

Infrastructure 101

**US infrastructure spending, decision-making
and policy projections**

March 22, 2021

Roadmap

- **America's infrastructure report card**
- Infrastructure spending and decision-making
- Federal-state cost sharing
- Infrastructure policy going forward

In 2021, the ASCE estimated that the US would need to raise investment from 2.5% to 3.5% of GDP before 2025 to satisfy infrastructure needs

2021 American Society of Civil Engineers’ report card on America’s infrastructure

Sector	Grade
Bridges	C
Dams	D
Drinking Water	C-
Hazardous Waste	D+
Levees	D
Ports	B-
Public Parks	D+
Roads	D
Solid Waste	C+
Wastewater	D+

Grading system

- A:** Exceptional/Fit for the Future
- B:** Good/Adequate for Now
- C:** Mediocre/Requires Attention
- D:** Poor/At Risk
- F:** Failing/Critical/Unfit for Purpose

Qualifications

- Capacity
- Condition
- Funding
- Public safety
- Innovation
- Operations
- Maintenance

Roadmap

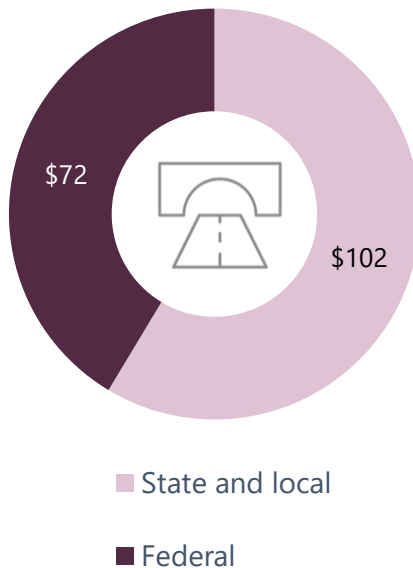
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Overview of federal funding and financing for infrastructure projects

Although state and local governments are typically responsible for funding infrastructure and transportation projects, the federal government provides financial support to localities in the form of grants, loans, and bonds.

Public sector capital investment, 2017

BILLIONS OF US DOLLARS



Funding

- Funding involves the direct spending of resources on projects
- The federal government funds state infrastructure projects through grant programs and trust funds, which sometimes collect revenue in the form of excise taxes



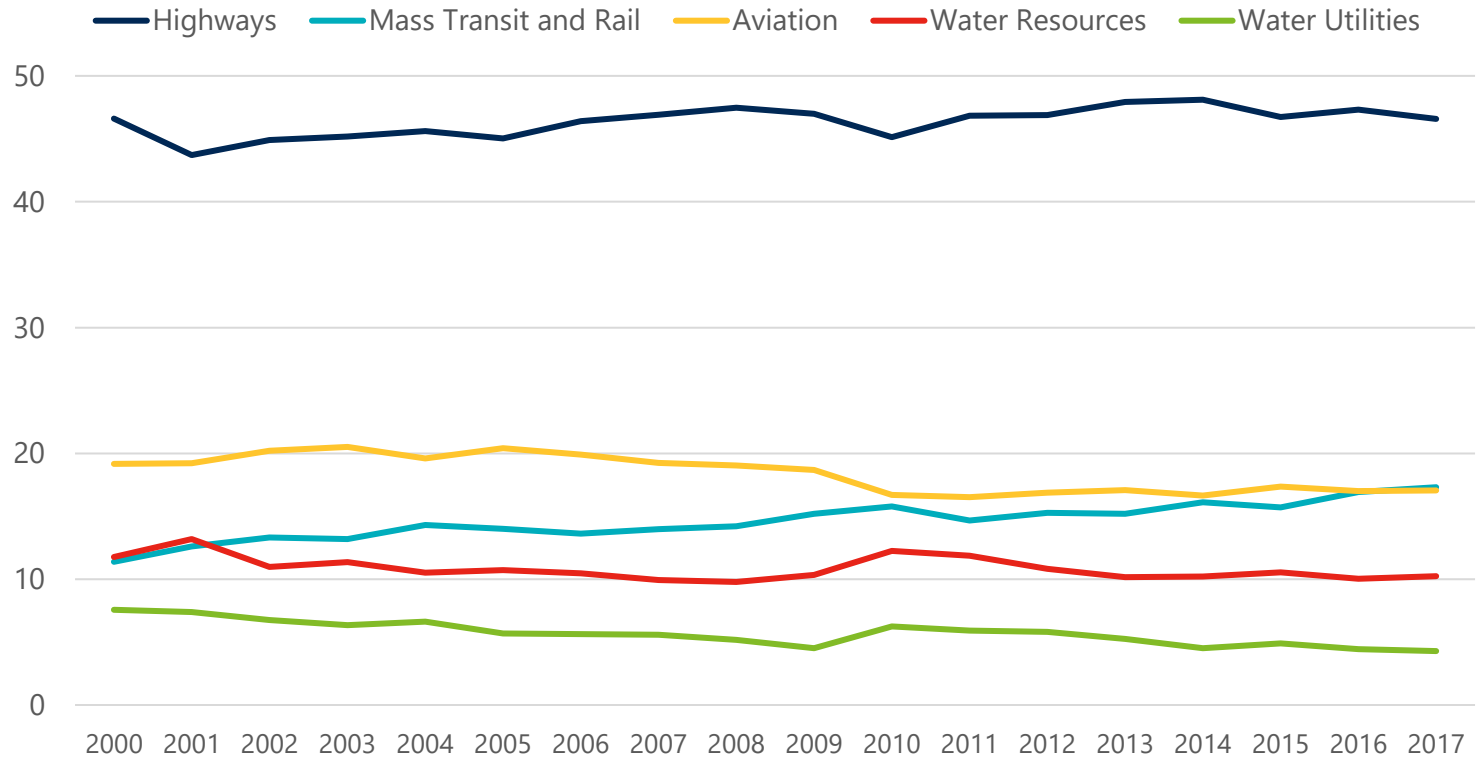
Financing

- In contrast to funding, financing involves providing funds that will eventually be paid back
- The federal government uses financing mechanisms, including tax-exempt bonds, state revolving funds, tax credit bonds and direct federal credit programs, to support infrastructure projects in states
- Tax-exempt and tax credit bonds are issued by states and localities, while the federal government provides loans and grants

Of all types of infrastructure, highways receive the most funding from the federal government

Federal spending on transportation and water infrastructure, 2000-2017

PERCENTAGE OF TOTAL SPENDING, BY TYPE OF INFRASTRUCTURE

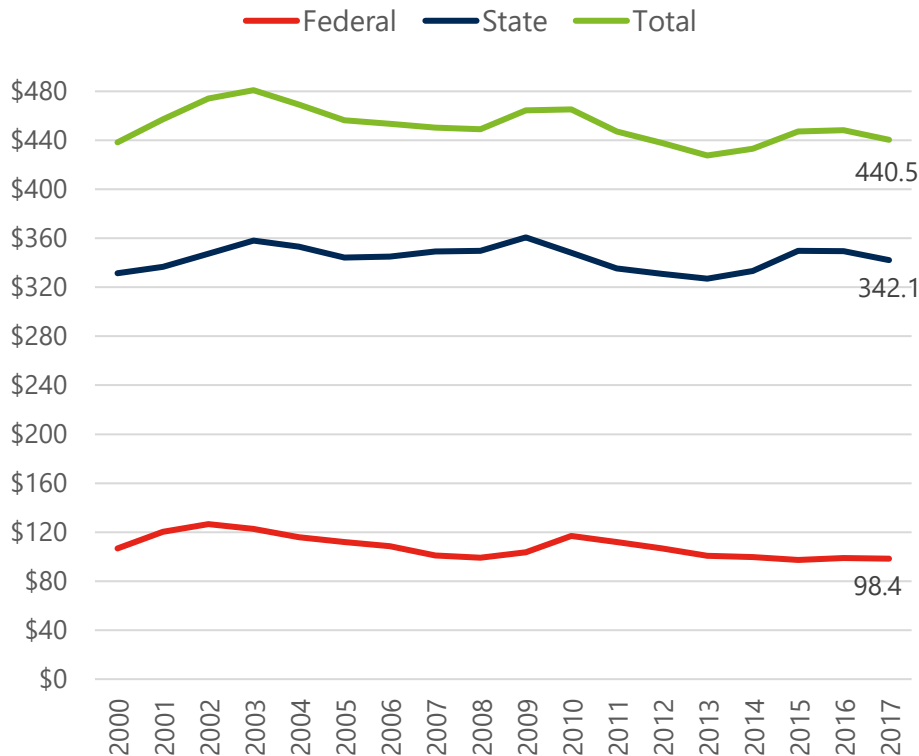


SOURCE Congressional Budget Office.
SLIDE LAST UPDATED ON 04/09/20

Public spending on transportation and water infrastructure has decreased in the last decade

Public spending on transportation and water infrastructure, 2000-2017

BASED ON INFRASTRUCTURE-SPECIFIC PRICE INDEXES, IN BILLIONS OF 2017 DOLLARS



Despite the US' growing infrastructure needs, **federal infrastructure spending has decreased more rapidly** than state and local spending has in recent years

8.4 percent drop in total infrastructure spending from 2003 to 2017; spending fell by 4.5% at the state and local level and by 20.3% at the federal level over this period

\$440.5 billion was spent on infrastructure in 2017

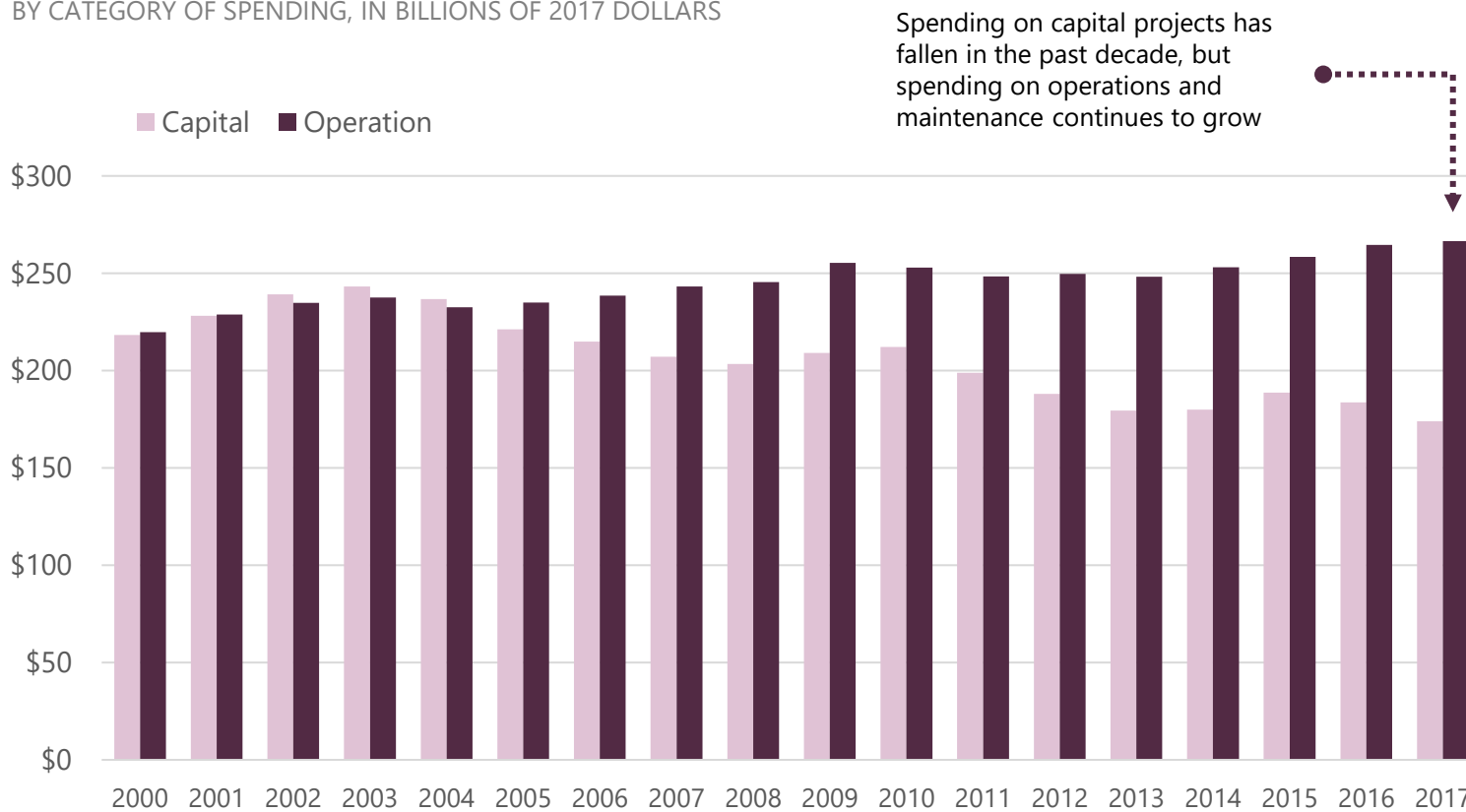
2.3 percent of GDP in 2017 was spent on infrastructure, down from ~2.5%

SOURCE Congressional Budget Office.
SLIDE LAST UPDATED ON 06/29/20

Public spending on operations and maintenance is higher than spending on capital

Public spending on transportation and water infrastructure

BY CATEGORY OF SPENDING, IN BILLIONS OF 2017 DOLLARS



SOURCE Congressional Budget Office.
SLIDE LAST UPDATED ON 04/09/20

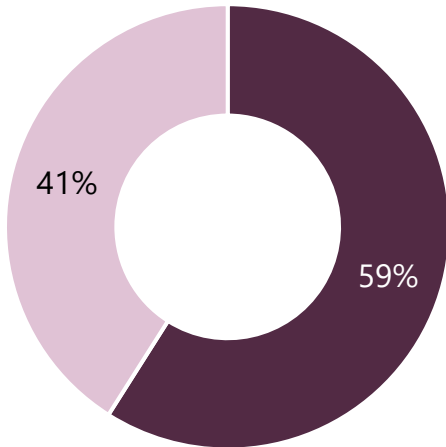
Operations and maintenance comprise a greater portion of state and local infrastructure spending than federal infrastructure spending

Shares of public spending on transportation and water infrastructure, by category of spending

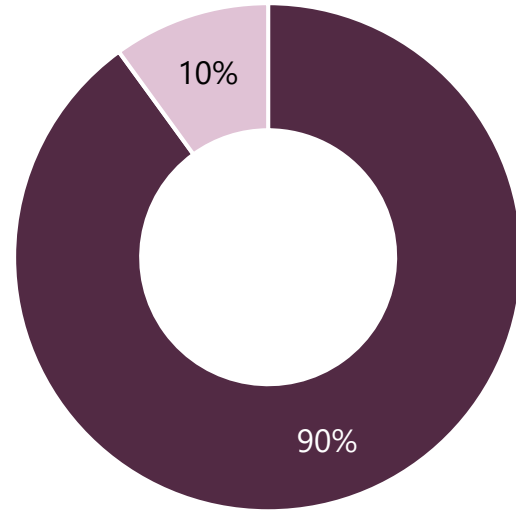
BY CATEGORY OF SPENDING, IN BILLIONS OF 2017 DOLLARS

■ Federal ■ State and local

Capital
(\$174 Billion)

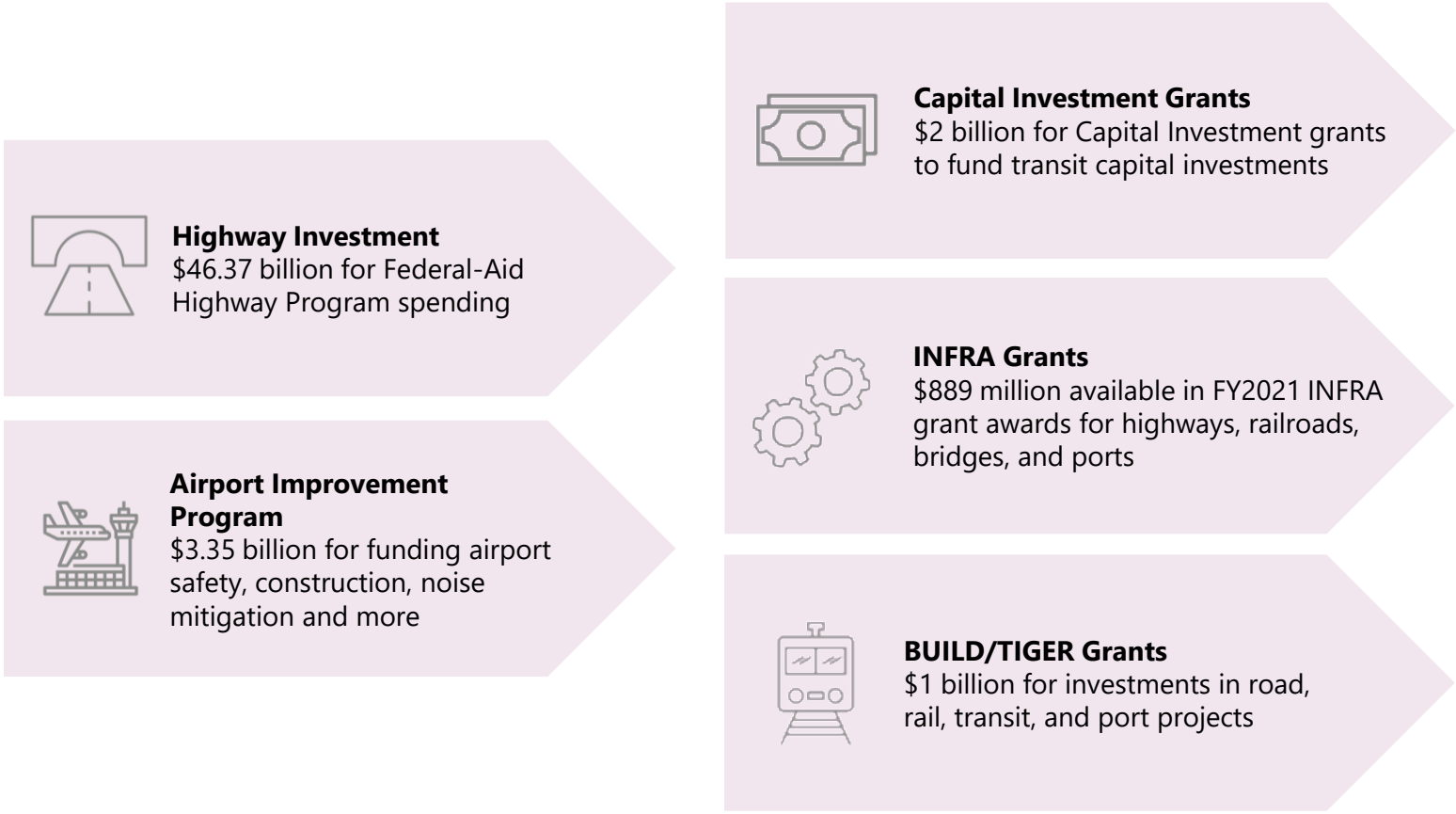


Operations and Maintenance
(\$266 Billion)



DOT program funding for Fiscal Year 2021

FY21 funding levels for Department of Transportation programs



Traditional sources of revenue-generation supply the majority of state-level transportation revenue



Fuel taxes

All 50 states have some form of tax on fuel for motor vehicles; many states charge a flat fee per gallon, and while a number of states have increased their gas taxes in recent years, the federal gas tax has not been raised since 1993



Sales taxes

Some states charge an additional sales tax for purchasers, distributors, or suppliers of gasoline; state sales taxes on gasoline range from 2-7%



Vehicle registration fees

Every state charges a fee for registering vehicles, and most use those fees to fund infrastructure projects



Traditional bond proceeds

Many states offer traditional transportation bonds in which bondholders are repaid from general revenue derived from other methods



Tolls

As of 2009, there were about 150 tunnels, bridges, and roads in the US that required a toll



General funds

A majority of states fund state highways in part using general funds

As costs rise and traditional infrastructure funding falls, state and federal entities are exploring new options

Methods of funding infrastructure projects

Non-traditional funding and financing methods	
Private activity bonds (PABs)	PABs are tax-exempt debt financing instruments for infrastructure projects limited by annual federal guidelines
Federal credit assistance	The federal government can provide direct loans, guarantees, and lines of credit for major transportation infrastructure projects through the Transportation Infrastructure Finance and Innovation Act (TIFIA) loan program
State or national infrastructure banks	35 states currently have infrastructure banks due to the federal government’s expansion of eligibility and seed funding provisions in 1998. Creating a national infrastructure bank is a popular idea among Democrats that would allow the government to provide guaranteed loans, below market cost-credit and subsidized bonds
Public-private partnerships (PPPs)	PPPs establish a contract between a public agency and a private entity to work together on a transportation project. 26 states use a form of PPPs, but it is a more popular model internationally
Vehicle Mile Traveled fees (VMTs)	VMTs charge drivers directly for each mile they travel, replacing a transitional motor fuel tax
Better Utilizing Investments to Leverage Development (BUILD)	The BUILD grant program allows DOT to make investments in transportation infrastructure that “promise to achieve national objectives”
Rural Opportunities to Use Transportation for Economic Success (ROUTES)	The ROUTES program is a DOT initiative meant to address rural-urban transportation infrastructure disparities
Tax-exempt municipal bonds	Local governments issue tax-exempt municipal bonds to develop and maintain infrastructure

Roadmap

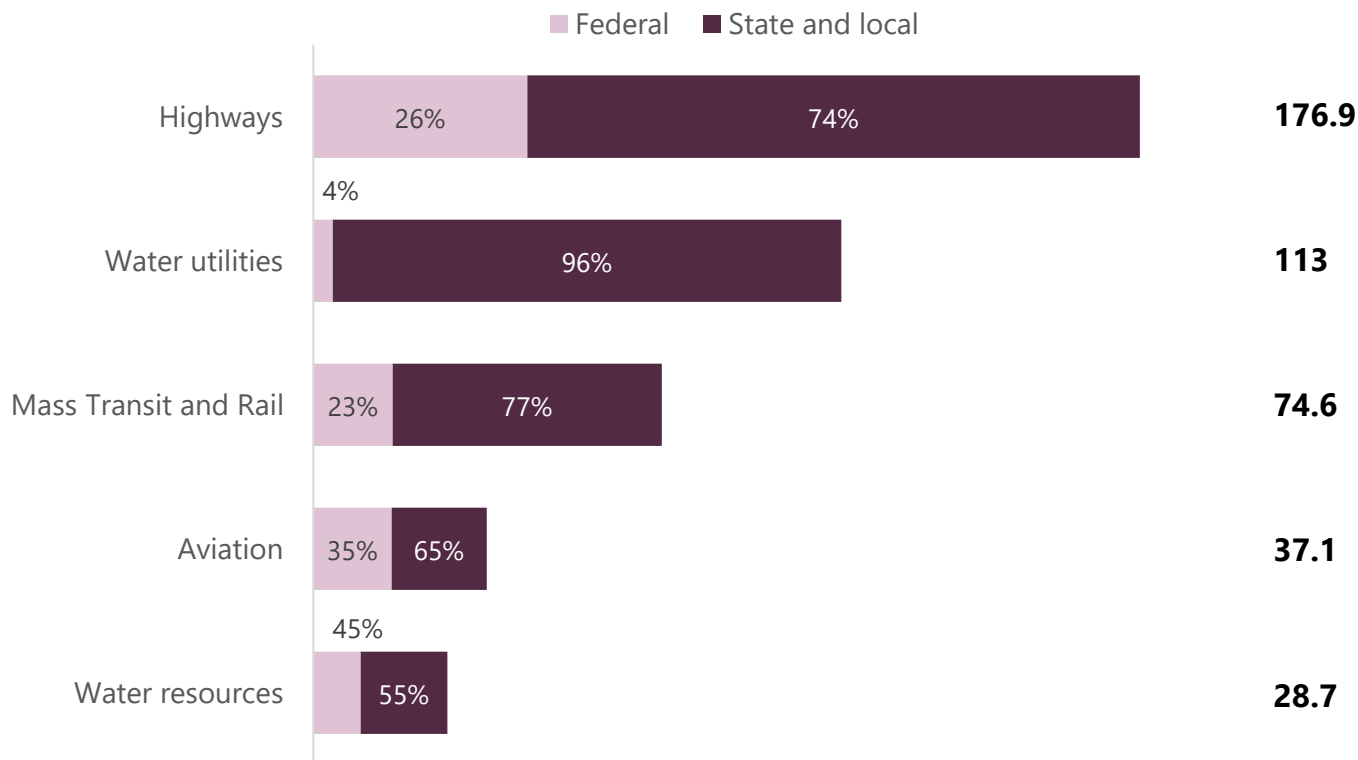
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State and local governments outspend the federal government on infrastructure in every project category

Public spending on infrastructure by type, 2017

BREAKDOWN OF PUBLIC INFRASTRUCTURE SPENDING

Total spending
IN BILLIONS OF
2017 DOLLARS



How states and localities utilize federal funding to help finance infrastructure projects

Types of federal assistance states use to finance infrastructure projects



Tax exempt bonds

Bonds that do not require the holder to pay federal taxes on the interest payments they receive



State revolving funds and infrastructure banks

State-administered funds that provide loans for infrastructure projects and are largely federally funded



Tax credit bonds

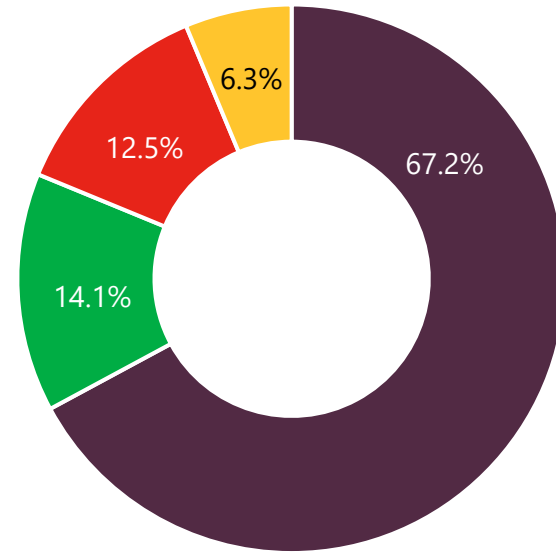
Bonds that provide a federal tax credit or a federal payment to the issuer or bondholder



Direct federal credit programs

Programs that give loans or guarantee loans to state and local governments for infrastructure projects

Sources of federal funds provided, 2007-2016

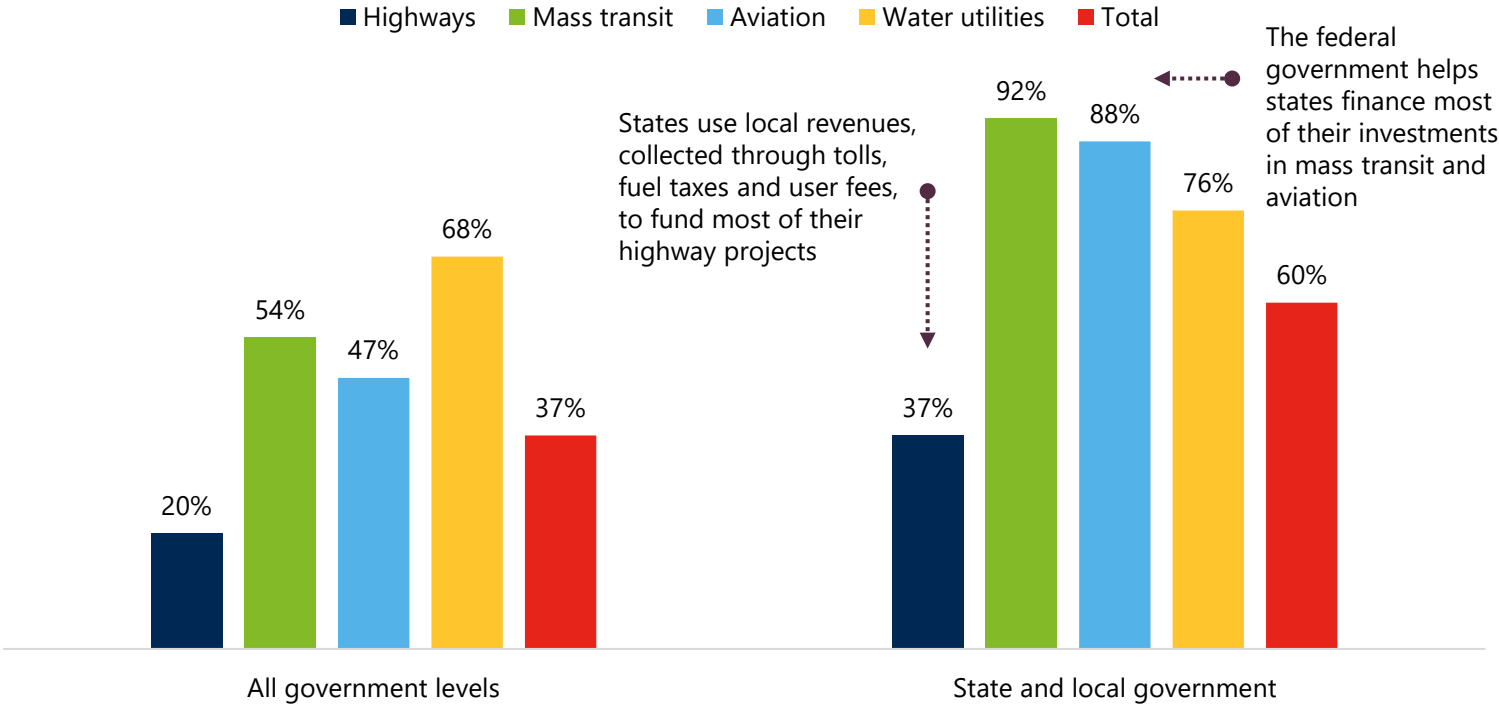


- Tax-exempt bonds
- State revolving funds and infrastructure banks
- Tax credits bonds
- Direct federal credit programs

The federal government supports 60% of state and local government spending on infrastructure projects







Federally supported financing of infrastructure projects, 2007-2016

AS A PERCENT OF CAPITAL SPENDING (CONSTRUCTION, LAND AND EXISTING STRUCTURES & EQUIPMENT)



*Buses, subways and commuter rail systems

Federal share of infrastructure spending, by type

Mode	Federal government's usual max % of total spending	Federal, state and local decision-making roles
Highways 	80% of capital	<ul style="list-style-type: none"> State and local governments choose projects, following federal rules and conditions
Mass Transit 	80% of capital, 50% of operations	<ul style="list-style-type: none"> State and local governments choose projects, following federal rules and conditions
Aviation 	75% to 90% of capital	<ul style="list-style-type: none"> State and local governments choose projects, following federal rules and conditions Federal government designs the national aviation system
Water Transportation 	40% - 100% of construction, 50% - 100% of operations	<ul style="list-style-type: none"> Federal government chooses water projects with Congressional approval
Water Utilities* 	<i>Clean Water State Revolving Fund (CWSRF) Loan Program & Drinking Water State Revolving Fund (DWSRF) Program</i> <ul style="list-style-type: none"> 80% for grants to states to capitalize SRFs <i>Water Infrastructure Finance and Innovation Act (WIFIA)**</i> <ul style="list-style-type: none"> 49% of project's eligible costs (for most projects) 	<ul style="list-style-type: none"> <i>DW/CW SRF programs:</i> States select projects to be funded based on their federal allotment; subject to federal rules and conditions <i>WIFIA:</i> Federal government selects projects of national and regional significance that cost \$20 million or more (\$5 million or more for rural areas)
Rail 	Generally 80%***	<ul style="list-style-type: none"> Regulatory

*Includes numbers only for specific Water Utilities programs mentioned; **Additional funds are made available annually, but total federal assistance may not exceed 80% of project's cost; ***Estimate based on recent Federal Railroad Administration (FRA) grants and language in Amtrak's FY21 appropriations request

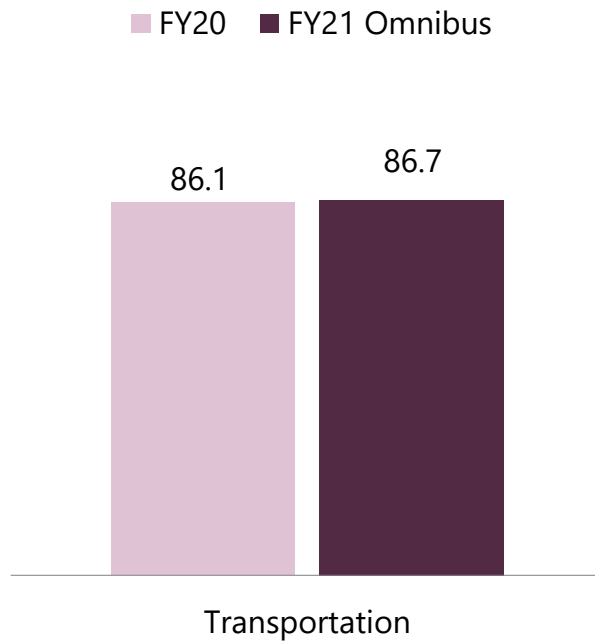
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Infrastructure FY2021 Budget Highlights

FY21 omnibus spending levels




IN BILLIONS OF DOLLARS



Key takeaways from the \$1.3 trillion H.R. 7617 minibus for FY2021

- *The Energy and Water Development bill includes \$43.5 billion in emergency spending*
 - These funds will go toward building and repairing water infrastructure products and modernizing energy infrastructure in the wake of the COVID-19 pandemic and ensuing economic recession
 - This bill also prohibits funding for nuclear weapons testing
- *\$75 billion is allocated to invest into transportation and housing infrastructure and aid in post-coronavirus economic recovery*
 - The Transportation-Housing and Urban Development bill also blocks the Trump administration's public housing rule change which targeted undocumented immigrants

Several committees have jurisdiction over US infrastructure programs

Committee	Dem leader	GOP leader
Senate Environment & Public Works	 Tom Carper (DE)	 Shelley Moore Capito (WV)
Senate Commerce, Science & Transportation	 Maria Cantwell (WA)	 Roger Wicker (MS)
Senate Banking, Housing & Urban Development	 Sherrod Brown (OH)	 Pat Toomey (PA)
Senate Finance	 Ron Wyden (OR)	 Mike Crapo (ID)
House Energy and Commerce	 Frank Pallone (NJ-6)	 Cathy McMorris Rodgers (WA-5)
House Transportation & Infrastructure	 Peter DeFazio (OR-4)	 Sam Graves (MO-6)
House Ways & Means	 Richard Neal (MA-1)	 Kevin Brady (TX-8)

SOURCE House of Representatives, Senate.
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