source would require its own leadtime to screen prospective projects or develop funding formulas. Existing infrastructure programs, by contrast, can be used to create new obligations and outlays more rapidly.

Would Infrastructure Labor Requirements Match the Unemployed? A further issue is whether the distribution of infrastructure-related employment, both by geographical regions and by required skills, matches those of the unemployed. While infrastructure needs exist in all regions of the country, highway and mass transit projects--particularly those involving repair rather than construction--are probably disproportionately centered in the Midwest and Mid-Atlantic regions, where unemployment is severe. Yet targeting repair work exclusively in these areas would force deferral of projects with legitimate needs elsewhere in the nation.

The types of labor required by infrastructure programs are generally skilled construction workers and laborers; in moving from major construction to repair projects, labor requirements shift to less skilled workers. Moreover, as emphasis shifts away from construction, demand for materials such as structural steel decrease, and the demand for labor in these support industries decreases in turn. Thus, while emphasizing short-term repairs might increase the immediate employment derived from an infrastructure program, it would do less to improve employment prospects in support industries that are now operating at low rates of utilization and with high unemployment. Finally, even if an infrastructure program increased short-term employment somewhat, it would not necessarily enhance the long-term employability of disadvantaged workers with few or no marketable job skills, or workers displaced from declining industries--so-called dislocated workers.

How Should Infrastructure Programs Be Financed? The manner in which an infrastructure program is financed would affect its ultimate employment effects. For example, financing infrastructure construction with a simultaneous increase in user fees--such as the proposed increase in the motor fuels tax--probably would not produce a net increase in employment. Higher motor fuels taxes would reduce the purchasing power of households and, in turn, their consumption of other goods and services. Thus, simultaneous increases in highway spending and the motor fuels tax would change the composition of economic activity and employment, but not its level. In the long run, this change might make us better off, as lower-cost transportation over well-maintained roads would provide economic benefits for many years. But in the short term, we should expect little increase in employment.

An alternative method of financing such a program would be to use general revenues for infrastructure improvements. This would result in greater short-term employment gains, particularly if more labor-intensive projects, such as repairs, were funded. But such a program would add to the budget deficit in the short term and could result in higher interest rates if monetary policy remained tight. Accommodating these higher expenditures with a looser monetary policy would preserve the employment effects but could rekindle inflation in the future. Thus, while financing public facilities through general revenues would result in some new employment and make

some progress in improving roads, water systems, and transit systems, it might conflict with other fiscal and monetary policy goals.

An additional disadvantage of funding infrastructure improvements from general revenues is the possibility that selected projects might lack economic merit. One way to preserve incentives to choose viable projects would be to convert infrastructure outlays into loans to state and local governments. These loans would be repaid through the subsequent imposition of user fees at the state or local level. Such a program would provide some short-term employment and would guide federal resources to the correct projects, but would reduce employment later when user fees were imposed.

OPTIONS FOR PROMOTING INFRASTRUCTURE EMPLOYMENT

With these limitations in mind, what kinds of projects offer the best prospects for both meeting infrastructure needs and providing new employment? Increasing the obligational authority ceiling of the highway trust funds, with a parallel increase in the motor fuels tax, would offer several advantages over other infrastructure projects. Small-scale highway resurfacing projects often can be started within several months and are more labor-intensive than new construction. The Congress could promote these

projects by temporarily waiving the state and local share of costs, by allowing states greater flexibility in transferring funds from construction to repair accounts within the trust fund, or by mandating a shift to smaller projects when authorizing new funds. While minor road repairs, such as filling potholes, might offer more employment opportunities for unskilled workers, these repairs fall outside of the jurisdiction of federal highway programs. Increasing highway obligational authority ceilings and the motor fuels tax would couple infrastructure improvements with user fees that cover their cost.

Sewer and water main repairs would have the same advantages as an employment program as the repair of the highway system. These activities are now the province of state and local governments, however, and the benefits they create are strictly local in nature. New legislation would be required to fund them at the federal level.

A parallel situation exists for mass transportation. Many municipal transit systems need repairs that could provide an immediate source of new employment. Mass transit systems, however, have a poor record for self-finance. Most have survived, in part, with assistance from the federal government through the Urban Mass Transportation Administration (UMTA), which provides capital and operating assistance to publicly owned mass transit systems. But UMTA appropriations are already at the budget

authority ceiling set in the budget resolution and, therefore, supplemental UMTA appropriations would require a new budget resolution.

Finally, large-scale, new capital programs for public facilities offer little scope for prompt employment stimulus. While some of these projects, such as new water tunnels or completion of the Interstate Highway System, may have been designed, they would still require significant lead times for contracting and start-up. Moreover, the principle of "user pays" grows in importance as the size of the project increases; if these projects could not support themselves on economic criteria, they might represent a diversion of society's resources from other, more productive uses.

CONCLUSION

While unemployment is extremely high and likely to remain so for some time to come, the solution to this problem lies in substantial, broad-based economic growth. There is probably little that the federal government can do in any single employment stimulus program to affect the overall unemployment rate appreciably. Moreover, short-term stimulus programs are not likely to enhance greatly the long-term employability of those persons suffering the greatest employment difficulties.

Proposals to increase highway trust fund obligations and to finance these higher obligations with a motor fuels tax or "user fee" share these difficulties. While they may not make a major dent in our unemployment problem, they do address the nation's need to devote more resources to improving our transportation system, and they do uphold the principle that users should bear the costs of these improvements. The proposed highway program, therefore, may offer the type of improvement in the nation's infrastructure that contributes to sustained long-term growth.