



FIXING AMERICA'S INFRASTRUCTURE: USES AND SOURCES OF FUNDS

To bring its infrastructure back to acceptable levels, the US will need over \$3 trillion of infrastructure investment by 2025, including major investments in the following categories*:

Roads and Bridges: \$769 billion. Thirty-two percent of American roads are in poor or mediocre condition. Congestion and poor road conditions waste 1.9 billion gallons of gasoline per year, and cost American motorists \$69 billion in increased operating costs due to wear and tear. Over 10% of US bridges are structurally deficient.

Transit: \$308 billion. The nation's transit bus fleet is in "barely adequate" condition overall, and rail systems are currently facing a \$59 billion maintenance backlog.

Electricity: \$736 billion. Six percent of all energy generated for public use in the US is wasted due to inefficiencies in the electric grid, equivalent to the output of 200 coal-burning power plants. Blackouts have increased almost three-fold since 1985, costing the economy \$150 billion per year from lost productivity. Our current electrical grid is unable to effectively integrate renewable energy sources. Outdated power generation systems produce nearly 2 billion tons of CO₂ emissions annually.

Rail: \$100 billion. Rail bottlenecks cause costly delays, and divert freight from fuel-efficient rail to less efficient trucks, raising emissions, increasing wear and tear on roads, and lowering overall road safety.

Water: \$682 billion. Leaking water pipes and mains waste as much as 2.1 trillion gallons of water per year. Aging and inadequate wastewater systems spill 3 to 10 billion gallons of untreated sewage every year, causing waterborne illness and contaminating American waterways.

Airports: \$134 billion. The last major airport built in the US, Denver International, was completed over 20 years ago; since then, passenger miles on US flights have increased over 50%. Implementation of the FAA's NextGen traffic control system is expected to cost over \$30 billion.

Ports and Inland Waterways: \$30 billion. America's inland shipping system experienced 25 years of cumulative delay due to bottlenecks in 2011, costing the economy \$33 billion. The widening of the Panama Canal will require nearly every major port on the East Coast to invest in improvements to accommodate larger ships. Deficiencies in transportation infrastructure surrounding US ports exacerbates freight bottlenecks and raises shipping costs.

Dams and Levees: \$101 billion. Only 8% of levees in the National Levee Database are in "acceptable" condition, although they are responsible for protecting over 14 million people. The average age of an American dam is 52 years, and more than 2,000 dams in the US are rated as both deficient and high-hazard (meaning dam failure would result in significant loss of life).

Hazardous and Solid Waste Disposal: \$56 billion. One in 4 Americans lives within 3 miles of a hazardous waste site, and there are over 1,300 Superfund sites awaiting cleanup in the EPA's priority list. The US produces 250 million tons of garbage each year, but recycling rates lag behind other developed countries due in part to inadequate infrastructure.

* Figures derived primarily from the American Society of Civil Engineers' May 2016 report "[Failure to Act: Closing the Infrastructure Investment Gap for America's Economic Future](#)."

Sources of Infrastructure Financing: Here is a menu of ways the federal government can help fund or finance infrastructure improvements.

- **1. Direct Appropriations.** Many federal appropriations bills, including Transportation-HUD, Energy and Water, Agriculture, and Interior, provide direct funding for infrastructure. Some programs are funded from general revenues, while others have dedicated funding sources. The most recent appropriations were \$305 billion in the FAST Act by Congress, which runs through 2020. Federal funds are typically matched by state and local governments. Many projects are financed without federal funds; in 2014, the federal government spent \$96 billion on transportation and water infrastructure, while state and local governments spent \$320 billion. The gas tax, which has been 18.4 cents per gallon since 1993, generated revenues of \$34 billion in 2015. These funds are deposited in the Highway Trust Fund, and at the current tax rate, are far less than is needed to meet current highway spending levels.
- **2. Public-Private Partnerships (3P).** Private financing dramatically increases the pool of available investment, with repayment coming either from user charges, such as tolls, or from a negotiated annual fee paid by the government entity. Some of the proposals below are intended to support 3P projects. The US lags other countries in tapping private financing for infrastructure projects, in part because of the tax advantages of public bonds vs. private debt.
- **3. National Infrastructure Bank.** An infrastructure bank would provide debt financing for public and private projects, repaid out of project-generated revenue or state and local tax obligations. Under some proposals, the federal government would provide initial seed capital, and private investors would contribute additional funds to the lending pool. Private investors could also potentially purchase shares in the bank corporation itself. Under another proposal, the Treasury Department could fund the bank exclusively. A Brookings report concluded that \$25 billion in initial federal funding could generate \$125 billion in private investment.
- **4. Move America Bonds.** This plan, proposed by Senators Wyden and Hoeven as part of the Move America Act, would afford privately financed projects the same tax-exempt financing as government bonds. The Act would authorize \$180 billion in tax-exempt bond authority to states and localities over the next 10 years. The similar Build America Bonds program issued \$185 billion in bonds during the 23-month duration of the program in 2009 and 2010.
- **5. Tax Credits.** Wilbur Ross and Peter Navarro, as part of the Trump campaign, proposed giving an 82% tax credit to private investors in selected infrastructure projects. With a tax expenditure of \$140 billion, they say this would finance over \$1 trillion in projects with 83% of debt financing.
- **6. Tax Repatriation.** This proposal would allow companies to repatriate overseas profits at a discount rate, and would use the tax revenue to pay for infrastructure upgrades. Under one proposal, a limited “tax holiday” would allow corporations to voluntarily repatriate profits at a substantially lower tax rate. A similar holiday in 2004 raised \$16 billion. Under another plan, profits would be “deemed” repatriated whether corporations actually did so or not, with taxes assessed regardless. The Obama administration’s “deemed” repatriation proposal, utilizing a 14% tax rate, would raise an estimated \$238 billion, all of it devoted to infrastructure funding.
- **7. Carbon Tax.** A carbon tax at \$20 per ton, as analyzed by a 2013 CBO report, would generate about \$120 billion annually. Assuming 75% of this would be used for tax cuts for middle class and tax credits for lower income families (to offset their higher costs of energy), \$30 billion per year could be available to upgrade America’s infrastructure.
- **8. Sale of Government Loans.** The federal government is owed \$1 trillion in student loans, and around \$1 trillion in loans across other categories and agencies (Department of Agriculture, Export-Import Bank, etc.). Capitalizing these revenue streams through sale of bonds to the public would raise approximately \$1.2 trillion (assuming an average maturity date of 10 years).