OVERVIEW OF SELECTED PROVISIONS AND OPTIONS RELATING TO FUNDING AND FINANCING INFRASTRUCTURE INVESTMENTS

Scheduled for a Public Hearing
Before the
HOUSE COMMITTEE ON WAYS AND MEANS
on January 29, 2020

Prepared by the Staff
of the
JOINT COMMITTEE ON TAXATION

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INTRODUCTION

The House Committee on Ways and Means has scheduled a hearing for January 29, 2020, entitled "Paving the Way for Funding and Financing Infrastructure Investments." This document[1] prepared by the staff of the Joint Committee on Taxation, provides a description of selected provisions and options relating to the funding and financing of infrastructure investments.

[1] This document may be cited as follows: Joint Committee on Taxation, *Overview of Selected Provisions and Options Relating to Funding and Financing Infrastructure Investments* (JCX-2-20), January 27, 2020. This document can also be found on the Joint Committee on Taxation website at www.jct.gov.

I. INFRASTRUCTURE TRUST FUND EXCISE TAXES

A. Highway Trust Fund

The Highway Trust Fund was established in 1956 for the Federal role in highway construction and maintenance activities, including the Interstate Highway System. The Highway Trust Fund is divided into two accounts, a Highway Account and a Mass Transit Account[2], each of which is the funding source for specific programs.[3] Periodic multiyear surface transportation acts authorize the taxes that support the Highway Trust Fund, the fund's expenditure levels, and the programs and activities these expenditures support. Expenditures from the Highway Trust Fund are authorized through September 30, 2020. Since 2001, expenditures from the fund have exceeded the revenues and interest flowing into the Highway Trust Fund. Beginning in FY2008, over $140 billion in Treasury General Fund and other transfers to the Highway Trust Fund have been made to address the shortfall.[4]

Most Federal surface transportation programs funded by the Highway Trust Fund span four major areas of investment: highway infrastructure, transit infrastructure and operations, highway safety, and motor carrier safety. The funds are distributed either by formula or on a discretionary basis through individual grant programs.

Revenue sources for the Highway Trust Fund

Six separate excise taxes are imposed to finance the Federal Highway Trust Fund program.[5] Three of these taxes are imposed on highway motor fuels and generate a substantial majority of the revenues dedicated to the Highway Trust Fund. The remaining three are a retail sales tax on heavy highway vehicles (trucks, trailers and certain highway tractors), a manufacturers' excise tax on heavy vehicle tires, and an annual use tax on heavy vehicles. With two exceptions, these taxes do not apply after September 30, 2022. The 4.3-cents-per-gallon portion of the fuels tax rates is permanent.[6] The annual use tax expires on September 30, 2023.

For fiscal year 2018, excise tax on gasoline produced $26.7 billion in taxes; the excise tax on diesel produced $10.0 billion in taxes; the excise tax on tires and tread rubber produced $0.5 billion in taxes; the heavy vehicle use tax produced $1.1 billion in taxes; the retail sales tax on trucks and trailers produced $4.5 billion in taxes; and the excise tax on other fuels (including

[2] The Mass Transit Account was established as part of the Surface Transportation Assistance Act of 1982, Pub. L. No. 97-424, Title V (the "Highway Revenue Act of 1982"), sec. 531 (January 6, 1983).

[3] Sec. 9503. All section references are to the Internal Revenue Code of 1986 ("the Code") unless otherwise indicated.

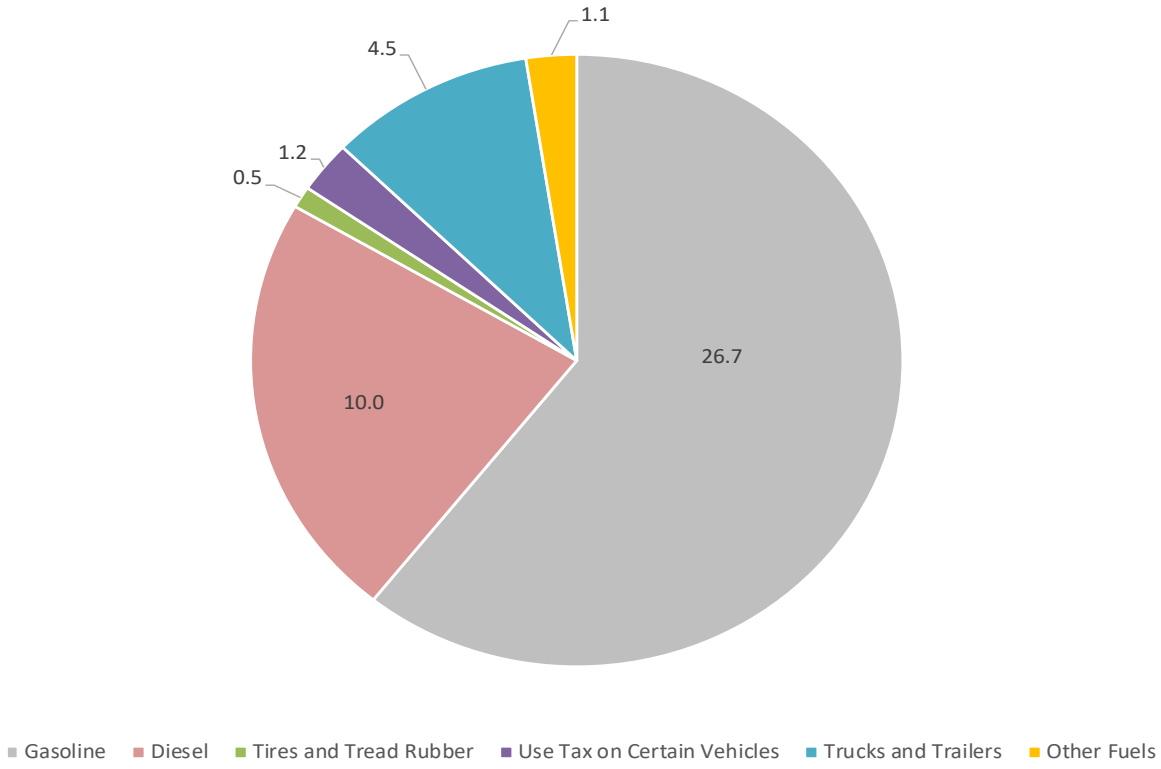
[4] Secs. 9503(f) and 9508(c)(2), (3) and (4).

[5] Sec. 9503(b)(1).

[6] This portion of the tax rates was enacted as a deficit reduction measure in 1993. Receipts from it were retained in the General Fund until 1997 legislation provided for their transfer to the Highway Trust Fund.

kerosene, liquefied natural gas and other alternative fuels) produced $1.1 billion in taxes.[7] For fiscal year 2018, the total tax revenue for the Highway Trust Fund was $44.1 billion.[8]

Figure 1.–HIGHWAY TRUST FUND TAX RECEIPTS
Fiscal Year 2018 by Source
($ Billions)



The taxes dedicated to the Highway Trust Fund are summarized below.

[7] Internal Revenue Service, Statistics of Income Bulletin, Historical Table 20, "Federal Excise Taxes Reported to or Collected by the Internal Revenue Service, Alcohol and Tobacco Tax and Trade Bureau, and Customs Service, by Type of Excise Tax, Fiscal Years 1999-2018," available at http://www.irs.gov/pub/irs-soi/histab20.xls.

[8] Motorboat fuel taxes and small engine fuel taxes, to the extent deposited in the Highway Trust Fund, are transferred to the Sport Fish Restoration and Boating Trust fund. Taxes attributable to kerosene used in aviation and aviation gasoline are dedicated to the Airport and Airway Trust Fund.

Highway motor fuels taxes

The Highway Trust Fund motor fuels tax rates are as follows:[9]

Fuel	Tax Rate
Gasoline	18.3 cents per gallon
Diesel fuel and kerosene	24.3 cents per gallon[10]
Alternative fuels	24.3 and 18.3 cents per gallon generally[11]

Non-fuels excise taxes

Tax on heavy vehicle tires

The Code imposes a tax on taxable tires sold by the manufacturer, producer or importer of tires. The rate is 9.45 cents for each 10 pounds of maximum rated load capacity over 3,500 pounds.[12] A "taxable tire" is any tire of the type used on highway vehicles if made of rubber (in whole or in part) and if marked according to Federal regulations for highway use.[13] "Rubber" includes synthetic and substitute rubber. For biasply tires, and super single tires (other than

[9] These fuels are subject to an additional 0.1-cent-per-gallon excise tax to fund the Leaking Underground Storage Tank ("LUST") Trust Fund, not the Highway Trust Fund. Secs. 4041(d) and 4081(a)(2)(B). That tax is imposed as an "add-on" to other existing taxes. These revenues are not credited to the Highway Trust Fund.

[10] Diesel-water emulsions are taxed at 19.7 cents per gallon. Sec. 4081(a)(2)(D). Diesel used in certain intercity buses is taxed at 7.4 cents per gallon. Sec. 6427(b)(1).

[11] The rate of tax for liquefied petroleum gas is 18.3 cents per energy equivalent of a gallon of gasoline. In the case of liquefied natural gas, the rate is 24.3 cents per energy equivalent of a gallon of diesel. The rate of tax is 24.3 cents per gallon in the case of any liquid fuel (other than ethanol or methanol) derived from coal, and liquid hydrocarbons derived from biomass. Other alternative fuels sold or used as motor fuel are generally taxed at 18.3 cents per gallon. For purposes of this pamphlet "alternative fuel" includes compressed natural gas. The tax rate for compressed natural gas is 18.3 cents per energy equivalent of a gallon of gasoline. See sec. 4041(a)(2) and (3).

[12] Sec. 4071(a). Tire load capacity is the maximum load rating labeled on the tire pursuant to regulations promulgated by the Secretary of Transportation. In general, only tires with a maximum rated load capacity greater than 3,500 pounds are subject to tax. These parameters would generally exclude tires for passenger automobiles and light trucks. Passenger automobile tire loads generally fall in a range between 852 pounds (a tire rating of 74) and 1,764 pounds (a tire rating of 100), which is under the tire tax threshold of 3,500 pounds.

[13] Sec. 4072(a). "Tires of the type used on highway vehicles" means tires of the type used on motor vehicles that are highway vehicles, or vehicles of the type used in connection with motor vehicles that are highway vehicles. Sec. 4072(c). However, the term does not include the kind of tires used exclusively on mobile machinery vehicles, as defined in section 4053(8).

those designed for steering), the rate of tax is half the regular rate, 4.725 cents for each 10 pounds of maximum rated load capacity over 3,500 pounds.[14]

Retail sales tax on tractors, heavy trucks, and heavy trailers

A 12-percent retail sales tax is imposed on the first retail sale of chassis and bodies of heavy trucks (over 33,000 pounds), chassis and bodies of trailers and semitrailers (over 26,000 pounds) and certain highway tractors.[15] The taxable weight is the "gross vehicle weight," which is the maximum total weight of a loaded vehicle (all equipment, fuel, body, payload, driver, etc.). The sale of a truck, trailer, or semitrailer is considered a sale of a chassis and a body.[16] The Code also imposes the 12-percent tax on the price of parts or accessories installed on a taxable vehicle within six months of the date the vehicle was placed in service.[17]

Annual use tax for heavy vehicles

An annual use tax is imposed on heavy highway vehicles, at the rates shown below.[18]

Vehicle Weight	**Tax Rate**
Under 55,000 pounds	No tax
55,000-75,000 pounds	$100 plus $22 per each 1,000 pounds (or fraction thereof) over 55,000 pounds
Over 75,000 pounds	$550

The annual use tax is imposed for a taxable period of July 1 through June 30. Generally, the tax is paid by the person in whose name the vehicle is registered.

Overview of Highway Trust Fund expenditure provisions

Section 9503 authorizes expenditures (subject to appropriations) from the Highway Trust Fund through September 30, 2020, for the purposes provided in authorizing legislation in effect on the date of enactment of the "Fixing America's Surface Transportation Act" (the "FAST

[14] Sec. 4071(a). The term "biasply tire" means a pneumatic tire on which the ply cords that extend to the beads are laid at alternative angles substantially less than 90 degrees to the centerline of the tread. A "super single tire" means a single tire greater than 13 inches in cross section width designed to replace two tires in a dual fitment. It does not include any tire designed for steering.

[15] Sec. 4051. The tax does not apply to a tractor weighing 19,500 pounds or less that, in combination with a trailer or semitrailer, has a gross combined weight of 33,000 pounds or less.

[16] Sec. 4051(a)(5).

[17] A vehicle is treated as placed in service on the date on which the owner of the vehicle took actual possession of the vehicle.

[18] Sec. 4481.

Act").[19] Amounts equivalent to receipts from the highway excise taxes, as imposed through September 30, 2022, generally are transferred to the Highway Trust Fund.[20] Receipts attributable to the excise taxes imposed on motorboat gasoline and special motor fuels and on gasoline used as a fuel in the non-business use of small-engine outdoor power equipment are transferred from the Highway Trust Fund to the Sport Fish Restoration and Boating Trust Fund through September 30, 2022, with the first $1,000,000 per fiscal year of such monies going to the Land and Water Conservation Fund instead.[21]

The Highway Trust Fund has two accounts: the Mass Transit Account and the Highway Account.[22] Both accounts are funding sources for specific transit and highway-related programs. Both accounts accrue interest on unexpended balances. The Mass Transit Account receives revenues equivalent to 2.86 cents per gallon of highway motor fuels excise taxes generally.[23] The Highway Account receives the balance of the monies dedicated to the Highway Trust Fund.

Projected balance of the Highway Trust Fund

The Congressional Budget Office ("CBO") projects that outlays from the Highway Trust Fund will exceed tax revenues and interest to the fund throughout the 2020-2030 budget window, see Table 1 below. Shortfalls are projected beginning in FY 2021 for the Mass Transit Account, and for both the Highway Account and Mass Transit Account by FY 2022. By FY 2030, the cumulative shortfall for the Highway Account is projected to reach approximately $134 billion, and $54 billion for the Mass Transit Account. Note that CBO's projections assume that taxes credited to the Highway Trust Fund will not expire as currently scheduled to in 2022. The CBO projections presented in this document are from CBO's January 2020 baseline.

[19] Pub. L. No. 114-94.

[20] The Highway Trust Fund also receives receipts from penalties imposed for violation of certain highway-related excise tax provisions. Sec. 9503(b)(5).

The Trust Fund benefits from an additional, ongoing General Fund transfers representing refunds for certain tax overpayments and excise tax credits for biodiesel, renewable diesel, and alternative fuels being borne by the General Fund.

[21] Sec. 9503(c)(4) and (5).

[22] Highway Trust Fund expenditures are subject to appropriations Acts. However, certain of the programs are classified as "contract spending," a category of Federal spending in which executive agencies are permitted to enter into contracts for spending with appropriations being enacted subsequently to liquidate the contracted expenditures. Highway Trust Fund spending further has benefited from special Federal budget "firewalls" designed to ensure that the monies are spent as authorized rather than being subjected to obligations ceilings enacted as part of deficit reduction measures.

[23] The Mass Transit Account also receives 1.43 cents per gallon for any partially exempt methanol or ethanol, 1.86 cents per energy equivalent of a gallon of diesel in the case of liquefied natural gas, 2.13 cents per energy equivalent of gasoline in the case of liquefied petroleum gas, and 9.71 cents per thousand cubic feet ("MCF") for compressed natural gas.

Table 1

Highway Trust Fund Accounts–CBO's January 2020 Baseline

Millions of Dollars, by Fiscal Year

January 2020

	Actual, 2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
						Highway Account						
Start-of-Year Balance	32,605	24,652	15,727	5,933	a	a	a	a	a	a	a	a
Flexed Balances[b]	-1,331	-1,200	-1,200	-1,200	-1,200	-1,200	-1,200	-1,200	-1,200	-1,200	-1,200	-1,200
Revenues and Interest[c]	38,985	38,241	38,119	37,841	37,658	37,499	37,324	37,226	37,219	37,265	37,348	37,457
Outlays	45,607	45,966	46,714	47,788	48,832	49,677	50,955	51,947	52,739	53,678	54,654	55,645
End-of-Year Balance	24,652	15,727	5,933	a	a	a	a	a	a	a	a	a
						Transit Account						
Start-of-Year Balance	11,902	8,254	4,313	a	a	a	a	a	a	a	a	a
Flexed Balances[b]	1,331	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
Revenues and Interest[c]	5,536	5,374	5,291	5,226	5,181	5,133	5,079	5,033	4,998	4,966	4,938	4,915
Outlays	10,515	10,515	11,039	11,364	11,558	11,759	12,049	12,233	12,500	12,670	12,891	13,115
End-of-Year Balance	8,254	4,313	a	a	a	a	a	a	a	a	a	a
Memorandum:												
Cumulative Shortfall[a]												
Highway Account	n.a.	n.a.	n.a.	-5,214	-17,588	-30,966	-45,797	-61,718	-78,438	-96,051	-114,556	-133,944
Transit Account	n.a.	n.a.	-235	-5,173	-10,350	-15,776	-21,546	-27,545	-33,847	-40,351	-47,104	-54,104

Components may not sum to totals because of rounding; n.a. = not applicable.

a. Under current law, the Highway Trust Fund cannot incur negative balances. However, following the rules governing baseline projections in the Balanced Budget and Emergency Deficit Control Act of 1985, CBO's baseline for surface transportation spending reflects the assumption that obligations presented to the Highway Trust Fund will be paid in full. The memorandum to this table shows the cumulative shortfall of fund balances, assuming spending amounts consistent with CBO's January 2020 baseline. Following the rules for baseline construction, those amounts are estimated by adjusting the obligation limitations enacted under P.L. 116-94, the Further Consolidated Appropriations Act, 2020, by projected inflation.

b. Flexed balances are amounts transferred from the highway account to the transit account.

c. Some of the taxes that are credited to the Highway Trust Fund are scheduled to expire on September 30, 2022, including the taxes on tires and all but 4.3 cents of the federal tax on motor fuels. However, under the rules governing baseline projections, these estimates reflect the assumption that all of the expiring taxes credited to the fund will continue to be collected after fiscal year 2022.

B. Airport and Airway Trust Fund Excise Taxes[24]

Revenues dedicated to the Airport and Airway Trust Fund

Excise taxes are imposed on amounts paid for commercial air passenger and freight transportation and on fuels used in commercial and noncommercial (*i.e.*, transportation that is not "for hire") aviation to fund the Airport and Airway Trust Fund.[25] The present aviation excise taxes are as follows:

Tax (and Code section)	Tax Rates
a. Domestic air passengers (sec. 4261)	7.5 percent of fare, plus $4.30 (2020) per domestic flight segment generally[26]
b. International air passengers (sec. 4261)	$18.90 (2020) per arrival or departure[27]
c. Amounts paid for right to award free or reduced rate passenger air transportation (sec. 4261)	7.5 percent of amount paid
d. Air cargo (freight) transportation (sec. 4271)	6.25 percent of amount charged for domestic transportation; no tax on international cargo transportation
e. Aviation fuels (sec. 4081):[28]	
i. Commercial aviation	4.3 cents per gallon
ii. Non-commercial (general) aviation:	
Aviation gasoline	19.3 cents per gallon
Jet fuel	21.8 cents per gallon
f. Surtax on fuel used in fractional ownership program aircraft (sec. 4043)	14.1 cents per gallon

[24] The Airport and Airway Trust Fund excise taxes (except for 4.3 cents per gallon of the taxes on aviation fuels) are scheduled to expire after September 30, 2023. The 4.3-cents-per-gallon fuels tax rate is permanent. However, for Federal budget scorekeeping purposes, the statutory expiration date is disregarded, and the full amount of the taxes is assumed to be permanent.

[25] Air transportation through U.S. airspace that neither lands in nor takes off from a point in the United States (or the 225-mile zone) is exempt from the aviation excise taxes, but the transportation provider is subject to certain "overflight fees" imposed by the Federal Aviation Administration pursuant to Congressional authorization. The term "225-mile zone" means that portion of Canada and Mexico that is not more than 225 miles from the nearest point in the continental United States. Sec. 4262(c)(2)

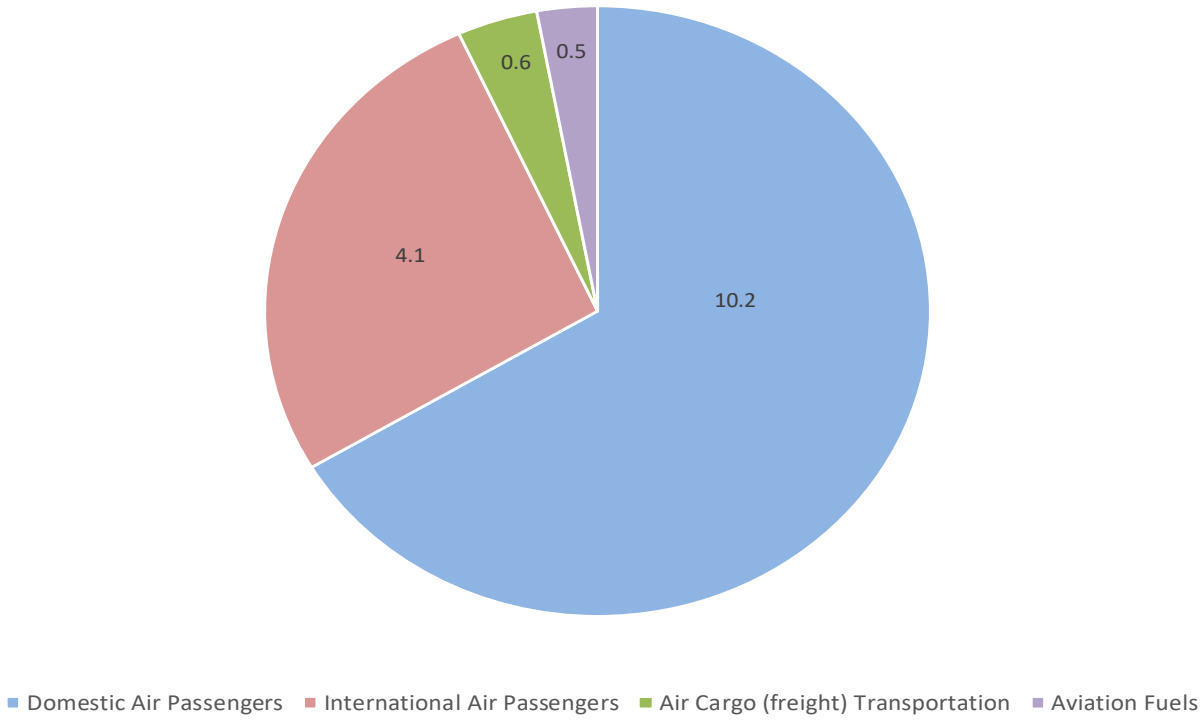
[26] A segment consists of a single takeoff and a single landing which is taxable transportation. The domestic flight segment portion of the tax is adjusted annually (effective each January 1) for inflation. Rev. Proc. 2019-44, sec. 3.45 (2019).

[27] The international arrival and departure tax rate is adjusted annually for inflation. For a domestic segment that begins or ends in Alaska or Hawaii, a reduced tax per person applies only to departures. For calendar year 2020, that reduced rate is $9.50 per departure (to/from mainland United States). *Ibid*.

[28] As noted in the section related to the Highway Trust Fund, kerosene generally is taxed at 24.3 cents per gallon. For kerosene used in aviation, these reduced rates apply when the kerosene is removed directly from the terminal into the fuel tank of an aircraft for use in commercial or noncommercial aviation. Under certain conditions,

For fiscal year 2018, domestic air passengers produced $10.2 billion in taxes; international air passengers produced $4.1 billion in taxes; air cargo (freight) transportation produced $0.6 billion in taxes, and aviation fuels produced $0.5 billion in taxes.[29] For fiscal year 2018, the total tax revenue for the Airport and Airway Trust Fund was $15.3 billion.

Figure 2.–AIRPORT AND AIRWAY TRUST FUND TAX RECEIPTS
Fiscal Year 2018 by Source
($ Billions)



refueler trucks, tankers, and tank wagons are treated as terminals. There is no tax on kerosene removed directly into the fuel tank of an aircraft for use in foreign trade. In addition, like most other taxable motor fuels, aviation fuels are subject to an additional 0.1-cent-per-gallon excise tax to fund the LUST Trust Fund. For kerosene removed directly into the fuel tank of an aircraft for a use exempt from tax under section 4041(c) (such as use in an aircraft for the exclusive use of a state or local government), the rate of tax is 0.1 cent per gallon.

[29] Internal Revenue Service, Statistics of Income Bulletin, Historical Table 20, "Federal Excise Taxes Reported to or Collected by the Internal Revenue Service, Alcohol and Tobacco Tax and Trade Bureau, and Customs Service, by Type of Excise Tax, Fiscal Years 1999-2018," available at http://www.irs.gov/pub/irs-soi/histab20.xls.

Overview of Airport and Airway Trust Fund expenditure provisions

In general

The Airport and Airway Trust Fund was established in 1970 to finance a major portion of national aviation programs (previously funded entirely with General Fund revenues). Operation of the Airport and Airway Trust Fund is governed by parallel provisions of the Code and authorizing statutes.[30] The Code provisions govern deposits of revenues into the trust fund and approve expenditure purposes in authorizing statutes as in effect on the date of enactment of the latest authorizing Act. The authorizing Acts provide for specific trust fund expenditure programs.

Authorized expenditures from the Airport and Airway Trust Fund include the following principal programs:

1. Airport Improvement Program ("AIP") (airport planning, construction, noise compatibility programs, and safety projects);

2. Facilities and Equipment ("F&E") program (costs of acquiring, establishing, and improving the air traffic control facilities);

3. Research, Engineering, and Development ("RE&D") program (Federal Aviation Administration research and development activities); and

4. Federal Aviation Administration Operations and Maintenance ("O&M") programs.

Projected balance of the Airport and Airway Trust Fund

CBO projects that tax revenues, transfers, and interest to the Airport and Airway Trust Fund will exceed outlays of the fund throughout the 2020-2030 budget window, see Table 2 below. As a result, the end of year cash balance of the fund is expected to grow from $19.9 billion in FY 2020 to almost $45 billion in FY 2030. Note that CBO's projections assume that taxes credited to the Airport and Airway Trust Fund will continue to be collected after the current scheduled expiration in 2023.

[30] Sec. 9502 and 49 U.S.C. sec. 48101, et seq.

Table 2

PROJECTED BALANCES OF THE AIRPORT AND AIRWAY TRUST FUND

January 2020

	Est.	Projected								
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	By fiscal year, in millions of dollars										
CASH BALANCES											
Start-of-Year Cash Balance	18,612	19,881	21,115	22,494	24,155	26,083	28,318	30,888	33,812	37,121	40,838
Revenues and Transfers	17,683	18,334	18,976	19,631	20,300	20,977	21,666	22,395	23,150	23,924	24,716
Interest	267	305	346	377	393	415	441	476	518	569	628
Outlays	16,681	17,406	17,943	18,347	18,765	19,157	19,538	19,946	20,360	20,775	21,202
End-Of-Year Cash Balance	19,881	21,115	22,494	24,155	26,083	28,318	30,888	33,812	37,121	40,838	44,980
UNCOMMITTED BALANCES											
Start-of-Year Uncommitted Balance	6,541	6,822	7,495	8,524	9,915	11,666	13,776	16,278	19,201	22,583	26,447
Revenues, Transfers, and Interest	17,950	18,639	19,322	20,008	20,693	21,392	22,107	22,870	23,669	24,493	25,344
Amounts Made Available for Obligation from Trust Fund	17,669	17,967	18,293	18,617	18,942	19,282	19,606	19,947	20,287	20,628	20,984
End-Of-Year Uncommitted Balance	6,822	7,495	8,524	9,915	11,666	13,776	16,278	19,201	22,583	26,447	30,807
SUMMARY OF FUNDING											
PROJECTED BUDGET AUTHORITY FROM TRUST FUND											
Amounts Made Available for Obligation from Trust Fund	17,669	17,967	18,293	18,617	18,942	19,282	19,606	19,947	20,287	20,628	20,984
Trust fund resources as % of total aviation funding	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
BUDGET AUTHORITY FROM GENERAL FUND											
Contribution to FAA Operations	111	116	120	124	128	133	137	141	146	151	156
General fund appropriation as % of total funding	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
TOTAL PROJECTED BUDGET AUTHORITY FOR AVIATION PROGRAMS	17,780	18,083	18,413	18,741	19,070	19,415	19,743	20,088	20,433	20,779	21,140

C. Inland Waterways Trust Fund Excise Tax

Tax and exemptions

A 29-cents-per-gallon excise tax is imposed on fuel used in powering commercial cargo vessels on a designated system of inland or intra-coastal waterways (the "inland waterways excise tax").[31] This tax is permanent. The tax applies to fuel used on any specified inland or intra-coastal waterway of the United States in the business of transporting property (other than fish or other aquatic animal life caught on the voyage) for compensation or hire, or in transporting property in the business of the owner, lessee, or operator of the vessel other than fish or other aquatic animal life caught on the voyage.[32] The inland waterways excise tax is a use tax, imposed on the boat operator.

Exemptions are provided for vessels designed primarily for use on the high seas which have a draft of more than 12 feet ("deep-draft ocean-going vessels"), for vessels used primarily for transportation of persons, and for State or local government vessels engaged in governmental business.[33]

For fiscal year 2018, the Inland Waterways Trust Fund financing rate produced $119.5 million in taxes.[34]

Overview of Inland Waterways Trust Fund expenditure provisions

Operation of the Inland Waterways Trust Fund is governed by parallel provisions of the Code and authorizing statutes.[35] The Code provisions govern deposit of receipts from the fuel tax into the Trust Fund and approve general expenditure purposes. The authorizing statutes specify expenditure programs.

Amounts in the Inland Waterways Trust Fund are available, as provided by appropriation Acts, for making construction and rehabilitation expenditures for navigation on the inland and coastal waterways of the United States described in section 206 of the Inland Waterways

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[31] Sec. 4042. Like other taxable motor fuels, inland waterway fuels are subject to an additional excise tax of 0.1 cents per gallon to fund the LUST Trust Fund.

[32] The term "inland or intra-coastal waterway of the United States" means any inland or intra-coastal waterway of the United States which is described in section 206 of the Inland Waterways Revenue Act of 1978 and includes the Mississippi River upstream from Baton Rouge, Louisiana, the Mississippi River's tributaries, and specified waterways, including the Gulf of Mexico and Atlantic Intra-coastal Waterways, and the Tennessee-Tombigbee Waterway.

[33] Sec. 4042(c)(4) also provides an exemption with respect to certain of LASH (lighter-aboard-ship) and SEABEE ocean-going barges. However, LASH and SEABEE vessels are no longer in use.

[34] Internal Revenue Service, Statistics of Income Bulletin, Historical Table 20, "Federal Excise Taxes Reported to or Collected by the Internal Revenue Service, Alcohol and Tobacco Tax and Trade Bureau, and Customs Service, by Type of Excise Tax, Fiscal Years 1999-2018," available at http://www.irs.gov/pub/irs-soi/histab20.xls.

[35] Sec. 9506 and 33 U.S.C. sec. 2212.

Revenue Act of 1978, as in effect on the date of the enactment of section 9506. There is a limit of 50 percent that may be paid from the Inland Waterways Trust Fund for the cost of any construction under section 102(a) of the Water Resources Development Act of 1986 (as in effect on the date of enactment of sec. 9506). The remaining 50 percent is to be paid from the General Fund.

Projected balance of the Inland Waterways Trust Fund

CBO projects that outlays from the Inland Waterways Trust Fund throughout the 2020-2030 budget window, see Table 3 below. As a result, a cumulative shortfall is projected beginning in FY 2023. By FY 2030, the cumulative shortfall is expected to be $293 million.

Table 3

CBO January 2020 Baseline Estimates of Spending and Revenues for the Inland Waterways Trust Fund
Millions of Dollars, by Fiscal Year January 2020

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Start-of-Year Balance	69	56	39	18	a	a	a	a	a	a	a
Tax Revenues and Interest	118	117	116	114	113	112	111	110	109	108	108
2020 Budget Authority Inflated[b]	131	134	137	139	142	145	148	151	154	157	160
End-of-Year Balance	56	39	18	a	a	a	a	a	a	a	a
Memorandum:											
Cumulative Shortfall[a]	n.a.	n.a.	n.a.	-7	-36	-69	-106	-147	-192	-241	-293

Components may not sum to totals because of rounding; n.a. = not applicable.

a. Under current law, the Inland Waterways Trust Fund cannot incur negative balances. However, following the rules governing baseline projections in the Balanced Budget and Emergency Deficit Control Act of 1985, CBO's baseline for inland waterway spending reflects the assumption that obligations presented to the Inland Water Trust Fund will be paid in full. The memorandum to this table shows the cumulative shortfall of fund balances assuming spending consistent with CBO's January 2020 baseline. Following the rules for baseline construction, those amounts are estimated by adjusting the obligation limitations enacted under the P.L. 116-94, the Further Consolidated Appropriations Act, 2020, by projected inflation.

b. The budget authority provided in 2020 is inflated in the baseline to provide an estimate of the appropriation level for the outyears. Each year the budget authority is transferred out of the trust fund to the Corps of Engineers construction account and expended over a few years.

c. Estimates of trust fund balances reflect CBO's best estimate of likely outcomes under current law. Actual balances could be higher or lower, depending on the accuracy of revenue and spending estimates.

D. Harbor Maintenance Trust Fund Excise Tax

Tax and exemptions

A 0.125-percent excise tax is imposed on the value of commercial cargo loaded or unloaded at taxable United States ports and on charges for transportation of passengers to or from such ports.[36] No tax is imposed on cargo movements within a U.S. port. The tax is permanent. Unlike most Federal excise taxes, the harbor maintenance excise tax is administered by U.S. Customs and Border Protection (rather than the Internal Revenue Service or the Treasury Department's Alcohol and Tobacco Tax and Trade Bureau (the "TTB")). Administrative rules applicable to the tax are those applicable to customs duties. Shippers and importers are liable for the tax.

The tax generally is imposed on all cargo (other than exports) and passengers that are loaded or unloaded at a U.S. port, defined as any channel or harbor in the United States that is open to public navigation. The tax does not apply to waterways where the inland waterways fuels excise tax is imposed or to ports with respect to which no Federal funds have been used since 1977 for construction, maintenance, or operation, or which were de-authorized by Federal law before 1985. Transportation at ports on the Columbia River is taxable only if the ports are downstream of the Bonneville lock and dam.

In addition to exported cargo, the tax does not apply to cargo shipped between the continental United States and Alaska (except for crude oil), Hawaii, and/or U.S. possessions, or to cargo shipped between Alaska, Hawaii, and/or such possessions for ultimate use or consumption in those locations. This exemption includes intra-state/U.S. possession cargo movements as well as passenger cruises within Alaska or Hawaii that also include travel in international waters, if the cruises do not include any stops at ports of call located outside the State from which the cruise begins. Transportation on regularly scheduled ferries transporting passengers (and their vehicles) that operate within the United States or between the United States and contiguous countries (*e.g.*, Canada) are not subject to tax. There is an exemption for cargo owned by nonprofit organizations that is intended for use in humanitarian or development assistance overseas and by U.S. government agencies. Ships' stores and fish (not previously loaded on shore) also are exempt.

For fiscal year 2018, the harbor maintenance tax produced $1.5 billion in taxes.[37]

Overview of Harbor Maintenance Trust Fund expenditure provisions

Operation of the Harbor Maintenance Trust Fund is governed by parallel provisions of the Code and authorizing statutes.[38] The Code provisions govern deposits of revenues into the

[36] Sec. 4461.

[37] U.S. Department of the Treasury Bureau of the Fiscal Service, Treasury Direct, *Harbor Maintenance Trust Fund*, 96X8863, September 2018 (uploaded October 17, 2018) ftp://ftp.publicdebt.treas.gov/dfi/tfmb/dfihm0918.pdf.

[38] Sec. 9505 and Pub. L. No. 104-303.

Harbor Maintenance Trust Fund and approve general expenditure programs. The authorizing statutes specify expenditure programs.

The Harbor Maintenance Trust Fund generally is used for financing the operations and maintenance costs for federally authorized public harbors and channels for commercial navigation incurred in carrying out section 210 of the Water Resources Development Act of 1986 (as in effect on the date of the enactment of the Water Resources Development Act of 1996). The U.S. Army Corps of Engineers oversees the harbor maintenance activities. Harbor Maintenance Trust Fund expenditures have principally been for the operations and maintenance costs of access channels to deep-draft harbors, *i.e.*, dredging expenses and not channel deepening projects.

Certain ancillary activities directly related to maintenance dredging or related to keeping a waterway unobstructed also are financed from the Harbor Maintenance Trust Fund.[39] Further, the administrative costs of collecting the harbor maintenance tax (not to exceed $5 million for any fiscal year) are authorized to be paid from the Trust Fund.

Projected balance of the Harbor Maintenance Trust Fund

Although CBO projects that outlays from Harbor Maintenance Trust Fund will exceed tax revenues and interest through FY 2023, end of year cash balances are projected to remain above $9 billion throughout the budget window. By FY 2030, the end of year cash balance of the fund is expected to reflect a small increase, growing from $9.2 billion in FY 2020 to $10 billion in FY 2030.

[39] See 33 U.S.C. sec. 2241(2).

Table 4

CBO January 2020 Baseline Estimates of Spending and Revenues for the Harbor Maintenance Trust Fund
Millions of Dollars, by Fiscal Year

January 2020

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Start-of-Year Balance	9,307	9,263	9,237	9,163	9,145	9,161	9,206	9,286	9,400	9,555	9,758
Tax Revenues and Interest	1,627	1,679	1,668	1,761	1,832	1,899	1,970	2,044	2,123	2,209	2,296
2020 Budget Authority Inflated[a]	1,671	1,705	1,742	1,779	1,816	1,854	1,890	1,930	1,968	2,006	2,046
End-of-Year Balance	9,263	9,237	9,163	9,145	9,161	9,206	9,286	9,400	9,555	9,758	10,008

Components may not sum to totals because of rounding.

a. The budget authority provided in 2020 is inflated in the baseline to provide an estimate of the appropriation level for the outyears. Each year the budget authority is transferred out of the trust fund to other federal accounts (mostly to other accounts within the Corps of Engineers) and expended over a few years.

b. Estimates of trust fund balances reflect CBO's best estimate of likely outcomes under current law. Actual balances could be higher or lower, depending on the accuracy of revenue and spending estimates.

II. TRADITIONAL FINANCING AND OTHER TAX INCENTIVES

A. Tax-Exempt Financing for Public Infrastructure

Overview

Interest paid on bonds issued by State and local governments generally is excluded from gross income for Federal income tax purposes. Because of the income exclusion, investors generally are willing to accept a lower rate on tax-exempt bonds than they might otherwise accept on a taxable investment. This, in turn, lowers the borrowing costs for the beneficiaries of such financing.

Bonds issued by State and local governments may be classified as either governmental bonds or private activity bonds. Governmental bonds are bonds the proceeds of which are primarily used to finance governmental functions or which are repaid with governmental funds. Private activity bonds are bonds in which the State or local government serves as a conduit providing financing to nongovernmental persons (*e.g.*, private businesses or individuals). The exclusion from income for interest paid on State and local bonds does not apply to private activity bonds, unless the bonds are issued for certain permitted purposes ("qualified private activity bonds") and other Code requirements are met.

Like other activities carried out and paid for by State and local governments, the construction, renovation, and operation of governmental infrastructure projects are eligible for financing with the proceeds of governmental bonds. In addition, certain privately used infrastructure projects may be financed with qualified private activity bonds.

Tax-exempt governmental bonds

Present law does not limit the types of facilities that can be financed with governmental bonds. Thus, State and local governments can issue tax-exempt, governmental bonds to finance a broad range of infrastructure projects, including highways, railways, airports, and sewage facilities. However, while the types of projects eligible for governmental bond financing are not circumscribed, present law imposes restrictions on the parties that may benefit from such financing. For example, present law limits the amount of governmental bond proceeds that can be used by nongovernmental persons. Use of bond proceeds by nongovernmental persons in excess of amounts permitted by present law may result in such bonds being treated as taxable private activity bonds, rather than governmental bonds. The Code defines a private activity bond as any bond that satisfies (1) the private business use test and the private security or payment test ("the private business test"), or (2) "the private loan financing test."[40] Generally, private activity bonds are taxable unless issued as qualified private activity bonds.

[40] Sec. 141. For a more detailed description of the private activity bond tests, see Joint Committee on Taxation, *Overview of Selected Provisions Relating to the Financing of Surface Transportation Infrastructure*

Qualified private activity bonds

Qualified private activity bonds are tax-exempt private activity bonds issued to provide financing for specified privately used facilities. The definition of a qualified private activity bond includes an exempt facility, qualified mortgage, veterans' mortgage, small issue, redevelopment, 501(c)(3), or student loan bond.[41]

Exempt facility bonds are often used to finance infrastructure projects. To qualify as an exempt facility bond, 95 percent of the net proceeds must be used to finance an eligible facility.[42] Facilities eligible for this financing include the following:

- Airports,
- Ports (docks and wharves),
- Mass commuting facilities,
- Facilities for the furnishing of water,
- Sewage facilities,
- Solid waste disposal facilities,
- Qualified residential rental projects,
- Facilities for the local furnishing of electric energy or gas,
- Local district heating or cooling facilities,
- Qualified hazardous waste facilities,
- High-speed intercity rail facilities,
- Environmental enhancements of hydro-electric generating facilities,
- Qualified public educational facilities,
- Qualified green building and sustainable design projects, and
- Qualified highway or surface freight transfer facilities.[43]

Generally, qualified private activity bonds are subject to a number of eligibility restrictions that do not apply to governmental bonds. For example, the aggregate volume of most qualified private activity bonds is restricted by annual State volume limitations (the "State

(JCX-97-15), June 23, 2015. This document can be found on the Joint Committee on Taxation website at www.jct.gov.

[41] Sec. 141(e).

[42] Sec. 142(a).

[43] Sec. 142(a)(1)-(15).

volume cap").[44] For calendar year 2020, the State volume cap, which is indexed for inflation, equals $105 per resident of the State, or $321,775,000, if greater.[45]

Qualified private activity bonds also are subject to additional limitations under section 147, including a substantial user limit, a bond maturity restriction, a limit on financing land acquisition, a limit on financing existing property absent substantial rehabilitation, certain prohibited facilities, a public approval requirement, and a limit on financing issuance costs.

Rules governing private activity bonds for selected infrastructure facilities

Airports

Exempt facility bonds may be issued to finance airports. Exempt facility bonds for airports are not subject to the State volume cap. However, all tax-exempt-bond-financed airport property must be governmentally owned. Property eligible for this financing includes land, terminals, runways, public parking facilities, and related equipment. Airplanes are not eligible for tax-exempt financing. Additionally, certain real property facilities (and related equipment) are excluded from this financing: (1) hotels and other lodging facilities; (2) retail facilities (including food and beverage facilities) located in a terminal, if the facilities are in excess of a size necessary to serve passengers and employees at the airport; (3) office buildings for individuals who are not employees of a governmental unit or of the public airport operating authority; and (4) industrial parks or manufacturing facilities.

Port facilities

Exempt facility bonds may be issued to finance port ("dock and wharf") facilities and related storage and training facilities. Facilities that are specifically ineligible for financing with airport bonds may not be financed with port bonds. Further, ships and other vessels are not eligible for private activity tax-exempt bond financing. All property financed with these bonds must be governmentally owned. Exempt facility bonds issued for ports are not subject to the State volume cap.

Mass commuting facilities

Exempt facility bond financing for mass commuting facilities is subject to restrictions similar to those that apply to such bonds for airports and port facilities. All property financed

[44] The following private activity bonds are not subject to the State volume cap: qualified 501(c)(3) bonds, exempt facility bonds for airports, docks and wharves, environmental enhancements for hydroelectric generating facilities, and exempt facility bonds for solid waste disposal facilities that are to be owned by a governmental unit. The State volume cap does not apply to 75 percent of exempt facility bonds issued for high-speed intercity rail facilities (100 percent if the high-speed intercity rail facility is to be owned by a governmental unit). Qualified veterans mortgage bonds, qualified public educational facility bonds, qualified green building and sustainable project design bonds, and qualified highway or surface freight transfer facility bonds also are not subject to the State volume cap, but the Code subjects such bonds to volume limitations specific to the category of bonds.

[45] Rev. Proc. 2019-44, 2019-47 I.R.B. 1099, November 18, 2019.

with these bonds must be governmentally owned. Further, "rolling stock" (*e.g.*, buses and rail cars) is not eligible for financing with exempt facility bonds.

High-speed intercity rail facilities

The definition of an exempt facility bond includes bonds issued to finance high-speed intercity rail facilities.[46] A facility qualifies as a high-speed intercity rail facility if it is a facility (other than rolling stock) for fixed guideway rail transportation of passengers and their baggage between metropolitan statistical areas.[47] The facilities must use vehicles that are reasonably expected to be capable of attaining a maximum speed in excess of 150 miles per hour between scheduled stops, and the facilities must be made available to members of the general public as passengers.

Unlike other bond-financed transportation facilities, high-speed intercity rail facilities may be privately owned. However, if the bonds are to be issued for a nongovernmental owner of the facility, such owner must irrevocably elect not to claim depreciation or credits with respect to the property financed by the net proceeds of the issue.[48]

Seventy-five percent of the principal amount of the bonds issued for high-speed rail facilities is exempt from the volume cap.[49] If all the property to be financed by the net proceeds of the issue is to be owned by a governmental unit, then such bonds are completely exempt from the volume cap.

Qualified highway or surface freight transfer facility bonds

Present law authorizes the issuance of tax-exempt private activity bonds to finance qualified highway or surface freight transfer facilities. A qualified highway facility or surface freight transfer facility is: (1) a surface transportation project which receives Federal assistance under title 23 of the United States Code; (2) an international bridge or tunnel project (for which an international entity authorized under Federal or State law is responsible) which receives Federal assistance under title 23 of the United States Code; or (3) any facility for the transfer of freight from truck to rail or rail to truck which receives Federal assistance under title 23 or title 49 of the United States Code.

Qualified highway or surface freight transfer facility bonds are not subject to the State volume limitations. Rather, the Secretary of Transportation is authorized to allocate a total of

[46] Secs. 142(a)(11) and 142(i).

[47] A metropolitan statistical area for this purpose is defined by reference to section 143(k)(2)(B). Under that provision, the term "metropolitan statistical area" includes the area defined as such by the Secretary of Commerce.

[48] Sec. 142(i)(2).

[49] Sec. 146(g)(4).

$15 billion of issuance authority to qualified highway or surface freight transfer facilities in such manner as the Secretary determines appropriate.[50]

The qualified highway or surface freight transfer facility bond provision was enacted in 2005 as part of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users ("SAFETEA-LU").[51] As reflected below, as of November 19, 2019, the Department of Transportation has made allocations of approximately $13.05 billion of the $15 billion it is authorized to allocate. Of the $13.05 billion that has been allocated, approximately $12 billion of bonds have been issued.[52]

[50] See U.S. Department of Transportation, *Notice of Solicitation for Requests for Allocations of Tax-exempt Financing and Request for Comments*, 71 Fed. Reg. 642 (January 5, 2006) and Internal Revenue Service, Notice 2006-45, *Exempt Facility Bonds for Qualified Highway or Surface Freight Transfer Facilities*, 2006-20 I.R.B. 891 (May 15, 2006).

[51] Section 11143 of Pub. L. No. 109-59.

[52] U.S. Department of Transportation, Build America Bureau, Private Activity Bonds, Current Status, as of November 19, 2019, available at https://www.transportation.gov/buildamerica/programs-services/pab.

Bonds Issued ($000s)

Capital Beltway HOT Lanes, VA	$589,000
North Tarrant Express, TX	$400,000
IH 635 Managed Lanes (LBJ Freeway), TX	$615,000
Denver RTD Eagle Project (East Corridor & Gold Line), CO	$397,835
CentralPoint Intermodal Center, Joliet, IL	$150,000
CentralPoint Intermodal Center, Joliet, IL	$75,000
Downtown Tunnel/Midtown Tunnel/MLK Extension, Norfolk, VA	$675,004
I-95 HOV/HOT Lanes, Northern VA	$241,950
Ohio River Bridges East End Crossing, IN	$676,805
North Tarrant Express Segments 3A & 3B, Fort Worth, TX	$274,030
Goethals Bridge, Staten Island, NY	$460,915
U.S. 36 Managed Lanes/BRT Phase 2, Denver Metro Area, CO	$20,360
I-69 Section 5, Bloomington to Martinsville, IN	$243,845
Rapid Bridge Replacement Program, PA	$721,485
Portsmouth Bypass, OH	$227,355
I-77 Managed Lanes, NC	$100,000
CenterPoint Intermodal Center, Joliet, IL	$100,000
SH-288, TX	$272,635
CenterPoint Intermodal Center, Joliet, IL	$130,000
Purple Line, MD	$313,035
I-395 Express Lanes, VA	$232,995
Transform 66, VA	$737,000
AAF-Brightline Phase I, FL	$600,000
Central 70, CO	$114,660
I-75 Modernization Segment 3	$610,300
AAF-Brightline Phase 2, FL	$1,150,000
AAF-Brightline Phase 2, FL	$950,000
Fredericksburg Express Lanes Extension, VA	$262,000
North Tarrant Expressway 3C, TX	$653,865

Subtotal……..……..$11,995,074

Allocations ($000s)

CenterPoint Intermodal Center, Joliet, IL	$150,000
Gilcrease Expressway West Turnpike Project, OK	$125,000
I-10 Mobile River Bridge and Bayway Project, AL	$420,000
Cibolo Parkway and Cibolo Expressway Project, TX	$200,000
DC Smart Lighting, DC	$160,000

Subtotal…….$1,055,000

Grand Total…….…….$13,050,074

Public works facilities

Exempt facility bonds may be issued to finance various types of public works facilities, including facilities for the furnishing of water, sewage facilities, solid waste disposal facilities, local district heating or cooling facilities, and qualified hazardous waste facilities.[53] The foregoing facilities generally may be privately owned. Exempt facility bonds issued to finance such facilities are subject to the State volume cap, with the exception of solid waste disposal facilities that are to be owned by a governmental unit.

A facility for the furnishing of water must meet the following two requirements: (1) the water is or will be made available to the public (including electric utility, industrial, agricultural, or commercial users); and (2) either the facility is operated by a governmental unit or the rates for the furnishing or sale of the water have been established or approved by a State or political subdivision thereof, by an agency or instrumentality of the United States, or by a public service or public utility commission or other similar body of any State or political subdivision thereof.[54]

A local district heating or cooling facility means property used as an integral part of a local district heating or cooling system. Such a system must consist of a pipeline or network providing hot water, chilled water, or steam to two or more users for (1) residential, commercial, or industrial heating or cooling, or (2) processing steam. A local system must include facilities furnishing heating or cooling to an area consisting of a city and one contiguous county.[55]

A qualified hazardous waste facility is a facility for the disposal of hazardous waste by incineration or entombment that meets certain additional requirements specified in the Code.[56]

Expired or repealed provisions

The authority to issue new tax credit bonds and direct-pay bonds was prospectively repealed by Public Law 115-97. The authority to issue two other types of tax-credit bonds, recovery zone economic development bonds and Build America Bonds, expired on January 1, 2011. In addition, the exclusion from gross income for a bond issued to advance refund another tax-exempt bond was prospectively repealed by Public Law 115-97, as described below.

Tax-credit bonds and direct-pay bonds

In general

Tax-credit bonds provide tax credits to investors to replace a prescribed portion of the interest cost. The borrowing subsidy generally is measured by reference to the credit rate set by the Treasury Department. Tax-credit bonds include qualified tax credit bonds, which have

[53] Sec. 142(a)(4), (5), (6), (9), and (10).

[54] Sec. 142(e).

[55] Sec. 142(g).

[56] Sec. 142(h).

certain common general requirements, and include new clean renewable energy bonds, qualified energy conservation bonds, qualified zone academy bonds ("QZABs"), and qualified school construction bonds.

An issuer could elect to issue certain tax credit bonds as "direct-pay bonds." Instead of a credit to the holder, with a "direct-pay bond" the Federal government pays the issuer a percentage of the interest on the bonds. The following tax credit bonds were permitted to be issued as direct-pay bonds: new clean renewable energy bonds, qualified energy conservation bonds, and qualified school construction bonds. QZABs could be issued as direct-pay bonds, but such an election was not available regarding any allocation of the national zone academy bond allocation after 2010 or any carryforward of such allocations.

As noted above, the authority to issue new tax credit bonds and direct-pay bonds was prospectively repealed by Public Law 115-97 (*i.e.*, for bonds issued after December 31, 2017).

Build America Bonds

The Build America Bonds program, part of the American Recovery and Reinvestment Act of 2009 ("ARRA"[57]), provided a subsidy to State and local governments to finance capital projects, including the development of infrastructure. As noted above, the authority to issue bonds under the program expired December 31, 2010.

Under the Build America Bonds program, an issuer could elect to have an otherwise tax-exempt bond, issued prior to January 1, 2011, treated as a "Build America Bond."[58] In general, Build America Bonds are taxable governmental bonds whose interest is subsidized by the Federal government by means of a tax credit to the holder ("tax-credit Build America Bonds") or, in the case of certain qualified bonds, a direct payment to the issuer ("direct-pay Build America Bonds").[59]

Although the authority existed to issue Build America Bonds that provided for a tax credit to the bond holder, most Build America Bonds were issued as direct-pay Build America Bonds. Under a special rule, in lieu of the tax credit to the holder, the issuer is allowed a refundable credit equal to 35 percent of each interest payment made under such bond.[60]

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[57] Pub. L. No. 111-5.

[58] Sec. 54AA (as in effect prior to its repeal by sec. 13404(a) of Pub. L. No. 115-97).

[59] Tax-credit Build America Bonds could be issued to finance any governmental purpose for which tax-exempt governmental bonds (excluding private activity bonds under section 141) could be issued under section 103. The eligible uses of proceeds and types of financings for direct-pay Build America Bonds are more limited than for tax-credit Build America Bonds. Direct-pay Build America Bonds could be issued to finance only capital expenditures that could have been financed with tax-exempt governmental bonds.

[60] Sec. 54AA(g)(1) (as in effect prior to its repeal by sec. 13404(a) of Pub. L. No 115-97).

Sequestration and direct-pay bonds

As noted above, issuers could elect to issue certain tax-credit bonds, including Build America Bonds, as direct-pay bonds under section 6431. Pursuant to the Balanced Budget and Emergency Deficit Control Act of 1985, as amended, sequestration applies to direct-pay bonds. For such bonds, refund payments and refund offset transactions processed are subject to a percentage reduction (5.9 percent for fiscal year 2020). Bonds subject to sequestration include Build America Bonds, qualified school construction bonds, QZABs, new clean renewable energy bonds, and qualified energy conservation bonds for which the issuer elected to receive a direct credit subsidy pursuant to section 6431.[61]

Advance Refundings

A refunding bond is a bond that is used to pay principal, interest, or redemption price on a prior bond issue (the refunded bond). Different rules apply to current as opposed to advance refunded bonds. A current refunding occurs when the refunded bond is redeemed within 90 days of issuance of the refunding bond. An advance refunding occurs when the refunding bond is issued more than 90 days before the redemption of the refunded bond. In an advance refunding, two issues of tax-exempt bonds remain outstanding simultaneously for more than 90 days to finance the same project or activity.[62]

Prior to Public Law 115-97, the exclusion from gross income for State and local bonds applied to current refundings and, in certain limited circumstances, to advance refundings. For example, governmental bonds and qualified 501(c)(3) bonds generally could be advance refunded one time.[63] Public Law 115-97 repealed the exclusion from gross income for interest on a bond issued to advance refund another tax-exempt bond, effective for refunding bonds issued after December 31, 2017.

[61] Additional information, including a summary of prior-year sequestration reduction rates, is available on the IRS's website, at https://www.irs.gov/tax-exempt-bonds/effect-of-sequestration-on-state-local-government-filers-of-form-8038-cp.

[62] See S. Rep. No. 99-313, p. 828 (1986).

[63] Sec. 149(d)(3) (as in effect prior to Public Law 115-97). In addition, prior to Public Law 115-97, private activity bonds other than qualified 501(c)(3) bonds could not be advance refunded. Sec. 149(d)(2) (as in effect prior to Public Law 115-97). Furthermore, in the case of an advance refunding bond that results in interest savings, the refunded bond was required to be redeemed on the first call date 90 days after the issuance of the refunding bond that results in debt service savings. Sec. 149(d)(3)(A)(iii) and (B) (as in effect prior to Public Law 115-97); Treas. Reg. sec. 1.149(d)-1(f)(3).

B. New Markets Tax Credit

Background and scope

In general

The new markets tax credit ("NMTC") is a geography-based tax credit program. Under section 45D(a), an investor may claim tax credits for a qualified equity investment in a qualified community development entity ("CDE"). The qualified CDE designates equity investments as qualified equity investments, rendering the investor eligible to receive tax credits. The qualified CDE can only designate up to an amount allocated to it by the Department of the Treasury's Community Development Financial Institutions Fund ("CDFI Fund"). The CDFI Fund allocates amounts to qualified CDEs through a competitive application process.

The amount of NMTC is determined on a credit allowance date as an amount equal to the applicable percentage of the investment in the qualified CDE on that date. The applicable percentage is five percent for the first three years of the investment and six percent for the remaining four years, for a total credit of 39 percent over seven years. The credit allowance date is the date of the investment and the next six anniversary dates of the investment.

To continue to be eligible for tax credits, the taxpayer must continue to hold the qualified equity investment on the credit allowance date of each year. In other words, if the qualified equity investment ceases, or ceases to be qualified, the remaining tax credits are no longer allowed. The credits already claimed may also be subject to recapture if the CDE ceases to be qualified, if the proceeds cease to be used in a qualified manner, or if the taxpayer redeems its qualified equity investment.

Regulated financial institutions provide most of the equity for NMTC transactions. In addition to receiving the NMTC, financial institutions often receive credit under the Community Reinvestment Act for investing in low-income census tracts.

Substantially all the qualified equity investment must be used by the qualified CDE to provide investments in low-income communities through qualified active low-income community businesses.

Qualifying geography

The NMTC provisions require CDEs to serve or provide investment capital for low-income communities or low-income persons. A low-income community is either a population census tract that meets certain criteria or a specific area designated by the Secretary. Specifically, a "low-income community" is a population census tract with either (1) a poverty rate of at least 20 percent or (2) median family income which does not exceed 80 percent of the greater of metropolitan area median family income or statewide median family income (for a nonmetropolitan census tract, does not exceed 80 percent of statewide median family income). In the case of a population census tract located within a high migration rural county, low-income is defined by reference to 85 percent (as opposed to 80 percent) of statewide median family income. For this purpose, a high migration rural county is any county that, during the 20-year period ending with the year in which the most recent census was conducted, has a net out-

migration of inhabitants from the county of at least 10 percent of the population of the county at the beginning of such period. In addition, a population census tract with a population of less than 2,000 is treated as a low-income community for purposes of the NMTC if such tract is within an empowerment zone (the designation of which is in effect under section 1391) and is contiguous to one or more low-income communities.

CDEs may also qualify for the NMTC if they serve targeted populations, as designated by the Secretary, regardless of the composition of the population census tract or tracts in which the targeted populations live. For this purpose, a "targeted population" is defined by reference to section 103(20) of the Riegle Community Development and Regulatory Improvement Act of 1994 (the "Act") to mean individuals, or an identifiable group of individuals, including an Indian tribe, who are low-income persons or otherwise lack adequate access to loans or equity investments. Section 103(17) of the Act provides that "low-income" means (1) for a targeted population within a metropolitan area, less than 80 percent of the area median family income; and (2) for a targeted population within a nonmetropolitan area, less than the greater of 80 percent of the area median family income or 80 percent of the statewide nonmetropolitan area median family income.

Project structures

In a typical NMTC structure, an intermediary entity (the "investment fund LLC") receives equity investments from investors (usually financial institutions) and debt from other sources. The investment fund LLC's proceeds are then invested as equity investment into a qualified CDE. The qualified CDE in turn makes a qualified low-income community investment in a qualified active low-income community business.

A qualified CDE is any domestic corporation or partnership: (1) whose primary mission is serving or providing investment capital for low-income communities or low-income persons; (2) that maintains accountability to residents of low-income communities by their representation on any governing board of or any advisory board to the CDE; and (3) that is certified by the Secretary as being a qualified CDE. A qualified equity investment means stock (other than nonqualified preferred stock) in a corporation or a capital interest in a partnership that is acquired directly from a CDE for cash and includes an investment of a subsequent purchaser if such investment was a qualified equity investment in the hands of the prior holder. Substantially all the investment proceeds must be used by the CDE to make qualified low-income community investments. For this purpose, qualified low-income community investments include: (1) capital or equity investments in, or loans to, qualified low-income community businesses; (2) certain financial counseling and other services to businesses and residents in low-income communities; (3) the purchase from another CDE of any loan made by such entity that is a qualified low-income community investment; or (4) an equity investment in, or loan to, another CDE.

Although equity investments in qualified active low-income community businesses qualify under the NMTC rules, generally such investments are in the form of loans. Equity investors that own a majority interest in a low-income community business can have their NMTC credits recaptured if the business violates the rules for qualification. However, Treasury regulations provide a "reasonable expectation" safe harbor for CDEs that lend to such a business;

if the CDE "reasonably expects" that the rules are being satisfied, NMTC credits are not subject to recapture.[64]

A qualified active low-income community business is defined as a business that satisfies, with respect to a taxable year, the following requirements: (1) at least 50 percent of the total gross income of the business is derived from the active conduct of trade or business activities in any low-income community; (2) a substantial portion of the tangible property of such business is used in a low-income community; (3) a substantial portion of the services performed for such business by its employees is performed in a low-income community; and (4) less than five percent of the average of the aggregate unadjusted bases of the property of such business is attributable to certain financial property or to certain collectibles.

Allocation process

The CDFI Fund annually allocates NMTCs to CDEs, under a competitive application process. CDEs, in turn, allocate NMTCs to equity investors. The maximum amount of NMTCs that the CDFI Fund could allocate was $3.5 billion per year for calendar years 2010 through 2019 and is $5 billion for calendar year 2020. The NMTC expires on December 31, 2020.

For the 2018 allocation application round, the CDFI Fund awarded 73 CDEs $3.5 billion in NMTCs from a total of 214 applications requesting $14.8 billion.[65] The successful CDE applicants focused on different types of investments and geographic areas, including financing projects ranging from large manufacturing plants to grocery and retail stores.

Applications for NMTCs are reviewed in two phases.[66] In Phase 1, applications are reviewed, scored, and ranked based on two criteria: business strategy and community outcomes. Applicants that meet the minimum scoring thresholds in Phase 1 advance to Phase 2 review and will be provided with "preliminary" awards, in descending order of final rank score, until the available allocation authority is fulfilled. Final rank scores are determined by evaluating management capacity, capitalization strategy, and information regarding previous awards.

In Phase 1, in evaluating and scoring the business strategy criteria, the CDFI Fund is looking for a CDE to articulate, with specificity, its strategy to use an allocation and to describe a long track record serving low-income communities, and of providing products and services like those that it intends to provide through its investments. The CDE can earn "priority points" if it has a track record of five or more years of experience providing capital and/or technical assistance to disadvantaged businesses and communities. For the community outcomes criteria, the CDFI Fund considers the extent to which the CDE is working in particularly economically

[64] Treas. Reg. sec. 1.45(D)-1(d)(6)(i).

[65] Information is available at https://www.cdfifund.gov/news-events/Pages/news-detail.aspx?NewsID=346&Category=Press%20Releases.

[66] The 2019 NMTC program allocation application provides information on reviewer criteria throughout and is available at https://www.cdfifund.gov/Documents/CY%202019%20NMTC%20Application%20-%20FINAL.pdf#search=2019%20NMTC%20program%20allocation%20application. The term "infrastructure" is provided as a business type on page 58 of the application.

distressed or otherwise underserved communities, shows that its projected financing activities will generate demonstrable community outcomes, and demonstrates meaningful engagement with community stakeholders when vetting potential investments. In general, the highest ranked applications provide specifics concerning job creation, community development benefits, and a track record of providing capital and/or technical assistance to disadvantaged businesses and communities.

In Phase 2, management capacity is evaluated based on management experience in low-income communities, asset and risk management, and fulfilling government compliance requirements. Capitalization is evaluated based on an applicant's track record of raising capital, investor commitments (or a strategy to secure such commitments), plan to pass along the benefits of the credit to the underlying businesses, and willingness to invest in amounts that exceed the minimum statutory requirements. Applicants with prior year allocations are evaluated on their effective use of prior-year allocations and whether they have substantiated a need for additional allocation authority.

NMTC and Infrastructure

Since inception of the credit, the CDFI Fund has allocated a total of $57.5 billion in tax credit authority to CDEs and CDEs have disbursed a total of $48.3 billion in qualified equity investment proceeds. The CDFI Fund reports data for all projects (5,799 qualified active low-income community businesses) between fiscal year 2003 and 2017 by State and zip code.[67] The CDFI has also prepared a short report on their dataset which includes some geographic breakdowns (metro/non-metro, levels of economic distress, etc.).[68]

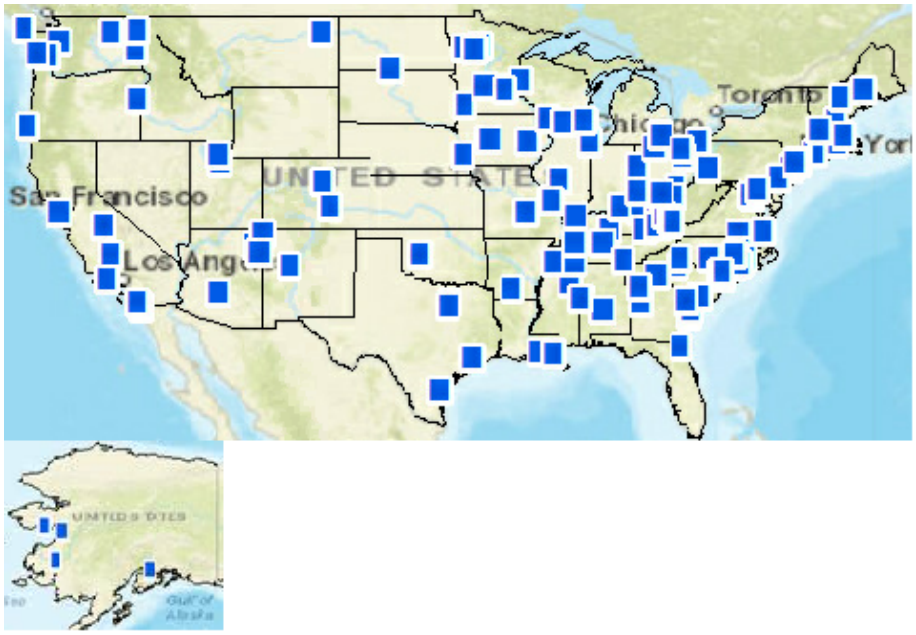
According to the report, 75.9 percent of investments occurred in metropolitan areas, and 75.3 percent of investments occurred in a census tract that experienced at least one criteria of severe distress. The report also indicates that 39.8 percent of the qualified active low-income community businesses that were beneficiaries of a qualified CDE investment were involved with the development or leasing of real estate (and they received $22.9 billion or 47.5 percent of the NMTC investments), 58.9 percent of the qualified active low-income community businesses were operating businesses (and they received $24.6 billion or 50.9 percent of the NMTC investments), and 1.3 percent of the qualified active low-income community businesses were the beneficiaries of loans or investments made by qualified CDEs through other unrelated CDEs (and they received $778 million or 1.6 percent of the NMTC investments).

[67] The information is available at: https://www.cdfifund.gov/Documents/2019%20NMTC%20Public%20Data%20Release_FY_17.xlsx.

[68] The report is available at: https://www.cdfifund.gov/Documents/2019%20NMTC%20Public%20Data%20Release_FY_17-comments%20incorporated_BL%20Edits%20incorporated_Final.pdf.

Over the course of the program, there have been nearly $2 billion out of the $48.3 billion in NMTCs invested in the following categories of infrastructure projects across 41 states:[69]

NMTC Infrastructure Investment	NMTC Amount Invested	#
Broadband	$ 142,849,585	1
Electric Power Generation, Transmission and Distribution	$ 678,983,347	55
Freight	$ 61,979,357	22
Municipal, tribal or government facility	$ 96,760,261	13
Navy yard	$ 18,000,000	1
Parking	$ 556,815,011	45
Parks and Recreation	$ 16,523,081	1
Port operations	$ 2,500,000	1
Telecommunications	$ 54,889,348	9
Urban Transit or supporting business	$ 96,483,000	6
Waste Treatment and Disposal	$ 18,151,250	3
Water, sewage, support activities, water transportation	$ 207,942,141	15
Grand Total	**$ 1,951,876,381**	171



[69] Data and map provided by U.S. Department of the Treasury, CDFI Fund, Office of Financial Strategies and Research.

C. Qualified Opportunity Zones

Background and scope

The qualified opportunity zone rules provide the tax benefits of deferral and exclusion to taxpayers who reinvest gain as equity in qualified opportunity funds, which are investment vehicles organized for the purpose of investing in qualified opportunity zones. A qualified opportunity zone is a census tract that is a low-income community (or, in certain cases, a census tract contiguous with a low-income community) that has received a designation as a qualified opportunity zone by the state government of the state in which the tract is located. A qualified opportunity fund must either (i) directly invest in qualified opportunity zone business property ("QOZBP") or (ii) invest in a partnership or corporation that is a qualified opportunity zone business, which in turn owns QOZBP.

QOZBP consists of tangible property used in the trade or business of the qualified opportunity fund or the qualified opportunity zone business. Tangible property must also satisfy requirements relating to its acquisition, improvement, and use in order to qualify as QOZBP.

Qualified Opportunity Zones and Infrastructure

The qualified opportunity zone rules require investors to hold equity in QOZBP, tangible property located in the qualified opportunity zone. As such, the rules may be used to finance investments in property such as real estate. However, the rules impose several restrictions that may make broader infrastructure projects less feasible.

For example, the requirement of an equity investment within the qualified opportunity zone may preclude infrastructure projects such as telecommunications lines or sewage facilities, that may need to span entire cities or counties, from being qualifying investments. The requirement of an equity investment by the qualified opportunity fund also means that infrastructure-type assets owned by the public sector or quasi-governmental agencies may not be qualifying structures.

An additional rule mandates that less than five percent of the average of the aggregate adjusted bases of the property of the qualified opportunity zone business be attributable to nonqualified financial property. This limits qualified opportunity funds from investing through debt; unlike NMTC investments which have traditionally been made in the form of loans, financial intermediaries are effectively prohibited by the opportunity zone rules. Another rule requires that at least 50 percent of the total gross income of the qualified opportunity zone business must be derived from the active conduct of business in the qualified opportunity zone. This requirement would seem to exclude non-revenue generating public infrastructure. Finally, the requirement that investments must be deployed within a certain timeframe may prevent using the benefit for infrastructure projects that are either too far into their development timeline or too early in the planning process.

III. OTHER FINANCING OPTIONS AND INCENTIVES

A. Vehicle Miles Traveled Tax

In general

A mileage-based tax system, also known as a vehicle miles traveled ("VMT") tax system, charges users a tax based on the number of miles traveled.[70] Unlike tolls, which are attached to a particular structure or area, mileage-based tax systems may directly charge users on all roads and for all driving.[71] A VMT tax has the potential to improve the efficiency of highway financing because the tax can be calibrated closely to the costs that vehicles impose in terms of road damage and congestion, as the tax can vary based on time of day, congestion, type of road, type of vehicle, etc.[72] In addition, a VMT may better align tax revenue with road use compared to a revenue stream based on fuel consumption, because the adoption of more fuel efficient or zero-emission vehicles will not reduce the revenues collected. Fuel taxes might still be imposed in conjunction with a VMT tax, if the objective is to address the pollution costs from burning fossil fuels.

Elements of a VMT

The three fundamental elements in designing a VMT are (1) the tax base, (2) the tax rate, and (3) the method of measuring the number of miles traveled.[73]

Tax base

As the name implies, the tax base of any VMT is composed of the vehicles and the miles they travel. A VMT could be imposed on all vehicles that use public roads and highways, or on a subset, such as trucks, buses, and other heavy vehicles.

The mileage component of the VMT tax base can vary depending on whether the tax is imposed on every mile a vehicle travels, or only on a subset of those miles. For example, a VMT could be designed to count only miles traveled on interstate highways as opposed to miles traveled on all roads.

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[70] Report of the National Surface Transportation Infrastructure Financing Commission, *Paying Our Way: A New Framework for Transportation Finance*, February 2009, p. 128.

[71] A VMT that is narrow in geographical scope and only imposed on certain roads or highways can resemble a toll system.

[72] *Ibid*.

[73] For a more detailed discussion of these elements, see Congressional Budget Office, *Issues and Options for a Tax on Vehicle Miles Traveled by Commercial Trucks*, October 2019.

Tax rate

A VMT could be designed to have a uniform rate per mile for each vehicle on which the tax is imposed. Alternatively, the rate could vary depending on the type of vehicle. For example, heavier vehicles can cause more pavement damage over time, and thus miles traveled by such vehicles might be taxed at a higher rate. A more nuanced approach to a VMT might measure weight per axle, rather than overall weight, to determine the rate of tax. Another rate differentiation option would be to impose a higher rate in urban areas with higher congestion and pollution, and a lower rate in rural areas where those problems are less significant.[74] A VMT could also be designed to have differential rates based on the type of road or bridge being traversed.

Method of measuring miles traveled

The principal options for measuring the number of miles traveled are odometer readings, a radio-frequency reader, or an onboard device that logs the number of miles over a period of time. Using existing vehicle odometers may require the least capital investment but have higher administrative costs over time and only be compatible with a tax base that included all roads and highways.

A radio-frequency reader approach would require a system of pillars or gantries similar to those used on some toll roads to collect the relevant mileage data. This would significantly increase the capital costs associated with implementing the tax but would be compatible with a tax base that includes only interstate highways and certain other designated highways or roads.

An onboard device that logs miles and is capable of transmitting data would eliminate the need to expensive pillars or gantries but would impose additional costs on vehicles that have them. Tracking miles using an onboard device also raises privacy issues, particularly if required for non-commercial vehicles. Although many heavy trucks are already equipped with such devices for non-tax purposes, significant administrative processes would need to be put in place to securely incorporate the data collected by those devices into a VMT system.

Regardless of the method of measuring miles traveled, compared with the current system of fuel excise taxes, a VMT would dramatically increase the number of taxpayers that must be audited and the number of measuring devices that must be tested and authenticated. In addition, new forms would need to be created and significant numbers of taxpayers would have to be educated about their new excise tax obligations. This would require the IRS to dedicate significant resources, both at the front end, to collect and process VMT data, and at the back end to audit tax return information.

[74] For a discussion of a hypothetical urban-rural differentiated VMT, see Ashley Langer, VIram Maheshri, and Clifford Winston, "From Gallons to Miles: A Disaggregate Analysis of Automobile Travel and Externality Taxes," *Journal of Public Economics*, vol. 152, August 2017, pp. 34, 41-44.

B. Tolling

Federal law generally restricts the ability of States to impose tolls on interstate highways.[75] Over the years, various laws passed by Congress have expanded the authority of States to impose tolls in certain circumstances. The Moving Ahead for Progress in the 21st Century Act (MAP-21), enacted in 2012, reinforced the encouragement of tolls on high occupancy vehicle lanes and congestion pricing, and allowed for tolling on new Interstate routes, route extensions, and additional lane capacity (but not on the existing lane capacity).[76]

An expansion of tolling could be achieved in several ways. Additional tolling pilot projects could be encouraged, and tolling-supported finance could be provided, such as more loans for road and bridge construction through the U.S. Department of Transportation's ("DOT") Transportation Infrastructure Finance and Innovation Act program, which would be repaid through user tolls. Another option would be to allow States to toll Federal-aid highways as they see fit, or Interstate Highway segments could be converted to toll roads as they undergo reconstruction in the future, eventually turning all Interstates into toll roads.

The amount of revenue that could be generated by tolling depends heavily on the way in which tolling is implemented. However, broader use of tolling faces a number of constraints. The costs of toll collection may exceed 10 percent of revenues, even if all tolls are collected electronically, not including the cost of physical infrastructure. This compares unfavorably to the cost of collecting the existing federal motor fuels taxes, estimated to be less than one percent of revenues. Many roads, even in urban areas, may not have sufficient traffic willing to pay a high enough toll to cover construction, maintenance, and toll collection costs. The availability of competing non-tolled routes could lead to reduced toll collections and increased congestion on local roads by motorists who use those roads in an effort to reduce their travel costs.

Efforts to make greater use of tolling are likely to draw attention to the Federal role in regulating tolls. Under current law, Federal approval is needed for initial implementation of tolls on roads and bridges that have received Federal aid, but the Federal government has no jurisdiction over toll rates. The law requires that bridge tolls "shall be just and reasonable,"[77] but provides no mechanism for enforcing that provision. More widespread use of tolls is likely to raise significant questions about differences in States' toll rates, preferential tolls for residents of particular jurisdictions, State attempts to collect tolls at borders rather than at internal locations where more residents would be affected, and the relationship between auto tolls and truck tolls. Congress may consider a more precise definition of the current "just and reasonable" requirement and clarify the role of DOT in enforcing tolling regulations and overseeing toll rates.

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[75] 23 U.S.C. sec. 301. Some State toll roads that existed before the creation of the interstate highway system in 1956 and that were later incorporated into that system were allowed to retain their tolls.

[76] Pub. Law No. 112-141. For further discussion of MAP-21 and the other Federal rules on highway tolling, see Robert Kirk, Congressional Research Service, *Tolling U.S. Highways and Bridges* (Report R44910), August 4, 2017, available at https://www.crs.gov/reports/pdf/R44910.

[77] Surface Transportation and Uniform Relocation Assistance Act of 1987, Pub. Law No. 100-17, sec. 135.

C. Infrastructure Bank

As a supplement to existing financing mechanisms for infrastructure, there have been proposals put forth in the past decade to create a "national infrastructure bank" with funding to provide additional financing for infrastructure projects of national and/or regional significance. The proposed legislation typically would establish the bank as a wholly owned government corporation and grant it authority to make loans, loan guaranties, and in some cases grants and equity investments. In these proposals, the board of the bank would consist of directors appointed by the President and confirmed by the Senate.

Generally, the proposals would initially capitalize the infrastructure bank with appropriated Federal funds. Projects eligible for assistance from the bank vary depending on the proposal; some focus on highway and transportation related projects, while others also include energy, water, telecommunications, and environmental projects.[78]

[78] For a discussion of several national infrastructure bank proposals, see William Mallett and Grant Driessen, Congressional Research Service, *Infrastructure Finance and Debt to Support Surface Transportation Investment* (Report R43308), November 17, 2016, p. 19.

D. Public-Private Partnerships

Another mechanism for financing infrastructure is the use of public-private partnerships. The U.S. Department of Transportation defines a public-private partnership broadly to include a contractual agreement formed between public and private sector partners that typically involves "a government agency contracting with a private partner to renovate, construct, operate, maintain, and/or manage a facility or system, in whole or in part, that provides a public service."[79] The private sector historically has participated in the design and construction of U.S. highways, most commonly as contractors to the public sector. A public-private partnership, however, generally shifts more of the economic risks (and attendant rewards) of a transportation project to the private sector than would be the case in a traditional public owner-private contractor relationship. Public-private partnerships take many forms. For example, a public-private partnership might involve a private party operating a project for a period of years following construction and obtaining an economic return based on the relative success of its management ("existing facilities"), or a private party taking on all the design and construction risks for a new project ("new build facilities").[80] State and local governments have shown increasing interest in public-private partnership arrangements as a means of shifting the increasing costs and risks of infrastructure development and maintenance to private parties in exchange for those private parties receiving some economic benefit.[81]

As previously mentioned, some public-private partnerships involve private parties acquiring economic interests in the financing, maintenance, and operation of public highways after they are built.[82] Two arrangements, involving the Chicago Skyway and the Indiana Toll

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[79] U.S. Department of Transportation, Federal Highway Administration, *Innovative Program Delivery*, *Glossary*, "Public-Private Partnership (P3)," available at https://www.fhwa.dot.gov/ipd/glossary/.

[80] This discussion provides a high-level overview of public-private partnerships involving long-term leases of transportation infrastructure assets by a private party, as well those involving the responsibility to design, build, finance, operate, and maintain new transportation infrastructure assets by a private party. The U.S. Department of Transportation categorizes public-private partnerships as either "new build facilities" or "existing facilities." For existing facilities, public-private partnerships are structured as long-term lease and operations and maintenance concessions under which the private partner operates and maintains the facility, in some cases makes improvements to it, and pays an upfront concession fee for the right to operate the toll road and retain toll revenues. For new build facilities, public-private partnerships are structured as design-build-finance-operate-maintain concessions "that bundle together and transfer to a private sector partner responsibilities for design, construction, finance, and long-term operations and maintenance over the concession period." See U.S. Department of Transportation, Federal Highway Administration, *Innovative Program Delivery*, "P3 Defined," available at http://www.fhwa.dot.gov/ipd/p3/defined/default.aspx.

[81] For background on infrastructure investment, see Congressional Budget Office, *Issues and Options in Infrastructure Investment* (May 2008), available at https://www.cbo.gov/sites/default/files/110th-congress-2007-2008/reports/05-16-infrastructure.pdf (public-private partnership discussion pp. 32-33). See also, Department of the Treasury, Office of Economic Policy, *Expanding our Nation's Infrastructure through Innovative Financing* (September 2014), available at https://www.treasury.gov/resource-center/economic-policy/Documents/3_Expanding our Nation's Infrastructure through Innovative Financing.pdf.

[82] For background on public-private partnerships, see CRS Report R45010, *Public Private Partnerships (P3s) in Transportation*, by William J. Mallett (November 2, 2017); CRS Report R43410, *Highway and Public Transportation Infrastructure Provision Using Public-Private Partnerships (P3s)*, by William J. Mallett (March 5,

Road, illustrate how the public-private partnership concept can be applied to transfers of economic interests in existing highways from the public sector to private parties. The Chicago Skyway and Indiana Toll Road deals are structured as very long-term arrangements (99 years and 75 years, respectively).[83] For tax purposes, each transaction can be seen as comprising three operating relationships, each of which in turn runs for the length of the overall arrangement: (i) a lease of the existing infrastructure (the highway itself and associated improvements) from the public owner to the private party; (ii) a grant by the public owner to the private party of a right of way on the public lands underlying that infrastructure; and (iii) a grant of a franchise from the public entity permitting the private party to collect tolls on the highway.[84] In return, the private party paid a large up-front amount to the public owner, and agreed to (i) operate and maintain the road, (ii) invest specified amounts in future improvements, and (iii) accept restrictions on the maximum tolls it could charge. An umbrella concession agreement sets out the long-term rights and obligations of each party including dispute resolution mechanisms.

Alternatively, some private parties take on all the design and construction activities and related risks for a new project (in accordance with standards specified by the public agency), as well as the financing, maintenance, and operation of the infrastructure assets after they are built. The Denver Eagle, an approximately 40-mile commuter rail project (the "Eagle P3"), and the Colorado U.S. 36 Express Lanes Project, a highway project, are examples of a public-private partnership where the public sector transferred the responsibilities to design, build, finance, operate, and maintain the project to the private party.[85] This type of public-private partnership arrangement involves an exclusive right of the private party to design and build new public-use infrastructure assets in accordance with the public agency's specified standards, followed by a lease of the new infrastructure assets from the public owner to the private party for the term of the concession agreement. Unlike public-private partnerships involving long-term leases of previously existing infrastructure assets, the private party in a design-build-finance-operate-maintain concession arrangement generally does not pay a large up-front amount to the public owner. Rather, the costs of construction are generally funded with equity capital, third-party debt, tax-exempt financing, federal loans, and/or federal grants. In return for operating and maintaining the infrastructure assets, the private party agrees to collect fees for the term of the

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2014); and U.S. 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 (Washington, DC: February 2008).

[83] See summaries of these arrangements at U.S. Department of Transportation, Federal Highway Administration, *Innovative Program Delivery* "Project Profiles," available at https://www.fhwa.dot.gov/ipd/project_profiles/il_chicago_skyway.aspx and https://www.fhwa.dot.gov/ipd/project_profiles/in_indiana_toll.aspx.

[84] For a detailed discussion of the tax treatment of certain public-private partnerships involved in transportation infrastructure, see Joint Committee on Taxation, *Overview of Selected Internal Revenue Code Provisions Relating to the Financing of Public Infrastructure* (JCX-7-19), March 4, 2019. This document can be found on the Joint Committee on Taxation website at www.jct.gov.

[85] See summaries of these arrangements at U.S. Department of Transportation, Federal Highway Administration, *Innovative Program Delivery*, "Project Profiles," available at https://www.fhwa.dot.gov/ipd/project_profiles/co_eagle_project.aspx and https://www.fhwa.dot.gov/ipd/project_profiles/co_us36_express_lanes_phase2.aspx.

agreement (*e.g.*, tolls from end users or availability payments from the public owner), which are structured to meet the debt service requirements, costs of operating and maintaining the infrastructure assets, and payments to equity investors. An umbrella concession agreement sets out the long-term rights and obligations of each party including dispute resolution mechanisms.

E. Excise Tax on Freight Transport

The weight of domestic shipments by truck has increased from 9.9 million tons in 2012 to 11.1 million tons in 2018.[86] Freight transport by truck can result in pavement damage, congestions, accidents, and increased air pollution. One proposal to address these externalities and raise additional revenue would be to impose a per mile tonnage tax on freight shipments by heavy trucks. Such a tax would be a variation of a vehicle miles traveled tax and would raise similar implementation issues. One effect of such a tax would be to shift some freight transportation to rail or barge where possible. A more comprehensive tax could be designed to account for these intermodal effects and tax shipments by rail and barge based on the externalities resulting from those modes of transportation as well as their use of public resources (such as dredging in the case barge traffic).

[86] United States Department of Transportation, Bureau of Transportation Statistics, Weight of Shipments by Transportation Mode, available at https://www.bts.gov/weight-shipments-mode, accessed January 17, 2020.

IV. SELECTED PROVISIONS TARGETING HOUSING INFRASTRUCTURE

A. Low-Income Housing Tax Credit

The low-income housing tax credit is provided to States annually and subsequently allocated to owners of certain qualified low-income residential rental property by State housing credit agencies. Generally, the low-income housing tax credit may be claimed over a 10-year period after a low-income building is placed in service. The amount of the credit for any taxable year in the credit period is the applicable percentage of the qualified basis of the qualified low-income building.[87]

Applicable percentage

The applicable percentage for newly constructed or certain substantially rehabilitated housing that is not Federally subsidized is adjusted monthly by the IRS so that the ten annual installments of credits have a present value of 70 percent of the building's qualified basis. The applicable percentage for newly constructed or substantially rehabilitated housing that is Federally subsidized and for certain existing housing that is substantially rehabilitated is calculated so that the ten annual installments of credits have a present value of 30 percent of the building's qualified basis.[88]

Qualified low-income housing projects and qualified low-income buildings

A qualified low-income building is a building that is subject to a 15-year compliance period and is part of a qualified low-income housing project.[89] A qualified low-income housing project is a project that meets the minimum set-aside requirement and other requirements with respect to the set-aside units at all times during the 15-year compliance period.

1) Minimum set-aside requirement

In general, a qualified low-income housing project must meet one of three tests (whichever is elected by the taxpayer) to satisfy the minimum set-aside requirement. The first test is met if 20 percent or more of the residential units in the project are both rent-restricted and occupied by individuals whose income is 50 percent or less of area median gross income (the "20-50 test"). The second test is met if 40 percent or more of the residential units in such project are both rent-restricted and occupied by individuals whose income is 60 percent or less of area median gross income (the "40-60 test"). The third test is met if 40 percent or more (25 percent or

[87] Sec. 42.

[88] The 70-percent present value credit and the 30-percent present value credit are sometimes referred to as the "nine percent credit" and "four percent credit," respectively. For newly constructed non-Federally subsidized buildings placed in service after July 30, 2008, the applicable percentage for the 70-percent present value credit cannot be less than nine percent. Sec. 42(b)(2).

[89] As discussed below, to be eligible for the low-income housing tax credit, the property owner must also enter into an extended use agreement, which is an agreement between the property owner and the State housing finance authority in which the property owner agrees to maintain affordable housing restrictions on the property for a period of 15 years after the initial 15-year compliance period has ended. Sec. 42(h)(6).

more in the case of a project located in a high cost housing area) of the residential units in such project are both rent-restricted and occupied by individuals whose income does not exceed the imputed income limitation designated by the taxpayer with respect to the respective unit (the "average income test"). The imputed income limitation is determined in 10-percentage-point increments, and may be designated as 20, 30, 40, 50, 60, 70, or 80 percent. The average of the imputed income limitations designated must not exceed 60 percent of area median gross income.

2) Rent-restricted unit requirement

The maximum rent that may be charged with respect to a rent-restricted unit depends on the number of bedrooms in the unit. The rent limitation is 30 percent of the qualifying income of a family deemed to have a size of 1.5 persons per bedroom (for example, a two-bedroom unit has a rent limitation based on the qualifying income for a family of three).[90] The limitation applies only to payments made directly by the tenant. Any rental assistance made on behalf of the tenant, such as through section 8 of the United States Housing Act of 1937 or any comparable Federal rental assistance, is not treated as rent. Also, any comparable State or local rental assistance is not treated as rent.

Compliance period and penalty for noncompliance

Qualified low-income housing projects must remain as rental property and must satisfy the minimum set-aside requirement throughout a prescribed compliance period. The compliance period for any building is the period beginning on the first day of the first taxable year of the credit period of such building and ending 15 years from such date. Generally, the minimum set-aside requirement must be met by the close of the first year of the compliance period.

Credit eligibility also depends on the existence of a 30-year extended use agreement between the taxpayer and the State housing credit agency. The extended use agreement requires the taxpayer to maintain affordable housing restrictions on the property for an additional 15 years after the initial 15-year compliance period has ended. The extended use agreement also gives certain low-income individuals the right to enforce the affordable housing restrictions in State court.[91]

The penalty for any building subject to the 15-year compliance period failing to remain part of a qualified low-income project (due, for example, to noncompliance with the minimum set-aside requirement, the rent-restricted unit requirement, or other requirements with respect to the units comprising the set aside) is recapture of the accelerated portion of the credit, with interest, for all prior years. In general, any change in ownership of a building subject to the compliance period is also a recapture event.

[90] In the case of a unit which does not have a separate bedroom (*e.g.*, a studio), the rent limitation is based on the qualifying income for one individual.

[91] Sec. 42(h)(6).

State housing credit ceiling

A low-income housing tax credit is allowable only if the owner of a qualified building receives a housing credit allocation from the State or local housing credit agency. Generally, the aggregate credit authority provided annually to each State for calendar year 2020 is $2.8125 per resident, with a minimum annual cap of $3,217,500 for certain small population States.[92] These State limits do not apply in the case of projects that also receive financing with proceeds of tax-exempt bonds issued subject to the private activity bond volume limit.

[92] See Rev. Proc. 2019-44, 2019-47 I.R.B. 1093, November 18, 2019. Sec. 42(h)(3)(I) provides for an increase in the State housing credit ceiling for 2018, 2019, 2020, and 2021. In 2019, the most recent year for which the IRS has issued resident population estimates for purposes of the low-income housing tax credit, the small population States were Alaska, Delaware, the District of Columbia, Montana, North Dakota, Rhode Island, South Dakota, Vermont, and Wyoming. See Notice 2019-19, 2019-12 I.R.B. 907, March 19, 2019.

B. Rehabilitation Credit for Certified Historic Structures

A 20-percent tax credit is provided for qualified rehabilitation expenditures with respect to a certified historic structure.[93] A certified historic structure means any building that is listed in the National Register, or that is located in a registered historic district and is certified by the Secretary of the Interior to the Secretary of the Treasury as being of historic significance to the district.

The credit is generally allowable ratably in each taxable year over the five-year period beginning in the taxable year in which the qualified rehabilitated building is placed in service. The provision requires the use of straight-line depreciation in order for rehabilitation expenditures to be treated as qualified.

[93] Sec. 47.