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FINANCING INFRASTRUCTURE INVESTMENTS

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JOINT HEARING

BEFORE THE

COMMITTEE ON THE BUDGET

AND THE

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

MAY 8, 2008

HEARING

BEFORE THE

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

JUNE 10, 2008

U.S. HOUSE OF REPRESENTATIVES

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May 6, 2008

SUMMARY OF SUBJECT MATTER

TO: Members of the Committee on Transportation and Infrastructure

FROM: Committee on Transportation and Infrastructure Staff

SUBJECT: Hearing on "Financing Infrastructure Investments"

PURPOSE OF HEARING

At 10:00 a.m., on Thursday, May 8, 2008, in Room 2167 Rayburn House Office Building, the Committee on Transportation and Infrastructure will hold a joint hearing with the Committee on the Budget to examine methods for financing investment in our nation's infrastructure, including roads, bridges, public transportation, aviation, ports, waterways, and wastewater treatment infrastructure. The Committee on Transportation and Infrastructure will have a second day of hearings on this topic next month, at which the Committee will hear from additional expert witnesses.

BACKGROUND

Adequate investment in our transportation and other public infrastructure is critical to our nation's economic growth, our competitiveness in the world marketplace, and the quality of life in our communities. Despite the importance of these investments, many of our nation's infrastructure needs are going unmet. The impact of inadequate infrastructure investment is being felt in a variety of ways, most notably through a significant increase in congestion.

Road congestion has become a major national problem. According to the Texas Transportation Institute's 2007 Urban Mobility Study, traffic congestion in the Nation's 437 urban areas continues to increase. Congestion now occurs during longer portions of the day and delays more travelers and goods than ever before.

As congestion increases, so does the cost it imposes both on our economy and on motorists. In 2005, traffic congestion cost urban motorists $78.2 billion in terms of wasted time and fuel,

compared to $73.1 billion in 2004, and just $14.9 billion in 1982.[1] This equates to an average annual cost per traveler of about $710 in 2005, up from $680 in 2004, and $260 in 1982. The hours of delay and gallons of fuel consumed due to congestion are only the elements that are easiest to estimate. The effect of uncertain or longer delivery times, missed meetings, business relocations and other congestion impacts are not included in this estimate.

Congestion has increased in the air, as well. In 2007, air travelers experienced the highest number of delayed flights -- 1.8 million -- in the 13 years since the Department of Transportation ("DOT") has collected such data. The Federal Aviation Administration ("FAA") predicts that, absent needed improvements to the aviation system, delays will increase by 62 percent by FY 2014.

According to the Commission on the Future of the U.S. Aerospace Industry, estimates of the cost of aviation delays to the U.S. economy range from $9 billion in 2000 to more than $30 billion annually by 2015. Without improvement, the combined economic cost of delays from 2000-2012 will total an estimated $170 billion.

Delays are also increasing on our inland waterways, which contain a series of outdated and antiquated locks and dams that, unless rehabilitated or improved, will continue to hinder the movement of coal, grain, and other bulk products. Fifty-three percent of the lock chambers on the system have exceeded their 50-year design lives. With the use of the aging inland waterway system expected to increase, including through expanded use of short-sea shipping, delays are likely to continue to rise.

Inadequate infrastructure investment is also putting our environment at risk. Communities throughout the United States continue to struggle financially to meet their ever-increasing wastewater treatment infrastructure needs. The Environmental Protection Agency ("EPA") has reported that a failure to increase investment in wastewater treatment infrastructure would erode many of the water quality achievements of the past 30 years.

Estimates of the nation's clean water infrastructure needs over the next 20 years exceed $400 billion. The needs are especially urgent for areas trying to remedy the problem of combined sewer overflows and sanitary sewer overflows and for small communities lacking sufficient independent financing ability. Drinking water infrastructure needs are estimated at nearly $500 billion over the next 20 years. Current spending by all levels of government is one-half of the estimated needs.

According to the Congressional Budget Office ("CBO"), in 2006, the Federal Government invested $76.3 billion on transportation and water infrastructure, including highways and roads, mass transit, rail, aviation, water transportation, water resources such as the construction and maintenance of dams and levees, and water supply and wastewater treatment.[2] Of this $76.3 billion in Federal spending, grants and loan subsidies totaled $50.6 billion, and all other federal spending on infrastructure totaled $25.7 billion. In recent years, the Federal grants and loan subsidies have accounted for slightly more than one-third of state and local governments' total capital expenditures on infrastructure.

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[1]In constant 2005 dollars.

[2]*See* "Trends in Public Spending on Transportation and Water Infrastructure, 1956 to 2004", issued by CBO in August 2007.

Over and above this $76.3 billion in Federal investment is approximately $7.9 billion in Federal revenues that were forgone in 2006 due to the tax preferences that the Federal Government provides to municipal bonds issued by States and localities to finance their infrastructure spending.

I. Existing Programs for Federal Financial Support for Non-Federally Owned Infrastructure

Most of the infrastructure discussed above is owned and operated by state and/or local governments, or private entities, and is only partially financed by the Federal Government. While the Federal Government does own and operate many capital assets (e.g., the air traffic control system, airport baggage screening systems, and public buildings), the issues related to Federally-owned capital assets are somewhat different from non-Federally owned capital assets and, therefore, are discussed separately in section III.

There are a range of options for financing infrastructure investments, including different methods of delivering the subsidy (e.g., grants vs. loans vs. tax exemptions), and different methods of financing the cost of that subsidy (e.g., borrowing through Treasury vs. borrowing through a third party). Some of the current methods by which infrastructure investments are financed are discussed below.

A. Grants

Traditionally, the Federal Government has subsidized infrastructure investments through grants. The major grant programs within the jurisdiction of the Committee on Transportation and Infrastructure include:

- Federal-Aid Highway Program ("FAHP") -- provides grants to States for construction, reconstruction, and improvement of highways and bridges on eligible Federal-Aid highway routes and for other special purpose programs and projects. The FY 2008 funding level for the FAHP is $41.2 billion (including the additional $1 billion for bridge repair).
- Transit Formula and Bus Grant Program -- provides grants to urbanized and non-urbanized areas nationwide to meet transit capital and, in some cases, operating expenses. For urbanized areas, formula funds are distributed to transit systems based on factors such as population, vehicle miles traveled, and transit ridership. Formula funds may be used for transit capital expenses, such as the purchase of new buses or train cars, or the rehabilitation and refurbishment of existing transit systems. For urbanized areas with populations of less than 200,000, and for non-urbanized areas, formula funds may also be used for transit operating expenses. Bus and Bus Facility Grants are allocated on a discretionary basis to fund the acquisition, construction, and improvement of buses and bus-related facilities. The FY 2008 funding level for Formula and Bus Grants is $7.8 billion.
- Transit Capital Investment Grant Program-- provides grants for large capital projects that cannot be funded from a transit agency's formula allotment, such as Major Fixed Guideway projects ("New Starts"). Funds are allocated on a discretionary basis. The FY 2008 funding level for Capital Investment Grants is $1.6 billion.
- Airport Improvement Program ("AIP") -- provides grants to public agencies and, in some cases, to private owners and entities for the planning and development of public-use airports that are included in the FAA's National Plan of Integrated Airport Systems ("NPIAS"). The

NPIAS currently identifies 3,431 airports that are significant to national air transportation and, therefore, eligible to receive grants under the AIP. The FY 2008 funding level for AIP is $3.5 billion.[3]

B. Forms of Assistance other than Grants

(1) Federally-Supported State Loan Funds

(a) State Infrastructure Banks

A State Infrastructure Bank ("SIB") is a revolving fund mechanism for financing a wide variety of highway and transit projects through loans and credit enhancement. SIBs are intended to complement the traditional Federal-aid highway and transit programs by supporting certain projects with dedicated repayment streams that can be financed in whole or in part with loans, or that can benefit from the provision of credit enhancements. As loans are repaid, or the financial exposure implied by a credit enhancement expires, the SIB initial capital is replenished and can be used to support a new cycle of projects.

Section 350 of the National Highway System Designation Act of 1995 ("NHS Act") (P.L. 104-59) authorized DOT to establish the SIB Pilot Program. Specifically, DOT was authorized to select up to 10 States to participate in the initial pilot program and to enter into cooperative agreements with the Federal Highway Administration and/or the Federal Transit Administration for the capitalization of SIBs with a portion of their Federal-aid highway funds. The FY 1997 DOT Appropriations Act opened SIB participation to all States and appropriated $150 million in Federal General Funds for SIB capitalization. In total, 38 States and the Commonwealth of Puerto Rico were selected to participate in the SIB pilot program. Of the 39 participants approved for the SIB program, 32 States and Puerto Rico have active SIBs. By the end of June 2007, these 33 SIBs had collectively issued $6.2 billion in loan agreements.

A small number of States have leveraged their SIB funds by using anticipated SIB loan repayments as collateral to secure bonds.[4] For example, in July 2006, the State of Ohio established the "State Transportation Infrastructure Bond Fund" ("STIBF"), an investment-grade bond financing program that issues bonds on behalf of eligible Ohio political subdivisions. Under this program, bonds are issued by the Ohio Treasurer to fund eligible projects, including highway, transit, airports, waterway, roads, bridges, railroad, and any other transportation infrastructure projects. The program is expected to help political subdivisions achieve a lower cost of capital. The first project financed under the STIBF program is a 10-year, $7 million transaction that received an "AA-" rating from Fitch Ratings and had an average borrowing cost fixed under four percent.

(b) Clean Water State Revolving Fund Program

Similar to the State Infrastructure Banks discussed above, the Clean Water State Revolving Fund ("CWSRF") program is another example of a state revolving loan fund that is capitalized by

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[3]Assumes enactment of legislation to extend the authorization for the AIP program from June 30, 2008, to September 30, 2008.

[4]This practice of leveraging revolving fund assets is more common among Clean Water State Revolving Funds. See discussion on page 5.

Federal grants. Under this program, which was established by the Clean Water Act amendments of 1987, the EPA provides grants to all 50 States and Puerto Rico to capitalize state loan funds. The States provide a 20 percent match. The CWSRF funds are then used by the State to make loans to fund the construction of municipal wastewater facilities, nonpoint source pollution control, and estuary protection projects. As the loans are paid back into the revolving fund, new loans are made to other recipients. Through FY 2007, the Clean Water SRFs have provided $62.9 billion in loans for wastewater and other projects, including $5.3 billion in loans in 2007 alone.

More than one-half of the CWSRF programs have leveraged their fund assets to increase loan funding available to address critical projects. Under a leveraging approach, federal capitalization grants and program cash flows are used as collateral to secure bonds that are issued by the CWSRF programs. The proceeds from the bonds are then lent out for SRF-eligible activities. According to EPA, leveraging has provided an additional $20.6 billion.

According to EPA, interest rates for CWSRF loans in 2007 averaged 2.1 percent nationally, compared to the average market rate of 4.3 percent. For a CWSRF program offering this rate, a CWSRF-funded project would cost 18 percent less than projects funded at the market rate. CWSRFs can fund 100 percent of the project cost and provide flexible repayment terms up to 20 years.

(2) Direct Federal Loans and Loan Guarantees

(a) Transportation Infrastructure Finance and Innovation Act ("TIFIA")

Enacted as part of the Transportation Equity Act for the 21st Century ("TEA-21"), the Transportation Infrastructure Finance and Innovation Act of 1998 ("TIFIA") established a Federal credit program for eligible transportation projects of national or regional significance. The program's goal is to leverage Federal funds by attracting substantial private and other non-Federal co-investment in critical improvements to the nation's surface transportation system.

Through TIFIA, DOT provides Federal credit assistance to highway, transit, rail, and intermodal freight projects, including seaports. The amount of TIFIA assistance may not exceed 33 percent of total project costs. The program targets only large projects, generally those costing more than $50 million.

The TIFIA program offers three types of financial assistance: secured loans, loan guarantees, and standby lines of credit. Secured loans are direct Federal loans to project sponsors. Loan guarantees provide full-faith-and-credit guarantees by the Federal Government to institutional investors that make loans for projects. Standby lines of credit represent secondary sources of funding in the form of contingent Federal loans that, if needed, supplement project revenues during the first ten years of project operations.

Both public and private project sponsors may apply for TIFIA assistance, but all prospective borrowers must demonstrate that the proposed project is consistent with State and local transportation plans.

To fund TIFIA, the Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users ("SAFETEA-LU") (P.L. 109-59) provides $122 million in contract authority from the Highway Trust Fund for each of fiscal years 2005 through 2009 to pay the subsidy cost (and administrative expenses) of credit assistance.[5]

As of April 2008, the TIFIA program had approved $4.8 billion in credit assistance to 15 projects representing a total of $18.6 billion of infrastructure investment. This $4.8 billion in credit assistance was provided at a Federal budget cost of approximately $346 million in contract authority.

(b) Railroad Rehabilitation and Improvement Financing ("RRIF")

The Railroad Rehabilitation and Improvement Financing ("RRIF") Program provides direct federal loans and loan guarantees to finance development of railroad infrastructure. The RRIF program was established by TEA-21 and amended by SAFETEA-LU. Under this program the Federal Railroad Administrator is authorized to provide direct loans and loan guarantees up to $35 billion. Up to $7 billion is reserved for projects benefiting freight railroads other than Class I carriers (i.e., projects that benefit "short line" railroads).

RRIF funding may be used to:

- Acquire, improve, or rehabilitate intermodal or rail equipment or facilities, including track, components of track, bridges, yards, buildings and shops;
- Refinance outstanding debt incurred for the purposes listed above; and
- Develop or establish new intermodal or railroad facilities.

Direct loans can fund up to 100 percent of a railroad project with repayment periods of up to 25 years and interest rates equal to the cost of borrowing to the government.

Eligible borrowers include railroads, state and local governments, government-sponsored authorities and corporations, joint ventures that include at least one railroad, and certain "captive" shippers who intend to construct a new rail connection.

[5]Since enactment of the Federal Credit Reform Act of 1990, Federal agencies are required to set aside capital reserves in advance to cover the expected long-term cost to the Government of providing credit assistance. Analogous to a private bank's loan reserve, the subsidy cost represents the Federal Government's estimate of expected loss associated with the provision of each TIFIA project's credit instrument.

Since its enactment, the RRIF program has executed 21 loan agreements worth a total of $748 million, as shown in the table below.

RRIF Loan Agreements

ORGANIZATION	YEAR	AMOUNT
Nashville and Eastern Railroad	2008	$4.6 million
Columbia Basin Railroad	2008	$3.0 million
Great Western Railway	2007	$4.0 million
Virginia Railway Express	2007	$72.5 million
R.J. Corman Railway	2007	$59 million
Dakota, Minnesota & Eastern Railroad	2007	$48 million
Iowa Northern Railroad	2006	$25.5 million
Wheeling & Lake Erie Railway	2006	$14 million
Iowa Interstate Railroad	2006	$9.35 million
Great Smoky Mountains Railroad	2005	$7.5 million
Riverport Railroad	2005	$5.5 million
The Montreal, Maine & Atlantic Railway	2005	$34 million
Tex-Mex Railroad	2005	$50 million
Iowa Interstate Railroad	2005	$32.7 million
Stillwater Central Railroad	2004	$4.6 million
Wheeling & Lake Erie Railway	2004	$25 million
Arkansas & Missouri Railroad	2003	$11 million
Nashville and Western Railroad	2003	$2.3 million
Dakota, Minnesota & Eastern Railroad	2003	$233 million
Amtrak	2002	$100 million
Mount Hood Railroad	2002	$2.07 million

(3) Federal Support of State and Local Bonds

(a) Tax-Exempt Bonds

The interest earned on most bonds issued by state and local governments is exempt from Federal taxation. Providing tax-exempt status for these bonds is another way in which the Federal Government helps to finance certain infrastructure investments. Tax-exempt status can lower the cost of capital significantly. Because of the exemption, purchasers of such bonds are willing to accept a lower interest rate than they would require on taxable bonds of comparable risk and maturity. Consequently, the Federal Government effectively pays a share (about 25-30 percent) of the taxable interest that state and local governments would have to pay if their debt were taxable.

From 2002-2006, $224 billion in tax-exempt municipal bonds were issued to fund transportation projects, including airport, mass transit, road and bridge projects, and $160 billion in such bonds were issued to fund water and sewer projects.[6]

[6]GAO-08-364, Appendix III: Summary of Thomson Financial 2007 Bond Buyer Yearbook Data, Use of Proceeds, 2002-2006 Combined.

Federal law limits tax-exempt financing of facilities used in conjunction with private activities. For federal tax purposes, municipal bonds are classified as private activity bonds if they pass both the private use and the private payment test. These tests specify that if more than 10 percent of the bond proceeds are used for private business purposes and more than 10 percent of the bond proceeds are secured by payments from property used for private business use, then the bond is a private activity bond.

A private activity bond can be either taxable or tax-exempt. Congress has specified certain private activities that can be financed with tax-exempt bonds. These activities include airport, water and sewer projects, and as of 2005, highway and surface freight transfer facilities (*see* SAFETEA-LU discussion below). Private activity bonds that receive tax-exempt status are called qualified private activity bonds. In general, qualified private activity bonds are subject to a number of restrictions, including annual state-by-state limitations on the volume of such bonds that can be issued.

Section 11143 of Title XI of SAFETEA-LU amended Section 142 of the Internal Revenue Code to add highway and freight transfer facilities to the types of privately developed and operated projects for which qualified (i.e., tax-exempt) private activity bonds may be issued. This change allowed private activity on these types of projects, while maintaining the tax-exempt status of the bonds.

Qualified Highway or Surface Freight Transfer Facilities include:

- Any surface transportation project which receives Federal assistance under Title 23, United States Code;
- Any project for an international bridge or tunnel for which an international entity authorized under Federal or State law is responsible and which receives Federal assistance under Title 23, United States Code; and
- Any facility for the transfer of freight from truck to rail or rail to truck (including any temporary storage facilities directly related to such transfers) which receives Federal assistance under Title 23 or Title 49.

It is important to note that any surface transportation project which receives Title 23 assistance is qualified to benefit from these private activity bonds. According to DOT, because TIFIA credit assistance is a form of Title 23 assistance, this means that TIFIA projects are also eligible to receive this tax-exempt bonding authority. This means that TIFIA-assisted public transportation projects, intercity bus or rail facilities and vehicles (including vehicles and facilities owned by Amtrak), public freight rail facilities or private facilities providing public benefit for highway users, and intermodal freight transfer facilities are all eligible to be financed with qualified private activity bonds.

SAFETEA-LU limits the total amount of such private activity bonds to $15 billion and directs the Secretary of Transportation to allocate this amount among qualified highway or surface freight transfer facilities. The $15 billion in exempt facility bonds is not subject to the state volume caps. As of April 3, 2008, DOT had approved a total of $5.288 billion in private activity bond allocations for a total of six projects, including the Port of Miami Tunnel ($900 million), the Missouri DOT Safe & Sound Bridge Improvement Project ($700 million), the Knik Arm Crossing in

Alaska ($600 million), the Virginia I-495 Capital Beltway HOT Lanes ($800 million), the Texas DOT IH 635 (LBJ Freeway) ($288 million), and Pennsylvania Turnpike Capital Improvements ($2 billion).

(b) Tax-Credit Bonds

Tax-credit bonds are a special type of bond that has in recent years been proposed as a way to increase investment in programs such as Amtrak and mass transit. Tax-credit bonds, which must be specifically authorized by Congress, allow investors to receive a nonrefundable tax credit against their federal income tax liability instead of a cash interest payment. One example of tax-credit bonds is the "Qualified Zone Academy Bonds", which were authorized by the Taxpayer Relief Act of 1997 to provide aid to state and local governments to improve certain schools.

During the last reauthorization of highway and transit programs, the use of tax-credit bonds was considered as a potential new funding source for transportation programs. At that time, CBO was asked by the Senate Committee on the Budget to analyze three hypothetical proposals involving the use of tax-credit bonds for transportation programs.[7] The first such proposal assumed Congress would authorize the creation of a new government-sponsored enterprise, the Transportation Financing Corporation, which would be authorized to issue tax-credit bonds. The second proposal assumed that tax-credit bonds would be issued by the U.S. Treasury. The third proposal assumed that conventional bonds whose proceeds were earmarked for transportation would be issued by the U.S. Treasury. CBO's analysis concluded that financing transportation programs through the proposed bonds would generally be more expensive to the Federal Government over the lifetime of the bonds than financing an equivalent amount through appropriations.

In July 2004, CBO further examined the issue of tax-credit bonds.[8] CBO reaffirmed that tax-credit bonds will always be a more expensive way of financing programs' spending than the conventional method of U.S. Treasury financing. Conventional Treasury securities achieve the lowest possible financing cost because they are free of default risk and highly liquid. According to CBO, any other means of raising funds can be expected to cost more. However, CBO did note one possible advantage of tax-credit bonds. Specifically, CBO noted that tax-credit bonds could be designed to deliver the same Federal subsidy to state and local governments that current tax-exempt bonds provide, but at a lower cost. This is because a tax-credit bond would subsidize the interest on state and local government debt more efficiently than an exemption of interest income could.[9]

(c) Grant Anticipation Revenue Vehicle ("GARVEE") Bonds

Bonds repaid with future Federal funds are commonly referred to as GARVEEs, or Grant Anticipation Revenue Vehicles. GARVEEs permit states to pay debt service and other bond-related expenses with future Federal-aid highway apportionments.

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[7] *See* "A Comparison of Tax-Credit Bonds, Other Special-Purpose Bonds, and Appropriations in Financing Federal Transportation Programs", issued by CBO in June 2003.

[8] *See* "Tax-Credit Bonds and the Federal Cost of Financing Public Expenditures", issued by CBO in July 2004.

[9] Because some bond purchasers' marginal tax rates are higher than other buyers', tax-exempt bonds usually end up costing the federal government more than the amount of benefits (i.e., the reduction in interest costs) received by the state and local governments that issue the bonds, making tax-exempt bonds a relatively inefficient method of delivering subsidies. For more information, see July 2004 CBO paper.

While some debt service payments have been eligible for reimbursement from Federal-aid highway funds since the beginning of the modern Federal-Aid Highway Program in 1956, this opportunity was of limited practical use. For example, prior to 1995, States could use their apportioned Federal-aid highway funds to repay only the principal component of debt service on certain categories of projects, and interest costs were eligible for reimbursement only for some Interstate projects.

The NHS Act, which amended Section 122 of Title 23 to expand the Federal Highway Administration's ("FHWA") bond reimbursement provisions, made two significant changes. First, the NHS Act expanded the types of debt-related costs eligible for Federal-aid reimbursement to include interest expense for all projects, debt issuance costs, and the cost of purchasing commercial bond insurance. Second, the NHS Act eliminated provisions that restricted the amount and timing of advance construction authorizations. The limitation was replaced with a requirement that advance construction projects be on the approved STIP, enabling FHWA to approve an advance construction project at any time, even in a future authorization period.

This ability to approve advance construction in a future authorization period is critical to the GARVEE process. Under the former rules, it would have been necessary to obligate the Federal share of debt service payments within the bounds of obligation authority available during the current authorization period. Under the new rules, it is possible to obligate Federal funds for debt service expenses over a longer period.

Candidates for GARVEE financing are typically larger projects (or programs of projects) that have the following characteristics:

- They are large enough to merit borrowing rather than pay-as-you-go grant funding, with the costs of delay outweighing the costs of financing;
- They do not have access to a revenue stream (such as local taxes or tolls) and other forms of repayment (such as state appropriations) are not feasible; and
- The sponsors (generally state DOTs) are willing to reserve a portion of future year Federal-aid highway funds to satisfy debt service requirements.

In addition, candidate projects must be eligible for Federal-aid highway funding under one or more program funding categories for which advance construction is available. The projects must also appear on the STIP.

As of April 2008, 20 States and two territories had issued more than $8 billion in GARVEE bonds (excluding refunding issues) since enactment of the NHS Act in 1995.

II. Proposed New Programs for Federal Support of Non-Federal Infrastructure

Recently, several bills have been introduced to establish a variety of "infrastructure banks" to increase investment in infrastructure. In general, these proposals use debt-financing to target investment to infrastructure. While this accelerates investment relative to what would likely occur under a pay-as-you-go approach, the debt obligations eventually must be repaid, with interest, often through user charges or other dedicated revenue sources.

In addition, there may well be no budget scoring advantage to these types of proposals. According to CBO, the way in which an activity should appear in the federal budget depends on the nature of the activity, not its method of financing.[10] Long-standing federal budget principles require that an investment that is essentially governmental in nature (i.e., initiated, controlled, and funded largely by the government for governmental purposes) be shown in the budget. This means that activities do not have to be conducted by a federal agency, or financed by the U.S. Treasury, to be classified as governmental and included in the budget.

Therefore, a key question in determining how these types of proposals would be scored is whether or not the activity is governmental in nature, in CBO's view. If the entity issuing the bonds is deemed by CBO to be sufficiently "federal-like", then the legislation creating the entity would likely be scored in a way that provides no advantage over the more traditional approach of providing regular appropriations.

A. National Infrastructure Development Act of 2007 (H.R. 3896)

H.R. 3896, introduced by Representative DeLauro on October 18, 2007, establishes the National Infrastructure Development Corporation ("NIDC") and its subsidiary, the National Infrastructure Insurance Corporation, as wholly owned Government corporations. Within five years after enactment, these corporations are intended to transition to self-sustaining, privately-controlled government-sponsored enterprises, comparable in structure to Fannie Mae and Ginnie Mae.

The NIDC would be a national level revolving fund intended to facilitate the financing of infrastructure projects that can be self-sustaining based on user charges or other dedicated revenue sources. A broad range of infrastructure projects would be eligible for financial assistance through the NIDC, including road, highway, bridge, tunnel, airport, mass transportation, passenger or freight rail, waterway, commercial port, drinking or wastewater treatment facility, and solid waste disposal facility projects, whether owned, leased or operated by a public entity or a private entity, or a combination thereof.

The NIDC would initially be capitalized by the Federal Government. Specifically, the bill requires the Secretary of Treasury, subject to appropriation, to purchase $3 billion worth of voting common stock of the Corporation in each of the three years following the date of enactment of this Act. Thereafter, the NIDC would be self-sustaining through revenues generated by income from loan repayments, fees, and charges.

The bill authorizes the NIDC to: (1) make loans and purchase debt securities and equity securities, the proceeds of which are to be used to finance the development of one of more infrastructure facilities; and (2) issue and sell debt securities and equity securities.

In addition, the Corporation would be authorized to designate certain bonds as "Public Benefit Bonds". Public Benefit Bonds are defined as any obligation issued after the date of enactment if: (1) 95 percent or more of the net proceeds of such obligation are used to finance one or more infrastructure facilities; (2) such obligation has received a published rating; and (3) the development of such infrastructure facilities is undertaken by a governmental entity or a public-

[10] *See* "Third-Party Financing of Federal Projects", issued by CBO June 1, 2005.

private partnership. The bill includes provisions intended to encourage pension plan investment in the development of infrastructure facilities, through Public Benefit Bonds.

The NIDC would have a 12-member Board of Directors, of which nine directors would be appointed by the President and three would be officers of the NIDC. Of the non-officer directors appointed to the board, a minimum of six would be selected from the private sector as follows:

- Two representatives from organized labor;
- Two individuals involved in the field of public-private infrastructure finance and related disciplines; and
- Two individuals selected after consultation with the National Governors' Conference.

A majority of the non-officer members of the board shall appoint the president of the NIDC, who shall serve on the board of directors. The president of the NIDC shall select two executive officers to be appointed to the board.

H.R. 3896 would also establish the National Infrastructure Insurance Corporation ("Insurance Corporation") as a subsidiary of the NIDC. The Insurance Corporation would be initially capitalized by the NIDC, and would be authorized to insure and reinsure bonds, debentures, notes, debt instruments, loans, and any interest thereon, the proceeds of which are to be used to finance or refinance development of infrastructure facilities.

The obligations of either corporation, and obligations insured by any such corporation shall not be obligations of, or guaranteed as to principal or interest by, the United States or any federal agency.

B. National Infrastructure Bank Act of 2007 (S. 1926 and H.R. 3401)

S. 1926, introduced by Senators Dodd and Hagel on August 1, 2007, and H.R. 3401, introduced by Representatives Ellison and Frank on August 3, 2007, would establish a National Infrastructure Bank as an entity of the U.S. Government to finance publicly-sponsored infrastructure projects of regional and national significance. Eligible types of projects include public transit systems, housing properties, roads, bridges, drinking water systems, and wastewater systems.

Modeled after the Federal Deposit Insurance Corporation, the Bank would be led by a five-member Board of Directors, each of whom would be appointed by the President and confirmed by the Senate. No more than three of the directors may be of the same political affiliation.

Under S. 1926, infrastructure projects with a potential Federal investment of at least $75 million would be brought to the Bank's attention by a public sponsor (e.g., state, locality, tribe, transit agency, or a consortium of these entities). Using criteria the Bank establishes through a rulemaking process, the Bank would select projects for funding, and develop a financing package that may consist of grants, direct loans, loan guarantees, or long-term project-specific bonds.

The Bank is authorized to issue up to $60 billion in infrastructure bonds. These bonds could be either general purpose infrastructure bonds (the proceeds of which would be used to provide direct subsidies to any qualified infrastructure projects) or project-specific infrastructure bonds (the

proceeds of which would be used to fund only that project). Both types of bonds issued by the Bank would be backed by the full faith and credit of the United States.

C. Build America Bonds Act of 2007 (S. 2021)

S. 2021, introduced by Senators Wyden and Thune on September 6, 2007, would authorize two or more State infrastructure banks to form a multi-state organization to be known as the Transportation Finance Corporation ("TFC"). The TFC would be authorized to issue up to $50 billion in "Build America" bonds to fund qualified transportation infrastructure projects, including roads, bridges, rail and transit systems, ports, and inland waterways. The TFC shall be exempt from all Federal, State, and local taxation.

The Build America bonds are not an obligation of the United States, and are not Federally-guaranteed. While the payment of principal with respect to such bonds is the obligation of the TFC, the Federal Government would essentially be paying the "interest" on the bonds. This is because the bonds would be tax credit bonds (i.e., bond holders would receive Federal tax credits in lieu of interest). The applicable credit rate would be equivalent to long-term corporate debt obligations, determined in such manner as the Secretary of Treasury prescribes.

The TFC shall establish a Build America Bonds Trust Account ("Trust Account"). The following amounts shall be deposited into the Trust Account: (1) the proceeds from the sale of all Build America bonds; (2) an appropriation of funds from the Federal Government equal to the lesser of $50 billion or the amount of revenues resulting from the extension of Customs user fees beyond September 31, 2007; and (3) any investment earnings on the amounts deposited into the Trust Account. Amounts in the Trust Account may be used only to pay the costs of qualified projects, redeem Build America bonds, and fund the operations of the Corporation.

III. Issues Related to Federally-Owned Infrastructure

As noted above, the issues related to Federally-owned infrastructure, such as the air traffic control system, airport baggage screening systems, and public buildings, are somewhat different from those related to non-Federally owned infrastructure. Some of the methods by which Federally-owned capital assets are financed are discussed below.

A. Appropriations

Up-front payment of appropriated funds, financed through Treasury, is generally the least expensive way to finance capital assets. However, full, timely, up-front appropriations are often not a realistic alternative in the current budget environment. In the face of budget constraints, a variety of other methods have been used or proposed to finance capital assets, as discussed below.

B. Leasing

Leasing is one method by which the use of a capital asset can be acquired. For example, it is sometimes mentioned as an option for financing the FAA's Next Generation Air Traffic Control system.

In the 1980s, many agencies used leases as a substitute for appropriations to acquire major capital assets with specialized uses unique to the Federal Government. While leasing to meet long-term needs almost always results in greater long-term costs to taxpayers, it also provides the government opportunities to spend more on other mission objectives. However, the budget "scorekeepers" (i.e., the House and Senate Budget Committees, the Office of Management and Budget ("OMB"), and CBO) considered such leasing practices to be harmful in that they reduced oversight by both Congress and OMB, and committed the Federal Government to future expenditures that were not reflected in the budget at the time the commitments were made.

To put an end to such leasing practices, the Budget Committees, OMB, and CBO jointly developed the current guidelines for the budgetary treatment of leases. These guidelines have been in place since 1991.

Under these guidelines, a long-term lease that, in effect, provides the Federal Government with ownership of an asset is scored "up-front" (i.e., in the year in which the lease is signed) with budget authority equal to the present value of all future lease payments. Such leases include both capital leases (i.e., leases in which the government consumes almost all of the services produced by an asset over its useful life) and lease-purchases (i.e., leases in which the government purchases the asset at the end of the lease term). In contrast, the budget authority for operating leases (i.e., leases that provide the government with access to the services of a commercial asset only for a limited portion of its useful life) can be recorded annually over the life of the lease as lease payments are made.

This "up-front" scoring rule was intended to put capital leases and lease-purchases on an equal budgetary footing with direct purchases of assets, in an effort to ensure that agencies acquire capital assets in the most cost-effective manner. Unfortunately, these guidelines have had an unintended and undesirable effect in that agencies have sometimes chosen to rely on a series of operating leases to obtain access to assets for which they have a long-term need -- a strategy that is generally even less cost-effective than a lease-purchase.

One example of this can be found in the leasing of Federal office space. In almost all circumstances, the use of long-term leases to satisfy the need for Federal office space is a wasteful use of appropriated funds, because such leases are almost always more expensive than Federal construction. However, budget constraints, combined with the "up-front" scoring rule for capital leases and lease-purchases, have sometimes resulted in the General Services Administration ("GSA") using a series of operating leases, which contain no ownership option, to meet Federal space requirements.

The Government Accountability Office's ("GAO") work over the years has shown that building ownership often costs less than operating leases, especially for long-term space needs. For example, in 1995 GAO reported that 55 of 73 operating leases that the GSA had entered into cost a total of $700 million more than construction. In 1999, GAO reported that for eight of nine major operating lease acquisitions that GSA had proposed, construction would have cost less than leasing and saved the government $126 million over 30 years. In 2005, GAO testified that for the Patent and Trademark Office's long-term requirements in northern Virginia, the cost of an operating lease was estimated to be $48 million more than the construction and $38 million more than lease purchase. Similarly, the Department of Transportation Building in Washington, D.C. was estimated to cost $190 million less to construct than to enter into an operating lease. Most recently, in January

2008, GAO reported that four of seven operating leases that GSA had entered into cost a total $83.3 million more than construction. Clearly, the current practice of relying on leasing to meet long-term space needs results in excessive costs to taxpayers and does not reflect an economically rational approach to capital asset management. It may, however, be a rational response to the current budget process which, for discretionary appropriations, has a one-year time horizon and does not recognize future cost savings or cost avoidance that would result from up-front investments in capital assets.

C. Other Contract Arrangements

Other contract arrangements have been used by Federal agencies to acquire assets without recording the costs up front, including the use of third-party financing to access private capital. According to CBO, one example of such third-party financing is the Energy Savings Performance Contract ("ESPC") program.[11]

The rationale for the ESPC program is that investing in more energy-efficient equipment should lower the government's energy use and hence its costs. Under the ESPC program, a contractor both finances and installs the energy-efficient equipment in Federal buildings. The financing is backed by fixed-price contracts that obligate the Federal Government to repay the vendor's costs, including a guaranteed rate of return, and to pay off any outstanding debt if it cancels a contract.

The law authorizing ESPCs is unusual in that it allows agencies to sign long-term contracts without getting an appropriation to cover the full cost of the Federal Government's contractual obligation -- only the amount needed to cover one year of the contract's cost is required when the agreement is approved. This budgetary treatment was also sanctioned in a memorandum from President Clinton to the heads of executive branch departments and agencies.[12] This statutory and executive authority combined provides, in effect, a limited exception from the up-front scoring rule for the acquisition of energy-efficient equipment.

As CBO notes, it would be more efficient to acquire the energy-efficient equipment by paying up-front, using appropriated funds, rather than by third-party financing. However, using appropriated funds is not always a viable option for Federal agencies with tight budgets. Without the unusual authority provided under the ESPC program, agencies may well have delayed investing in energy-efficient equipment, despite the future savings that could be derived from reduced energy use. This is because, under the current budget process, there is no recognition of the link between an up-front capital investment and the future savings that would be derived from that investment.

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[11] See "Third-Party Financing of Federal Projects", issued by CBO June 1, 2005.

[12] Memorandum from President Clinton titled "Cutting Greenhouse Gases Through Energy Savings Performance Contracts", issued July 25, 1998.

IV. Capital Budgeting

In general, proponents of capital budgeting believe that the current Federal budget structure and process have led to a less than optimal level of investment in infrastructure and other programs that promote long-term economic growth and increased productivity.

Currently, the Federal budget treats all expenditures the same, regardless of whether it is spending for long-term investment or spending for current consumption. In addition, the current budget process does not encourage Congress to make decisions about how much spending overall should be devoted to programs having a direct bearing on long-term growth and productivity.

Some believe this has allowed spending for current consumption to "crowd out" spending for long-term investment. For example, Federal outlays for physical capital, research and development, and education declined as a share of gross national product ("GNP") between 1980 and 1984 and have remained relatively stable at the lower level since then.[13] Specifically, in 1980, such spending was 2.6 percent of GNP. By 1984, such spending had been reduced to 1.8 percent of GNP. In 2007, the most recent year for which actual data are available, such spending was still 1.8 percent of GNP.

As discussed above in Section III, even capital investments that would result in future cost savings to the Federal Government can be "crowded out" under the current budget process. This is because the spikes in budget authority needed to make up-front capital investments can be difficult to accommodate, and the one-year time horizon of the federal budget process does not easily recognize future cost savings that result from up-front capital investments. Under the current process, the overriding concern is to minimize spending in the budget year, regardless of whether or not increased investments made in the budget year could more than pay for themselves by reducing costs in the outyears. This can lead to inefficient Federal spending.

Interest in a capital budget increased in the 1980s with the apparent approval of Comptroller General Charles Bowsher and the suggestion by President Reagan in 1986 that the idea be studied. In 1982 and 1983, the Subcommittee on Economic Development, then chaired by Chairman Oberstar, held several days of hearings on capital budgeting. In 1995 and 1996, the issue arose again during Congressional deliberations over the proposed Balanced Budget Amendment to the Constitution.

"Capital budgeting" appears to mean different things to different people. In broad terms, capital budgeting refers to methods by which spending on long-term investments (i.e., spending that generates benefits over multiple years) can be accounted for separately from spending on current consumption, and perhaps given a different budgetary treatment in recognition of the fact that the benefits are generated over multiple years. This can take a variety of forms, ranging from simply displaying additional information in the budget regarding investment spending; to depreciating capital investments over time and requiring the appropriation of annual depreciation charges rather than the entire cost of the investment up-front; to establishing and enforcing target levels of "investment" spending.

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[13] FY 2009 President's Budget, Historical Tables, Table 9.1, "Total Investment Outlays for Major Public Physical Capital, Research and Development and Education and Training: 1962-2009".

Budget experts (e.g., the Office of Management and Budget) have tended to be wary of capital budgeting proposals, because they want to protect the concepts of full-funding and up-front scoring, to maintain budget discipline and ensure that Congress fully evaluates the likely costs and benefits of investments before appropriating funds for them.

A. Proposal for Separate "Investment" Budget Category

In 1993, in response to a request by Chairman John Conyers, House Committee on Government Operations, to evaluate capital budgeting, GAO issued a report titled "Incorporating an Investment Component in the Federal Budget".

In this report, GAO concluded that the most appropriate definition of "investment", for the purpose of focusing on long-term economic growth, would include Federal spending intended to enhance the private sector's long-term productivity, including spending on research and development, education and training, as well as spending for physical capital to improve infrastructure. GAO did not include in this definition spending on federally owned capital that the government itself uses (e.g., federal land, office buildings, or defense weapons systems).

GAO further concluded that establishing investment targets within a framework similar to that contained in the Budget Enforcement Act (i.e., having a separate budget category for investment spending, similar to the non-defense discretionary, and defense discretionary budget categories), was the most promising way to incorporate an investment component into the budget. GAO argued that, under this approach, Congress and the administration would reach agreement on the appropriate level of investment spending, and a separate discretionary spending cap could be established to mandate a separate investment target (or floor) to protect investment spending from being crowded out by other activities. This is similar to the approach that was taken in TEA-21 to establish separate highway and transit budget categories.

B. President's Commission to Study Capital Budgeting

In 1997, President Clinton established by Executive Order a Commission to Study Capital Budgeting. The order directed the commission to report on various aspects of capital budgeting, including the budgeting of capital in other countries, state and local governments, and the private sector; the appropriate definition of capital; the role of depreciation in capital budgeting; and the effect of a capital budget on macroeconomic stability and budgetary discipline.

In 1999, the President's Commission issued its report, which did not propose the adoption of a formal capital budget. Nor did it support GAO's proposal for a separate "investment" budget category. Rather, its recommendations were largely aimed at improving the information available to budget decision-makers, and a reiteration of current scoring rules requiring full, up-front funding for capital projects.

WITNESSES

Dr. Peter R. Orszag
Director
Congressional Budget Office

Ms. Patricia A. Dalton
Managing Director, Physical Infrastructure Team
Government Accountability Office

FINANCING INFRASTRUCTURE INVESTMENTS

THURSDAY, MAY 8, 2008

HOUSE OF REPRESENTATIVES,
COMMITTEE ON THE BUDGET,
COMMITTEE ON TRANSPORATION AND INFRASTRUCTURE,
Washington, DC.

The Committees met, pursuant to call, at 10:09 a.m., in room 2167, Rayburn House Office Building, Hon. John Spratt [chairman of the Committee on the Budget] presiding.

Present for Committee on the Budget: Representatives Spratt, Blumenauer, Scott, Baird, Ryan, Simpson, Alexander, and Smith.

Present for Committee on Transportation and Infrastructure: Representatives Oberstar, Taylor, Tauscher, Schmidt, Latta, and Sires.

Chairman SPRATT. Despite the numerous votes we are about to have today, I think it behooves us to begin the hearing. Before turning to the two witnesses we have today for their testimony, let me ask unanimous consent that the committee agree to the following rules to facilitate this hearing. First of all, for the purpose of questioning witnesses, we will alternate between the two committees beginning with the Budget Committee Democrats, followed by the Budget Committee Republicans and then proceed to the Transportation and Infrastructure Committee Democrats, Republicans. As usual, members who were present at the beginning of this hearing will be recognized by seniority, and the members arriving later will be recognized in the order that they appear. Members will have 5 minutes to ask questions, to make statements.

After all members have had a chance to address the witnesses, members may follow up with an additional 5 minutes if time permits. All members will be allowed to submit an opening statement for the record. Those members who do not have the opportunity to ask questions will be given 14 days to submit questions for the record. And the written testimony of all witnesses will be made part of the record so that they may summarize their testimony to allow time for questions and answers. Is there any objection to those rules and procedures before we begin this hearing? Hearing none, so ordered.

I told Mr. Oberstar that I felt a bit self-conscious sitting in his chair here to which he has long established the right. I have a feeling we are being set up for something on the Budget Committee by the gracious hospitality that they have extended to us, but we are delighted to meet with them today. I look forward to this hearing. This is a joint hearing of the Committee on the Budget and the Committee on Transportation and Infrastructure. Today's hear-

ing is the first joint hearing, to the best of my knowledge, held by these two committees.

Historically, our committees have not always seen eye to eye. And I hope this hearing signals the commitment to work together on infrastructure issues because they are vitally important. Today we will put our budget and infrastructure experience together to explore how we can fund or finance capital projects in the Federal budget. Our witnesses include Dr. Peter Orszag, Director of the Congressional Budget Office, and Ms. Patricia Dalton, managing director of GAO's physical infrastructure team. Public infrastructure is vital to us and to our economy, whether we are talking about highways or mass transit or rail or aviation or drinking water or wastewater treatment. Despite their vital importance, infrastructure investments have not kept pace with repair, maintenance and the need for expansion and replacement.

As a result, there is a growing interest in how we can maintain the appropriate level and the proper kind of infrastructure investment. The Transportation and Infrastructure Committee understands our infrastructure needs, after all, it is their charter. The Budget Committee wants to better understand ways that we can fund or finance such investments and how we can evaluate the assorted options. The Federal support for infrastructure usually comes in the form of grants embodied in the authorizing legislation and funded during the appropriations process. But there are numerous means of financing. Some are described as banks, some as revolving funds. Some increase borrowing or create new forms of borrowing. Some establish entities to manage or operate such projects.

All of these proposals, along with a new highway bill looming on the horizon in the not too distant future, give these two committees a chance to put our heads together. And putting these two committees together, there are a lot of heads. Maybe a third of the House, Mr. Oberstar. We want to understand the budgetary implications, the amount and manner by which we increase our capital investments. We want to know under what scenarios it is appropriate to consider investment mechanisms other than direct Federal financing, of any policy tradeoffs of one mechanism over the other. We need to understand the new proposals for financing infrastructure improvements, keeping in mind there is never, in the end, such a thing as a free lunch. We hope this hearing will be a starting point for a longer and larger conversation about how to fund and finance infrastructure investments and how to evaluate such proposals. I now turn to Chairman Oberstar for his opening statement.

Mr. OBERSTAR. Thank you very much, Mr. Chairman. Welcome to our committee. I am glad to have you here and I am glad to be, once again, part of the Budget Committee, which I served on for my limited 6 years in the 1980s and into 1990. And I want to welcome the gentleman from Wisconsin, Mr. Ryan, who represents three of the most important constituents in the United States, my granddaughters in Kenosha, Wisconsin.

And as I said to him, we could be having this meeting at Tenuta's Deli in Kenosha, a wonderful welcoming place. But I want to welcome everyone back to the subject of capital budgeting. Let me just read a few brief highlights—13 percent of the Nation's

aging dams are classified as "high hazard." Municipal water systems need $100 billion to keep up with demand. Nearly 1 of every 2 miles of paved highways needs resurfacing or reconstruction.

Half of America's bridges are too old, too weak to adequately and safely handle today's traffic; 56 of the 184 principal locks in the Nation's inland waterways will require major repairs over the next 20 years. Deepwater ports have insufficient capacity and are stifling trade. That from a report by the Subcommittee on Economic Development, which I chaired in 1982, a report that my then-colleague and later Chair of the House Government Reform Committee, Bill Clinger from Pennsylvania, spent an enormous amount of time working on, developing the hearings. We spent months crafting this report.

We concluded in our recommendations to the committee and to the House the adoption of a capital investment budget is a move toward a prospective public policy, rather than the retrospective action that is too often indicative of public works decisions. A capital budget would provide important information not available to the Congress and the executive branch so that they can then make capital decisions weighing the evidence, evaluating resources and projecting future needs. That is what we need.

In the course of that hearing, there was an extraordinary moment when David Stockman turned around and said, yes, I think a capital budget would be a good thing. But as an annex to the Federal budget, not as an integral part of it. Now, those figures I read off from 1982, you can say that today, 260 of the Nation's inland waterway locks are inadequate to handle the capacity. Today it takes 820 hours round trip from Clinton, Iowa to New Orleans to export grain from America's heartland. That is 3 weeks travel one way. We have to do better than that, because the locks are 600 feet long and the barge tows are 1,200 feet long, and you have to split them in half, send 600 feet through—the next 600 feet through tie them together and then go onto the next of those five inadequate locks.

And on the Illinois-Ohio river system, they need an additional 12 each—1,200 foot lock—we passed that legislation through this committee, through the House, by an overwhelming vote, overrode a presidential veto. Yet not a dime, not a single project entered into the President's budget for the coming fiscal year.

I don't want to go back and update all these figures. But just on bridges we said half. That meant 73,784 structurally deficient bridges in the U.S. that are on the verge of collapse. We need to invest in America. On Monday, I participated as the keynote speaker for the European transport ministers' meeting in Slovenia, the land of half of my ancestors, to talk about our investment needs in infrastructure in waterways, highways, airways, railways and ports and to exchange with the European ministers on their plan. This is their plan—the Trans-European Transport Network (TEN–T).

But this plan was formally presented to the council of ministers, all 27 of them, yesterday, by Jacques Barrat, who is the European Union Transport Commissioner. The TEN–T Plan would provide $350 billion over 10 years for highway, railway, high-speed passenger, high-speed rail, ports and lockage systems that will link

the Atlantic Ocean through the English Channel to the Black Sea, to the Seine River, to the Rhine, to the Danube and to the Black Sea to link with a water highway. They already ship enormous amounts of goods. $350 billion. They have every one of their priority projects listed page by page, process by process, funding source by funding source.

We don't have that kind of capital budgeting. We need to do that. Some say it will be too much money, it will be too big a challenge. But if we don't know what the picture is, then how can you prioritize? How can you make choices? We have to make those choices. They are tough choices to make, of course. But that is our responsibility as Members of Congress.

So I plead to develop a capital budgeting process. I think we need to have a roadmap, a water map, an airways map, a railways map as Europe is doing or we will fall behind. Just one final observation. In 1989, China had 168 miles of interstate quality highway. Today, they have 22,500 miles and in 10 years they will have 55,000 miles. With their investment, they have reduced the travel time by truck from Beijing to Hong Kong from 55 hours to 25 hours. Nowhere in America, with all of our investments, have we reduced truck travel time by 30 hours on any stretch of roadway. We have increased it by that amount of time. They have reduced the travel time by truck from Beijing to Shanghai from 35 hours to 14 hours. We have not made those kinds of investments and improvements. If we are going to compete in this world economy, then we have to make those investments. Thank you very much.

Chairman SPRATT. Thank you, Mr. Oberstar. Mr. Ryan.

Mr. RYAN. Thank you, Chairman Spratt. And I also want to thank Chairman Oberstar for his gratitude and his kind invitation to bring us here. I hope I get invited back after I read my opening statement. I also want to thank our witnesses for joining us today, Director Orszag and Patricia Dalton, managing director of GAO's physical infrastructure team, welcome. And I look forward to your testimony. Before I share my statement on the subject of this hearing, I am going to take just a brief moment to talk about the transportation issue first on the minds of the American people. And I hear the bell, so I realize we have some time constraints here. And the issue that is first on the minds of the American people is clearly the skyrocketing price of gasoline.

One of the things almost certain to come up today as we look at alternative financing mechanisms for public infrastructure is the possibility of increasing the gas tax. I think that is the last thing we want to do at this time. We need to be looking at ways of reducing the gas price burden on the American people. And that is why today I will introduce legislation that will suspend the 18.4 cent tax on gasoline for the summer and give American families at least a little relief. I know there is a concern, probably a lot in this room about the impact this proposal will have on the highway trust fund.

So my bill holds the highway trust fund harmless and it goes a step further. It will actually shore up the trust fund by eliminating its 2009 shortfall. This may sound impossible, but it is not. We can address both these high priority issues, relief from high gas prices and needed infrastructure improvements. And we can do it without costing the taxpayers a single dime. We will do it by addressing a

third issue that is also on the list of the American people's concerns and that is Congress' pork-barrel spending. If Congress will agree to give up earmarks for just one year as laid out in the Kingston-Wolf proposal, we could save $14.8 billion. This is a proposal that proposes a bipartisan commission to make sure that we have a system that is transparent and accountable to the American people who have lost faith in the way we spend their dollars. We could use that money to give taxpayers a little relief at the pump for the summer and still have more than enough money left over to shore up the trust fund in 2009, something that I know is a major priority for the transportation and infrastructure committee. Now, while my bill takes care of the highway trust fund's short-term financing problem, there is—there is a longer-term issue on highway financing and that is what we are here to talk about today, clearly public infrastructure, from roads and bridges to dams and sewers is vitally important to the growth and productivity of our economy and to our way of life. There are two issues before us. First, how do we ensure Federal funding is allocated to high priority infrastructure that has a high benefit cost ratio. And second, what is the best means of financing this activity? Today we are here to discuss this second issue, what role, if any, alternative financing mechanisms can or should play in the funding of Federal investment in public infrastructure.

In the past, the Budget Committees have concluded, as have CBO and GAO, that these alternative financing mechanisms from sale-leasebacks to third-party financing to tax credit bonds to be a more expensive, less transparent way to acquire and use capital assets when compared to conventional appropriations in treasury borrowing. And as Dr. Orszag notes in his testimony, there is no free money here. It is pay me now or pay me later. Regardless of what kind of mechanisms we use, alternative or otherwise, the bills still have to be paid.

And while we have many worthy demands of Federal spending, the American taxpayers and thus Congress don't have a limitless supply of money to fund them. So Congress has got to set priorities so we can ensure that our most critical public infrastructure projects get every bit of funding they need in the most cost effective way.

Finally, as Dr. Orszag knows and has testified before the Budget Committee, the question of how we might finance extra spending on infrastructure or anything else will soon be moot if we don't get to the business of reforming our entitlement programs. If we continue to push off entitlement reform, these programs will make most of our funding decisions for us. Because after paying for them, there simply won't be enough money left in the budget to even finance our highest domestic priorities. This will take place regardless of what financing methods we use for these other programs.

Federal infrastructure makes an important contribution to our economy. The chairman is right to point out the needs for America in the future. And I hope we can find the best way to address these key priorities in a transparent and a responsible way. And once again, I thank every one for being here. I thank you, chairman, for your invitation. And I look forward to the views of Dr. Orszag and Ms. Dalton.

Chairman SPRATT. Mr. Mica, the ranking member of this committee is not here, I believe. Mr. Oberstar, Mr. Ryan, if it is agreeable to you, I thought we would start with Dr. Orszag, give him 5 minutes and that will leave us about 5 minutes to get to the floor. We have got 6 votes, nearly an hour on the floor. And I beg your pardon, but we didn't set the schedule. Let's go ahead and see if we can't make use of what time is available. Dr. Orszag, we will give you 5 minutes. But you can take your time when we come back to make sure you have a full presentation of your testimony.

STATEMENT OF PETER ORSZAG, DIRECTOR, CONGRESSIONAL BUDGET OFFICE

Mr. ORSZAG. Thank you very much, Mr. Spratt. I will try to be brief in this initial period. Mr. Oberstar, Mr. Ryan, members of the two committee, thank you for having me this morning. Growing delays in air travel and surface transportation, bottlenecks in transmitting electricity, inadequate school facilities all suggest that some targeted additional infrastructure spending would be economically justifiable.

First, let's get some facts. As the first slide shows, the Nation spends about $400 billion a year on infrastructure. And I tried to give you a breakdown. I don't know if you can see that of that $400 billion. Of that, the Federal Government provides about $60 billion. This is from 2004. And Federal Government spending is very concentrated, particularly in highways.

So $30 billion of the $60 billion or so in Federal spending on infrastructure is dedicated towards highway spending. State and local governments spend a disproportionate share of their money in other areas. You see that on utilities and other. And similarly, the private sector spending on infrastructure is disproportionately concentrated in things like electricity generation and transmission.

The second slide that I have may be of more interest to people. For the first time, the Congressional Budget Office has gone through the various studies that exist on what would be needed to maintain current service levels from our infrastructure and what could be economically justifiable; that is, what projects could generate larger benefits than costs. And let me focus, for example, on highways. We currently spend about $67 billion a year on highway spending. The Federal Highway Administration has estimated that it would cost about $79 billion a year to maintain current levels of service. And so an additional, let's say, $10 to $12 billion a year would be required to maintain current levels of service and that as much as $132 billion a year could be justified in terms of benefits exceeding costs. So that would be an extra roughly $60 billion or so.

In aggregate for transportation infrastructure, additional spending to maintain current levels of spending—current levels of service would amount to perhaps $20 billion a year and perhaps as much as $80 billion a year could pass an economically justifiable test. Now, it is important to remember that although the economic rationale for some additional infrastructure spending is strong, it depends very specifically on the individual projects. Some projects generate large additional benefits, others not so much.

So to say that these levels of spending may be economically justifiable is not to say that just pumping that amount of money into infrastructure would generate benefits. It depends very sensitively on which specific projects are chosen or where the money is directed. It is also the case that these estimates are dependent on and sensitive to what else is happening. And in particular, if we priced and used the existing infrastructure that we have more efficiently, these numbers would go down.

So, for example, the Federal Highway Administration has suggested that widespread implementation of congestion pricing would reduce investment needed to maintain the current highway system by $20 billion, significantly reducing the necessary investments that we are showing there. Fourth, I want to note that the existence of additional economically justifiable investments does not determine who should pay for it. And in general, the benefits principle suggests that Federal taxpayers are often the least efficient source for financial support of an infrastructure investment after the direct beneficiaries of the investment and local and State taxpayers. Even when Federal support for a given type of infrastructure is justified in principle, implementation problems may make it undesirable in practice. GAO for example, found that States offset roughly half of the increase in Federal highway grants between 1982 and 2002 by reducing their own spending and that the rate of substitution increased during the 1980s.

Let me just finally say in my final 30 seconds that I think there is a lot that the Federal Government could be doing to better utilize and make more efficient the support that we already provide for infrastructure. My testimony goes through the inefficiencies in the current tax subsidies for tax exempt State and local bonds and ways that that could be made more efficient. And I would also note that we own a significant amount of property and other forms of infrastructure that could be much more efficiently managed and that could provide offsets or sources of funding for new investments in things like highways. Thank you very much, Mr. Chairman.

[The statement of Peter Orszag follows:]

Prepared Statement of Peter R. Orszag, Director, Congressional Budget Office

Chairman Spratt, Chairman Oberstar, Representative Ryan, Representative Mica, and Members of the Committees, thank you for inviting me to testify today on the challenges the nation faces in maintaining and upgrading its infrastructure. Growing congestion on the nation's transportation networks, high-profile events such as the tragic collapse of the I-35 bridge in Minneapolis last year, and concerns that the nation is underinvesting in its physical infrastructure raise important policy questions for the Congress.

"Infrastructure" is notoriously difficult to define because it can encompass such a wide array of physical assets. Today's testimony adopts a relatively broad definition; in this testimony, infrastructure includes transportation, utilities, and some other public facilities. Our nation currently invests more than $400 billion per year in infrastructure defined this way, and about $60 billion of that amount—primarily for highways and other transportation networks—is financed by the federal government each year.

The Congress would face several challenges if it sought to enhance the quality of the nation's infrastructure—among them determining what kinds of projects the nation requires; how those projects should be funded and by whom; and how to provide an environment that fosters private development, where that is an appropriate approach.

My testimony draws on past work done by the Congressional Budget Office (CBO) and others, and it sets the stage for more detailed analysis to identify economically justifiable infrastructure spending and appropriate funding mechanisms. The testimony makes the following key points:

- Estimates from the Federal Highway Administration (FHWA) and other sources indicate that additional spending of up to tens of billions of dollars each year on transportation infrastructure projects could be justified. Some of that spending would simply maintain the current performance of existing infrastructure; other projects would improve performance to the extent that the economic benefits exceeded the costs (although some projects would have net benefits that were smaller than those that could be obtained from spending on items besides infrastructure).

- In general, additional government spending for nontransportation infrastructure appears more difficult to justify. In some instances, the interaction of private producers and consumers in the marketplace determines an appropriate level of spending on infrastructure. In other instances, the case for a government role might be strong, but the case for specific additional spending either is not well documented or is difficult to justify from an economic perspective.

- Although the rationale for some additional spending is probably strong, the economic returns on specific projects vary widely. The evidence suggests that a relatively large share of net benefits would come from a relatively small share of projects. Accordingly, even if the Congress were to increase spending, it would be important to identify which projects provided the largest potential benefit from limited budgetary resources.

- Some of the demand for additional spending on infrastructure could be met by providing incentives to use existing infrastructure more efficiently and by devoting current budgetary resources to their highest valued uses. For example, the Department of Transportation has reported that the demand for new spending on highways could be reduced by as much as $20 billion annually if congestion pricing were implemented to encourage efficient use of existing infrastructure.

- The question of whether projects are economically justifiable is distinct from determining who should pay for them. There is a strong economic rationale for charging beneficiaries for the costs of infrastructure. For example, it can be more efficient to impose taxes and fees on identifiable groups of users, such as drivers, than to rely on general revenues to fund an infrastructure project. Similarly, for projects whose benefits are mostly local or regional, state or local funding can be more efficient than federal funding.

- A special-purpose entity, such as a federally chartered infrastructure bank, could provide funding for infrastructure outside of the annual appropriation process but would not be a source of "free money": Any reduction in the federal shares of project costs (obtained by reducing grant sizes or by shifting from grants to loans or loan guarantees with smaller subsidy costs) would require greater shares to be borne by project users, state or local taxpayers, or both.

Current Spending on Infrastructure

Under any definition, "infrastructure investment" encompasses spending on a variety of projects. For present purposes, it is useful to distinguish transportation, which receives the bulk of federal support, from other types of infrastructure, such as utilities. Both types of assets promote other economic activities: An adequate road, for example, facilitates the transport of goods from one place to another and thereby promotes economic activity; utilities that provide such services as electricity, telecommunications, and waste disposal are also essential to modern economies. (Appendix A describes spending on research and development and on education. Those categories form the basis for supporting intellectual and human capital, respectively, and can provide benefits that are similar to those generated by infrastructure spending.)

The most recent comprehensive data, for 2004, indicate that total capital spending from all sources on transportation, utilities, and selected other public facilities—specifically, prisons, schools, and facilities related to water and other natural resources, such as dams—was more than $400 billion in 2004 (see Table 1).[1] The federal government financed about $60 billion (including federal grants to state and local governments), or roughly 15 percent of the total.[2] State and local governments (net of the federal grants) funded 42 percent of the investment, and the private sector provided the balance. Those funding shares have changed over time and vary greatly from one infrastructure category to another.

Federal spending on infrastructure is dominated by transportation, which accounted for nearly three-quarters of the roughly $60 billion total federal investment in infrastructure in 2004. Highways alone accounted for nearly half of the total. Spending by state and local governments that year was primarily for schools, highways, and water systems. Together, those categories accounted for about $135 billion in state and local government spending, which is about 80 percent of the $170 billion spent on infrastructure by state and local governments.

In contrast, private-sector investment in infrastructure is dominated by spending on energy and telecommunications, which in 2004 represented nearly 80 percent of the sector's total infrastructure spending of about $175 billion. Private entities provide most of the nation's electricity and telecommunications services (typically, under federal or state regulation) and account for nearly all capital spending on those utilities.

To examine trends in infrastructure spending, CBO has compiled data on public spending on transportation, water resources, and drinking water and wastewater systems, which together account for the majority of the federal investment in infrastructure. From 1956 to 2004, public spending on infrastructure capital grew by 1.7 percent annually (after adjustment for inflation; see Figure 1, top panel). Since 1987, real annual spending has grown more rapidly, rising by 2.1 percent a year. As a share of gross domestic product (GDP), however, public spending on capital infrastructure has been relatively constant for the past several decades (see Figure 1, bottom panel).

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1. The data in Table 1 include capital spending on infrastructure but exclude spending to maintain that infrastructure. The distinction can be somewhat arbitrary—some forms of maintenance extend the useful life of an asset and thus can have long-term benefits in much the same way new infrastructure can—and can vary from category to category. That variation affects the comparability of the rows in the table.

2. The federal government also funds investments in infrastructure through "tax expenditures," which represent the cost of tax receipts that are forgone because of the exclusion of interest on tax-exempt municipal bonds from personal and corporate gross income and certain other tax preferences. In 2006, tax expenditures for transportation, water resources, and water supply and wastewater treatment systems totaled about $8 billion.

Table 1.

Capital Spending on Infrastructure in 2004, by Category

(Billions of 2004 dollars)

	Public		Total		
	Federal	State and Local	Public	Private	Total
		Transportation Infrastructure			
Highways	30.2 [a]	36.5 [a]	66.7	n.a.	66.7
Mass Transit[b]	7.6 [a]	8.0 [a]	15.5	0 [c]	15.5
Freight Railroads	0 [a]	0 [a]	0	6.4 [c]	6.4
Passenger Railroads	0.7 [d]	0 [a]	0.7	0 [c]	0.7
Aviation	5.6 [a]	6.8 [a]	12.4	2.0 [c]	14.4
Water Transportation[e]	0.7 [a]	1.7 [a]	2.4	0.1 [c]	2.5
Total Transportation	44.7	53.0	97.7	8.5 [c]	106.2
		Other Infrastructure			
Drinking Water and Wastewater	2.6 [a]	25.4 [a]	28.0	n.a.	28.0
Energy[f]	1.7 [g]	7.7 [h]	9.4	69.0 [i,j]	78.4
Telecommunications[k]	3.9 [l]	n.a. [h]	3.9	68.6 [i]	72.5
Pollution Control and Waste Disposal[m]	0.8 [i]	1.8 [j]	2.6	3.6 [k]	6.2
Postal Facilities	0.9 [g]	0 [j]	0.9	0	0.9
Prisons	0.3 [g]	2.6 [j]	2.9	n.a.	2.9
Schools[n]	0.4 [g]	75.5 [j]	75.9	23.8 [k]	99.7
Water and Other Natural Resources[o]	7.1 [a]	4.3 [j]	11.3	n.a.	11.3
Total Utilities and Other	17.6	117.2	134.9	165.0	299.9
Total	**62.4**	**170.2**	**232.6**	**173.5**	**406.1**

Continued

Highways and roads have been the largest category of federal capital spending for decades (see Figure 2). In 2007, the federal government spent approximately $32 billion (in 2006 dollars) on highways and roads, $8.5 billion on mass transit, $5.8 billion on aviation, and $3.5 billion on water resources. Over time, the relative shares have fluctuated. The growth in highway spending in the late 1950s was associated with the development of the Interstate Highway System. Spending on water systems increased sharply in the 1970s, after passage of the Clean Water Act; more recently, the combined share of aviation, mass transit, and rail has increased significantly.

Potential for Additional Investment in Infrastructure

Growing delays in air travel and surface transportation, bottlenecks in transmitting electricity, and inadequate school facilities all suggest that some targeted additional infrastructure spending could be economically justifiable. CBO's review of

Table 1. **Continued**

Capital Spending on Infrastructure in 2004, by Category

Source: Congressional Budget Office.

Note: n.a. = not available.

a. See Congressional Budget Office, *Trends in Public Spending on Transportation and Water Infrastructure, 1956 to 2004* (August 2007), Supplemental Tables.

b. Includes subways, bus transportation, and commuter rail.

c. Department of Commerce, Bureau of Economic Analysis, National Economic Accounts, Fixed Asset Tables, Table 3.7ES, Historical-Cost Investment in Private Fixed Assets by Industry, www.bea.gov/national/FA2004/TableView.asp?SelectedTable=53&FirstYear=2001&LastYear=2006&Freq=Year. Private spending for transportation equipment is primarily for vehicles, which can be used anywhere in the system and therefore is not considered part of infrastructure spending.

d. See *Amtrak Strategic Plan, FY 2004–2008* (April 25, 2003), p. 7, www.amtrak.com/pdf/strategic.pdf. Data represent infrastructure and fleet/facilities.

e. Includes inland waterways, harbors, and port facilities.

f. Includes electricity generation, transmission, and distribution; natural gas transmission and distribution; and oil pipelines.

g. CBO analysis of data reported in *Budget of the United States Government, Fiscal Year 2006: Analytical Perspectives,* 2006, Table 6.2.

h. Census Bureau, *Annual Survey of State and Local Government Finances and Census of Governments, 2006, 2007,* www.census.gov/govs/www/estimate.html.

i. Department of Commerce, Bureau of Economic Analysis, National Economic Account, Fixed Asset Tables, Table 3.7ES (includes equipment).

j. Includes a small amount of private spending on drinking water and wastewater treatment systems.

k. Includes wired and wireless telecommunications, Internet service providers, fiber-optic networks, and broadcasting.

l. CBO analysis of data provided by Universal Service Administrative Company.

m. Includes disposal of hazardous waste and solid waste.

n. Includes primary, secondary, higher, vocational, and special education.

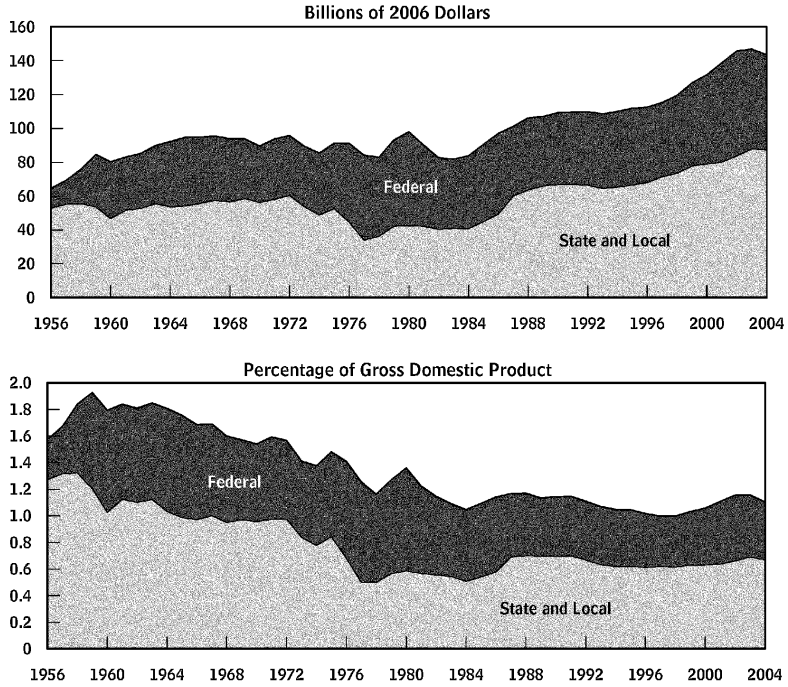
o. Includes conservation, dams, and flood control.

the evidence suggests that tens of billions of dollars of additional infrastructure spending each year could be justified on an economic basis. The need for such spending, however, could be substantially reduced by user fees that encourage more efficient use of infrastructure.

Estimates of requirements for additional infrastructure are available from a variety of sources that often define "need" differently. Some analyses seek to quantify the spending required to maintain the current performance of an asset or to provide improvement that is considered desirable according to certain engineering or public health standards (such as standards for the smoothness of pavement or allowable concentrations of a contaminant in drinking water). Other analyses attempt,

Figure 1.

Public Capital Spending on Transportation and Water Infrastructure, 1956 to 2004



Source: Congressional Budget Office.

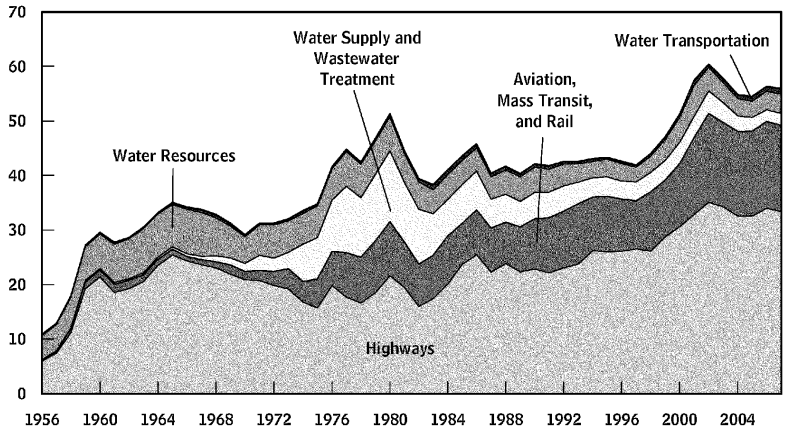
Note: Includes spending on highways, mass transit, rail, aviation, water transportation, water resources, and water supply and wastewater treatment systems.

through evaluation of private and social benefits and opportunity costs, to estimate the maximum investment that could be justified on economic grounds. The discussion below provides more detail for transportation than for other types of infrastructure because federal investment is concentrated in transportation and because more information is available on those estimates. However, the general issues raised about the transportation estimates apply to utilities and other types of infrastructure as well.

Figure 2.

Federal Capital Spending on Transportation and Water Infrastructure, 1956 to 2007

(Billions of 2006 dollars)



Source: Congressional Budget Office.

Transportation

Although capital spending on transportation infrastructure already exceeds $100 billion annually, studies from the FHWA, the Federal Aviation Administration (FAA), and elsewhere suggest that it would cost roughly $20 billion more per year to keep transportation services at current levels. Those studies also suggest that substantially more than $20 billion in additional capital spending on transportation would be justified on economic grounds if well targeted (because such spending would generate benefits whose value would exceed its cost).

Table 2 provides data on current public and private spending (reproducing the totals from Table 1) and estimates from various sources of the annual spending that would maintain each category of infrastructure at its current service level, given expected growth in demand (see the column "Spending to Maintain Current Levels of Service"). The table also provides estimates of the maximum annual investment that might be justified on economic grounds—investments whose

Table 2.

Annual Spending on U.S. Transportation Infrastructure

(Billions of 2004 dollars)

	Current Spending (Total Column, Table 1)	Spending to Maintain Current Levels of Service[a]	Economically Justifiable Investment[b]	Other
Highways[c]	66.7	78.8 [d]	131.7 [d]	*
Mass Transit[c,e]	15.5	15.8 [d]	21.8 [d]	*
Freight Railroads[c]	6.4 [f]	10.7 [g]	12.3 [g]	*
Passenger Railroads[c]	0.7	0.5 [h]	n.a.	2.1 [i]
Aviation[c]	14.4	17.9 [j]	18.9 [j]	*
Water Transportation[c,k]	2.5	2.7 [l]	n.a.	7.9 [m]
Total Transportation	**106.2**	**126.5**	**184.8**	

Source: Congressional Budget Office.

Notes: n.a. = not available; * = not applicable.

a. Given expected growth in demand.

b. Based on estimates from other sources of investments for which private and social benefits at least equal economic costs.

c. Excludes private investment in transportation equipment (primarily vehicles).

d. Department of Transportation, Federal Highway Administration (FHWA), *2006 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance* (updated March 15, 2007), Chapter 7, www.fhwa.dot.gov/policy/2006cpr/. The study contains specific estimates of the "cost to maintain" and "cost to improve" based on models of highway and mass transit infrastructure. FHWA derived the "cost to improve" estimates through analyses that compared total costs of various types of projects with their discounted future public and private benefits. Other recent studies (such as that by the National Surface Transportation Policy and Revenue Study Commission, *Transportation for Tomorrow* [December 2007], www.transportationfor tomorrow.org/final_report/) contain larger estimates for investments. However, those estimates assume substantial service improvements or include investments that may not pass a benefit–cost test.

e. Includes subways, bus transportation, and commuter rail.

f. A substantial amount of current capital spending is being used to increase railroad capacity. See "New Era Dawns for Rail Building," *Wall Street Journal,* February 13, 2008, p. A1.

g. *Transportation for Tomorrow,* Exhibit 4-16, provides estimates of additional freight rail investment required to accommodate expected traffic growth and to improve service. The estimate of "investment to maintain" reflects widespread improvements in infrastructure performance that are thought to be needed to maintain rail's share of the freight market.

Continued

Table 2. **Continued**

Annual Spending on U.S. Transportation Infrastructure

h. Statement of Mark R. Dayton, Senior Economist, Department of Transportation, Office of Inspector General, before the Subcommittee on Transportation, Treasury, the Judiciary, Housing and Urban Development, and Related Agencies, Committee on Appropriations, U.S. Senate, *Intercity Passenger Rail and Amtrak* (March 16, 2006), p. 2. The *Amtrak Strategic Plan, FY 2004–2008* (April 25, 2003), p. 7, www.amtrak.com/pdf/strategic.pdf, presents a slightly higher average of $669 million (in 2007 dollars) per year over five years for infrastructure and fleet/facilities.

i. Estimate by David Gunn, then-president of Amtrak, quoted in "Gunn: Amtrak Needs Up to $2 Billion Yearly to Repair Tracks and Bridges," *AASHTO Journal,* vol. 103, no. 4 (January 23, 2003), p. 5. Gunn was speaking of capital requirements for all Amtrak service at that time. Other sources, such as *Transportation for Tomorrow,* Exhibit 4-17, report a much higher estimate, $7.4 billion (in 2007 dollars), for a substantial expansion of intercity passenger service. Concerns about the long-term economic viability of Amtrak service outside the Northeast corridor, and the economic viability of a substantial expansion of intercity passenger service, prevent CBO from concluding that such investments would be economically justifiable. See Congressional Budget Office, *The Past and Future of U.S. Passenger Rail Service* (September 2003).

j. Federal capital spending on airports: Federal Aviation Administration, *National Plan of Integrated Airport Systems (NPIAS), 2007–2011* (2006), p. v, www.faa.gov/airports_airtraffic/airports/planning_capacity/npias/reports/media/2007/npias_2007_narrative.pdf. State and local capital spending on airports, net of Airport Improvement Program grants: CBO analysis of data from the Census Bureau, *Annual Survey of State and Local Government Finances and Census of Governments, 2006, 2007,* www.census.gov/govs/www/estimate.html. Air traffic control: Federal Aviation Administration, *Capital Investment Plan for Fiscal Years 2009–2013* (2008), Appendix C, p. 4, www.faa.gov/about/office_org/headquarters_offices/ato/service_units/operations/sysengsaf/cip/. "Air traffic control" includes $4.082 billion for the Next Generation Air Traffic System (NGATS) over five years.

   Other estimates of NGATS are $1 billion or more per year higher. See statement of David A. Dobbs, Assistant Inspector General for Aviation and Special Program Audits, Department of Transportation, *Perspectives on the Progress and Actions Needed to Address the Next Generation Air Transportation System,* before the Subcommittee on Aviation, Committee on Commerce, Science and Transportation, U.S. Senate (July 25, 2006), p. 11. Private investment to implement NGATS is estimated to be roughly equal to public investment. See Federal Aviation Administration, Joint Planning and Development Office, *Business Case for the Next Generation Air Transportation System* (August 24, 2007), p. 15, www.jpdo.gov/library.asp.

k. Includes inland waterways, harbors, and port facilities.

l. Inland waterways and harbors: Department of the Army, Office of the Assistant Secretary of the Army (Civil Works), *Civil Works Budget for the U.S. Army Corps of Engineers, Fiscal Year 2009* (February 2008), pp. 3 and 4. Port facilities: Department of Transportation, U.S. Maritime Administration, *U.S. Public Port Development Expenditure Report* (July 2007), Table 7, www.marad.dot.gov/Publications/ports.htm.

m. Inland waterways and harbors: Department of the Army, Army Corps of Engineers, "Database of Internal Analysis of Approved and Ongoing Construction for Inland Waterways and Harbors." Port facilities: *U.S. Public Port Development Expenditure Report,* Table 7. Concerns about the quality of the Corps' benefit–cost analyses prevent CBO from accepting its estimate as economically justifiable. (See General Accounting Office, *U.S. Infrastructure: Agencies' Approaches to Developing Investment Estimates Vary,* GAO-01-835 [July 2001], p. 36.)

private and social benefits would be at least equal to their economic costs (see the column "Economically Justifiable Investment").[3]

Highways constitute by far the largest category of current spending on transportation infrastructure, and they dominate the estimates of investment required to maintain current performance. FHWA estimates that, without a significant change in the way highways are paid for, it would cost $79 billion per year to maintain performance—$12 billion more than total current spending. The next largest category is aviation, which has seen burgeoning demand for air travel and a commensurate growth in congestion. According to estimates from the FAA and other sources, annual investment of $18 billion, about $4 billion above current annual spending for airports and air traffic control, would be necessary to maintain performance under current pricing policies. Freight railroads also would require annual investment of about $4 billion more than is currently spent. (Some current spending on freight rail is for projects that will expand service by boosting capacity on major routes.[4])

For mass transit and water transportation, the best estimate of investment to maintain current services is only slightly above the current amount; and for passenger rail, it is below current spending. The latter fact could be the result of differences among sources in the definitions of capital spending and maintenance, or it could indicate that some efforts to maintain performance are simply inefficient—that is, they cost more than is necessary. The figures for freight and passenger rail illustrate an important general point: Not all current investment is effective in maintaining, or even is intended to maintain, the performance of the existing infrastructure. Likewise, future increases in investment might or might not be targeted to that purpose.

Similar distinctions apply to the estimates of spending that might be justified on economic grounds. In most instances, those estimates are for amounts well above

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3. Because the estimates in Table 2 were derived from a variety of sources using different methodologies and periods, it is difficult to compare modes. The table does not present estimates of economically justifiable investments for passenger rail or water transportation. David Gunn, then-president of Amtrak, was quoted providing an estimate for passenger rail in "Gunn: Amtrak Needs Up to $2 Billion Yearly to Repair Tracks and Bridges," *AASHTO Journal,* American Association of State Highway and Transportation Officials, vol. 103, no. 4 (January 24, 2003), p. 5; the National Surface Transportation Policy and Revenue Study Commission, *Transportation for Tomorrow* (December 2007), www.transportationfortomorrow.org/final_report, also presented figures. The Army Corps of Engineers and the Maritime Administration have developed estimates for water transportation. However, concerns about the quality of the analyses prevent CBO from placing confidence in the estimates. See the notes to Table 2 and Congressional Budget Office, *The Past and Future of U.S. Passenger Rail Service* (September 2003) and General Accounting Office, *U.S. Infrastructure: Agencies' Approaches to Developing Investment Estimates Vary,* GAO-01-835 (July 2001), p. 36.

4. See Daniel Machalaba, "New Era Dawns for Rail Building," *Wall Street Journal*, February 13, 2008, p. A1.

current spending or the estimate of investment required to maintain current services. The estimates, however, are approximations because they are based on analyses of broad samples of generic projects and not detailed analyses of individual projects. Moreover, the estimates do not justify increases of those amounts in infrastructure spending unless such spending is carefully targeted to economically efficient projects. Otherwise, the spending would not generate the same benefits as the estimates suggest—and indeed it could produce costs that exceed the benefits.

A related point is that, even within a group of economically justifiable projects, the benefits from some would greatly exceed their costs while the benefits from others would just barely do so (and might not exceed the benefits available from other types of federal or private spending). Carefully ranking and funding projects to implement those with the highest net benefits would yield a disproportionate share of the total possible benefits at a fraction of the total spending that is potentially economically justifiable. For example, according to a detailed analysis that the FHWA provided to CBO, over the next five years, investments required to maintain current levels of highway service would represent 58 percent of the total spending for all economically justifiable investments for highways, but they would provide 83 percent of the net benefits.

Table 2 on page 8 provides information about the potential for additional spending, but it provides no information about who should pay. The "benefits principle" suggests that federal taxpayers are often the least efficient source of financial support for an infrastructure investment—after the direct beneficiaries of the investment and local or state taxpayers. From the standpoint of economic efficiency, the ideal is to charge users of infrastructure according to the marginal costs of their use. For example, people who use water can be charged for the costs of acquiring, storing, treating, and distributing the water they consume.

One characteristic of many infrastructure services, however, is that some costs are not associated with anyone's marginal use. For example, to the extent that water pipes deteriorate with time, independent of the volume of water flowing through them, investments in pipes cannot be financed solely through marginal-cost pricing. Telecommunications networks provide a similar example: Until a network begins to experience congestion effects, the marginal cost of another phone call is essentially zero. In such cases, the most efficient solution might be a two-part tariff, which includes an access charge (for example, a monthly fee) as well as use charges. Although two-part tariffs pose the risk of discouraging some uses that would be cost-efficient, they demonstrate the willingness of users to pay for the services that are made possible by an infrastructure investment, and thus they provide an indication of that investment's efficiency. (Indeed, the term "infrastructure demand" should arguably be reserved for desires that are supported by beneficiaries' willingness to pay.)

Although it is generally desirable from an economic efficiency perspective, charging the beneficiaries of infrastructure investments is not always feasible,

even when the benefits of such investments would exceed their costs. In some cases, the key problems are technical, such as the limitations of 20th-century methods for collecting highway tolls. In other cases, the difficulty arises because the benefits are widely distributed and preventing nonpayers from receiving the benefits is difficult or impossible, as in the case of a dam that provides flood control services. In those instances, taxpayer funding can be the most efficient solution, if the projects to be funded are chosen on the basis of benefit–cost analyses.

Even under taxpayer funding, a version of the benefits principle still applies: The more closely the group being taxed matches the set of beneficiaries, the more efficient the investment decisions are likely to be. In particular, if the benefits of a project are concentrated locally or regionally, state or local governments spending their own money are likely to be in a better position to make efficient choices, weighing benefits against costs, than the federal government would be. For example, partial taxpayer support for a mass transit system could be economically efficient, to the extent that the system benefits nonriders by reducing congestion on area roads. However, decisions about the amount to invest might be less efficient if the taxes being collected come from areas that extend beyond the region served by the system.

Conversely, the case for support from federal taxpayers is strongest for investments with benefits that accrue to broad geographic areas or to the nation as a whole and are not restricted to a class of users that can be charged more directly. Infrastructure with such widespread benefits arguably includes the Interstate Highway System and wastewater treatment plants for communities whose water eventually flows into a major resource such as the Chesapeake Bay or the Gulf of Mexico. Even when federal support for a given type of infrastructure is justified in principle, implementation problems might make it undesirable in practice. If the federal government decides to channel additional infrastructure funds through state governments, some of those funds ultimately might not finance additional infrastructure; instead, federal funding might merely substitute for state and local government funding, with little or no effect on the total. The Government Accountability Office (GAO) has confirmed earlier analyses showing that federal grants to state and local governments do not always serve their intended purposes. In its analysis of increases in federal highway grants between 1982 and 2002, GAO reported that states offset roughly half of the increases by reducing their own funding, and that "the rate of substitution increased during the 1990s."[5]

A final and crucial point regarding Table 2 on page 8: The estimates generally assume that the economic and policy environment remains unchanged. In

5. See Government Accountability Office, *Federal-Aid Highways: Trends, Effects on State Spending, and Options for Future Program Design,* GAO-04-802 (August 2004), summary page. Another factor that undermines the efficiency case for federal funding is the formulaic approach commonly used to divide federal resources among the states, which can be an obstacle to funding for the projects with the best benefit–cost ratios.

particular, the estimate for highways assumes no expansion in the use of congestion pricing—that is, tolls that are higher during peak times and lower during off-peak times.[6] However, the FHWA estimates that widespread implementation of congestion pricing would reduce the investment needed to maintain the highway system by more than one-fourth, or about $20 billion annually. Thus, the estimate of the investment to maintain current services would decline from nearly $80 billion to slightly less than $60 billion per year, which is less than the current spending of $66.7 billion.[7] Similarly, congestion pricing would reduce the amount of highway investment that would be economically justifiable by almost 16 percent, to roughly $110 billion per year.

Utilities and Other Types of Infrastructure

Most energy and telecommunications systems are privately owned and operated, and their funding comes from sales to consumers. Current capital spending on energy-related infrastructure exceeds $75 billion annually—about 90 percent of it in private investment. Estimates prepared for the Edison Electric Institute indicate that electric utilities would need to invest an annual average of $28 billion for generation, $12 billion for transmission, and $34 billion for distribution of electricity to maintain current levels of service, given expected growth in demand.[8] To justify such investment to shareholders and regulatory authorities, businesses typically conduct thorough financial analyses before undertaking large investments. Comparable figures for electricity generation, oil pipelines, and natural gas distribution are not readily available. The Department of Energy's Energy Information Administration arrived at an estimate of $2.6 billion per year for economically justifiable investment in the natural gas transmission network.[9]

Systems for wastewater and drinking water are dominated by the public sector. The nation spends about $26 billion per year on those systems, and CBO has previously estimated that investment from 2000 to 2019 would need to average between $29.7 billion and $47.2 billion annually (converted to 2004 dollars) to maintain current service standards and allow some modest improvements to meet

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6. Other policy changes, such as the implementation of a carbon tax or a cap-and-trade system for carbon dioxide emissions, also could affect the amount of spending that could be justified on economic grounds.

7. See Federal Highway Administration, *2006 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance* (updated March 15, 2007), p. 10-6.

8. See Brattle Group, "Transforming America's Power Industry: The Investment Challenge—Preliminary Findings" (presented at the Edison Foundation Conference, "Keeping the Lights On—Our National Challenge," New York, April 21, 2008).

9. See Department of Energy, Energy Information Administration, *Natural Gas 1998: Issues and Trends*, p. 126. (The estimate given here was converted to 2004 dollars by CBO to be consistent with Table 2.) A more recent but less well documented estimate appears in J. Alex Tarquinio, "There's a Light at the End of the Energy Pipelines," *New York Times*, February 26, 2006.

current or future regulations imposed by the Environmental Protection Agency (a somewhat different standard than that presented in Table 2 on page 8).[10]

The available estimates for investment in other categories of infrastructure included in Table 1 on page 4—pollution control and waste disposal facilities, postal facilities, prisons, schools, and water and other natural resources—are limited. Two estimates are available for schools: Survey data from the National Center for Education Statistics indicate that a one-time investment of $142 billion beyond current amounts would be necessary to bring school facilities into a good state of repair; the National Education Association has estimated that a one-time investment of $360 billion beyond current spending would be necessary to "modernize" schools (both figures are in 2004 dollars).[11] However, neither estimate makes any allowance for the opportunity cost of the capital invested or specifies the period over which the investment would be made.

The Association of State Dam Safety Officials has estimated that maintaining non-federal dams in their current condition would cost $0.8 billion per year and that $3.2 billion (in 2004) in annual spending is economically justifiable.[12] CBO has no information on the methods by which those estimates were produced. Other available estimates for public facilities include the Environmental Protection Agency's $8.3 billion per year for cleaning up waste sites and the Postal Service's $2.9 billion for capital spending from 2007 to 2016.[13]

Conversely, for one category of public facility not covered in Table 1—federal buildings—the government could reduce total investment and operating costs by changing the way it acquires, manages, and disposes of property. Agencies could construct more federal facilities rather than enter into more costly long-term leases of private facilities; better manage unused, underused, and inefficient buildings; and maximize proceeds from the disposal of federal property (see Box 1).

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10. See Congressional Budget Office, *Future Investment in Drinking Water and Wastewater Infrastructure* (November 2002).

11. See Department of Education, National Center for Education Statistics, *Condition of America's Public School Facilities: 1999,* NCES 2000-32 (June 2000), p. iv; and National Education Association, *Modernizing Our Schools: What Will It Cost?* (April 2000), p. 1.

12. See Association of State Dam Safety Officials, *The Cost of Rehabilitating Our Nation's Dams, 2002*, as cited in American Society of Civil Engineers, *Report Card for America's Infrastructure, 2005,* www.asce.org/reportcard/2005/index2005.cfm.

13. For the former, see Environmental Protection Agency, Office of Solid Waste and Emergency Response, *Cleaning Up the Nation's Waste Sites: Markets and Technology Trends, 2004 Edition,* EPA 542-R-04-015 (September 2004), pp. viii; the latter is based on data the Postal Service provided to CBO.

Economic Returns on Public Spending for Infrastructure

Another approach that sheds light on the appropriateness of additional spending on infrastructure reaches broadly similar conclusions. In particular, spending on infrastructure benefits the economy by reducing the cost of private business transactions; over the past 20 years, economists have attempted to measure those benefits and have obtained a wide range of estimates. The literature supports two conclusions: First, public spending on infrastructure often produces positive economic returns, and second, there is significant variation—both in the average returns and in the range of returns among projects—that depends on several factors. Second, the research suggests that the returns on the initial phase of a system of public investments, such as the creation of the Interstate Highway System, can be large but that the economic payoff declines as the system grows.

Federal spending on infrastructure increases the stock of publicly owned capital and, in that sense, represents an investment in the future productivity of the private sector. The economic payoff from public spending on infrastructure depends on the usefulness of the investments themselves and the extent to which the spending "crowds out"—or reduces the funding available for—investment in private capital. The early research on infrastructure spending identified substantial returns on that investment. One prominent study from the late 1980s concluded that, from 1949 to 1985, a 1 percent increase in the stock of "core infrastructure" (transportation, water supply and wastewater treatment, and electrical and natural gas facilities) was associated with a 0.24 percent increase in the level of national output.[14] Because annual national output was roughly four times the estimated value of the stock of core infrastructure, that result suggested that public capital enhanced the economy's ability to produce goods and services to the extent that $1 spent on infrastructure could generate close to $1 of output within roughly a year. An implication of such findings was that a substantial part of the productivity slump of the 1970s and 1980s was the result of a shortfall of investment in infrastructure.

Estimates of such large returns, however, have been persuasively challenged by subsequent researchers. For example, some of those estimates have been found to be overly sensitive to minor changes in the data from which they were derived (as

14. Most of the issues considered in the 1990s were raised by David Alan Aschauer, "Is Public Expenditure Productive?" *Journal of Monetary Economics,* vol. 23, no. 2 (March 1989), pp. 177–200, and discussed in a large number of papers reviewed by Alicia H. Munnell, "Policy Watch: Infrastructure Investment and Economic Growth," *Journal of Economic Perspectives,* vol. 6, no. 4 (Autumn 1992), pp. 189–198, and Edward M. Gramlich, "Infrastructure Investment: A Review Essay," *Journal of Economic Literature,* vol. 32, no. 3 (September 1994), pp. 1176–1196. See also Congressional Budget Office, *The Economic Effects of Federal Spending on Infrastructure and Other Investments* (June 1998); and Jeffrey P. Cohen and Catherine J. Morrison Paul, "Public Infrastructure Investment, Interstate Spatial Spillovers, and Manufacturing Costs," *Review of Economics and Statistics,* vol. 86, no. 2 (May 2004), pp. 551–559. There is variation in the definitions of public capital and the periods covered by those papers.

Box 1.

Management of Federal Buildings and Facilities

The General Services Administration (GSA) reports that the federal government owns about 1.2 million structures, which together have an estimated replacement value of more than $1.5 trillion. The list includes standard office buildings, hospitals, courthouses, dams, and utility systems. GSA's list also includes specialized research and industrial facilities—60 percent of which are controlled by the Department of Defense.

GSA reports that about 10 percent of all government facilities are either underused or empty and that there is no information on the market value of those facilities. GSA notes that each year federal agencies destroy thousands of unused and surplus structures because they have little or no market value and demolition can reduce operating costs. Some of the structures do not meet current building and safety codes and might also pose environmental hazards.

Federal agencies that seek to dispose of unneeded facilities must follow legislatively prescribed procedures for property disposition. In particular, before they can be sold at auction, facilities must first be screened for use by other federal, state, or local agencies or evaluated for use by organizations that serve the homeless. Transfers of federal property to nonfederal entities are called public benefit conveyances and typically are executed for $1. Many federal civilian agencies that control real property are authorized to spend any proceeds from the disposal of surplus property; in some cases they also have the option of leasing unneeded assets and either spending the rental income or, more commonly, receiving services such as building improvements or construction of new facilities. In most years, net receipts to the Treasury from the sale of surplus civilian properties are relatively small, generally less than $50 million. The Base Realignment

Continued

occurs if the time period or the sectors of the economy covered by the analysis are changed only slightly). Follow-up research has identified other weaknesses in methodology and, after attempting to correct for them, has in some cases resulted in a different conclusion about the economic returns on public spending for infrastructure. For example, the size of the stock of public capital and the level of economic output can vary together over time for reasons unrelated to a causal link between them. One study that attempted to control for that spurious correlation

Box 1. Continued

Management of Federal Buildings and Facilities

and Closure (BRAC) process—by which the Department of Defense identifies opportunities to relocate military organizations, consolidate facilities, and eliminate excess infrastructure to reduce annual costs for operating, sustaining, repairing, and modernizing defense facilities—has generated about $1 billion in receipts since 1990, but the process has not been designed to maximize receipts.[1]

To improve the management of federal facilities and maximize proceeds from the sale of surplus properties, the Congress could consider creating incentives for the quick identification and disposal of unneeded facilities. Resources also would be necessary to pay for identifying and marketing those facilities that have a value in the private sector, and laws related to public conveyances would need to be amended.

Reforms to the process that agencies follow when making property acquisition decisions also could yield long-term budget savings. According to the Government Accountability Office, in many cases it is less expensive for the government to build new facilities for its own long-term use than it is to lease property from private landlords.[2]

1. According to estimates from the Department of Defense, the up-front costs of the first four rounds of BRAC were recouped in one-time savings from canceled construction and restoration projects, and annual net savings of about $6.5 billion in operations costs are now being realized. CBO has not verified those estimates. The fifth round of BRAC, which began in 2005, is years away from producing net savings.

2. See Government Accountability Office, *Federal Real Property: Strategy Needed to Address Agencies' Long-standing Reliance on Costly Leasing,* GAO-08-197 (January 2008).

identified no positive association of public capital with economic performance.[15] Even the direction of causality is open to question: For example, it could be that states that are more productive and more prosperous choose to spend more on

15. See Charles R. Hulten and Robert M. Schwab, "Public Capital Formation and the Growth Process in Developing Countries," *National Tax Journal,* vol. 44, no. 1, part 1 (December 1991), pp. 121–134. A criticism of efforts that focus on year-to-year changes is that they can mask long-term relationships between accumulated stocks of public capital and subsequent economic performance when additions to the stock of public capital could influence economic activity for years after they occur.

infrastructure and not that spending more on infrastructure makes states more productive or prosperous. One study concludes that, once such state-specific characteristics are recognized, public capital plays no role in the differences among states' economic performance.[16]

However, recent surveys that involve the United Sates and other nations show positive returns from investment in public capital. One study from 2007 concludes that the recent literature reflects more consensus about the "growth-enhancing effect of public capital" than existed before. Similarly, a study sponsored by the Organisation for Economic Co-operation and Development reports a "positive effect of infrastructure."[17] The implications of those findings for public spending on infrastructure in the United States, though, are unclear because much of the newer research supporting those favorable assessments analyzed circumstances that might not be relevant in this country. The studies range from analyses of national and regional spending on infrastructure within various countries in Europe, South America, and Asia to investigations of economic returns on infrastructure spending in a large sample of countries at different stages of development. Moreover, some important results cited by those surveys rely on a broader concept that includes public investment in basic telecommunications, for example, and in other areas that in the United States are privately owned and funded.[18]

All together, recent research indicates that the returns on investment in public capital in the United States are positive but below earlier estimates. One 2006 study concludes that a dollar of capital or maintenance spending for highways and roads in 1996 reduced annual congestion costs to drivers by $0.11 that year.[19] Total benefits over time would be greater; whether they would be large enough to

16. See Douglas Holtz-Eakin, "Public-Sector Capital and the Productivity Puzzle," *Review of Economics and Statistics,* vol. 76, no. 1 (February 1994), pp. 12–21.

17. For a comprehensive overview of the relevant economic literature with brief descriptions of individual papers and their results, see Ward Romp and Jakob de Haan, "Public Capital and Economic Growth: A Critical Survey," *Perspektiven der Wirtschaftspolitik,* vol. 8, special issue no. 1 (April 2007), pp. 6–52. See also Vincent Ribeyrol, "Impact of Infrastructure on the Economy: Review of the Literature" (paper presented at the Organisation for Economic Co-operation and Development's conference on Global Infrastructure Needs: Prospects and Implications for Public and Private Actors, Paris, June 3, 2005).

18. See Lars-Hendrik Röller and Leonard Waverman, "Telecommunications Infrastructure and Economic Development: A Simultaneous Approach," *American Economic Review,* vol. 91, no. 4 (September 2001), pp. 909–923; and António Afonso and Miguel St. Aubyn, "Macroeconomic Rates of Return of Public and Private Investment: Crowding-In and Crowding-Out Effects," European Central Bank Working Paper 864 (Frankfurt, February 2008).

19. Congestion costs reflect both the amount of gasoline consumed and the value of the time that motorists lose to traffic delays. See Clifford M. Winston and Ashley Langer, "The Effect of Government Highway Spending on Road Users' Congestion Costs," *Journal of Urban Economics,* vol. 60, no. 3 (November 2006), pp. 463–483.

justify the costs would depend on the opportunity cost of the spending and the rate at which the highway construction or improvements deteriorate.

Consistent with such findings, other economic research points out that the payoff from investments in public infrastructure, such as highways, falls off significantly after the initial impact on economic activity. For example, according to data spanning 1953 to 1989, construction of the Interstate Highway System in the United States made vehicle-intensive industries in particular more productive; however, the capital spending that took place after completion of that system in 1973 appears not to have had an effect on differences in those industries' productivity.[20] The evidence thus suggests that the positive returns on investments in infrastructure depend on the type of infrastructure and the amount of infrastructure already in place.

Options for Meeting Demand for Infrastructure Services

Broadly speaking, the federal government can take four basic approaches—separately or together—to contribute to meeting the growing demand for services associated with the nation's infrastructure: It can increase spending, improve the cost-effectiveness of tax expenditures, reduce the cost of providing infrastructure, and promote reductions in demand for services to an economically efficient level.

Increase Federal Spending

If the Congress were to decide that there is justification for building additional infrastructure, it could choose to increase federal spending (although such increases might not translate dollar for dollar into increased total spending if state governments or other funders decided in response to redirect some of their own spending away from infrastructure). Increases in federal support for infrastructure could come from any combination of increased receipts, reduced spending elsewhere, and higher deficits. However, most such funding currently comes either from dedicated receipts or through tax expenditures.

Most of the federal government's programs for surface transportation are financed through the Highway Trust Fund (see Appendix B). About 90 percent of total revenues credited to the trust fund come from two taxes on motor fuels. The tax of 18.4 cents per gallon on gasoline and gasoline–ethanol blends currently accounts for about two-thirds of the trust fund's total revenues. The levy of 24.3 cents per

20. See John Fernald, "Roads to Prosperity? Assessing the Link Between Public Capital and Prosperity," *American Economic Review,* vol. 89, no. 3 (June 1999), pp. 619–638.

gallon on diesel fuel accounts for about one-quarter more.[21] Both tax rates have been unchanged since 1993. In 2007, receipts to the Highway Trust Fund from those taxes totaled about $38.8 billion.

The trust fund's taxes are scheduled to expire in 2011. If they are reauthorized at current levels, CBO projects that, over the coming decade, revenues credited to the trust fund will rise at an average annual rate of about 2 percent. However, they will decline as a share of GDP (which CBO expects to rise at an average annual rate of 4.4 percent during the same period), from 0.28 percent of GDP in 2007 to 0.20 percent of GDP in 2018. The main reason for that relative decline is that fuel tax collections depend on the quantity of fuel consumed rather than on the price of gasoline. Moreover, the purchasing power of fuel taxes has eroded since 1993. On the basis of a price index produced by the Bureau of Economic Analysis to analyze spending by state and local governments, CBO estimates that a current gasoline tax would need to be about 30 cents per gallon to match 1993 purchasing power.

CBO projects that, even before the current taxes expire, the trust fund's highway account will be depleted because revenues are not keeping pace with the outlays that have increased under the latest two authorization acts (see Appendix B). To avoid that result, spending must be reduced or the revenues going into the trust fund must be increased.

On the basis of information supplied by the Joint Committee on Taxation (JCT), CBO estimates that a 1 cent increase in gasoline and diesel taxes would raise about $1.8 billion per year for the trust fund over the next 10 years and that a 10 cent increase would raise about $18 billion annually.[22] The National Surface Transportation Policy and Revenue Study Commission recommended that the Congress raise fuel taxes between 25 cents and 40 cents per gallon, by 2012, to help finance infrastructure investments. Using information from JCT, CBO estimates that an increase of 25 cents per gallon would generate $44 billion per year for the trust fund; an increase of 40 cents would generate $70 billion annually.

Current law requires states to provide matching funds—generally about 20 percent of a project's costs—on most highway projects that they undertake using federal money. If that matching requirement was retained, an increase of roughly 6.5 cents per gallon in gasoline and diesel taxes would bring in enough revenue to meet

21. The Omnibus Budget Reconciliation Act of 1993 increased the gasoline tax by 4.3 cents; the added receipts initially were not deposited into the trust fund but went into the general fund of the Treasury. A share of one-tenth of a cent per gallon goes to the Leaking Underground Storage Tank Trust Fund.

22. Because excise taxes reduce the tax base of income and payroll taxes, higher excise taxes would lead to reductions in income and payroll tax revenues. The estimates cited here do not reflect those reductions. Those reductions would amount to an estimated 25 percent of the estimated increase in excise tax receipts.

FHWA's estimate of the amount necessary to maintain service at current levels.[23] A 6.5 cent increase would boost revenue by about $11.6 billion annually. Currently, 87 percent of that total, or about $10.1 billion, would be deposited into the trust fund's highway account. The remaining $1.5 billion would go to the mass transit account. (The increase in mass transit revenue could allow spending to exceed FHWA's estimated cost of maintaining performance, although not its estimate of economically justifiable investment.) Those figures assume that states would not substitute the increased federal funding for their own funds and that they would be willing and able to support the increase with the 20 percent match. Without the state match, the required increase in gasoline and diesel taxes would be about 8 cents per gallon.

Improve the Cost-Effectiveness of Tax Expenditures

The federal government could substantially increase the efficiency with which it subsidizes debt financing of state and local spending by replacing federal tax exemptions on income from municipal bonds with carefully designed tax-credit bonds.

According to JCT, tax-exempt bonds will cost the federal government an average of $31.2 billion per year between 2007 and 2011. However, the savings that state and local entities receive will be considerably less, and the difference will accrue to investors in higher-income tax brackets who receive greater tax savings through those exemptions than would be necessary for them to purchase such bonds. For 2006 and 2007, the observed yield spreads between high-grade municipal bonds and corporate bonds suggest that the marginal tax rates of the "market-clearing" municipal bond buyers—those who purchase the last units of the bond issues—averaged 21 percent.[24] That figure implies that all bonds issued in those years that are held by taxpayers whose marginal rates are above 21 percent cost the federal government more in forgone tax revenues than they save the issuers in reduced interest costs.

A relatively new debt instrument, the tax-credit bond, has gained some favor as a way to finance public expenditures. Tax-credit bonds allow bond purchasers to receive credits against federal income tax liability instead of all or some of the cash interest that is typically paid on the borrowing the bonds represent. Current-law tax-credit bonds are designed to provide investors with a credit that is the

23. Based on its analysis of the trust fund's revenues and outlays, CBO estimates that closing the gap between them in 2008 through higher fuel taxes would require an increase of about 2 cents per gallon. That amount would grow over time.

24. For more information on the tax treatment of municipal bonds and the benefit to bond issuers, see Joint Committee on Taxation, *Present Law and Background Relating to State and Local Government Bonds*, JCX-14-06 (March 14, 2006). Table 1 of that report (p. 6) shows interest rates on corporate and high-grade municipal bonds and the resulting implied tax rate of the market-clearing municipal bond buyers for 1986 through 2005. CBO used the same method and data sources to derive estimates for 2006 and 2007.

equal of 100 percent of the interest that would otherwise be paid on the bonds. With a 100 percent credit, the federal government bears virtually all of the cost of borrowing in the form of forgone revenues. That structure provides a subsidy to issuers of such bonds that is deeper than the subsidy provided to issuers of tax-exempt bonds (which is limited to the difference between tax-exempt and taxable interest rates). However, bonds with a partial tax credit could be designed to deliver a subsidy to state and local governments that is equivalent to the subsidy provided by current-law, tax-exempt bonds, or any other desired level of subsidy. For a given subsidy, the federal cost is lower for tax-credit bonds than for tax-exempt bonds because the revenues forgone by the federal government through tax-credit bonds reduce state and local borrowing costs, dollar for dollar, rather than partially accruing to investors in high marginal tax brackets.

To illustrate, assume that the inefficiency associated with current tax-exempt financing is between 10 percent and 20 percent, so that 80 percent to 90 percent of the federal tax expenditures actually translates into lower borrowing costs for states and localities. Then, if the outstanding stock of tax-exempt debt during the 2007–2011 period instead took the form of tax-credit bonds designed to deliver the same amount of federal subsidy, the federal government would save between $3 billion and $6 billion per year. (However, the savings would not be recognized in the federal budget; for budgetary purposes, the tax expenditures are not classified as federal spending.)

Reduce the Cost of Providing Infrastructure

In addition to using tax expenditures more efficiently, the federal government also could encourage efficiency by lowering the costs of supplying infrastructure services. One way to accomplish that is to encourage funding of high-value projects through more systematic use of rigorous analysis, and conversely, to minimize funding of potentially low-value projects—for example, by careful scrutiny of projects initiated by the Congress, which represent significant portions of federal investments in infrastructure. The Department of Transportation estimated that $5.7 billion, or about 15 percent of the $36.6 billion appropriated to FHWA programs in fiscal year 2006, was earmarked, as was $2.4 billion of the $8.6 billion (28 percent) in funding for Federal Transit Administration programs.[25] In some cases, earmarks might be used to improve efficiency, compensating for the rigidity of the formula that allocates funds to the states or for problems with the process or criteria for project selection by state or local governments. In other cases, policymakers earmark projects on the basis of criteria for fairness or equity, or other

25. The estimates are based GAO's definition of an earmark as a Congressional directive in legislation to a federal agency to spend a specific amount of its budget for a specific entity, project, or service. Other estimates of earmarks were $408 million for FAA programs and $56 million for all other transportation programs. See Government Accountability Office, Office of the General Counsel, *Principles of Federal Appropriations Law,* 3rd edition, vol. 2 (February 2006); and Department of Transportation, *Review of Congressional Earmarks Within Department of Transportation Programs,* AV-2007-066 (September 7, 2007).

noneconomic goals, although doing so raises the total cost of providing any given set of infrastructure services.

More generally, the federal government can encourage the use of "asset management" to maximize the benefit from existing and future infrastructure. Asset management relies on monitoring the condition of equipment and the performance of systems and analyzing the discounted costs of different investment and maintenance strategies. For existing infrastructure, the key issue is making efficient choices about maintenance and replacement. In constructing new infrastructure, asset management involves evaluating total life-cycle costs—both the initial capital costs and the subsequent costs for operation, maintenance, and disposal—to ensure not only that projects are prioritized appropriately, but also that they are built cost-effectively.[26]

The principles of asset management apply to all types of infrastructure, although specific applications differ. In the case of highways, asset management can involve making a larger initial investment in thicker pavement, which could provide a more-than-proportional increase in pavement life. It also might involve shortening the period between pavement overlays, which could reduce the fuel and maintenance costs of highway users.

The potential for managing assets efficiently in the case of wastewater and drinking water systems has increased with the advent of sophisticated analytical tools that can optimize the design of pipe networks (in some cases, identifying links that can be abandoned rather than replaced) and that can be used to evaluate the tradeoffs involved in maintaining or replacing equipment. Asset management has been shown to produce significant payoffs in extending the life of equipment, eliminating redundant systems, reducing the cost of operations and maintenance by as much as 40 percent, and improving systems' reliability by roughly 70 percent.[27]

Promote Reductions in Demand

Finally, the government could reduce the demand for additional infrastructure by implementing fees and charges that raise the cost to users of existing infrastructure. One factor that can contribute to the high cost of infrastructure services is that users often are not asked to pay the full marginal cost of the services they use.

A classic case is the excessive crowding of a highway for which users pay no congestion charge. In economic terms, society would be better served by reducing demand for travel on such a highway during the hours when traffic is heaviest instead of investing to increase the road's capacity to accommodate traffic. One

26. Another approach the federal government could take to reduce the cost of meeting demands for infrastructure (in addition to promoting more use of asset management) would be to conduct or support research and development in cost-saving technology.

27. See Congressional Budget Office, *Future Investment in Drinking Water and Wastewater Infrastructure* (November 2002).

way to reduce that inefficient demand is to impose congestion pricing—that is, to charge tolls that are higher during peak times of the day and lower during off-peak hours. Besides dampening demand for the highway during the most congested periods—some motorists would alter their travel plans and use the road when it is less crowded, find alternative routes, or switch to public transit—congestion pricing also helps to signal the places where additional investment in road capacity is warranted. FHWA has estimated that widespread use of congestion pricing would reduce by about $20 billion per year both the investment required to maintain services in their current condition and the total economically justifiable investment.

Congestion pricing is in use in the New York City area, for example, where, since March 2001, the Port Authority of New York and New Jersey has charged more for vehicles to cross the Hudson River during peak hours than during off-peak hours. The crossing's six bridges and tunnels carry about 350,000 vehicles in each direction every day. Initially, drivers who paid with cash were charged a $6 toll, regardless of the hour of the day; drivers who used the E-ZPass electronic toll collection system paid $5 during peak hours and $4 during off-peak hours—a 20 percent discount for off-peak E-ZPass users. After the program took effect, traffic in the morning peak period declined by 7 percent from May 2000 to May 2001, and evening peak traffic declined by 4 percent (overall traffic volume remained the same).[28] Six percent of trucking carriers shifted their operations to off-peak hours.[29] Tolls from the Port Authority's facilities raised $750 million in 2006, more than covering their operating and capital expenses.[30] Those funds are used exclusively to build, operate, and maintain transportation facilities in the New York–New Jersey area.[31] Tolls on the crossings went up March 2, 2008. The cash charge is now $8; E-ZPass rates are $8 during peak hours and $6 during off-peak hours.

Similar pricing systems have been adopted for more than half a dozen bridges, tunnels, and highways in the United States. In Orange County, California, express toll lanes built in a 10-mile section of the median strip of State Route 91 give motorists a choice between driving in toll-free lanes and driving in new lanes on which tolls are charged according to time of day. More than a dozen similar

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28. See Mark F. Muriello and Danny Jiji, *The Value Pricing Toll Program at the Port Authority of New York & New Jersey: Revenue for Transportation Investment and Incentives for Traffic Management* (New York: Port Authority of New York and New Jersey, September 30, 2003), http://knowledge.fhwa.dot.gov/cops/hcx.nsf/384aefcefc48229e85256a71004b24e0/f28934ff571ff3c685256db10063e81b?OpenDocument.

29. See José Holguín-Veras, Kaan Ozbay, and Allison de Cerreño, *Evaluation Study of Port Authority of New York and New Jersey's Time of Day Pricing Initiative, Final Report* (March 2005), p. 7.

30. See Port Authority of New York and New Jersey, *Annual Report* (2006), p. 92.

31. See José Holguín-Veras, Kaan Ozbay, and Allison de Cerreño, *Evaluation Study of Port Authority of New York and New Jersey's Time of Day Pricing Initiative,* p. 7.

highway capacity expansions are either in operation, under construction, or in planning. On Interstate 15 in San Diego, drivers of single-occupant vehicles may pay a toll to use high-occupancy vehicle (HOV) lanes. At least a half a dozen existing HOV lanes have been converted or soon will be converted to "high-occupancy toll" (HOT) lanes.

The concept of marginal-cost pricing extends beyond congestion, however. To maximize efficiency, users would be charged for all of the incremental costs they impose on the system. For example, the incremental damage imposed by trucks on highways does not depend on a vehicle's total weight but rather on its weight per axle.[32] Because that fact is not reflected in the current taxes on truck ownership and use, there are wide disparities in the degree to which different types of trucks pay the cost of the highway damage that is associated with their use. For example, researchers have estimated that the taxes paid for a five-axle tractor–semitrailer with a gross vehicle weight of 55,000 pounds on rural interstate highways are about 20 percent more than the marginal cost of use. In contrast, the taxes paid by a vehicle with the same configuration and a gross weight of 80,000 pounds represent only one-third of the marginal costs on rural interstate highways. Marginal costs on urban interstate highways, which are more expensive to repair, or on lighter-duty roads, which incur more damage, are even higher. Instituting charges that are tied to axle weight and to the number of miles traveled by a truck could reduce the need for spending on highways by inducing motor freight carriers to reconfigure their vehicles or shippers to switch from trucks to rail. If the charges also varied by the type of road, some carriers might adjust their routes to travel on more durable roads.[33]

Financing Infrastructure Through a Special-Purpose Entity

Through the years, the Congress has considered proposals to charter banks, corporations, or other special-purpose entities to help finance investment in infrastructure outside of the annual appropriation process. Two issues in the makeup of such entities—which could be designed in a variety of ways—are particularly important: first, the entity's relationship to the federal government and the extent to which it relies on federal funding rather than on income from its own operations; second, the types of financing tools that the entity is authorized to use to support infrastructure investment.

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32. See Congressional Budget Office, *Paying for Highways, Airways, and Waterways: How Can Users Be Charged?* (May 1992).

33. See Kenneth A. Small, Clifford Winston, and Carol A. Evans, *Road Work: A New Highway Pricing and Investment Policy* (Washington, D.C.: Brookings Institution, 1989), as cited in Congressional Budget Office, *Paying for Highways, Airways, and Waterways*, p. 19.

Although special-purpose entities can be designed to allow a given level of federal spending to support a greater volume of infrastructure projects, they are not sources of "free money." To the extent that such an entity would reduce the federal share of projects' costs, it would do so by increasing the shares borne by the projects' users, state or local taxpayers, or both. Relying more heavily on user fees to fund infrastructure might improve economic efficiency if doing so encouraged better selection, operation, and maintenance of projects. However, an infrastructure entity that issued its own debt would incur higher interest and issuance costs than the Treasury does and could expose the federal government to the risk of default on such debt. Moreover, some entities might be designed primarily as special conduits for federal funds, removing the spending from the oversight of the regular appropriation process but not drawing on larger shares of funding from state and local taxpayers or infrastructure users.

If the Congress wishes to increase the extent to which federally supported infrastructure projects draw their funding from user fees, it need not create a special entity to do so. Under authority provided by the Transportation Infrastructure Finance and Innovation Act (TIFIA) of 1998 (Public Law 105-178, sections 1501–1504), the Department of Transportation provides assistance to public or private surface transportation projects that have dedicated revenues for repayment. As of February 2008, the department reported that it had provided $4.3 billion in assistance under TIFIA, supporting $17.2 billion in total project investments.[34] Federal support for infrastructure investment that draws on user fees occurs through other vehicles as well, such as the state revolving funds for water supply and wastewater treatment systems that are capitalized with grants made by the Environmental Protection Agency; the Airport Improvement Program, which provides grants for the development or improvement of airports that are significant to national air transportation; and tax expenditures on revenue bonds, which are issued by states and localities to finance construction of toll roads, utilities, and other user-supported infrastructure.

Options in Designing a Special-Purpose Entity

A special-purpose entity could be designed as an independent federal agency or corporation, as a government-sponsored enterprise (GSE), as a fully independent corporation owned by the private sector or by state government, and perhaps in other ways as well. One trade-off to be considered in designing such an entity is between federal control and budgetary status: The more authority the Congress or the Administration has over project selection, fund-raising, and other management choices of an entity, the more likely the entity is to be considered part of the federal budget. Conversely, the activities of an entity that is essentially independent of federal control would not be recorded in the budget, but such an entity would be subject to little if any control over its operations. For example, the Tennessee

34. See Department of Transportation, *TIFIA Credit Program Overview* (updated February 2008), http://tifia.fhwa.dot.gov/tifia_bkgrnd_slides_080211.pdf.

Valley Authority (TVA) is supported by its sales of electricity, receives no federal appropriations, and can issue its own debt instruments. But ultimately, it is under federal control—all nine of TVA's directors are nominated by the President and confirmed by the Senate—and its activities are recorded in the budget. Other federal corporations or "independent" agencies could be designed not to be self-supporting but to serve primarily or exclusively as conduits for federal funds.

GSEs are privately owned—although they are more constrained than are most private businesses by their charters and by federal regulation and oversight—and have only a minority of federally appointed directors, if any. For example, 5 of 18 directors each on the boards of Fannie Mae and Freddie Mac are federal appointees (those positions currently are vacant).

GSEs and fully independent private entities are alike in that they typically sustain their operations from business income. GSEs are distinguished from other chartered private entities by investors' perception of an implicit federal guarantee of GSEs' debt obligations; that perception arises in part from various legal characteristics that they tend to share. For example, a GSE's corporate earnings may be exempt from state and local income taxes, and its securities, like Treasury debt, may be exempt from Securities and Exchange Commission registration or eligible to be held in unlimited amounts by federally regulated banks and thrifts.[35]

The National Cooperative Bank is one example of a fully independent corporation. It was established as a federal agency in 1978 and then was converted to private, cooperative ownership in 1981. The legislation that privatized the bank provided start-up funding in a long-term subordinated loan at a below-market interest rate.[36]

A corporation owned by state governments could be similar to an independent private corporation in several ways, such as its independence from federal control. However, it might differ from most private corporations in having more access to federal funds to support its operations.

In addition to the governance structure, another issue in the design of an infrastructure bank or corporation is the set of financing tools available to it, perhaps including direct subsidies, loans, loan guarantees, lines of credit, bond insurance and reinsurance, debt or equity purchases, issuance of bonds on behalf of a supported project, insurance for project development costs, or technical assistance on project development or financing. Because the degree of support the entity can provide to projects depends on its availability of funds, any direct subsidies are likely to be

35. See Congressional Budget Office, *Controlling the Risks of Government-Sponsored Enterprises* (April 1991), pp. 6–8.

36. That approach to support investment in infrastructure is discussed in Congressional Budget Office, *An Analysis of the Report of the Commission to Promote Investment in America's Infrastructure* (February 1994).

small unless the entity receives continuing federal appropriations or has some other source of external support.

Comparing Special-Purpose Entities and Other Methods for Financing Infrastructure

Infrastructure banks, corporations, or other special entities can be compared with other vehicles for federal support—annual appropriations, direct spending authority, and tax expenditures—in terms of the associated budgetary cost and economic efficiency.

The budgetary cost of federal support for infrastructure investment depends on two factors: the share of project costs drawn from nonfederal funds—such as user fees and state and local tax revenues—and the federal cost per dollar of effective project aid. Some proposals for infrastructure entities call for nonfederal shares that are much higher than is common under current appropriated programs (for example, the 20 percent typically required for projects supported through the Highway Trust Fund), and such entities would therefore stretch federal dollars further. However, because Treasury securities are highly liquid and free of default risk, any given federal share of project costs could be provided at lower budgetary cost through a program funded by appropriations or direct spending, such as TIFIA, rather than through a special entity. TVA's bonds, for example, typically pay 30 to 40 basis points more than comparable Treasury securities (a basis point is one one-hundredth of a percentage point). The interest rates on bonds and other debt instruments from GSEs are higher than are those from independent agencies, and those paid by fully private corporations are higher still. Because of their comparatively smaller offerings, special entities also would face higher costs than the Treasury does in issuing bonds.

Economic efficiency focuses on the use of real resources, and so the source of investment funds matters less than the way the funds are used.[37] In that light, the important questions to ask about any given funding vehicle involve whether it tends to select the most cost-beneficial projects for support and whether it promotes efficient operations, maintenance, and use. To the extent that an infrastructure bank or corporation funds projects that are supported by user fees, rather than by tax dollars, it is possible that inefficient demands would be reduced and that market discipline would improve project selection and management. (See the discussion of public–private partnerships below.) Again, however, the federal government already supports projects that rely on user fees through various spending programs and through tax expenditures, and policymakers could choose to increase such support without establishing a special entity.

37. Funding mechanisms matter for efficiency to the extent that some have lower "transaction costs" than others—that is, they use fewer resources to verify project quality, issue the bonds, and the like. Essentially, the interest payments themselves are transfers that do not consume real resources.

Current Proposals

Three proposals in the current Congress illustrate the options for structuring an infrastructure investment entity: the National Infrastructure Bank Act of 2007 (S. 1926 and H.R. 3401); the National Infrastructure Development Act of 2007 (H.R. 3896); and the Build America Bonds Act of 2007 (S. 2021). (The European Investment Bank, described in Box 2, is an example of such an entity outside the United States.)

The National Infrastructure Bank (NIB) would be an independent federal entity with a five-member board of directors appointed by the President and confirmed by the Senate. The bank would evaluate and finance infrastructure projects "of substantial regional and national significance" with a potential federal investment of at least $75 million per project. The NIB would serve as a conduit for federal funding. It would be authorized to issue $60 billion in bonds—the proceeds of which could be used to finance direct subsidies, loans, and loan guarantees—but the Treasury would pay the interest on the bonds. Because the bonds would carry the full faith and credit of the United States, the Treasury also would have ultimate responsibility for paying the principal in the event that the bank's own funds (for example, from repayments of project loans the bank had made) were insufficient.

The National Infrastructure Development Act would create a National Infrastructure Development Corporation (NIDC) and a subsidiary National Infrastructure Investment Corporation (NIIC). Initially, both would be federal corporations, but the bill would give the NIDC five years to develop a plan to convert both entities to GSEs. The NIDC would be capitalized with up to $9 billion in appropriations authorized over three years. Thereafter, it would be self-financed through business income, presumably through fees on users of infrastructure, and (once converted to a GSE) through the sale of public stock. The NIDC would be authorized to make senior and subordinated loans and to buy debt and equity securities issued by others to fund infrastructure projects; the NIIC would be authorized to insure and reinsure debt instruments and loans, insure leases, and issue letters of credit.

The Build America Bonds Act would grant consent and recognition to a transportation finance corporation established by two or more state infrastructure banks. The corporation would be under the control of the participating states, but it would be authorized to issue up to $50 billion in bonds providing federal tax credits in lieu of interest. The rate of the credits would be set so as to equal the average yield of long-term corporate debt obligations at the time the bonds were issued.

Public–Private Partnerships

Some advocates of increased spending on infrastructure suggest that greater use of public–private partnerships (PPPs) would facilitate such increases. (A PPP is an institutional arrangement in which a private entity assumes some level of risk

Box 2.

The European Investment Bank

The European Investment Bank (EIB), a major lender for projects in the European Union (EU), was established under the terms of the 1957 Treaty of Rome (the founding contract for the European Economic Community, the forerunner of the EU). The EIB is the European Union's long-term lending institution, financing an array of projects that contribute to economic policy objectives in the energy, infrastructure, and industrial sectors. The nonprofit bank raises funds through bond issues and other debt instruments; it makes loans to public and private enterprises.

Each of the EU's 27 member states owns a proportional share of the bank and provides a proportional share of its total capital—currently 164 billion euros (equivalent to $255 billion as this was written). A country's share is set by its relative gross domestic product within the EU at the time of its accession, and each member provides 5 percent of that share and agrees to make the rest available to the EIB as deemed necessary to cover the cost of loan defaults. The EIB's board of governors consists of ministers (usually the finance ministers) from all of the EU member states; its board of directors has a representative from each member state. The governors supervise the bank's operations, defining lending policies, deciding on capital increases, and approving the balance sheet. The directors manage the bank's lending and borrowing operations.

Mainly, the EIB provides low-interest loans to finance the capital projects of public- and private-sector enterprises. Borrowers include large corporations and countries and small enterprises and municipalities. More than 85 percent of the 45.8 billion euros (roughly $70 billion) lent in 2006 went to organizations located within the EU. Lending to borrowers outside the European Union supports the EU's development and cooperation policies. External projects have promoted the enlargement of the EU toward southern and eastern Europe, supported nearby countries in the Mediterranean and Eurasia, assisted development in Africa, and aided the EU's programs in Asia and Latin America.

Repayment periods for EIB loans range from four years to two decades, and borrowers may use the loans to finance up to 50 percent of the total cost of a project. To be eligible, projects must contribute to the EU's economic policy objectives. Included on the list are projects that support small and medium-sized enterprises; develop transportation, energy, and telecommunications infrastructure; protect, remediate, or ameliorate the rural or urban landscape; develop human capital through health care or

Continued

Box 2. Continued

The European Investment Bank

projects; and support industry and manufacturing. Eligible projects must be economically, financially, technically, and environmentally sound. Projects that can demonstrate compliance with those criteria are subjected to detailed appraisals by EIB's project teams, which consist of economists, engineers, and loan contact officers. All approved projects are monitored by the EIB for the lifetime of the loan.

As a nonprofit, policy-driven bank, the EIB can provide loans to its clients at relatively low interest rates. The rates are determined by three factors: the bank's cost of funds (that is, the interest rate the EIB pays to borrow in capital markets), which is fully passed along to the borrower; a markup to cover administrative costs; and an additional risk-related charge for certain projects. Those rates are attractive to the EIB's borrowers because of the bank's AAA credit rating, which is a function of the quality of its investments; the high amount of capital available through the reserve fund provided by the member states; and its size.

The EIB also offers technical assistance and loan guarantees to its clients. Its specialist economists and engineers help assess and advise borrowers with their projects. The assistance often is provided during project formulation and preparation and focuses on regulatory issues, questions of feasibility, and challenges in project management. The aid helps streamline the loan application process.

For some clients of the EIB, loan guarantees are more cost-effective than loans. The EIB provides the largest loan guarantee program for the Trans-European Networks (TENs), the infrastructure networks for transportation, energy, and telecommunications that cover the entire EU. The EIB program provides a guarantee against revenue risk for a short period after the construction of a TENs project.

The EIB is part of the EIB Group, which was established in 2000 to coordinate the activities of the EIB with the European Investment Fund (EIF), which itself was chartered to promote development of small and medium-sized enterprises in Europe's rapidly expanding new-technologies sector. The EIF finances venture capital funds that invest in projects that contribute to the EU's economic policy objectives. The EIB is the EIF's majority shareholder with 61 percent of the fund's shares; the European Commission controls 30 percent, and the 26 European banks and financial institutions control the remaining 9 percent.

beyond that traditionally associated with supplying its services to a government agency.) In the infrastructure arena, such partnerships appear to be most common for projects that lend themselves to private operation: roads, rail, and water supply and wastewater treatment. A private entity could control access to and charge for the use of a toll road or a drinking water system, for example, but it would be harder to charge users to recoup costs given the more diffuse benefits from a dam or flood control project.

Public–private partnerships can take a variety of forms that differ in the amount of risk assumed by the private entity. For example, private entities bidding on long-term contracts to supply services, such as maintaining public roads or operating water supply facilities, would face relatively modest risks concerning their ability to deliver services at the agreed-upon price over the length of the contract.[38] In other cases, however, the private entity could have almost complete responsibility for the project and accept a variety of risks, including uncertainties about construction, the cost of financing, and the demand for the infrastructure that it provided. In some public–private partnerships for highway and road construction, for example, the private entity could raise most or all of the funds and also would be responsible for design, construction, operation, and maintenance. That entity would recoup its investment through user fees.[39]

A recent report by the Government Accountability Office provides examples of PPPs for highway infrastructure in the United States, and it illustrates the use of both private management and private financing.[40] Two of the four partnerships reviewed involve long-term lease concessions of existing toll roads: Chicago has entered into a 99-year lease with a private entity. That business paid the city $1.83 billion in consideration of the right to operate, maintain, and collect the tolls on the Chicago Skyway. Similarly, Indiana received $3.85 billion for a 75-year lease on the Indiana Toll Road. The other two cases involve plans for new toll roads. The winning bid for the first segment of the Trans-Texas Corridor (a projected 4,000-mile network of roads, railways, and utility rights-of-way) included $6 billion in capital investment for a new toll road between Dallas and San Antonio and $1.2 billion in concession payments to the state for the right to

38. An extensive treatment of public–private partnerships in transportation can be found in Department of Transportation, *Report to Congress on Public Private Partnerships* (December 2004), www.fhwa.dot.gov/reports/pppdec2004/index.htm.

39. The risk to the private entity of not recouping its investment often is mitigated by advantageous financing available through government sponsorship of the project and through terms that grant the private entity exclusive rights to provide the services in question.

40. See Government Accountability Office, *Highway Public–Private Partnerships: More Rigorous Up-front Analysis Could Better Secure Potential Benefits and Protect the Public Interest,* GAO-08-44 (February 2008).

operate the facility for 50 years.[41] And in Oregon, three projects have been studied under an agreement between the state and a private group to determine suitability for PPPs that would combine design services, financing, construction, and operation. Two of the three projects have been found to have insufficient toll revenue potential, but the third is moving forward to the environmental assessment phase.

PPPs have been used in many other cases to obtain private-sector financing of new toll roads, including the Dulles Greenway in Virginia and the State Route 91 and State Route 125 toll roads in California. PPPs also have been used to finance transit projects, such as the Hudson–Bergen Light Rail system in New Jersey, and freight railroad projects, including the Alameda Corridor in Los Angeles.

The potential advantages and disadvantages of PPPs include the possible reductions in investment requirements that would come with more efficient management (including cost-based pricing) and the potential increases in the costs of financing, respectively. Whether the use of private management in PPPs would help to reduce total spending on infrastructure depends on the extent to which savings from improved asset management exceed the costs of using the private services. To maximize profits, a private partner might reduce life-cycle costs through higher construction standards, more frequent maintenance, or investments in cost-saving technology. Efficiencies also could result if a private entity charged prices that were more closely aligned with costs, thereby reducing inefficient demands for services and thus perceived investment needs. However, if there is insufficient competition, public oversight could be needed to guard against the risk that the private entity might use monopoly power to raise prices excessively.

CBO's recent analysis of spending on transportation and water infrastructure reported that PPPs do not yet account for a significant share of nationwide spending in those categories. According to a regularly cited survey, the cumulative project costs of such partnerships in the United States that had been funded or completed by October 2006 totaled a bit over $48 billion (in nominal dollars).[42] In contrast, nominal capital spending on those types of infrastructure by the federal government and by states and localities totaled $1.6 trillion between 1985 and 2004 (averaging $80 billion annually). Other studies have come to a similar conclusion regarding highway and transit projects.[43]

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41. Public opposition to the Trans-Texas Corridor and other PPPs resulted in the Texas Legislature's enacting a two-year moratorium on future highway PPPs (other than regional projects in the Dallas area). The moratorium will expire on September 1, 2009.

42. That figure is based on data from the 2006 International Major Projects Survey, which accompanied *Public Works Financing,* vol. 209 (October 2006). The data have important limitations: For the purposes of this analysis in particular, they do not distinguish between the public- and private-sector components of such projects. More generally, the data were not collected to provide an exhaustive inventory of public–private partnerships and, as a result, they probably understate their extent.

43. See General Accounting Office, *Highways and Transit: Private Sector Sponsorship of and Investment in Major Projects Has Been Limited,* GAO-04-419 (March 2004).

Proposals for Capital Budgeting

Questions about the adequacy of current investment in infrastructure are sometimes accompanied by questions about whether capital spending should be treated differently in the federal budget. Capital budgeting would involve distinguishing certain investments from other expenditures in the budget. Under many proposals for capital budgeting, the full cost of those investments would not be counted at the time of purchase; rather, it would be apportioned over the expected life of the resulting assets. Spreading the cost into the future, however, would deviate from current budgetary treatment, which generally requires funding for the full cost of a project up front and records expenditures when cash is disbursed.

The federal budget is a statement of the government's expenditures and revenues for a given fiscal year. That statement is designed to serve many purposes: It provides a mechanism for making decisions to allocate resources to serve national objectives, provides constraints and direction for agencies' management of fiscal resources, gives the Treasury information needed for its management of cash resources and the public debt, and provides businesses and individuals with the information they need to assess the government's stewardship of the public's money and resources.

Proponents of capital budgeting often assert that the current budgetary treatment of capital investment creates a bias against capital spending and that additional spending would benefit the economy through future increases in productivity. Even if a change in budgetary treatment would increase federal capital spending, the degree to which such increased spending benefited the economy would depend on how well the additional funds were targeted and the extent to which they were offset by reduced spending by others.

Moving to a budget that is more reliant on accrual-based accounting could increase complexity, diminish transparency, and make the federal budget process more sensitive to small changes in assumed parameters, such as depreciation rates. (Indeed, other nations have considered adopting capital budgets, but generally decided against it for those same reasons.) Adopting an accrual approach to only one aspect of the budget could raise concerns about whether the budgeting system would provide a fair basis for allocating the government's resources among competing priorities. In addition, providing special treatment to certain areas of the budget, such as capital spending, could make the process more prone to manipulation. For example, arriving at a definition of "capital" for budgeting purposes could be a significant challenge.

More limited reform of the current process might still accomplish the goal of focusing on capital investment but be simpler to implement. One approach would be to create a category for capital spending as part of a restoration of the statutory budget enforcement procedures that expired in 2002. Such a category within overall discretionary spending limits could help highlight important policy goals. By carving out separate limits for certain programs, however, lawmakers would forgo flexibility to meet other needs. Another alternative might be to attribute a portion of the cost of assets each year to the programs that use them. Requiring users to pay the costs might improve incentives for agencies to sell assets that were no longer appropriate to their needs.

Appendix A: Spending for Research and Development and for Education

Total public and private spending on research and development (R&D) is currently about 2.6 percent of gross domestic product (GDP) (see Figure A-1).[1] In fiscal year 2007, the federal government's budget authority for the conduct of R&D totaled $135 billion, slightly less than 1 percent of GDP. The government spent an additional $3.6 billion for acquisition and construction of R&D facilities and equipment.

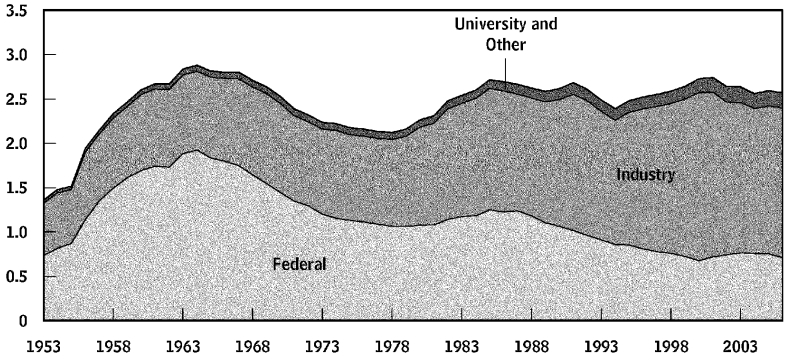
About $78 billion of the $135 billion went to the Department of Defense, and 92 percent of that spending was for developing programs and systems that support national defense. Conversely, 84 percent of the rest of the federal government's spending of $57 billion went to basic and applied research. During the past 20 years, federal funding has typically represented between 40 percent and 50 percent of all research funding nationwide. Except in the case of the Department of Defense and other agencies where R&D is linked to an explicit mission, economists generally view federal funding of research more favorably than development; even though research might not be conducted with a specific commercial purpose in mind, the knowledge it produces has large potential for wider use, both by other researchers and in later commercial endeavors. Still, economic returns are difficult to measure because the resulting progress can be difficult to discern and the economic payoff might take years or even decades to become clear.

The life sciences account for more than half of federal spending on research. Although some observers have attributed high rates of return to research in the life sciences, others state that there are benefits to supporting a wide range of scientific fields because researchers reach across disciplines for new ideas and tools. In the past decade, as more than 40 percent of federal research funding has gone to university researchers, federal laboratories have seen their share fall to near 20 percent, and federally funded R&D centers have received about 15 percent. Industry and nonprofits account for the rest. Besides supporting increases in knowledge, federal funding of academic research also contributes to the education

1. See Congressional Budget Office, *Federal Support for Research and Development* (June 2007).

Figure A-1.

U.S. R&D Spending as a Percentage of GDP, 1953 to 2006



Sources: Congressional Budget Office and National Science Foundation.

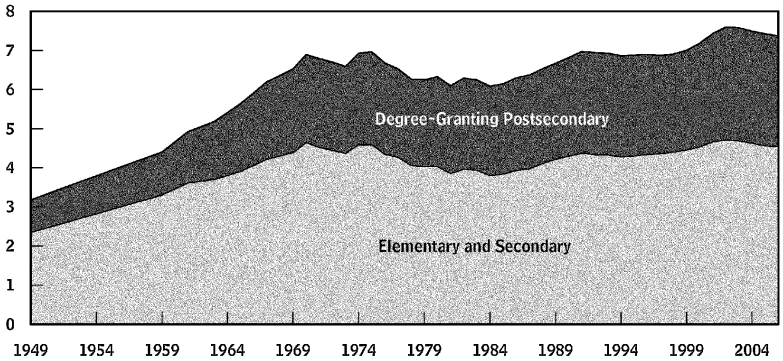
Note: R&D = research and development; GDP = gross domestic product.

of the next generation of researchers: In 2005, more than 55,000 science and engineering graduate students received financial support through federally funded research assistantships.

The United States spends more than 7 percent of its GDP on elementary, secondary, and postsecondary education (see Figure A-2). State and local governments provide about 75 percent of the funding, mostly for elementary and secondary education. The federal government pays about 12 percent, about two-thirds of which goes to elementary and secondary schools, primarily in the form of grants distributed by states. The rest is mostly for student financial aid for postsecondary education. The remaining 13 percent of the funds come from families and other private sources. Families often pay part of the cost of the higher education of their children, and some families pay tuition to private elementary and secondary schools.

Figure A-2.

Expenditures by Educational Institutions as a Percentage of GDP, 1949 to 2005



Sources: Congressional Budget Office and Department of Education.

Note: GDP = gross domestic product.

On average, the private rate of return on investment in education is estimated to be about 10 percent. In addition, as with other forms of capital, investment in education can produce benefits for the larger economy and for society that exceed those to the individual student. Although the spillover benefits of education are most easily documented in developing countries, some economists believe that even in developed countries, increasing the educational attainment of the population fosters productivity growth—for example, by increasing the body of knowledge that makes up modern science, technology, and management. To the extent they exist, such effects could provide an economic rationale for investments in education. Research has suggested significant social returns on investment in high-quality early-childhood education, in the form of fewer retentions in grade, higher achievement, less involvement in criminal activity, and lower rates of participation in welfare programs.[2]

2. See James J. Heckman and Dimitriy V. Masterov, *The Productivity Argument for Investing in Young Children,* Working Paper 13016 (Cambridge, Mass.: National Bureau of Economic Research, April 2007); and Art Rolnick and Rob Grunewald, *Early Childhood Development: Economic Development with a High Public Return,* Federal Reserve Bank of Minneapolis (December 2003).

Appendix B: Overview of the Highway Trust Fund

The Highway Trust Fund is the source of funding for most of the federal government's surface transportation programs (certain transit programs receive appropriations from the Treasury's general fund), and the programs are administered by the Federal Highway Administration (FHWA) and the Federal Transit Administration.[1]

The Highway Trust Fund is an accounting mechanism in the federal budget that comprises two separate accounts, one for highways and one for mass transit. It records specific cash inflows (revenues from certain excise taxes on motor fuels and trucks) and cash outflows (spending on designated highway and mass transit programs). By far, the largest component of the trust fund is the Federal-Aid Highway program.

Spending from the trust fund is not automatically triggered by tax revenues credited to it. Authorization acts provide budget authority for highway programs, mostly in the form of contract authority (the authority to incur obligations in advance of appropriations). Annual spending is largely controlled by limits on the amount of contract authority that can be obligated in a particular year.

Such obligation limitations are customarily set in annual appropriation acts. The most recent authorization law governing spending from the trust fund, called SAFETEA-LU, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, was enacted in 2005 and is due to expire at the end of 2009. The law provides specific amounts of contract authority for the period from 2005 to 2009, and it authorizes appropriations for certain programs that are not funded through contract authority. It also specifies annual obligation limitations, which may be superseded each year by limitations set in appropriation acts.

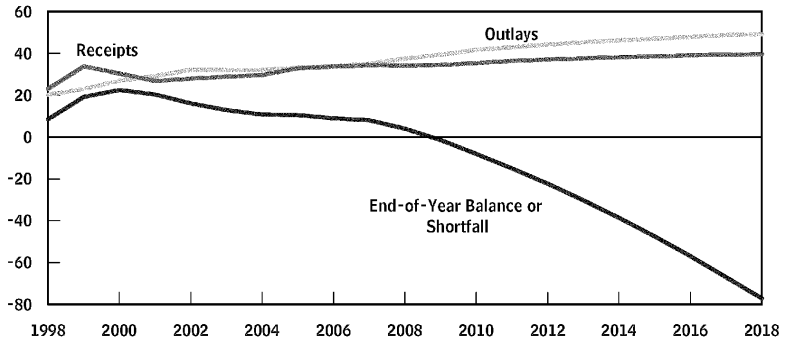
In 2007, the obligation limitation included in the appropriations act was $47.7 billion, and the total in outlays from both accounts of the trust fund came to $39.2 billion. In 2008, the Congress added $1 billion to the obligation limitation for highways, specifically to repair bridges; the total obligation limitation was $50.2 billion.

1. Other agencies within the Department of Transportation that also receive funding from the Highway Trust Fund include the Federal Motor Carriers Administration and the National Highway Transportation Safety Administration. In 2007, those two entities received a total of about 3 percent of the trust fund's budgetary resources.

Figure B-1.

Actual and Projected Highway Account Receipts, Outlays, and Balances or Shortfalls, 1998 to 2018

(Billions of dollars)



Source: Congressional Budget Office.

Note: Actual data are in nominal dollars for 1998 through 2007. Data projections for 2008 to 2018 assume that the Highway Trust Fund's taxes, which are scheduled to expire in 2011, will be reauthorized at current levels. Under current law, the Highway Trust Fund cannot incur negative balances. A negative level is a projected shortfall, reflecting the trust fund's inability to pay obligations out of estimated receipts. Assumptions are based on authorization levels for SAFETEA-LU, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users.

Spending from the trust fund started to increase rapidly in 1999 because of changes enacted in the Transportation Equity Act for the 21st Century (TEA-21), which provided budget authority and contract authority of $218 billion over the 1998–2003 period (an average of $36.3 billion per year). Consequently, annual outlays rose by 40 percent from 1999 to 2003. SAFETEA-LU, which provided contract authority of $286 billion (an average of $57.2 billion per year), represented a further significant increase in funding. From 2005 to 2007, outlays from the trust fund grew from about $30 billion to $35 billion, an increase of about 3 percent per year.

Balances in the highway account were steady during the 1980s and in the first half of the 1990s—they stayed in the vicinity of $10 billion. Receipts substantially exceeded outlays from 1996 to 2000, and the unexpended balance in the highway account (sometimes called the cash balance) grew from $10 billion in 1995 to a peak of about $23 billion in 2000 (see Figure B-1). Revenues fell sharply in 2001 but have increased steadily since then—at an average rate of about 3.4 percent per year through 2007. Spending generally has exceeded revenues since 2001, and by the end of 2007, unspent balances in the highway account had declined to about

Table B-1.

Actual and Projected Highway Trust Fund Receipts, 1998 to 2018

	Highway Account		Transit Account		Total Trust Fund	
	Receipts (Billions of dollars)	Share of GDP (Percent)	Receipts (Billions of dollars)	Share of GDP (Percent)	Receipts (Billions of dollars)	Share of GDP (Percent)
1998	23.1	0.26	3.5	0.04	26.6	0.30
1999	33.8	0.36	5.5	0.06	39.3	0.42
2000	30.3	0.31	4.6	0.05	35.0	0.36
2001	26.9	0.27	4.6	0.04	31.5	0.31
2002	28.0	0.27	4.6	0.04	32.6	0.31
2003	29.0	0.26	4.8	0.04	33.7	0.31
2004	29.8	0.25	4.9	0.04	34.7	0.30
2005	32.9	0.26	5.0	0.04	37.9	0.30
2006	33.7	0.26	4.9	0.04	38.5	0.29
2007	34.3	0.25	5.1	0.04	39.4	0.28
2008	34.1	0.24	5.0	0.03	39.1	0.27
2009	34.5	0.23	5.0	0.03	39.6	0.26
2010	35.4	0.22	5.2	0.03	40.6	0.26
2011	36.4	0.22	5.3	0.03	41.6	0.25
2012	37.1	0.21	5.3	0.03	42.4	0.24
2013	37.6	0.21	5.4	0.03	43.1	0.24
2014	38.2	0.20	5.5	0.03	43.6	0.23
2015	38.6	0.19	5.5	0.03	44.1	0.22
2016	39.0	0.19	5.5	0.03	44.6	0.21
2017	39.4	0.18	5.5	0.03	44.9	0.21
2018	39.7	0.18	5.6	0.02	45.3	0.20

Source: Congressional Budget Office.

Notes: After 2007, revenues are estimated; GDP = gross domestic product.

$7.4 billion. In general, balances in the mass transit account also have been falling since 2000, although more slowly than in the highway account. At the end of 2007, the balance in the mass transit account totaled about $7.3 billion. If recent trends persist and spending from the trust fund continues to exceed its revenues, the balances in the highway account will be depleted during fiscal year 2009.[2]

The highway account receipts shown in the figure also are shown in the Table B-1, which expresses those receipts as a share of GDP and provides comparable figures for the mass transit account and for the trust fund as a whole. Because of decreased consumption of gasoline and diesel fuel, CBO projects, receipts will not keep pace with GDP over the next 10 years, and total receipts will decline as a share of GDP, from 0.27 percent in 2008 to 0.20 percent in 2018.

2. The Highway Trust Fund cannot incur negative balances. A negative number indicated in the figure represents a projected shortfall, reflecting the trust fund's inability to pay obligations out of estimated receipts.

Chairman SPRATT. We will recess——

[Recess.]

Chairman SPRATT. We will let you proceed with your testimony.

Mr. ORSZAG. I thought I was done, Mr. Chairman.

Chairman SPRATT. You are completed?

Mr. ORSZAG. For now, yeah, sure.

Chairman SPRATT. Okay. Ms. Dalton, we are glad to have you and we look forward to your testimony. As in the case of Dr. Orszag, your complete statement has been made a part of the record. You can summarize it as you see fit, but take your time.

STATEMENT OF PATRICIA A. DALTON, MANAGING DIRECTOR, PHYSICAL INFRASTRUCTURE TEAM, GOVERNMENT ACCOUNTABILITY OFFICE

Ms. DALTON. Thank you, Chairman Spratt and members of the committee. I really appreciate the opportunity to testify on infrastructure financing issues today. These are important issues because the Nation's physical infrastructure is under strain raising a host of safety, security and economic concerns. My remarks today are going to focus on the challenges associated with our infrastructure, principles that we at GAO have identified to help guide efforts to address these challenges and existing and proposed options to fund investments in the nation's infrastructure. The challenges are numerous.

For example, just by increases in transportation spending at all levels of government and improvements to the physical condition of highways and transit facilities over the past 10 years, congestion has worsened and safety gains have leveled off. In addition, demand has outpaced the capacity of our Nation's surface transportation and aviation systems resulting in decreased performance and reliability. Water utilities nationwide are under increased pressure to make significant investments. Needs across the country are estimated to range between $485 billion and $1.2 trillion over the next 20 years. For example, about a third of our water utilities report that 20 percent of their pipes are at the end of their useful life. Clearly these and other challenges need to be addressed. Additional investment is clearly warranted. However, calls for increased investment in infrastructure come at a time when traditional funding is increasingly strained and the Federal Government's fiscal outlook is worse than many may understand.

Addressing these challenges is complicated by the breadth of the Nation's physical infrastructure which is owned, funded and operated by all levels of government and the private sector. Moreover, infrastructure policy decisions are inextricably linked with economic, environmental and energy policy concerns. Given these types of challenges and the Federal Government's fiscal outlook, it is clear that the Federal Government cannot continue with business as usual. Rather a fundamental re-examination of government programs, policies and activities is needed, including in the infrastructure area. Questions to be asked include what are our goals and are they tied to the national interest? What is the Federal role? Are performance and accountability built into the funding decisions? Are we using the right tools, the best tools? Is the approach physically sustainable? Funding for the Nation's infrastructure comes from a variety of Federal, State, local and private

sources. As primary owners of the infrastructure, State and local governments and the private sector generally account for a larger share of infrastructure funding than the Federal government, however the Federal Government has played and continues to play an important role in funding infrastructure.

Various existing funding approaches could be altered or new funding approaches could be developed to help fund investments in our infrastructure. These various approaches can be grouped into two categories for funding, taxes and user fees. An example of a tax is clearly the Federal fuel taxes on gasoline and jet fuel, which are attractive because they provide a relatively stable stream of revenue and their collection and enforcement costs are relatively low. Examples of user fees include air passenger facility charges or highway tolls. The concept underlying user fees; that is, users pay directly for the infrastructure they use is a long standing aspect of infrastructure programs.

Financing strategies on the other hand can provide flexibility to bridge gaps when traditional pay as you go funding sources are scarce as they are nowadays. Financing mechanisms can create potential savings by accelerating projects to offset rapidly increasing construction costs and offer incentives for investment from State and local governments and from the private sector. The Federal Government currently offers several programs that provide infrastructure financing. For example, the TIFIA program provides loans for transportation projects of national significance. The government also has authorized a number of revolving funds that are used to dedicate capital to be loaned for qualified infrastructure projects.

In general, loan dollars are repaid, recycled back into the revolving funds and subsequently reinvested in the infrastructure through additional loans. Such funds exist at both the Federal and State level. They include State infrastructure banks, the clean water State revolving fund and the drinking water State revolving fund. Several proposed bills would make additional financing mechanisms available for infrastructure. For example, the proposed Build America Bond Fund would provide $50 billion in new infrastructure funding through bonds. The National Infrastructure Development Act bill introduced by Ms. DeLauro, would establish a loan program administered by a government sponsored entity to fund a variety of infrastructure projects.

A National Infrastructure Bank Act would provide an infrastructure bank at the national level as a revolving fund. Although each of these financing mechanisms has different merits, each mechanism in the final analysis is a form of debt, but ultimately must be repaid with interest. Furthermore, since the Federal Government's cost of capital is generally lower than that of the private sector, financing mechanisms such as bonding should be recognized as more expensive than full upfront funding.

To help policymakers make explicit decisions about how much overall Federal spending should be devoted to investment, we previously have proposed establishing an investment component within the unified budget by recognizing the different effects of various types of Federal spending. An investment focus within the budget

would provide a valuable supplement in the unified budget's consideration of macroeconomic issues.

Moreover, with direct attention to the consequent choices within the budget under existing budget limitations, a level which is now not determined explicitly by policymakers but is simply the result of numerous individual decisions. In conclusion, various investment options have been and likely will be continued to be identified to repair, upgrade, expand and better use our Nation's infrastructure.

Ultimately, Congress and other Federal policymakers will have to determine which option or more likely which combination of options best meets the needs of the Nation. There is no silver bullet. The suitability of any of these options will depend on the level of Federal involvement the policymakers decide in a given area. We look forward to continuing to work with the committees as you consider these various options. Thank you, Mr. Chairman.

[The statement of Ms. Dalton follows:]

United States Government Accountability Office

GAO

Testimony Before the Committee on the Budget and the Committee on Transportation and Infrastructure, U.S. House of Representatives

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PHYSICAL INFRASTRUCTURE

Challenges and Investment Options for the Nation's Infrastructure

Statement of Patricia A. Dalton, Managing Director
Physical Infrastructure Issues

G A O
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GAO-08-763T

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Highlights

Highlights of GAO-08-763T, a testimony before the Committee on the Budget and the Committee on Transportation and Infrastructure, U.S. House of Representatives

Why GAO Did This Study

Physical infrastructure is critical to the nation's economy and affects the daily life of virtually all Americans—from facilitating the movement of goods and people within and beyond U.S. borders to providing clean drinking water. However, this infrastructure—including aviation, highway, transit, rail, water, and dam infrastructure—is under strain. Estimates to repair, replace, or upgrade aging infrastructure as well as expand capacity to meet increased demand top hundreds of billions of dollars. Calls for increased investment in infrastructure come at a time when traditional funding for infrastructure projects is increasingly strained, and the federal government's fiscal outlook is worse than many may understand.

This testimony discusses (1) challenges associated with the nation's surface transportation, aviation, water, and dam infrastructure, and the principles GAO has identified to help guide efforts to address these challenges and (2) existing and proposed options to fund investments in the nation's infrastructure. This statement is primarily based on a body of work GAO has completed for the Congress over the last several years. To supplement this existing work, GAO also interviewed Department of Transportation officials to obtain up-to-date information on the status of the Highway Trust Fund and various funding and financing options and reviewed published literature to obtain information on dam infrastructure issues.

To view the full product, including the scope and methodology, click on GAO-08-763T. For more information, contact Patricia Dalton at (202) 512-2834 or daltonp@gao.gov.

PHYSICAL INFRASTRUCTURE

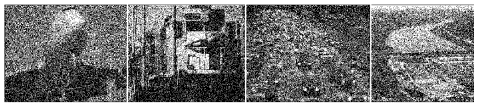
Challenges and Investment Options for the Natio Infrastructure

What GAO Found

The nation faces a host of serious infrastructure challenges. Demand h outpaced the capacity of our nation's surface transportation and aviatic systems, resulting in decreased performance and reliability. In additior utilities are facing pressure to upgrade the nation's aging and deteriorat water infrastructure to improve security, serve growing demands, and r new regulatory requirements. Given these types of challenges and the f government's fiscal outlook, it is clear that the federal government can continue with business as usual. Rather, a fundamental reexamination government programs, policies, and activities is needed. Through prior analyses of existing programs, GAO identified a number of principles th could guide a reexamination of federal infrastructure programs. These principles include

- creating well-defined goals based on identified areas of national int
- establishing and clearly defining the federal role in achieving each g
- incorporating performance and accountability into funding decisior
- employing the best tools and approaches to emphasize return on investment, and
- ensuring fiscal sustainability.

Various options are available to fund infrastructure investments. These options include altering existing or introducing new funding approache employing various financing mechanisms, such as bonds and loans. Fo example, a variety of taxes and user fees, such as tolling, can be used tc fund infrastructure projects. In addition, some have suggested includin infrastructure component in a future economic stimulus bill, which cou provide a one-time infusion of funds for infrastructure projects. Each c options has different merits and challenges, and choosing among them likely involve trade-offs among different policy goals. Furthermore, the suitability of the various options depends on the level of federal involve or control that policymakers desire. However, as GAO has reported, w infrastructure investment decisions are made based on sound evaluatio these options can lead to an appropriate blend of public and private fur match public and private costs and benefits. To help policymakers mal explicit decisions about how much overall federal spending should be c to investment, GAO has previously proposed establishing an investmen component within the unified budget.



Source: Corbis. Source: U.S. Army Corps c

Messrs. Chairmen and Members of the Committees:

We appreciate the opportunity to testify on infrastructure financing issues. As you know, the nation's physical infrastructure is critical to the nation's economy and affects the daily life of most Americans—from facilitating the movement of goods and people within and beyond U.S. borders to providing clean drinking water. However, as illustrated by the 2007 bridge collapse in Minnesota and numerous water main breaks across the country, the nation's physical infrastructure is under strain. Estimates of the costs to repair, replace, or upgrade aging infrastructure so that it can safely, efficiently, and reliably meet current demands, as well as expand capacity to meet increasing demands, top hundreds of billions of dollars.

Addressing these challenges is complicated by the breadth of the nation's physical infrastructure—including aviation, highway, transit, rail, water, and dam infrastructure—which is owned, funded, and operated by all levels of the government and the private sector. Moreover, infrastructure policy decisions are inextricably linked with economic, environmental, and energy policy concerns. Calls for increased investment in infrastructure coincide with increasing strains on traditional funding for infrastructure projects. For example, without significant changes in funding or planned spending, the Highway Trust Fund is projected to incur significant deficits in the years ahead.[1] Furthermore, the federal government's financial condition and fiscal outlook are worse than many may understand.[2] Specifically, the federal budget is on an unsustainable path—raising questions about whether people should assume federal funds will be available to help solve the nation's current infrastructure challenges. We have also previously reported that state and local governments will likely face persistent fiscal challenges starting within the next few years.[3] Consequently, a range of investment options for the

[1]The Highway Trust Fund is the mechanism used to account for federal highway user taxes (e.g., federal excise taxes on fuel) that are dedicated for highway- and transit-related purposes. The Highway Trust Fund has two accounts: the Highway Account and the Mass Transit Account.

[2]GAO, *Long-Term Fiscal Outlook: Action Is Needed to Avoid the Possibility of a Serious Economic Disruption in the Future*, GAO-08-411T (Washington, D.C.: Jan. 29, 2008) and *Fiscal Stewardship: A Critical Challenge Facing Our Nation*, GAO-07-362SP (Washington, D.C.: January 2007).

[3]GAO, *State and Local Governments: Persistent Fiscal Challenges Will Likely Emerge within the Next Decade*, GAO-07-1080SP (Washington, D.C.: July 18, 2007).

nation's physical infrastructure is currently being explored and proposed by some policymakers and industry stakeholders.

Prudent use of taxpayer dollars is always important. The economic and social importance of the nation's infrastructure and the current fiscal environment make it even more important that federal, state, and local governments make prudent decisions on how to invest limited available resources. In making these decisions, governments will face an array of challenges that include repairing and maintaining aging infrastructure, making more efficient use of existing infrastructure, accounting for population growth, and incorporating new technologies in funding for infrastructure. In this environment, the infrastructure improvements that all levels of government want may not reflect what they need or what the nation can afford. Accordingly, decisions about the appropriate level of distribution and spending on infrastructure are both difficult and enormously important.

My remarks today focus on (1) challenges associated with the nation's surface transportation, aviation, water, and dam infrastructure, and the principles we have identified to help guide efforts to address these challenges and (2) existing and proposed options to fund investments in the nation's infrastructure. My comments are based primarily on a body of work that we have completed over the past several years for the Congress.[4] To supplement our existing work, we also interviewed Department of Transportation (DOT) officials and reviewed published literature to obtain up-to-date information on the status of the Highway Trust Fund, various funding and financing options, and dam infrastructure issues. We conducted this work between March and May 2008 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Summary

The nation faces a host of serious infrastructure challenges. For example, demand has outpaced the capacity of our nation's surface transportation

[4]See Related GAO Products at the end of this testimony statement. We conducted these performance audits in accordance with generally accepted government auditing standards.

and aviation systems, resulting in decreased performance and reliability. Furthermore, as we recently reported, federal surface transportation programs are not effectively addressing key challenges, such as congestion, because the federal goals and roles are unclear, many programs lack links to performance or needs, and the programs often do not employ the best tools and approaches. In addition, water utilities are facing pressure to upgrade the nation's aging and deteriorating water infrastructure to improve security, serve growing demands, and meet new regulatory requirements. Given these types of challenges and the federal government's fiscal outlook, it is clear that the federal government cannot continue with business as usual. Rather, a fundamental reexamination of government programs, policies, and activities is needed. Through our prior analyses of existing programs, we identified a number of principles that could help guide a reexamination of the federal surface transportation program. While these principles are designed specifically to reexamine the surface transportation program, most, if not all of them, could be applicable to other federal infrastructure programs. These principles are

- creating well-defined goals based on identified areas of national interest,
- establishing and clearly defining the federal role in achieving each goal,
- incorporating performance and accountability into funding decisions,
- employing the best tools and approaches to emphasize return on investment, and
- ensuring fiscal sustainability.

A wide variety of options are available to fund infrastructure investments. These options include altering existing or introducing new funding approaches and employing various financing mechanisms, such as bonds and loans. For example, a variety of taxes and user fees, such as tolling, can be used to help fund infrastructure projects. In addition, some have suggested including an infrastructure component in a future economic stimulus bill, which could provide a one-time infusion of funds for infrastructure projects. Each of these options has different merits and challenges, and choosing among them will likely involve policy trade-offs. Furthermore, the suitability of any of these options depends on the level of federal involvement or control that policymakers desire in a given policy area. However, as we have reported, when infrastructure investment decisions are based on sound evaluations, these options can lead to an appropriate blend of public and private funds to match public and private

costs and benefits. To help policymakers make explicit decisions about how much overall federal spending should be devoted to investment, we have previously proposed establishing an investment component within the unified budget.

Background

The economic well-being of the United States is dependent on the reliability, safety, and security of its physical infrastructure. The nation's infrastructure is vast and affects the daily lives of virtually all Americans. In total, there are about 4 million miles of roads, 117,000 miles of rail, 600,000 bridges, 79,000 dams, 26,000 miles of commercially navigable waterways, 11,000 miles of transit lines, 500 train stations, 300 ports, 19,000 airports,[5] 55,000 community drinking water systems, and 30,000 wastewater treatment and collection facilities. Collectively, this infrastructure connects communities, facilitates trade, provides clean drinking water, and protects public health, among other things.

The nation's infrastructure is primarily owned and operated by state and local governments and the private sector. For example, state and local governments own about 98 percent of the nation's bridges and the private sector owns almost all freight railroad infrastructure. The federal government owns a limited amount of infrastructure—for instance, the federal government owns and operates the nation's air traffic control infrastructure. In addition, through its oversight role, the federal government plays an important role in ensuring the safety, security, and reliability of the nation's infrastructure. Table 1 provides information on infrastructure ownership.

[5]About 3,400 of these airports are in the national airport system.

Table 1: Physical Infrastructure Ownership

Surface transportation	• Ninety-seven percent of the nation's roads and highways are owned by state and local governments, with local governments owning approximately 77 percent of the miles of roadway. • About 98 percent of the nation's bridges are owned by state and local governments. • Most transit systems are owned and operated by public agencies that are created by state and local governments. • Most freight railroad infrastructure is owned by private freight railroads. The federal government owns about 650 miles of Amtrak's 22,000-mile rail network. • The maritime transportation infrastructure, including ports, is generally owned and operated by state and local agencies and private companies. Many ports are publicly owned and privately operated.
Aviation	• Most commercial service airports are owned by local or state governments, either directly or through an authority, a quasi-governmental body established to operate the airport. • Air traffic control facilities are owned by the federal government.
Water	• About half of the nation's drinking water systems and an estimated 20 percent of the wastewater systems are privately owned. Private owners range from homeowners' associations, mobile home parks, and other entities whose primary business is unrelated to water supply or wastewater treatment, to larger, investor-owned companies. Publicly owned drinking water systems and wastewater utilities are owned by municipalities, townships, counties, water or sewer districts, and water or sewer authorities.
Dams (including levees)	• The majority of dams in the United States are privately owned. The federal government owns and operates about 5 percent of the nation's dams. • Levees are typically constructed by the federal government, and local governments are responsible for their operation and maintenance.

Source: GAO summary of information from the Airport Cooperative Research Program, Department of Transportation, Environmental Protection Agency, Federal Emergency Management Agency, National Academy of Public Administration, and the National Railroad Passenger Corporation.

Funding for the nation's infrastructure comes from a variety of federal, state, local, and private sources. For example, the private and local public owners of water infrastructure as well as multiple federal agencies fund drinking water and wastewater capital improvements. As owners of the infrastructure, state and local governments and the private sector generally account for a larger share of funding for infrastructure than the

federal government. However, the federal government has played and continues to play an important role in funding infrastructure. For example:

- From 1954 through 2001, the federal government invested over $370 billion (in 2001 dollars) in the Interstate Highway System.
- Federal Airport Improvement Program grants provided an average of $3.6 billion annually (in 2006 dollars) for airport capital improvements between 2001 and 2005.
- From fiscal year 1991 through fiscal year 2000, nine federal agencies provided about $44 billion (in 2000 dollars) for drinking water and wastewater capital improvements.
- Through the New Starts program, the federal government provided over $10 billion in capital funds for new fixed-guideway transit (e.g., commuter rail and subway) projects between fiscal year 1998 and fiscal year 2007.

To increase the nation's long-term productivity and growth, the federal government invests in various activities and sectors, including infrastructure.[6] While providing long-term benefits to the nation as a whole, much of this spending does not result in federal ownership of the infrastructure assets. For the most part, the federal government supports infrastructure investments through federal subsidies to other levels of government or the private sector. To address concerns about the state of the nation's infrastructure, Members of Congress have introduced several bills that are intended to increase investment in the nation's infrastructure by, for example, issuing bonds and providing tax credits for infrastructure investments. (See table 2.)

Table 2: Examples of Proposed Legislation Related to Infrastructure Investment

Proposed title	Description
National Infrastructure Bank Act (S. 1926 / H.R. 3401)	Would establish an independent National Infrastructure Bank to: (1) designate qualified transit, public housing, water, highway, bridge, or road infrastructure projects for loans, loan guarantees, and other financial assistance; and (2) issue general purpose and project-based infrastructure bonds exempt from state and local taxation.

[6]In addition to federal spending designed to increase economic activity, some federal spending on infrastructure is motivated by noneconomic policy goals, such as improved safety.

Proposed title	Description
Build America Bonds Act (S. 2021)	Would provide $50 billion in new transportation infrastructure funding through bonding to empower states and local governments to complete significant infrastructure projects across all modes of transportation, including roads, bridges, rail and transit systems, ports, and inland waterways, and for other purposes.
American Infrastructure Investment and Improvement Act (S. 2345)	Would provide $3.4 billion to the Highway Trust Fund and establish a rail infrastructure tax credit, among other things.
Our Nation's Trade, Infrastructure, Mobility, and Efficiency Act (H.R. 5102)	Would direct the Secretary of Transportation to establish and collect a fee based on the fair market value of articles imported into the United States and articles exported from the United States in commerce and to use amounts collected from the fee to make grants to carry out certain transportation projects in the transportation trade corridors for which the fee is collected, and for other purposes.
Dam Rehabilitation and Repair Act of 2007 (H.R. 3224)	Would provide $200 million over five years to repair state and locally owned dams. The grants would be part of the National Dam Safety Program, a federal-state partnership aimed at reducing the risk to life and property from dam failure. The federal government's share of repair costs would be limited to 65 percent. Dams that do not meet state safety standards or that pose a risk to the public would be eligible for funding under the program.
Freight Rail Infrastructure Capacity Expansion Act (H.R. 2116 / S. 1125)	Would provide incentives to encourage investment in the expansion of freight rail infrastructure capacity and to enhance modal tax equity. Specifically, the bill amends the Internal Revenue Code to allow: (1) a tax credit for 25 percent of the cost of new qualified freight rail infrastructure property and qualified locomotive property; and (2) a taxpayer election to expense the cost of qualified freight rail infrastructure property (i.e., deduct all costs in the current taxable year).

Source: GAO analysis of legislation introduced in the 110th Congress.

Congress previously established two commissions to study the condition and future needs of the surface transportation system, including financing options. It created the National Surface Transportation Policy and Revenue Study Commission (Policy Commission) to examine the condition and future needs of the nation's surface transportation system and short- and long-term alternatives to replace or supplement the fuel tax as the principal revenue source supporting the Highway Trust Fund. In January 2008, the Policy Commission released its final report. Congress also created the National Surface Transportation Infrastructure Financing Commission and charged it with analyzing future highway and transit needs and the finances of the Highway Trust Fund and with recommending alternative approaches to financing transportation

infrastructure. This commission issued its interim report in February 2008, and its final report is expected in November 2008.

The Nation Faces Significant Challenges Associated with Its Infrastructure

We have previously reported that the nation's surface transportation, aviation, water, and dam systems face numerous challenges related to their infrastructure. Increasing congestion has strained the capacity of our nation's surface transportation and aviation systems, decreasing their overall performance in meeting the nation's mobility needs. Furthermore, significant investments are needed in our nation's drinking and wastewater systems to address deteriorating infrastructure and deferred maintenance. In light of these and other challenges, we have called for a fundamental reexamination of government programs and developed a set of principles that could help guide such a reexamination.

Growing Congestion Challenges the Nation's Surface Transportation System, While Federal Programs Face Funding Uncertainties

Despite increases in transportation spending at all levels of government and improvements to the physical condition of highways and transit facilities over the past 10 years, congestion has worsened and safety gains have leveled off. For example, according to DOT, highway spending by all levels of government has increased 100 percent in real dollar terms since 1980, but the hours of delay during peak travel periods have increased almost 200 percent during the same period. In addition, demand has outpaced the capacity of the system, and projected population growth, technological changes, and increased globalization are expected to further strain the system. We have previously reported that federal surface transportation programs are not effectively addressing these key challenges because federal goals and roles are unclear, many programs lack links to needs or performance, and the programs may not employ the best tools and approaches.[7] In addition, federal transportation funding is generally not linked to specific performance-related goals or outcomes, resulting in limited assurance that federal funding is being channeled to the nation's most critical mobility needs. Federal funding is also often tied to a single transportation mode, which may limit the use of federal funds to finance the greatest improvements in mobility.

[7] GAO, *Surface Transportation: Restructured Federal Approach Needed for More Focused, Performance-Based, and Sustainable Programs,* GAO-08-400 (Washington, D.C.: Mar. 6, 2008).

To address these surface transportation challenges, various stakeholders have called for increasing significantly the level of investment by all levels of government in surface transportation. For example, in its January 2008 report, the Policy Commission recommended that all levels of government and the private sector collectively invest at least $225 billion each year to maintain and improve the surface transportation system, which would be about $140 billion more than is currently invested. However, without significant changes in funding, planned spending, or both, the balance of the Highway Account of the Highway Trust Fund—the major source of federal highway funds—is projected to be exhausted at some point during fiscal year 2009. To address this gap between revenues and spending, in its fiscal year 2009 budget request, the administration proposed granting the Secretary of the Treasury, in consultation with the Secretary of Transportation, the flexibility to transfer funds between the Highway and Transit Accounts of the Highway Trust Fund. However, this solution, if enacted, would provide only a short-term reprieve—both the administration and the Congressional Budget Office project that the balances of the Highway and Transit Accounts would be exhausted by the end of fiscal year 2010.

Increasing Demand Strains the Aviation System and Traditional Funding Approaches

The Federal Aviation Administration (FAA) faces significant challenges in keeping the nation's current airspace system running as efficiently as possible as the demand for air travel increases and the air traffic control system ages. System congestion, and the resulting flight delays and cancellations, are serious problems that have worsened in recent years. For example, according to DOT, 2007 was the second-worst year for delays since 1995. To accommodate current and expected demand for air travel, FAA and aviation stakeholders are developing the Next Generation Air Transportation System (NextGen) to modernize the nation's air traffic control infrastructure and increase capacity. This effort is complex and costly. Although there is considerable uncertainty about how much NextGen will cost, FAA estimates that NextGen infrastructure will cost the federal government between $15 billion and $22 billion through 2025. Other key challenges for FAA include managing a timely acquisition and implementation of NextGen and dealing effectively with the environmental concerns of communities that are adjacent to airports or under the flight paths of arriving and departing aircraft. For example, as we have previously testified, if not adequately addressed, these concerns, particularly about the noise that affects local communities and the

emissions that contribute to global warming, may constrain efforts to build or expand the runways and airports needed to handle the added capacity envisioned for NextGen.[8] In addition, airports face similar funding challenges in attempting to expand their capacity. For example, planned airport development costs total at least $14 billion annually (in 2006 dollars) through 2011—exceeding historical funding levels by about $1 billion per year.

We have previously testified that FAA's current funding mechanisms—the Airport and Airway Trust Fund (Trust Fund) and the U.S. Treasury's general fund—can potentially provide sufficient resources to support FAA activities, including NextGen.[9] However, there are a number of uncertainties—including the future cost of NextGen investment, the volume of air traffic, the future costs of operating the National Airspace System, and the levels of future appropriations for the Airport Improvement Program—that may influence the funding necessary to support FAA's activities. In addition, uncertainties surrounding the status of FAA's reauthorization could have adverse effects on FAA's ability to carry out its mission unless other revenue sources and spending authority are provided. Without legislative action, both the excise taxes that fund the Trust Fund and FAA's authority to spend from the Trust Fund will expire on June 30, 2008. Failing to meet these infrastructure challenges in aviation may have significant economic consequences, since aviation is an integral part of the economy.

Aging and Deteriorating Water Infrastructure Presents Challenges

Water utilities nationwide are under increasing pressure to make significant investments to upgrade aging and deteriorating infrastructures, improve security, serve a growing population, and meet new regulatory requirements.[10] Water infrastructure needs across the country are estimated to range from $485 billion to nearly $1.2 trillion over the next 20 years. According to the Environmental Protection Agency's (EPA) June 2005 Drinking Water Infrastructure Needs Survey, the largest category of

[8]GAO, *Federal Aviation Administration: Challenges Facing the Agency in Fiscal Year 2009 and Beyond*, GAO-08-460T (Washington, D.C.: Feb. 7, 2008).

[9]GAO-08-460T.

[10]In October 2007, EPA made several changes to the monitoring and public notice provisions in the Lead and Copper Rule under the Safe Drinking Water Act, the principal federal regulation protecting public water system consumers from exposure to lead and copper in drinking water.

need is the installation and maintenance of transmission and distribution systems—accounting for $183.6 billion, or about 66 percent of the needs projected through 2022. For wastewater systems, EPA's 2004 Clean Watersheds Needs Survey projected infrastructure-related needs for publicly owned wastewater systems of $202.5 billion through 2024.[11] Many drinking water and wastewater utilities have had difficulty raising funds to repair, replace, or upgrade aging capital assets; comply with regulatory requirements; and expand capacity to meet increased demand. For example, based on a nationwide survey of several thousand drinking water and wastewater utilities, we reported in 2002 that about one-third of the utilities (1) deferred maintenance because of insufficient funds, (2) had 20 percent or more of their pipelines nearing the end of their useful life, and (3) lacked basic plans for managing their capital assets.[12] Other GAO work suggests that the nation's water utilities could more effectively manage their infrastructure at a time when significant investments are needed.[13]

Several factors have contributed to the nation's deteriorating water infrastructure over the years. The adequacy of available funds, in particular, has been a key determinant of how well utility infrastructure has been maintained. However, according to our nationwide survey, a significant percentage of the utilities serving populations of 10,000 or more—29 percent of the drinking water utilities and 41 percent of the wastewater utilities—were not generating enough revenue from user charges and other local sources to cover their full costs of service. In addition, when asked about the frequency of rate increases during the period from 1992 to 2001, more than half the utilities reported raising their rates infrequently: once, twice, or not at all over the 10-year period. Citing communities' funding difficulties, many have looked to the federal government for financial assistance. However, if budgetary trends over the past few years serve as any indication, federal funding will not close the gap. For example, the trends and overall funding levels associated with the Clean Water and Drinking Water State Revolving Funds, the key federal programs supporting water infrastructure financing, suggest that they will

[11]U.S. Environmental Protection Agency, *Clean Watersheds Needs Survey 2004 Report to Congress*, (Washington, D.C.: January 2008).

[12]GAO, *Water Infrastructure: Information on Financing, Capital Planning, and Privatization*, GAO-02-764 (Washington, D.C.: Aug. 16, 2002).

[13]GAO, *Water Infrastructure: Comprehensive Asset Management Has Potential to Help Utilities Better Identify Needs and Plan Future Investments*, GAO-04-461 (Washington, D.C.: Mar. 19, 2004).

have only a marginal impact in closing the long-term water infrastructure funding gap. We have previously reported that comprehensive asset management, a technique whereby water systems systematically identify their needs, set priorities, and better target their investments, can help utilities make better us of available funds. Additional funds, however, will ultimately be needed to narrow the funding gap.

Aging Dam Infrastructure Raises Safety and Funding Challenges

Our nation's dam infrastructure is an important component of the nation's water control infrastructure, supplying such benefits as water for drinking, irrigation, and industrial uses; flood control; hydroelectric power; recreation; and navigation.[14] However, as evidenced by the events of Hurricanes Katrina and Rita, the failure of dam infrastructure, which includes levees, also represents a risk to public safety, local and regional economies, and the environment. In particular, the aging of dam infrastructure in the United States continues to be a critical issue for dam safety because the age of dams is a leading indicator of potential dam failure.[15] According to the American Society of Civil Engineers, the number of unsafe dams has risen by more than 33 percent since 1998, to more than 3,500 in 2005.[16] In addition, the number of dams identified as unsafe is increasing faster than the number of dams that are being repaired.

To address the challenges facing our nation's dams, the Federal Emergency Management Agency and the National Dam Safety Review Board identified both short- and long-term goals and priorities for the National Dam Safety Program[17] over the next 5 to 10 years. They include identifying and remedying deficient dams, increasing dam inspections, increasing the number of and updating of Emergency Action Plans, achieving the participation of all states in the National Dam Safety Program, increasing research products disseminated to the dam safety community, and achieving cost efficiencies. However, according to the

[14]The term "dam" includes conventional dams, navigation locks, levees, canals (excluding channels), or other similar types of water retention structures.

[15]A number of factors, including age, construction deficiencies, inadequate maintenance, and seismic or weather events contribute to the likelihood of dam failure.

[16]American Society of Civil Engineers, *2005 Report Card for America's Infrastructure*, March 2005.

[17]The National Dam Safety Program, which is administered by FEMA, is a partnership of the states, federal agencies, and other stakeholders to encourage individual and community responsibility for dam safety.

Congressional Research Service, most federal agencies do not have funding available to immediately undertake all nonurgent repairs, and at some agencies, dam rehabilitation projects must compete for funding with other construction projects.[15] The Association of State Dam Safety Officials reported similar funding constraints on dam investment at the state level.

GAO Principles Could Guide Efforts to Reexamine Federal Programs in Light of Challenges

Given the nation's infrastructure challenges and the federal government's fiscal outlook, we have called for a fundamental reexamination of government programs. Addressing these challenges requires strategic approaches, effective tools and programs, and coordinated solutions involving all levels of government and the private sector.[16] Yet in many cases, the government is still trying to do business in ways that are based on conditions, priorities, and approaches that were established decades ago and are not well suited to addressing 21st century challenges. A reexamination offers an opportunity to address emerging concerns by eliminating outdated or ineffective programs, more sharply defining the federal role in relation to state and local roles, and modernizing those programs and policies that remain relevant. Through our prior analyses of existing programs, we identified a number of principles that could help drive an assessment for restructuring and financing the federal surface transportation program. While these principles are designed specifically to reexamine the surface transportation programs, most, if not all of these principles could be informative as policymakers consider how to address challenges facing other federal infrastructure programs. These principles include

- creating well-defined goals based on identified areas of national interest, which involves examining the relevance and relative priority of existing programs in light of 21st century challenges and identifying emerging areas of national importance;
- establishing and clearly defining the federal role in achieving each goal in relation to the roles of state and local governments, regional entities, and the private sector;

[15]Congressional Research Service, CRS Report for Congress, *Aging Infrastructure: Dam Safety*, updated March 25, 2008.

[16]GAO, *21st Century Challenges: Reexamining the Base of the Federal Government*, GAO-05-325SP (Washington, D.C.: Feb. 2005).

- incorporating performance and accountability into funding decisions to ensure resources are targeted to programs that best achieve intended outcomes and national priorities;
- employing the best tools, such as benefit-cost analysis, and approaches to emphasize return on investment at a time of constrained federal resources; and
- ensuring fiscal sustainability through targeted investments of federal, state, local, and private resources.

Various Options Are Available or Have Been Proposed to Fund Investments in the Nation's Infrastructure

Various options exist or have been proposed to fund investments in the nation's infrastructure. These options include altering existing or introducing new funding approaches and employing various financing mechanisms. In addition, some have suggested including an infrastructure component in a future economic stimulus bill, which could provide a one-time infusion of funds for infrastructure. Each of these options has different merits and challenges, and the selection of any of them will likely involve trade-offs among different policy goals. Furthermore, the suitability of any of these options depends on the level of federal involvement or control that policymakers desire for a given area of policy. However, as we have reported, when infrastructure investment decisions are made based on sound evaluations, these options can lead to an appropriate blend of public and private funds to match public and private costs and benefits.[20] To help policymakers make explicit decisions about how much overall federal spending should be devoted to infrastructure investment, we have previously proposed establishing an investment component within the unified budget.

Funding Approaches Can Be Altered or Developed to Help Fund Infrastructure Investments

Various existing funding approaches could be altered or new funding approaches could be developed to help fund investments in the nation's infrastructure. These various approaches can be grouped into two categories: taxes and user fees.

[20]GAO, *Freight Transportation: Strategies Needed to Address Planning and Financing Limitations*, GAO-04-165 (Washington D.C.: Dec. 19, 2003).

A variety of taxes have been and could be used to fund the nation's infrastructure, including excise, sales, property, and income taxes. For example, federal excise taxes on motor fuels are the primary source of funding for the federal surface transportation program. Fuel taxes are attractive because they have provided a relatively stable stream of revenues and their collection and enforcement costs are relatively low. However, fuel taxes do not currently convey to drivers the full costs of their use of the road—such as the costs of wear and tear, congestion, and pollution. Moreover, federal motor fuel taxes have not been increased since 1993—and thus the purchasing power of fuel taxes revenues has eroded with inflation. As Congressional Budget Office (CBO) has previously reported, the existing fuel taxes could be altered in a variety of ways to address this erosion, including increasing the per-gallon tax rate and indexing the rates to inflation.[21] Some transportation stakeholders have suggested exploring the potential of using a carbon tax, or other carbon pricing strategies, to help fund infrastructure.[22] In a system of carbon taxes, fossil fuel emissions would be taxed, with the tax proportional to the amount of carbon dioxide released in the fuel's combustion. Because a carbon tax could have a broad effect on consumer decisions, we have previously reported that it could be used to complement Corporate Average Fuel Economy standards, which require manufacturers meet fuel economy standards for passenger cars and light trucks to reduce oil consumption.[23] A carbon tax would create incentives that could affect a broader range of consumer choices as well as provide revenue for infrastructure.

Another funding source for infrastructure is user fees. The concept underlying user fees—that is, users pay directly for the infrastructure they use—is a long-standing aspect of many infrastructure programs. Examples of user fees that could be altered or introduced include airport passenger facility charges; fees for use of air traffic control services; fees based on

[21]CBO, *Status of the Highway Trust Fund: 2007*, March 27, 2007.

[22]Another carbon pricing strategy is a cap-and-trade program, which combines a regulatory limit or cap on the amount of carbon that can be emitted into the atmosphere with market elements such as the opportunity to buy additional allowances to emit additional carbon. Auctioning the allowances of a cap-and-trade program would generate revenue for the government, which could be used for a variety of purposes, including infrastructure investments.

[23]GAO, *Vehicle Fuel Economy: Reforming Fuel Economy Standards Could Help Reduce Oil Consumption by Cars and Light Trucks, and Other Options Could Complement These Standards*, GAO-07-921 (Washington, D.C.: Aug. 2, 2007).

vehicle miles traveled (VMT) on roadways; freight fees, such as a per-container charge; highway tolls; and congestion pricing of roads and aviation infrastructure.

- **Aviation user fees.** Many commercial airports currently impose a user fee on passengers—referred to as a passenger facility charge—to fund airport capital projects.[24] Over $2 billion in passenger facility charge revenues are collected by airports each year, representing an important source of funding for airport capital projects. In contrast, FAA's activities, including the transition to NextGen, are largely funded by excise taxes through the Airport and Airway Trust Fund. To better connect FAA's revenues with the cost of air traffic control services that FAA provides, the administration has proposed, in its FAA reauthorization bill, to replace this excise tax funding system with a cost-based user fee system. This new system would aim to recover the costs of providing air traffic control services through user fees for commercial operators and aviation fuel taxes for general aviation. According to the administration, cost-based user charges would link revenues more closely to costs and could create incentives for more efficient use of the system by aircraft operators. We have previously testified that a better alignment of FAA's revenues and costs can address concerns about long-term revenue adequacy, equity, and efficiency as intended, but the ability of the proposed funding structure to link revenues and costs depends critically on the soundness of FAA's cost allocation system in allocating costs to users. We found that the support for some of FAA's cost allocation methodology's underlying assumptions and methods is insufficient, leaving FAA unable to conclusively demonstrate the reasonableness of the resulting cost assignments.[25]

- **VMT fees.** To more directly reflect the amount a vehicle uses particular roads, users could be charged a fee based on the number of vehicle miles traveled. In 2006, the Oregon Department of Transportation conducted a pilot program designed to test the technological and administrative feasibility of a VMT fee. The pilot program evaluated whether a VMT fee could be implemented to replace motor fuel taxes as the principal source of transportation revenue by utilizing a Global Positioning System (GPS) to track miles driven and collecting the VMT fee ($0.012 per mile traveled) at fuel pumps that can read information from the GPS.[26] As we have

[24]The majority of commercial airports charge a passenger facility charge of between $1 and $4.50 per enplaned passenger.

[25]GAO-08-460T.

[26]Oregon's Mileage Fee Concept and Road User Fee Pilot Program: Final Report.

previously reported, using a GPS could also be used to track mileage in high-congestion zones, and the fee could be adjusted upward for miles driven in these areas or during more congested times of day such as rush hour—a strategy that might reduce congestion and save fuel.[27] In addition, the system could be designed to apply different fees to vehicles, depending on their fuel economy. On the federal level, a VMT fee could be based on odometer readings, which would likely be a simpler and less costly way to implement such a program. A VMT fee—unless it is adjusted based on the fuel economy of the vehicle—does not provide incentives for customers to buy vehicles with higher fuel economy ratings because the fee depends only on mileage. Also, because the fee would likely be collected from individual drivers, a VMT fee could be expensive for the government to implement, potentially making it a less cost-effective approach than a motor fuel or carbon tax. The Oregon study also identified other challenges including concerns about privacy and technical difficulties in retrofitting vehicles with the necessary technology.

- **Freight fees.** Given the importance of freight movement to the economy, the Policy Commission recently recommended a new federal freight fee to support the development of a national program aimed at strategically expanding capacity for freight transportation.[28] While the volume of domestic and international freight moving through the country has increased dramatically and is expected to continue growing, the capacity of the nation's freight transportation infrastructure has not increased at the same rate as demand.[29] To support the development of a national program for freight transportation, the Policy Commission recently recommended the introduction of a federal freight fee. The Policy Commission notes that a freight fee, such as a per-container charge, could help fund projects that remedy chokepoints and increase throughput. The Policy Commission also recommended that a portion of the customs duties, which are assessed on imported goods, be used to fund capacity improvements for freight transportation. The majority of customs duties currently collected, however, are deposited in the U.S. Treasury's general fund for the general support of federal activities.[30] Therefore, designating a

[27] GAO-07-921.

[28] *Transportation for Tomorrow: Report of the National Surface Transportation Policy and Revenue Study Commission*, January 2008.

[29] GAO, *Freight Transportation: National Policy and Strategies Can Help Improve Freight Mobility*, GAO-08-287 (Washington, D.C.: Jan. 7, 2008).

[30] GAO, *Marine Transportation: Federal Financing and a Framework for Infrastructure Investments*, GAO-02-1033 (Washington, D.C.: Sept. 9, 2002).

portion of customs duties for surface transportation financing would not create a new source of revenue, but rather transfer funds from the general fund.

- **Tolling.** We have previously reported that roadway tolling has the potential to provide new revenues, promote more effective and rational investment strategies, and better target spending for new and expanded capacity for surface transportation infrastructure.[31] For example, the construction of toll projects is typically financed by bonds; therefore, projects must pass the test of market viability and meet goals demanded by investors, although even with this test, there is no guarantee that projects will always be viable. Tolling potentially can also leverage existing revenue sources by increasing private-sector participation and investment through such arrangements as public-private partnerships. However, securing public and political support for tolling can prove difficult when the public and political leaders perceive tolling (1) as a form of double taxation, (2) unreasonable because tolls do not usually cover the full costs of projects, or (3) unfair to certain groups. Other challenges include obtaining sufficient statutory authority to toll, adequately addressing the traffic diversion that might result when motorists seek to avoid toll facilities, limitations on the types of roads that can be tolled, and coordinating with other states or jurisdictions on a tolling project.

- **Congestion pricing.** As we have previously reported, congestion pricing, or road pricing, attempts to influence driver behavior by charging fees during peak hours to encourage users to shift to off-peak periods, use less congested routes, or use alternative modes. Congestion pricing can also help guide capital investment decisions for new transportation infrastructure. In particular, as congestion increases, tolls also increase, and such increases (sometimes referred to as "congestion surcharges") signal increased demand for physical capacity, indicating where capital investments to increase capacity would be most valuable. Furthermore, these congestion surcharges can potentially enhance mobility by reducing congestion and the demand for roads when the surcharges vary according to congestion to maintain a predetermined level of service. The most common form of congestion pricing in the United States is high-occupancy-toll lanes, which are priced lanes that offer drivers of vehicles that do not meet the occupancy requirements the option of paying a toll to

[31] GAO, *Highway Finance: States' Expanding Use of Tolling Illustrates Diverse Challenges and Strategies*, GAO-06-554 (Washington, D.C.: June 28, 2006).

use lanes that are otherwise restricted for high-occupancy vehicles. In its FAA reauthorization proposal, the administration proposed extending congestion pricing to the aviation sector as a means of managing air traffic congestion. Specifically, the administration proposed that FAA establish a fee based on time of day or day of the week for aircraft using the nation's most congested airports to discourage peak-period traffic. Under such a fee, cargo carriers could pay lower fees by operating at night than they would pay by operating at peak periods of the day, creating an incentive for some cargo carriers to switch daytime operations to nighttime. Like tolling, congestion pricing proposals often arouse political and public opposition, raise equity concerns, and face statutory restrictions.

Various Financing Mechanisms Can Also Help Fund Infrastructure Projects

Financing strategies can provide flexibility for all levels of government when funding additional infrastructure projects, particularly when traditional pay-as-you-go funding approaches, such as taxes or fees, are not set at high enough levels to meet demands. The federal government currently offers several programs to provide state and local governments with incentives such as bonds, loans, and credit assistance to help finance infrastructure. Financing mechanisms can create potential savings by accelerating projects to offset rapidly increasing construction costs and offer incentives for investment from state and local governments and from the private sector. However, each financing strategy is, in the final analysis, a form of debt that ultimately must be repaid with interest. Furthermore, since the federal government's cost of capital is lower than that of the private sector, financing mechanisms, such as bonding, may be more expensive than timely, full, and up-front appropriations. Finally, if the federal government chooses to finance infrastructure projects, policy makers must decide how borrowed dollars will be repaid, either by users or by the general population either now or in the future through increases in general fund taxes or reductions in other government services.

A number of available mechanisms can be used to help finance infrastructure projects. Examples of these financing mechanisms follow:

Bonding. A number of bonding strategies—including tax-exempt bonds,[32] Grant Anticipation Revenue Vehicles (GARVEE) bonds, and Grant Anticipation Notes (GAN)—offer flexibility to bridge funding gaps when traditional revenue sources are scarce. For example, state-issued GARVEE bonds or GANs provide capital in advance of expected federal funds, allowing states to accelerate highway and transit project construction and thus potentially reduce construction costs. Through April 2008, 20 states and two territories issued approximately $8.2 billion of GARVEE-type debt financing and 20 other states are actively considering bonding or seeking legislative authority to issue GARVEEs. Further, SAFETEA-LU authorized the Secretary of Transportation to allocate $15 billion in private activity bonds for qualified highway and surface freight transfer facilities. To date, $5.3 billion has been allocated for six projects. In aviation, most commercial airports issue a variety of bonds for airport capital improvements, most notably general revenue bonds that are backed by general revenues from the airport—including aircraft landing fees, concessions, and parking fees—and passenger facility charges. Several bills introduced in this Congress would increase investment in the nation's infrastructure through bonding. For example, the Build America Bonds Act would provide $50 billion in new infrastructure funding through bonding. Although bonds can provide up-front capital for infrastructure projects, they can be more expensive for the federal government than traditional federal grants. This higher expense results, in part, because the government must compensate the investors for risks they assumed through an adequate return on their investment.

- **Loans, loan guarantees, and credit assistance.** The federal government currently has two programs designed to offer credit assistance to states for surface transportation projects. The Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA) authorized FHWA to provide credit assistance, in the form of direct loans, loan guarantees, and standby lines of credit for projects of national significance. A similar program, Railroad Rehabilitation and Improvement Financing (RRIF) offers loans to acquire, improve, develop, or rehabilitate intermodal or rail equipment or facilities. To date, 15 TIFIA projects have

[32]Tax-exempt bonds are government bonds that are used for purposes such as infrastructure, schools, libraries, general municipal expenditures or refunding of old debt. Tax-exempt means that the interest paid to bondholders is generally not included in their gross income for federal income tax purposes. Examples of tax-exempt bonds include municipal bonds, and private activity bonds that allow tax-exempt debt to be used by private entities to help finance qualified facilities.

been approved for a total of about $4.8 billion in credit assistance and the RRIF program has approved 21 loan agreements worth more than $747 million. These programs are designed to leverage federal funds by attracting substantial nonfederal investments in infrastructure projects. However, the federal government assumes a level of risk when it makes or guarantees loans for projects financed with private investment.[33]

- **Revolving funds.** Revolving funds can be used to dedicate capital to be loaned for qualified infrastructure projects. In general, loaned dollars are repaid, recycled back into the revolving fund, and subsequently reinvested in the infrastructure through additional loans. Such funds exist at both the federal and the state levels and are used to finance various infrastructure projects ranging from highways to water mains. For example, two federal funds support water infrastructure financing, the Clean Water State Revolving Fund (CWSRF) for wastewater facilities, and the Drinking Water State Revolving Fund (DWSRF) for drinking water facilities. Under each of these programs, the federal government provides seed money to states, which they supplement with their own funds. These funds are then loaned to local governments and other entities for water infrastructure construction and upgrades and various water quality projects. In addition, State Infrastructure Banks (SIB)—capitalized with federal and state matching funds—are state-run revolving funds, make loans and provide credit enhancements and other forms of nongrant assistance to infrastructure projects. Through June 2007, 33 SIBs have made approximately 596 loan agreements worth about $6.2 billion to leverage other available funds for transportation projects across the nation.[34] Furthermore, other funds—such as a dedicated national infrastructure bank—have been proposed to increase investment in infrastructure with a national or regional significance. A challenge for revolving funds in general is maintaining their capitalized value. Defaults on loans and inflation can reduce the capitalized value of the fund—necessitating an infusion of capital to continue the fund's operations.

[33]According to DOT, federal requirements necessitate that a credit risk premium be provided to insure the federal government against the risk of loans defaulting. As a result, these loans are closely examined for risk of loss and, to date, none of the TIFIA or RRIF loans have defaulted.

[34]Eight states—Arizona, Florida, Minnesota, Missouri, Ohio, South Carolina, Texas, and Wyoming—account for 95 percent of the total loan agreements reached through fiscal year 2006.

Designing an Economic Stimulus Package to Increase Infrastructure Investment Would Be Difficult

Another option proposed for temporarily increasing investment in the nation's infrastructure is including an investment component in a future economic stimulus bill. According to supporters, including funding for "ready to build" infrastructure projects in a stimulus bill would serve to both boost the economy and improve the nation's infrastructure through a one-time infusion of funds. For example, the American Association of State Highway and Transportation Officials estimates 42,000 jobs are created for every $1 billion dollars invested in transportation projects.

We have previously identified important design criteria for any economic stimulus package.[38] Specifically:

- **Economic stimulus package should be timely.** An economic stimulus should not be enacted prematurely, delayed too long, or consist of programs that would take too long to be implemented to lessen any economic downturn. For example, if fiscal stimulus is undertaken when it is not needed, it could result in higher inflation or if fiscal stimulus is enacted too slowly, it could take effect after the economy has already started to recover.

- **Economic stimulus package should be temporary.** An economic stimulus should be designed to raise output in the short run, but should not increase the budget deficit in the long-run. If a stimulus program is not temporary and continues after the economy recovers, it could lead to higher inflation.

- **Economic stimulus package should be targeted.** An economic stimulus should be targeted to areas that are most vulnerable in a weakening economy and should generate the largest possible increase in short-run gross domestic product.

Designing and implementing an economic stimulus package with an infrastructure investment component that is timely, temporary, and targeted would be difficult. First, while an effective stimulus package should be timely, practically speaking, infrastructure projects require lengthy planning and design periods. According to CBO, even those projects that are "on the shelf" generally cannot be undertaken quickly enough to provide a timely stimulus to the economy.[39] Second, spending on

[38] GAO-08-411T.

[39] CBO, *Options for Responding to Short-Term Economic Weakness*, January 2008.

infrastructure is generally not temporary because of the extended time frames needed to complete projects. For example, initial outlays for major infrastructure projects supported by the federal government, such as highway construction, often total less than 25 percent of the total funding provided for the project. Furthermore, the initial rate of spending can be significantly lower than 25 percent for large projects.[37] Third, because of differences among states, it is challenging to target stimulus funding to areas with the greatest economic and infrastructure needs. For example, two possible indicators for targeting infrastructure aid to states, gross state product and lane miles per capita, are not correlated. Furthermore, as we have previously reported, states tend to substitute federal funds for funds they would have otherwise spent—making it difficult to target a stimulus package so that it results in a dollar-for-dollar increase in infrastructure investment.[38]

Investment Component within Unified Budget Could Guide Federal Investment in Infrastructure

We have previously reported that the budget process can favor consumption over investment because the initial cost of an infrastructure project looks high in comparison to consumption spending.[39] Thus, adopting a capital budget is suggested as a way to eliminate a perceived bias against investments requiring large up-front spending when they compete with other programs in a unified budget. However, proposals to adopt a capital budget at the federal level often start with certain concepts and models extended from state and local governments and the private sector, which are not appropriate because of fundamental differences in the role of the federal government. Specifically, when state and local governments and the private sector make investments, they typically own the resulting assets, while this is frequently not the case for the federal government. For example, although the federal government invests in surface transportation, aviation, water, and dam infrastructure, a significant portion of this infrastructure is owned by state and local governments. This makes it difficult to fully apply traditional capital

[37] CBO, *Options for Responding to Short-Term Economic Weakness*, January 2008.

[38] GAO, *Federal-Aid Highways: Trends, Effect on State Spending, and Options for Future Program Design*, GAO-04-802 (Washington, D.C.: Aug. 31, 2004).

[39] See GAO, *Budget Trends: Federal Investment Outlays, Fiscal Years 1981-2003*, GAO/AIMD-98-184 (Washington, D.C.: June 15, 1998); *Budget Structure: Providing an Investment Focus in the Federal Budget*, GAO/T-AIMD-95-178 (Washington, D.C.: June 29, 1995); and *Budget Issues: Incorporating an Investment Component in the Federal Budget*, GAO/AIMD-94-46 (Washington, D.C.: Nov. 9, 1993).

budgeting approaches, such as depreciation, which might be considered when assets are fully owned. Moreover, there are fundamental differences between the roles of the state and local governments and the federal government. In an inclusive, unified budget, it is important to disclose up front the full commitments of the government. Federal fiscal policy, as broadly conceived, plays a key role in managing the short-term economy as well as promoting the savings needed for long-term growth.

Rather than recommend adopting a capital budget, we have previously proposed establishing an investment component within the unified budget to address federal spending intended to promote the nation's long-term economic growth.[40] By recognizing the different effects of various types of federal spending, an investment focus within the budget would provide a valuable supplement to the unified budget's concentration on macroeconomic issues. Moreover, it would direct attention to the consequences of choices within the budget under existing budget limitations—a level which is now not determined explicitly by policymakers but is simply the result of numerous individual decisions. If an investment component within the unified budget was adopted, Congress could decide on an overall level of investment in a budget resolution or other macro framework, which would be tracked and enforced through the authorizing and appropriations process to ensure that individual appropriations actions supported the overall level. This approach has the advantage of focusing budget decision makers on the overall level of investment supported in the budget without losing sight of the unified budget's effect on the economy. It also has the advantage of building on the current congressional budget process. Finally, it does not raise the problems posed by capital budgeting proposals that use depreciation and deficit financing.[41]

[40]GAO, *Budget Trends: Federal Investment Outlays, Fiscal Years 1981-2002*, GAO/AIMD-97-88 (Washington, D.C.: May 1997), GAO/AIMD-95-178, and GAO/AIMD-94-40. Numerous definitions of investment are possible and can include more than physical capital. We have reported that an appropriate definition would include federal spending, either direct or through grants, directly intended to enhance the nation's long-term productivity. This definition includes spending on some intangible activities such as research and development; human capital designed to increase worker productivity, particularly education and training; and spending for physical capital to improve infrastructure, such as highways and bridges.

[41]Paul Posner, Trina Lewis, and Hannah Laufe, *Budgeting for Federal Capital* (Washington, D.C.: Public Budgeting and Finance, Fall 1998).

Although the investment component would be subject to budget controls, the existence of a separate component could create an incentive to categorize many proposals as investment. If an investment component within the budget is to be implemented in a meaningful fashion, it will be important to identify what to include. Any changes in the budgetary treatment of investment need to consider broader federal responsibilities. While well-chosen investments may contribute to long-term growth, financing such programs through deficits would undermine their own goal by reducing savings available to fund private investment.[42] Accordingly, reforms in the federal government's budget for investment should be considered within the overall constraints of fiscal policy based on unified budget principles.

Concluding Observations

The nation's physical infrastructure is under strain, raising a host of safety, security, and economic concerns. Given these concerns, various investment options have been, and likely will continue to be, identified to help repair, upgrade, and expand our nation's infrastructure. Ultimately, Congress and other federal policymakers will have to determine which option—or, more likely, which combination of funding and financing options—best meets the needs of the nation. There is no silver bullet. Moreover, although financing mechanisms allow state and local governments to advance projects when traditional pay-as-you-go funding approaches, such as taxes and fees, are insufficient, ultimately these borrowed dollars must be repaid by the users or the general population. Consequently, prudent decisions are needed to determine the appropriate level of infrastructure investment and to maximize each dollar invested. We will continue to assist the Congress as it works to evaluate various investment options and develop infrastructure policies for the 21st century.

Messrs. Chairmen, this concludes my prepared statement. I would be pleased to respond to any questions that you or other Members of the Committee might have.

[42]Because the deficit absorbs private savings otherwise available for domestic investment, it exerts the single most important federal influence on investment. The surest way to increase national savings and investment would be to reduce the unprecedented level of federal dissaving by reducing the deficit.

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Chairman SPRATT. Thank you very much. Just to start off the questions. We have had several hearings here at which the topic of capital budgeting has been raised as if it is a beginning at least towards more rational planning, more rational budgeting and funding of infrastructure projects. How would we take the Federal budget and recast it into capital and noncapital operating budgets? Is that a viable idea and does it accomplish anything that we couldn't do by other means just as easily?

Mr. ORSZAG. I guess I will start on that, Mr. Chairman. As you know, we released a study this morning on a capital budget. And let's separate how you would do it from whether you would want to. With regard to whether you would want to, there are trade offs, but I would note it is awkward to move to accrual accounting,

which is what a capital budget is, just for part of the budget. Most of the budget is cash based. And moving to accrual accounting for capital spending but not for entitlement spending or lots of other parts of the budget is an awkwardness and it raises the question of whether one should move to full accrual accounting. And on that, I would just note that there are lots of countries that have evaluated that question, decided not to do it and that also there are many countries that have not moved to a capital budget for precisely that reason, that it is awkward to do it just for this part of the budget. Secondly, that if you were going to do it, just for part of the budget, there is a lot of pressure that would come to bear on the definition of what capital is. So if you have one system for capital and another system for noncapital, it becomes very attractive to start labeling everything as capital and one would have to pay particular attention to the definition of capital spending.

With regard to how you could do it, that is frankly not as complicated as the normative question of whether you should. It would involve simply taking out—moving away from a cash basis system of accounting for capital investments, however defined, instead of when you buy something for a dollar of capital, that currently is scored as a dollar. Instead, what would happen is that you would not score that dollar; but instead as the capital depreciated, there would be an allocation each year, a charge each year for the depreciation.

Chairman SPRATT. Ms. Dalton, do you have any observation about capital budgeting and what it might offer us?

Ms. DALTON. The one additional point I would make is one thing to consider where I don't think it will work very well at the Federal level is that we don't own a lot of the infrastructure. We do fund a lot of it, but it is owned at the State and local levels. So therefore, when you are looking at capital budgeting, fundamentally it assumes that you are owning the infrastructure and from an accrual basis, you are using that asset over time and depreciating that. When the Federal Government doesn't own the infrastructure, you don't have that opportunity from an accounting standpoint.

Chairman SPRATT. Would human investments be considered—could they be considered a capital investment as part of the capital budgeting?

Mr. ORSZAG. Well, I think you're touching upon one of the tensions which is that the theory behind a capital budget is that there are things that we pay for today that have long-term economic benefits. It is traditionally interpreted as physical capital, but many of the same arguments would apply to research and development spending, to education spending. Some people would even argue things like——

Chairman SPRATT. Do you need a discrete or several discrete revenue streams or income streams that you can then attach, levy or tax in order to repay the front-end capital costs?

Mr. ORSZAG. Not conceptually with regard to a capital budget. You do need that sort of thing with regard to other financing mechanisms that have been under discussion. But with regard to a capital budget by itself, you know, conceptually at least you could just say that amount of capital or that definition of capital is not count-

ed when it is purchased but rather as it depreciates. And that can be independent of whether there are user fees or specific tax revenues that are tied to that capital.

Chairman SPRATT. And how would you treat the funding of capital projects differently from, say, other projects which is funded on a year-to-year basis? Would you borrow and then have an identified source of money to pay back the capital outlays?

Mr. ORSZAG. Well, one of the consequences, again, would be—and maybe this is getting to your question—one of the consequences would be there would be more of a divergence than currently exists between the reported deficit and the amount of financing that the Federal Government would require. So if we went out and we purchased a dollar of investment goods or of capital goods and that was excluded from the budget, only the depreciation would be counted in future years, we would still need to finance that dollar in terms of borrowing or some other financing mechanism. And that would be another source of divergence between the reported deficit and the treasury's borrowing needs.

Chairman SPRATT. Ms. Dalton?

Ms. DALTON. There is nothing I could add to that.

Chairman SPRATT. There are different ideas being proposed that would give us a different way of identifying activities that generate expenses and are different from—that could be used to complement existing revenue sources. The gasoline tax, for example, which could be complemented by a congestion tax. Is a potential congestion tax sufficient to really put much stock in what could be done with it in terms of financing capital improvements and highway improvements, transportation improvements of various kinds?

Mr. ORSZAG. I will take a crack at that. Congestion pricing has—it is almost a twofer. It has two potential benefits. I know there are concerns about it that we could talk about also, but it has two significant benefits. First it could raise revenue that could be used to finance new investments; and secondly, it reduces the amount of investment that is necessary to undertake or to maintain current services or to exhaust the economically beneficial projects that are out there. It allows us to use the infrastructure that we have or that we would build much more efficiently and the evidence on this is very clear. When you price something by time of day or by congestion, you do get the results that you are looking for in terms of reducing congestion costs and more efficiently using the infrastructure that we have. And that would apply to highways. It applies frankly to landing rights at airports. It applies in lots of different settings.

Chairman SPRATT. You can see how cities like London and New York can apply taxes of this kind. But is it feasible for the Federal Government to apply a congestion tax which depends very much on local conditions?

Ms. DALTON. You are correct, Mr. Chairman, in that it does depend on local conditions. And traditionally the congestion taxes have been imposed at the local level or the State level reflecting the demand on the infrastructure in trying to spread that demand over time usually.

Mr. ORSZAG. But, for example—and I agree that this is traditionally not a Federal role. But, for example, one could construct sce-

narios or policy options—I will just give you one possibility—that you could require a higher State and local match on Federal grants for projects that do not have congestion pricing relative to those that do. There are lots of different ways that you can have the Federal Government encourage this and try to recapture some of the potential benefits.

Chairman SPRATT. Thank you very much. Let me turn now to Mr. Simpson.

Mr. SIMPSON. Thank you, Mr. Chairman. And thank you for setting up this hearing. I appreciate it. It is a subject that is of interest to me and should be of interest to all of us, because, you know, no matter where you travel in the world, you come back with the conclusion that one of the reasons that we have become the strong economy of the world is because of our infrastructure and the investment that we have made in it over the years, that our forefathers made in it.

In fact, it is kind of interesting, I would have liked to have heard the debate when the Eisenhower administration proposed the interstate highway system. I am sure the debate was are you kidding me, we are not going to need interstates in Idaho and Montana and Wyoming. And in fact, when they built them there, I can remember driving 50 miles down the road and never passing another car. And while it was real nice, now those areas—actually some of them have some pretty good congestion in them. Those were forward looking individuals that did that. And I am afraid that we haven't done the same or aren't doing the same and future generations are going to pay for that if we don't invest in the infrastructure of this country, not only roads and bridges and railways and waterways, and as you said, our water systems and so forth. Let me ask you, does capital budgeting make much sense without capital planning?

Ms. DALTON. I certainly don't believe so. I think one of the things that we need to be looking at is having a comprehensive capital plan identifying what we are trying to achieve, what our goals are, what the role we should be having in this infrastructure or any type of capital expenditures so that we have a way to prioritize what needs to be done. Clearly there is an awful lot that we need, we would like. What are our highest priorities and how do we set those. I think a capital planning approach would assist in that decision making.

Mr. ORSZAG. And I would just agree that again, the return to different projects vary substantially and just kind of throwing money at infrastructure does not get you what at least economists would hope for.

Mr. SIMPSON. Let me express one of my frustrations that I have had here, is that we don't have plans for those kinds of things. And as you know, we are sometimes accused of doing congressional directive spending, otherwise known as earmarking things, which I'm not opposed to. The problem is I never know where that stands in terms of a national need when you start looking at what projects are. And my assumption is that a local person that represents a district knows that district better than I do and so forth. So I have a tendency to listen to them.

But I don't know how it fits the national need. And another example is that I sit on the Energy and Water Subcommittee. The Army Corps of Engineers comes in and wants to dredge harbors to make deepwater harbors and so forth. There are harbors all over this country. And I don't know that there is—well, I know there is not a plan to say how are the ones that we are going to actually make deepwater harbors going to fit into the overall transportation system? We need a plan somehow. Then we've got to sit down and say how are we going to pay for that plan. And it obviously can't be just the gas tax and the local units are about property taxed out. Registration fees in most places are getting high. We've got to find some alternative ways of doing it.

And as we were mentioning before this hearing started, I think people are willing to pay when they see improvement in the system. If they are just hiring more employees and stuff, they have got some concerns. Go ahead and respond if you would like.

Ms. DALTON. One of the things I was going to point out was one of the things that capital planning will do is that it helps you in choosing between projects, because there may be three or four different solutions for a particular problem; which one is the best? A rigorous analysis and evaluation of the project through a capital planning approach lets you choose.

You know, you may be presented with two different things. Well, one person says this is the best; another one will say that. Well, how do you tell? And through that rigorous analysis, hopefully it will lead you to better decision-making, so that the return on that investment will be greater.

What kind of performance can I expect out of a rail project versus building another highway?

Mr. SIMPSON. Mr. Oberstar, I appreciated his opening statement; he seems very interested in this. And I would hope the T&I Committee would actually sit down and take some time and work on how to put together a capital plan, because, to me, that is a multiyear project of putting that together.

Ms. DALTON. It is one of the reasons that we at GAO believe that having an investment component as part of the unified budget would be helpful, in that it would, at least as a start, start beginning together all of the investment projects and efforts that we have under way and identifying them clearly in the budget to assist in making those decisions.

Mr. SIMPSON. Well, as we mentioned earlier, this is something that—I have been interested in the trust funds and how the trust funds are used. And Mr. Blumenauer and I are going to introduce a resolution dealing with the trust funds and studying the trust funds and how they are used. Because sometimes I think they are used improperly or not used as they should be. Some of them are actually growing in amount when we have a need out there.

And I will be talking to you, I am sure, in the near future, as we do that, to see how we can work on that so that we are using the resources appropriately.

And then look at, as I said earlier, how are we going to pay for this? We have got to find some innovative ways to pay for it, some that we probably don't employ right now that are totally different.

So I appreciate it.

And, thank you, Mr. Chairman.

Chairman SPRATT. The Chair recognizes Mr. Smith.

Mr. SMITH. Thank you, Mr. Chairman.

And to our witnesses, I appreciate your time.

In rural Nebraska, we have seen an obvious pattern of economic growth along four-lane interstates or expressways, and certainly our State trust fund is suffering, just like the Federal. And I would say that simply adding the gas tax on a per-gallon basis doesn't really address things long-term, kind of piggybacking off of Mr. Simpson's comments.

But as we do look to the future and some population differences just within Nebraska, we see congestion being addressed using trust fund dollars in the urban areas. I would challenge whether or not that is enough forward-thinking, by merely adding lanes, actual lane miles. Whereas in rural Nebraska we can leverage more economic growth, I think, looking to the future, just as the interstate system did many years ago.

Do you have some suggestions of how dollars should be spent in terms of adding lane miles versus other types of transportation infrastructure?

Ms. Dalton, if you would?

Ms. DALTON. Yes, I think there are some things that can be looked at, because, in some ways, in some areas, you really can't build your way out of the congestion. You have to look at how can we use what we have better.

And there are a number of tools. Congestion pricing is just one of them. There is also technology that can be used. We have seen that here in this area, with some of the lighting systems to get on the interstates and trying to regulate the flow of traffic.

Congestion pricing helps to spread the demand out over time, so that if you are going to travel from 4 o'clock to 6 o'clock in the evenings, it may cost you more than if you are traveling at 6:30 or 3:30. And that just helps move the flow of traffic.

And those are certainly tools that should be used in conjunction with overall infrastructure, construction and development, and trying to look at what are the least expensive but also the most effective alternatives in terms of performance, and what are we trying—it basically gets down to what are we trying to accomplish. If we are trying to reduce congestion, are there ways to spread that out? Do we really need to, as I said, build another lane? Are there alternative transportation systems available, such as bus transit?

Mr. SMITH. I guess also, you know, proactively developing things, rather than just waiting for the auto count to get up to the point where we can react.

Ms. DALTON. Exactly. Right. And you mentioned economic development. You know, where is that development going to occur? Can you anticipate that? And, certainly, if you can anticipate it and build ahead of time and accommodate it, you are in a much stronger position.

That is why oftentimes local governments will, as there is a housing development going in, they work with the developer to build in the infrastructure as part of that development, as one example of trying to anticipate what is going to happen.

Mr. SMITH. I see. Very good.

Dr. Orszag, if you would address, perhaps, any information you might have that speaks to the effectiveness of transportation dollars being spent in more rural areas in a more proactive fashion. Do you guys quantify any of those expenditures and how that is leveraged?

Mr. ORSZAG. No, we haven't.

And I would say most of my written testimony, not surprisingly, given my background and our outlook, is based on cost-benefit analysis and similar things. There obviously are other considerations that policymakers want and do take into account. But it is the case under most cost-benefit analyses that rural projects often don't look as good as projects in more concentrated areas.

Mr. SMITH. And how far into the future would that gauge?

Mr. ORSZAG. It depends on the outlook of the underlying study. Sir, I can't give you a generic answer to that question.

Mr. SMITH. Then, as well, do you ever look at perhaps a multi-State effort?

I mean, the Heartland Expressway is an example in mid-America where it is several States. Actually, Ports-to-Plains Corridor is a multi-State effort, rather than just one State at a time.

Does that get much credit in the big picture?

Mr. ORSZAG. Well, let me sort of broaden the question. It is clear that, as we tried to lay out, infrastructure investments generate additional economic activity. And, obviously, the more that the different components of the system fit together so that you don't have inconsistencies across the Nation's infrastructure, the better, in terms of generating economic activity.

Mr. SMITH. All right.

Thank you, Mr. Chairman.

Chairman SPRATT. Thank you.

Mr. Blumenauer?

Mr. BLUMENAUER. Thank you, Mr. Chairman.

I deeply appreciate having this hearing, and I hope that there will be an opportunity for us to explore in greater detail in the future, because I am concerned.

I heard my friend from Nebraska raise some concerns that he has, in terms of making sure that the infrastructure needs are appropriately met. And I think, from where I sit, the deficiency we have now is not having an overall vision or plan about how the pieces fit together. Because there are some areas, frankly, that may not pencil out in the short term, but they are part of a network. And if we don't have a network, rural America and small-town America is shortchanged.

Too often, we see investments in some rural areas that are just like darts thrown at a map. They have political cache, but they aren't part of meeting the overall needs of agriculture, of electrical infrastructure. And I am hopeful, I know I have been in consultation with my friend from Idaho, about a way to look at the big picture, maybe actually have an infrastructure plan for this century.

Mr. Orszag, something that is not on your plan in terms broken out, but you have "utilities and other," in terms of water infrastructure that is going to probably be the greatest stressor with climate change, with depletion of water supplies, with an aging infrastructure.

These are things that I am hopeful that we, as a Congress, can be able to zero in, flesh out, help have a big picture, and then think about what is economically justifiable and how the pieces fit together.

You have passenger rail, an economically justifiable investment; we don't have an element there. But we have aviation, that with one-third of the trips in this country now 350 miles or less by airplane, that doesn't pencil with $120-a-barrel oil. They economically don't work.

We have the potential, if we could look at it comprehensively, with some modest investment in rail passenger service, to eliminate some of the pressures for aviation, for instance, for airport expansion. We would actually get capacity, and we would be able to have something that would be more pleasurable for the riding public.

Mr. Orszag, we have talked in the past about present-value accounting that currently in a capital budget may help move us in this direction. But there are so many elements here in the transportation system that don't take into account the dollars we know we are going to spend or the cost that we are going to avoid.

Have you had any further thought about what we could do with the Budget Committee to look at this long-term picture of infrastructure investment and ways that we will be able to coax more value out of the system to deal with rail, to deal with water, to deal with surface transportation, motorway, that would reflect avoided costs, that would reflect investments that will make money over time, that would have a fairer application of our budget rules?

Mr. ORSZAG. Well, let me answer that in two ways.

First, we did come out this morning with a report on capital budgeting, in particular. And I can talk more about that.

But, secondly, and part of your question is, what is the long-term benefit or return to these various different investments? And we did try in this document, in the testimony that we prepared, the written testimony, which is longer than normal for us, to go through the evidence on the returns to infrastructure spending. And while they are positive on average, they vary a lot by specific project. And they are also lower than some early estimates from the early 1980s suggested.

So, there is a long-term benefit to additional infrastructure investment. It obviously depends very sensitively on the specific projects, on the specific types of infrastructure.

I would also just note quickly, you had mentioned wastewater and drinking water. We do have estimates in the testimony that is based on previous work by CBO, suggesting that the Nation is spending about $26 billion a year currently on those, and that investments would need to average between $30 billion and $47 billion a year to basically maintain current services and do a little more.

Mr. BLUMENAUER. Thank you. I will look to further examination. I am sorry we were chopped up a little bit.

Mr. Chairman, I appreciate your indulgence and having this hearing.

The point of inquiry, I will warn you, next, Dr. Orszag, when I am sure our paths will cross, is the notion that, if we are able to

actually have a comprehensive infrastructure plan and a vision, whether that wouldn't help us actually coax more value, avoid some of the problems Ms. Dalton is talking about, and be able to put us ahead overall.

Mr. ORSZAG. I just hope our paths don't cross while we are both on bicycles. That could get a little messy.

Mr. BLUMENAUER. Thank you.

Chairman SPRATT. Mr. Baird?

Mr. BAIRD. I thank the Chair.

I thank our distinguished witnesses.

This may have been addressed already. Forgive me. I was at another meeting.

I certainly felt that the most recent stimulus package amounted basically to dropping money out of helicopters and was not our best investment. There are some business provisions of the stimulus package that make sense, but the rebates I did not think did.

We did some surveys in my own State and district about projects which were ready to go, in the sense that they were permitted, designed, could be actually putting people to work in the same time frame it has taken us to get the stimulus package out, and that would produce jobs with paychecks and lasting infrastructure to the good of people for many years to come.

It has been quite frustrating, because there seems to be this sense that—it is a shibboleth but I don't think a fact—that infrastructure investment doesn't stimulate the economy. I wonder if you could talk a little about that, what seems to be received wisdom by the economists' side, but in direct conflict to the evidence I get on the ground when I talk to school boards or local communities, et cetera. Frankly, you walk around these Capitol grounds and you see needed infrastructure repairs right there.

Educate us on this, if you would.

Mr. ORSZAG. I think that one might be for me. Let me say two things.

First, as I tried to indicate earlier, there is a long-term return or a long-term benefit to infrastructure spending. We are now just talking about the degree to which money can flow out the door quickly in a period of economic weakness, which is a different question.

There I have pushed my folks hard. And I would just again say, outside of road resurfacing, where it looks like money can flow more rapidly, that I have been eager to receive the list of specific projects that people believe can move fast. Because it is often the case that, when you start to actually go down those lists—and I don't want to just take it on faith; I want to be looking at the specifics involved—that you get responses like, "Oh, no, we meant we could get it permitted rapidly, not actually have money out the door." The question is, how quickly can money actually go out the door?

Mr. BAIRD. But permitting isn't free. You don't magically get a permit. I mean, someone has to be employed to do the paperwork for the permitting.

And so my belief is there is a continuum of projects in the pipeline, some of which are at the permitting stage, some of which are

at the design stage. People actually get paid money and then pay taxes on that money.

Mr. ORSZAG. Yes. The question is just, what share of the cost of the project is occurring rapidly? And the cost of the permitting process is often only a very small share of the overall cost of the project itself.

So the question is really, what is the spend-out rate? If you are going to spend $100 on this project, what share of that $100 do you get out the door rapidly?

Mr. BAIRD. Let me ask this: If I pump $20 billion into the economy and it is going to transportation infrastructure, whether the money is going to employ a geologist or a hydrologist to work on permitting, even a lawyer, heaven forbid, or whether some of those projects—which I am convinced they are, because my school districts have shown me the plans—actually get some people nailing boards and pulling wire, that is money that is going to a domestic workforce in all of those cases.

And whether or not that permit is done now or 5 years from now is a bit chronologically fungible. But doing it now sets up later projects. So you have to invest in it at some point. So the point is, there are many stages on infrastructure projects that we could invest money in right now.

And the second point is this: Relative to a flat-screen plasma TV made in Korea, that, except for the exchange, the import and export by shipping and the guy that works at Best Buy and gets a 2 percent commission, the stimulus to me and the long-term benefit for our society is vastly superior.

The cost-benefit ratio to the feds and the public of building a water treatment plant or fixing your school, I would wager, pencils out a good bit better than buying that plasma TV.

Mr. ORSZAG. Well, a couple things.

First, it is true that the larger the share of imported value-added or imported goods and whatever is purchased with the stimulus money, the less impact there is on domestic production. I would note that a lot of the rebate checks will probably go for things like food at restaurants and what have you and not just for plasma televisions, and that some component of infrastructure spending also involves imported inputs or imported goods.

Again, I think the real question is, out of that $20 billion, and assuming it is a well-chosen project, there will be long-term economic benefits. If your objective, as most of the policy debate earlier this year was framed, was to get the economy a jumpstart now, within the next 3 or 4 or 5 months, what share of that $20 billion can go out the door within that 3 or 4 months. And that is a separate question from whether we should be spending the $20 over time or not or the returns to it.

Again, I would just come back to, I want to see the specific projects that can get a big share of their $20 billion or their $100 or whatever it is out the door really fast, and by that I mean months.

Mr. BAIRD. One last comment on that. I don't think it is necessary that the checks arrive and the building starts in order to get $20 billion of economic stimulus. If you promised me that 4 months from now there would be money made available to me to do some-

thing on my home, I could start working on that home today and put the people to work on the promise of the money. So I don't have to write the check today to have the stimulus effect today.

I yield back.

Ms. DALTON. The one thing I would add is, on the spend-out rates, when you are going to do a project, you have committed the money, you may start spending. Oftentimes with infrastructure, that spend-out rate goes over time, often over years, so you in all likelihood won't have that immediate impact on the economy, which is one of the issues with an economic stimulus package.

There are ways, if you can identify projects that are ready to go and the spend-out plans are immediate, yes, they could influence the economy.

Mr. BAIRD. My problem was I saw no effort to do that in this stimulus package. And I think it was a terrible lost opportunity.

Chairman SPRATT. Mr. Simpson?

Mr. SIMPSON. I just want to say that I agree with my friend from Washington, that we could have spent this a lot more wisely, and I think it would have had a better stimulus effect. I will guarantee you that I can show you communities, cities, that have wastewater treatment facilities, they are waiting for their match from the Federal Government. And within 4 weeks, they could be spending money, literally, because they have things ready to go, highways that are ready to be built and so forth that we just don't have the money for.

I think we could have had a much more effective stimulus plan, and, quite frankly, that is why I voted against it.

So, anyway, it is an interesting discussion we are going to have, but it is one that is vital to the future of this country that we have, because if we are going to have the infrastructure for the next generation and if we are going to keep America on the leading edge of the economies of this world, we had better start investing in our infrastructure. And it is one we are going to have to sell the American public, and we are going to have to take some political courage to do it.

So I appreciate it. I am sure that we will be calling you and talking to you substantially in the near future about this. As Congressman Blumenauer and I were just talking about, we plan on making this one of our highest priorities in the next Congress.

So I appreciate it. Thank you.

Chairman SPRATT. A couple of final questions. I thought Doris Matsui was here, but she has left.

Back in January 2008, the National Surface Transportation Policy and Revenue Commission recommended an annual investment of $225 billion for surface transportation. Has GAO or CBO undertaken an examination of that?

Ms. DALTON. We currently, Mr. Chairman, are taking a look at that, the recommendations of the policy commission. That work isn't completed yet.

I will say, on the $225 billion, what we have seen so far is that it is based on their highest needs scenario, and we are really trying to work to get beneath those numbers at this point. We are not——

Chairman SPRATT. Does CBO—excuse me. Go ahead.

Ms. DALTON. I was going to say, what we are looking for is, what is the support for that $225 billion?

Mr. ORSZAG. And the reason the figures that I presented to you this morning differ from those include that it is not clear whether the investments proposed were economically justifiable or were, sort of, held to that standard. And also it is not clear if the opportunity cost of capital—that is, when you put $1 into this project, it means that you either have to pay interest, if you want to think about it that way, or are you are foregoing opportunity to invest in something else—was actual fully taken into account.

Chairman SPRATT. Have you produced any sort of written analysis of the $225 billion?

Mr. ORSZAG. I don't think we have produced a written analysis of it, no.

Chairman SPRATT. Okay. As you know, the Budget Committee's principal annual output is something called a budget resolution. Do you have any recommendations for whether or not we should target or somehow identify or classify how much of the budget is going for capital purposes and improve the budget system for allocating to capital needs?

Mr. ORSZAG. Again, as was earlier discussed, I do think there are things that can be done without moving to a full capital budget to better identify and classify capital investments and to give some structure and rigor to the process of deciding both on the aggregate amount and on the specific projects.

With regard to the aggregate amount, as I have already said, there does appear to be additional capital spending that would be required to maintain current services and that would be economically beneficial in the sense of generating larger benefits than costs.

And I would also say that I think there are significant things we can do to offset those costs through both some of the pricing mechanisms that we discussed and also through better management of the infrastructure that we already own, including Federal buildings and property and other capital assets that we already currently own and, I think, arguably, we are not doing a terrific job managing.

Ms. DALTON. I would add that another benefit would be that it would bring together all of the various investment expenses and hopefully agreement on what we consider to be investments.

We have talked a lot about transportation. Dr. Orszag just mentioned Federal buildings. We have talked about human capital. Are those part of the investment component or not?

And I think it would be helpful, as part of the budget resolution and budget structure, to make some of those distinctions and determinations.

Chairman SPRATT. Any further observations from either of you before we close the hearing?

Mr. ORSZAG. I would just note on this last question that, as part of the study on capital budgeting that we put out this morning, we do have a section on, for example, creating a separate enforcement cap under a possible new statutory pay-as-you-go rule for capital spending and other things you can do along the lines that you seem to have been suggesting.

Chairman SPRATT. Ms. Dalton?

Ms. DALTON. I would just conclude with that I think this is a good opening discussion of what we want in terms of our goals, what the Federal role should be, what are we trying to achieve. A lot of our programs were developed in the mid-1900s or earlier; do they fit with the 21st century?

And I think, as we start looking at investment in total, it will help us in those decisions as to, do these programs still work, what do we need in the future? We definitely need more investment, but how do we want to go about that and get the greatest return from that investment.

Chairman SPRATT. We will definitely continue this inquiry, but the next time we hold a hearing, we will look for a better day.

Thank you very much for your patience, your forbearance and not least your excellent presentations and testimony. It has been extremely useful to us. And while we didn't have as many members as we would have liked here, rest assured your work product will redound to the benefit of the whole institution, particularly our two committees.

Thank you very much, indeed, for coming and testifying.

Ms. DALTON. Thank you, Mr. Chairman.

Chairman SPRATT. The hearing is now adjourned.

[The statement of Mr. Carnahan follows:]

OPENING STATEMENT OF
THE HONORABLE RUSS CARNAHAN (MO-3)
HOUSE TRANSPORTATION AND INFRASRUCTURE COMMITTEE

Hearing On
Financing Infrastructure Investments

Thursday, May 8, 2008

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Chairman Oberstar, Chairman Spratt, Ranking Member Mica, and Ranking Member Ryan, thank you for holding this important hearing to look at methods for financing investment in our nation's infrastructure.

The collapse of the 35-W bridge in Minneapolis last summer was a much needed wake up call that infrastructure across the county is on the brink of collapse. The rapid growth in the use of both our nation's surface transportation and aviation systems can be seen in our aging infrastructure. This growth has surpassed our investment resulting in decreased performance and reliability.

A significant way Americans feel the impact of inadequate infrastructure across the country is the increasing amount of time we spend in traffic. In 2005, traffic congestion cost urban motorists $78.2 billion in terms of wasted time and fuel. This is more than a $5 billion increase from the year before. Instead of Americans spending billions of dollars to sit in traffic we should be investing that money to make needed repairs to our surface transportation system.

Unfortunately, this is not unique to our surface transportation and aviation systems, but rather includes water infrastructure deteriorating across the country. This is especially urgent for cities like my hometown of St. Louis that are trying to remedy the problem of combined sewer overflows. Fixing the St. Louis combined sewer overflow has been and continues to be the city's top priority for too many years. I find it deeply troubling that over the next twenty years drinking water infrastructure needs are estimated to be nearly $500 billion, but our current government investment is half that amount.

With infrastructure on the brink of collapse across the country and many of the funding mechanisms we have relied on in the past drying up it is time for Congress to reexamine our infrastructure programs and policies to see where critically needed improvements can be made.

In closing, I want to thank our witnesses for joining us today to share their prospective on what can be done to increase our investment in our aging infrastructure.

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[The statement of Mr. Costello follows:]

PREPARED STATEMENT OF HON. JERRY F. COSTELLO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Thank you, Mr. Chairman. I am pleased to be here today as we examine financing our infrastructure investment. I would like to welcome today's witnesses.

The United States has an extensive system of highways, ports, locks and dams, and airports. Yet, we have neglected our infrastructure over the years and as a result, it needs major improvements and modernization.

For example, our Interstate System is almost 50 years old. Thirty-two percent of our major roads are in poor or mediocre condition; one of every eight bridges is structurally deficient; and 36 percent of the nation's urban rail vehicles and maintenance facilities are in substandard or poor condition.

I strongly believe we have an obligation to maintain it and modernize our infrastructure it as it becomes antiquated. According to the Transportation for Tomorrow report, a significant surface transportation investment gap exists that can only be filled by an annual investment level of between $225 billion and $340 billion by all levels of government and the private sector. If we look at our current capital investment from all sources in all modes of transportation, it is $85 billion, well below the recommended level.

I am Chairman of the Aviation Subcommittee and according to the FAA's Operational Evolution Plan (OEP), new runways and runway extensions provide the most significant capacity increases. The FAA's 2007-2011 National Plan of Integrated Airport Systems (NPIAS) states that during the next five years, there will be $41.2 billion of AIP-eligible infrastructure development, an annual average of $8.2 billion. However, the FAA states that the current NPIAS report may understate the true cost of needed capital investment. The 2007—2011 Airports Council International—North America (ACI-NA) Capital Needs Survey estimates total airport capital needs—including the cost of non-AIP-eligible projects—to be about $87.4 billion or $17.5 billion per year from 2007 through 2011.

The FAA's "Capacity Needs in the National Airspace System, An Analysis of Airport and Metropolitan Area Demand and Operational Capacity in the Future" report found that 18 airports around the country are identified as needing additional capacity by 2015, and 27 by 2025. As you can see, aviation infrastructure is much-needed and that is why in HR 2881, we increased the PFC and also increased the authorization for AIP by $4 billion over the Administration's proposal.

Continued congestion and delays in our skies, on our roads, in our ports and on our waterways is costing us excessive amounts of money. We must and can do better. We must find a way to make the necessary improvements to our entire transportation system to make sure the highest level of safety is maintained and that the US economy remains strong. I am interested in hearing more from our witnesses on their recommendations as Congress looks for ways of financing the much needed infrastructure investment.

With that, I look forward to today's hearing as we discuss financing infrastructure investment.

[Questions submitted by Ms. DeLauro follow:]

MS. DELAURO'S QUESTIONS SUBMITTED TO DR. ORSZAG

The Government Accountability Office released a report in February 2006 entitled "Excess and Underutilized Property Is an Ongoing Problem." In short, the report makes clear that the problem of unused federal property "puts the government at significant risk for wasting taxpayers' money and missing opportunities to benefit taxpayers." Such properties are costly to maintain and could be put to more cost-beneficial uses, including being sold to generate revenue. I believe a reasonable action for the federal government to take would be to sell these unused federal properties, which in a sense is unused and idle infrastructure, and use that revenue to benefit the taxpayers by putting it toward renovating our public infrastructure. We could, for example, use that to offset the $18 billion cost for funding the "ready to go" infrastructure projects identified by state transportation departments across the country in a recent American Association of State Highway and Transportation Officials (AASHTO) survey.

When we are talking about infrastructure, we are talking about the heart of our economy, jobs, GDP growth and fiscal responsibility. Government does not always create jobs, but it can set forth creative policies that do in fact bring about opportunity. Funding these "ready-to-go" projects would create approximately 850,000 jobs and create over $110 billion in economic activity. Offsetting the cost by mandating the sale of these unused federal properties would allow us to do that in a fiscally responsible and paid for way. I would appreciate, from a budgetary perspective, your observations and thoughts on such a policy?

MS. DELAURO'S QUESTIONS SUBMITTED TO MS. DALTON

I introduced a bill, the National Infrastructure Development Act (HR 3896). The bill would establish a tax exempt National Infrastructure Development Corporation that would make loans, purchase securities, issue "public benefit" bonds and offer other insured financing packages, in order to maximize private investment to fund our most critical infrastructure projects. Within five years the Corporation would prepare a plan to transition to a government-sponsored enterprise, including broad distribution to long-term investors with all voting securities ultimately transferred to non-federal government investors. The Corporation would at that point become self-financed through user fees or other dedicated sources of revenue, as well as the sale of public stock.

In your prepared testimony you refer to proposals intended to increase investment through new financing mechanisms in the nation's infrastructure. You touch on bonds as a source of up-front capital, yet an expensive investment for the federal government. You also talk about a national infrastructure bank and the associated pros and cons, including defaults on loans and inflation. In short, you suggest there is no silver bullet to address the multi-faceted infrastructure challenges we face. I understand that my proposal surely also has pros and cons and is by no means a silver bullet, yet I believe it is well worth considering as a key component of any bold infrastructure plan to rebuild America. In my mind, the Federal Government simply cannot do this on its own. We must build effective private-partnerships and we must leverage significance private sector investment if we are going develop a 21st Century state-of-the art infrastructure.

Accordingly, I would like to get your expert opinion on the concept of a GSE, a Fannie Mae type entity, in the realm of infrastructure. What do you see as the pros and cons in relation to the other financing proposals out there? Do you think there are certain infrastructure sectors, water treatment for example, where it might work better than others? Are there perhaps geographic areas where it might work best, perhaps funding big city infrastructure projects?

[The statement of Mr. Mitchell follows:]

1 Harry E. Mitchell

Statement of Rep. Harry Mitchell
House Transportation and Infrastructure Committee
"Financing Infrastructure Investments"
5/8/2008

Thank you, Mr. Chairman.

As you know, Arizona is now the fastest growing state in the nation. Since 1970, our population has more than tripled.

The Phoenix metropolitan area, long the largest in our state, is now one of the largest in the nation. According to the U.S. census, our metropolitan area is now the 13th largest in the nation, just behind San Francisco and Boston.

Not surprisingly, all this growth has created an urgent need for new transportation infrastructure.

According to a recent Federal Highway Administration traffic congestion report, the portion of I-10 that runs through the Phoenix metropolitan area has some of the worst bottlenecks in the country.

Furthermore, Phoenix Sky Harbor Airport is now the eighth busiest airport in the country. At the rate demand in our area is growing, we are facing a serious risk of becoming the next national bottleneck.

The FAA has already warned Phoenix that it is one of 8 metropolitan areas that will need significantly more capacity by 2025.

This isn't just a problem for Phoenix, it's a problem for the national aviation system, which is already struggling to reduce delays.

As we examine the methods for financing investment our nation's infrastructure, it is critical that we address the significant increase in congestions as well as importance of a cost-effective intermodal system that can support the dynamic and changing needs of transportation of goods and people.

I look forward to hearing more from our witnesses.

I yield back.

[The statement of Ms. Tsongas follows:]

PREPARED STATEMENT OF HON. NIKI TSONGAS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MASSACHUSETTS

I thank the Committee on Budget and the Committee on Transportation and Infrastructure for holding this important hearing to explore alternative mechanisms for investing in our nation's infrastructure. This hearing could not be more timely or more relevant. In recent years, federal appropriations have failed to fully meet the demands of our nation's aging infrastructure while current alternative funding mechanisms, such as the Highway Trust Fund, are poised to run multi-billion dollar deficits.

These shortfalls come at a particularly critical time for Massachusetts, which must maintain some of the oldest infrastructure in the country in a climate that is often punishing to the state's roads, bridges, ports, airports, and railroads. Even though Massachusetts' share of the nation's population has decreased, its total number of inhabitants continues to grow, further adding to the strain on its infrastructure.

According to data from the American Society of Civil Engineers, more than half of the bridges in Massachusetts have been deemed "structurally deficient" or "functionally obsolete," 40 dams have been deemed deficient, and 71 percent of major roads are in "poor or mediocre condition." Nationwide, 33 percent of the nation's major roads are in "poor or mediocre condition" and 36 percent of major urban highways are congested.

Failure to adequately invest in our nation's infrastructure has had a direct impact on our safety, our energy dependence, and our economic health. In my district, examples abound of the effect that infrastructural improvements can have on the economy. For instance, construction of an interchange on Interstate-93 near Tewksbury and Andover would alleviate existing traffic congestion, providing a major economic stimulus. The area is home to such global industry leaders as Wyeth, Proctor and Gamble/Gillette, Charles River Laboratories and others, each of which is currently unable to expand its operations as long as transportation resources remain so restricted. Similarly, at the national level, investments in infrastructure have been shown to stimulate both short term job growth and long-term economic health. According to the U.S. Department of Transportation, every $1 billion of federal highway investment supports 34,779 jobs. These jobs have a subsequent magnifying effect throughout the economy.

By making critical, coordinated investments in our transportation systems, we can spur economic development, create jobs, restore confidence in the safety of our system, and maintain our global competitiveness.

[Questions submitted by Mr. Walz follow:]

MR. WALZ'S QUESTIONS SUBMITTED TO THE WITNESSES

To all witnesses:

• How would you say the level of coordination and cooperation between units of government at the federal, state, and local level is working now, and what would you suggest to improvement this coordination?

• We have been hearing a great deal lately about a temporary gasoline tax break. What do you think the impact of such a proposal would be in helping develop our national infrastructure?

• What incentives for the private sector could intensify their participation in public-private partnerships to develop our transportation infrastructure?

• Which experiences from foreign countries do you take into consideration when determining what strategies we should use?

PREPARED STATEMENT OF HON. JASON ALTMIRE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF PENNSYLVANIA

Thank you, Chairman Oberstar, for holding today's joint hearing with the Committee on the Budget to examine methods that can be taken to finance investments in our nation's infrastructure. I would like to also thank Chairman Spratt for agreeing to join us today. His Committee's expertise will be of great benefit to us today as we discuss investment opportunities and how these investments will fit into our nation's budget.

Like many of my colleagues on this committee, I have serious concerns about the future of our nation's infrastructure. Increased congestion on our roads and rail lines is resulting in significant costs to American taxpayers. In 2005, congestion on our nation's roadways cost motorists over $78 billion, which equates to an average cost of $710 per traveler. It is apparent that steps must be taken to improve and expand our infrastructure.

Furthermore, the tragic collapse of the Interstate 35W bridge in Minnesota last year brought to America's attention what many members of this Committee have known for years—the infrastructure in this nation is in desperate need of repair. In the six counties that I represent, there are currently more than 1,000 bridges considered structurally deficient. These repairs and improvements will not be cheap. It will truly take the combined efforts of the Transportation and Budget Committees to develop a comprehensive plan for future investments that can finally begin to address this growing problem and I look forward to being a part of this process.

Chairman Oberstar, I would like to thank you again for holding this hearing.

[Responses to questions for the record from CBO follow:]

RESPONSES FROM THE CONGRESSIONAL BUDGET OFFICE TO QUESTIONS FOR THE RECORD

Question: The Government Accountability Office released a report in February 2006 entitled "Excess and Underutilized Property Is an Ongoing Problem." In short, the report makes clear that the problem of unused federal property "puts the government at significant risk for wasting taxpayers' money and missing opportunities to benefit taxpayers." Such properties are costly to maintain and could be put to

more cost-beneficial uses, including being sold to generate revenue. I believe a reasonable action for the federal government to take would be to sell these unused federal properties, which in a sense is unused and idle infrastructure, and use that revenue to benefit the taxpayers by putting it toward renovating our public infrastructure. We could, for example, use that to offset the $18 billion cost for funding the "ready to go" infrastructure projects identified by state transportation departments across the country in a recent American Association of State Highway and Transportation Officials (AASHTO) survey.

When we are talking about infrastructure, we are talking about the heart of our economy, jobs, GDP growth and fiscal responsibility. Government does not always create jobs, but it can set forth creative policies that do in fact bring about opportunity. Funding these "ready-to-go" projects would create approximately 850,000 jobs and create over $110 billion in economic activity. Offsetting the cost by mandating the sale of these unused federal properties would allow us to do that in a fiscally responsible and paid for way. I would appreciate, from a budgetary perspective, your observations and thoughts on such a policy?

Response: As noted in CBO's testimony, the General Services Administration reports that about 10 percent of all federal government facilities are either underused or empty. Remarkably, no information is readily available about the market value of those facilities, and federal agencies destroy thousands of facilities each year that have little or no market value. Some of the facilities do not meet current building and safety standards and some pose environmental hazards.

Selling unused federal properties could be desirable for a number of different reasons. More detailed analyses of the inventory of federal facilities and the state of the local markets for such facilities appear to be warranted.

RESPONSES FROM THE CONGRESSIONAL BUDGET OFFICE TO QUESTIONS FOR THE RECORD FOR CONGRESSMAN WALZ

Question 1. How would you say the level of coordination and cooperation between units of government at the federal, state, and local level is working now, and what would you suggest to improvement this coordination?

Response: As noted in CBO's testimony, the Government Accountability Office and other researchers have found that federal highway grants generally do not increase total spending dollar for dollar, because state and local governments reduce spending from their own funds. Greater clarity about the appropriate roles of each of the three levels of government (and the private sector) in supporting the development of additional infrastructure could facilitate a clearer division of responsibility, which in turn could reduce uncertainty and allow for better planning.

Question 2: We have been hearing a great deal lately about a temporary gasoline tax break. What do you think the impact of such a proposal would be in helping develop our national infrastructure?

Response: CBO has not analyzed such proposals.

Question 3: What incentives for the private sector could intensify their participation in public-private partnerships to develop our transportation infrastructure?

Response: Private firms will be motivated to participate in partnerships with the public sector to the extent that they anticipate a level of profits that is sufficiently attractive given the risks involved. Partnerships are not sources of "free money": Although private firms may, in some cases, reduce total costs through management efficiencies, all infrastructure is ultimately paid for by some combination of users and taxpayers. Accordingly, private firms will evaluate the revenues expected from those sources (through contract fees and/or rights to charge fees to the users of infrastructure services) and any forms of cost-sharing by the public sector (such as tax-preferred financing and loan guarantees).

Question 4: Which experiences from foreign countries do you take into consideration when determining what strategies we should use?

Response: CBO does not make policy recommendations (except on issues relating to the budget process) but does examine other countries' experiences where relevant to our analyses. In the case of investment in infrastructure, foreign experiences with user fees, asset management, and capital budgeting can provide useful perspectives on questions facing policymakers in the United States. For example, CBO's May 2008 "Capital Budgeting" paper discusses the use of accrual budgeting in Australia and New Zealand—where it is applied not only to depreciation of government assets, but also to employees' pension benefits and the future cost of environmental cleanup associated with government services—and the rejection of separate capital budgets by five countries in northern Europe.

[Responses to questions for the record from GAO follow:]

RESPONSES FROM THE GOVERNMENT ACCOUNTABILITY OFFICE TO QUESTIONS FOR THE RECORD

QUESTION FROM CONGRESSWOMAN DELAURO

Question: I introduced a bill, the National Infrastructure Development Act (HR 3896). The bill would establish a tax exempt National Infrastructure Development Corporation that would make loans, purchase securities, issue "public benefit" bonds and offer other insured financing packages, in order to maximize private investment to fund our most critical infrastructure projects. Within five years the Corporation would prepare a plan to transition to a government-sponsored enterprise, including broad distribution to long-term investors with all voting securities ultimately transferred to non-federal government investors. The Corporation would at that point become self-financed through user fees or other dedicated sources of revenue, as well as the sale of public stock.

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GAO response: We agree that we will need to consider all options, and as you mentioned, we will likely need to use a variety of options as there is no silver bullet. We also agree that the federal government cannot do it all—it will take the collective efforts of all levels of government and the private sector to address our infrastructure challenges. In considering the different options, one of the first steps is determining the federal role—because the suitability of any of the options depends heavily on the level of federal involvement desired.

In terms of the advantages, government-sponsored enterprises (GSE) can be designed to sustain their operations from business income. In addition, GSEs are distinguished from other chartered private entities by investors' perception of an implicit federal guarantee of GSEs' debt obligations. Therefore, a GSE potentially could borrow funds at a lower interest rate since the risk is perceived to be lower. The perceived federal guarantee, however, is also a disadvantage—that is, there is an assumption that the federal government would step in and bail the GSE out if needed.

One area where GSEs could be particularly useful is in the funding of infrastructure projects of regional or national significance—that is, projects that benefit regions or the nation as a whole. These projects can be large and costly, requiring the cooperation and financial support from multi-jurisdictions. However, as we have previously reported, it can be difficult for state and local governments to secure funding for these kinds of multi-jurisdictional projects because transportation projects that provide benefits that are more readily discernable to immediate localities are favored. The GSE could provide an alternative financing source for these types of projects.

QUESTIONS FROM CONGRESSMAN WALZ

Question: How would you say the level of coordination and cooperation between units of government at the federal, state, and local level is working now, and what would you suggest to improve this coordination?

GAO response: We did not examine the level of coordination and cooperation between the different levels of government for our testimony. However, last year we issued a report on intermodal transportation, which enables freight and passengers

to cross between different modes of transportation efficiently and can improve mobility, reduce congestion, and cut costs. We identified several barriers that inhibit intermodal transportation, including limited collaboration among the many entities and jurisdictions involved. For example, the Department of Transportation (DOT) operating administrations and state and local transportation agencies are organized by mode—reflecting the structure of funding programs—resulting in an organizational structure that DOT's own assessments acknowledge can impede coordination between modes. In addition, collaboration between the public and private sector can also be challenging; for example, some transportation officials told us that private-sector interests in airport, rail, and freight have historically not participated in the regional planning process. These barriers impede state and local agencies' ability to carry out intermodal projects and limit DOT's ability to implement Congress' goal of a national intermodal transportation system. To help address these barriers, we recommended that the Secretary of Transportation direct one office or administration to lead and coordinate intermodal efforts at the federal level by improving collaboration and the availability of intermodal guidance and resources.

Question: We have been hearing a great deal lately about a temporary gasoline tax break. What do you think the impact of such a proposal would be in helping develop our national infrastructure?

GAO response: We have not examined the gasoline tax break proposals in detail. We would note, however, that fuel taxes are the primary revenue source for the Highway Trust Fund, which is the major source of federal highway and transit funding. Therefore, unless an alternative revenue source was identified, the suspension of the gasoline tax would negatively impact the balance of the Highway Trust Fund. Furthermore, the most recent Highway Trust Fund projections, which do not factor in the proposed tax break, predict that the balance of the fund will be exhausted by 2012.

Question: What incentives for the private sector could intensify their participation in public-private partnerships to develop our transportation infrastructure?

GAO response: As we reported in February 2008, the private sector has traditionally been involved as contractors in the design and construction of highways. In recent years, however, the private sector has become increasingly involved in assuming other responsibilities including planning, designing, and financing. The private sector, and in particular, private investment groups, including equity funds and pension fund managers, have recently demonstrated an increasing interest in investing in public infrastructure. They see the sector as representing long-term assets with stable, potentially high-yield returns. As a result, the private sector has also entered into a wide variety of highway public-private partnership arrangements with public agencies.

In addition to the expected return on investment, there are several other incentives that can encourage the private sector to participate in highway public-private partnerships. For example, the private sector can also receive potential tax deductions from depreciation on assets involving private sector investment and the availability of these deductions were important incentives to the private sector to enter some of the highway public-private partnerships we reviewed. Obtaining these deductions, however, may require lengthy concession periods. In the United States, federal tax law allows private concessionaires to claim income tax deductions for depreciation on a facility (whether new highways or existing highways obtained through a concession) if the concessionaire has effective ownership of the property. Effective ownership requires, among other things, that the length of a concession be greater than or equal to the useful economic life of the asset. Financial and legal experts, including those who were involved in the Chicago and Indiana transactions, told us that since the concession lengths of the Chicago Skyway and the Indiana Toll Road agreements each exceed their useful life, the private investors can claim full tax deductions for asset depreciation within the first 15 years of the lease agreement. The requirement to demonstrate effective asset ownership contributed to the 99-year and 75-year concession terms for the Chicago Skyway and Indiana Toll Road, respectively. One tax expert told us that, in general, infrastructure assets (such as highways) obtained by the private sector in a highway public-private partnership may be depreciated on an accelerated basis over a 15-year period.

Private investors can also potentially benefit from being able to use tax-exempt financing authorized by the Safe, Accountable, Flexible, Efficient Transportation Equity Act for the 21st Century—A Legacy of Users (SAFETEA-LU) in 2005. Private activity bonds have been provided for private sector use to generate proceeds that are then used to construct new highway facilities under highway public-private partnerships. This exemption lowers private sector costs in financing highway public-private partnership projects. As of January 2008, the Department of Transpor-

tation (DOT) had approved private activity bonds for 5 projects totaling $3.2 billion and had applications pending for 3 projects totaling $2.2 billion. DOT said it expects applications for private activity bond allocations from an additional 12 projects totaling more than $10 billion in 2008.

Finally, the private sector can potentially benefit through gains achieved in refinancing their investments. Both public and private sector officials with whom we spoke agreed that refinancing is common in highway public-private partnerships. Refinancing may occur early in a concession period as the initial investors either attempt to "cash out" their investment—that is, sell their investment to others and use the proceeds for other investment opportunities—or obtain new, lower cost financing for the existing investment. Refinancing may also be used to reduce the initial equity investment in highway public-private partnerships. Refinancing gains can occur throughout a concession period; as project risks typically decrease after construction, the project may outperform expectations, or there may be a general decrease in interest rates.

Question: Which experiences from foreign countries do you take into consideration when determining what strategies we should use?

GAO response: In previous reports, we have examined how foreign countries approach various transportation challenges and solutions. For example, based on experiences from foreign countries we recently concluded that consideration of highway public-private partnerships in the United States could benefit from more consistent, rigorous, systematic, up-front analysis. By weighing the potential benefits of highway public-private partnerships against potential costs and trade-offs through careful, comprehensive analysis, decision makers can better determine whether public-private partnerships are appropriate in specific circumstances and, if so, how best to implement them. We found that governments in other countries, such as Australia, have developed such systematic approaches to identifying and evaluating public interest and require their use when considering private investments in public infrastructure. While similar tools have been used to some extent in the United States, their use has been more limited. Using up-front public interest evaluation tools can assist in determining expected benefits and costs of projects; not using such tools may lead to aspects of protecting the public interest being overlooked. For example, projects in Australia require consideration of local and regional interests. Concerns by local governments in Texas that their interests were being overlooked resulted in state legislation requiring their involvement. To balance the potential benefits of highway public-private partnerships with protecting public and national interests, we recommended that Congress consider directing the Secretary of Transportation to consult with them and other stakeholders and develop and submit to Congress objective criteria for identifying national public interests in highway public-private partnerships. We also believe that, the Secretary should, when developing these criteria, identify what guidance and assessment tools are appropriate and needed to protect national public interests in future highway public-private partnerships.

In 2006, we issued a report that examined how other countries—specifically, Canada, Germany, Japan, France, and the United Kingdom—approached efforts to reform intercity passenger rail systems. We found that intercity passenger rail reform efforts in other countries illustrate that, to be more cost effective and offer increased benefits in relation to expenditures, there are a variety of approaches—and several key reform elements—that need to be addressed when implementing any approach. Over the past 20 years, several countries have employed a variety of approaches in reforming their intercity passenger rail systems to meet national intercity passenger rail objectives—that is, primarily achieving more cost effective, value-added passenger service for the level of subsidies spent. These approaches, alone or in combination with each other, have been used to support other national objectives as well, such as increasing transparency in the use of public funds and providing transportation benefits and public benefits. For example, France and Germany changed their public funding structure by devolving decision making to local and regional governments in order to support the purchase of intercity passenger rail service, allowing local and regional governments to be more flexible and purchase service that best fits the preferences of the users. Prior to, or during, implementation of these various approaches, several elements key to comprehensive reform were addressed. The national governments of most countries we visited focused their efforts on the following elements: (1) clearly defining national policy goals; (2) clearly defining the various roles and responsibilities of all government entities involved; and (3) establishing stable, sustainable funding for intercity passenger rail. These elements were important to determining how passenger rail fit into the national transportation

system and to increase the value of both federal and nonfederal expenditures on such systems.

[Whereupon, at 1:25 p.m., the committees were adjourned.]

U.S. House of Representatives
Committee on Transportation and Infrastructure
Washington, DC 20515

James L. Oberstar
Chairman

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June 9, 2008

SUMMARY OF SUBJECT MATTER

TO: Members of the Committee on Transportation and Infrastructure

FROM: Committee on Transportation and Infrastructure Staff

SUBJECT: Hearing on "Financing Infrastructure Investments"

PURPOSE OF HEARING

At 10:00 a.m., on Tuesday, June 10, 2008, in Room 2167 Rayburn House Office Building, the Committee on Transportation and Infrastructure will hold a hearing to examine methods for financing investment in our nation's infrastructure, including roads, bridges, public transportation, aviation, ports, waterways, and wastewater treatment infrastructure. This will be the second day of hearings on this topic, following up on the May 8 joint hearing with the Committee on the Budget.[1]

BACKGROUND

Adequate investment in our transportation and other public infrastructure is critical to our nation's economic growth, our competitiveness in the world marketplace, and the quality of life in our communities. Despite the importance of these investments, many of our nation's infrastructure needs are going unmet. The impact of inadequate infrastructure investment is being felt in a variety of ways, most notably through a significant increase in congestion.

Road congestion has become a major national problem. According to the Texas Transportation Institute's 2007 Urban Mobility Study, traffic congestion in the Nation's 437 urban areas continues to increase. Congestion now occurs during longer portions of the day and delays more travelers and goods than ever before.

As congestion increases, so does the cost it imposes both on our economy and on motorists. In 2005, traffic congestion cost urban motorists $78.2 billion in terms of wasted time and fuel,

[1] This memorandum is essentially the same as the one issued for the May 8 joint hearing, but has been updated to include descriptions of two new bills (H.R. 6004 and H.R. 5102) in Section II, and a new list of witnesses.

compared to $73.1 billion in 2004, and just $14.9 billion in 1982.[2] This equates to an average annual cost per traveler of about $710 in 2005, up from $680 in 2004, and $260 in 1982. The hours of delay and gallons of fuel consumed due to congestion are only the elements that are easiest to estimate. The effect of uncertain or longer delivery times, missed meetings, business relocations and other congestion impacts are not included in this estimate.

Congestion has increased in the air, as well. In 2007, air travelers experienced the highest number of delayed flights -- 1.8 million -- in the 13 years since the Department of Transportation ("DOT") has collected such data. The Federal Aviation Administration ("FAA") predicts that, absent needed improvements to the aviation system, delays will increase by 62 percent by FY 2014.

According to the Commission on the Future of the U.S. Aerospace Industry, estimates of the cost of aviation delays to the U.S. economy range from $9 billion in 2000 to more than $30 billion annually by 2015. Without improvement, the combined economic cost of delays from 2000-2012 will total an estimated $170 billion.

Delays are also increasing on our inland waterways, which contain a series of outdated and antiquated locks and dams that, unless rehabilitated or improved, will continue to hinder the movement of coal, grain, and other bulk products. Fifty-three percent of the lock chambers on the system have exceeded their 50-year design lives. With the use of the aging inland waterway system expected to increase, including through expanded use of short-sea shipping, delays are likely to continue to rise.

Inadequate infrastructure investment is also putting our environment at risk. Communities throughout the United States continue to struggle financially to meet their ever-increasing wastewater treatment infrastructure needs. The Environmental Protection Agency ("EPA") has reported that a failure to increase investment in wastewater treatment infrastructure would erode many of the water quality achievements of the past 30 years.

Estimates of the nation's clean water infrastructure needs over the next 20 years exceed $400 billion. The needs are especially urgent for areas trying to remedy the problem of combined sewer overflows and sanitary sewer overflows and for small communities lacking sufficient independent financing ability. Drinking water infrastructure needs are estimated at nearly $500 billion over the next 20 years. Current spending by all levels of government is one-half of the estimated needs.

According to the Congressional Budget Office ("CBO"), in 2006, the Federal Government invested $76.3 billion on transportation and water infrastructure, including highways and roads, mass transit, rail, aviation, water transportation, water resources such as the construction and maintenance of dams and levees, and water supply and wastewater treatment.[3] Of this $76.3 billion in Federal spending, grants and loan subsidies totaled $50.6 billion, and all other federal spending on infrastructure totaled $25.7 billion. In recent years, the Federal grants and loan subsidies have accounted for slightly more than one-third of state and local governments' total capital expenditures on infrastructure.

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[2]In constant 2005 dollars.

[3]*See* "Trends in Public Spending on Transportation and Water Infrastructure, 1956 to 2004", issued by CBO in August 2007.

Over and above this $76.3 billion in Federal investment is approximately $7.9 billion in Federal revenues that were forgone in 2006 due to the tax preferences that the Federal Government provides to municipal bonds issued by States and localities to finance their infrastructure spending.

I. Existing Programs for Federal Financial Support for Non-Federally Owned Infrastructure

Most of the infrastructure discussed above is owned and operated by state and/or local governments, or private entities, and is only partially financed by the Federal Government. While the Federal Government does own and operate many capital assets (e.g., the air traffic control system, airport baggage screening systems, and public buildings), the issues related to Federally-owned capital assets are somewhat different from non-Federally owned capital assets and, therefore, are discussed separately in section III.

There are a range of options for financing infrastructure investments, including different methods of delivering the subsidy (e.g., grants vs. loans vs. tax exemptions), and different methods of financing the cost of that subsidy (e.g., borrowing through Treasury vs. borrowing through a third party). Some of the current methods by which infrastructure investments are financed are discussed below.

A. Grants

Traditionally, the Federal Government has subsidized infrastructure investments through grants. The major grant programs within the jurisdiction of the Committee on Transportation and Infrastructure include:

- Federal-Aid Highway Program ("FAHP") -- provides grants to States for construction, reconstruction, and improvement of highways and bridges on eligible Federal-Aid highway routes and for other special purpose programs and projects. The FY 2008 funding level for the FAHP is $41.2 billion (including the additional $1 billion for bridge repair).
- Transit Formula and Bus Grant Program -- provides grants to urbanized and non-urbanized areas nationwide to meet transit capital and, in some cases, operating expenses. For urbanized areas, formula funds are distributed to transit systems based on factors such as population, vehicle miles traveled, and transit ridership. Formula funds may be used for transit capital expenses, such as the purchase of new buses or train cars, or the rehabilitation and refurbishment of existing transit systems. For urbanized areas with populations of less than 200,000, and for non-urbanized areas, formula funds may also be used for transit operating expenses. Bus and Bus Facility Grants are allocated on a discretionary basis to fund the acquisition, construction, and improvement of buses and bus-related facilities. The FY 2008 funding level for Formula and Bus Grants is $7.8 billion.
- Transit Capital Investment Grant Program-- provides grants for large capital projects that cannot be funded from a transit agency's formula allotment, such as Major Fixed Guideway projects ("New Starts"). Funds are allocated on a discretionary basis. The FY 2008 funding level for Capital Investment Grants is $1.6 billion.
- Airport Improvement Program ("AIP") -- provides grants to public agencies and, in some cases, to private owners and entities for the planning and development of public-use airports that are included in the FAA's National Plan of Integrated Airport Systems ("NPIAS"). The

NPIAS currently identifies 3,431 airports that are significant to national air transportation and, therefore, eligible to receive grants under the AIP. The FY 2008 funding level for AIP is $3.5 billion.[4]

B. Forms of Assistance other than Grants

(1) Federally-Supported State Loan Funds

(a) State Infrastructure Banks

A State Infrastructure Bank ("SIB") is a revolving fund mechanism for financing a wide variety of highway and transit projects through loans and credit enhancement. SIBs are intended to complement the traditional Federal-aid highway and transit programs by supporting certain projects with dedicated repayment streams that can be financed in whole or in part with loans, or that can benefit from the provision of credit enhancements. As loans are repaid, or the financial exposure implied by a credit enhancement expires, the SIB initial capital is replenished and can be used to support a new cycle of projects.

Section 350 of the National Highway System Designation Act of 1995 ("NHS Act") (P.L. 104-59) authorized DOT to establish the SIB Pilot Program. Specifically, DOT was authorized to select up to 10 States to participate in the initial pilot program and to enter into cooperative agreements with the Federal Highway Administration and/or the Federal Transit Administration for the capitalization of SIBs with a portion of their Federal-aid highway funds. The FY 1997 DOT Appropriations Act opened SIB participation to all States and appropriated $150 million in Federal General Funds for SIB capitalization. In total, 38 States and the Commonwealth of Puerto Rico were selected to participate in the SIB pilot program. Of the 39 participants approved for the SIB program, 32 States and Puerto Rico have active SIBs. By the end of June 2007, these 33 SIBs had collectively issued $6.2 billion in loan agreements.

A small number of States have leveraged their SIB funds by using anticipated SIB loan repayments as collateral to secure bonds.[5] For example, in July 2006, the State of Ohio established the "State Transportation Infrastructure Bond Fund" ("STIBF"), an investment-grade bond financing program that issues bonds on behalf of eligible Ohio political subdivisions. Under this program, bonds are issued by the Ohio Treasurer to fund eligible projects, including highway, transit, airports, waterway, roads, bridges, railroad, and any other transportation infrastructure projects. The program is expected to help political subdivisions achieve a lower cost of capital. The first project financed under the STIBF program is a 10-year, $7 million transaction that received an "AA-" rating from Fitch Ratings and had an average borrowing cost fixed under four percent.

(b) Clean Water State Revolving Fund Program

Similar to the State Infrastructure Banks discussed above, the Clean Water State Revolving Fund ("CWSRF") program is another example of a state revolving loan fund that is capitalized by

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[4]Assumes enactment of legislation to extend the authorization for the AIP program from June 30, 2008, to September 30, 2008.

[5]This practice of leveraging revolving fund assets is more common among Clean Water State Revolving Funds. See discussion on page 5.

Federal grants. Under this program, which was established by the Clean Water Act amendments of 1987, the EPA provides grants to all 50 States and Puerto Rico to capitalize state loan funds. The States provide a 20 percent match. The CWSRF funds are then used by the State to make loans to fund the construction of municipal wastewater facilities, nonpoint source pollution control, and estuary protection projects. As the loans are paid back into the revolving fund, new loans are made to other recipients. Through FY 2007, the Clean Water SRFs have provided $62.9 billion in loans for wastewater and other projects, including $5.3 billion in loans in 2007 alone.

More than one-half of the CWSRF programs have leveraged their fund assets to increase loan funding available to address critical projects. Under a leveraging approach, federal capitalization grants and program cash flows are used as collateral to secure bonds that are issued by the CWSRF programs. The proceeds from the bonds are then lent out for SRF-eligible activities. According to EPA, leveraging has provided an additional $20.6 billion.

According to EPA, interest rates for CWSRF loans in 2007 averaged 2.1 percent nationally, compared to the average market rate of 4.3 percent. For a CWSRF program offering this rate, a CWSRF-funded project would cost 18 percent less than projects funded at the market rate. CWSRFs can fund 100 percent of the project cost and provide flexible repayment terms up to 20 years.

(2) Direct Federal Loans and Loan Guarantees

(a) Transportation Infrastructure Finance and Innovation Act ("TIFIA")

Enacted as part of the Transportation Equity Act for the 21st Century ("TEA-21"), the Transportation Infrastructure Finance and Innovation Act of 1998 ("TIFIA") established a Federal credit program for eligible transportation projects of national or regional significance. The program's goal is to leverage Federal funds by attracting substantial private and other non-Federal co-investment in critical improvements to the nation's surface transportation system.

Through TIFIA, DOT provides Federal credit assistance to highway, transit, rail, and intermodal freight projects, including seaports. The amount of TIFIA assistance may not exceed 33 percent of total project costs. The program targets only large projects, generally those costing more than $50 million.

The TIFIA program offers three types of financial assistance: secured loans, loan guarantees, and standby lines of credit. Secured loans are direct Federal loans to project sponsors. Loan guarantees provide full-faith-and-credit guarantees by the Federal Government to institutional investors that make loans for projects. Standby lines of credit represent secondary sources of funding in the form of contingent Federal loans that, if needed, supplement project revenues during the first ten years of project operations.

Both public and private project sponsors may apply for TIFIA assistance, but all prospective borrowers must demonstrate that the proposed project is consistent with State and local transportation plans.

To fund TIFIA, the Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users ("SAFETEA-LU") (P.L. 109-59) provides $122 million in contract authority from the Highway Trust Fund for each of fiscal years 2005 through 2009 to pay the subsidy cost (and administrative expenses) of credit assistance.[6]

As of April 2008, the TIFIA program had approved $4.8 billion in credit assistance to 15 projects representing a total of $18.6 billion of infrastructure investment. This $4.8 billion in credit assistance was provided at a Federal budget cost of approximately $346 million in contract authority.

(b) Railroad Rehabilitation and Improvement Financing ("RRIF")

The Railroad Rehabilitation and Improvement Financing ("RRIF") Program provides direct federal loans and loan guarantees to finance development of railroad infrastructure. The RRIF program was established by TEA-21 and amended by SAFETEA-LU. Under this program the Federal Railroad Administrator is authorized to provide direct loans and loan guarantees up to $35 billion. Up to $7 billion is reserved for projects benefiting freight railroads other than Class I carriers (i.e., projects that benefit "short line" railroads).

RRIF funding may be used to:

- Acquire, improve, or rehabilitate intermodal or rail equipment or facilities, including track, components of track, bridges, yards, buildings and shops;
- Refinance outstanding debt incurred for the purposes listed above; and
- Develop or establish new intermodal or railroad facilities.

Direct loans can fund up to 100 percent of a railroad project with repayment periods of up to 25 years and interest rates equal to the cost of borrowing to the government.

Eligible borrowers include railroads, state and local governments, government-sponsored authorities and corporations, joint ventures that include at least one railroad, and certain "captive" shippers who intend to construct a new rail connection.

[6]Since enactment of the Federal Credit Reform Act of 1990, Federal agencies are required to set aside capital reserves in advance to cover the expected long-term cost to the Government of providing credit assistance. Analogous to a private bank's loan reserve, the subsidy cost represents the Federal Government's estimate of expected loss associated with the provision of each TIFIA project's credit instrument.

Since its enactment, the RRIF program has executed 21 loan agreements worth a total of $748 million, as shown in the table below.

RRIF Loan Agreements

ORGANIZATION	YEAR	AMOUNT
Nashville and Eastern Railroad	2008	$4.6 million
Columbia Basin Railroad	2008	$3.0 million
Great Western Railway	2007	$4.0 million
Virginia Railway Express	2007	$72.5 million
R.J. Corman Railway	2007	$59 million
Dakota, Minnesota & Eastern Railroad	2007	$48 million
Iowa Northern Railroad	2006	$25.5 million
Wheeling & Lake Erie Railway	2006	$14 million
Iowa Interstate Railroad	2006	$9.35 million
Great Smoky Mountains Railroad	2005	$7.5 million
Riverport Railroad	2005	$5.5 million
The Montreal, Maine & Atlantic Railway	2005	$34 million
Tex-Mex Railroad	2005	$50 million
Iowa Interstate Railroad	2005	$32.7 million
Stillwater Central Railroad	2004	$4.6 million
Wheeling & Lake Erie Railway	2004	$25 million
Arkansas & Missouri Railroad	2003	$11 million
Nashville and Western Railroad	2003	$2.3 million
Dakota, Minnesota & Eastern Railroad	2003	$233 million
Amtrak	2002	$100 million
Mount Hood Railroad	2002	$2.07 million

(3) Federal Support of State and Local Bonds

(a) Tax-Exempt Bonds

The interest earned on most bonds issued by state and local governments is exempt from Federal taxation. Providing tax-exempt status for these bonds is another way in which the Federal Government helps to finance certain infrastructure investments. Tax-exempt status can lower the cost of capital significantly. Because of the exemption, purchasers of such bonds are willing to accept a lower interest rate than they would require on taxable bonds of comparable risk and maturity. Consequently, the Federal Government effectively pays a share (about 25-30 percent) of the taxable interest that state and local governments would have to pay if their debt were taxable.

From 2002-2006, $224 billion in tax-exempt municipal bonds were issued to fund transportation projects, including airport, mass transit, road and bridge projects, and $160 billion in such bonds were issued to fund water and sewer projects.[7]

[7]GAO-08-364, Appendix III: Summary of Thomson Financial 2007 Bond Buyer Yearbook Data, Use of Proceeds, 2002-2006 Combined.

Federal law limits tax-exempt financing of facilities used in conjunction with private activities. For federal tax purposes, municipal bonds are classified as private activity bonds if they pass both the private use and the private payment test. These tests specify that if more than 10 percent of the bond proceeds are used for private business purposes and more than 10 percent of the bond proceeds are secured by payments from property used for private business use, then the bond is a private activity bond.

A private activity bond can be either taxable or tax-exempt. Congress has specified certain private activities that can be financed with tax-exempt bonds. These activities include airport, water and sewer projects, and as of 2005, highway and surface freight transfer facilities (*see* SAFETEA-LU discussion below). Private activity bonds that receive tax-exempt status are called qualified private activity bonds. In general, qualified private activity bonds are subject to a number of restrictions, including annual state-by-state limitations on the volume of such bonds that can be issued.

Section 11143 of Title XI of SAFETEA-LU amended Section 142 of the Internal Revenue Code to add highway and freight transfer facilities to the types of privately developed and operated projects for which qualified (i.e., tax-exempt) private activity bonds may be issued. This change allowed private activity on these types of projects, while maintaining the tax-exempt status of the bonds.

Qualified Highway or Surface Freight Transfer Facilities include:

- Any surface transportation project which receives Federal assistance under Title 23, United States Code;
- Any project for an international bridge or tunnel for which an international entity authorized under Federal or State law is responsible and which receives Federal assistance under Title 23, United States Code; and
- Any facility for the transfer of freight from truck to rail or rail to truck (including any temporary storage facilities directly related to such transfers) which receives Federal assistance under Title 23 or Title 49.

It is important to note that any surface transportation project which receives Title 23 assistance is qualified to benefit from these private activity bonds. According to DOT, because TIFIA credit assistance is a form of Title 23 assistance, this means that TIFIA projects are also eligible to receive this tax-exempt bonding authority. This means that TIFIA-assisted public transportation projects, intercity bus or rail facilities and vehicles (including vehicles and facilities owned by Amtrak), public freight rail facilities or private facilities providing public benefit for highway users, and intermodal freight transfer facilities are all eligible to be financed with qualified private activity bonds.

SAFETEA-LU limits the total amount of such private activity bonds to $15 billion and directs the Secretary of Transportation to allocate this amount among qualified highway or surface freight transfer facilities. The $15 billion in exempt facility bonds is not subject to the state volume caps. As of April 3, 2008, DOT had approved a total of $5.288 billion in private activity bond allocations for a total of six projects, including the Port of Miami Tunnel ($900 million), the Missouri DOT Safe & Sound Bridge Improvement Project ($700 million), the Knik Arm Crossing in

Alaska ($600 million), the Virginia I-495 Capital Beltway HOT Lanes ($800 million), the Texas DOT IH 635 (LBJ Freeway) ($288 million), and Pennsylvania Turnpike Capital Improvements ($2 billion).

(b) Tax-Credit Bonds

Tax-credit bonds are a special type of bond that has in recent years been proposed as a way to increase investment in programs such as Amtrak and mass transit. Tax-credit bonds, which must be specifically authorized by Congress, allow investors to receive a nonrefundable tax credit against their federal income tax liability instead of a cash interest payment. One example of tax-credit bonds is the "Qualified Zone Academy Bonds", which were authorized by the Taxpayer Relief Act of 1997 to provide aid to state and local governments to improve certain schools.

During the last reauthorization of highway and transit programs, the use of tax-credit bonds was considered as a potential new funding source for transportation programs. At that time, CBO was asked by the Senate Committee on the Budget to analyze three hypothetical proposals involving the use of tax-credit bonds for transportation programs.[8] The first such proposal assumed Congress would authorize the creation of a new government-sponsored enterprise, the Transportation Financing Corporation, which would be authorized to issue tax-credit bonds. The second proposal assumed that tax-credit bonds would be issued by the U.S. Treasury. The third proposal assumed that conventional bonds whose proceeds were earmarked for transportation would be issued by the U.S. Treasury. CBO's analysis concluded that financing transportation programs through the proposed bonds would generally be more expensive to the Federal Government over the lifetime of the bonds than financing an equivalent amount through appropriations.

In July 2004, CBO further examined the issue of tax-credit bonds.[9] CBO reaffirmed that tax-credit bonds will always be a more expensive way of financing programs' spending than the conventional method of U.S. Treasury financing. Conventional Treasury securities achieve the lowest possible financing cost because they are free of default risk and highly liquid. According to CBO, any other means of raising funds can be expected to cost more. However, CBO did note one possible advantage of tax-credit bonds. Specifically, CBO noted that tax-credit bonds could be designed to deliver the same Federal subsidy to state and local governments that current tax-exempt bonds provide, but at a lower cost. This is because a tax-credit bond would subsidize the interest on state and local government debt more efficiently than an exemption of interest income could.[10]

(c) Grant Anticipation Revenue Vehicle ("GARVEE") Bonds

Bonds repaid with future Federal funds are commonly referred to as GARVEEs, or Grant Anticipation Revenue Vehicles. GARVEEs permit states to pay debt service and other bond-related expenses with future Federal-aid highway apportionments.

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[8] *See* "A Comparison of Tax-Credit Bonds, Other Special-Purpose Bonds, and Appropriations in Financing Federal Transportation Programs", issued by CBO in June 2003.

[9] *See* "Tax-Credit Bonds and the Federal Cost of Financing Public Expenditures", issued by CBO in July 2004.

[10] Because some bond purchasers' marginal tax rates are higher than other buyers', tax-exempt bonds usually end up costing the federal government more than the amount of benefits (i.e., the reduction in interest costs) received by the state and local governments that issue the bonds, making tax-exempt bonds a relatively inefficient method of delivering subsidies. For more information, see July 2004 CBO paper.

While some debt service payments have been eligible for reimbursement from Federal-aid highway funds since the beginning of the modern Federal-Aid Highway Program in 1956, this opportunity was of limited practical use. For example, prior to 1995, States could use their apportioned Federal-aid highway funds to repay only the principal component of debt service on certain categories of projects, and interest costs were eligible for reimbursement only for some Interstate projects.

The NHS Act, which amended Section 122 of Title 23 to expand the Federal Highway Administration's ("FHWA") bond reimbursement provisions, made two significant changes. First, the NHS Act expanded the types of debt-related costs eligible for Federal-aid reimbursement to include interest expense for all projects, debt issuance costs, and the cost of purchasing commercial bond insurance. Second, the NHS Act eliminated provisions that restricted the amount and timing of advance construction authorizations. The limitation was replaced with a requirement that advance construction projects be on the approved STIP, enabling FHWA to approve an advance construction project at any time, even in a future authorization period.

This ability to approve advance construction in a future authorization period is critical to the GARVEE process. Under the former rules, it would have been necessary to obligate the Federal share of debt service payments within the bounds of obligation authority available during the current authorization period. Under the new rules, it is possible to obligate Federal funds for debt service expenses over a longer period.

Candidates for GARVEE financing are typically larger projects (or programs of projects) that have the following characteristics:

- They are large enough to merit borrowing rather than pay-as-you-go grant funding, with the costs of delay outweighing the costs of financing;
- They do not have access to a revenue stream (such as local taxes or tolls) and other forms of repayment (such as state appropriations) are not feasible; and
- The sponsors (generally state DOTs) are willing to reserve a portion of future year Federal-aid highway funds to satisfy debt service requirements.

In addition, candidate projects must be eligible for Federal-aid highway funding under one or more program funding categories for which advance construction is available. The projects must also appear on the STIP.

As of April 2008, 20 States and two territories had issued more than $8 billion in GARVEE bonds (excluding refunding issues) since enactment of the NHS Act in 1995.

II. Proposed New Programs for Federal Support of Non-Federal Infrastructure

Recently, several bills have been introduced to establish a variety of "infrastructure banks" to increase investment in infrastructure. In general, these proposals use debt-financing to target investment to infrastructure. While this accelerates investment relative to what would likely occur under a pay-as-you-go approach, the debt obligations eventually must be repaid, with interest, often through user charges or other dedicated revenue sources.

In addition, there may well be no budget scoring advantage to these types of proposals. According to CBO, the way in which an activity should appear in the federal budget depends on the nature of the activity, not its method of financing.[11] Long-standing federal budget principles require that an investment that is essentially governmental in nature (i.e., initiated, controlled, and funded largely by the government for governmental purposes) be shown in the budget. This means that activities do not have to be conducted by a federal agency, or financed by the U.S. Treasury, to be classified as governmental and included in the budget.

Therefore, a key question in determining how these types of proposals would be scored is whether or not the activity is governmental in nature, in CBO's view. If the entity issuing the bonds is deemed by CBO to be sufficiently "federal-like", then the legislation creating the entity would likely be scored in a way that provides no advantage over the more traditional approach of providing regular appropriations.

A. National Infrastructure Development Act of 2007 (H.R. 3896)

H.R. 3896, introduced by Representative DeLauro on October 18, 2007, establishes the National Infrastructure Development Corporation ("NIDC") and its subsidiary, the National Infrastructure Insurance Corporation, as wholly owned Government corporations. Within five years after enactment, these corporations are intended to transition to self-sustaining, privately-controlled government-sponsored enterprises, comparable in structure to Fannie Mae and Ginnie Mae.

The NIDC would be a national level revolving fund intended to facilitate the financing of infrastructure projects that can be self-sustaining based on user charges or other dedicated revenue sources. A broad range of infrastructure projects would be eligible for financial assistance through the NIDC, including road, highway, bridge, tunnel, airport, mass transportation, passenger or freight rail, waterway, commercial port, drinking or wastewater treatment facility, and solid waste disposal facility projects, whether owned, leased or operated by a public entity or a private entity, or a combination thereof.

The NIDC would initially be capitalized by the Federal Government. Specifically, the bill requires the Secretary of Treasury, subject to appropriation, to purchase $3 billion worth of voting common stock of the Corporation in each of the three years following the date of enactment of this Act. Thereafter, the NIDC would be self-sustaining through revenues generated by income from loan repayments, fees, and charges.

The bill authorizes the NIDC to: (1) make loans and purchase debt securities and equity securities, the proceeds of which are to be used to finance the development of one of more infrastructure facilities; and (2) issue and sell debt securities and equity securities.

In addition, the Corporation would be authorized to designate certain bonds as "Public Benefit Bonds". Public Benefit Bonds are defined as any obligation issued after the date of enactment if: (1) 95 percent or more of the net proceeds of such obligation are used to finance one or more infrastructure facilities; (2) such obligation has received a published rating; and (3) the development of such infrastructure facilities is undertaken by a governmental entity or a public-

[11] *See* "Third-Party Financing of Federal Projects", issued by CBO June 1, 2005.

private partnership. The bill includes provisions intended to encourage pension plan investment in the development of infrastructure facilities, through Public Benefit Bonds.

The NIDC would have a 12-member Board of Directors, of which nine directors would be appointed by the President and three would be officers of the NIDC. Of the non-officer directors appointed to the board, a minimum of six would be selected from the private sector as follows:

- Two representatives from organized labor;
- Two individuals involved in the field of public-private infrastructure finance and related disciplines; and
- Two individuals selected after consultation with the National Governors' Conference.

A majority of the non-officer members of the board shall appoint the president of the NIDC, who shall serve on the board of directors. The president of the NIDC shall select two executive officers to be appointed to the board.

H.R. 3896 would also establish the National Infrastructure Insurance Corporation ("Insurance Corporation") as a subsidiary of the NIDC. The Insurance Corporation would be initially capitalized by the NIDC, and would be authorized to insure and reinsure bonds, debentures, notes, debt instruments, loans, and any interest thereon, the proceeds of which are to be used to finance or refinance development of infrastructure facilities.

The obligations of either corporation, and obligations insured by any such corporation shall not be obligations of, or guaranteed as to principal or interest by, the United States or any federal agency.

B. National Infrastructure Bank Act of 2007 (S. 1926 and H.R. 3401)

S. 1926, introduced by Senators Dodd and Hagel on August 1, 2007, and H.R. 3401, introduced by Representatives Ellison and Frank on August 3, 2007, would establish a National Infrastructure Bank as an entity of the U.S. Government to finance publicly-sponsored infrastructure projects of regional and national significance. Eligible types of projects include public transit systems, housing properties, roads, bridges, drinking water systems, and wastewater systems.

Modeled after the Federal Deposit Insurance Corporation, the Bank would be led by a five-member Board of Directors, each of whom would be appointed by the President and confirmed by the Senate. No more than three of the directors may be of the same political affiliation.

Under S. 1926, infrastructure projects with a potential Federal investment of at least $75 million would be brought to the Bank's attention by a public sponsor (e.g., state, locality, tribe, transit agency, or a consortium of these entities). Using criteria the Bank establishes through a rulemaking process, the Bank would select projects for funding, and develop a financing package that may consist of grants, direct loans, loan guarantees, or long-term project-specific bonds.

The Bank is authorized to issue up to $60 billion in infrastructure bonds. These bonds could be either general purpose infrastructure bonds (the proceeds of which would be used to provide direct subsidies to any qualified infrastructure projects) or project-specific infrastructure bonds (the

proceeds of which would be used to fund only that project). Both types of bonds issued by the Bank would be backed by the full faith and credit of the United States.

C. Build America Bonds Act of 2007 (S. 2021)

S. 2021, introduced by Senators Wyden and Thune on September 6, 2007, would authorize two or more State infrastructure banks to form a multi-state organization to be known as the Transportation Finance Corporation ("TFC"). The TFC would be authorized to issue up to $50 billion in "Build America" bonds to fund qualified transportation infrastructure projects, including roads, bridges, rail and transit systems, ports, and inland waterways. The TFC shall be exempt from all Federal, State, and local taxation.

The Build America bonds are not an obligation of the United States, and are not Federally-guaranteed. While the payment of principal with respect to such bonds is the obligation of the TFC, the Federal Government would essentially be paying the "interest" on the bonds. This is because the bonds would be tax credit bonds (i.e., bond holders would receive Federal tax credits in lieu of interest). The applicable credit rate would be equivalent to long-term corporate debt obligations, determined in such manner as the Secretary of Treasury prescribes.

The TFC shall establish a Build America Bonds Trust Account ("Trust Account"). The following amounts shall be deposited into the Trust Account: (1) the proceeds from the sale of all Build America bonds; (2) an appropriation of funds from the Federal Government equal to the lesser of $50 billion or the amount of revenues resulting from the extension of Customs user fees beyond September 31, 2007; and (3) any investment earnings on the amounts deposited into the Trust Account. Amounts in the Trust Account may be used only to pay the costs of qualified projects, redeem Build America bonds, and fund the operations of the Corporation.

D. RIDE 21 (H.R. 6004)

H.R. 6004, the Rail Infrastructure Development and Expansion Act for the 21st Century ("RIDE 21"), introduced by Representative Oberstar on May 8, 2008, would authorize states or interstate compacts to issue bonds to finance high-speed passenger rail infrastructure improvements. Specifically, the bill authorizes the issuance of $12 billion in federal tax-credit bonds and $12 billion in federal tax-exempt private-activity bonds over the next ten years, if the Secretary of Transportation ("Secretary") determines that the bond proceeds will be used for projects that are part of a high-speed rail transportation corridor design approved by the Secretary.

Under H.R. 6004, the Secretary may approve an overall corridor design that includes the following elements: (1) a written agreement regarding the use of any rights-of-way owned by freight railroads; (2) the elimination of existing railway-highway grade crossings that would impede high-speed rail operations; (3) the application of prevailing wage rate standards to construction projects; and, in the case of multi-state corridors, (4) the existence of an interstate compact.

The Secretary shall give preference to projects that: (1) use a mix of tax-credit and tax-exempt bonds; (2) link rail passenger service with other modes of transportation; (3) have a significant impact on air traffic congestion; (5) have completed environmental analyses and are ready to commence; or (6) have received financial commitments and other support of State and local governments.

E. ON TIME Act of 2007 (H.R. 5102)

H.R. 5102, introduced by Representative Calvert on January 23, 2008, takes a different approach from the bills discussed above. Rather than rely on debt-financing, H.R. 5102 would create new freight-related user fees and a dedicated freight trust fund to assist trade gateway communities in addressing their freight-related infrastructure needs.

Specifically, H.R. 5102 would direct the Secretary of Transportation to assess and collect a national trade gateway corridor fee on each article imported into, and exported from, the United States. Such fee shall be equal to .075 percent of the value of the article, or $500, whichever is less. Fee collections shall be deposited into the National Trade Gateway Corridor Fund ("the Fund"). Amounts in the Fund shall be apportioned to States to fund eligible projects in the transportation trade corridor for the Customs port of entry at which the fees were collected. Such apportionments shall be made proportionally, such that fees collected at a particular port of entry are used to fund projects in the transportation trade corridor for that particular port.

Under H.R. 5102, the Secretary of Transportation, in consultation with the Secretary of Commerce, would establish one transportation trade corridor for each Customs port of entry. Such corridors may not extend more than 300 miles from the Customs port of entry for which they are established, and may only include areas that are used for motor vehicle and cargo movements related to international trade.

To be eligible for funding from the National Trade Gateway Corridor Fund, a project must be located in a designated transportation trade corridor. In addition, it must be (1) eligible for assistance under chapter 1 of title 23, United States Code; or (2) for construction of or improvements to a publicly-owned intermodal freight transfer facility, for providing access to such a facility, or for making operational improvements to such a facility.

Project selection authority under H.R. 5102 rests with the State Departments of Transportation, which are required to seek input from local governments, port authorities, regional planning organizations, and public and private freight shippers. Finally, H.R. 5102 requires each State to establish a process for rating proposed projects that clearly identifies the basis for rating projects in accordance with the purposes of the legislation.

III. Issues Related to Federally-Owned Infrastructure

As noted above, the issues related to Federally-owned infrastructure, such as the air traffic control system, airport baggage screening systems, and public buildings, are somewhat different from those related to non-Federally owned infrastructure. Some of the methods by which Federally-owned capital assets are financed are discussed below.

A. Appropriations

Up-front payment of appropriated funds, financed through Treasury, is generally the least expensive way to finance capital assets. However, full, timely, up-front appropriations are often not a realistic alternative in the current budget environment. In the face of budget constraints, a variety of other methods have been used or proposed to finance capital assets, as discussed below.

B. Leasing

Leasing is one method by which the use of a capital asset can be acquired. For example, it is sometimes mentioned as an option for financing the FAA's Next Generation Air Traffic Control system.

In the 1980s, many agencies used leases as a substitute for appropriations to acquire major capital assets with specialized uses unique to the Federal Government. While leasing to meet long-term needs almost always results in greater long-term costs to taxpayers, it also provides the government opportunities to spend more on other mission objectives. However, the budget "scorekeepers" (i.e., the House and Senate Budget Committees, the Office of Management and Budget ("OMB"), and CBO) considered such leasing practices to be harmful in that they reduced oversight by both Congress and OMB, and committed the Federal Government to future expenditures that were not reflected in the budget at the time the commitments were made.

To put an end to such leasing practices, the Budget Committees, OMB, and CBO jointly developed the current guidelines for the budgetary treatment of leases. These guidelines have been in place since 1991.

Under these guidelines, a long-term lease that, in effect, provides the Federal Government with ownership of an asset is scored "up-front" (i.e., in the year in which the lease is signed) with budget authority equal to the present value of all future lease payments. Such leases include both capital leases (i.e., leases in which the government consumes almost all of the services produced by an asset over its useful life) and lease-purchases (i.e., leases in which the government purchases the asset at the end of the lease term). In contrast, the budget authority for operating leases (i.e., leases that provide the government with access to the services of a commercial asset only for a limited portion of its useful life) can be recorded annually over the life of the lease as lease payments are made.

This "up-front" scoring rule was intended to put capital leases and lease-purchases on an equal budgetary footing with direct purchases of assets, in an effort to ensure that agencies acquire capital assets in the most cost-effective manner. Unfortunately, these guidelines have had an unintended and undesirable effect in that agencies have sometimes chosen to rely on a series of operating leases to obtain access to assets for which they have a long-term need -- a strategy that is generally even less cost-effective than a lease-purchase.

One example of this can be found in the leasing of Federal office space. In almost all circumstances, the use of long-term leases to satisfy the need for Federal office space is a wasteful use of appropriated funds, because such leases are almost always more expensive than Federal construction. However, budget constraints, combined with the "up-front" scoring rule for capital leases and lease-purchases, have sometimes resulted in the General Services Administration ("GSA") using a series of operating leases, which contain no ownership option, to meet Federal space requirements.

The Government Accountability Office's ("GAO") work over the years has shown that building ownership often costs less than operating leases, especially for long-term space needs. For example, in 1995 GAO reported that 55 of 73 operating leases that the GSA had entered into cost a

total of $700 million more than construction. In 1999, GAO reported that for eight of nine major operating lease acquisitions that GSA had proposed, construction would have cost less than leasing and saved the government $126 million over 30 years. In 2005, GAO testified that for the Patent and Trademark Office's long-term requirements in northern Virginia, the cost of an operating lease was estimated to be $48 million more than the construction and $38 million more than lease purchase. Similarly, the Department of Transportation Building in Washington, D.C. was estimated to cost $190 million less to construct than to enter into an operating lease. Most recently, in January 2008, GAO reported that four of seven operating leases that GSA had entered into cost a total $83.3 million more than construction. Clearly, the current practice of relying on leasing to meet long-term space needs results in excessive costs to taxpayers and does not reflect an economically rational approach to capital asset management. It may, however, be a rational response to the current budget process which, for discretionary appropriations, has a one-year time horizon and does not recognize future cost savings or cost avoidance that would result from up-front investments in capital assets.

C. Other Contract Arrangements

Other contract arrangements have been used by Federal agencies to acquire assets without recording the costs up front, including the use of third-party financing to access private capital. According to CBO, one example of such third-party financing is the Energy Savings Performance Contract ("ESPC") program.[12]

The rationale for the ESPC program is that investing in more energy-efficient equipment should lower the government's energy use and hence its costs. Under the ESPC program, a contractor both finances and installs the energy-efficient equipment in Federal buildings. The financing is backed by fixed-price contracts that obligate the Federal Government to repay the vendor's costs, including a guaranteed rate of return, and to pay off any outstanding debt if it cancels a contract.

The law authorizing ESPCs is unusual in that it allows agencies to sign long-term contracts without getting an appropriation to cover the full cost of the Federal Government's contractual obligation -- only the amount needed to cover one year of the contract's cost is required when the agreement is approved. This budgetary treatment was also sanctioned in a memorandum from President Clinton to the heads of executive branch departments and agencies.[13] This statutory and executive authority combined provides, in effect, a limited exception from the up-front scoring rule for the acquisition of energy-efficient equipment.

As CBO notes, it would be more efficient to acquire the energy-efficient equipment by paying up-front, using appropriated funds, rather than by third-party financing. However, using appropriated funds is not always a viable option for Federal agencies with tight budgets. Without the unusual authority provided under the ESPC program, agencies may well have delayed investing in energy-efficient equipment, despite the future savings that could be derived from reduced energy use. This is because, under the current budget process, there is no recognition of the link between an up-front capital investment and the future savings that would be derived from that investment.

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[12] See "Third-Party Financing of Federal Projects", issued by CBO June 1, 2005.

[13] Memorandum from President Clinton titled "Cutting Greenhouse Gases Through Energy Savings Performance Contracts", issued July 25, 1998.

IV. Capital Budgeting

In general, proponents of capital budgeting believe that the current Federal budget structure and process have led to a less than optimal level of investment in infrastructure and other programs that promote long-term economic growth and increased productivity.

Currently, the Federal budget treats all expenditures the same, regardless of whether it is spending for long-term investment or spending for current consumption. In addition, the current budget process does not encourage Congress to make decisions about how much spending overall should be devoted to programs having a direct bearing on long-term growth and productivity.

Some believe this has allowed spending for current consumption to "crowd out" spending for long-term investment. For example, Federal outlays for physical capital, research and development, and education declined as a share of gross national product ("GNP") between 1980 and 1984 and have remained relatively stable at the lower level since then.[14] Specifically, in 1980, such spending was 2.6 percent of GNP. By 1984, such spending had been reduced to 1.8 percent of GNP. In 2007, the most recent year for which actual data are available, such spending was still 1.8 percent of GNP.

As discussed above in Section III, even capital investments that would result in future cost savings to the Federal Government can be "crowded out" under the current budget process. This is because the spikes in budget authority needed to make up-front capital investments can be difficult to accommodate, and the one-year time horizon of the federal budget process does not easily recognize future cost savings that result from up-front capital investments. Under the current process, the overriding concern is to minimize spending in the budget year, regardless of whether or not increased investments made in the budget year could more than pay for themselves by reducing costs in the outyears. This can lead to inefficient Federal spending.

Interest in a capital budget increased in the 1980s with the apparent approval of Comptroller General Charles Bowsher and the suggestion by President Reagan in 1986 that the idea be studied. In 1982 and 1983, the Subcommittee on Economic Development, then chaired by Chairman Oberstar, held several days of hearings on capital budgeting. In 1995 and 1996, the issue arose again during Congressional deliberations over the proposed Balanced Budget Amendment to the Constitution.

"Capital budgeting" appears to mean different things to different people. In broad terms, capital budgeting refers to methods by which spending on long-term investments (i.e., spending that generates benefits over multiple years) can be accounted for separately from spending on current consumption, and perhaps given a different budgetary treatment in recognition of the fact that the benefits are generated over multiple years. This can take a variety of forms, ranging from simply displaying additional information in the budget regarding investment spending; to depreciating capital investments over time and requiring the appropriation of annual depreciation charges rather than the entire cost of the investment up-front; to establishing and enforcing target levels of "investment" spending.

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[14] FY 2009 President's Budget, Historical Tables, Table 9.1, "Total Investment Outlays for Major Public Physical Capital, Research and Development and Education and Training: 1962-2009".

Budget experts (e.g., the Office of Management and Budget) have tended to be wary of capital budgeting proposals, because they want to protect the concepts of full-funding and up-front scoring, to maintain budget discipline and ensure that Congress fully evaluates the likely costs and benefits of investments before appropriating funds for them.

A. Proposal for Separate "Investment" Budget Category

In 1993, in response to a request by Chairman John Conyers, House Committee on Government Operations, to evaluate capital budgeting, GAO issued a report titled "Incorporating an Investment Component in the Federal Budget".

In this report, GAO concluded that the most appropriate definition of "investment", for the purpose of focusing on long-term economic growth, would include Federal spending intended to enhance the private sector's long-term productivity, including spending on research and development, education and training, as well as spending for physical capital to improve infrastructure. GAO did not include in this definition spending on federally owned capital that the government itself uses (e.g., federal land, office buildings, or defense weapons systems).

GAO further concluded that establishing investment targets within a framework similar to that contained in the Budget Enforcement Act (i.e., having a separate budget category for investment spending, similar to the non-defense discretionary, and defense discretionary budget categories), was the most promising way to incorporate an investment component into the budget. GAO argued that, under this approach, Congress and the administration would reach agreement on the appropriate level of investment spending, and a separate discretionary spending cap could be established to mandate a separate investment target (or floor) to protect investment spending from being crowded out by other activities. This is similar to the approach that was taken in TEA-21 to establish separate highway and transit budget categories.

B. President's Commission to Study Capital Budgeting

In 1997, President Clinton established by Executive Order a Commission to Study Capital Budgeting. The order directed the commission to report on various aspects of capital budgeting, including the budgeting of capital in other countries, state and local governments, and the private sector; the appropriate definition of capital; the role of depreciation in capital budgeting; and the effect of a capital budget on macroeconomic stability and budgetary discipline.

In 1999, the President's Commission issued its report, which did not propose the adoption of a formal capital budget. Nor did it support GAO's proposal for a separate "investment" budget category. Rather, its recommendations were largely aimed at improving the information available to budget decision-makers, and a reiteration of current scoring rules requiring full, up-front funding for capital projects.

WITNESSES

PANEL I

Representative Rosa L. DeLauro

Representative Ken Calvert

Representative Earl Blumenauer

Representative Keith Ellison

PANEL II

Dr. Everett M. Ehrlich
President
ESC Company

Mr. Mark Florian
Managing Director
Goldman, Sachs & Co.

Dr. Rudolph G. Penner
Senior Fellow
The Urban Institute

Mr. Bernard Schwartz
Chairman and Chief Executive Officer
BLS Investments LLC

FINANCING INFRASTRUCTURE INVESTMENTS

Tuesday, June 10, 2008

HOUSE OF REPRESENTATIVES,
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
Washington, DC.

The Committee met, pursuant to call, at 10:09 a.m., in Room 2167, Rayburn House Office Building, Hon. James Oberstar [Chairman of the Committee] presiding.

Mr. OBERSTAR. The Committee on Transportation and Infrastructure will come to order. We are awaiting the arrival of our senior Republican Member on the Committee. He is en route. But we will have soon the rule providing for consideration of the Amtrak bill. And I know that several of our Members want to be on the floor for that, so I will just get started with my comments. I want to thank, at the very outset, our member panel for being here for their very interesting and persistent and thoughtful constructive work on financing infrastructure investments. We will hear from that panel in just a moment. Welcome Mr. Mica, thank you very much.

Mr. MICA. Thank you for beginning and also for conducting this meeting. And I know I have to run to the floor in a few minutes. I understand our Amtrak proposal is up pretty soon.

Mr. OBERSTAR. The rule on the bill.

Mr. MICA. Okay. So we have got a little bit of time.

Mr. OBERSTAR. The bill will be up after all of the——

Mr. MICA. I appreciate it after the one-minute diatribes. But thank you for hosting this important meeting, and also hearing from our colleagues. And what is interesting, I have read through some of the testimony and proposals of our colleagues, and I think we all have the same goal in mind. And that is providing more net dollars for America's infrastructure.

We have got three leaders here, another one expected, Mr. Calvert, who are interested in making certain that America is not a Third World nation as far as its investment and infrastructure, a position which Chairman Oberstar and I maintain. We have to stay ahead of the curve. And as we look at probably the most comprehensive reform in transportation policy, which will come with next year's expiration of our current legislation, we want to make certain that we are all working together toward that goal. I have reviewed some of the proposals, as I say, and they provide some additional net dollars available through infrastructure banking. Mr. Blumenauer has a proposal that is similar to one that I have proposed and share his desire also to try to get us to develop a national strategic infrastructure and transportation plan.

In fact, I had actually drafted a similar proposal to his, which had a commission at the top, and that was my first thought at the legislation and that approach in trying to get a solid hold on what projects are in our national interest. And oddly enough after sort of vetting that, I came to the conclusion to reverse the process, which was rather than have a commission that would come out with a report or a study or a recommendation, and, in fact, Con-

gress would have to be the ultimate arbiter of what is set in policy, that we would reverse that process.

And so I have changed my approach, since if you contact any State, any governmental entity or jurisdiction, they can produce to you instantaneously what their infrastructure needs are. I was with Mayor Bloomberg, and he has, for New York City, a strategic plan. Each State just about now has a comprehensive strategic plan, and most of them incorporate most modes of transportation. So we took the reverse approach and have those flow from grassroots up. And having Congress in the position, which it ultimately will be in setting what our national strategic policy projects and priority plans are. We must also incorporate a way to finance them.

Quite frankly, I think some of the proposals offered by my colleagues are quite modest. I believe that we need instead of $500 million, which I have heard the Chairman mention as a net amount, I would like to see $1.5 trillion in infrastructure and raise the $286 billion to what the Chairman has said to approach a half a trillion dollars. Then through public—well, through, first of all, through creative financing, bonding and leverage financing, finance an additional half a trillion dollars worth of projects. My administration has not been conducive to those types of proposals, which I believe make so much sense, because we can't pay for all projects up front, we do need to finance them and create a fashion, which will give us another half a trillion dollars. And then the third half a trillion dollars would come from public-private partnerships. And if we define at the Federal level what public-private partnerships are available, whether it is dealing with a sale of portions of our interstate, whether it is public-private partnerships in developing in toll roads, in a whole host of public-private arrangements, I think the potential for another half a trillion dollars in that net value is there.

So that sounds like a lot of money. Richard Nixon, of course, went in August, I believe it was 1954, to Lake George to the Governors Association Conference. The Federal budget in 1954 was $78 billion and he proposed a half a trillion dollar National highway system. And I think that is the kind of conservative initiative that we need in these times that we need infrastructure. I yield back to the Chairman.

Mr. OBERSTAR. I am delighted to hear my colleague and good friend, Mr. Mica, talk about half a trillion dollars as a conservative investment. And I welcome that conservatism because it is a progressive conservatism and it is investing in America's productivity in our future. I have a number of comments that I intended to make at the outset, but I thought in light of the rule on the Amtrak bill coming up very early in this process, I yield to the Ranking Member, because I know he wants to be on the floor, and the other Members of the Committee want to be on the floor for the rule, however, I want to get on with this panel and intend to listen very carefully.

I have read your testimony ahead of time. We have a second panel of financial and budget experts who are very special people, and several of whom have testified before at this Committee hearing. Dr. Everett Ehrlich; Mark Florian, Goldman-Sachs; Rudy Penner, a former CBO Director; and Bernie Schwartz, whom I have

known for many years over the time when he took over IBM's failed efforts at modernization of the air traffic control system and brought it into the modern age with great improvements and our en route center technology and the TRACON technology.

Unfortunately, we will not have Felix Rohatyn.

[speaks French.]

So Bob Rowe at the unveiling of my portrait said that we have two official languages in the Committee, I just used one of them. Thank you. And now, Ms. DeLauro, thank you. Please proceed.

STATEMENT OF THE HON. ROSA DeLAURO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CONNECTICUT

Ms. DELAURO. Thank you very much, Mr. Chairman. I take it in transportation that Mr. Rohstyn is in Paris, so good for him, if that is the case.

Mr. OBERSTAR. We are not at war with anybody after what I said.

Ms. DELAURO. First of all, let me just say thank you to you also just as a comment. 18 years ago when I first came to the Congress, my first Committee assignment was to the Transportation Committee. It is a love that I have, and I appreciate all of the good work that you have done and the innovation that this Committee is engaged in. And to Mr. Mica, thank you. I heard you on the news this morning on Amtrak, well done, and I thank you for your comments as well. This is an important hearing, and I am delighted to have the opportunity to testify. I am also so pleased to be here with my colleagues Earl Blumenauer, Keith Ellison, I am hoping we will see Mr. Calvert, as we examine these critical issues.

As you know, when the Congressional Budget Office testified before this Committee last month, they indicated that as a share of gross domestic product, public spending on capital infrastructure has been relatively constant for the past several decades. Yet the CBO's review suggests that billions of dollars of additional spending on infrastructure each year would make good economic sense.

Indeed, with our national economy struggling, the smartest national investments are the ones that create jobs today and continue to pay off for years down the road and whose benefits reach our entire community. The National Service Transportation Policy and Review Study Commission, a January report, recommended an annual $225 billion investment to maintain and improve our transportation system. Approximately $140 billion more than is currently invested. The GAO says our national water infrastructure will need from $485 billion to nearly $1.2 trillion over the next 20 years. And according to the American Society of Civil Engineers, the number of unsafe dams in America has arisen by more than 33 percent since 1998 to more than 3,500 in 2005.

It is clear we need a bold national infrastructure policy. Of course, we need leadership on this issue from the very top, from the White House. But Congress also has a critical role to play as well to provide both a vision and a way to realize it. Which is why I have introduced the National Infrastructure Development Act, to create an objective process for evaluating our infrastructure needs and leveraged private dollars to help rebuild our Nation's infra-

structure, such as highways, roads, bridges, pipelines and public buildings.

The legislation would create a national infrastructure development corporation and a subsidiary national infrastructure insurance corporation initially as Federal entities. The corporation would make loans, purchase securities and issue public benefit bonds to finance infrastructure projects. And the insurance corporation would further reduce the cost of those projects by ensuring the investments. The development corporation would include a board of directors consisting of 12 members, nine appointed by the President with demonstrated expertise in the field of infrastructure project development, finance or related disciplines.

The board would determine which projects to be funded based on how they would meet national critical infrastructure needs and the degree to which private sector finance is being leveraged. It would also consider whether providing funds will help expedite the project in question. We would fund the corporation with $9 billion in appropriations over 3 years. After 5 years, it would develop a plan to transition into a government sponsored enterprise, entirely self-financed through user fees and the sale of public stock.

We face a critical moment, and this proposal represents, I believe, a powerful opportunity to accomplish two important obvious. First, to establish an entity that can carefully look at projects and fund those which are the most critical to our Nation's continued growth. Second, the proposal leverages private sector investment to the largest degree possible. This could not be more important during tight financial times in which Federal and State governments simply cannot finance these projects alone. SAFETEA-LU is expiring and we face funding constraints on our aviation, water and school building systems, among others.

We need a new funding mechanism to supplement what we are doing. This legislation can fill that gap and meet our responsibilities. It is endorsed by the Associated General Contractors of America. The American Society of Civil Engineers, building and construction trades, Department AFL and the U.S. Chamber of Commerce, among many others.

Mr. Chairman, I believe my proposal, as well as the proposal of my colleagues here today, offer innovative and effective ways to take our national infrastructure policy in a positive and in a strong direction. By ensuring our Nation can continue investing in its instructor we can rebuild America and keep our Nation highly competitive throughout the 21st century. And I thank you for the opportunity to testify this morning.

Mr. OBERSTAR. You join the ranks of many graduates of the Committee on Transportation and Infrastructure that go on to other Committee assignments. Mostly they go to the Appropriations Committee, occasionally to Ways and Means. And you are one of those who went to the Ways and Means.

Ms. DELAURO. Well, it is a way really to fund the programs that we think so highly of Mr. Chairman.

Mr. OBERSTAR. Well, we start you out here in the Committee to learn how to do it, then you go somewhere else to do it. Mr. Blumenauer.

Mr. BLUMENAUER. Thank you Mr. Chairman. And I feel that I am just on leave from the Committee. I deeply appreciate the decade that I spent with you.

Mr. OBERSTAR. It is a sabbatical, that's all.

STATEMENT OF THE HON. EARL BLUMENAUER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OREGON

Mr. BLUMENAUER. And look forward in my other Committee assignments to find a way to help you generate the resources to be able to rebuild and renew America. The legislation that I am speaking to today compliments what my good friend from Connecticut talked about. I am intrigued with the notion of an infrastructure bank. What I hope to offer up for your consideration is the leadership from this Committee to develop a vision for how all of the infrastructure pieces fit together. We are in the midst of an infrastructure crisis. I think, if anything, we have understated it. From water, rail, the transmission of electricity, right down the line, all of the infrastructure we are actually, I think, investing less as a percent of our gross domestic product than we have in recent memory. And we have on a regular basis evidence in the news about sink holes opening up, levies failing, the strains on the system. And it is going to be only compounded by the impact of global warming and climate change.

The numbers are staggering in terms of you pick one, $1 trillion, $2 trillion. We are losing the infrastructure investment race with our competitors overseas. Some are concerned about China and a potential military confrontation. I am worried that we are losing the infrastructure race to China. It was not ultimately our Polaris missiles and atomic cannons that brought down the former Soviet Union. It was their ability to compete with us economically. And we at this point are in a situation where we are losing the capacity to compete economically with the European Union, with China, with Japan.

Even India is investing eight times what the United States is in terms of its gross national product. But it is not just more money. And I will work with you as a Member of the Budget Committee, as a Member of Ways and Means to find more resources. But it is how we spend the money and what we spend it on. Twice in the past the United States has developed a large vision for infrastructure development. You passed legislation several months ago commemorating the 200th anniversary of the Gallatin plan that was commissioned by President Jefferson with his Secretary of Treasury, Albert Gallatin, to develop a plan that led to the Erie Canal, that led to the Transcontinental Railroad, the Homestead Act, that helped knit a ragtag group of 13 colonies into a transcontinental Nation.

And it served us well in the 1800s. A century ago, President Roosevelt convened a similar conference in Washington, D.C. That led to infrastructure for hydro projects, for the National Park Service, and actually planted the seeds for the national plans that ultimately resulted in the interstate highway system. We need a vision on the scale of what Roosevelt and Jefferson did so that we can bring people together on all, in a comprehensive fashion for what infrastructure should look like.

I am suggesting that we have a commission that would be jointly appointed by the legislative branch, by local governments and by the new administration so that we have a buy-in to how we are going to go ahead and do this. We have demographic strains where we are going to have 50 percent of the population, or excuse me, a 50 percent increase in our population by 2050. We are going to have reallocation in the Metropolitan areas. We have significant strain for rural and small town America. And energy prices skyrocketing. You are going to go to the floor in a few minutes to talk about your Amtrak reauthorization. And that is one other element where we are not putting the pieces together in terms of a robust rail passenger system at a time when we have airport congestion, where one-third of the trips for air transport are 350 miles or less and the economic model doesn't work with $140 a barrel oil.

It is why we need to look at it comprehensively. I strongly urge that you consider a commission like I am suggesting. I know my friend from Minnesota is going to reemphasize and has an approach there. But unless and until we have you help us frame what the big picture is and we get the buy-in with a new administration, with local governments and have this conversation take place in congressional districts across the country, we are not going to have the consensus, the momentum and the insight to be able to have the big picture. Not a lot of studies. You know what the need is. But we need to bring that together in a comprehensive fashion and get a buy-in into a bigger picture for how the infrastructure pieces fit together. I appreciate your courtesy, I appreciate your past work in terms of putting the spotlight on plans in the past, and hope that this Committee can help set the tone for how we are going to rebuild and renew this country. Thank you very much.

Mr. OBERSTAR. Thank you for your energy and for your enthusiasm and for your ideas. Mr. Ellison, my good friend and colleague, a first-term Member from Minnesota. He has proven himself and worked very hard without a lot of fanfare, just a good nose-to-the-grindstone work. Glad to have you hear. Thank you.

STATEMENT OF THE HON. KEITH ELLISON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MINNESOTA

Mr. ELLISON. Thank you, Mr. Chairman. And let me start by thanking you, Chairman Oberstar, and Ranking Member Mica for holding this important hearing on the condition of our Nation's infrastructure and proposals needed for improvements to it. The issue of investing in public infrastructure in the state of our ailing public infrastructure is a very real issue that demands our immediate attention. You and I stood together, shook up and amazed at our own infrastructure tragedy in Minnesota when the I-35 bridge collapsed. We will never forget those moments. But those moments help us focus our attention on the needs of our country now, which unfortunately other Members of our body can talk about tragedies that happened in their areas.

But it is bigger than just tragedy, it is a question of our economic viability. And that is why I am so happy to appear before the Committee today to discuss the National Infrastructure Bank Proposal, which is H.R. 3401 that I have introduced along with Representative Barney Frank of Massachusetts. This legislation would create

an independent national bank with an initial outlay of about $60 billion in tax credit bonds. The bank would also be able to receive private capital and hence would be able to potentially leverage millions of private dollars. The bank is modeled after the European investment bank whose financing of public projects has created one of the most modern and efficient transportation infrastructure systems the world has ever seen. The infrastructure bank would not displace existing formula grants or earmark infrastructure, it would target specifically large capacity building projects that are not adequately served by the current financing mechanisms.

Eligible infrastructure projects to the bank's jurisdiction would be limited to publicly owned mass transit systems, roads, bridges, drinking water, wastewater treatment systems and public housing properties. We ensure—to assure that we focus on public investment on projects with broad regional or national impact only projects that require a minimal Federal investment of $75 million would be eligible for bank financing. And these projects must demonstrate a substantial regional or national significance. Like other modern investment banks, once the bank identifies an investment opportunity, it will develop a financing package. This package would include direct subsidies, direct loan guarantees, long-term tax credit general purpose bonds. Most importantly, these bonds would be backed by municipal and state revenue which makes them some of the safest and most attractive investments.

I believe this infrastructure bank could play a crucial role in tackling the major infrastructure deficit that currently exists in America. According to the American Society of Civil Engineers in its 2005 report card for America's infrastructure, it will take an estimated investment of $1.6 trillion by 2010 to just bring the Nation's existing infrastructure to working order. In addition, the research is clear that investing in public infrastructure can help stimulate economic growth.

According to the Department of Transportation, each $1 billion of infrastructure investment creates 47,500 jobs. Many of these will be high paying high school jobs that can't be outsourced or offshored. We also need to consider the cost to our economy. For the failure to not invest in a public infrastructure, according to the Brookings Institution, our economy lost $78 billion in productivity due to public ailing, public infrastructure from congested roads and antiquated rail systems.

Mr. Chairman, no doubt there will be a course of diverse opinions on these issues. Some will say we can't afford to meet our infrastructure needs. But in reality, we cannot afford to not meet our infrastructure needs, and the time to act is now. I believe the infrastructure, the tragic Interstate 35 bridge collapse which occurred in our State serves as a national call to action for this Congress and our Nation to focus on improving domestic infrastructure. In addition to health and safety, to maintain our competitive edge in the world America needs to dramatically increase our investment in public infrastructure. Americans deserve a need at public infrastructure of the 21st century that meets the demands of our lives and the 21st century. I look forward to working with this Committee and other Members of Congress to make a new national commitment to public infrastructure in this country. Thank you.

Mr. OBERSTAR. Thank you very much Congressman Ellison, and for your remarks about that I-35 W bridge. To paraphrase Benjamin Baniker, a tragedy is a terrible thing to waste. We wasted an opportunity with that tragedy. Had the Congress been in session for one more week, I think we would have enacted legislation that I proposed in conceptual form. There was an opportunity, and by the time August passed and Labor Day passed, an appetite for action had also passed. And you are right to call that to mind.

I just recently this past Friday was with Mr. Walz, our colleague from the Rochester area, at the Winona Bridge. And their bridge engineer took a hammer and tapped one of the girders and the hammer went right through. Rust had gone right through one of the critical structures of the bridge. And I asked, would you have done this inspection if I-35 had not collapsed? He said no. And then there is bridge routine to Luke and Superior that is now being completely rebuilt, or not completely rebuilt, the gusset fits are being restored, replaced and reinforced. And the bridge in St. Paul.

And there are many others. But this is what was predicted in hearings I held 20 years ago about bridge condition. And a professor of bridge engineering at a prominent university said then the bridge maintenance and repair and inspection is in the stone age. It still is. We have got to pull out of it and we have got to make some investments to make sure those things don't happen again. Mr. Calvert, you have an interesting proposal. I look forward to hearing from you.

STATEMENT OF THE HON. KEN CALVERT, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. CALVERT. Thank you, Mr. Chairman and Ranking Member Mica and Members of the Committee. Thank you for giving me the opportunity to testify here at the hearing today. As you know, I represent a congressional district in southern California that encompasses some of the fastest growing communities in the Nation. My constituents are found to have the highest commuting cost in the Nation and the unhealthiest commute in America. While the region I represent faces infrastructure challenges on a number of fronts, I would like to focus my comments today solely on the emerging goods movement challenge. As many of you know all too well, this challenge is not exclusive to southern California. Trade Gateway communities all over the Nation are experiencing increased burdens on freight infrastructure surrounding air, land and seaports. During most of last year, I met and discussed goods movement issues with a variety of stakeholders, including industry leaders, think tanks which represent truckers, railroads, port operators, retailers and transportation planners.

In a proactive attempt to address the freight challenges I introduced, along with my colleague Jesse Jackson, Jr., the ON TIME Act. The bill, H.R. 5102, which was introduced on January 23rd of this year, will fund the construction of high priority transportation projects which will alleviate congestion in our Nation's Gateway Corridors to a dedicated trade-based funding stream. The ON TIME Act would direct the United States Department of Transportation to designate key transportation corridors or National Trade Gateway Corridors extending out from every official air, land and

seaport of entry in the United States. Project eligibility under the ON TIME Act is limited to transportation projects located within the National Gateway Corridor.

Furthermore, the legislation limits funding to surface transportation projects, such as highway improvements, truck climbing lanes, truck bypasses, grade separations and interchanges on key freight routes. Publicly owned intermodal freight transfer facilities and improvements to the transportation linkages out of port facilities also qualify as eligible projects. The bill grants States with the project selection authority, not the United States Department of Transportation or Congress, to ensure all interested parties have an opportunity to engage in the project selection process.

The legislation requires States to seek the input from other government agencies, as well as the public and private freight stakeholders. The ON TIME Act derives its trade-based dedicated funding stream to the establishment of a capped and a nominal ad valorem fee on all goods entering and exiting through the official ports of entry. The ad valorem fee shall be equal to .075 percent of the stated value of the shipment with a cap or maximum fee of $500, whichever is less.

The proceeds generated by the establishment of this fee which is conservatively estimated to be approximately $63 billion over the next 10 years, will be deposited into a National Trade Gateway Corridor fund which the ON TIME Act establishes is a separate trust fund account within the United States Treasury. The fee established on the ON TIME Act is designed to ensure that it is paid for by the beneficial cargo owner rather than the transportation service providers such as shipping lines, trucking or railroad companies. Additionally, the fee is designed to be collected and administered by the existing Federal Government agencies through the use of existing forms and processes to the fullest extent possible. The bill apportions the funds collected by the newly establishment fee to the transportation improvement projects within the National Trade Gateway Corridor in which it was collected. Therefore, all funds generated from the application of the fee on goods imported and exported at the Port of Charleston, for example, would be apportioned to the transportation projects within the National Trade Gateway Corridor designated for the Port of Charleston. While I recognize that a proposal like the ON TIME Act is most appropriate as a possible component of the next highway authorization, in the short term, the Committee could move forward by advancing legislation that would simply direct the Department of Transportation to designate the National Trade Gateway Corridors.

I am confident if we work together, we can create real solutions to ease the congestion bogging down the freight and commuters in our Gateway communities. Thank you again for allowing me to testify. I look forward to your questions. Thank you, Mr. Chairman.

Mr. OBERSTAR. I thank you very, very much, Mr. Calvert, and each of our colleagues for their splendid thoughts. Each have a slightly different approach to the needs. But just a month ago, I traveled to Slovenia to the annual meeting of the Ministers of Transportation, 27 ministers of the EU, who were having their conference and asked me to be their keynote speaker of Slovene, French, Dutch, whatever else. But to discuss with them also their

transEuropean transportation network, TEN-T, $350 billion investment. Not just money planned or discussed, but a 30-project system.

This is not an eye test. I am just showing you it. You can't see from there. I can hardly see it from where I sit. But it is 30 individual projects. $350 billion. The most ambitious of which is to link the North Atlantic through the English Channel to the Black Sea through the Seine River, past Bahi, to the Rhine, and then by further canal to the Danube and the Danube to the Black Sea, saving hundreds of hours of transit and hundreds of millions of euros annually in transportation costs.

And others deal with extending their existing high speed passenger rail systems, expanding their freight rail network, moving more goods from truck to rail, reducing their fatalities, which five years ago were 53,000 a year on their comparable highway network to ours. But in 5 years, they have reduced that down to the level of fatalities on the U.S. highway system, 43,000. They are serious about this. They have a plan. They didn't engage a commission, they engaged their ministers, they engaged their top policymakers, to lay out the needs, the sources of investment and to make the investments, and they are about half of the way through already ahead of schedule.

Each of you, in your own specific ways, are proposing something similar. It really simply takes political will to get there. And we haven't had political will to make those bold investments that we need at the White House in the last 8 years. There has been will on the part of the Congress. I recall very well Mr. Shuster challenging the Clinton administration and House Republican leadership to fence off the highway trust fund, to truly make it a trust and not subject to withholding of funds to build up surpluses and make deficits look smaller.

And we succeeded in that effort. It was a bipartisan effort. Mr. Young advocated with the White House for a $375 billion investment in surface transportation as recommended by the Department of Transportation. The White House said no. Speaker Hastert made the same appeal. He finally told me that he was told by the White House staff he was welcome any time at the White House but not to talk about transportation. And we wound up with $286.3 billion, thanks in large part to Mr. Thomas, a Chair of the Ways and Means Committee who insisted on additional investments well above the administration threshold.

So now we have four splendid ideas set before us. I take heart from what Mr. Mica said a little while ago about $1.5 trillion dollars of investment going beyond, I think that is total infrastructure investment, not just transportation.

So Ms. DeLauro, let me ask, your testimony says that the board that you would establish would determine which projects to fund based on how they meet national critical infrastructure needs. What are the criteria? Do you spell those out or do you leave those up to the board to determine? How will—and private sector finance leveraging. The question I have is how do you make those decisions? The Wilson Bridge on the east coast through which 1 percent of gross domestic product of the Nation passes, or the Golden Gate Bridge on the west coast, which is a privately owned and op-

erated structure, but to which we have committed Federal funds to strengthen against earthquake and terrorist damage, how much total investment will the $9 billion over 3 years in the corporation generate.

Ms. DELAURO. Let me just start with that. First of all, I would imagine that at that conference in Slovenia, Mr. Chairman, that you didn't need simultaneous translation.

Mr. OBERSTAR. No. For sure they can speak at least three languages.

Ms. DELAURO. But I think it is very, very exciting what you outline there, and the kind of commitment and will that you have spoken about. Because my view is similar to yours and to Mr. Mica's that without the will or the willingness to engage in serious public investment, that we are not going to succeed. My view is that we need the robust investment from the Federal level. But what I have tried to do with this proposal is to create the opportunity for there to be public and private investment. Because I don't believe we can succeed alone in this effort. I think the scale of the problem is that serious. We are looking at a $1.6 trillion annual shortfall of funds. And I think we all know that that kind of money is not going to come from the Federal Government. And I think that we will succeed if we have the engagement of a public-private partnership. The national infrastructure development corporation would create $55.8 billion in economic activity.

Mr. OBERSTAR. That is what you anticipate would be the leveraging, that is that the $9 billion would generate $55 billion dollars?

Ms. DELAURO. That's right. We would start with $3 billion a year over 3 years. And $30 million in terms of start-up costs. And this would become, over the time it would become a GSE a government sponsored entity, in the nature of Fannie Mae and Ginnie Mae.

Mr. OBERSTAR. And then the criteria for the various projects would be——

Ms. DELAURO. I think that we haven't filled out the criteria. And that that would become a function of the board. But there again, when we take a look at—you know, there is a question of what, in fact, is in the public good. And I think that that is something that has to be considered. But this is about leveraging private capital. It is not about privatizing our infrastructure.

Mr. OBERSTAR. I understand that. I appreciate that.

Ms. DELAURO. I want that to be clear.

Mr. OBERSTAR. The reason I asked that, and I want each of the members to think about this, each of our witnesses, is that in consideration of SAFETEA-LU legislation I crafted the mega projects proposal. And it sailed through the House. We were going to have $17 billion. That eventually was cut down to $6 billion because we had to cut the whole program back. And then when we got to the conference with the Senate they didn't want criteria, they didn't want any national standards. I envisioned maybe six or seven national mega projects were going to get $1 billion to solve a critical juncture of confluence of goods movement, people and congestion. Huh-uh.

The Senate told us very frankly we know how to make these investments and we will make the decision. We will take half of that

money and spread it out. So it all got frittered away out on the national stage. We have to go into this with a clear national commitment as Europe did. 30 projects, $350 billion. We don't have to take a lesson from Europe, but we can take a lesson from their experience. Mr. Blumenauer, what do you envision the commission, how long a time do you anticipate it would take for a commission to review and make policy statements and to make recommendations to the Congress?

Mr. BLUMENAUER. Mr. Chairman, it would be my hope that we would be able to streamline this process. As I mentioned briefly in my testimony, we don't have to have any original studies. There is ample documentation about cost, about challenges. I hope synthesizing that information and being able to take the show on the road to help develop the criteria you talk about. We, I would hope that within the course of the next two years of the new administration and the new Congress that we would be able to use this to supplement the work that this Committee would be doing to be able to have the overview to give impetus for what you have tried to do in terms of buying into a big picture, having criteria, having grassroots support, which is why the commission that I am proposing would have a minimum of 50 hearings around the country, to be able to give the sort of stamp of approval for the big picture and help us with the synthesizing process.

One of the challenges we face is that the responsibility is spread in Congress throughout, although the primary thrust is here with your Committee, we have Commerce, we have Ways and Means, we have Homeland Security, the Natural Resource Committee. This would I think help us engage the administration and some outside experts in the big picture.

Mr. OBERSTAR. I thank you for that. I just am troubled. I think the National Surface Transportation Policy and Revenue Study Commission did a good job in 18 months. But I worry about commissions, having observed them over many years, that they are a little like college professors. I have never seen a college professor's study proposal for less than three years. They are usually five-year grant proposals or at least three years. And we need some tangibles. So think more how you compress that whole process into a much shorter time frame.

Mr. BLUMENAUER. I appreciate your admonition Mr. Chairman and would look forward to working with you and the Committee in doing that. Part of the good news is that the rest of America is not waiting for us. The Chamber of Commerce is rolling out, I think, 40 hearings that they are going to have around the country, we have been working with some groups that are looking at major conferences and public gatherings. We are having one with Senator Cardin in Baltimore on Monday. The number of national unions, including the laborer's union, are moving forward.

I think that with your help, we could craft an admonition for a short time frame, engage the new administration, the grassroots effort, so that it comes back in a quick enough time that we can do this integrative process. And I look forward to working with you to make it happen.

Mr. OBERSTAR. We will do that. Thank you. Mr. Ellison, the bonds issued by this national infrastructure bank proposed would

be backed by full faith and credit of the U.S. Government, is that your concept?

Mr. ELLISON. Well, no, it is not envisioned that the Federal Government would be responsible for repaying the principal. The $60 billion in tax credits would be issued with the full faith and credit of the Federal Government, you are right about that. The principal of these initial bonds would be paid from the bank's revenues, which is taken from the subsidized loans that the bank offers to infrastructure projects around the country.

Mr. OBERSTAR. Will government have to repay the principal?

Mr. ELLISON. Well, the—well, because the bonds, the tax credit bonds, not paying an interest rate, the bank would not be responsible for interest payments of the bond, only the repayment on the original principle.

Mr. OBERSTAR. Okay. Thank you. Mr. Calvert, your proposal, together with Representative Jackson, Jesse Jackson that is, is a very intriguing one. It harkens back for me to the Port Security Act that we passed in 2002. And Mr. Young, then Chairman of the Committee, and I, and Senator Hollings from South Carolina advocated very much what you are proposing, a container security fee, and the White House vigorously resisted.

Finally, Mr. Young and I, Senator Hollings, just said, well, we will drop it, let us get the framework port security policy in place and then figure out what we are going to do from there. I remember at the White House at the signing of the bill, the President signed the bill and he said, thank you, Jim, for your help in getting this through, I know you had to give up a lot. I said, now, Mr. President, how are we going to pay for it. He said, well, we will do that, we will get there. Well, we haven't. And I think that your container fee idea is a good one.

A maximum of $500, do you know what the cost is, the transportation cost of moving a container from Long Beach, Los Angeles to the east coast.

Mr. CALVERT. Significant.

Mr. OBERSTAR. $800 minimum. Probably getting more these days with the price of fuel. So your maximum cap on this would be minimal. Do you know how much money, do you have any idea, ballpark idea what agrees with that?

Mr. CALVERT. We are talking about approximately $63 billion over a 10-year period.

Mr. OBERSTAR. Given what Mr. Mica said a moment ago, that is a modest investment.

Mr. CALVERT. Well——

Mr. OBERSTAR. But it is a significant one.

Mr. CALVERT. —it is a start.

Mr. OBERSTAR. But it is targeted, isn't it?

Mr. CALVERT. That's correct, it is targeted to the Gateway communities of the land, air and seaports throughout the United States.

Mr. OBERSTAR. And intermodal applications?

Mr. CALVERT. Yes, sir. And also grade separations, truck dedicated lanes.

Mr. OBERSTAR. Some of the biggest cost items in the portfolio?

Mr. CALVERT. That's correct.

Mr. OBERSTAR. Thank you. Mr. Duncan.

Mr. DUNCAN. Well, thank you very much, Mr. Chairman, and thank you for calling this hearing. I made extensive comments on this issue when we had the hearing with the National Surface Transportation Commission several weeks ago, and then again last week, when we had a hearing before the Highways and Transit Subcommittee, and so I won't make additional comments at this time except to say that Ms. DeLauro has hit the nail on the head when she says that it will take obviously public and private investment. There is certainly an important role for this Committee and this Congress in regard to our Nation's infrastructure.

As I have pointed out many times, people in California use infrastructure in Tennessee and vice versa and there is a legitimate and important national role. And I share some of the Chairman's skepticism about another commission. But because I have such great respect for my friend, Mr. Blumenauer, who was such a fine Member of this Committee, I have co-sponsored his bill, and I think he is headed in the right direction.

And there is good suggestions from all the Members. Especially, I think Mr. Calvert has made some good suggestions too. I will have a chance to talk with all these members, and so I will save my questions for the witnesses on the next panel. Thank you very much.

Mr. OBERSTAR. I thank the gentleman. Mr. Nadler.

Mr. NADLER. Thank you Mr. Chairman. Congresswoman DeLauro, Rosa, in your bill, as I read your testimony, am I correct in deducing that these projects would have to be self-funding ultimately?

Ms. DELAURO. Ultimately they become self-sustaining through user fees, through tolls, those kind of mechanisms.

Mr. NADLER. So a project that could not be self-sustaining because it was more important for whatever reasons or more expensive than it could recoup in user fees or tolls, could be financed in part through this bank but not in total?

Ms. DELAURO. That may be. What we want to try to do here is to try to make the entity after the initial period a self-sustaining one. And the best way to try to do that, in my view, is—you know, for instance, with water projects, there are already fees associated with water usage. It is a safe investment usually thought to be by the investment community.

Mr. NADLER. The reason I ask is that clearly there are many infrastructure investments that are very important that could be self-sustaining over the long term, but also many that are very important that could not, and we have to make sure that we provide for them too.

Ms. DELAURO. Let me just, if I can, for a second, because this is not meant to take——

Mr. NADLER. The place of everything else.

Ms. DELAURO. —the place of everything. In essence, it is meant, as my colleague Mr. Blumenauer pointed out, this to supplement what is in place, not to take the place of, because that would be a mistake. And you could look at other ways in which you might be able to address some of these issues. And Mr. Chairman I also might add, while I said to you that the criteria would be estab-

lished by the board of directors of the corporation, there are further, and I won't go through them, that are listed within the bill where the proposals can come from, what projects are ready to go projects in the first 3 years, evaluation processes, et cetera, in terms of eligibility criteria. I just wanted to make that clear. I am sorry, Mr. Nadler.

Mr. NADLER. Okay. Thank you. Keith, Mr. Ellison, I will ask you the same question. In your proposal, as I understand it, these projects would also have to be ultimately self-sustaining in order to be financed through this bank?

Mr. ELLISON. Yeah. The projects are ultimately envisioned to be self-sustaining.

Mr. NADLER. Thank you. Earl, Mr. Blumenauer, I have no question. I simply want to observe that your history of the Gallatin, et cetera, is fascinating. I would also commend to you Henry Clay's American play which came between Gallatin and the later things which we saw the developments of that, and provided some of the basis for the formation of our political party system.

Mr. Calvert, I have a question for you. You say that in your proposal—well, you say a number of things, but it says that the legislation limits funding to service transportation projects such as highway improvements, truck climbing lanes, truck bypasses, et cetera. Publicly owned intermodal freight transfer facilities and improvements to the transportation linkage at port facilities would also qualify as eligible projects. So for example—I have two questions. One is a tunnel or a bridge for rail freight coming from a port, that would qualify?

Mr. CALVERT. The local commission would determine whether or not that is a priority project.

Mr. NADLER. I understand that. It would qualify as a possible project?

Mr. CALVERT. It could very well qualify, yes.

Mr. NADLER. Okay. Thank you. My second question, the bill apportions of funds collected by the newly established fees to transportation improvement projects within the National Trade Gateway Corridor in which it was collected. Therefore, all funds generated from the application of the fee on goods imported and exported to the port of Charleston for example would be apportioned to transportation projects within the National Gateway Corridor designated for the Port of Charleston. If we are looking at a national infrastructure system, and I know nothing about Charleston, we are just using it as an example because you used it, might it not be the case, for example, and isn't this the purpose of the Federal Government, among other things, that it might serve a national purpose to invest more in the Port of Los Angeles than could be generated in Los Angeles, and maybe we should take some money from Charleston and give it to Los Angeles or vice versa? Isn't that why we have a Federal Government? In other words, not every port has to be self-sustaining. And if it serves the national interest, we should be able to—just as we don't say that every dollar of taxes collected in New York has to be spent in New York.

Mr. CALVERT. The assumption behind this by the way is not that the fee would raise enough money to take care of all the problems in the transportation network related to freight. There would be

additional revenues that are collected by the Federal Government and could be determined to go to a port that may be deemed as a higher priority. Certainly the busier the port, the more revenue that that port would generate. Certainly the Port of LA, Long Beach, is a significant port facility in the United States. The Port of New York generates a significant amount of revenue. And there is significant projects that are needed to help alleviate some of the problems that those port facilities are having.

Mr. NADLER. But there is no question of that. But my question is, if you are setting up—if we are saying we have a national infrastructure crisis, which we clearly do, and if we are looking for various revenue streams to support projects and to prioritize projects within that national need, shouldn't we set up those financing mechanisms to be directed wherever the greatest need is?

Mr. CALVERT. The users of the system are paying the fee. And so after a year of talking to the freight forwarders, the truckers, the railroad folks, the retailers that are using the system obviously to move goods, a consensus was that they did not want to see those amounts diminished by others who would determine what the priorities of those projects should or should not be. If the fee was in effect collected where the facilities need to be improved, then they were more or less in favor of this process moving forward. If the monies are diverted by well meaning folks, like appropriators, to other projects, there was less enthusiasm for this approach.

Mr. OBERSTAR. The gentleman's time has expired.

Mr. NADLER. Thank you.

Mr. OBERSTAR. Mr. Mica.

Mr. MICA. Thank you. Just a couple of questions. First of all, I guess, Ms. DeLauro, you have a development bank with a net value of about $9 billion is it?

Ms. DELAURO. Yes.

Mr. MICA. And Mr. Ellison, you have a infrastructure bank backed by bonds in the neighborhood of $60 billion?

Mr. ELLISON. That's right. Yes, sir.

Mr. MICA. The only problem I have is again the low dollar amounts. I was up in New York last week and told the Chairman about this. Went down to look at the Long Island subway extension to Grand Central Station. It is a $7.2 billion project. We got FTA to finally agree on moving forward with it. It is far in excess of $5 billion for the Dulles Rail extension. The projects are getting very high in dollar amounts. I met with some financiers in New York when I was up there in promotion of our high speed rail private sector initiative. And one of them told me he is working on a $40 billion project. I thought it was in Japan, but I know it was in Asia, that they are working on financing.

Mr. MICA. So I just have questions about the numbers of dollars. That is why I said I want to look towards half a trillion in taking some of the revenue stream and expanding it—some for bonding, some for loan guarantees, some for government backing, some for creative leveraging, a host of those—so I think we are on the same target.

Mr. Blumenauer, tell me, from the Commission how do you get into law the priority projects from your bill?

Mr. BLUMENAUER. The goal, Mr. Mica, is to develop a national infrastructure vision of how the pieces fit together.

Mr. MICA. Yeah. And I agree with you that we don't have that. But how do I get from—the Commission creates that; then in order to enact it, it has to be incorporated into law?

Mr. BLUMENAUER. Absolutely.

Mr. MICA. How do you get from——

Mr. BLUMENAUER. Part of what needs to happen is that Congress needs to be operating under an overall framework for how infrastructure pieces fit together.

Mr. MICA. But that would be, again, the law that we pass. And the Commission is going to develop basically the blueprint. But then I need to get the blueprint into law.

Mr. BLUMENAUER. Absolutely. And what I would hope is that if we would finally have a comprehensive infrastructure vision for this century, that it would guide what happens with reauthorization.

For instance, we just passed——

Mr. MICA. Okay. Basically a guide. It doesn't go into——

Mr. BLUMENAUER. We just passed a farm bill that has nothing aggressive in terms of water quality and water quantity. And we are going to have communities across the country spend billions of dollars to take farm waste, pesticide, and fertilizer pollution out of drinking water. If we had a framework that could be used to guide legislation as it goes through, we could have the various pieces fit together.

Mr. MICA. I think we both agree that we need a strategic infrastructure plan. My concern is getting it into law. Because unless it is in law we can't get it enacted and we can't get it financed or funded.

And the third part of my proposal also deals with moving the process forward, Mr. Ellison, which is my 437-day process plan, which is the amount of time it is going to take to replace that bridge in Minneapolis. Staff tells me that normally that takes 6 or 7 years through the normal process. But we should be able to do that for most projects that are basically in the same footprint.

And finally, Mr. Calvert, I think you have got a great proposal. I think it would generate revenue. But I think it needs to be part of a more comprehensive plan like Mr. Blumenauer is proposing and I am proposing, because even if I solve southern California's problems and I get to the Nevada border, I get to some other jurisdiction and my road narrows from 10 lanes down to four lanes, and my rail goes to single track, and my other infrastructure is not adequate, then things instead of getting clogged up at the dock are getting clogged up somewhere else.

So, yes, I think we need some of the vision that you have provided. That needs to be meshed into the larger plan so that we are doing the rest of the puzzle to make the whole thing work. Would you agree?

Mr. CALVERT. Well, certainly you are correct this is a step forward. There isn't a freight strategy in this country, as you all know. And there are certain areas in this country that are suffering the consequences of that. And I can't think of any area moreso than southern California.

Mr. MICA. I just want to take your plan nationwide.

Mr. CALVERT. What is that?

Mr. MICA. I just want to take your plan nationwide.

Mr. CALVERT. Well, it is nationwide. Obviously, all ports of entry, air, land and sea, would collect that fee; and it would collect $63 billion in 10 years.

Mr. MICA. And part is again this infrastructure plan.

But we are going to have to look at all of the above when it comes to financing, because we have got some incredible—we have an incredible backlog of needs.

Ms. DELAURO. Mr. Mica, may I just add something?

Mr. MICA. If it is friendly, go ahead.

Ms. DELAURO. Oh, it is always friendly.

With regard to my proposal, it is $9 billion, 3 billion over the 3 years and the $30 million in start-up; but in terms of the economic activity we are talking about, you know, close to $60 billion in economic activity.

But—I understand your point, but I think that what is the latter part of the way you want to divide up your revenue stream that you talk about, I concur that this needs to be a massive investment. But I think the degree to which we can work with the private communities in terms of that investment, and I will be very honest with you, I think at this juncture may be, and I am hoping that is not the case, there is more interest on our part, and we need a ready, willing, and able investment community to work in concert in order for us to begin to get to the scale that you are talking about.

And that is why I believe that the way in which we can do it is through this proposal, other proposals, or some entity that provides the interest to the investment community of getting engaged with the public sector in order for us to carry out truly a national infrastructure development policy. And we need to be creative and innovative in that way in working with the investment community.

Thank you.

Mr. MICA. Mr. Chairman, you are going to have to give special footnote advice to the transcriber for this hearing because part of this is in French and part of this is conservatives talking very liberally and liberals talking very conservatively.

Ms. DELAURO. One should never stereotype, Mr. Mica.

Mr. OBERSTAR. Very pertinent observation.

Mr. MICA. I never do that. I am just stating an observation.

Mr. OBERSTAR. Mr. Ellison, you had a comment?

Mr. ELLISON. Yes, in response to the Ranking Member's comment, I just thought I would mention that we don't envision that the infrastructure bank would just cover the whole regional project when an area would apply.

Our expectation is that they would have to come up with matching funds. And so perhaps, even if we did an equal match, we are talking about 120 billion—not quite to that half a trillion you mentioned, but closer.

Mr. MICA. We will get you there. We are going to work with the liberals on the other side to try to get you thinking in terms of spending more money.

Mr. Bishop.

Ms. DELAURO. Let's get the investors to do it.

Mr. MICA. With the investors.

Mr. BISHOP. No questions.

Mr. OBERSTAR. No questions.

Ms. Napolitano.

Mrs. NAPOLITANO. Thank you, Mr. Chairman. And I am glad that we have vision in some of the proposals that are presented here today. This has been something that has been long, long overdue, investment in the infrastructure, especially Ken's area. What goes through Ms. Richardson's area goes through my area, the great separation, the pollution, the safety issues that we keep talking about in this Committee.

But beyond that, we get into the areas of the port; and I am very interested in your comments, Mr. Calvert, in regard to being able to add some additional cost to the shippers. What I would also like to see is being able to fund Homeland Security to inspect them to see what is in them so you can have the ad valorem. Because at one point several years ago one of our major colleagues from your neck of the woods indicated that if we were able to inspect every rail car, every U.S. citizen would have seven lawn chairs, because that is how they are manifested. And we lose a lot of funding because of miscalculations, if you will.

That being said, the areas I think that all of you are touching upon, which are totally critical, is the reinvestment in job development for this country which would build the economy. To the extent that it hasn't been done in decades, that is critical to be able to insert not just money into people's pockets, but jobs that are ongoing and investment into the infrastructure which has been so—how would I say—"neglected" for many, many, many years. I look forward to hearing more about all those.

I have questions, but at this point the questions are really, not necessarily useless, I just need to learn more about what each one of you are proposing and how we can meld and marry—this is not a one-size-fits-all—for funding for all the other areas that we have. And I would like to hear some of the comments about how you feel that this can help this country's economy begin to get back on track by providing jobs and infusing a lot of what is needed in this country.

Ms. DELAURO. Well, I think that the main premise of what I have been talking about is the way in which, by serious investment both by the Federal Government—continued serious investment by the Federal Government, which has been historic in the areas of infrastructure, and that in today's world, given that the public sector—and we are not going to do the kinds of things that we have done historically with the millions and millions of dollars that went into what they called old "public works projects" and that what we now are looking at is the need for the public and private sector to come together to look at this $1.6 trillion shortfall that we have in being able to look at our infrastructure and transportation infrastructure, but also water. Let's take a look at energy and broadband and some other areas that are critical.

We are a great Nation and we built rail nationally, we did communications nationally; we have done other areas. And that kind of investment created economic growth. And with economic growth

that was—it created jobs. What I am talking about here when I talked about this $58 billion in economic activity creating 427,000 jobs, or close to 500,000 jobs, because of what you generate in terms of being able to put people, you know, to work with good jobs.

Mrs. NAPOLITANO. Ms. DeLauro, also, though—I am making a comment because I am losing time—we need to ensure that whatever is worked on, whatever is developed, that there is some provision to be able to do the further maintenance and ensure that that is not going to fall in disrepair——

Ms. DELAURO. Absolutely.

Mrs. NAPOLITANO. —20, 30 years from now, which is what is happening.

Anybody else want to comment?

Mr. CALVERT. I just would point out that whatever fee is placed on—and I don't call this a container fee; we call it a shipment fee because it is based upon an existing customs form, which makes it much less burdensome to collect that fee. Whatever that fee may or may not be, it needs to be equitable.

As the Chairman knows and others know, the harbor maintenance fee, for instance, as an example, I think has not been handled properly, and maybe it is the fault of the appropriators. But the LA Port, for instance, is always complaining that they are not getting the fees back in the City of Los Angeles and Long Beach that they pay into that fund.

If we are paying this fee, I think that those who are paying the fee should experience the benefit of that fee. And so that is the point I just want to make.

Mrs. NAPOLITANO. Yeah. Not only that——

Mr. OBERSTAR. The gentlewoman's time has expired.

Mrs. NAPOLITANO. Thank you. Thank you, Mr. Chair.

Mr. OBERSTAR. That is the problem with establishing a trust fund. You have to wall it off from reservations by the executive branch and by the legislative branch to make deficits look smaller or to shift dollars elsewhere, to be a cover for some other purpose.

If we are going to establish trust funds, then we have to have the trust that the money will be used for the purpose for which the fee was collected.

The gentleman from Wisconsin, Mr. Petri.

Mr. PETRI. Thank you very much. Thank you very much, Mr. Chairman, for having scheduled this important hearing to help set up the reauthorization of the Surface Transportation Act and other areas.

Thank you all for being here.

I just want to make an observation first, and that is, as a country, it is my sense that we are sort of at an inflection point. The national effort in infrastructure investment has been dwindling in the United States for the better part of a generation now. And yet, in our history, every—from the beginning, when they were all interested in developing this great continent, and then almost every 50 years since then, we have had leadership that has managed to lead the country to renew its commitment to having a first-rate infrastructure, from Henry Clay and the expansion westward, to Lincoln and the huge railroad investments that were a public-private

partnership, to Dwight Eisenhower, who led us to build the biggest public works project in the history of the world that transformed our economy and our country.

But now to maintain that actually costs twice as much as to build new, because people are using that road and so they have to repair it and improve it while working around existing traffic; and we are spending less than we did when Eisenhower was President, as a country.

India, China, others are stepping up to bat and increasing their investments dramatically because they know that that is the way to maintain and improve their standard of living; and yet if we can't figure out how to do it, we will see ourselves gradually slip down.

These things don't happen overnight, but a generation of neglect, followed by a second generation of relative neglect will send us into a situation where we may not be able to recover and go the way of Argentina, which led the world—in this new world was one of the big leaders 100 years ago, and is now sort of struggling because of neglect.

So I just have two real quick questions: One, on the Commission, you know, there are two kind of commissions. One is—and the worry is that you kick the problem down the road, and it can be used as an excuse for procrastination. I think the Chairman expressed that concern that we don't really want to provide another occasion for delay. We need to marshal our forces and get the job done. So I would like, if you could, to address that.

And the second question is that I think the public will rise to the occasion, provide leadership and increase investment. But they would want to have a good plan, not have it wasted and not have unnecessary delay. And we have tied ourselves up like Gulliver's Lilliputian where we have a lot of well-meaning regulations and so on. And they do—we do have to have good environment, but do we have to spend 10 or 20 years to build a new airport or expand a road? Isn't there some way we can work together to speed up these approval processes?

So I will yield.

Mr. BLUMENAUER. If you are addressing that to me, Mr. Petri, I took the Chairman's admonition to heart. I mean, the whole thrust behind this is that there is a sense of urgency now. I think there is a recognition that infrastructure is in crisis, and that it is only going to become compounded by global warming and international competition and the fact that the Highway Trust Fund is going into deficit for the first time in history.

So the whole thrust behind the creation of the Commission and tying this down is to make sure that it is not an excuse for procrastination, but instead provides a framework so that we can move forward.

And it is not, I am convinced, a question of just more money—we do need more money—but the value proposition, how the money is spent and what it is spent on. I find it fascinating that, as we look around the country, there are local initiatives for transportation, for transit, for water, for parks and recreation; and 75 percent of them pass and they are financed by property taxes and sales taxes that are not always the most popular. But it is because

they have had the vision, they have had the connection, and they have had a plan to move forward, and people know what they are getting.

It is my hope that we can create a national commission, have a sense of urgency with the new administration to move forward, and that with that sense of urgency and direction that it will be easier for people to make the adjustments in financing that are going to be necessary for water, for transportation, for broadband, for energy; and that they fit together.

Mr. CALVERT. Mr. Chairman—one thing you mentioned, Mr. Petri, which I want to point out to the Committee, if the railroad builds a grade separation in the United States, they are exempt from NEPA, the National Environmental Protection Act. I think that it is something you should look into.

If a private entity or another government entity is going to build a grade separation, they should be given the same exemption. It would save millions of dollars per grade separation, saving the taxpayers a tremendous amount of money without any real lessening of the environmental quality laws in the United States, because most of these grade separations are done in an existing urban area and, in fact, improve the environmental situation rather than degrade it.

So that is a simple change, when you reauthorize the transportation act, which would have tremendous effect throughout the country.

Mr. OBERSTAR. The gentleman's time has expired.

The gentleman from California raised an interesting point, which I am not quite sure is accurate, but at any rate we will pursue it.

Ms. Hirono.

Ms. HIRONO. Thank you, Mr. Chairman. And I thank the panelists for your leadership in providing us with these bills.

Sitting on this Committee, it is clear to me that the infrastructure of all 50 States is critical to our Nation's economic health. And all 50 States are experiencing huge gaps between their infrastructure needs and the funding to provide for these needs. So I am interested in—I am looking at the practical application of these proposals.

Hawaii is the most isolated landmass in the world, and so statutory language requiring substantial regional or national significance poses challenges for us, because if too narrowly interpreted, people argue, because of our isolation, what happens in Hawaii stays in Hawaii. And that is not true.

So Mr. Ellison and Ms. DeLauro, both of your bills use this kind of language, and I hope that it is not your intent, to leave out a State like Hawaii from being able to obtain these kinds of financing from the outset.

Mr. ELLISON. Absolutely not. I think that Hawaii is a vital part of our national scene and needs to be fully engaged in this process. And I think what you are saying is borne in mind, and I think considers Hawaii; and I think we will be counted on to do that.

Ms. DELAURO. This is a project or proposal that includes the application to all 50 States. This is not, you know, cherry-picking or doing anything else. This is meant to deal with infrastructure na-

tionally, and as far as I know, Hawaii qualifies under the national rubric.

Ms. HIRONO. Good. Thank you. Because there have been other times when language such as this has pretty much iced out Hawaii; and as the only Member from the Hawaii delegation to sit on this important Committee in decades, if ever, I am glad to be able to point out these things.

Mr. Calvert, along the same lines, I know that the State of California is pursuing the possibility of assessing fees on goods that go through your ports. And I certainly understand the stress on your roads and highways because of all of the goods that are going through.

Now, Hawaii is one of the most—it is probably the most dependent on goods coming through shipping. And so I hope that as we discuss your proposal further that that kind of unique situation, where there are no highways, there are no alternative ways for people of Hawaii to obtain their goods—90-plus percent come through, I think, the ports of California—that we can give some recognition to the potential of a very, very adverse impact on the cost of goods to Hawaii.

We already have some of the highest cost of living in the country.

Mr. CALVERT. By the way, the fee would only be collected at the port of entry. So, in fact, it would only be one fee paid.

So there wouldn't be a duplication of fee in the State of Hawaii; you would pay that fee, the importers of goods, at the port of entry of Hawaii, and those funds would remain in Hawaii.

As you know, there is a problem with these States and local communities imposing fees within the States and the communities because of the provisions of the Interstate Commerce Clause, which many in the freight industry claim is unconstitutional. And many attorneys agree. So more than likely a fee, if one is to be placed, has to be done by us here in the United States House of Representatives, and not by the State and local communities.

So I would be happy to work with the gentlelady from Hawaii to make sure it is an equitable fee and Hawaii benefits from this, not be taken away from any benefit from this bill.

Ms. HIRONO. Thank you very much.

Thank you, Mr. Chairman.

Mr. OBERSTAR. The gentleman from North Carolina, Mr. Coble.

Mr. COBLE. Thank you, Mr. Chairman. Mr. Chairman, I may be in and out, so I may repeat some of the questions.

At previous hearings witnesses have advised us that one of the reasons that we have a surging infrastructure problem is that some communities have not maintained their infrastructure and had no plan for replacement. If this is true—and I am inclined to think that it is—do you all agree with me that it would be reasonable to ask, as a condition of receiving Federal financial assistance, that this problem be corrected?

Either of the panel members.

Mr. ELLISON. Mr. Chairman, Representative Coble, I think in the course of this, my plan for infrastructure bank would be that local communities, regional projects would be presented. And I am hoping this would be a spark for greater planning regarding local

needs so that we would have communities thinking about what they need over the longer term.

So that is sort of the idea behind focusing on regional—projects of regional significance, because then it would force communities to say, what are our needs; how are we maintaining what we have?

Mr. COBLE. I've got you.

Anybody else?

Mr. BLUMENAUER. Part of what I would hope would come out of a national infrastructure vision would be a reassessment of what the appropriate role of the Federal Government should be. And I would hope that out of that comes the notion that there will be local skin in the game everywhere.

The era of 100 percent Federal money, or largely Federal money, I think, as it relates to infrastructure should go away. And I would hope that part of what we could do in the context of an infrastructure plan for the country would be to harmonize what the match ratios would be for different types of infrastructure.

Right now, you get 80 percent for a road project, you might get 50 percent for a transit project, you get something else for a water infrastructure. And we find that the Federal formula sometimes drives the decision, not what is the best transportation solution.

So I would hope that there would be local skin in the game, a uniform Federal match ratio, and that we rethink the myriad of all these goofy little things that we have embedded in statute over time. That is one of the reasons why it takes so long, is because we have so many permutations that no longer make sense.

Mr. COBLE. I thank you for that.

Mr. CALVERT. Mr. Coble, you have an excellent point on the issue of maintenance. As you know, if we are in the private sector, we depreciate capital improvement, we hopefully set aside dollars and make improvements along the way and maintain that equipment in good working order.

Mr. COBLE. Thank you, sir.

Mr. CALVERT. In government, that is not the case. And unfortunately, the government's a reactive body to a disaster such as what happened in obviously well-publicized events here in the United States.

We ought to, when we finish an infrastructure project, deliver to whoever the recipient of that project is going to be. They should also deliver to us a maintenance program and how they are going to maintain that project in future.

Mr. COBLE. You mentioned dollars, Mr. Calvert. Speaking of dollars, let me ask you this. What is the practical effect of applying Davis-Bacon prevailing wage laws to Federal infrastructure funds? And—well, strike that. Let me put it a different way.

Would this mean that fewer projects could be constructed?

Mr. CALVERT. Well, obviously every State has different laws. And the effect of, quite frankly, in our State of California any public infrastructure project would be more than likely built under Davis-Bacon. For a person who believes that should not be the purview of the Federal Government, but left to the States to determine their own, right-to-work States, for instance, may have different laws.

So I would not pursue Davis-Bacon provisions with the Federal law. But that is my position.

Mr. COBLE. I didn't mean to ignore the lady from Connecticut.

Ms. DELAURO. Thank you, Mr. Coble. The question of maintenance, I think, has got to be very, very much a part of the discussion and debate, whatever entity we try to put together. I think we—and I come from the northeast, which has a very old infrastructure. And we see the issue of deterioration and the lack of maintenance and what effect it has.

And so, whatever new infrastructure project, including the one that I am talking about, I think we need to build in and sort through what is the best way in which we commit to maintenance and what is the Federal obligation there, what is the State and local obligation to deal with that, what kind of a proposal would come forward from a private sector in dealing with that?

I think maintenance is critical. We have seen what happens when you don't deal with maintaining what we have. And we have sorely neglected, as Mrs. Napolitano pointed out earlier, our infrastructure. And when it collapses, our economic development and our revitalization and the thriving economy collapses with it.

Mr. COBLE. Thank you all very much.

Mr. Chairman, I yield back.

Mr. OBERSTAR. And now Mr. Arcuri.

Mr. ARCURI. Thank you, Mr. Chairman. I would like to thank the panel.

Just one brief comment that I have. You know, you talk about how we are going to fund this, and obviously that is critically important. But after we decide how we are going to fund it, my concern comes to what priorities do we use?

And, Mr. Blumenauer, you brought it up. I think it is—no matter where I go in my district, people talk about water, sewer; that is their number one concern. Every mayor, every county executive has that concern and how they are going to fund it.

Broadband, everyone wants it.

Then when we move into the areas, though, of energy and transportation, there is a lot of controversy as to what is the best thing for the Nation, the region, for the State.

How do you think that we prioritize these different projects? What suggestions do you have once we get the funding in place for setting up priorities? Do we have a national priority? Do we make the priorities based upon what the local communities want, or do we set a national priority list in terms of how we fund these?

Mr. BLUMENAUER. It would be my hope that this process, particularly one that, for the first time, the Federal Government really does engage people at the State and local level in terms of the formulation, will help develop a consensus. I find as I work around the country—every month I go to one or two different communities—I find that there is much greater consensus about what the needs are, and that complying with Federal requirements with clean air, with clean water, with congestion, that there is less controversy than one would think when people are given a chance to come together and work on it.

If we systematize what the Federal partnership is going to be, if we streamline the value proposition so there aren't people—I

mean, right now in the Department of Transportation there are people cranking away on a stupid cost-effectiveness formula for transit that has no relationship to how any transit agency in America is operated. But they are still spending time and money on it in Republican and Democratic administrations.

We have got to get to a point where we strip this stupid stuff out, that we streamline what it is that the Federal Government is going to do, that we give greater accountability for the money according to a broader framework.

I think that this is something that Congress can agree to, and I think it will enable more money to move faster to areas of greater need.

Mr. ARCURI. Well, again it is easy with respect—I think with water and broadband, everyone agrees. But when you get to transportation, then you get the push and pull between rail—do we move to road construction? Energy? You know, how do you make that decision of what priorities?

Mr. BLUMENAUER. Having established, for example, criteria that transit projects are going to have to reduce the carbon footprint—I mean, I think that is a reality—and deal in a uniform fashion in terms of how we are going to move the greatest number of people for the amount of money involved. It will enable us, I think, very quickly as a nation to stop subsidizing airplane trips that are 19 minutes from here to Philadelphia, for instance.

I mean, the economic model I mentioned a moment ago doesn't work for $140-a-barrel oil. It would argue for shifting more resources to rail passenger service and giving people flexibility, giving corridors opportunities in terms of how you are going to solve congestion problems. In some cases it will argue for beefing up rail as opposed to short hops for aviation.

This will I think get us to the 30,000-foot level so that there are criteria to make those evaluations.

Mr. ARCURI. Thank you.

Ms. DeLauro?

Ms. DELAURO. I think that what we are trying to do here is create an entity—at least what I am trying to do here is, where you do have a 12-member board, 9 of the members of the board of directors who are people appointed by the President, people who have experience in the area of transit, public housing, roads, bridges, water infrastructure, public finance or related disciplines where there is a—now that is a board of people who have the capability and the credentials in the area to deal with, you know, an examination of what it is that we need and where we need it, et cetera.

Now, we have the Society of Engineers. We have all kinds of groups that are moving forward with what our priorities need to be, what areas are out there. So this is not reinventing the wheel. We will deal with input from State and, you know, local government in terms of those priorities.

But what you have, and probably a heretical statement in many respects here, but there is—it is a way of, if you will, lifting the decision-making process out of what is beneficial to yourself or to me in terms of my own community. And obviously, that would continue because we have a local perspective, we listen to local government.

But I am saying it is about trying to utilize an independent board, if you will, with representation from government, et cetera, in helping to create that.

You had the ministers, when the Chairman pointed out what the European governments have come up with here, they laid out a plan, and it was based upon some very serious analysis of where the shortfalls are. We have again a number—I am repeating myself—a number of entities today that do that year in and year out. And most of the time those projects and plans lie on the shelf and they collect dust.

I think we can create a mechanism, and we have tried to lay that out in this, which will help us to make those kinds of determinations with the appropriate input.

Mr. ARCURI. Thank you.

Mr. OBERSTAR. The gentleman's time has expired.

This panel certainly is not collecting any dust. We have had panels of Members testifying before us many times in the last several years, and never has a Member panel attracted so much interest.

Ms. Capito.

Mrs. CAPITO. Well, thank you, Mr. Chairman. I think in light of your comments what we are really seeing here is that while we may have our differences on a lot of things, this is an area where we have so many similarities. I come from a State that has a lot of infrastructure needs, but some of our needs are not restructuring what we already have or repairing or redoing; it is still trying to reach people with clean water and waste water and broadband. And we know that to reach these areas it becomes so expensive, and that is why they are not being reached.

So I would like to see something where we have a combination of not just restructuring what we already have, but still high prioritizing people who have never had that chance, never had the ability to access clean water in a fashion that most of our constituents have.

The other thing I think that I am certain we have similarities on—and I don't know if you address this in any of your bills—is the ″time is money″ aspect of infrastructure. I mean, I have a road in my congressional district, Route 35, you know, if we had started building it when we got our first estimate—oh, I wish we had, because now it is so inordinately expensive that to complete this is going to be a challenge for years to come. And so I think that is why GARVEE bonds and those types of things have been attractive. We did a design-build—the governor did a design-build on this segment of highway.

But I don't know how you answer that question or how you meet that challenge of moving forward. I do believe it goes back to what Congressman Blumenauer was saying, that you have got to have a lot of local skin in the game in order to set the priority to move it forward.

And but it also has to be vetted. I think a lot of people in our local communities, you know, their project is the number one project for them. And so that is where it really becomes hard. As we all know, we are political people. It becomes very political at the same time.

So I don't know if the ″time is money″ aspect of infrastructure development, if this is something that you all have gotten to—and the totally unserved areas, if anybody has any comment on that.

Mr. CALVERT. The gentlelady, in fact, the name of my bill is called the ON TIME Act, so it is an appropriate name for what you are talking about. And obviously when you are moving—this bill is specifically about freight—when you are moving freight, absolutely time is money, especially with manufacturing processes in the United States where you literally manufacture goods as the basic parts are received. And so it is a cost to every consumer if, in fact, freight is delayed at the port facilities, whether it is air, land, or sea.

So you are absolutely correct to say that it is necessary to get freight moving in America, because that would help alleviate costs to manufacturers, make them more competitive, and have fewer jobs go offshore because of that. So it is an important thing that we address through this process.

Mr. BLUMENAUER. The reference I made to the value proposition in the plan, when we have construction costs going up 40 percent in the last 3 years—and it is going to be higher than that going forward—that is a huge potential benefit if we can get our act together. And I would hope it would be a primary thrust of a national commission on comprehensive infrastructure, addressing the precise point that you make.

Ms. DELAURO. Just to say that in the first 3 years funding is directed towards projects that are ready to go. And so the notion is on how we can move and how we can get going.

And then I think you are right in terms of the length of time that it takes. And I, you know, think this is what we are trying to do, to not have the kinds of delays that we have had in the past. But specifically it talks about the first 3 years of this, saying it is stuff that is ready to go. And I hear all the time that there are projects ready to go, and there just isn't the financing to deal with them.

And the purpose of the Infrastructure Development Act, Ms. Capito, is—really one of my primary concerns has been that there are areas of this country that don't have the kinds of services that the rest of us have, and it is because of financing. I look at that particularly as Chair of the Ag Subcommittee of Appropriations.

And I look at broadband; we are just not doing it, and it is not happening. And I think that is why it has to be public and private in order to make it happen. Thank you.

Mrs. CAPITO. Thank you, Mr. Chairman.

Mr. OBERSTAR. The gentlewoman's time has expired.

Mr. Carney.

Mr. CARNEY. Thank you, Mr. Chairman.

Mr. Blumenauer and Ms. DeLauro, your commissions do what differently than this Committee? Actually, what should we be—you know, where is the Committee missing the mark for what you are proposing here?

Ms. DELAURO. I don't have a commission. Mr. Blumenauer does. I will have to look at that.

And this is an infrastructure bank. As I said earlier, this supplements the work of the Committee. This ultimately becomes an independent, government-sponsored entity similar to a Fannie Mae

or a Freddie Mac, there again meant to supplement other efforts in terms of you have got State investment banks, you have got the good work of this great Committee, and you would have this effort in trying to leverage—essentially, and maybe I haven't made this point strong enough with regard to this proposal, this bill is about public-private partnerships to deal specifically with the shortfall that we experience every single year in being able to finance infrastructure.

Mr. BLUMENAUER. The Chairman recalled some of the difficulties that we have had in recent years with administrations. Actually, I recall, as a Member of the Committee, we were arm wrestling with the Clinton administration and OMB. We have certainly had our differences with the current Bush administration and a lack of vision and a different approach.

The Commission that I am recommending would have the new administration be part of the formulation so that it makes it easier to work with them in a cooperative fashion. It would have local and State because, as Ms. Capito is talking about, we have got lots of different needs around the country. We want to have them to be participating in the buy-in.

Last but not least, as important as this Committee is, it doesn't have exclusive jurisdiction in the House. We have issues that take place in some of the Superfund cleanups, in terms of water with Commerce, with Natural Resources, with Homeland Security, even—dare I say—with the Department of Defense, which is the largest manager of infrastructure in the world.

So by having a comprehensive commission, State and local, the administration and other elements, it would give us an opportunity to have a comprehensive effort so that it increases the likelihood that we are pulling in the same direction because we have no time to waste.

Mr. CARNEY. Do you want sort of a Ben Bernanke for transportation?

Mr. BLUMENAUER. For infrastructure.

Mr. CARNEY. For infrastructure.

Mr. BLUMENAUER. Comprehensive infrastructure.

Mr. CARNEY. Thank you.

I missed Mr. Mica's earlier comments on $1.5 trillion. I think that is what he was after.

Mr. OBERSTAR. Yes, comprehensive for all infrastructure.

Mr. CARNEY. Comprehensive.

Is there any sense of how much that would generate in revenue for the government if we actually improved infrastructure and became more efficient, what that means?

Mr. ELLISON. That question can be answered a lot of ways, Representative Carney, but I would like to say, on the job front for every billion dollars spent, we are looking at about 47,500 new jobs, generally union paying jobs, actually jobs you can't offshore and you can't outsource.

So—it has an amazing and tremendous economic impact, and so I just thought I would add that.

Mr. BLUMENAUER. One of the assignments I have taken for the Chairman with one of my other budget responsibilities on the

Budget Committee is, we need to do a better job of actually assessing the economic impact.

Mr. CARNEY. Right.

Mr. BLUMENAUER. Because there has been talk about, quote, ″dynamic scoring,″ but the current system does not take into account savings that occur by making investments properly or the ripple effects of doing it right. And as important as anything we need to do is to reassess how the budget rules craft, so that they don't actually lead to nonsensical and artificially understating the value of our investments.

Mr. CARNEY. Mr. Calvert, do you have a comment?

Mr. CALVERT. I would only point out, yes, that obviously you spend a tremendous amount of money on infrastructure development. Like any business, if you spend money on capital improvement, you would hope it leads to efficiencies and in, effect, more profits down the road. But as you develop the mechanism to collect that fee or tax—and whatever mechanism you have, that it is an equitable one, and that those that are using the system pay, obviously, an equitable amount, and that those who benefit from the system benefit at least to the amount that they pay in.

As we go through that process, I think if we can keep that basic tenet that we will be just fine.

Mr. CARNEY. Let me tell you, as a Blue Dog, I don't like to spend money we don't have to, but when we spend money, I want a return on the investment. And if this does that, you know, we have got to actually be serious about how we approach this one.

Thank you, Mr. Chairman.

Mr. OBERSTAR. The gentleman's time has expired.

Mr. Platts?

Mr. PLATTS. No questions.

Mr. OBERSTAR. No questions.

Mr. Diaz-Balart?

Mr. DIAZ-BALART. No questions. Thank you.

Mr. OBERSTAR. Ms. Fallin?

Ms. FALLIN. Thank you, Mr. Chairman. I just have a couple of comments, and I appreciate all of our fellow colleagues that have come today to help us with a good discussion about important issues for our Nation.

And I will just say on the record that I do support public-private partnerships, and I appreciate the good discussion and some of the ideas.

I didn't get to hear everything discussed today, but got to hear a little bit of it. And I do agree that we need to have a national plan for infrastructure, especially in light of the rising fuel costs, congestion delays, the issues that we have with our airlines and costs involving them, the aging of our infrastructure in general, whether it is railroads, bridges, airports, whatever it might be. So I appreciate the discussion of having a group that comes together with all the parties involved.

But I know one of the issues that is very important to my State is that the local department of transportation, the director of our transportation and our transportation committee members who are appointed by our governor, also like to have input into what is a priority for our State as far as our spending needs.

So I guess my question is, how can we ensure that our States have a good role to play in determining the priorities of how that money will be spent, the timing that it will be spent, in light of us also needing to have a national plan to address movement throughout our Nation, especially on our major interstate areas?

Mr. ELLISON. Well, Mr. Chairman, Representative Fallin, under my bill states and regions that wanted to apply, they would come up with the projects that they wanted funded. So they would always be right involved. And of course there would be an expectation that they would lay some money out on the table to get that Federal assistance. So they would be right there.

Ms. DELAURO. In terms of the National Infrastructure Development Bank, proposals may come from the State revolving fund or another entity. ″Entity″ is defined as an individual, corporation, partnership, joint venture, trust, governmental entity or instrumentality, so absolutely included in terms of what the State and local government feel is in their best interests.

Mr. CALVERT. In my legislation, the Department of Transportation would pick the national gateway corridors. However, the bill states that the project selection authority would not be the U.S. Department of Transportation or Congress, but a local—State and local-driven process in which those priorities would be driven. And also the users of the system, including the private entities that would be using the system, would also be involved to make sure that the system is prioritized to make sure that the money is spent a proper way.

Mr. BLUMENAUER. The Infrastructure Commission that I am proposing would have representation from State and local in terms of the formulation. And one of the tasks of creating a national infrastructure division is to refine the role of the various partners in that equation.

As I mentioned earlier, I think the era of 100 percent Federal money should not return. I think we ought to look at balancing the partnership and providing a framework so people can work comfortably within it.

Ms. FALLIN. One other follow-up question, too: One of our other big concerns is that we send our Federal Highway Trust Fund taxes in, and many times we don't get as much money back as some other States. So that also has been a huge concern of our State; we don't mind doing our share, but we also want to have our share back. So how do you ensure that states will be treated fairly?

Mr. CALVERT. From California's perspective, being the largest donor State in the country, that is certainly an important issue. We have important needs in our own State. As I mentioned to Mr. Carney, any process that we do here, whether it is a Republican process or a Democratic process, it has to be thought of as equitable.

And California is willing to do its fair share, as are other large States, but it has to be for a national purpose, where we all believe that we are getting something out of the process. And hopefully, that is what will happen in future transportation bills.

Mr. BLUMENAUER. If you do it comprehensively for infrastructure, and you are dealing with transportation and water and broadband and energy transmission and aviation and rail, if you do

it comprehensively, it is easier to have an equitable balance than if you are just picking one and another.

And so I would suggest the more comprehensive, the easier it is to reach the objective that you are seeking.

Ms. FALLIN. All right.

Thank you, Mr. Chairman.

Mr. OBERSTAR. I thank the gentlewoman.

And Mr. Hall.

Mr. HALL. Thank you, Mr. Chairman.

In my district and in the Hudson Valley of New York there are pressing needs both with regard to transportation and clean water, sewage treatment. It is a heavy commuter district. We have 13 bridges on the deficient list. We have a number of dams on the deficient flagged list of dams in need of repair.

We have infrastructure needs that I wouldn't have thought of, maybe, until recently. Metro North Railroad, for instance, is suffering from a lack of parking spaces since the price of fuel went up so much that a lot of people are leaving their cars home and commuting to the New York area, to the New York City region by train. And so that is the kind of infrastructure that needs to be considered.

Buses, which may not be thought of as infrastructure, but nonetheless in an area that is heavily populated, like Westchester County, where it is so densely populated it is hard to find a right of way for a new rail transit, it has been brought to my attention that buses that are designed to compete with the high-speed rail or airplanes in terms of comfort—ergonomically designed seats, drink holders, Internet access and so on—these high-quality accoutrements that we are used to seeing in other modes of travel would attract people to use the buses, which are currently thought of still as sort of the old Greyhound model.

And they had the added advantage of being able to have managed bus lanes while they go through the major routes. And then when they go out into the counties, they can split and go on existing infrastructure, roads that already exist, to take people to diverse drop-off points. So just a couple of ideas there.

In terms of skin in the game, for many of the communities in my district, they are strapped for cash; and property tax is a constant and yearly concern or, for some, a daily concern.

If a 20 percent cost-share on a road or a 45 percent cost-share for a water grant is a high hurdle to climb, how would these infrastructure proposals help them? And would communities be able to band together to spread costs for projects with multijurisdictional benefits?

And I would ask for a brief answer from each, starting with Ms. DeLauro, please.

Ms. DELAURO. Well, I think that needs to get—we talked about skin in the game. I said at the outset, I—and I think that we want to deal with localities, but I want to see skin in the game from the investment community in terms of this public-private partnership effort.

I think that we need to engage them and talk about what kind of incentives we can provide for investment into these projects. And

then we can sort out with a locality and stuff what makes sense in terms of the appropriate match.

We looked at this in terms of when we did the COPS program here. We said, hey, you have got some money here for 3 years, and then after that you have to take on some of the responsibility or all of the responsibility.

And I think we can sort that out. I don't have a dollar amount for you; I don't have a percentage for you. I think we have got to start to put pieces together and deal with it.

I am, frankly, of the concern at the moment that we do not have the kind of capitalization of these projects at an investment level that is going to help us to meet the shortfall in your community and other communities.

And then I think we can go from there to figure out how it is that we make this actually, when we say ″public-private,″ that is on the public side the Federal Government and State and local government in terms of their participation.

Mr. CALVERT. I just point out on the freight proposal we have before us, it is 80-20, but of course the fees are collected by the users of the system, so their skin is in the game substantially.

And so in my experience most communities that are given the opportunity for an 80-20 project take it happily in water projects or in transportation projects. So I think we can work out some kind of an equitable process by which it will work.

Mr. ELLISON. Under my proposal, these are projects of national or regional significance. So, absolutely, local communities would be banding together with other local communities in order to get these kinds of projects funded and would be able to pool resources.

I think that is exactly what you are asking, so that is an answer to the question.

Mr. HALL. Mr. Blumenauer?

Mr. OBERSTAR. The gentleman's time has expired.

Ms. Richardson?

Ms. RICHARDSON. Yes. Thank you, Mr. Chairman.

First of all, I would like to applaud my colleagues for your testimony today, particularly your concern with transportation and what is going on in this Nation. Given, though, many of you don't serve in this jurisdiction, I really applaud your efforts to help us as we struggle to do better in this area.

I am going to focus my questions, because I am limited in time, to Mr. Calvert, because your proposal most impacts my particular district. I have five questions for you. So if you could be as brief as possible, because I would like to say a closing comment.

Number one, do you have a list of supporting companies and organizations that are supporting H.R. 5102?

Mr. CALVERT. Yes. I can supply that for you.

Ms. RICHARDSON. Thank you.

Number two, why did you include exports in your proposal? Many would say that companies here in the Nation are having a difficult enough time competing with products in Japan and China and everyplace else. So why did you consider including exports?

Mr. CALVERT. One, there are some regulations that are international regulations regarding trade. This is a fee, and if you exclude exports, it may be deemed as disproportionate to imports.

And so in order for this to meet legal requirements under collection of fees, exports were necessary.

And obviously exports do impact transportation as well as imports.

Ms. RICHARDSON. Third question, what is the cost of collecting these fees and administering the program? You said you were talking about a $63 billion profit over a 10-year period of time.

Is that net, gross, or is this less?

Mr. CALVERT. That is gross. It is a very nominal fee because you are using an existing customs form on a shipment fee. So, in effect, it would be a software change. I understand from those who are involved, it would be somewhere in, about, the 2 percent range.

Ms. RICHARDSON. Okay. And Mr. Calvert, I am a little concerned about the wide scope of the use of the funds. In the notes that were provided to this Committee, it said that the second option of where funds could be utilized is for construction of, or improvements to, a publicly owned, intermodal freight transfer facility for providing access to such facility or for making operational improvements to such a facility.

I will tell you, in my district, I am the home of the 710 freeway, the 405; 45 percent of the entire Nation's cargo, almost half of the entire Nation's cargo is going through my district.

So could you describe why you felt the need to include the use of funding for construction of these intermodal facilities given the dramatic impacts on our roads and highways, which is what this Committee is really all about.

Mr. CALVERT. Obviously—and I know your district well—obviously, we are trying to encourage shippers to get on more trains and use fewer trucks.

And so, as this process moves forward—and by the way, it would be prioritized by the local community, your community, the State and the users of the system, to find the points that are clogging traffic through the system and clear it to get those trains and trucks through the system, through the highway system as quickly as possible.

These dollars could be used to improve the 710 highway, for instance, for truck-dedicated lanes. It could be used for truck-dedicated lanes throughout the National Gateway corridor, how it is defined, to help move freight. Certainly rail is an important component of that and will continue to be an important component.

As you know, we built the Alameda corridor, but we stopped building it, and now the train traffic is backing up throughout southern California all the way to the Cajon Pass.

So this is a way for the local communities to collect a fee which would alleviate that traffic and collect a significant amount of money to pay for those improvements.

Ms. RICHARDSON. Okay.

My final question, Mr. Chairman, although I do agree that Mr. Calvert's bill is well timed, some point of this is absolutely needed. I would like to respectfully request that we do a hearing, particularly in my district, since 50 percent of the Nation's cargo is impacted by this idea.

In California right now, the Port of Long Beach and Los Angeles is in the process of instituting an IE container fee. And I think it

is quite timely for this Committee and welcome all the many questions that were stated by Committee Members. I think it really speaks to the need of this issue.

My final point, though, Mr. Calvert, I would like to bring up of my concern of your bill, your comment you said that the benefits should be at least as much as we put in. And in your bill you talk about a corridor of 300 miles. Well, California, we are pretty well congested, so in my particular, district 300 miles goes past San Diego into Mexico; 300 miles goes all the way up to Sacramento. And I have got to tell you, I am going to have a real hard time supporting why 50 percent of the entire Nation's cargo is going through my district, and yet you would say San Diego would benefit, you would say Sacramento would benefit.

So my question to you is, are you considering making an adjustment in terms of that corridor? Because that would be an extreme objection not only of myself, but many of my colleagues who represent southern California.

Mr. CALVERT. As this bill moves forward I am sure that there will be improvements to the legislation. But I would like to point out that the Port of L.A., Long Beach is not the only areas impacted by the trade activity that takes place at that port. Obviously with 44 percent of all imports and exports taking place at that port, it has a tremendous amount of traffic. But the trains, the majority of the trains that leave the Port of L.A. Long Beach go through San Bernardino and Riverside Counties, the inlet empire. Most of the distribution facilities where the trucks are going are located in the inlet empire of the State of California.

And so I would point out to the gentlelady that those impacts are shared by other communities, not just Los Angeles. And as a matter of fact, the train traffic is so backed up in Riverside, the standard grade crossing now is 25 minutes in the city of Riverside and the city of San Bernardino.

So obviously we need to work together to help alleviate this. This is a regional problem in southern California. I have been working with the Port of L.A., Long Beach for a long period of time, and with the freight forwarders, the truckers, the American Railroad Association, the U.S. Chamber of Commerce, all the people that are interested in pursuing a solution to this problem. And I found that it is not simple, but we would be happy to work with the gentlelady to try to come up with an equitable solution.

Ms. RICHARDSON. I welcome that. And Mr. Calvert, I would say I agree with you there are impacts throughout; however, a formula is definitely needed because it is not equal impacts. As you stated, if you expect people to be supportive they are going to have to feel that there is true equity, and I think there is more work to be done, but I welcome your openness.

Mr. OBERSTAR. The gentlewoman's time has expired. If the panel has not expired, I think they should be fatigued at this point. There has been a longer grilling of this panel than we have of most other noncongressional witnesses, and I thank you for your patience for remaining with us throughout this whole period of time. Usually Members come, give their statement and run off to a hearing or to a floor statement. But you have stayed with it and you have been responsive to all the searching questions by our col-

leagues on the Committee. And for that I thank you. I invite you all, and will make sure you get a copy of the statements of the subsequent witnesses on today's hearings. It is very informational reading, very instructional, and I think it is extremely substantive material that will add to your understanding of the already advanced understanding of and proposals for the problems we are all facing.

Mr. Calvert, I did want to observe, however, that whenever a railroad undertakes an action that triggers review by the Surface Transportation Board that also triggers a NEPA review. Should a railroad want to add a second line, for example, it must seek under Federal law review by the Surface Transportation Board and that entails NEPA review.

Mr. CALVERT. Mr. Chairman, I ask a question for clarification. Could they ask for a negative declaration of that?

Mr. OBERSTAR. Could they ask for what?

Mr. CALVERT. A negative declaration? In effect, that they have that review.

Mr. OBERSTAR. Usually railroads do. When they are making an acquisition, for example, they will ask for either a negative declaration or for a short course review of the acquisition. In some cases that is approved, in other cases it is denied.

Mr. CALVERT. Thank you, Mr. Chairman.

Mr. OBERSTAR. I thank the panel and the whole panel is dismissed. Our next panel is Dr. Everett Ehrlich, Mr. Mark Florian, Dr. Rudy Penner and Mr. Bernard Schwartz. And in that sense, Dr. Felix Rohatyn, whose testimony has already been submitted and will be included in the record. I want to welcome this panel. Thank you for your participation today and for the splendid statements that you have already submitted, which I read at great length and with keen interest. I think it is collectively a splendid contribution to the work of the Committee.

TESTIMONY OF EVERETT EHRLICH, PRESIDENT, ESC COMPANY; MARK FLORIAN, MANAGING DIRECTOR, GOLDMAN, SACHS AND COMPANY; RUDOLPH PENNER, SENIOR FELLOW, THE URBAN INSTITUTE; AND BERNARD SCHWARTZ, CHAIRMAN AND CHIEF EXECUTIVE OFFICER, BLS INVESTMENTS LLC

Mr. OBERSTAR. And Dr. Ehrlich we will begin with you.

Mr. EHRLICH. Thank you very much, Mr. Chairman. I am flattered by your invitation and to be on a panel with my three colleagues. I have submitted a statement for the record. Let me speak broadly and discursively about our topic today of infrastructure finance. We are here to consider the ways in which we pay for infrastructure because we find very frightening levels of needs that come out of engineering statements and other estimates. And the point that I want to make is that perhaps we are entering the worm wood at the wrong hole. Needs, when we talk about infrastructure, are a biological, not an economic term.

When we have a statement of need for a dam or a bridge, is the dam the best solution, is it cost effective? Simply the fact that it is in disrepair doesn't tell us, for example, whether or not we should rehabilitate it, whether or not we should build a new one

or whether we should let the dam go obsolescent or take it down and allow on other nonstructural solutions to provide the benefits with regard to electric power or wetlands preservation or whatever our objectives may be.

The point is that we do not have a system that evaluates comprehensively all of our infrastructure opportunities. And my belief is that if we want to get more out of Federal resources, that we would do better to look at not how we pay for these projects, but how we select them. This is particularly true because of credit scoring in the 1990 Act that now takes direct outlays, loan guarantees, other forms of credit arrangements and puts them on a parity dollar-for-dollar basis in the Federal budget. The problem is less that we don't have a new method of infrastructure finance, than we have 90/10 or 80/20 cost sharing or 100 percent cost bearing by the Federal Government regardless of the scope of national versus local benefits, regardless of the presence of nonstructural alternatives, regardless of whether or not user fees have been used to manage peek uses or otherwise to maximize our use of the asset.

The proposal that came out of the CSIS Infrastructure Commission was to create a single national infrastructure bank. And not only would it be able to wield all of the tools that we have heard discussed and will hear discussed on this panel, such as direct subsidies or loan guarantees, or interest rate subsidies and the like, or whatever kind of assistance the government wants to provide to make an infrastructure debt instrument creditworthy, but also to have a place where all infrastructure proposals are evaluated using consistent parameters for the value of time, the interest rate, the cost of capital, the discount rate, the value of human life, to put all of them on an equal footing so that we know that we are allocating Federal dollars to the most pressing needs.

And the infrastructure bank would create a variety of interesting opportunities, and I will highlight three very quickly. Representatives Calvert and Jackson have a proposal for a container system. And they have an idea that users would be willing to pay for it. And the point was made, I believe by Congressman Mica, that is inherently multi-state. Let the states come together with a package of user fee proposals, with perhaps supplementary private financing, go to the bank and say, we think that this is worth Federal involvement of X. And that can be directly negotiated.

I will give you another example. New York City has a very daring vision for how it will exist in 2025. But when it takes that vision and tries to get funding for roads versus mass transit versus ports versus sewer, it has to go to different places. Let it take that comprehensive vision and take it to one place, to a national infrastructure facility, that would allow it to say, well, New York, if you raise this on your own and the State helps you, we will give you this. Or finally, we have very innovative new private financing entering the infrastructure area, and yet we have concerns about whether or not we are hocking assets or whether or not Federal and state prerogatives are being balanced.

Let us establish a framework within which private money can refinance old assets or, more importantly, finance the construction of new assets within the framework of the bank and let the bank be a true financing partner. I dislike the term public-private partner-

ship, I think the right term is business deal, but let us make good business deals with the private sector with the bank as the Federal Government's agent. Thank you, sir.

Mr. OBERSTAR. Thank you very much for your rather concise statement of your written presentation. It is a remarkable feat.

Mr. EHRLICH. We have a shared interest in my doing so.

Mr. OBERSTAR. Mr. Florian.

Mr. FLORIAN. Chairman Oberstar, Ranking Member Duncan and the Committee, thank you for the opportunity to present to you today. My name is Mark Florian. I run the infrastructure banking group at Goldman, Sachs. In my 23 years at the firm, I focused on financing of infrastructure development. It truly is my passion. The Nation's transportation system, as the Committee knows, is in a crisis because current funding sources, as well as financing tools, are insufficient. As everybody knows, we are falling behind. The use of our highways have doubled in the last 25 years, yet the capacity of the system is only up 3 percent. The cost of maintaining and expanding this system has accelerated.

Construction inflation is up 40 percent over the last 3 years. The cost of asphalt alone this year is up over 25 percent. The fuel tax has served our country well since 1956, but it is not keeping up. There is no silver bullet to our Nation's transportation crisis, but there are a number of actual steps we can take in order to address our problems. Two main categories; more funding or revenues available which will help us to use broader capabilities in financing infrastructure investments. The gas tax is an important source of funding. We could try to increase the fuel tax in the short term, but it is a challenge from both a political will and a public acceptance perspective. One alternative that the Committee has considered is to index the fuel tax. I think that makes sense. We can index it either to CPI or to construction inflation. That being said, however, I think most importantly for the long-term it is imprudent to rely primarily on a funding source that is based on fuel consumption given the reality that Americans are shifting to more efficient vehicles so consumption will naturally go down vis-a-vis the vehicle miles traveled and cars that don't even use gasoline are in our future, and not a distant future, one of the most promising solutions for the funding shortfall is to explore greater use of direct user charges, tolling or vehicle miles travel charges.

We need to pursue greater use of user fees and availability of user fees in their various forms. At the same time we need to be cognizant that there are citizens of our country that have less means and we need to provide alternatives for all of our citizens, particularly those who don't have the financial capacity necessarily to pay user fees. Secondly, in addition to funding, we need better and broader use of financing tools. We need to tap all the sources of capital. Taxes on debt, government funding tools, as well as private sector funds. The tax exempt municipal bond market supplies about $400 billion a year of funding for infrastructure. We need to encourage it and to expand it. And it is provided at a very attractive cost to capital. As a result of this Committee's efforts under SAFETEA-LU, private activity bonds in TIFIA have been expanded and have been an important part of our transportation funding in recent years.

We need to expand these programs and streamline them. There has been a lot of interesting discussion about the exciting proposal for the national infrastructure bank. I believe this national infrastructure bank will only be effective if we specifically figure out what we intend to accomplish with this tool. There is no lack of capital to provide financing. We have the deepest capital markets in the world in the U.S. We don't need another source of money to lend to projects. But we can use a source to subsidize and to help assist in infrastructure projects getting them done better, faster and cheaper. First the bank could provide an interest cost subsidy, lower rates. We have tax exempt bonds already. It should be competitive with tax exempt bond financing or better.

Second, the bank could provide a credit subsidy, essentially lending to projects that are higher risk, much like TIFIA does today, but perhaps more aggressively. And third, the bank could provide project cost subsidies with grants for early stage developments. It is always important to keep in mind, though, that while financing tools are incredibly important, we need more funding. Without that funding we can't finance. Public-private partnerships are also an opportunity. We should encourage these structures since our own U.S. pension plans are now interested in investing in them. We have seen that CalPERS, New Jersey teachers, Texas teachers, CalSTERS and many others are very, very interested in investing in infrastructure.

We should tap into that source of capital. What are our end steps? What do we do from here? As we look to improve the quality of our Nation's transportation infrastructure, I think there are four key objectives. First, faster delivery of projects. Second, better choices for users, more revenue available and using the broad range of financing alternatives. While the Committee's focus on financing alternatives is appropriate, I urge you to continue your consideration of additional revenue sources that will underpin that financing that is necessary to fund our Nation's needs into the future. Thank you.

Mr. OBERSTAR. Thank you very much, Mr. Florian. I appreciate it very much. Dr. Penner, good to have you back at the witness table. I remember your years at CBO and your contributions over a very long period of time.

Mr. PENNER. Well, thank you very much Mr. Chairman. And I would like to thank you and other Members of the Committee for this opportunity to testify. It is difficult to handle public investments in government budgets. The rewards from the investments are spread over an extended period, while the cost of investing is immediate. This creates something of a bias against investment. My full testimony describes six options for dealing with this bias. For highways and mass transit, there are very strong arguments for raising the fuel tax, but obviously that is difficult politically. A related, and I think superior option, probably not much easier politically, is relying more on tolling and congestion fees, which are now much easier to collect because of technological advances. They could generate very large amounts of revenue while increasing the efficiency of highway investment.

Quite another approach would be to adopt capital budgeting for the Federal Government. I don't think that would work very well

in our system. The basic idea of capital budgeting is to reduce capital's disadvantage in the budget process by allowing it to be financed with borrowing, while requiring the operating budget to be balanced with tax and other revenues. The problem is that we seldom come close to balancing our operating budget. And if you allow the marginal operating expenditure to be financed by debt, you are no longer reducing capital's relative disadvantage. If you do find a way to reduce it, then there is a danger in the budgeting process and all sorts of things get defined to be capital.

My full testimony looks at various types of infrastructure banks, and they can be designed in a great variety of ways with varying degrees of control by the Federal Government. One form is a government sponsored enterprise. But they have to be carefully regulated to limit their risk taking. Given the problems in dealing with institutions such as Fannie Mae, I would suggest that the Congress should think long and hard before creating any new GSEs. One could create a revolving fund to deal with the problem of the lumpiness of investments for agencies that invest only occasionally. In years when an agency was not making large investments, they could contribute to the fund, and when they needed to invest, they could draw on their deposit or borrow for the fund. I think this is a promising idea that was discussed by President Clinton's commission to study capital budgeting. It is certainly worth an experiment.

The full testimony discusses public-private partnerships by which, I mean, a private ownership of parts of the infrastructure. I think that could be a useful way to bring more resources to infrastructure investment. Last, the testimony discusses ways of making Federal subsidies for highways more efficient. The structure of Federal grants is very complicated, but many think that a considerable portion just displaces investments that States and localities would make anyway. It would be useful to study minimum effort and cost sharing requirements to see if they could be designed to provide the Federal Government more bang for the buck. While that is not an easy task, there is a much simpler improvement efficiency out there that could be pursued, that is, looking at the tax exemption on municipal bond.

It costs the Federal Government far more in lost revenues than it reduces interest costs at lower levels to government. A carefully designed tax credit could greatly improve the efficiency of this subsidy. Having said all that, it is clear that getting money for infrastructure investment is going to be very difficult in future years. Social security, Medicare and Medicaid expenditures are approaching one half of noninterest spending and are growing faster than tax revenues and the economy. This puts a hard squeeze on all the rest of the government, including infrastructure. I think that a greater use of tolling and congestion fees and public-private partnerships are the most efficient ways of countering this squeeze. Thank you very much, Mr. Chairman.

Mr. OBERSTAR. Thank you, Dr. Penner. I really appreciate your testimony. Mr. Schwartz, good to have you back again at the Committee. I appreciate your contributions over a very long time. As I said at the outset, when you were at Loral and we were trying re-

direct the energies of the FAA to modernize the air traffic control system, you made a great contribution. Thank you.

Mr. SCHWARTZ. Thank you for your nice introduction. Chairman Oberstar and Ranking Member Mica and the Members of the Committee, thank you for the opportunity to appear before your Committee. Over several decades, our country has accumulated a sizable infrastructure deficit, and as a result there have been numerous breakdowns and bottlenecks that have impeded the free flow of goods and services in this country. There is a wide inventory of deficiencies in our infrastructure from congested roads to water systems, et cetera. I will not recite them here. But I will say that there has been a wide deterioration. As a matter of fact, most people regard our infrastructure as broken. And this deterioration has undercut the Nation's economy and productivity, it has endangered our national security and it has undermined the quality of our life.

One of the reasons for this infrastructure deficit is that our system for financing infrastructure has become increasingly inadequate with the passage of time. It has not kept up with the practices of other advanced industrialized economies. At the Federal level infrastructure is funded largely out of general revenues and highway trust funds, and at the State level the great majority of infrastructure is funded through the municipal bond markets as well as through state and local budgets. But these funding mechanisms have failed to keep pace with our national requirements.

The current economic slowdown in turmoil in housing and credit markets threaten to further constrain State and local capabilities for infrastructure spending. Because States and municipalities rely heavily on property and sales taxes the housing correction in consumer slowdown will create a budgetary crisis even greater than we are having today. In addition to the absence of a Federal capital budget, the prevention, the lack of having a Federal budget, prevents us an appropriate sensible transparent and fully accountable method of funding the Nation's investment in long-term productive assets which are so necessary for our global competitiveness.

A Federal budget would better focus our national priorities in a timely fashion. Also, it would better structure the payment and amortization of long-term investment so as to match resulting revenues derived from the investment. I disagree with Dr. Penner's approach to the Federal budgeting as being an additional problem. Most industrialized countries in the world do have a separate capital budget and operating budget and do very well with it. And every business in the United States is able to manage that problem as well. The major impediment to closing the infrastructure deficit is not lack of available cash, as Mr. Florian mentioned, or because of high interest rates.

Notwithstanding recent credit problems and bank liquidity concerns, the world is awash with capital and long-term interest rates remain near historic low levels. In fact, there is no shortage of privately held funds to help pay for infrastructure, reconstruction and development if it is undertaken in a market sensitive manner. A new approach to funding infrastructure capital investment would open up new capital markets on international sources and domestic and fiduciary and pension funds. It would further enhance access to sizable pools of capital which require larger projects for scale

and efficiency. Recently several legislative initiatives have been introduced in the Congress. The Dodd-Hagel Senate bill S. 1926, would create a national infrastructure bank.

Representatives Ellison and Frank have introduced similar provisions in 1301 and they spoke to those issues today. These bills would authorize up to $60 billion in U.S. Government guarantees for bonds with maturities up to 50 years for infrastructure projects. Properly structured government guaranteed bonds could leverage up to $300 billion. As proposed, the national infrastructure bank would not operate as a bank but as a Federal agency with no capitalization.

However, if Ms. DeLauro's legislation were modified for the bank to be capitalized for up to $10 billion, the bonds would be sufficiently flexible to achieve investment grade status as well as access to broader markets. In the House Congresswoman DeLauro's bill, I think it is 3896, has proposed an Infrastructure Development Act of 2007 which would be capitalized at $9 billion over 3 years. This entity would act like a bank, even though it is not called a bank. It would be able to make loans, issue and settle debt and equity securities. All of these new institutional arrangements would help remove politics from the funding of infrastructure projects and provide needed professional expertise and standards to states and localities for project development. They would also help States acquire financing for projects of national and regional significance. Further, by offering Federal guarantees State and local governments would keep borrowing costs low and provide both leverage and flexibility. The adoption of the significant elements of these combined pieces of legislation is strongly urged in order to achieve the following imperatives; to create high skilled well paid jobs to put the economy on a net growth path it is estimated, as stated here earlier today, for example, that for each $1 billion spent in infrastructure there is a creation of 47,500 jobs. Secondly, to divert the economic gains of our economic economy into long-term investments and away from consumer stimulus programs which inevitably lead to excessive speculation. I would like to stress this in particular.

Congress, in its attempt to offset the lack of jobs and a deteriorating economy, passed legislation for a stimulus that is short-term and would be a consumer-driven stimulus which, in the end, leads to the kind of excessive speculation that we have trouble with dealing. However, an infrastructure investment program provides for a stimulation but through long-term projects that continue to add to the economy's wealth in the future. The third imperative is to enable us to close the infrastructure gap at a time of low borrowing costs, to create significant wealth in the form of productive long-term national resources, to increase future revenues and to provide access to new large capital markets here and abroad.

In summary, public investment is the most responsible and reliable way to stimulate new private investment, create good jobs in the country and sustain innovation and productivity growth. This country can ill afford to delay infrastructure investment.

And finally, America's competitiveness depends on the healthy infrastructure and needs long-term job creations as part of its program. I commend the Committee for addressing this very long-term

but very, very substantial issue for the country. I think it is critical that this debate that we heard here today be continued. And I thank you for the opportunity to participate.

Mr. OBERSTAR. Thank you very much, Mr. Schwartz, for your thoughtful comments and to each of the members of the panel for your contributions. Your back-up papers go in much greater depth into the oral summaries that you have already provided. I want to refer to the European Commission. The Transport Council that I addressed in the early part of May, May 5th, that council consisted of 27 transport ministers of the European Union. They have spent a great deal of time over a period of several years in fashioning a transEuropean transportation network above and beyond what individual member countries of the European Union have crafted, and boiled those down to 30 major projects that are of significance because they are transborder projects and because they relate to priority transportation needs. Of those 30, 19 are rail projects. Three are mixed, that is intermodal railroad projects. Two are inlandwaterways, one of which would link the North Atlantic to the Black Sea traveling across the heartland of Europe. And one they call motorways of the sea, a fascinating concept.

High priority in their report has been given to more environmentally friendly transport modes. And they have a map for each one of the 30 projects, and a progress report on how much money has come from the European infrastructure bank, how much has come from national governments, how much has come from private sources, and the state of progress on each one of the 30 projects. It is a remarkably well-structured, thought-through plan. Some of the largest scale projects have been completed. The fixed link between Sweden and Denmark, Malpensa Airport, the railway line linking Rotterdam to the German border. And then the high speed Brussels—Paris-Brussels-Cologne-Amsterdam-London. Those are massive projects.

The result of the Paris Brussels link is that there is no commercial air service between Paris and Brussels, it is all by high speed train. A trip that I took as a graduate, en route to a graduate program from Paris to Brussels in 1956 took 6 hours. Last year that trip was 80 minutes. One train leaves every 3 minutes from Brussels to Paris, and likewise from Paris to Brussels with 1,100 passengers aboard at 184 miles an hour from six in the morning to midnight, carrying millions. People commute daily between the capital of Europe and the capital of France. People commute from, business persons commute from Tours in the southeast Loire Valley 220 miles daily to Paris in an hour and 15 minutes. You could hardly get through security at the nation's airports to your gate in 75 minutes, and they are doing this.

Now, they have their national—they have their European community budget. They have something called a cohesion fund. They have the European redevelopment fund, they have the European investment bank and then they have private sector sources. But all of this investment which in the short term is 350 billion U.S. Dollars, but in the long term will be in the range of well in excess of $1 trillion, is subject to a master plan that the ministers have agreed to.

Now, Dr. Penner, you have been a critic of capital budgeting, but I suspect you would not disagree that we should know what those capital needs are.

Mr. PENNER. Absolutely, Mr. Chairman. And we should be very careful in selecting the kind of projects that we finance to make sure they pass cost benefit tests of one kind or another. But I think that is very different from capital budgeting. The capital budget is a way of planning how you divide your capital and operating expenditures.

Mr. OBERSTAR. If you can just stop there and say we need to assess the portfolio of capital requirements of the civilian side of government. That is a first step, isn't it?

Mr. PENNER. Yes, that is a first step. But I don't think you have to have capital budgeting to do that. I think the advantage of capital budgeting, if you do it right, is that you can finance the capital with debt and you can pay it off as it amortizes, therefore the citizens who actually use it are the ones who pay for it. But that only works if you balance your operating budget. And that is a great defect in our system. We don't come anywhere close to that.

In my full testimony, I give the numbers of capital investment. And you can define it to just include physical capital, you can include R&D, you can include education. If you include all of those things, the warranted deficit under capital budgeting would only be a little over $100 billion. And our deficit last year was well over $200 billion and this year it is going to be well over $400 billion. So unless you have the discipline to do it right, I don't think you should do it at all.

Mr. OBERSTAR. That is the key, that is the key. At that very witness table 20 or so years ago, David Stockman said that he was opposed to a capital budget because if we had one, Congress would want to fund it. However, I said, well, we are doing it now, but it is done in a haphazard fashion and we have no way of prioritizing unless we know what the total portfolio of capital needs.

The European Commission has done that. They have looked at the total range of capital investments and then narrowed it down to transportation, to those transportation projects that have met national, that is European national benefits. So I think my personal preference is that we at least establish a capital budget so we have an assessment of the needs, then engage as a political will to prioritize and to invest in those. And you are quite right, Dr. Penner, to point out the difference in the operating budget and the capital budget. That is a separate matter for the Appropriations Committee and the Budget Committee. Dr. Ehrlich, you make a very interesting distinction between financing infrastructure that compares new projects to managing the old ones and allows nonstructural alternatives. The European Commission also introduced an element that I cited a moment ago, environmentally friendly. Why do you make that distinction?

Mr. EHRLICH. Because we pay for people to build things, and we generally don't pay for people to pursue those nonstructural alternatives. And they might be better, they might not. So a congestion charge akin to the one charged in London might be a better solution than building new mass transit or than other capital expenditures in a given urban area. Preserving wetlands or planning land

use might be a better solution to flood control than building new dams and levees. The system we have now doesn't hunt up those answers. What it does is encourage localities to apply for capital grants so that they can get 100 percent funding from the Corps of Engineers. And if they don't get it that year, the system encourages them to ride the merry-go-round for another year and come back and see if they can get it next year. So what is lost is directing their attention first to nonstructural solutions and second to getting the best solution that can be funded now in place. And so what we get are solutions biased towards capital and that are often delayed because of the process by which we select these projects.

Mr. OBERSTAR. You are quite right to point out that distinction and the importance, and we have in the Water Resources Development Act that the President vetoed and Congress overrode, a new direction for the Corps of Engineers to review nonstructural alternatives. And that is a principle that we should probably extend to other aspects of our infrastructure portfolio.

One of the tantalizing propositions for the surface transportation program is, in addition to the user fee gas tax, vehicle miles traveled, to which I would add weight. Now, the State of Oregon is experimenting with this vehicle miles traveled which requires a transponder in the vehicle, a satellite and downloading and gathering that information in some meaningful way to assess. Are you familiar, Mr. Florian, with how well that is working and at this stage.

Mr. FLORIAN. Yes. I know the State of Oregon feels, and I don't want to speak for the Oregon DOT, but I think they feel that their pilot program to explore vehicle miles traveled has been quite successful. And the way that system worked was basically your odometer when you go to the gas station it is checked, and to the extent you have traveled more miles you get a charge that is built into your tax bill. That is one technology.

In Germany right now for trucks, there is a GPS system where there are transponders and the trucks are tracked across the country. And when they travel over a highway there is a pennies-per-mile charge that is allocated to them. And one of my concerns, Mr. Chairman, is I do think the fuel tax has been a terrific source of revenue for us, but I think the world is changing. It is not going to be a growing revenue source in the future and we need other alternatives like a VMT, vehicle miles travel charge or more tolling or other user fees.

Mr. OBERSTAR. I would call them supplements.

Mr. FLORIAN. Supplements, exactly sir. It is not a replacement.

Mr. OBERSTAR. Yes. I think we are going to need the highway trust fund as a cornerstone for investment. Mr. Schwartz, you recommend that Congress capitalize a national infrastructure financing entity so that it can leverage a capital. What level of capitalization would be appropriate? Have you given that some thought?

Mr. SCHWARTZ. Yes, I have.

Mr. OBERSTAR. You have dealt with billion dollar projects in the private sector?

Mr. SCHWARTZ. Yes, sir I have, and most of those were adopted under the discipline of a capital budget which requires a certain amount of oversight to see that you meet your objectives. I think

that it was mentioned earlier today that a $9 billion capitalization over a three-year period would be adequate for the kind of leverage and financing. And I think that is probably right. I favor, strongly favor theDodd-Hagel structure of infrastructure bank. It is not quite a bank, but a method of financing. And with a $60 billion authorization to offer guarantees that would attract much capital in the United States through pensions and other fiduciary pools of capital, and certainly in Europe. I think a $60 billion funding for infrastructure, plus a $10 billion capitalization to be used for banking purposes would be a very good mixture Mr. Chairman.

Mr. OBERSTAR. Thank you. That is very helpful, very useful. Dr. Peter Orszag testified before the Committee last month and said that the government could save $3 billion to $6 billion a year by replacing the tax exemption on municipal bonds with partial tax credit bonds.

Dr. Penner, you have been on the inside on this. What do you think about that? Would it make some sense to shift from tax exempt to partial tax credit bonds for supporting State and local government?

Mr. PENNER. Absolutely, Mr. Chairman, because as I said in my full testimony, the current tax exemption costs much more in terms of the revenues we lose than the benefit that actually goes to the State and local governments. I guess looking at the CBO testimony, they figured that you break even at about a 21 percent tax rate, so that anybody above that is getting more of a tax advantage than the subsidy that is being conveyed to the lower level of government. So certainly a carefully thought out credit would be far, far superior to what we have now.

Mr. OBERSTAR. That is great food for thought. I like Dr. Ehrlich's reference to public-private partnerships as business deals. That is really what they are. But in the European context, those P3s are subjected to a public utility service sort of overview. And they are strictly subjected to public scrutiny. We don't seem to have such a structure in our system.

Mr. EHRLICH. But we are yet to be confronted with the issue, and therefore we are yet to devise a solution. I would find it unfortunate if every business deal surrounding an infrastructure asset were a pretext to create a new regulatory structure. But I think that it is possible, through the kinds of contracts and arrangements that we build into these deals, to create equity.

An example I used in my testimony is that we would want the private manager of a toll road—a private owner and manager of a toll road—to charge some kind of congestion fees to optimize the use of the road. Now that in essence says here is a monopoly on the road, do with it what you will. And so you would want to balance that with something that looks like rate based regulation perhaps, saying, well, you really can't make more than X or alternatively less than Y on the asset, but otherwise go and do what you need to do. You can't create a regulatory regime surrounding every deal that scares away the money that you hope the deal will attract.

Mr. OBERSTAR. We have 3 minutes remaining on this vote. I would propose that we—we have two more votes after this one, and they are 5 minutes each, and I propose that we recess and come

back so that the Members may have more time to ask more questions. We will stand in recess for about 20 minutes.

Mr. OBERSTAR. The Committee will resume its sitting, with apologies to the witnesses for a delay of much longer than the point I anticipated we would be able to return. Votes on the House floor are beyond the control of even the Chair and even the House leadership.

And I acknowledge that Mr. Schwartz had to leave. He indicated prior to his testimony that he had a commitment on the West Coast. And I understand if you miss your—even when you have your own aircraft, if you miss your departure time then you are in a long waiting queue. And that is not good. But his testimony has been very valuable.

I want to return to the question of the vehicle miles traveled and a weight factor as a substitute for the highway user fee or gas tax. Mr. Florian, we started on that. I welcome the contribution of the other two members. How long do you think it would take, given where Oregon is today with their experience, with Germany's experience in a similar initiative, how long do you think it would take to implement such a structure? And then how would such a scheme be calibrated to generate at least a substitute for the existing 18 and a half cents and index it, if you will, into the future?

Mr. FLORIAN. Thank you, Mr. Chairman. A couple thoughts on that. The technology exists today. But getting it implemented in a broad base is complicated. You know, we have tens of millions of vehicles across the country. So it is in use in Germany, it has been for a few years. The Netherlands is doing a study, and will likely put in a vehicle miles traveled charge for not only trucks, but also for all other vehicles as well. So they are in the process of looking at it and potentially implementing it. I think this could potentially be rolled out, if we studied it intensively with appropriate pilot programs, in the next 2 to 3 years. This could start to be—I am not saying comprehensive for all vehicles across the country, but we could start to roll this out perhaps starting with trucks, perhaps starting with certain regions of the country. So it is—the technology exists. There is another thing that would be very important. If we want to use a GPS-like system, it would be important for the OEM manufacturers to start to put that technology in all vehicles so we could utilize such a system. There might be a cost to that. We would need to analyze that and figure that out.

But I actually think—I am personally concerned that the gas tax is going to start to certainly be flat, if not go down in pretty short order. Taxicab drivers in New York City are now buying hybrids, which tells you a lot. So I am concerned about the gas tax and its viability unless it gets ramped up dramatically in the next several years. So there is an opportunity here.

Mr. OBERSTAR. Do you factor weight into this as well? Dr. Penner?

Mr. FLORIAN. Yes, you can.

Mr. PENNER. Yes, Mr. Chairman. I chaired a Committee for the TRB of the National Academy of Sciences, and we looked into this very carefully. And I really think it has incredible promise. I think the transition is very difficult. You hear a lot of people voice privacy concerns. And while the technicians assure me that that is no

problem, I think a lot of people worry about it, and you have really got to prove to people that you can do it without snooping on them. But in terms of the potential revenue yield, it is enormous. I mean if you really priced our Beltway the way economists say it should be priced you would collect billions of dollars just in this locality. So there would be no problem with thinking up ways of getting revenues if it was politically feasible.

But I am very pleased, I think your most recent authorization allowed for some more experimentation, I believe. And I think that is very important. We have got to figure out how to do it and we have got to agree on the specifics of the technology. But I think it is one of the most promising things to come along for a very long time.

Mr. OBERSTAR. Thank you for your thoughts. Dr. Ehrlich.

Mr. EHRLICH. I think I am only going to second at greater length what was said. The privacy concerns are going to be very important. But we are building precedent now, because of EZ Pass and other comparable uses of technology, regarding privacy, and this is an area that we should establish what our expectations are early. Rolling it out, to my thinking, would take a period of something like 3 to 4 years. New manufacturers would have to be given a mandate. And then the cycle of either state maintenance or environmental vehicle inspection could be a window to require old automobiles to conform to the new standard and the like.

The last point I would make, and this might be a parochial view as an economist, and I have talked about this with other transportation economists, the system would give you the ability to analyze trips, and therefore provide a database for comprehensive automotive transportation planning that we do not now have. We know about cars, we know about households, but what is the distribution of the distance of trips? What is their timing? We would now understand that and know in a much more rich way how people use roads, and therefore how to build them and how to manage them.

Mr. OBERSTAR. Thank you. I think that is a very keen observation. It strikes me that a vehicle miles traveled plus weight relates more to the concept of a fee as defined by OMB historically over many years as a charge for—charge directly related to the service for which the fee is exacted. And by narrowing the focus down to vehicle miles traveled, your trip length, and the weight of the vehicle, this reflects the stress put on the infrastructure, the roadways and the bridges, better than the amount of fuel purchased times cents per gallon. It is a different concept for highways than we have for the Aviation Trust Fund, where the tax is a percentage of the value of your airline ticket, not expressed in miles traveled, although that ticket is supposed to reflect somehow miles traveled.

Next question is what is apparent from your testimony and that of my congressional panel is that we have kind of a two-tiered approach. We have a cornerstone of financing through the Highway Trust Fund, but then we have mega needs. There are some really high profile project needs. I will go back and cite the Wilson Bridge. At the time it was proposed, there wasn't a great deal of thought about its importance to the national transportation system or to the national economy. But as we dug into the issue, particularly in House-Senate conference, I made some calculations and

found that the Wilson Bridge transports 1 percent of the total gross domestic product of the United States. There are other similar entry points, intermodal points that are vital to the national economy. The transit of freight rail and passenger rail and interstate highway movement through Chicago is one such chokepoint, if you will, in the Nation's system. If it takes, as it does, as long for a container to move seven miles through Chicago as it does for that container to move 1,800 miles from Long Beach, Los Angeles to Chicago, then there is something wrong with our system. And then it has to move 1,200 miles to the East Coast, because 70 percent of that container traffic from the West Coast is destined for the rest of the country, and a little more than half of it for the East Coast.

The CREATE project in Chicago merits national investment. Why shouldn't we have a national focus on unlocking that part of the grid? Alameda corridor is another such example. I think you can make the point that Seattle, with I-5, with the two freight rails, the UP and the BNSF in that corridor, and not only a north-south interstate but an east-west interstate that intersect at that point, that this cries out for a national investment.

Now just using those examples, wouldn't those kinds of projects qualify for something above the board, whether a TIFIA type approach or national infrastructure bank approach, or as one of you has suggested, and I don't remember now because the testimony has merged in my mind, a World Bank type approach? Is that approach sort of separating out onto a national scale these super projects that deserve a special category of financing that goes beyond the Highway Trust Fund?

Mr. FLORIAN. I would be glad to comment, Mr. Chairman. I think that there are projects of national significance that benefit all of us, even though they might be in a particular locale. The CREATE project I know—I am from Chicago—I am very familiar with the grade separation and a lot of the key things that need to happen in Chicago to get freight rail through the city. And so I agree with you that is a project that affects everybody across the country. There is obviously a lot of congestion that has happened in southern California with the ports of Long Beach and Los Angeles. That needs to be fixed. One of my colleagues in my group actually did the financing for the Alameda corridor. So I do think there is a real rationale for targeting specific projects that—particularly in freight—that will open up corridors, create less congestion, and have more mobility across the country. I think freight is a natural for that, and that might be one way of separating out some focus with regard to projects with national significance.

Mr. OBERSTAR. Dr. Penner?

Mr. PENNER. Yes. I think projects like that could actually be financed under our current framework. Obviously, you would have to provide more resources for the trust fund one way or another. But I think there is a fundamental problem with our grant structure in that so much of the money is given away by formula, and that doesn't really induce States to prioritize taking the national interest into account. And I think that really should be looked at very carefully, and see whether we could make more use of cost-sharing grants, or at least require more minimum effort. Because I don't think we are getting out of the States what we deserve for

the amount of money we are sending them. And it is a very complicated business. And I could go on at great length about it. But that is one area where a technical commission might help sort out the main issues and how you might provide the best incentives for States.

Mr. OBERSTAR. You are certainly right about that. I think one only has to go to the bridge program itself. Now several years ago, over a decade ago, the States asked for more flexibility. In fact, 20 years ago they wanted to reduce the number of categories. I think we had at one time 50 or 60 categories in the Federal Surface Transportation Program. We got those down to well under 30, and a half dozen major categories. One of those is the bridge program. And they wanted flexibility so that if they didn't need to dedicate the money to bridge repair or reconstruction or rebuilding to use it elsewhere. So we gave them that authority. And then just in the last 4 years they flexed $4-1/2 billion out of their bridge program to other categories of need in the State, and then a bridge collapses, and they say oh, my God, we don't have enough money for the bridge program. Well, wait a moment. We gave you the authority, you used it somewhere else, and now you are complaining.

So it comes back to again a statement in the panel's testimony that the Highway Trust Fund is a kind of Federal-State revenue sharing program.

Dr. Ehrlich?

Mr. EHRLICH. That was mine, and I will stand by it. I mean it is the transportation equivalent of what I used to say to my kids: Here is 20 bucks, have a good time. When you get right down to it, saying that we will pick up $0.90 on the dollar or 75 for local connecting roads and the like becomes an invitation to shop for that kind of money. Rudy is right in that if we were to make that cost share negotiable in some way, we would get out of the States far more, and we would eliminate the biases inherent in saying we will pick up 90 percent, whatever it is. There would remain the freight projects we are talking about, the multimodal issue, the fact that there is money coming through several windows and the like, and there is a lot of coordination.

I want to go back to that because there is one thing that projects we are talking about, these national scope projects, have in common. And that is they have a local steward. The City of Chicago. That fact can't be avoided. So we have to recognize Chicago's stewardship—we are not going to federalize it in some sense. There is not going to be any eminent domain exercised over it. Same thing in Alameda. We have to get that local steward's incentives in line with the country's, get it done now, create a workable balance between local costs and other users' costs and the like, create an opportunity for private money to enter.

I can imagine that Mark, understanding the Chicago freight issue, sees the opportunity for private money, but it has got to be part of what is really a mosaic of different contributions from different classes of user and our own superimposition of the national need and a national cost share. We need a place where all of that can get done. And we can either do it on an ad hoc basis or we can do it on an institutionalized basis. And in essence, the testimony I have given you today prefers the latter.

Mr. OBERSTAR. Will any such investment have public credibility if it is—unless it is—unless those priorities are set by an independent entity?

Mr. EHRLICH. Let me free up my colleagues for a second. I think it will have credibility if the process that appraises projects has credibility.

Mr. OBERSTAR. Okay.

Mr. EHRLICH. It needs to be independent, it needs to be expert, it needs to resemble the World Bank—that is one model, the Public Company Accounting and Oversight Board is another—dedicated experts whom we wall away in some way to make these very important professional project appraisal decisions. Because if there is confidence in that process, then the markets will have an appetite for securities that derive their value from the projects that are being picked. If the people in securities markets look at this bank and think, well, who the heck is over there, what are they doing, then there is going to be no appetite for their securities. But if they have faith that there are transparent and expert standards being employed across a range of modes, then they will understand the value, much as they—much as Goldman did its own analysis in looking at the Indiana toll road or the Skyway, which allows me to segue to Mark.

Mr. FLORIAN. I think the key, Mr. Chairman, is that citizens need to see the benefit of a particular project. And if there is a cost-benefit analysis that shows that either that project that is getting done benefits the general populous in some way, shape or form, or because that project gets done it benefits others elsewhere, that if there is that linkage we have seen in other projects there is success. If there isn't that linkage and it doesn't have the credibility of a real benefit that comes from allocating dollars that way, that is when projects become controversial.

Mr. PENNER. I think, too, that is the real value of moving toward a per mile fee adjusted for weight, and allowing the private sector to charge such fees. Because the amount of money you collect from a particular network of roads then is a very good indicator of how valuable they are to the public. And if you don't collect much money, there isn't much of a case for expanding that particular network. And then if you put it in private hands, of course they are interested in making a buck, so they will do the work of analyzing what they might collect with a very sharp pencil. And I think we can have some confidence in their calculations.

Mr. OBERSTAR. Dr. Ehrlich suggested that a crucial element is having a central facility, in his words, that picks projects coherently, independently, provides subsidies transparently, and faces a market test. There are very few market tests that I have seen of any of the projects of State highway departments. They are based on vehicle miles traveled, they are based on fatalities. If you have a roadway that had no fatality it has a very low rating. One that kills 57 people in 15 years, that too often goes, as in the case of one in my district, goes unnoticed by State highway departments, because they put money someplace else. But turn the page to transit, and transit projects have to meet this very strict cost-effectiveness index test that has some subjective elements to it. But we don't impose that same responsibility on highway and bridge

projects. We do with the Corps of Engineers. And we have raised the bar for the Corps of Engineers in the Water Resources Development Act that was passed over the President's veto last fall. Raised very—well, much more rigorous testing than ever in the history. And we will probably up that again in the future.

But if you have locks that are 600 feet long on the Mississippi River and barge tows that are 1,200 feet in length, and they have to split the barge tow, send 600 feet through, send the next 600 feet through, lash them together, no wonder it takes 820 hours for a barge leaving Clinton, Iowa, northeast Iowa, to New Orleans round trip.

And if you look at a map of the Southern Hemisphere, that point of Brazil that sticks out on the south Atlantic Ocean at that point is the port of Recife. And just below Recife is another port of Santos. They export soybeans from Brazil to the same markets that our soybean farmers in the Midwest are marketing, West Africa, East Africa, Pacific rim. They have a 2,500-mile advantage because that is how much further Recife is out into the Atlantic Ocean than New Orleans. And that is a 5- or 6-day sailing advantage. And if you add to that 3 weeks to get to the Gulf with your commodities, and then 2,500 miles on top of that, and grain moves in international markets on as little as an eighth of a cent a bushel, then we are losing enormously in the marketplace. There is no cost-effectiveness index applied to that movement of goods in the internal market of the United States.

So we are making these infrastructure investments, you know, based on somebody on this Committee, somebody else from another region is on another Committee, and there is no global view. Now, the European TEN-T plan has a national view. And they really are Europeanists now in the EU. And they think in these big terms and how they are going to be competitive in the world marketplace. And that is where I think this panel is leading us. I think you have given us a real financial investment map by which to make judgments for the future, and I think this may be the most important testimony that we have received in our evaluation of where we are and where we are going and where we are going to make the next investments.

Any other comments from any of you? Well, we will look forward, this will not—consider this part of a continuing conversation, and we will need to engage your expertise and your judgment, your insights as we move further down this road. My goal is we have a surface transportation bill, at least the outlines of it, and much of the substance of it, in place before the next administration takes office so they can't mess it up.

Thank you very much. The Committee is adjourned.

[Whereupon, at 2:00 p.m., the Committee was adjourned.]

Testimony before the Transportation and Infrastructure Committee

"Financing Infrastructure Investments"

Tuesday, June 10, 2008
10:00 am
Room 2167
Rayburn House Office Building
Washington, D.C.

Testimony of Congressman Earl Blumenauer

Introduction

I would first like to take this opportunity to thank my good friends on this Committee where I served for so many interesting and challenging years and where so much of the vital work of building America takes place on a daily basis.

As this Committee's many wonderful hearings amply demonstrate, our nation faces grave challenges in providing sufficient infrastructure to support our expanding population and economy as well as to respond to the challenges of climate change. I have introduced H.R. 5976, the "United States Commission on Rebuilding America for the 21st Century Act" to engage the public in a sweeping dialogue about these challenges. By integrating our communities into this discussion, we can generate the necessary political will to make the significant investments demanded by these challenges.

I thank the Chairman for his attention to this important subject, as well as for his kind invitation to testify on this matter today.

Decaying Infrastructure

The infrastructure of the United States is in decay. The challenges of the 21st century require a renewed national focus on the infrastructure that is essential to our cities, our rural communities, our economy, and the health of our planet. America is facing an infrastructure crisis that cannot be ignored. The levee breaches in New Orleans, bridge collapse in Minneapolis, and burst steam pipes in New York City are only the most visible signs of a persistent underinvestment in our nation's infrastructure. The actual danger to our communities and economy is much greater. We have neglected the foundations of America's communities, threatening our environment and our future economic prosperity.

As the members of this Committee are well aware, in 2005, the American Society of Civil Engineers gave our nation's public infrastructure – water, sewer, and transportation systems – a grade of D-minus, estimating that it will cost $1.6 trillion to repair our existing infrastructure. That cost is unsurprising when the following facts are considered:

- The Environmental Protection Agency, the Congressional Budget Office, and other stakeholders have identified a funding gap of between $300 billion and $400 billion over the next 20 years for the

restoration and replacement of wastewater infrastructure, and an additional $250 billion over the next 30 years will be needed to replace worn-out drinking water pipes and associated structures;

- From 1988 to 1998, the Nation's electricity demand grew 30 percent, but only enough new transmission capacity was added to handle half that amount. According to the North American Electric Reliability Council, electricity demand will grow 20 percent between 2002-2011, but only 3.5 percent in new transmission capacity is planned;

- The cost of congestion, including added freight costs and lost productivity for consumers, reached $78 billion in 2005;

- Climate change poses significant threats to infrastructure, not only to America's 60,000 miles of coastal highways, but throughout the interior and on our inland waterways as well;

- Significant under-investment in public lands infrastructure jeopardizes the tremendous conservation, recreation, and other benefits that these lands provide the public; and

- By 2050, we will build 89 million new or replaced homes as well as 190 billion square feet of new offices and other non-residential buildings.

The American Society of Civil Engineers is not alone in calling for substantial investment in transportation and water infrastructure; the National Surface Transportation Policy and Revenue Study Commission recently calculated that maintaining and upgrading our existing transportation system over the next 50 years will require an annual investment of $225 billion.

Increasing Challenges

These challenges will continue to increase. The US Census Bureau estimates that by 2050, the US population will grow 49% from its point in 2000, reaching 420 million. As the Regional Plan Association has amply documented, most of this growth will take place in extended networks of metropolitan regions linked by environmental systems, transportation networks, economies, and culture. Already this year, this

Committee has heard that these areas handle 75 percent of the nation's seaport tonnage, 79 percent of air cargo weight, 92 percent of air passengers, and 96 percent of rail travelers. These figures will grow dramatically over the next fifty years. Additionally, freight challenges do not tell the whole story for our economy – poverty has moved into our suburbs. In 2005, as the Brookings Institute reports, for the first time in American history, more poor people live in suburbs than in traditional cities.

In addition to these demographic challenges, climate change presents our infrastructure with additional significant challenges. As the Transportation Research Board concluded earlier this year, the impacts of climate change will "vary by mode of transportation and region of the country, but they will be widespread and costly in both human and economic terms and will require significant changes in the planning, design, construction, operation, and maintenance of transportation systems." To avoid the worst effects of climate change, we must greatly reduce our carbon emissions, by at least 80% by 2050. Transportation is the second largest—and fastest growing—source of U.S. CO2 emissions. Already, the top 100 metro areas of the country drive 60 percent of all the vehicle miles traveled in the United States. Our infrastructure systems require significant investments to avoid the worst impacts of these changes.

America Has Met Past Challenges

In 1808 – an anniversary that Congress, led by this Committee, honored earlier this year – President Thomas Jefferson faced immense changes brought about by the Louisiana Purchase. With the purchase, America grew from a new nation of 13 disparate states along the Eastern seaboard to include a great mass of uncharted land stretching into the heart of the continent. In response, Treasury Secretary Albert Gallatin created a national plan of ports, roads, and inland waterways to encourage settlement of the nation and facilitate trade among its scattering of independent farmers. The Gallatin Plan created a vision for transportation and infrastructure to unite our young Republic. Though the plan was slowed by the increasing tensions between Northern and Southern states, it paved the way for the Erie Canal, the Pacific Railway Act, and knitted together the vast expansion generated under the Homestead Act.

One hundred years later, America faced different challenges. Extensive settlement and economic expansion had significantly degraded parts of the environment and created urban areas blighted by pollution, while the excesses of railroads and

unscrupulous business interests left farmers and laborers in financial ruin. In response, President Theodore Roosevelt convened a conference of Governors at the White House to detail the natural resources needed for the nation's future economic expansion. The resulting National Conservation Commission launched a series of conservation plans and water projects to irrigate the West and generate cheap hydroelectric power, while the conference report identified future infrastructure needs. This report laid the groundwork for many of the critical investments initiated by President Franklin Roosevelt to jump start the nation's economy from the Great Depression decades later, such as the Tennessee Valley Authority and the Bonneville Power Administration.

A New Vision for Infrastructure Investment

Today, the challenges our public infrastructure face are dramatic and worsening. The pace of population growth and demographic change in our country is matched only by the intensity of our economic transformation and the looming of challenge of climate change. Strategic investments in our infrastructure systems can alleviate these challenges.

As we did in the 1800s and the 1900s, it is time to reach out to the American people to create a long-term vision that will allow us to meet our challenges. This is why I have introduced H.R. 5976, the "United States Commission on Rebuilding America for the 21st Century." This bill, which is co-sponsored by a number of members of this Committee, will create a commission of 17 members, to be appointed by Congress, the Administration, and State and local governments, to synthesize existing reports to identify challenges and needs; commence a thorough set of public hearings on infrastructure conducted in not fewer than 50 Congressional districts across the United States to ensure geographic and demographic representation; and articulate a national vision for infrastructure investments.

A new national vision for public infrastructure investment will guide decisions on reducing carbon emissions, supporting a greener economy, and meeting the needs of our changing demographics. Smarter investments in these areas can generate greater returns for our country. A recent academic study highlighted by the Brookings Institute shows that public investment in transportation in the 1970s generated a return approaching 20 percent, mostly in the form of higher productivity. Investments in the 1980s generated only a 5 percent return; in the 1990s, the return was just 1 percent. We need to refocus our investments on the challenges of this century.

We need a new approach for these challenges. We need to craft a new national vision, one that addresses the challenges of global warming, our growing energy crisis, and the need to rebuild America's communities and the American economy. Only by engaging stakeholders and communities in a sweeping dialogue about the challenges we face will we find the necessary political will to make the significant investments demanded by these challenges. H.R. 5976 begins that dialogue across America.

Thank you for allowing me this opportunity to address the Committee.

Statement of the Honorable Ken Calvert
Committee on Transportation and Infrastructure
Hearing on "Financing Infrastructure Investments"
June 10, 2008

Chairman Oberstar, Ranking Member Mica and members of the Committee, thank you for giving me the opportunity to testify before you at the hearing today.

As you know, I represent a Congressional District in southern California that encompasses some of the fastest growing communities in the nation. As is often the case, population growth has been closely followed by increased demands on transportation infrastructure. The Inland Empire region, which consists of Riverside and San Bernardino Counties, was recently bestowed the dubious distinction of having the highest commuting cost in the nation. Just last year, another study determined that residents of the city of Riverside had the unhealthiest commute in America.

While the region I represent faces infrastructure challenges on a number of fronts, I would like to focus my comments today solely on the emerging goods movement challenge. My congressional district is more than 40 miles from the Ports of Los Angeles and Long Beach, yet my constituents see and feel their impact everyday. Freight moving to and from the ports on our highways, along our rail lines, and at the various places where our roads, rail lines, and warehouses intersect results in overwhelming congestion. In addition, the growing interaction between commuters and freight affects them both in an equally negative manner.

As many of you know all too well, the goods movement challenge is not exclusive to southern California. Gateway communities all over the nation are experiencing increased burdens on freight infrastructure surrounding air, land and sea ports.

During most of last year, I met and discussed goods movement issues with a variety of stakeholders including industry leaders and think tanks which represent truckers, railroads, port operators, retailers, and transportation planners.

In a proactive attempt to address the freight challenges I introduced, along with my colleague Jesse Jackson Jr., the "Our Nation's Trade Infrastructure, Mobility, and Efficiency Act" or the ON TIME Act. The bill, H.R. 5102, which was introduced on January 23rd of this year, will fund the construction of high priority transportation projects which alleviate congestion in our nation's trade gateway corridors through a dedicated trade-based funding stream.

Let me briefly explain in more detail what the ON TIME Act would do.

The bill directs the U.S. Department of Transportation to designate key trade transportation corridors, or National Trade Gateway Corridors, extending out from every official air, land and sea port of entry in the United States.

Project eligibility under the ON TIME Act is limited to transportation projects located within a National Trade Gateway Corridor. Furthermore, the legislation limits funding to surface transportation projects, such as highway improvements, truck climbing lanes, truck bypasses, grade separations, and interchanges on key freight routes. Publicly-owned intermodal freight transfer facilities and improvements to the transportation linkages out of port facilities also qualify as eligible projects within the boundaries of a port terminal.

The bill grants states with the project selection authority, not the U.S. Department of Transportation or Congress. To ensure all interested parties have an opportunity to engage in the project selection process, the legislation requires states to seek the input from local governments, transportation agencies, port authorities, regional planning organizations, as well as public and private freight stakeholders. The ON TIME Act also requires each state to establish a process for rating proposed projects that clearly identifies the basis for rating projects in accordance with the purposes of the legislation.

The ON TIME Act derives its trade-based dedicated funding stream through the establishment of a capped and nominal ad valorem fee on all goods entering and exiting through official ports of entry. The ad valorem fee shall be equal to .075 percent of the stated value of the shipment, with a cap or maximum fee of $500, whichever is less. The proceeds generated by the establishment of the fee will be deposited into the "National Trade Gateway Corridor Fund," which the ON TIME Act establishes as a separate "trust fund" account within the U.S. Treasury.

The fee established by the ON TIME Act is designed to ensure that it is paid by the beneficial cargo owner, rather than transportation service providers, such as steamship, trucking, or railroad companies. Additionally, the fee is designed to be collected and administered by existing federal government agencies through the use of existing forms and processes to the fullest extent possible.

The bill apportions the funds collected by the newly established fee to transportation improvement projects within the National Trade Gateway Corridor in which it was collected. Therefore, all funds generated from the application of the fee on goods imported and exported at the Port of Charleston, for example, would be apportioned to transportation projects within the National Trade Gateway Corridor designated for the Port of Charleston.

While I remain strongly committed to a number of the core principles contained in the bill, such as ensuring the collected funds are spent where and how they are intended and preventing the creation of any new bureaucracies, I welcome the insight and expertise many of you have on our nation's freight infrastructure. I am confident that if we work together, we can create real solutions to ease the congestion bogging down the freight and commuters in our gateway communities.

Thank you again for allowing me to testify and I look forward to your questions.

OPENING STATEMENT OF
THE HONORABLE RUSS CARNAHAN (MO-3)
HOUSE TRANSPORTATION AND INFRASRUCTURE COMMITTEE

Hearing On
Financing Infrastructure Investments

Tuesday, June 10, 2008
2167 Rayburn House Office Building

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Chairman Oberstar and Ranking Member Mica, thank you for holding this important hearing to further cosider methods for financing investments in our nation's infrastructure systems.

As we discussed in the hearing last month, infrastructure in this nation is on the verge of collapse, and many of the financial resources we have relied on in the past have been out-spent. It is our responsibility as elected officials to ensure that our nation's land, air, and water infrastructure systems are fully funded and in adequate repair for use. Given the lack of funding currently available, it is crucial that we consider and implement new financing methods so these responsibilities can be carried out effectively.

One of the most pressing matters regarding infrastructure is our nation's highway system. As the situation with the highway system worsens, so does the problem of congestion. Not only does congestion take away significant amounts of time that could be otherwise used toward productivity, but it also takes a considerable toll on our nation's environment. The nation's clean water infrastructure needs are expected to exceed $400 billion over the next 20 years, partly as a result of congestion.

In a time of skyrocketing oil prices and global warming concerns, Americans should not have to pay for gas that will be wasted while sitting in traffic and will ultimately add to deteriorating air quality. Thus, it is imperative that we quickly find new ways to finance and revitalize our nation's infrastructure systems to ease the consequences of sub-par funding.

In closing, I would like to thank our witnesses for joining us today. I look forward to hearing your testimony.

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Statement by Congressman Jerry F. Costello
Committee on Transportation and Infrastructure
Financing Infrastructure Investments, Part II
June 10, 2008

Thank you, Mr. Chairman. I am pleased to be here today as we continue to examine financing our infrastructure investment. I would like to welcome today's witnesses.

The United States has an extensive system of highways, ports, locks and dams, and airports. Unfortunately, major improvements and modernization is needed.

According to the Transportation for Tomorrow report, a significant surface transportation investment gap exists that can only be filled by an annual investment level of between $225 billion and $340 billion by all levels of government and the private sector. If we look at our current capital investment from all sources in all modes of transportation, it is $85 billion, well below the recommended level.

I am Chairman of the Aviation Subcommittee and according to the FAA's Operational Evolution Plan (OEP), new runways and runway extensions provide the most significant capacity increases. The FAA's 2007-2011 National Plan of Integrated Airport Systems (NPIAS) states that during the next five years, there will be $41.2 billion of AIP-eligible infrastructure development, an annual average of $8.2 billion. However, the FAA states that the current NPIAS report may understate the true cost of needed capital investment.

These statistics demonstrate that aviation infrastructure needs to be updated. That is why in HR 2881, we increased the PFC and also increased the authorization for AIP by $4 billion over the Administration's proposal.

I strongly believe we have an obligation to maintain and modernize our infrastructure as it becomes antiquated. Members of Congress are here to discuss different legislative proposals

regarding bonding. While I believe bonding may work in some instances, I have reservations on using it to fund all of our infrastructure needs. I am interested in hearing more from our witnesses on this point.

Continued congestion and delays in our skies, on our roads, in our ports and on our waterways is costing us excessive amounts of money. We must find a way to finance our transportation infrastructure while maintaining the highest level of safety and a strong US economy.

With that, I look forward to today's hearing as we discuss financing infrastructure investment.

Elijah E. Cummings

COMMITTEE ON TRANSPORTATION & INFRASTRUCTURE

Full Committee

"Financing Infrastructure Investments"

June 10, 2008 – 10:00 a.m.
Rayburn House Office Building

Statement of Congressman Elijah E. Cummings

Thank you, Mr. Chairman, for holding this, the second hearing in the Committee this year to examine the critical issues surrounding infrastructure financing.

As we look ahead toward the next transportation authorization, the issue that looms largest is providing adequate funding to support a federal transportation program that can truly meet our

nation's need for expanded infrastructure investments.

The last bill – SAFETEA-LU – provided $286 billion – which, though a significant sum, nonetheless fell far short of the amount that the U.S. Department of Transportation said was needed just to maintain current infrastructure while supporting limited construction of new infrastructure.

Further, as other recent hearings have examined, there is a significant backlog of maintenance needed to bring our transportation infrastructure into a state

of good repair. As states have turned renewed attention to implementing rehabilitation projects to reduce some of this backlog, they have deferred the construction of new infrastructure, which in turn has only worsened congestion, particularly on our nation's roadways.

I note that congestion is now often just accepted as an unalterable fact of life – but such acceptance signals merely a growing tolerance for the inadequacy of our existing infrastructure and of the planning processes that have supported continuing sprawl.

Importantly, in this time of limited financing, when states do begin new construction, they now often rely on so-called "innovative financing" methods for larger projects. "Innovative financing" is really just a way of saying "new forms of borrowing" – whether through GARVEE bonds that enable states to pledge future federal funds from future authorizations to existing projects or through TIFIA [pronounced "Tifiah"] credit lines or from State Infrastructure Banks.

While these are useful tools that can provide critical boosts to priority projects, unfortunately, they too

are stop-gap measures ultimately limited by the total amount of funding made available to support infrastructure investments. Further, a state that pledges excessive amounts of future aid to GARVEE bonds or that borrows extensively will eventually arrive at a time when it will have only limited unencumbered funds available to support new construction.

Mr. Chairman, as you know better than anyone, meeting our national need for adequate infrastructure financing will require the will to make investments in our country and its future – just as the

development of the Interstate, which created a truly national system of roadways linking coast to coast, was possible only by a federal commitment to a radical vision of mobility.

While it may seem that infrastructure investments are not affordable now as gas prices reach new record highs almost everyday, the fact is that the development of infrastructure is key to ensuring the continued economic strength of our nation.

If we fail again in this authorization to adequately fund infrastructure investments, we will only fall

further behind in the developments that are needed to meet our national mobility needs – while allowing the infrastructure built through an earlier generation's foresight to crumble around us.

Mr. Chairman, I thank you for your commitment to the value of investing in our nation – and as we look toward the new highway authorization, I urge all of my colleagues to make this same overdue commitment to build the infrastructure that will carry us toward future successes.

Thank you and I yield back.

REMARKS OF THE HON. ROSA L. DELAURO
TESTIMONY ON NIDA
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
TUESDAY, JUNE 10, 2008

Thank you. I want to thank Chairman Oberstar for having this important hearing and for giving me the opportunity to testify today. I am proud to be here with you and our colleagues, Mr. Blumenauer, Mr. Ellison, and Mr. Calvert as we examine these critical issues.

As you know, when both the Congressional Budget Office, testified before this committee last month they indicated that as a share of gross domestic product (GDP), public spending on capital infrastructure has been relatively constant for the past several decades. Yet, the CBO's review suggests that tens of billions of dollars of additional spending on infrastructure each year would make good economic sense.

Indeed, with our national economy struggling, the smartest national investments are the ones that create jobs today and continue to pay off for years down the road and whose benefits reach our entire community. The National Surface Transportation Policy and Revenue Study Commission January report recommended an annual $225 billion investment to maintain and improve our transportation system, approximately $140 billion more than is currently invested.

The GAO says our national water infrastructure will need from $485 billion to nearly $1.2 trillion over the next 20 years. And according to the American Society of Civil Engineers, the number of unsafe dams in America has risen by more than 33 percent since 1998, to more than 3,500 in 2005.

It is clear, we need a bold national infrastructure policy. Of course, we need leadership on this issue at the very top from the

White House – but Congress has a critical role to play as well, to provide both a vision and a way to realize it.

That is why I have introduced the National Infrastructure Development Act, to create an objective process for evaluating our infrastructure needs and leverage private dollars to help rebuild our nation's infrastructure, such as highways, roads, bridges, pipelines, and public buildings.

This legislation would create a National Infrastructure Development Corporation and a subsidiary National Infrastructure Insurance Corporation initially as federal entities. The Corporation would make senior and subordinated loans and purchase senior and subordinated debt securities and equity securities, the proceeds of which are to be used to finance infrastructure projects. The Insurance Corporation would provide insurance and further reduce the costs for the infrastructure projects.

The Development Corporation would include a Board of Directors consisting of 12 members -- 9 appointed by the president -- with demonstrated expertise in the field of infrastructure project development, finance or related disciplines.

And the Board would determine which projects to fund based on how they meet national critical infrastructure needs and the degree to which private sector financing is being leveraged. It would also consider whether providing funds will help expedite the project in question.

And we would fund the Corporation with $9 billion in appropriations over 3 years. After 5 years, it would develop a plan to transition into a Government Sponsored Enterprise -- entirely self-financed through user fees and the sale of public stock.

We face a critical moment and this proposal represents a powerful opportunity to accomplish two important objectives. First to establish an entity that can carefully look at projects and fund those which are most critical to our nation's continued growth.

Second, this proposal leverages private sector investment to the largest degree possible. This could not be more important during tight financial times in which federal and state governments simply cannot finance these projects alone.

SAFETEA-LU is expiring and we face funding constraints on our aviation, water, and school building systems, among others. We need a new funding mechanism to supplement what we are doing. This legislation can fill that gap and meet our responsibilities. It is endorsed by the Associated General Contractors of America, American Society of Civil Engineers, Building and Construction Trades Department: AFL-CIO, and the U.S. Chamber of Commerce among many others

Mr. Chairman, I believe my proposal, as well as the proposals of my colleagues here today, offer innovative and effective ways to take our national infrastructure policy in a positive and strong direction.

By ensuring our nation can continue investing in its infrastructure, we can rebuild America and keep our nation highly competitive throughout the 21st century.

Congressman Keith Ellison
Statement before the House Transportation and Infrastructure Committee
Hearing on Financing Infrastructure Investments
June 10, 2008

Let me start by thanking Chairman Oberstar and Ranking Member Mica for holding this important hearing on the condition of our nation's infrastructure and proposals for needed improvements to it.

The issue of investing in public infrastructure and the state of our ailing public infrastructure is a very real issue that demands our immediate attention.

That is I am so happy to appear before the committee today to discuss the National Infrastructure Bank proposal (H.R. 3401) that I have introduced along with Representative Barney Frank of Massachusetts.

This legislation would create an independent national bank with an initial outlay of up to $60 billion in tax credit bonds. The Bank would also be able to receive private capital and hence would be able potentially to leverage millions of private dollars.

The bank is modeled after the European Investment Bank whose financing of public projects has created one of the most modern and efficient transportation infrastructure systems the world has ever seen.

The Infrastructure Bank would not displace existing formula grants or earmarks for infrastructure. It would target specifically large capacity-building projects that are not adequately served by the current financing mechanisms.

Eligible infrastructure projects under the Bank's jurisdiction would be limited to:

- Publicly-owned mass transit systems,
- Roads,
- Bridges,
- Drinking water and wastewater systems,
- Public housing properties.

To ensure we focus public investment on projects with broad regional or national impact, only projects that require a minimum federal investment of $75 million would be eligible for bank financing – **and these projects must demonstrate substantial regional or national significance.**

Like other modern investment banks, once the Bank identifies an investment opportunity, it will develop a financing package. This package could include direct subsidies, direct loan guarantees, and long-term tax-credit general purpose bonds. Most importantly, these bonds would be backed by municipal and state revenue, which makes them some of the safest and most attractive investments.

I believe this infrastructure bank could play a crucial role in tackling the major infrastructure deficit that currently exists in America.

According to the American Society of Civil Engineers in its *2005 Report Card for America's Infrastructure*, it would take an estimated investment of $1.6 trillion by 2010 to just bring the nation's existing infrastructure to working order.

Additionally, the research is clear that investing in public infrastructure can help stimulate economic growth. According to the Department of Transportation, each one billion of infrastructure investment creates 47,500 jobs. Many of these will be high-paying, high-skilled jobs that can't be "outsourced."

We also need to consider the costs to our economy for our failure to not in invest in our public infrastructure. According to the Brookings Institution our economy lost $78 billion in productivity due to the ailing public infrastructure from congested roads to antiquated rail systems.

There will be some critics, Mr. Chairman, who will say that we cannot afford to meet our infrastructure needs. The reality, Mr. Chairman -- as you understand well as a fellow Minnesotan -- is that we cannot afford **not** to do this. I believe the tragic Interstate 35-W Bridge collapse which occurred in Minneapolis serves as a national call to action for this Congress and our nation to focus on improving our domestic infrastructure.

In addition to our health and safety, to maintain our competitive edge in the world economy, America needs to dramatically increase our investments in public infrastructure. One study has noted that America's infrastructure spending has averaged less than two percent since 1980, while India and China have devoted between five and nine percent of GDP to infrastructure, which has facilitated dramatic economic growth in those countries. To remain competitive, we cannot presume we will have an infrastructure advantage without significant new investment.

Americans deserve and need a public infrastructure in the 21st Century that meets the demands of our lives and economy in the 21st Century.

I look forward to working with this committee and other Members of Congress to making a new national commitment to the public infrastructure of this country.

Opening Statement for the Honorable Eddie Bernice Johnson
Transportation & Infrastructure Committee
Full Committee Hearing
Tuesday, June 10, 2008 – 2167 RHOB

Thank you Mr. Chairman.

I want to thank you and Ranking Member Mica for holding today's important hearing on infrastructure investment.

As evidence shows, many of the congressionally established trust funds and revolving loan funds are not keeping pace with demand.

With this being said, it is imperative for us to search for innovative ways to either augment or totally replace some of our traditional funding mechanisms.

In general, design practices in the U.S. are not drastically different from 30 years ago. But research in Europe and Japan suggests the broad goal of sustainability is not being achieved by current design practices in the United States.

Obviously this suggests that as a country we have fallen behind tremendously in upgrading our nation's infrastructure.

According to the Environmental Protection Agency, from a water infrastructure perspective, over the next 20 years waste water and drinking water infrastructure will require at least $400 and $500 billion dollars respectively.

So as one can see Mr. Chairman, our needs are great and they are growing in intensity by the day. Failure to enact innovative policy solutions will yield an enormous blow to our economy and our constituents' quality of life and we can not allow that to happen.

Mr. Chairman I thank you for your leadership on this issue and yield back the balance of my time.

1 Harry E. Mitchell

Statement of Rep. Harry Mitchell
House Transportation and Infrastructure Committee
"Financing Infrastructure Investments"
6/10/2008

Thank you, Mr. Chairman.

As you know, Arizona is now the fastest growing state in the nation. Since 1970, our population has more than tripled.

The Phoenix metropolitan area, long the largest in our state, is now one of the largest in the nation. According to the U.S. census, our metropolitan area is now the 13th largest in the nation, just behind San Francisco and Boston.

Not surprisingly, all this growth has created an urgent need for new transportation infrastructure.

According to a recent Federal Highway Administration traffic congestion report, the portion of I-10 that runs through the Phoenix metropolitan area has some of the worst bottlenecks in the country.

Furthermore, Phoenix Sky Harbor Airport is now the eighth busiest airport in the country. At the rate demand in our area is growing, we are facing a serious risk of becoming the next national bottleneck.

The FAA has already warned Phoenix that it is one of 8 metropolitan areas that will need significantly more capacity by 2025.

This isn't just a problem for Phoenix, it's a problem for the national aviation system, which is already struggling to reduce delays.

Today, we will examine methods for financing critical investment in our nation's infrastructure. Sufficiently investing in our transportation infrastructure is crucial as we face an increase in congestion.

I look forward to hearing more from our witnesses on methods for financing investment in our nation's infrastructure.

I yield back.

Testimony of

Dr. Everett M. Ehrlich

before the

Committee on Transportation and Infrastructure
U.S. House of Representatives

June 10, 2008

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Mr. Chairman,

I want to thank you and this committee for your invitation to testify today on the financing of infrastructure investments. I speak from the perspective of having served as the Executive Director of the CSIS Commission on Public Infrastructure, which was co-chaired by Ambassador Felix Rohatyn and Senator Warren Rudman. Mr. Bernard Schwartz was also a leading member of our Commission. Much of the direction of our report has been captured by a bill submitted by Senators Dodd and Hagel, and Representatives Ellison and Frank, that creates a National Infrastructure Bank.

In my testimony, I want to touch on three realities regarding current infrastructure policy and briefly explore their implications for infrastructure finance – specifically, why they lead you to the idea of a national infrastructure financing facility of some sort. The issues are:

- **the growing unsuitability of the existing "modal" programs to their tasks;**
- **the inescapability of using tolls and other user charges as a method of managing infrastructure assets; and**
- **the difficulty of turning good business deals into good infrastructure policy.**

The Failure of the Modal Programs

It is widely understood that the so-called modal programs – the programs that govern highways, airports, water projects, and the like – are good at building things and not good at managing and maintaining them. The Minneapolis bridge event is a dramatic example, but more generally, we are letting our infrastructure assets depreciate by spending less than the replacement level of spending or the level associated with the highest economic returns.

But we pay even less attention to a different and, to me, more important problem – we are choosing the wrong projects to build. At the highest level, dedicated trust funds or financing facilities for highways, navigation, water, and the like mean that those projects do not compete with each other in the budget process. Nor do we evaluate those projects using standardized criteria for the cost of capital, the value of time or life, or the benefits of expanded economic activity. The programs are too prone to political guidance – the term "earmark" would not be in the public vocabulary today were it not for the last transportation bill and its bridge to nowhere. And the largest program – highways – turns money over to states and tells them that whatever they pick will be funded by the feds using a predetermined percentage. Mr. Chairman, that is not infrastructure policy. That is federal-state revenue sharing.

The Highway Trust Fund was a good system for building the national highway system. But that job was effectively done over thirty years ago. Today, the same selection process means that we favor new road construction over non-structural solutions, whether they mean variable speed limits, flexible traffic flow patterns, or congestion fees. They mean that new road segments are being built to encourage growth in some areas while decaying segments retard growth in others. They mean that if a flood control project doesn't get federal funding this year, the best thing for a locality to do is wait until next year, as if policy were a merry-go-round with a brass ring attached.

And, of course, in times of budgetary stringency, those programs mean that federal dollars are spent according to formula grants or project approval lists without a primary focus on getting the best return for our dollars. Is the last road we built more important than the last water treatment plant we funded? We have absolutely no way of knowing the answer and, therefore, no way of knowing how far we are from getting the most out of our resources,

These realities tell us that we need to find a way to finance infrastructure that compares funding new projects to managing the old ones, that allows nonstructural alternatives – from urban congestion fees to wetlands preservation for flood control – to be considered, and that uses the same criteria to evaluate the impact of every federal dollar.

Tolls

In a world in which people empty bedpans and mop floors for an unlivable minimum wage and working families face four dollar gas and forty thousand dollar college, we are hesitant to think about raising the price of *anything*. But tolls are inescapable. There are no new places to build roads to solve downtown rush hour congestion. There are no new ways to expand dramatically the capacity of airports. We have two alternatives – we can impose congestion charges for peak uses, as we do for electricity use, or we can resolve the issue by having people sit in their cars or on airport tarmacs and waste their time. Those are our options. If we dislike the extent of poverty or the real incomes of working families, there are no shortage of tools to address the problem.

Moreover, tolls are a possible new source of funds for transportation solutions – low-cost surface rail, intelligent sensors to change traffic flow controls on the fly, improvements in the technology of the air traffic control system, and the like.

Governments are too often hesitant to impose or raise user charges for understandable political reasons. But when they fail to do so, they ration congestion through delay or, more recently, they sell the asset to private parties who will raise the tolls for them. In other words, one bad decision leads to another.

Mayor Bloomberg attempted to break this cycle with his visionary program to accommodate a million new New Yorkers by 2025, a program that included downtown access fees, such as those used successfully in London. But the political opposition he faced shows us that we need to turn dramatically the issue. A national infrastructure financing facility would help change this dynamic by rewarding localities or states that used tolls correctly with targeted federal financing, and by requiring that peak-time management policies were in place before new capital expenditures were made.

Public-Private Partnerships

I confess that I dislike the term public-private partnerships. I have worked in a large corporation, and I have been involved in private-private partnerships, or as we called them, business deals.

And that is what selling a turnpike or a toll road is -- it's a business deal. It is *not* a partnership, nor a transportation policy, and sometimes not even a budget policy. It's a bad business deal from our perspective as policy makers if a government sells a road and then uses some of the proceeds for a "rainy day" fund that substitutes for missing revenues. It's a bad deal if the government agrees that no new roads will compete with the existing one, or if the government makes a 99 year deal for a road that will only last 40 or 50 years. It's a bad deal if the government could have simply securitized its future tolls receipts instead of selling the right to impose them.

Those are important concerns, but the reality is that private money is itching to enter this area, and lots of it. Infrastructure is the flavor of the month in asset markets. The point is not to keep private money out, but to guide it in the right directions.

This is an important prospective function for a national infrastructure financing facility. A Bank could guide private money -- and state policy regarding asset sales -- to the right purposes. For example, private money has eagerly pursued existing assets, but has no appetite for building new ones, at least in the United States. A Bank could change that focus by being a lending partner for new projects in which private investors played a leading role, or could provide credit guarantees or other enhancements that lowered their cost of capital. A Bank could require or encourage states to have a pre-announced, competitive, and comprehensive evaluation policy before selecting private bids for assets. It could help finance the rehabilitation of old roads if private parties agreed to impose congestion pricing and share the proceeds of these charges with the public sector.

In short, a Bank could provide a framework within which private money could best enter the infrastructure area and support long-term public policy goals, while having enhanced access

to credit markets through the Bank's active support. This "partnership" would still be a business deal, but it would be a better deal for all concerned.

A National Infrastructure Bank

The facility our Commission imagined would be similar to the World Bank, a private investment bank, or any other entity that evaluates candidate projects and assembles a portfolio of them. State, localities, or other government entities would come to it with proposals that explained the benefits of specific projects that had a proposed federal exposure above some threshold in value. Those project proposals would outline the stakes that state and local governments would be willing to take, what users would be expected to pay, the funds that were available and on what terms from private sources, and what the national benefits would be. If it found the national benefits compelling, the Bank would then have the ability to use a variety of tools to involve itself. It could buy credit guarantees or enhancements for the project's financing: it could provide interest rate subsidies or otherwise reduce the borrower's cost of capital; it could lend directly; or it could finance sinking funds, underwrite an offering, or take any other steps. The point is that such a facility could go project-by-project, and dollar-by-dollar, to find the best use of federal support.

The bank would have two windows. One would provide direct subsidies, when appropriate, through a variety of mechanisms. It would require appropriations and be subject to credit scoring when appropriate. For investments above some threshold, it would replace the existing modal programs. Any and all federal subsidies to any project would be delivered through this "subsidy window."

The second window would be a credit window, in which projects with Bank participation were refinanced on a break-even basis. If the "credit window" were to lose money, it would be

because it had made bad decisions, and the Bank's management would be obliged to correct them, or it itself would be corrected. Perhaps these projects would be pooled and resold to investors, which would facilitate the Bank's balance sheet leverage. Perhaps the bank would issue covered bonds, as has been proposed by the New America Foundation, in which the Bank promises to give to borrowers what state and local governments and users have promised to give the Bank, and make good what is not.. Perhaps the Bank would issue preferred stock that would finance a revolving pool of activities. These details are in fact secondary, and the "best" combination of them would change as do capital markets, economic conditions, the Bank's credibility, and other factors. For example, investors might feel more comfortable at first with covered bonds, then, as the Bank gains experience and credibility, with pooled securities, and then, when it is mature, with preferred stock.

This choice is not as crucial as having a central facility that picks projects coherently and independently, that gives out subsidies transparently, and that then must face a market test. Whatever the financing mechanism, the Bank would have to convince investors that its projects were tenable and their benefits compelling – in short, its project selections would face a market test every day, as a deep and liquid market for its securities was formed. Let me also add that we do not think the bank's securities, whatever they may be, should receive tax-free returns, nor do we think there should be a promise of the government's full-faith and credit beyond whatever project-by-project guarantees the Bank makes. If the Bank wishes to make a subsidy, let it be a conscious and targeted one, and let investors be compelled to then evaluate the assets they buy.

Conclusion

We know that the resources our economy devotes to infrastructure are inadequate to meet our best engineering estimates of needs. But we do not have a system for testing the economic validity of those needs, nor of making sure the best projects are funded first. A National

Infrastructure Bank is attractive not just because it would better lever federal resources, but also because it would allow us to put in place a project selection process that evaluated our investment opportunities coherently and set priorities based on those evaluations.

Testimony before the House Committee on Transportation and Infrastructure

Hearing on Investment in Transportation Infrastructure

Mark Florian, Managing Director

and Head of Infrastructure Banking; Goldman, Sachs & Co.

June 10, 2008

Introduction

Chairman Oberstar, Ranking Member Mica and members of the Committee: good morning, and thank you for the opportunity to appear before you today. My name is Mark Florian. I am a Managing Director at Goldman Sachs, and head of its Infrastructure Banking group. I have been at Goldman Sachs for 23 years and have been involved in the financing of Infrastructure development for my entire career. I am also a member of the National Surface Transportation Infrastructure Financing Commission, working at Congress' behest to suggest solutions to our infrastructure issues. It is from this perspective that I am pleased to be able to share with you my thoughts on how to finance and improve our nation's transportation system.

The Problem

The nation's transportation system is in a crisis because current funding sources and financing tools are insufficient to maintain and improve this country's highways, public transportation systems, and intermodal connectors. As this Committee knows, the continued availability of abundant and efficient transportation infrastructure is critical to the economic growth and prosperity of our economy, and to the quality of life of individual Americans. I believe that this problem can be expressed in several key observations:

- Demands on our transportation system are outpacing investment in it.
  - For example, Vehicle Miles Traveled (or "VMTs") on U.S. highways have doubled in the last 25 years, but capacity on our highway system is up only 3 percent
- Maintenance costs of existing transportation assets are competing for the same funds needed to expand our transportation system. Many states do not have sufficient funds to maintain their roads, much less add needed capacity
- Construction inflation has accelerated, up 40% cumulatively in the last 3 years; the cost of asphalt alone is up 25-30% <u>this year</u>

- The fuel tax, administered through the Highway Trust Fund (the "HTF"), has served our country well since 1956. Nevertheless, this source of funds is no longer sufficient to meet the large and growing needs for transportation Infrastructure development in the United States

The Solution

While there is no "silver bullet" to our nation's transportation crisis, there are a number of deliberate and actionable steps that we can take in order to help address the problems highlighted above:

- **More Funding**:
  - Transportation development in the U.S. is currently funded through a number of sources, but the primary source of funds has to date been the Federal fuel tax.
  - We must look to alternative sources of funding. One of the more promising solutions is to explore a greater use of direct user charges (such as a "vehicle miles traveled" or other user charge), while balancing the need to assure accessible, affordable and timely transportation alternatives for those who have little control over when they have to report to work or fulfill other responsibilities
- **More Innovative Financing Techniques**:
  - While it is important that we increase the ongoing funding streams, we also need new and innovative ways to borrow against these funding streams to create upfront capital to invest in infrastructure
  - We have at our disposal many tools (some traditional, others new and exciting alternatives) to turn ongoing funds into upfront dollars

Having outlined the Funding and Financing opportunities available to our Nation, I would now like to spend a few minutes discussing each of these topics in more detail

Funding

- **Federal Gas Tax**
  - While an increase in the federal fuel tax could help address the investment shortfall in short term, the political will and public acceptance required for even modest increases may be challenging
  - That said, one alternative we might consider is to "index" the gas tax to some agreed-upon measure. The "real" purchasing power of gas tax funding has significantly eroded, due to inflation over the past several decades
  - Even with the periodic increases in the gas tax over the last 50 years, simple inflation as measured by the Consumer Price Index (CPI) would have

increased the tax to $2.94 per gallon today. Moreover, due to the fact that the cost of new projects (as measured by the cost of labor and construction materials) has also recently accelerated even more quickly than the CPI, indexation to some measure such as the CPI or perhaps a "Construction Cost" index should be seriously considered

- Most importantly, however, I believe it is imprudent to rely primarily on a funding source that is tied principally to fuel consumption, given the reality of Americans reducing their consumption of gas with more efficient cars, or cars that don't even use gas at all in the coming years

- **User Fees**
  - One of the most promising solutions for the funding shortfall is to explore a greater use of direct user charges, like tolls
  - One of the problems with the current set of funding mechanisms is that they are not perceived to be closely linked to direct use of the transportation system, allowing demand and costs for a given asset to grow faster than the revenue that funds it
  - One way to address this disconnect is to implement VMT (or Vehicle Miles Traveled) –based revenue streams. That is, user fees for a given transportation system can be directly linked to the traffic on that asset
  - Another way to address the funding shortfall is through greater use of tolling mechanisms. As long as there are viable alternatives to tolled routes, having users pay for the use of a facility makes sense. In particularly congested areas, tolls can be used to incent us to clear congestion and utilize other alternatives such as mass transit. There are many forms of tolling, and frankly we need more to fill our funding gap. However, there must be viable transportation alternatives available for those unable to regularly afford these variable pricing systems

Financing

- Closing the Infrastructure deficit in our country cannot be achieved by one financing mechanism alone, but will require tapping *all* sources of capital: tax-exempt debt, federal government funding tools, *and* private sector funds
- **Tax-Exempt Markets**
  - Tax-exempt Municipal Bonds are the traditional mechanism for financing investment in U.S. surface transportation infrastructure

- Tax-exempt bonds have typically created a very low cost of capital for borrowers, enabling state and local governments to finance infrastructure development under attractive terms
- The U.S. Municipal Bond market demonstrates significant size and depth, with annual issuance of $350-400 billion

- **The Role of the Federal Government**
  - PABs
    - The US tax code encourages non-governmental entities to invest in capital facilities designed to advance or improve a public purpose by providing the opportunity to finance the cost of the asset with low cost tax-exempt debt
    - As a result of this Committee's efforts in SAFETEA-LU, PABs can now be used to finance Roads and Highways. They have been employed in recent projects such as the Port of Miami Tunnel, the Capital Beltway, and the Missouri Bridge Safe & Sound program
    - PABs are a critically important financing tool, and they are one that should be preserved and greatly expanded in future years
  - TIFIA
    - TIFIA, or the Transportation Infrastructure Finance and Innovation Act of 1998, provides a new source of project financing to eligible projects. Under the provisions of TIFIA, the U.S. DOT can provide direct loans, credit enhancement or lines of credit
    - Also as a result of enhancements that this Committee made in SAFETEA-LU, the TIFIA program has provided several billion dollars of financing to important projects, including the Capital Beltway, the Washington Metro, the Staten Island Ferries, Miami Intermodal Center and the New York Penn Station renovation
    - The TIFIA program should be expanded and streamlined to reflect the high interest in and usefulness of this mechanism
  - National Infrastructure Bank
    - The proposed National Infrastructure Bank (NIB) has the potential to be another tool in financing the development of additional surface transportation Infrastructure. While this is an exciting proposal, I believe that it will only be effective if we are able to early and accurately identify

what we *specifically* intend to accomplish with this tool. We have the deepest capital markets in the world in the U.S. We do not need another way to lend money for projects, yet a NIB can provide one of three types of subsidy to get projects done better, faster, and cheaper

- First, the NIB could provide an interest cost subsidy; tax-exempt bonds provide one today, so to be a competitive source of capital the NIB's interest cost would need to be similar or lower
- Second, the NIB could provide a credit subsidy, essentially lending to higher risk projects, much like TIFIA does today or even more aggressively
- Third, the NIB could provide a project cost subsidy, with grants or early stage development monies

- With one or all of these approaches, we can create an attractive financing tool through the NIB
- It is important to keep in mind, however, that while infrastructure banks can be an important part of the infrastructure solution, they are not **the** solution to our investment infrastructure deficit; we need more revenue as part of the solution as well
- Finally, let me address the size of the NIB. As we know, it has been suggested that it could provide as much as $60 billion financing. While this is a lot of money, we have heard that our infrastructure gap is many multiples of this amount. The Tappan Zee Bridge replacement project in New York is estimated at $8-12 billion alone. If we want a comprehensive solution to our infrastructure issues, we need a broad range of funding and financing tools

- **The Role of Private Investors**
  - PPP Overview
    - As you know, although new in the United States, Public Private Partnerships are the financing structure of choice in other developed markets, such as Europe and Asia
    - More capital (debt and equity) can be raised for a project, creating greater up-front proceeds and savings to local governments
    - Operating risk is also shifted to private investors and operators

    - PPPs are codified by Concession Agreements (A legal document that evidences a long-term lease of a public asset by a private operator)
  - PPP Opportunities
    - These transactions serve to both fund, finance, and execute on the construction and maintenance of our infrastructure
    - We should encourage the use of these structures, particularly since our own U.S. pension plans are looking to invest in infrastructure
  - U.S. Pension Funds
    - Billions of dollars of U.S. pension plan capital have been dedicated to investment in Infrastructure
    - These investors include major commitments from U.S. public pension funds, such as CalPERS (up to $13 billion to infrastructure and commodities), Texas Teachers ($2.5 billion), CalSTERS ($1 billion), and the Illinois State Board ($500 million +). With several billion dollars dedicated to Infrastructure investment, these funds hope to take leadership roles in future transactions as "direct" investors

Next Steps: What do we do from Here?

As we look to improve the quality of our nation's transportation infrastructure, there are several key objectives that we ought to keep in mind. We need to rigorously consider the following:

- **Faster Delivery of Projects**
- **Better Choices for Users**
- **More Revenue Available**
- **Broad Range of Financing Alternatives**

I have obviously only dwelled on the last two; while financing structures, including the NIB, are very important, the biggest issue we need to face is creating more revenue (or funding) for infrastructure. Without more revenue, we will have a lack of funding against which to raise capital. While the Committee's focus on financing alternatives is appropriate, I urge you to continue your consideration of the additional revenue sources necessary to fund the Nation's need in the future.

BUDGETING FOR CAPITAL INVESTMENT

Statement of

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Before the

U. S. House of Representatives
Committee on Transportation and Infrastructure

June 10, 2008

The views expressed are those of the author and do not necessarily reflect the views of the trustees, executives, or staff of the Urban Institute.

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Mr. Chairman, Mr. Mica, and other members of the committee. Thank you for the opportunity to testify.

It is difficult to properly handle investments in public budgets. The rewards are spread out over an extended period of time while the cost or the pain of investing is immediate. That makes it difficult to finance public investments. There are two different situations.

The first occurs when there is a fairly steady stream of investment financed by a dedicated tax. The highway program is a perfect example. It is hampered by strong political resistance to raising the dedicated fuel tax, especially in instances in which the pre-tax price of gasoline has been rising rapidly. The tax has not been raised since 1993, although the last increase, which was originally dedicated to reducing the budget deficit and not to highway spending, has now been redirected into the highway trust fund. It is generally agreed that the current rate of tax of 18.4 percent per gallon is not sufficient to finance conservatively estimated investment needs or to cover the spending levels authorized in 2005.

The second problem occurs when an agency generally has a fairly stable operating budget, but occasionally has to make a sizeable investment. For example, the National Institute of Standards and Technology (NIST) may need an expensive new laboratory. Our budget process is not well designed to handle such lumpy expenditures. The budget resolution makes a spending allocation to the Appropriations Committee which, in turn, allocates spending allowances to its various subcommittees. It is difficult for a particular

subcommittee to get a sudden increase in its allocation, because the increase is likely to come out of the hide of other subcommittees. Similarly, when a subcommittee decides its spending allocation among programs, any sudden increase for NIST must be found in the budget of other programs within the subcommittee's jurisdiction.

The rest of this testimony reviews options for dealing with the two problems. Some are more relevant to one problem than the other.

Fuel taxes, tolls, and congestion fees -- In 2005 and 2006, I had the pleasure of chairing a Transportation Research Board committee on "The Fuel Tax and Alternatives for Transportation Funding." The committee was formed because of a fear among highway interests that the development of alternative fuels and regulatory initiatives, such as CAFÉ standards, would diminish the demand for gasoline and fuel tax revenues. The committee concluded that fuel tax revenues were not in immediate jeopardy, if the Congress continued to increase the fuel tax to approximate the inflation rate, something that has not happened recently. The main reason that fuel tax revenues were unlikely to be eroded quickly by technological and regulatory developments was that it takes so long for the auto fleet to turn over in the United States. Another reason was that Americans seemed to respond to greater fuel economy by demanding more horsepower. Admittedly, the committee reached its conclusions before the recent run-up of gasoline prices and I ruefully admit that we did not predict it, but it probably would not have made a big difference to our conclusions unless we see a dramatic drop in the demand for gasoline.

Although the committee concluded that fuel tax revenues would not erode quickly, it did not believe that fuel taxes were necessarily the best and only way to

finance highway expenditures. The committee did strongly endorse the philosophical principle that in transportation the user should pay. The principle seems equitable and although I referred above to strong political resistance to raising the fuel tax, I suspect that the resistance is less than with other taxes because taxpayers have a better idea what they are getting for their money.

However, the committee believed that it would be more beneficial to link user payments more closely to actual road use. A more extensive use of tolling is now possible since technological advances such as EZ passes and photo imaging have greatly reduced the cost of collection and the inconvenience imposed on motorists. Ideally, tolls should vary with the degree of congestion, so each motorist pays for the delays he or she imposes on others. Moreover, the collection of congestion fees provides a very useful indicator for allocating highway spending. High collections from a particular area provide a pretty good indicator that investments in expanding capacity in that area would be worthwhile whereas low collections would suggest that investment is not badly needed.

GPS technology theoretically opens the door to charging for every mile of highway in the United States and for varying the charge according to vehicle weight and time of day. No one would advocate that degree of coverage, but the technology is there to rationalize highway fees and provide funding for efficient investments. Experiments using this technology are underway and our committee urged much more research into the topic.

Some object to the creation of so-called Lexus lanes, because they would be detrimental to the poor. But highway pricing policy is a very awkward way of achieving

income distribution goals. If the poor are deemed to be suffering, it is much more efficient to give them relief through increasing the generosity of the Earned Income Tax Credit and other similar devices. Moreover, some low income households benefit from congestion pricing, because it is often more important for them to be at work on time and to pick up their kids at daycare before they have to pay a penalty.

Congestion pricing tends to work best where there are alternative routes between the same places, so that people can choose between the slower congested road and the faster lanes that are priced appropriately. And while I am not an expert on air or water transport, I suspect that congestion pricing could play a beneficial role in those areas as well.

Capital Budgeting – Some believe that government spending should be divided into a current operating and a capital component. In a true capital budgeting system, spending on current operating activities would be covered by revenues, that is to say, the operating budget should be balanced while it would be permissible to finance capital investments by issuing debt. Many state and local governments follow variants of these practices.

Assuming that the debt issued to finance the investment is amortized and the amortization is considered part of operating expenditures, this arrangement has the advantage that those residents who benefit from the investment also pay for it. This feature is most valuable when there is a surge in investment and is less important if investment occurs in a fairly steady stream.

It is thought that capital budgeting levels the playing field between current and capital expenditure, because borrowing to fund the investment and then amortizing the debt counters the fact that the pain of investing otherwise comes long before the rewards. There are several practical problems with this approach. First, it requires a balanced operating budget. We often miss that target. If one looks only at direct federal spending on physical capital during 2006, it only exceeded the depreciation of the government's capital stock by $30 billion. That is the total deficit that would be allowed under a strict capital budgeting framework. The actual federal deficit was $248 billion. If one adds the capital stock indirectly financed through Federal grants, one can add another $29 billion to the permissible deficit, but that does not help much. Moreover, it is not clear that federal capital grants add to the nation's capital stock dollar for dollar. There is, in fact, considerable evidence that a one dollar increase in federal grants allows states to reduce their own investment by some portion of a dollar. I shall return to this topic later, because it is very important.

Some would add Federal research and development and education expenditures to the nation's capital stock. It is extremely difficult to know how to depreciate this stock and to know whether the Federal monies supporting these activities increase them dollar for dollar or are to some extent substitutes for other forms of public or private financing. The president's 2008 budget makes some very crude estimates and states that in 2006 the net stock of R & D increased $35 billion and education increased $68 billion. If one adds 100 percent of the increases in the stock of capital defined to include R & D and education, -- and this is most surely an overestimate -- one gets an increase in the stock of $162 billion which would be the maximum allowable unified deficit under true capital

budgeting. That is less than two-thirds the actual deficit. If the whole point of capital budgeting is to give investment some advantage in the budget process to offset the disadvantage that it has because of high upfront costs, then allowing it to be financed with debt does not work if you also allow the marginal operating expenditure to be financed with debt.

A last practical problem with true capital budgeting is that if it does actually favor capital by allowing borrowing while insisting that current expenditures be paid for with taxes, all sorts of current expenditures start to be redefined to be investment. It is said that during New York City's budget problems of the 1970s, even janitors got to be defined as capital because they worked on physical structures. When there are rules requiring that the current operating budget be balanced, one also often sees a proliferation of off-budget agencies and activities – a common practice at the state and local level.

Infrastructure Banks – It is thought that a new financial institution might provide additional funds for financing infrastructure investment. Such an institution can take many different forms. It can be wholly controlled by the federal government, lend money to state and local governments and perhaps to the private sector, and issue Treasury debt, like the Export-Import Bank. It may also have a loan guarantee program. It can be totally self-financing or operate with a subsidy or be capitalized with a subsidy. In any case, a fully federal entity should be fully reflected in the federal budget and the present value of any subsidy it provides should be appropriated according to the rules of the Credit Reform Act of 1990.

It is not clear that such a facility would provide much of an advantage to borrowers. Generally, infrastructure can be financed with regular tax exempt municipal bonds or private purpose bonds and they typically earn lower rates than fully taxable Treasuries. The U. S. government could provide subsidies and the one advantage would be that the borrower would finance a larger share of the total cost than with our current system of highway grants, but the same goal could be accomplished by restructuring the current grant system. Guarantees might be helpful, but there is already an active private market selling municipal bond insurance. That industry is facing many troubles at the moment, but there is no reason to believe that it will not again be healthy in the long run.

An infrastructure bank could be set up as a government sponsored enterprise (GSE) with private shareholders, some directors appointed by government, and a charter that required it to carry out some public purposes. Fannie Mae is an example of such an entity. Its bonds do not bear the full faith and credit of the U. S. government and it has only a tiny line of credit from the U. S. Treasury. However, investors believe that the government will bail it out if it gets in trouble. That allows it to borrow at slightly lower interest rates than if it were fully private and to take much more risk by increasing its leverage. Those advantages have allowed it to become dominant in mortgage markets, thus squeezing out a lot of private activity. It has now become too big to fail and it is essentially certain that the Fed or Treasury would intervene if it gets into trouble. We are now struggling with the issue of how to regulate it, so that it is forced to follow less risky practices.

You can tell that I am not a fan of GSEs. The Congress should think long and hard before it creates another one.

I suppose that Congress could create a fully private entity that is subsidized either with an initial infusion of capital or an annual interest subsidy, but any subsidy should, of course, be appropriated and fully on budget.

A Revolving Fund to Finance Agency Investments – This proposal is meant to address the problem of lumpy agency investments discussed at the beginning of this testimony. The Appropriations Committee would provide a regular investment allowance to an agency based on its historic need to make investments. The allowance would be deposited in a fund and the deposit would earn interest at the Treasury rate. If the agency felt the need to make an investment, it would include it in its budget request to OMB which would make a recommendation to the appropriation committee. If the Appropriations Committee approved, the investment would be financed by drawing down the agency's deposit, or if the deposit is not big enough, borrowing from the fund.

A similar idea was floated by President Clinton's Commission to Study Capital Budgeting on which I served. They did not recommend it as a permanent device, but thought it a promising idea that deserved some experimentation.

A similar device is used to charge rent to government agencies that are located in government-owned buildings. It was thought that if they had to pay rent, they would economize on space. Admittedly, it has not worked very well, but I think that is because rent is appropriated routinely every year. Investments would occur less frequently and I would hope that they would be more thoroughly scrutinized.

Public-Private Partnerships – Selling existing facilities to private owners or having private owners build infrastructure from scratch has become more common in recent years. For example, Chicago and Indiana have sold or leased facilities, and locally, we have the extension of the Dulles toll road.

This is a device for bringing in private money for infrastructure investment and it may become more important as public budgets are squeezed severely by the retirement of the baby boom generation. The squeeze is particularly important federally as Social Security, Medicare, and Medicaid are growing far faster than tax revenues and the economy and now absorb almost one-half of non-interest spending.

The attractiveness of public-private ownership varies from case to case and each deal must be scrutinized carefully. Private investors often gain something approaching a natural monopoly and must, therefore, be regulated. State and local governments must be careful to use the proceeds from sales for further investment or debt repayment and not fritter the proceeds away on current expenditures. Nevertheless, public-private partnerships may be a very useful approach to bring more money into infrastructure investment and increasing the efficiency of managing the facilities.

Improving the Efficiency of Grants and Subsidies -- The federal highway grant structure is incredibly complicated and it is difficult to generalize about its effects, but to a considerable degree it simply allows states and localities to reduce their highway expenditures by some portion of the grants and so does not increase capital investment dollar for dollar. That is because much of the money is distributed by formula with

minimum effort requirements placed on states that are not very rigorous. It is said that most states can meet the requirements without breathing very hard.

An effort should be made to increase the state and local share of investments, perhaps by increasing minimum effort requirements or experimenting with different types of cost sharing grants. This is a complex area and most options have considerable disadvantages, but the topic is worth an intense study.

Much infrastructure investment is financed by issuing tax-free municipal bonds. The Federal tax expenditure is extremely inefficient in that the tax loss endured by the federal government is far greater than the interest savings for the issuers of the bonds. CBO reports that any taxpayer buying these bonds who has a marginal tax rate greater than 21 percent enjoys a gain that typically is not fully passed on to states and municipalities. A carefully designed tax credit would equalize the subsidy to state and local governments and the tax loss faced by the federal government.

Conclusions – The outlook for federal infrastructure investment is not good. The inexorable growth of Social Security, Medicare, and Medicaid is putting a squeeze on all other government activities and infrastructure investment is particularly vulnerable because its benefits are so far in the future.

Among the ways of correcting this bias, I do not think that options like capital budgeting or infrastructure banks are very promising. Private-public partnership may bring some more money to infrastructure investment and some sort of revolving fund might help smooth out the lumpiness that occurs when ordinary agencies try to do some investing.

With regard to the very big question of highway financing, the arguments for raising the fuel tax are very strong if political resistance can be overcome. But there is even a stronger case for relying more on tolling and congestion fees which could provide very large amounts of revenue while improving the efficiency of the system.

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Redressing America's Public Infrastructure Deficit

Testimony Before the House Committee on Transportation and Infrastructure
June 10, 2008

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Chairman, Oberstar, Representative Mica, and Members of the Committee, thank you for inviting me to testify today on the question of "financing infrastructure investments."

Over the past several decades, we have accumulated a sizeable public infrastructure deficit. As a result, a variety of infrastructure bottlenecks—traffic congested roads, clogged ports, and an antiquated air traffic system, to mention just a few—have begun to undercut our economy's efficiency and undermine our quality of life.

One of the reasons for this infrastructure deficit is that our system for financing infrastructure has become increasingly inadequate with the passage of time and has not kept up with the practices of other advanced industrialized economies. That is why I am generally supportive of the various legislative proposals this Committee is now studying—in particular, the National Infrastructure Bank Act of 2007 (S. 1926 and H.R. 1301), introduced by Senators Christopher Dodd and Chuck Hagel in the Senate and Representatives Keith Ellison and Barney Frank in the House, and the National Infrastructure Development Act of 2007 (H.R. 3896), introduced by Representative Rosa DeLauro, which would establish a National Infrastructure Development Corporation and its subsidiary, the National Infrastructure Insurance Corporation, as wholly owned government entities. It is also why I favor the establishment of a federal capital budget, as I explain later.

The way we currently fund infrastructure in this country is flawed. At the federal level, infrastructure is funded largely out of general revenues and the highway trust funds. Thus, it is not surprising that in recent years political concerns over the budget deficit together with competing short-term spending needs have crowded out public infrastructure projects.

At the state and local level, the great majority of infrastructure is funded through the municipal bond market as well as through state and local budgets. But over the past decade or two, increased federal mandates for social spending, balanced-budget requirements, debt limitations, and increased competition among states to keep taxes low have restrained state and local borrowing as well as spending. The current economic slowdown and turmoil in the housing and credit markets threaten to further constrain state and local infrastructure spending. Because states and municipalities rely heavily on property and sales taxes, the housing correction and consumer slowdown are creating a budgetary crisis for many state and local governments. As of January of this year, 24 states were either facing a shortfall for FY 2009 or were expecting budgetary problems in

the next year or two. The expected shortfalls are likely to accelerate as home foreclosures increase, property values decline, and consumer spending falls. New capital projects will be one of the first victims of this budgetary crisis.

Thus, our nation's infrastructure deficit will actually get worse unless we change the way we finance infrastructure investment. The major impediment to closing the infrastructure deficit is not a lack of available capital or high interest rates. Notwithstanding recent credit problems and bank liquidity concerns, the world is still awash in capital and long-term interest rates remain near historical low levels. In fact, there is no shortage of privately held funds to help pay for infrastructure reconstruction and development if it is undertaken in a market-sensitive manner. As Transportation Secretary Mark Peters recently noted, "there is upwards of $400 billion available in the private sector right now for infrastructure investment." Likewise, even with today's bank credit and liquidity problems, there are literally trillions of dollars available for high-quality debt investments through both domestic and international markets. The amount of funds held by central banks, sovereign funds, and global pension funds is estimated to be approaching $30 trillion—and growing fast. U.S. public pension funds alone have more than $3 trillion in assets; moreover, they have a long-term investment outlook that is consistent with the stable returns that infrastructure assets generate.

I would like to offer three recommendations for how we can take advantage of these large pools of capital—in the short term by more imaginatively using our existing capacity to borrow and over the slightly longer term by improving our system for financing infrastructure investment by pursuing the legislation proposed by Senators Dodd and Hagel and Congressmen Ellison and Frank and by Congresswoman Rosa DeLauro.

1. Make a Large Down Payment on our Infrastructure Deficit as Part of a New Economic Recovery Program.

My first recommendation is for the federal government to make a significant down payment on the public infrastructure deficit as part of new economic recovery program. The stimulus package passed by Congress earlier this year was too focused on providing a short-term boost to consumption, and will be too small and too transitory to create a sustainable recovery given the size of the housing and credit bubble, and the role that the housing played in sustaining consumption levels over the past decade. A second stimulus program will be needed that is longer in duration and that is more focused on investment and creating new jobs.

By making public infrastructure spending the centerpiece of a new economic recovery program, we would be able to accomplish several urgent public policy goals simultaneously. We would close the public infrastructure investment gap at a time of low borrowing costs; we would provide the economy a significant boost in investment and job creation that it is needed to put the economy on a new growth path that is less dependent on housing and debt-financed consumption; and we would make the economy more productive and efficient over the longer term by eliminating costly bottlenecks and by crowding in new private investment.

Public spending on infrastructure is the most effective way to counter an economic slowdown caused by the unwinding of a major asset bubble. And funding public infrastructure by issuing long-term Treasury Bills is still the lowest cost way to finance much needed public infrastructure improvements. For these reasons, we should use the necessity of a second stimulus package to close the public infrastructure deficit by dramatically increasing public infrastructure spending over the next two years. And we can do so without an equivalent increase in the budget deficit, since the deficit would widen in any case as tax revenues decline because of falling incomes for businesses and individuals and since public infrastructure spending would create new jobs and economic activity and thus increase tax revenues.

In comparison to other stimulus measures, such as cutting taxes, public infrastructure investment would have the advantage of directly creating more jobs, particularly more good jobs, and thus would help counter the negative employment effects of a collapsing housing bubble. For example, the U.S. Department of Transportation estimates that for every $1 billion in federal highway investment, 47,500 jobs would be created. Similarly, a recent California analysis concludes that each $1 billion of transit system improvements, including roadways, would produce 18,000 direct new jobs and nearly the same level of induced indirect investment.

Public infrastructure investment not only creates jobs but generates a healthy multiplier effect throughout the economy by creating demand for materials and services. The U.S. Department of Transportation estimates that for every $1 billion in federal highway investment more than $6.2 billion in economic activity would be generated. By comparison, tax cuts and tax rebates are estimated to produce only 67 cents in demand for every dollar of lower taxes. In short, public spending on infrastructure is the best way to provide long-term stimulus to the economy at the lowest cost and at the same time make it more productive and efficient.

Contrary to conventional wisdom, a public infrastructure program can be implemented in a sufficiently timely way to help counter an economic slowdown, in addition to providing long-term benefits for the economy. There are a number of ways to accelerate projects already planned and to provide federal guarantees and financing for state and local governments to speed-up spending on long-delayed public infrastructure improvements.

2) Establish a National Infrastructure Bank and Supporting Regulation.

My second recommendation relates to the proposed new programs for federal support of non-federal infrastructure investment. If properly designed, they would significantly improve our system for financing infrastructure investment.

State and local governments account for the lion's share of our nation's public infrastructure spending. For many years, the U.S. municipal bond markets have functioned well, allowing state and local governments to finance much of their infrastructure needs through the debt markets. But as noted earlier, state and local

governments are experiencing new borrowing constraints as some states and localities bump up against debt ceilings or face increased borrowing costs because of deteriorating credit ratings and conditions. Moreover, our current financing structures do not allow states and localities to take advantage of the large institutional pools of capital, such as U.S. and European pension funds, that are available for infrastructure financing.

For these reasons, the federal government will need to do more in the future to bear the cost of infrastructure investment and to assist state and local governments with the financing of their infrastructure needs. It can do so by offering federal guarantees to help keep borrowing costs for state and local governments low and by creating new institutions to help state and local governments borrow more efficiently and to tap large pools of capital. In these respects, the proposed National Infrastructure Bank (NIB) and the proposed National Infrastructure Corporation (NIDC) move us in the right direction and would help modernize the way we finance infrastructure.

First, the proposed NIB and NIDC would give us the capacity at the federal level to issue long-term general-purpose and specific-project infrastructure bonds enabling us to tap more easily the private capital markets for financing public infrastructure. The bonds could be as long as 30 to 50 years in maturity, thereby providing an attractive financing vehicle for infrastructure improvements that have a useful life of several decades.

Second, the proposed NIB and NIDC would lower the borrowing costs for state and local governments by offering federal guarantees for state and local projects as well as by providing direct grants and start-up financing. A federal guarantee for state and local projects would lower the interest rates state and local governments need to pay in the municipal bond market by 50 to 100 basis points, saving state and local taxpayers millions of dollars each year.

Third, the NIB and NIDC would help remove politics from the funding equation, thus eliminating the standard political objections to public infrastructure projects as just "pork-barrel" politics. They would do so by providing a professional, non-partisan justification for needed infrastructure spending. The NIB, for example, would have a five-member independent board that would be appointed by the president and confirmed by the Senate. It would also have a professional staff to carry out a thorough review of projects based on return on investment and their contribution to the public good.

In these ways, the proposals for the establishment of a NIB or a NIDC would considerably improve our system of financing public infrastructure. But in other ways, the proposals do not go far enough to enable state and local governments to tap the large pools of institutional capital I mentioned earlier. In particular, there are two shortcomings in the proposed entities as they are now envisioned—for which I have two recommendations.

The first limitation relates to the question of capitalization. The Dodd-Hagel and Ellison-Frank bills would establish an initial $60 billion ceiling on the mount of the aggregate outstanding obligations the NIB can assume, which is low relative both to our

infrastructure financing needs and the market's potential appetite for infrastructure investment. Moreover, the NIB, as currently envisioned, would not in fact operate like a bank but rather more like an agency with no capitalization, thus limiting its ability to create leverage the way infrastructure development banks in other countries do. The House proposal for a National Infrastructure Development Corporation (NIDC) would have the advantage of operating more like a bank in that it would be capitalized and would be able to use leverage to make loans and to issue and sell debt securities. But its initial capitalization of $3 billion in the first year (with a ceiling of $9 billion over three years) is too limited to address the scale of the nation's infrastructure needs.

My first recommendation, then, is to suggest that the Congress properly capitalize any national infrastructure financing entity it approves so that it can leverage its capital like most development banks do. Again, take the case of the proposed NIB. If it were properly capitalized and operated more like a bank, the NIB would be able to make loans and loan guarantees some five times its initial capitalization. Thus, it would be able to finance $300 billion in new infrastructure projects as opposed to merely $60 billion, greatly expanding the amount of financing available for infrastructure investment. Even the very conservative European Investment Bank allows for leverage of two and half times it capital.

Second, the NIB and NIDC, as now conceived, would do little to help state and local governments attract larger institutional financing, because they do not explicitly allow for the pooling of privately created infrastructure-backed loans. The problem that state and local governments now face is that any one bond issuance is in most cases just too small to attract institutional interest. Large institutional funds and central bank managers prefer to focus on bond issues in the range of $500 million and above, with many preferring bond issue above $1 billion. In addition, large institutional investors are not attracted to municipal bonds because they do not generally benefit from their tax-exempt status. For these reasons, they do not participate in the municipal bond market in any active way. The issuance size and lack of liquidity of the municipal bond market therefore limits the range of investors and drives up the cost of issuing bonds. To overcome this problem, an infrastructure bank should have the authority to bundle various state and local bonds, and to offer the larger bundled instruments to large institutional investors much like Fannie Mae and Freddie Mac do.

My second recommendation, therefore is that any new government agency or bank not only be properly capitalized but that it have the explicit authority to pool, package, and sell existing and future public infrastructure securities in the capital markets. Such an entity should also have the in-house capability to originate infrastructure loans and thus the ability to fund itself through the international capital markets. With this authority and this capability, a NIB or NIDC would be able to channel private finance into public infrastructure almost immediately. As importantly, they would be able to tap financing from large institutional investors—from large U.S. and European pension funds, insurance companies, central banks, sovereign wealth funds, and other institutional investors. Thus, they would allow us to raise more capital for public infrastructure

investment more efficiently and at a lower cost than we can do through the municipal bond market as it now exists.

3) Establish a Federal Capital Budget.

My final recommendation is for the government to move as quickly as is feasible to capital budgeting, which is needed to help us establish better spending priorities and develop a more sensible approach to fiscal responsibility. As is well known, a capital budget would separate in a transparent way long-term capital expenditures (for which borrowing is appropriate) from current operating expenses (which normally should be covered by tax revenues). It would thus not only make our government more accountable for its spending priorities. But as importantly, it would give us the latitude to finance big public infrastructure investment projects when needed without the constraints of fitting expenditures in any one budget year.

For this reason, the establishment of a federal capital budget is a necessary complement to the creation of a national infrastructure bank or financing entity. Current federal budget principles treat public infrastructure investment as if it were an ordinary operating expense. Expenditures on public infrastructure thus show up in the budget in the year they are expended even though the infrastructure may have a useful life of several decades. In requiring upfront recognition of the costs of public infrastructure investment, the current budgeting rules places infrastructure investment projects at a disadvantage, because those projects would seem expensive relative to other government purchases.

Lumping together current government expenditures and public investment as the federal budget now does makes no sense since public investment is different from current government expenditures in both character and economic consequences. Capital budgets are used by private businesses—as well as by most cities and states—because they help management distinguish between ordinary operating expenses that a company routinely incurs during the course of doing business and extraordinary ones that add to a business's capacity to grow and thus should be depreciated over a number of years. Like most business investment, most public investment, especially most public infrastructure projects, should be paid for over the useful life of the investment. Moreover, the fact that public infrastructure investment earns a return on investment in the form of higher productivity and increased tax revenues should be reflected in how we account for it.

Capital budgeting would allow us to better reflect the true cost of public infrastructure investment in any one given year because it would allow us to depreciate the expense over the useful life of the investment. It would thus eliminate the distortions in the budget that large public infrastructure projects can create and thus reduce the bias against funding them. At the same time, it would create more budgetary discipline because it would force us to do a more thorough evaluation of various government expenditures to determine productive from unproductive projects.

In summary, a federal capital budget would not alone correct the problem of chronic underinvestment in public capital. But it would eliminate the disadvantage public

infrastructure now suffers from in the appropriations process. As importantly, it would make possible a more rigorous assessment of our spending priorities and help negate some of the unfounded concerns over the budget deficit that now work against public infrastructure spending.

WHY PROSPERITY REQUIRES PUBLIC INVESTMENT

BERNARD L. SCHWARTZ

The United States' extraordinary economic development flows from our government's historical commitment to public investment. This investment has taken a number of forms. The government has made direct investments, as in interstate highways, air traffic control, and the Tennessee Valley Authority. It has paid for research and development, as in the initial production of integrated circuits, financed by the Air Force, and the invention of the Internet, funded by the Defense Advanced Research Projects Agency. It has provided subsidies, such as land grants to 19th-century railroads and airmail contracts and regulated rates for early airlines. It has even run factories, such as the Harpers Ferry and other arsenals that pioneered the "American system" of interchangeable parts. The government has also provided funding for ventures that were too risky or expensive for private industry to undertake alone. It has supported business in transforming the United States from a small agrarian society to the world's economic, industrial, and financial leader.

The U.S. economy has become increasingly globalized and knowledge-based in recent years. It draws more than ever on labor, savings, and productive capacity from China, India, the countries of the former Soviet Union, and other nations. Our financial markets have become increasingly integrated with financial markets around the world. And the information technology revolution has underpinned major increases in productivity.

Yet we have not adequately incorporated these changes into our picture of the economy. Because the government's national income and product accounts (NIPAs) are still done essentially as they were in the 1930s, they undervalue our gross domestic product (GDP) and investment by about 10 percent, or one trillion dollars. They thus overestimate the government budget deficit as a percentage of GDP and underestimate U.S. savings and exports. Politicians and economists are like accountants obsessing over numbers that do not reflect reality.

This focus on an overstated deficit undermines our willingness to invest funds where they are truly needed. One constant in the new economy is the importance of sustained public investment in infrastructure—both tangible forms, such as highways and airports, and intangible forms, like R&D on biotechnology and energy. The need for environmentally sound energy sources today is as urgent as that for railroads in the 19th century, but the scale of the needed transformation is too uncertain, too rapid, too vast for private industry to handle alone. Banks today are no more likely to offer firms a loan to develop clean coal technology, which removes carbon from gases produced as coal is burned, than they were to offer loans for the construction of a transcontinental railroad in the 19th century. The government must play a major role, alongside the private sector. By channeling savings into essential and lasting infrastructure rather than dot-com and housing bubbles, it can stimulate prudent investment and help achieve higher living standards for all Americans.

HOW 450 ECONOMISTS AND TEN NOBEL LAUREATES GOT THE BUDGET DEFICITS WRONG

For decades, economists have been predicting more or less imminent doom if the government did not balance its budget and Americans did not save more. Consider a widely read article that ran in *Science* magazine in 1988, written by George Hatsopoulos, a Boston-area high-tech entrepreneur; Paul Krugman, an MIT macroeconomist who now teaches at Princeton and writes a column for the *New York Times*; and Lawrence Summers, a Harvard macroeconomist who served as treasury secretary under Bill Clinton and later as president of Harvard.[1] "As long as the U.S. national savings rate remains far below that of all our major competitor nations," they warned, "there is little chance for restoring America's international economic position."

Far from hard-core conservatives, these authors represent the progressive wing of mainstream economics, which allows that periodic budget deficits can be useful during downturns. Their argument therefore merits special attention. "For some time now," they wrote, "the U.S. national savings rate has been the lowest among the advanced industrial countries and has fallen recently to its lowest nondepression level in history." They predicted a "bleak" future unless the United States turned this situation around:

At best, the United States will experience a period of declining growth in living standards ... followed by a long period of slowly rising living standards associated with a steady relative decline of the United States in the world.... At worst, the mismatch between our aspirations and our achievement could bring financial crisis on the Latin American model.

The economy they proposed as a model for the United States was, of course, that of Japan. They estimated that the "real cost of funds" to businesses that sought to invest was 6 percent here and only 1.5 percent there. Japanese firms therefore supposedly had a longer-term investment focus that was going to leave the U.S. economy far behind.

The administrations of George H.W. Bush and William J. Clinton did raise taxes to some extent, but except for a few years at the end of the Clinton administration, large budget deficits remained the norm, and the U.S. private savings rate declined to its lowest point ever. Yet over the two decades following the article's publication, the U.S. economy experienced some of its strongest growth ever, while the Japanese economy fell into recession for more than a decade.

Yet the bells of doom never stop tolling. In 2003, when George W. Bush passed large new tax breaks, more than 450 economists, including ten Nobel laureates, signed a petition in the *New York Times* sounding them again.[2] Nobel laureate George Akerlof saw a number of problems with the "so-called stimulus package":

The first is that it creates deficits so large that one cannot even contemplate how we are going to pay for our governmental needs but especially our promises to the elderly—Medicare and Social Security, programs that have been extraordinarily popular and for very good reason.... [The second is that if the tax cuts] are implemented, they will cause deficits, which in turn will raise long-term interest rates, which will actually cause an economic contraction.

Although those tax cuts were not necessarily a good idea, the warning these 450 economists issued has proven to be far off the mark. Interest rates declined, and despite the tax cuts and the escalating cost of the war in Iraq, the 2007 budget deficit was only 1.2 percent of GDP, well below the historical norm.[3] The problem was not that a ballooning deficit raised interest rates but that abundant global savings fueled speculative excesses in housing and other assets, a disaster that might have been avoided if we had channeled more of the savings into public investments.

WHY NATIONAL ACCOUNTS ADD UP THE WRONG DATA

Predictions of doom arise because we have not yet grasped the dynamic structure of the U.S. economy. It is tapping into vast new skilled labor markets, particularly in China and India but elsewhere as well. As the second-largest exporter in the world, with 29 percent of global exports,[4] the United States also benefits from the demand of hundreds of millions of new middle-class consumers around the world. They are a plus, not a minus, for us. The expansion of the market, identified by Adam Smith as the driving force behind capitalism, creates a more stable economic environment for investment. Of course, the United States does not supply homes and refrigerators to the emerging middle classes, but we do produce the next generation of medical, communications, and information technology. We can remain the world leader if we continue to invest in infrastructure, both tangible and intangible, including education.

One reason predictions of doom have proved wrong is that the NIPAs, the basic source of data about GDP, investment, savings, trade, and government budgets, miss about 10 percent of the new economy. When the NIPAs were developed in the 1930s, a capital good had to be a tangible investment, such as a building or machine. Only in 1999 did the Bureau of Economic Analysis (BEA), which calculates NIPA data, include software as a capital good. The BEA still does not consider R&D and other important intangibles as investments. But like software, R&D is actually a capital good, one that is critical to a company's—or a nation's—long-term productivity and growth, perhaps even more than a new plant or equipment.

By failing to properly categorize R&D and other intangible capital goods, the NIPAs underestimate U.S. investment—and the money businesses save to make that investment. By categorizing these intangibles as intermediate goods, consumed in production the way flour is consumed in baking commercial bread, the NIPAs also underestimate GDP. The value of intermediate goods is subtracted from the value of final goods to calculate GDP. Otherwise, intermediate goods would be double-counted: GDP would count both the value of commercial bread and the value of the flour that went into the bread. But capital goods—flour mills—are not consumed in production or deducted from the cost of final goods. Today, a pharmaceutical firm's plant and equipment are included in GDP. But its costs to develop a new drug are netted out of the value of the drug, as if R&D were consumed like raw chemicals. Since R&D is a durable addition to GDP, just like plant and equipment, it should be counted as such.

Another major intangible that the BEA miscategorizes is education. Education is an investment that increases an individual's earning power for the rest of his or her working life—and thereby increases national GDP as well. But the BEA counts the money that individuals and governments spend on education like money spent on cars: as a consumption expenditure rather than the savings and investment that it really is. Corporate costs for training employees are counted as an intermediate good, consumed in production, rather than a permanent investment. Both of these ways of miscategorizing

education therefore lead the BEA to further understate national investment, savings, and GDP.

"Most business expenditures aimed at enhancing the value of a firm and improving its products, including human capital development as well as R&D, [should] be accorded the same treatment as tangible capital in national accounting systems," state Federal Reserve Board economists Carol Corrado and Daniel Sichel and University of Maryland economist Charles Hulten, who have published seminal papers on this matter.[5] This is not at all a crackpot idea. "No one disagrees with [it] conceptually," BEA director Steven Landefeld conceded to *BusinessWeek*. "The problem is in the empirical measurement."

Corrado, Sichel, and Hulten calculate that on average, from 2000 through 2003, business spending on intangible investment was $978 billion, just a little shy of spending on tangible capital and software, at $1.139 trillion.[6] They argue that intangible investment spending, which the BEA omits from both total investment and total GDP, amounts to about 10 percent of GDP. Intangibles such as manufacturing know-how that U.S. corporations provide to their overseas plants are likewise excluded from exports. *BusinessWeek*'s chief economist Michael Mandel estimated in 2006 that if intangibles were counted, not only would GDP and investment be about 10 percent higher, but the foreign account deficit (the net flow of goods and services including interest and other financial payments) would be "considerably smaller," and the personal savings rate would not have turned negative.[7] (It has since turned positive, according to NIPA data, but would be even greater if the accounts were done properly.)

A CAPITAL ACCOUNT FOR THE GOVERNMENT

The government's capital spending is also miscategorized. In fact, in official data, all government spending—whether tangible investments, such as roads and air traffic control, or intangible investments, such as education and research—is classified as consumption. If government investment were properly categorized as capital spending, the budget situation would look fine, as indeed it is. Capital spending need not be in balance with current income from taxes and other sources. Current government expenditures on all types of public consumption, from food stamps to Social Security, would be in surplus.[8]

If the federal government had separate capital and operating budgets, as many state governments and every major business do, we would not be talking about budget deficits. You do have to balance operating budgets. Buying a Ferrari does not make you richer; you have to pay the debt off. But if you invest in a new factory, the profits of the factory will pay off the debt. Investment is amortized against benefits that return many times the amount of the debt incurred. Managing a business by balancing capital budgets against current income is a good way to drive it into the ground.

The notion that you cannot spend more than you earn makes no sense in the context of government capital budgets either. The U.S. government never pays off its debt in this context. For example, Thomas Jefferson paid France some 80 million francs, or $20 million dollars, in the Louisiana Purchase. The government sold bonds to make the payment. Those bonds were rolled over into other bonds, which were rolled over into still other bonds, and so on. Much of the 1803 purchase price remains part of the debt structure of the United States. But what is $20 million dollars for a quarter of the land area of this nation? The investment would be worth easily a million times as much today.

The government never paid off debts incurred for other investments including the Tennessee Valley Authority, which dramatically expanded electrification in the United States; the GI Bill, which paid for the education of a generation of veterans; or the interstate highway system. As with the Louisiana Purchase, the economy simply outgrew the debts. It is a mathematical fact that as long as the return on capital expenditures is greater than the interest rate—and it certainly should be for public or private sectors—the value of the debt incurred will be a diminishing portion of income.

Current government expenditures should be funded from current income, but even here we should put them in the context of future growth. A few years ago, Social Security was said to be headed for imminent crisis. Today this issue has receded into the background. Why? Because the dimensions of the issue were greatly exaggerated for political reasons. No doubt we have a problem to address—but over the next 40 years, not overnight. We may have a $10 trillion or $20 trillion problem. But over the next 40 years, the GDP of the United States will be on the order of a quadrillion—a thousand trillion—dollars. The Social Security shortfall might be 1 or 2 percent of that. We can handle it.

Because government debts are paid off over time, we should relate them not only to GDP (and GDP as properly measured, at 10 percent higher than the usual figure) but also to national wealth. Though extremely hard to quantify, U.S. national wealth is estimated to be on the order of four times GDP. As of the fourth quarter of 2007, net household wealth totaled more than $57.7 trillion, according to the Federal Reserve. Thus, the relative size of any capital expenditure will be only a quarter as much gauged against national wealth as it is gauged the usual way, against GDP. And of course, when businesses go to the

bank to take out a loan for capital investment, they do borrow against wealth—buildings, machinery, inventory, accounts receivable, and, increasingly, intellectual property such as trademarks and patents.

The fear is that budget deficits will produce a "financial crisis on the Latin American model," as Hatsopoulos, Krugman, and Summers put it. Everyone can agree that crises do happen. But it is just as dangerous to overestimate their importance as to underestimate it. Today we are in the midst of an energy crisis. But it is not our first or our second or even our third; it is our fifth, according to the energy policy expert Daniel Yergin. Each time, technology has been developed to resolve the problem. We are also in the midst of a financial crisis resulting from the subprime mortgage collapse, our second financial crisis in the last ten years, following on the heels of the dot-com bubble. But neither of them had anything to do with the government budget deficit or the foreign account deficit (see Milberg chapter in this volume). And over the medium term, the economy has barely even paused to notice. Both the dot-com and the subprime mortgage bubbles channeled global savings into unproductive speculation—money wasted. If instead the government had channeled those savings into capital investments, both tangible and intangible, it would have created jobs and strengthened productive private investment—money well spent.

THE INFRASTRUCTURE DEFICIT

Political and economic freedom has played such an important role in U.S. development that we easily forget the central role that the government has also played. Although we think of the American West as the prototypically individualistic society, even to the point of lawlessness, its economic survival depended on transcontinental railways and telegraphs that linked it to burgeoning industrial centers such as Chicago and New York. In addition to supplying the essential transport infrastructure for late-nineteenth-century and early-twentieth-century industrialization, the railroads generated an ongoing demand for the advanced products and technologies of the day: steel, machinery, electricity. Railroads were operated by private capital but would not have been built—or would have been built at a much slower rate—had they not received large federal subsidies in the form of land grants. A more recent example is the Internet: Entrepreneurs working out of garages have built multi-billion-dollar information-age giants applying technology developed by the government. The Defense Advanced Research Projects Agency paid for the research, conducted largely in university laboratories, behind the invention and development of this technology as a workable infrastructure.

Recent economic growth has also depended on government investment, in areas ranging from semiconductors to recombinant DNA. Beginning in the 1950s, the Air Force bought semiconductors from Fairchild, Intel, and other firms at exorbitant prices, but as the technology and manufacturing improved and prices went down, the private sector saw that it could use these products. Televisions could be built with transistors and printed circuits instead of vacuum tubes soldered by hand. The biotechnology revolution has likewise depended on federal research money, largely from the National Institutes of Health. In theory, the government finances basic research rather than development of commercial products; in biotech, however, the line can be blurred to such an extent that debates have arisen about private ownership of resulting patents. But at least the advances are being made and exploited.

> You do have to balance operating budgets. Buying a Ferrari does not make you richer; you have to pay the debt off. But if you invest in a new factory, the profits of the factory will pay off the debt.

The government's more mundane role in building and maintaining ports, airports, highways, and waterways should not be underestimated, either. Efficient transport and communications give industries ranging from textiles to medical equipment a competitive advantage in delivering projects rapidly and inexpensively.

Unfortunately, the U.S. economy has been living off public capital created in earlier decades of healthy government investment to an unacceptable degree. From 1950 to 1970, the federal government spent more than 3 percent of GDP on public infrastructure, but since 1980, it has spent less than 2 percent of GDP, leaving a public investment deficit of some $1.7 trillion.[9] Traffic-choked roads, clogged ports, and an antiquated air transport system are reducing our nation's efficiency. The Department of Transportation reports that freight bottlenecks

cost the American economy $200 billion a year, or 1.6 percent of GDP. A 2005 report by the American Society of Civil Engineers (ASCE) offers an array of examples of underinvestment in infrastructure: 27.1 percent of our nation's bridges are structurally deficient or functionally obsolete, a fact that came to the fore with last summer's bridge collapse in Minneapolis; nearly 50 percent of the 257 locks operated by the U.S. Army Corps of Engineers are functionally obsolete; and most of our airports are not equipped to accommodate the new super-jumbo jets scheduled for introduction later this decade or to handle the expected growth in small regional jets necessary for smaller business centers. Travelers typically spend an hour longer at a U.S. airport than they would at a European airport because of antiquated check-in, security, baggage handling, and traffic control. Recent events such as the failure of New Orleans' levees during Hurricane Katrina and the July 2007 steam pipe explosion in New York City are tragic reminders of our infrastructure deficit.

The American economy is lagging to a surprising extent in the deployment of information-age infrastructure. According to the Organization for Economic Cooperation and Development (OECD), a group of 30 mainly advanced nations, the United States ranks only 15th in per capita broadband coverage, down from fourth in 2001. Only 33 percent of U.S. households have access to broadband, and broadband costs in the United States are rising relative to those in other countries. American consumers pay nearly twice as much as their Japanese counterparts for connections that are 20 times slower. And the United States is 20th among OECD countries in the growth of broadband penetration. These deficits seriously harm U.S. competitiveness.

The United States has not kept up with other nations in training skilled workers, particularly scientists and engineers. This country now produces fewer engineers as a percentage of college graduates than nearly all other advanced countries.[10] Further, more and more science and technology degrees are being awarded to foreign citizens with temporary visas, indicating that U.S. students entering college are either less qualified or less interested in the sciences than their foreign counterparts. The fall in the number of new scientists and engineers parallels equally worrying trends in research funding. Federal investment in research declined to 0.4 percent of GDP in 2007 from 0.5 percent in 2006. The government's share of R&D now constitutes just 30 percent of the nation's total, down from 67 percent in the late 1960s. Moreover, the cutbacks have occurred in some of the most economically important areas, while spending on weapons development has increased.[11] So far these problems have had only a modest impact. But in a globalized, information-driven economy, the more we delay in remedying the situation, the more vulnerable we will become.

Aside from repairing infrastructure deficits, we need to push forward in new areas. Uncertainty about water supplies is beginning to threaten growth in much of the West and South. The United States is practically the only industrial nation that does not have high-speed rail. And the development of abundant, clean energy alternatives is of paramount importance. Although we have known about this problem for decades, the private sector has failed to address it, and the time to act has run out. We need to deploy wind, water, biofuels, fuel cells, nuclear power, and clean coal technologies. Clean coal technologies would draw on one of the most abundant resources in the United States and could be exported to Russia and China. All these technologies are available today, but they are either not cost-effective or too limited in scale to solve our energy problems. It remains unclear which of these technologies will prove to be the most viable to scale up. Private industry is unwilling or unable to make the enormous investments needed in the available timeframe. As with the railroads in the 19th century, the government must step in.

> Although we think of the American West as the prototypically individualistic society, even to the point of lawlessness, its economic survival depended on transcontinental railways and telegraphs that linked it to burgeoning industrial centers such as Chicago and New York.

THE ROAD FORWARD

The problem we need to focus on is our real infrastructure deficit, not our imaginary fiscal deficit. While structural economic changes have made it easier for the United States to finance public borrowing, they have also made public investment increasingly crucial. In a globalized economy, public investment is critical to pursuing a nonprotectionist

strategy, creating good jobs here, and enabling U.S.-based companies to compete with lower-wage economies.

Some of the Bush tax cuts may have been inappropriate, but they may not be politically easy to undo. As long as the economy grows robustly, we can achieve a more equitable distribution. Programs to upgrade our transportation and communications infrastructure to world standards and to lay the foundations for a 21st-century energy and water infrastructure would create millions of higher-skill jobs that could not be outsourced. Tax rebates, such as those mandated by the recent emergency package, are expected to generate only about $0.67 of domestic demand per dollar (with much of the rest going to imports); in contrast, infrastructure spending would produce nearly ten times as much, some $6.20 per dollar.[12]

Congress is now considering several infrastructure proposals:

- The Regional Economic and Infrastructure Development Act (HR 3246) establishes five regional commissions to provide grants for infrastructure projects. Passed by the House on October 4, it authorizes appropriations of $40 million for each commission in the first year.
- The National Infrastructure Development Corporation (HR 3896) establishes a government-owned corporation authorized to provide "public benefit bonds" and insure debt securities for investments in infrastructure projects. The corporation would be capitalized by the issuing of $3 billion of common stock in each of four consecutive years.
- The Build America Bonds Act (S. 2021) authorizes issuing $50 billion in federally backed bonds to fund infrastructure projects.

One of the most popular measures put forward is the Dodd-Hagel proposal in the Senate and the companion Ellison-Frank proposal in the House for a national infrastructure bank. The bank's five-member board, appointed by the president and supported by a professional staff, would select, finance, and monitor major infrastructure projects. It would be capitalized at $60 billion, an amount that could be leveraged to finance some $250 billion to $300 billion of investments. The projects would be large: The minimum federal financing share, $75 million, would constitute only 20 percent of the total of each project; states or regions managing the projects would supply the rest. Investments might be made in mass transit, water supplies, ports, or air traffic control. Other possibilities are the construction of a regional energy grid or high-speed rail between San Diego and San Francisco and development of alternative energy sources. For example, a regional initiative among coal-mining states might provide tax breaks and other incentives to local industry to advance clean coal technologies. The bank board would select projects on the basis of their potential for promoting economic growth, job creation, and community development. An inspector general would oversee operations and report to Congress.

While structural economic changes have made it easier for the United States to finance public borrowing, they have also made public investment increasingly crucial.

None of these infrastructure projects would be sufficient alone; rather, they would supplement existing federal infrastructure and R&D funding. Infrastructure investment does not, by and large, provoke fervent opposition. Opponents merely say it must wait until we have brought the fiscal deficit under control. The debate comes down to which priority will truly strengthen the economy. The deficit alarm is a mirage that always seems to loom in the short term but recedes in the long term. Public investment is the most responsible and reliable way to stimulate new private investment, create good jobs in this country, and sustain innovation and productivity growth. If we postpone investment in infrastructure, education, R&D, and alternative energy sources until we balance the budget, we will have lost a generation.

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STATEMENT OF

THE AMERICAN SOCIETY OF CIVIL ENGINEERS

ON

FINANCING INFRASTRUCTURE INVESTMENTS

BEFORE

THE HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

JUNE 10, 2008

STATEMENT OF
THE AMERICAN SOCIETY OF CIVIL ENGINEERS
ON
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BEFORE
THE HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
JUNE 10, 2008

Mr. Chairman and Members of the Committee:

The American Society of Civil Engineers* (ASCE) is pleased to offer this statement for the record for the hearing on financing infrastructure investments. ASCE and its members have been in the forefront of the national effort to awaken the country to the dangers of our aging infrastructure and the need to find ground-breaking ways to finance new construction and repairs necessary to maintain the existing systems.

I. AMERICA'S FAILING INFRASTRUCTURE

ASCE concluded in our 2005 Report Card for America's Infrastructure that the nation's infrastructure deserved an overall grade of "D."

We said then that America's aging and overburdened infrastructure threatens the economy and quality of life in every state, city, and town in the nation. In addition, we estimated that it would take an investment of $1.6 trillion by 2010 to bring the nation's existing infrastructure into good working order.

Nothing approaching that level of investment has been made. Indeed, little has changed in the three years since we handed out that dismal grade, and establishing a long-term plan to finance the development and maintenance of our infrastructure remains a pressing national priority.

This nation continues to under invest in infrastructure at the national level. The total of all federal spending for infrastructure as a share of all federal spending has steadily declined over the last 30 years, according to the Congressional Budget Office (CBO).

* ASCE was founded in 1852 and is the country's oldest national civil engineering organization. It represents 140,000 civil engineers in private practice, government, industry and academia who are dedicated to the advancement of the science and profession of civil engineering. ASCE is a non-profit educational and professional society organized under Part 1.501(c) (3) of the Internal Revenue Code.

II. CURRENT CONDITIONS

We highlight only a few of the more drastic problems here:

- In 2005, we concluded that total spending on America's roads and highways should be about $94 billion each year to improve transportation infrastructure conditions nationally. The federal investment in 2006 totaled approximately $34 billion, barely a third of the investment needed.

The CBO recently estimated that America's investment in surface transportation infrastructure by all levels of government in 2004 was $191 billion (in 2006 dollars), or 1.5 percent of gross domestic product (GDP).

- In January, the Environmental Protection Agency (EPA) reported that we must invest at least $202.5 billion just to prevent combined sewer overflows and sanitary sewer overflows at the nation's 16,000 publicly owned wastewater treatment works.

But in 2002, the EPA estimated that the projected gap in what is spent on sewage treatment systems and what is needed was between $331 billion and $450 billion by 2019. The investment "gap" for drinking-water systems was equally stark: $102 billion over 20 years.

- The Corps of Engineers operates and maintains 240 locks at 195 locations along 12,000 miles of inland waterways. The average lock on these waterways is 53 years old—past the 50-year service life.

It costs about $600 million to replace a lock. If we were to replace just half of the 240 locks that are known to be beyond their design life, we would need to spend $72 billion. Simply to rehabilitate the other half of the system would cost another $30 billion.

That's more than $100 billion just to bring our antiquated waterways into the 21st century.

At the annual rate of spending of $180 million in the administration's budget proposal for FY 2009, it would take the Corps 20 years simply to fund all the inland waterways projects authorized in WRDA 2007.

- The Association of State Dam Safety Officials estimates that $36.2 billion is needed to rehabilitate all dams across the nation, and $10.1 billion is needed over the next 12 years to address the most critical dams, both public and private, that pose a direct risk to human life should they fail. Needed repairs to publicly owned dams are estimated at $5.9 billion.

ASCE's 2005 Report Card for America's Infrastructure gave Dams in the United States a grade of "D". We believe that the federal government should bear some responsibility in repairing ailing dams as failures do not necessarily respect state and local boundaries. Proposed legislation supported by ASCE (H.R. 3244 and S. 2238, the Dam Rehabilitation and Repair Act) would authorize federal assistance of $200 million over five years and distribute funds to state dam safety agencies based on the number of high-hazard publicly owned non-federal dams in the state. The federal government's share of any grant provided to a state will not exceed 65 percent of the total cost of the rehabilitation or repair.

III. INVESTMENT OPTIONS FOR CONGRESS

Although our national infrastructure has suffered from severe underinvestment for decades, there are solutions to the problem. Unfortunately, many will not be cost-free and will require Congress and the Administration to work together to provide federal financial assistance and a rational system of priorities for all infrastructure construction and maintenance.

A. National Infrastructure Bank

- The National Infrastructure Bank Act of 2007 (H.R. 3401/S. 1926) would begin to address a problem that is rapidly approaching crisis levels—the physical deterioration of the nation's major public works systems.

Briefly, the legislation would establish a National Infrastructure Bank. The Bank would be an independent body designed to evaluate and finance "capacity-building" infrastructure projects of substantial regional and national significance.

Initially, eligible infrastructure projects would be limited to publicly owned mass transit systems, public housing, roads, bridges, drinking-water systems, and sewage-treatment systems.

Sponsors— states, cities, counties, tribes, or an infrastructure agency such as a transit or wastewater treatment agency, or a consortium of these entities—would propose infrastructure projects. To be eligible, the projects would need a minimum federal investment of $75 million.

The National Infrastructure Bank would evaluate and finance "capacity-building" infrastructure projects of substantial regional and national significance, and the bill would prime the pump to begin meeting the staggering investment needs for our infrastructure.

We believe the National Infrastructure Bank Act is an essential start to the long-term effort to maintain or replace economically vital infrastructure systems across the nation. This nation cannot afford to wait much longer to invest significant sums in its infrastructure, and this bill will help to lead the way.

B. Federal Capital Budget

- ASCE supports the establishment of a federal multiyear capital budget for public works infrastructure construction and rehabilitation as is the case for state and local governments. The capital budget must be separated from non-capital federal expenditures. The current budgeting process at the federal government level has a short-term, one- to two-year, focus. Infrastructure, by its very nature, is a long-term investment.

The current federal budget process does not differentiate between expenditures for current consumption and long-term assets. This causes major inefficiencies in the planning, design and construction process for long-term investments. A federal capital budget could create a mechanism to help reduce the constant conflict between short-term and long-term needs. It also would help increase public awareness of the problems and needs facing this country's physical infrastructure.

Without long-term financial assurance, the ability of the federal, state, and local governments to do effective infrastructure investment planning is constrained severely.

In addition, we support:

1. User fees (such as a motor fuel sales tax) indexed to the Consumer Price Index.
2. Appropriations from general treasury funds, issuance of revenue bonds, and tax-exempt financing at state and local levels.

3. Trust funds or alternative reliable funding sources established at the local, state and regional levels, including use of sales tax, impact fees, vehicle registration fees, toll revenues, and mileage based user fees be developed to augment allocations from federal trust funds, general treasuries funds and bonds.

4. The use of budgetary firewalls to eliminate the diversion of user revenues for non-infrastructure purposes.

5. Public-private partnerships, state infrastructure banks, bonding and other innovative financing mechanisms as appropriate for the leveraging of available transportation program dollars, but not in excess of, or as a means to supplant user fee increases.

C. Public-Private Partnerships

Public–private partnerships (PPPs) are contractual relationships between public and private sectors in infrastructure development. They have been defined as "a cooperative venture between the public and private sectors, built on the expertise of each partner that best meets clearly defined public needs through the appropriate allocation of resources, risks and rewards."

PPPs have been practiced worldwide in both developed and developing countries with multiple objectives including promoting infrastructure development, reducing costs, increasing construction and operation efficiencies, and improving service quality by incorporating private sector knowledge, expertise, and capital.

These PPPs span a spectrum of contractual models from straight contracting out to outright privatization, with increasing responsibilities and risks allocated to the private sector. However, no matter which PPP model is used, the regulatory control remains the responsibility of the public sector, which determines the kind of public works and services to be acquired and the quality and cost requirements on the delivery of such works and services, and takes necessary remedial actions for substandard performance.

Our research has discovered a wide range of barriers to public–private partnerships in infrastructure development. These are broadly classified as to (1) social, political, and legal risk; (2) unfavorable economic and commercial conditions; (3) inefficient public procurement framework; (4) lack of mature financial engineering techniques; (5) problems related to the public sector; and (6) problems related to the private sector.

As a matter of policy, ASCE has concluded that:

1. Any public revenue derived from PPPs must be dedicated exclusively to comparable infrastructure facilities in the state or locality where the project is based.

2. PPP contracts must include performance criteria that address long-term viability, life cycle costs and residual value.

3. Transparency must be a key element in all aspects of contract development, including all terms and conditions in the contract. There should be public participation and compliance with all applicable planning and design standards, and environmental requirements.

And, although these partnerships are increasingly popular at the state level and are believed to offer some help for financially strapped communities to provide basic infrastructure, that help can come at a potentially high price to the public.

The Government Accountability Office (GAO) cautioned in February that these partnerships may be useful in boosting highway investments but that they are not a panacea.

> Highway public-private partnerships have resulted in advantages for state and local governments, such as obtaining new facilities and value from existing facilities without using public funding. The public can potentially obtain other benefits, such as sharing risks with the private sector, more efficient operations and management of facilities, and, through the use of tolling, increased mobility and more cost effective investment decisions. There are also potential costs and trade-offs—there

is no "free" money in public-private partnerships and it is likely that tolls on a privately operated highway will increase to a greater extent than they would on a publicly operated toll road. There is also the risk of tolls being set that exceed the costs of the facility, including a reasonable rate of return, should a private concessionaire gain market power because of the lack of viable travel alternatives. Highway public-private partnerships are also potentially more costly to the public than traditional procurement methods and the public sector gives up a measure of control, such as the ability to influence toll rates.

In the field of water infrastructure, for example, New Jersey American Water, a wholly owned subsidiary of American Water, a private, for-profit corporation, operates investor-owned drinking-water systems that supply water to more than 2.6 million people in New Jersey.

In January, New Jersey American announced that it is seeking an increase in water rates to raise an estimated $350 million to pay for the cost of replacing outdated infrastructure. The proposed rate escalation will increase the cost of water for the average residential customer consuming 21,000 gallons quarterly from $106.20 to $145.71—about 37 percent.

"Replacing aging infrastructure and improving our supply capacity and water production facilities to meet increasing demand are the main drivers of this necessary rate increase," said the company's press release.

Thank you, Mr. Chairman. That concludes our statement. If you have additional questions, please contact Brian Pallasch at (202) 789-7842 or bpallasch@asce.org or Michael Charles at (202) 789-7844 or mcharles@asce.org .

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EMBARGOED UNTIL 6/10/2008

Statement
by Felix G. Rohatyn
to the
Transportation and Infrastructure Committee
United States House of Representatives
The Honorable James Oberstar, Chairman
June 10, 2008

Mr. Chairman, I am grateful for this opportunity to provide testimony to the Transportation and Infrastructure Committee's hearing on financing infrastructure investments. As you know, Mr. Chairman, Senator Warren Rudman and I chair the bipartisan Commission on Public Infrastructure that is sponsored by the Center for Strategic and International Studies. The Commission has explored new ways to address the crisis of America's crumbling infrastructure and I submit this testimony on behalf of Senator Rudman and myself. We also are pleased that this Committee will hear testimony from the executive director of our Commission, Mr. Everett Ehrlich.

Mr. Chairman, our Commission has proposed a new type of government effort to spur the rebuilding of public infrastructure—a National Infrastructure Bank that will refocus our national infrastructure policy on those projects that generate significant return. Such a new facility would allow us to treat the renewal of our country's roads and bridges, schools and water lines, airports and air traffic control systems, ports and water projects, as investments, not simply as budget expenditures.

The new, federal entity that our Commission proposes will more effectively finance infrastructure projects of substantial national and regional significance using both public and private capital. In offering this idea, we are encouraged by a marked increase in private infrastructure investment that we see in major investment houses. According to *The Financial Times,* an estimated 58 infrastructure funds are trying to raise $79 billion. Much of this private funding, however, is focused on buy-outs of toll roads and other existing, often dilapidated

infrastructure. What our country needs is significant funding for new infrastructure and to improve existing systems—the large scale modernization that we need will require significant levels of both public and private investment.

Mr. Chairman, in response to the recommendation that a federal financing entity be established, two of our Commission members, Senator Chris Dodd and Senator Chuck Hagel, authored The National Infrastructure Bank Act of 2007, and we have urged its passage. In addition, Speaker of the House Pelosi has expressed support for the idea of an Infrastructure Bank, and I believe that Representatives Frank and Ellison have offered a bill in the House. Congresswoman DeLauro also has proposed the National Infrastructure Development Act, which would create a quasi-governmental corporation to invest in and insure infrastructure projects.

As proposed in the Senate bill, the Infrastructure Bank's initial capital of $60 billion would be deployed so as to bring in billions of additional dollars from outside investors and other partners. The bank should have the authority to issue bonds with maturities of up to 50 years, among its other financing capabilities. These long bonds would be backed by repayment of the loans the bank made to state and local governments, and would therefore align the financing of infrastructure investments with the benefits they create. The bank will also be capable of issuing preferred stock as well as other investment grade security. If the bank were to provide subsidies, whether through credit insurance, interest rate discounts, or even grants to accompany its lending, these would be transparent, using credit scoring. To the extent that the bank provided non-subsidized lending, it would be self-financing.

The American Society of Civil Engineers forecast a total infrastructure investment need of $1.6 trillion over the next five years. The Infrastructure Bank could be an important factor in such a program.

As proposed, Mr. Chairman, the Infrastructure Bank would ensure that its financial

governance, project selection and delivery are focused on funding those projects with the highest economic returns. Currently, road, water, airport and other funding candidates are evaluated using widely disparate assumptions for capital costs, discount rates and other characteristics, if they are evaluated at all. And many projects are funded using fixed cost shares that don't reflect different local conditions. Moreover, the bank has the prospect of being unencumbered by earmarks that benefit localities but neglect national and regional priorities. The Bank would be modeled after modern investment banks, or, in fact, the European Investment Bank, whose financing of public projects has created a superb European infrastructure, including a high-speed rail system that is a model of efficiency and an enormous asset.

While the private sector drives our economy, our government—since the beginning of the Republic—has played a leading role as the indispensible investor in America's development, advancing our economy by supporting transport, infrastructure and education. Thomas Jefferson's purchase of Louisiana, the canals of upstate New York and the railroads that linked our industrial cities to our heartland were vital national investments, as were the GI Bill, the foundation of land-grant colleges, and President Eisenhower's construction of our interstate highways. Indeed, Presidents Jefferson, Lincoln, Franklin Roosevelt and Eisenhower proved that public investment can generate vast returns.

Our bipartisan infrastructure commission, a group of business leaders, governors and members of Congress, reflects the strong support for this idea among both Democrats and Republicans, especially in the business community. We know that our public infrastructure crisis is no less serious for being silent. To fix it, we call for federal action that is big enough and smart enough to be effective.

The American people deserve railways that are as good as Europe's, ports that work as efficiently as modern Asian port facilities and public schools that are not in ruins. Indeed, as

our investment in infrastructure declines year after year, *The Economist* reports that China will invest $200 billion in its railways between 2006 and 2010—the largest investment in railroad capacity made by any country since the 19th century—this in addition to having built 53,000 kilometers of expressways since the 1990's, and plans over the next twelve years to construct 300,000 kilometers of roads in rural China, as well as 97 new airports. Meanwhile here at home—according to the Brookings Institution—our congested roads, in 2005 alone, cost us $78 billion in lost productivity and higher freight charges.

Mr. Chairman, there will be some who say that we cannot afford to meet our infrastructure needs—that our budget deficits are too large and out borrowing is too great. But the truth is that we cannot afford *not* to do this. Every day that we delay causes additional deficits and losses in productivity and employment. One of the most basic accounting concepts is the difference between capital investments and operating expenses. It is true that our operating expenses are excessive, perhaps dangerously so, largely because of the war in Iraq. On the other hand, our capital investments are woefully inadequate and can be leveraged in a number of ways through a federal infrastructure bank.

To compete in the global economy, improve our quality of life and raise our standard of living, we must successfully rebuild America's public infrastructure. Our economy is in a state of near-recession, at best, and employment is under pressure. Every $1 billion invested in transportation infrastructure directly creates an estimated 47,500 jobs. Thus it is with a sense of urgency that we call upon the members of this committee, from both sides of the aisle, to begin this process by following in the footsteps of great American leaders who adopted a fresh perspective on our national wealth and how to increase it.

Thank you, Mr. Chairman, for inviting Senator Rudman and me to provide this testimony, and for the attention that you and the members of your Committee are giving to this vital issue.

Statement of the
National Association of Water Companies

Before the

House Committee on Transportation and Infrastructure

Regarding Financing Infrastructure Investments

June 10, 2008

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The National Association of Water Companies (NAWC) represents all aspects of the private water service industry. The range of our members' business includes ownership of regulated drinking water and wastewater utilities and the many forms of public-private partnerships and management contract arrangements. NAWC membership is comprised of over 200 members in 39 States; providing safe, reliable, water and wastewater to more than 30 million Americans everyday.

Private water companies, like all other municipal water and wastewater systems, are regulated on the federal level by the Environmental Protection Agency (EPA) and on the state level by the various state health and environmental agencies. However, unlike municipally owned utilities, privately owned utilities are also regulated by the various State Public Utility Commissions, (PUC), which approve capital investments and set the rates our members charge.

THE INFRASTRUCTURE REPLACEMENT CHALLENGE

NAWC commends this Committee for tackling the complex issue of infrastructure replacement and financing. The NAWC strongly supports the willingness of the Transportation and Infrastructure Committee to look beyond traditional methods of infrastructure financing to consider innovative and effective ways of funding much needed improvements in our nation's infrastructure. How Congress responds to this challenge will not only set the parameters for the water and wastewater industry's response to infrastructure replacement, but also send important signals to the industry, which will guide it for years to come.

The water and wastewater industry as a whole is struggling with the challenge of closing the clean water and drinking water infrastructure financing "gap" as reported by the EPA in 2002.

However, in this same EPA report, EPA found that the projected $500-$800 billion funding gap for water and wastewater infrastructure replacement "largely disappears if municipalities increase clean water and drinking water spending at a real rate of growth of 3% per year (over twenty years).[1] This strongly suggests that the infrastructure challenge, while serious, is ultimately manageable through good management and creative financing solutions.

The NAWC welcomes the opportunity to work with this Committee to develop avenues for responsible federal leadership and assistance. We support federal policies that encourage infrastructure financing solutions that involve creative debt finance, good asset management, full cost-of-service pricing, consolidation, and public-private partnerships.

CREATIVE DEBT FINANCE AND USER FEES

At a time of soaring national debt, Congress should consider ways in which it can ease this burden while continuing to help fulfill public expectations. If properly priced, infrastructure projects can attract private capital and obtain loans based on dedicated user fees and forecasted revenue streams. Water and wastewater utilities currently have the cost structure in place to support debt financing and loan repayment and should therefore not be wholly subsidized through grants. NAWC is supportive of financing mechanisms that encourage the water and wastewater industry to be self-sustaining and economically viable over the long-term.

NAWC supports providing tax-exempt financing for capital associated with water and wastewater infrastructure improvement. By effectively lowering the interest earned on debt, Congress can reduce the cost of infrastructure projects to the public and help to finance certain infrastructure investments. Similarly, NAWC supports low-interest public loans which can and should be repaid to the government issuer.

Private Activity Bonds

One important tool for utilities meeting the infrastructure replacement challenge can come from Congress enacting H.R. 6194; a bill sponsored by Rep. Bill Pascrell that would remove the state volume cap on private activity bonds for water and wastewater infrastructure projects. While we understand this change in the tax code is not the jurisdiction of this Committee, it is important to note that NAWC actively supports this vital reform and hopes to see it enacted this Congress.

Amending the tax code to bring water projects out from under the cap will make capital both easier to obtain and less expensive for partnerships wherein a municipality works along with a private entity to receive tax-exempt financing. Safe guards already in place in the tax code will assure that these tax-exempt bonds will only flow to projects that meet specific requirements and are in the interest of the general public.

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[1] U.S. Environmental Protection Agency, Office of Water, *The Clean Water and Drinking Water Infrastructure Gap Analysis,* September 2002.

The change to the tax code would cost the federal government very little money: $34 million over five years, $214 million over 10 years. Yet, according to the Environmental Protection Agency, as much as $6 billion annually in private capital could be leveraged to address the infrastructure financing challenge.

This would be yet another 'tool' in the 'tool box' available to localities.

National Infrastructure Development Act H.R. 3896

An innovative idea for national infrastructure investments that this Committee should help to enact is Rep. DeLauro's National Infrastructure Development Act (NIDA) H.R. 3896. This national level revolving fund would facilitate and streamline the financing of infrastructure projects. By removing certain infrastructure financing decisions from the political process, infrastructure could be built efficiently and as-needed.

NIDA would allow the National Infrastructure Development Corporation to create infrastructure financing packages for project applicants in the form of loans through the purchase of debt and equity securities. To reduce the costs incurred on the capital market and the substantial risks associated with major projects NIDA creates a new form of federally-backed, tax-exempt financing called "public benefit bonds."

The National Infrastructure Development Corporation would supplement traditional forms of infrastructure finance and provide an additional avenue for fiscally responsible localities to pursue loans for infrastructure improvement.

DRINKING WATER AND CLEAN WATER STATE REVOLVING LOAN FUNDS

Low-interest State Revolving Fund loans (SRFs) are another important 'tool' that localities must have available in their 'tool box.' Our industry has historically been supportive of the SRFs: by providing primarily a modest subsidy on interest, it does not breed dependence on grants.

SRF History and Legislative Principles

NAWC was very encouraged by H.R. 3930 which was introduced and passed by this Subcommittee during the 107th Congress, garnering 97 bipartisan cosponsors. This piece of legislation was a good model for water infrastructure financing legislation, and with a few modifications we hope this subcommittee returns to this approach. Similarly, in the 108th Congress, NAWC supported H.R. 1560, which also passed out of this subcommittee with bi-partisan support. We viewed this bill as a positive step forward in the process.

Both H.R. 3930 and H.R. 1560 would have brought many innovations to the Clean Water State Revolving Fund (CW-SRF), which could have moved the water industry toward efficient use of resources and self-sustainability. The provisions in the bill, which

encouraged the use of public-private partnerships, regionalization, and consolidation to address viability problems and infrastructure replacement challenges, are of great importance and are to be commended. Similarly, provisions encouraging full cost of service rates and sound asset management are essential if the industry is to meet the challenge and become self-sustaining.

If utilities are to receive assistance from the federal government, it is not unreasonable for the federal government to expect that utilities receiving such assistance will do everything they can to manage their utilities in the most efficient and effective way possible, drawing from the vast array of management options available to them.

Private Utility Access to the Clean Water State Revolving Fund (CW-SRF)

We have been disappointed that the bills considered by this committee in recent years – including H.R. 720 in this Congress – would not have allowed access to the CW-SRF by privately owned utilities, thereby extending the benefits of the SRF to all water users. The Senate counterparts to these bills in past three Congresses – S. 1961, S. 2550 and S. 1400 – would have allowed access to the CW-SRF. Private utilities have had access to the Drinking Water SRF (DW-SRF) since its inception. It has worked very well, and this innovation is long overdue in the CW-SRF.

When Congress authorized the DW-SRF it correctly concluded that the benefits of private access would flow to the customers of private utilities in the form of rate relief, not to their owners or shareholders in the form of increased profits. To allay concerns of "corporate welfare", the National Association of Regulatory Utility Commissioners (NARUC) – the association of the regulators which oversee and set our members' rates - went on record in a 2006 resolution assuring that neither shareholders nor owners of investor owned utilities are profiting from taxpayer investments when DW-SRF loans are used. NARUC further endorsed allowing private utilities access to the CW-SRF because NARUC members are in the position of assuring that the benefits of the CW-SRF would flow to customers, not utilities or share-holders.

Since the benefits of the SRF loans will flow to our customers and your constituents, why shouldn't the customers of privately owned utilities enjoy the same rate subsidies provided through the SRF as do those of municipally owned utilities? After all, customers of all systems, as taxpayers and constituents, are contributing to the SRFs. Unless subsidies are targeted to low-income individuals, Congress should not pick and chose which Americans to subsidize.

The provision granting private access to the DW-SRF has created opportunities for privately owned utilities to work with states and municipalities in assisting failing systems and/or under-served areas. It would be a shame and a mistake to continue to foreclose these potential success stories in the wastewater industry, especially in light of the many infrastructure challenges we face.

REJECT A RETURN TO OUTDATED GRANT PROGRAM

To address the infrastructure financing challenge there are calls from some to re-establish a federal grant program – similar to the EPA construction grants program of the 1970s. This grant program would be financed through a new trust fund and presumably some sort of new tax. With all of the financing options available to this Committee, the idea for a large, inefficient grant program should be disregarded.

Significant subsidies to all customers, like those that would be provided by grants, are not provided by the federal government to other essential utility services like energy and telecommunication, so why should water be water and sanitation services be treated any differently? As it is with other utility services, self-sustainability of utilities and the industry should be the goal and grants work directly against this. Grants to utilities should only be made in rare circumstances when all other options have been exhausted.

Grants send the wrong economic and conservation signals to consumers. Grants:

- Breed dependence on large federal subsidies,
- Encourage – even reward – bad management practices,
- Discourage innovation, public private partnerships, consolidation, and other creative business models,
- Because of overhead costs and inefficiencies, grants can cost the public more than other creative solutions would,
- Disguise the true value of water and wastewater service thereby encouraging overuse of this scarce resource.

ROLE OF THE PRIVATE SECTOR

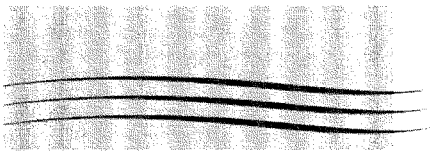
The private sector has long played a vital role in our nation's water infrastructure and stands ready to do much more. Privately owned utilities have successfully provided service to the public since the early 1800s. It is a proven model. Another viable option is contract operations, wherein the municipality retains ownership of the asset; in this case a water utility and its infrastructure, but the management and operations of the facility are contracted out to a private company.

History has shown that the private sector can and does provide clean water services to customers efficiently while focusing on long term sustainability through market-based solutions. The broad range of public-private partnership models can be adapted to the unique needs of individual communities. All of this is done while maintaining accountability to the public and complying with all federal and state regulatory requirements. Studies by the National Association of Water Companies and others have shown that creative public-private partnerships and other arrangements can increase environmental compliance and simultaneously reduce operating costs by 10 to 40%. It is obvious that with such cost savings, the need to look to the federal government for assistance is greatly reduced.

Privately owned utilities are on the cutting edge of technical innovation and research. Furthermore, in this time of climate uncertainty, the private sector's ability to attract experts to the industry with singular knowledge and experience in green practices and conservation is essential.

CONCLUSION

We appreciate the leadership role that this Committee has taken to address new solutions to age-old infrastructure problems. These are long-term challenges, and we look forward to working with the Committee to achieve long-term solutions that will allow the water and wastewater industries to meet their present and future infrastructure investment needs.



WATER RESOURCES COALITION

June 12, 2008

The Hon. James Oberstar
Chairman, Transportation and
Infrastructure Committee
U.S. House of Representatives
Washington, D.C. 20510

The Hon. John Mica
Ranking Member, Transportation
and Infrastructure Committee
U.S. House of Representatives
Washington, D.C. 20510

Dear Chairman Oberstar & Ranking Member Mica:

The Water Resources Coalition applauds your leadership and foresight in convening a hearing on "Financing Infrastructure Investments" to explore the infrastructure investment needs of this country, particularly with regard to water resource projects. We too are very concerned about the state of the nation's decaying infrastructure and the projected funding gap totaling $1.6 trillion to maintain, preserve and upgrade it to acceptable condition and performance standards over the next 5 years.

Decades of chronic underinvestment in infrastructure is jeopardizing the strength of our economy and economic competitiveness in the world. The extent of the funding crisis is staggering and will require a broad and comprehensive suite of tools to address the problem. The Coalition would also like to encourage the Committee to request an examination by either the Government Accountability Office or the Congressional Budget Office of innovative financing activities that fall outside of the surface transportation field.

The Water Resources Coalition is a group of organizations representing state and local government, engineering and construction, ports, waterways, transportation services and conservation organizations that have an interest in a comprehensive national water resources policy. Our primary focus is on the need to invest more money and resources in our nation's water resources.

Our national infrastructure forms the backbone of society, fosters economic development, facilitates trade and commerce and international competitiveness, rebuilds environmentally sensitive areas, stimulates employment, provides water recreation opportunities, enhances agricultural and industrial productivity, and augments our national defense. It includes our roads, bridges, public transportation systems and

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airports; and our drinking water and wastewater infrastructure. Our nation's water resources are no less critical to the American economy and global competitiveness than the more visible roads, bridges and highways. Ports and waterways transport domestic and international cargo. Flood control projects protect lives and prevent property damage. Coastal nourishment projects help to save lives and reduce property damages from storms while providing critical public recreation as well as environmental habitat. In addition, projects for water supply, habitat protection, irrigation and water-based recreation also provide significant benefits.

Through initiatives such as Building America's Infrastructure, momentum is building among policy makers, infrastructure stakeholders and the public to tackle the looming infrastructure funding crisis, and this opportunity should not be lost. Now is the time to seize upon this opportunity and to create an environment where infrastructure funding is treated like the national priority it should be. A renewed federal commitment to infrastructure investment is critical. The federal government has traditionally played a strong role in financing infrastructure projects in partnership with state and local officials. State and local governments spend almost three times as much on infrastructure as the federal government does. Given the enormity of the current funding crisis, consideration of a broad suite of financing mechanisms and tools that include more traditional financing tools as well as new and innovative approaches must be utilized to meet these overwhelming needs.

Financing mechanisms such as bonding, tolling and congestion pricing, public –private partnerships and capital budgeting mechanisms can be used to expand available infrastructure funding and begin to address the state of the nation's decaying infrastructure. In addition, we should seek means to better maintain our existing infrastructure. An example is full utilization of monies collected annually under the Harbor Maintenance Trust Fund to be used for its intended purpose – maintenance dredging of our Nation's ports and harbors. We cannot afford to rule out any funding sources, and we cannot shy away from the tough decisions necessary to renew and rebuild the nation's infrastructure.

The Coalition and its members have a wealth of knowledge and experience that we look forward to sharing with you and your colleagues whose commitment to investing in America's future by investing in its infrastructure we both applaud and actively support.

Sincerely,

Brian Pallasch
Co-Chairman
American Society of Civil Engineers

Marco Giamberardino
Co-Chairman
Associated General Contractors

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