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Tolling U.S. Highways and Bridges

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Summary

The Federal-Aid Road Act of 1916 (39 Stat. 355), which provided federal funds to states for highway construction, included the requirement that all roads funded under the act be "free from tolls of all kinds." Following the funding of the Interstate System in 1956, the "freedom from tolls" policy was reaffirmed (23 U.S.C. §301). Although the provision still exists, exceptions to the general ban on tolls now cover the vast majority of federal-aid roads and bridges. New roads, bridges, and tunnels may be tolled, and most existing roads, bridges, and tunnels may be tolled if they are reconstructed or replaced. Yet growth in the extent of toll facilities has been slow, and some new toll projects have struggled financially.

The failure, beginning in 2008, of federal highway user taxes and fees to provide sufficient revenues to fund the surface transportation program authorized by Congress has renewed interest in expanding toll financing. The Congressional Budget Office (CBO) projects that annual highway revenues, mostly from motor fuels taxes, will fall an average of $20 billion short of the amount needed to sustain the current federal surface transportation program between FY2021 and FY2025, and some Members of Congress see an expansion of tolling as a way to reduce the need for federal expenditures on roads.

Congress could achieve an expansion of tolling in several ways. At one extreme, it could simply encourage tolling pilot projects on Interstate System highways, of which relatively few have been implemented to date. At the other extreme, Congress might authorize states to toll federal-aid highways as they see fit, or even require that Interstate highway segments be converted to toll roads as they undergo reconstruction, eventually turning all Interstates into toll roads.

One obstacle to increased use of tolling is that tolls are a relatively inefficient way of raising revenue. The costs of toll collection on many existing toll roads exceed 10% of revenues even if all tolls are collected electronically, not including the cost of toll collection infrastructure. This compares unfavorably to the cost of collecting the existing federal motor fuels tax, estimated to be less than 1% of revenues. In addition, many roads may not have sufficient traffic willing to pay a high enough toll to fully cover financing, construction, maintenance, and toll collection costs. Due to these factors, as well as their political unpopularity, tolls are likely to play a limited role in funding surface transportation projects in the near future.

Beyond a requirement that toll rates on bridges "shall be just and reasonable" and a provision limiting tolls on over-the-road buses, current federal law provides no role for the federal government in regulating toll rates or practices. States do not need to ask for permission from the Federal Highway Administration (FHWA) prior to imposing tolls but must be careful to adhere to the legal requirements, especially in regard to the use of revenues. However, there have been controversies in a number of states over toll schedules that favor in-state residents over others; over attempts to collect tolls at state borders, where more nonresidents would be affected, rather than at internal locations; and over trucking industry complaints that truck tolls are excessive compared to auto tolls. If tolling becomes more widespread, the extent to which tolling should be subject to federal oversight may become a more prominent question.

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Introduction

Since FY2008, federal highway user taxes and fees have been inadequate to fund the surface transportation program authorized by Congress. Although the 2015 surface transportation act addressed the revenue shortfall through FY2020 by authorizing the use of general funds for transportation purposes, the Congressional Budget Office (CBO) projects that after FY2020 the gap between dedicated surface transportation revenues and spending will average $20 billion annually.[1] The search for ways to fill this gap may revive congressional interest in tolling as a means of financing transportation projects without federal expenditures.

States are free to impose tolls on roads, bridges, and tunnels that have been built and maintained without federal assistance. New federally assisted roads, bridges, and tunnels may be tolled. The vast majority of existing federally assisted roads, bridges, and tunnels may be converted to toll facilities but must meet reconstruction or replacement requirements. There remains a ban on the tolling of existing Interstate System highway surface lane capacity. Lifting or retaining this ban is one of the main policy issues regarding tolling of federally assisted roads. This report explains current federal policies governing tolling and discusses issues related to increasing the use of tolls as a source of revenue for surface transportation projects.

A Brief History of Tolling on Federal Roads

In some states, mostly in the Northeast and the mid-Atlantic region, many of today's highways were originally toll roads, often built and operated by private investors. While tolling often made it possible to build or improve roads at minimal cost to taxpayers, many of these roads failed due to overly optimistic revenue expectations, inability to attract sufficient investment to pay for improvements, competing capacity, and toll avoidance and the related cost of enforcement.[2] Over time, toll roads came to be regarded as obstacles to the free flow of commerce. When it established the forerunner of today's federal-aid highway program in 1916, Congress emphasized the principle that roads should be free. Section 1 of the Federal-Aid Road Act (39 Stat. 355) provided that "all roads constructed under the provision of this Act be free from tolls of all kinds."[3]

The Oldfield Act of 1927 (44 Stat. 1398) opened the door to tolls by permitting the use of federal funds to build toll bridges as long as they were operated by the states or their political subdivisions.[4] However, the federal Bureau of Public Roads continued to oppose the use of federal funds on toll roads. Consequently, when states, mainly in the Northeast, undertook expressway construction in the decade after World War II, they built toll roads without federal

[1] Congressional Budget Office, *Projections of Highway Trust Fund Accounts Under CBO's June 2017 Baseline*, June 2017, https://www.cbo.gov/sites/default/files/recurringdata/51300-2017-06-highwaytrustfund.pdf. The $20 billion figure represents the average annual gap between projected receipts from the motor fuels and other excise taxes that flow into the Highway Trust Fund (HTF) and the anticipated cost of maintaining the surface transportation program at its current "baseline" level.

[2] Joseph Austin Durrenberger, *Turnpikes: A Study of the Toll Road Movement in the Middle Atlantic States and Maryland* (Valdosta, GA: Southern Stationery and Printing Co., 1931), pp. 156-158. See also George Rogers Taylor, *Transportation Revolution* (New York: Rinehart and Co., 1951), pp. 3-31.

[3] The provision was added without opposition. See House debate, *Congressional Record*, vol. 53, part 2 (January 19, 1916), p. 1284. Also, Senate debate, *Congressional Record*, vol. 53, part 2 (January 25, 1916), p. 1518.

[4] The authors of the legislation were concerned about private bridge monopolies. For a detailed legislative history of federal toll road policy, see Congressional Budget Office, *Toll Roads: a Review of Recent Experience; Appendix*, 1997, pp. 22-28.

aid. By January 1, 1955, there were 1,239 miles of completed "arterial toll roads" in the United States, another 1,382 miles were under construction, and 3,314 miles were being planned or studied.[5] Many of these roads were on routes of the planned Interstate System. Although the Bureau of Public Roads supported the building of new Interstate highways as free roads, it did recommend that existing toll roads that met its engineering standards and followed the routes of proposed Interstate highways be incorporated into the new network.[6]

The tolling prohibition was reiterated in the Federal-Aid Highway Act and Highway Revenue Act of 1956 (P.L. 84-627; 70 Stat. 374), which authorized 13 years of funding for construction of the Interstate Highway System, created the Highway Trust Fund (HTF) as the source of federal funds for state road construction, and raised tax rates on motor fuels to help fund it. The fuel and other highway taxes that were now dedicated to the HTF were seen as a close proxy for a user-payer system of financing federal-aid roads.[7] The increased flow of federal funds, heavily weighted toward the Interstate highways, effectively stopped the development of new toll roads by the states.[8]

Thirty-five years later, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA; P.L. 102-240) opened non-Interstate federal-aid highways to tolling, but allowed existing roads or bridges to be tolled only after being reconstructed. This effectively linked tolling to capacity additions or road improvements. Both the 1998 Transportation Equity Act for the 21st Century (TEA-21; P.L. 105-178, as amended by P.L. 105-206) and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (P.L. 109-59; SAFETEA) allowed tolling on high-occupancy vehicle (HOV) lanes, established pilot projects for tolling of a limited number of Interstate System routes, and allowed limited use of tolls that vary according to the level of traffic, known as congestion pricing.

The Moving Ahead for Progress in the 21st Century Act (MAP-21; P.L. 112-141), enacted in 2012, reinforced the encouragement of tolls on HOV lanes and congestion pricing. It allowed tolling of new Interstate System routes, route extensions, and additional lane capacity, but continued to block tolling of most existing Interstate highway lane capacity. MAP-21 retained two pilot programs, one encouraging the use of pricing to control congestion and another allowing Interstate route segments in three states to be converted to tolling as part of their reconstruction.

The Fixing America's Surface Transportation Act (FAST Act; P.L. 114-94), enacted in December 2015, clarified that public authorities generally, as opposed to solely state agencies, may impose tolls on single-occupant vehicles using HOV lanes. It modified the TEA-21 pilot program allowing existing Interstate highway segments in three states to be subject to tolls to finance reconstruction by providing that federal approval lapses if the selected states have not started construction within three years of approval.

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[5] Federal Highway Administration, *America's Highways* (Washington: GPO, 1977), pp. 166-170.

[6] Bureau of Public Roads, "Toll Roads Included in Interstate System," press release, August 21, 1957.

[7] President Franklin D. Roosevelt envisioned building a network of interstate toll roads, in part as a jobs program, in the late 1930s. President Dwight D. Eisenhower supported the findings of the President's Advisory Committee on a National Highway Program, chaired by former General Lucius D. Clay, which recommended creation of a Federal Highway Corporation that would issue bonds to be paid off by existing gas taxes. This financing method was not well received by the chairs of the Senate Finance and House Ways and Means Committees, primarily because of the long-term dedication of the gas tax to service the bonds. Eventually, Congress settled on a gas tax increase and the pay-as-you-go funding of the 1956 act. See Federal Highway Administration, *America's Highways,* pp. 172-173.

[8] Some planned toll roads already under development in 1956 were completed.

The Federal Role in the Tolling of U.S. Highways

With minor exceptions (see "The Setting of Toll Rates," below), the Federal Highway Administration (FHWA) does not have a role in setting toll rates. MAP-21 also eliminated the requirement that a toll agreement be negotiated by the tolling authority (including the state transportation departments) with the U.S. Department of Transportation prior to federal participation in construction of a toll facility. Any highway owner (a state, public authority, or other eligible entity) has the right to implement tolling, provided the facility is eligible to be tolled under 23 U.S.C. Sections 129 or 166, or under congressionally authorized pilot toll programs. However, federal law does impose restrictions on the use of toll revenue.

Federal Conditions for Tolling of Highways, Bridges, and Tunnels

The legal ability to toll is based on exceptions to the 1958 "Freedom from Tolls" provision of 23 U.S.C. Section 301. The exceptions are set forth in 23 U.S.C. Section 129. Over the years, the exceptions and their conditions have expanded to the point where the only absolute prohibition is the requirement that the toll-free surface lane count on any existing Interstate System highway must be retained.[9]

Tolling of Highway Categories Under Section 129 Exceptions from "Freedom From Tolls"

Interstate System Highways

The Dwight D. Eisenhower National System of Interstate and Defense Highways covers 48,053 miles, or about 1% of the total mileage of all U.S. public roads.[10] Approximately 3,419 miles of the Interstate System are currently tolled. Most of these toll roads were built by the states prior to creation of the Interstate System and were designated as Interstate highways in the late 1950s.

- Tolling is allowed on all new Interstate System highways, bridges, and tunnels.
- Existing Interstate System bridges and tunnels may be converted to toll facilities if reconstructed or replaced.
- Added lane capacity on existing Interstate System highways may be tolled.
- The toll-free lane count on existing Interstate System surface routes must be maintained. These lanes may not be tolled even if reconstructed, unless reconstructed under the Interstate System Reconstruction and Rehabilitation Pilot Program.[11]

Non-Interstate Federal-Aid Highways

This category includes highways on the National Highway System (other than the Interstate System highways), and all other public roads not classified as local roads and rural minor collectors. These roads are eligible for federal highway funding. About 974,514 miles, or about 23% of all U.S. public roads, are non-Interstate System federal-aid highways.

- All lanes of an existing toll-free non-Interstate System federal-aid highway, bridge, or tunnel may be converted to a toll facility if they are reconstructed.
- Tolling is allowed on all new federal-aid highways, bridges, and tunnels. Added lane capacity on existing highways may be tolled as long as the existing toll-free lane count remains the same. However, the toll-free lanes may be

[9] Federal Highway Administration, *Federal Tolling Programs: Section 129 General Toll Program Q and A*, Washington, DC, https://www.fhwa.dot.gov/ipd/revenue/road_pricing/tolling_pricing/section_129_faqs.aspx.

[10] Federal Highway Administration, *Public Road Length, 2015: Miles by Functional System and Federal-Aid Highways; National Summary*, Table HM-18, Washington, DC, December 2016, https://www.fhwa.dot.gov/policyinformation/statistics/2015/pdf/hm18.pdf.

[11] Since 1998, under this program, up to three existing Interstate System facilities in three states may be tolled to fund needed reconstruction or rehabilitation on Interstate corridors that could not otherwise be adequately maintained or functionally improved without collection of tolls. No facilities have been converted under this pilot program. See https://www.fhwa.dot.gov/ipd/revenue/road_pricing/tolling_pricing/interstate_rr.aspx.

converted to tolling as part of a project to reconstruct them.

"Off-System" Roads

These roads are not federal-aid highways and are generally not eligible for federal spending on highways. This category is mostly made up of county and town roads and bridges as well as most neighborhood streets. Of the 4.2 million miles of public roads and bridges in the United States, 3.1 million, or roughly 75%, are off-system.

- An off-system road, bridge, or tunnel may generally be converted to a toll facility, with or without reconstruction.
- Off-system facilities that have benefited from federal highway spending, despite being off the federal-aid system, would have to be reconstructed or replaced to be converted to tolled facilities. These are largely off-system bridges that benefited from former federal bridge program and other off-system bridge spending.

The decision to convert a free facility to a tolled facility must be made prior to completion of the qualifying reconstruction project. According to FHWA, once physical construction is completed, it is too late to make the decision to toll, unless an additional qualifying reconstruction or rehabilitation project is undertaken. The earliest that toll collection may be initiated is when the contract has been awarded for the physical construction activities that render the facility eligible for conversion to a toll facility.

The only way that an existing toll-free federal-aid highway may be converted without being reconstructed or replaced is if the conversion occurs under the Value Pricing Pilot Program.[12]

HOV/HOT Lane Program: Section 166

Under 23 U.S.C. Section 166, high occupancy vehicle (HOV) lanes built with federal participation may be converted to high occupancy toll facilities. When this occurs, single-passenger vehicles may be allowed to access the HOV facility only if those users pay a toll for access. The tolls must be collected electronically and must be variably priced to manage travel demand to help prevent degradation of the facility's performance.

The Setting of Toll Rates

FHWA does not regulate the toll rates users pay on toll roads. Setting toll rates is the responsibility of the toll road owner or operator of the facility. The Regulation of Tolling provision of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (P.L. 100-17) requires that bridge tolls "shall be just and reasonable." However, "just and reasonable" is not defined. Conference report language (H.Rept. 100-27) specifically directs that bridge tolls are not subject to review by the Department of Transportation.[13]

The FAST Act involved the federal government in toll rates for the first time, mandating that intercity buses serving the public have the same access to and pay the same rates as public transportation buses, and requiring public authorities operating high-occupancy toll lanes on the

[12] The Value Pricing Pilot Program permits FHWA to enter into agreements with as many as 15 state or local governments or public authorities to establish, maintain, and monitor programs to manage congestion on highways through tolling and other pricing mechanisms. No funding has been provided since FY2012. As of December 2016 there were 12 state-led and two city-led programs participating. According to FHWA, future requests for tolling authority under the program "will be limited to situations that cannot be accommodated under the mainstream tolling programs, such as the pricing of existing toll-free facilities without substantial reconstruction of those facilities." See https://ops.fhwa.dot.gov/congestionpricing/value_pricing/.

[13] U.S. Congress, House Committee on Conference, *Surface Transportation and Uniform Relocation Assistance Act of 1987*, Conference Report to accompany H.R. 2, 100th Cong., 1st sess., March 17, 1987, H.Rept. 100-27 (Washington: GPO, 1987), pp. 45, 175.

Interstate System to consult with affected metropolitan planning organizations on the placement and amount of tolls

Use of Toll Revenues

Although the requirement for upfront tolling agreements under Section 129 no longer exists, there continue to be restrictions on the use of toll revenues. FHWA provides oversight of the "limitations on the use of revenues" under 23 U.S.C. Section 129(a)(3), which requires that the public authority with jurisdiction over a toll facility use toll revenues only for

- debt service with respect to the projects on or for which the tolls are authorized, including funding of reasonable reserves and debt service on refinancing;
- a reasonable return on investment of any private person financing the project, as determined by the state or interstate compact of states concerned;
- any costs necessary for the improvement and proper operation and maintenance of the toll facility, including reconstruction, resurfacing, restoration, and rehabilitation;
- payments that the party holding the right to toll revenues owes another party under a public-private partnership agreement; or
- any other purpose for which federal funds may be obligated by a state under Title 23 (including certain transit projects), provided the public authority certifies annually that the tolled facility is being adequately maintained.

MAP-21 imposed a requirement for annual audits to ensure adherence to these limitations, the results of which must be transmitted to the Secretary of Transportation. If the Secretary concludes that the public authority responsible for the toll facility is not in compliance with these restrictions, the Secretary may require that toll collection be discontinued until an agreement is reached to achieve compliance.

Financial Realities of Toll Roads

Whether it is built or operated by a government agency or by private investors, a toll road must have sufficient traffic willing to pay a high enough toll to cover construction, maintenance, and toll collection costs if it is to be financially successful. Most roads on the federal-aid system are not likely to pass that test. In rural areas, highways often do not have enough traffic to cover the cost of building toll-collection infrastructure and collecting tolls. Although urban roads typically have more traffic, they may not be able to generate sufficient toll revenue to make the facilities self-sustaining.

Some publicly owned toll roads have been financially successful, generating sufficient revenue to pay for capital improvements and operations, and, in some cases, to contribute to the cost of other highway activities and even to public transportation activities. Other public toll facilities, however, have struggled. One recent example is the 8 miles of express toll lanes built by the Maryland Transportation Authority on I-95 north of Baltimore. In the early months following their opening in December 2014, the toll lane revenue was less than expected, and although it has grown, the tolls still produced only $11 million in gross revenue in the year to June 2016, far from enough to cover the cost of financing the $1.1 billion project.[14]

[14] Maryland Transportation Authority, *Comprehensive Annual Financial Report for the Fiscal Year Ended June 30,* (continued...)

Recent federal policy has encouraged the use of tolling to attract private investment into highway and bridge construction, but a number of private toll roads have proven to be financial failures. The Pocahontas Parkway, an 8.8-mile-long toll road near Richmond, VA, which opened in 2002, has persistently been unable to service debt due to low traffic volumes; in June 2012, its private operator wrote off the entire value of its investment in a 99-year concession, and eventually transferred the lease to a new operator.[15] SH-130, a 90-mile, four-lane toll road near Austin, TX, has had much lower traffic volumes than forecast when it opened in 2012, and the Texas Department of Transportation ended up subsidizing truck tolls in an effort to help make the privately owned project viable. Despite the subsidy, in March 2016 the toll road operator, SH 130 Concession Co., and two affiliates filed for Chapter 11 bankruptcy protection.[16] Other toll roads whose operators have sought bankruptcy protection include the South Bay Expressway in San Diego, CA, and the Indiana Toll Road.

All of these financial failures were public-private partnerships (P3s) that were formed based, at least in part, on overly optimistic forecasts of the revenue that would be provided by tolls. Their widely publicized difficulties have made investors more cautious about projects reliant on toll revenue. In some cases, private-sector investors have conditioned their participation in P3s on "availability payments," regular payments from the sponsoring government entity to the private entity. This reduces the risk to the private entity, but leaves the public entity at risk if toll revenue falls short of expectations.[17]

Billing and Operating Costs

Using tolls to support transportation expenditures may be a comparatively inefficient form of funding because of high administrative costs. Collecting federal motor fuels taxes is estimated to cost less than 1% of the amount collected.[18] The process is administratively simple, because nearly all the federal fuels taxes are collected at the terminal "rack" from only 850 registered taxpayers nationwide, rather than at a large number of retail gasoline stations. The small number of collection points also facilitates enforcement.

The administrative costs of toll collection appear to be significantly higher than the cost of fuels-tax collection. Determining the true cost of toll collection is difficult because, as noted in a 2007 report for the Transportation Research Board, some costs are not readily identified in agencies' financial reports, such as a portion of general administrative costs and pension expenses

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2016, pp. 10, 85. The authority pools the tolls from all its toll facilities, so that some facilities in effect subsidize others.

[15] Transurban, "Transurban Distribution for the Six Months Ending 30 June 2012 and Pocahontas Impairment Charge," http://www.transurban.com/3A374702.pdf. The leased road remains under the ownership of the Virginia Department of Transportation.

[16] Tom Corrigan, "Texas Toll-Road Operator Files for Bankruptcy," *Wall Street Journal*, March 2, 2016, http://www.wsj.com/articles/texas-toll-road-operator-files-for-bankruptcy-1456958991. The concession is majority-owned by Spanish infrastructure firm Ferrovial's Cintra unit and minority-owned by Zachry Construction Corporation. The concession operated under a leasing agreement. The State of Texas is the owner of the road. SH130 Concession Company, LLC, and its affiliated debtors filed their Chapter 11 Plan of Reorganization on August 12, 2016.

[17] CRS Report R43410, *Highway and Public Transportation Infrastructure Provision Using Public-Private Partnerships (P3s)*, by (name redacted) .

[18] National Surface Transportation Infrastructure Financing Commission, *Paying Our Way; a New Framework for Transportation Finance*, Final Report, Washington, DC, February 2009, p. 150, http://financecommission.dot.gov/. This 1% cost of collection figure has been challenged; see Daryl S. Fleming, *Dispelling the Myths: Toll and Fuel Tax Collection Costs in the 21st Century*, Reason Foundation, Culver City, CA, November 2012, http://reason.org/files/dispelling_toll_and_gas_tax_collection_myths.pdf.

attributable to tolling. Published figures thus likely understate true collection costs. Even so, at the seven agencies examined, the study estimated that toll collection cost from 16.5% to 92.6% of the amount collected.[19]

Most toll facilities now collect a majority of their tolls from customer accounts that are debited when an electronic sensor detects a transponder in a vehicle passing beneath a gantry. In principle, the cost of operating an electronic tolling system should be much lower than the cost of manual collection, due to obvious personnel savings. However, many toll facilities continue to employ collectors to receive cash tolls. Those with no provision for collecting cash tolls normally bill drivers without transponders by mail at the address associated with the license plate on the vehicle, often at a higher rate to cover the cost of mailing the bill.

Recent financial reports from public agencies indicate that even with extensive use of electronic tolling, collecting highway tolls costs between roughly 8% and 13% of the amount collected (see **Table 1**). The annual report of the New Hampshire turnpike system breaks out some of the costs of electronic tolling in detail, including bank and credit card fees (2.7% of revenue collected from the electronic system), fees paid to process electronic transactions (7.3%), and the in-vehicle transponders furnished to drivers (0.7%). The agency's total operating costs for electronic tolling in FY2015, not including enforcement costs and depreciation of the electronic tolling infrastructure, were 11.2% of revenues collected electronically.[20]

[19] Transportation Research Board, National Cooperative Highway Research Program, *Costs of Alternative Revenue-generation Systems*, NCHRP Report 689, Washington, DC, 2011, pp. 70-74, http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_689.pdf.

[20] State of New Hampshire Department of Transportation Turnpike System, *Annual Financial Report for the Fiscal Year Ended June 30, 2016*, pp. 19, 36, https://www.nh.gov/dot/org/operations/turnpikes/documents/DOTTPKESAnnualReport20160113FinalSigned.pdf.

Table 1. Toll Collection Revenues and Costs

Facility	Costs	Revenues	Cost as % of Toll Revenues
407 International, Inc. Toronto (all electronic) C$=Canadian dollars	C$149,700,000	C$1,134,700,000	13.2%
New Hampshire Turnpike (electronic collections/costs only)	$10,462,000	$93,495,000	11.2%
New Jersey Turnpike Authority (81.7% E-ZPass usage rate, 2015)	$157,558,000	$1,523,133,000	10.3%
Kansas Turnpike Authority (53% electronic K-Tag)	$9,207,166	$108,455,441	8.5%
Oklahoma Turnpike Authority[a]	$18,201,278	$256,050,594	7.1%
Maine Turnpike Authority	$12,985,346	$133,822,432	9.7%

Source: *407 International, Inc. 2016 Results,* December 31, 2016; New Hampshire Turnpike System, *Annual Report, Fiscal Year Ending June 30, 2016*, p. 19; New Jersey Turnpike Authority, *New Jersey Turnpike Authority Financial Statements*, December 31, 2015, pp. 17, 94; Kansas Turnpike Authority, *Annual Report June 30, 2016*, pp. 6, 10; Oklahoma Turnpike Authority, *Comprehensive Annual Financial Report, December 31, 2015*, pp. 16, 29; Maine Turnpike Authority, *Maine Turnpike Authority Financial Report*, December 2016, p. 2.

Notes: New Hampshire Turnpike revenue figure includes E-ZPass and transponder revenues only, and cost figure includes only bank and credit card fees, E-ZPass processing fees, and transponder expense. The electronic tolling share of personnel benefits (such as pension contributions), enforcement, and equipment and repair costs are not separated in the accounting and have not been counted as toll collection costs.

a. Oklahoma Turnpike Authority also incurred $14,444,832 in PIKEPASS customer service costs that are not reflected in **Table 1**. If these costs are included, collection costs are 12.7% of toll revenues.

Tolling and Highway Funding

Highway toll revenue nationwide came to $14.35 billion in FY2014, the latest year available, according to FHWA. While the amount of toll revenue has grown significantly in recent years, toll revenue as a share of total spending on highways has been relatively steady for more than half a century, in the range of roughly 5% to 6%.[21] On average, facility owners collected $2.36 million per mile of toll road or bridge in FY2014, but revenue per mile varies greatly among facilities.[22] All revenue from tolls flows to the state or local agencies or private entities that operate tolled facilities; the federal government does not receive any revenue from tolls. However, a major expansion of tolling might reduce the demand for federal expenditures on roads.

There are three possible means of increasing revenue from tolling:

- **Increase the extent of toll roads.** FHWA statistics identify 5,882 tolled miles of roads, bridges, and tunnels as of January 1, 2015,[23] a net increase of 1,161 miles,

[21] Federal Highway Administration, *Highway Statistics: Summary to 1975*, Table HF-211, 1977, pp. 107-136. Also *Highway Statistics: Summary to 1995*, Table SF-210, and *Highway Statistics*, various years, Tables SF-21, HF-10, and HF-10a. Also "Figure 6-6: Toll Facility Revenue: 1993-2008," *Our Nation's Highways: 2010*, http://www.fhwa.dot.gov/policyinformation/pubs/pl10023/fig6_6.cfm.

[22] Federal Highway Administration, *Funding for Highways and Disposition of Highway-User Revenues, All Units of Government, 2014*, Table HF-10, March 2016.

[23] Federal Highway Administration, *Toll Facilities of the United States: Toll Mileage Trends 2005-2015*, "FHWA-PL-16-011," January 2016, https://www.fhwa.dot.gov/policyinformation/tollpage/factsheet.cfm. The 5,882 miles of toll roads, bridges, and tunnels compare with the total federal-aid highway eligible road length of 1,022,567 miles (0.6%). (continued...)

or 25%, over 1990.[24] These figures indicate that the extent of toll roads has been growing by 46.5 miles per year, on average, adjusting for the fact that some previously tolled roads have become toll-free. Toll-road mileage comprises only 0.6% of the 1,022,567 miles of public roads eligible for federal highway aid.[25] While there may be many existing roads on which tolling would be financially feasible, proposals to place tolls on existing roads have encountered strong opposition in several states, including Missouri, North Carolina, Texas, and Virginia.

- **Increase toll-road usage.** In the aftermath of the recession that began in 2007, the number of vehicle miles traveled in the United States fell below prerecession levels until 2014.[26] Vehicle miles traveled increased by 3.5% in 2015 and again by 2.8% in 2016.[27] Vehicle miles traveled per capita have also increased, by 2.7% in 2015 and by 2.1% in 2016.[28] If this trend continues, it bodes well for toll revenues, which would rise with increasing traffic. On the other hand, if long-term demographic trends and social changes, such as the increased popularity of center-city living, eventually lead to slower growth in personal motor vehicle use, then toll revenues may be constrained in the longer term. The most obvious way to increase toll road use is to lower the rates. However, for this strategy to work, the increase in net revenue from the increased use would have to exceed the aggregate revenue lost because of the lower rates per user.
- **Increase the average toll per mile.** Toll rates are often significant political issues at the state and local levels, especially when toll revenue is used for purposes other than building and maintaining the toll facility. Trucking interests frequently raise opposition to rate changes that increase truck tolls relative to automobile tolls. On publicly owned facilities, political concerns may lead to toll reductions, as occurred on bridges operated by the Delaware River Port Authority and the Maryland Transportation Authority in 2015. Where roads are operated by private concessionaires, the operators' contracts with state governments typically specify the maximum rate at which tolls can rise. Public and political pressure can also lead to state toll subsidies on roads operated by private concessionaires, as occurred for over a decade on the Indiana Toll Road.[29] Additionally, large increases can encourage motorists to use competing non-tolled routes.

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This includes 5,508 miles (2.5%) of toll facilities on the total 222,743 miles of the National Highway System.

[24] Federal Highway Administration, *Toll Facilities in the United States: Bridges-Roads-Tunnels-Ferries*, Publication No: FHWA-PL-91-009, 1991, p. v.

[25] Federal Highway Administration, *Public Road Length-2014: Miles by functional System and Federal-Aid Highways, National Summary*, Table HM-18, Washington, DC, October 2015, https://www.fhwa.dot.gov/policyinformation/statistics/2014/hm18.cfm.

[26] Federal Highway Administration data obtained from Federal Reserve Bank of St. Louis, https://research.stlouisfed.org/fred2/series/TRFVOLUSM227NFWA. See also http://www.fhwa.dot.gov/policyinformation/travel_monitoring/15dectvt/page2.cfm.

[27] Federal Highway Administration, *Traffic Volume Trends: December 2016*, Washington, DC, 2017, p. 2, https://www.fhwa.dot.gov/policyinformation/travel_monitoring/16dectvt/.

[28] "VMT Hits Nominal High, Approaches All-Time Per Capita Mark," *Eno Transportation Weekly*, February 24, 2017, pp. 18-19.

[29] "Many Indiana Toll Road Drivers Seeing Big Rate Increase," CBS Chicago, June 1, 2017, http://chicago.cbslocal.com/2017/06/01/indiana-toll-road-rate-increase/.

These factors suggest that imposing tolls on individual transportation facilities is likely to be of only limited use in helping states overcome reductions in federal grants should Congress deal with the shortfall in motor fuels tax revenue by reducing the size of the federal surface transportation program. Further, some states, particularly those with low population densities, may have few or no facilities suitable for tolling. Tolls may be an effective way of financing specific facilities, especially major roads, bridges, or tunnels that are likely to be used heavily and are located such that the tolls are difficult to evade, but they seem likely to be less effective in providing broad financial support for surface transportation programs.

Proposals to encourage toll-like user charges on road or bridge networks raise issues that differ from those affecting single facilities. Networking toll facilities can have advantages of scale and allow for facilities with excess cash flow to cross-subsidize parts of the network that may not have sufficient traffic to be self-sustaining.

Tolling the Interstate Highway System

By mileage, roughly 60% of the toll roads, bridges, and tunnels in the United States are on the Interstate System. Facilitating an increase in tolled Interstate System mileage (or even tolling the Interstate System as a network) has been the major issue in federal tolling policy in recent years. According to FHWA figures, from 1990 to 2015 nearly 750 miles of Interstate highways, bridges, and tunnels were built as or converted to toll roads.[30] This represents 64% of the increase in toll road mileage over that period.

The federal restrictions on tolling the Interstate System have been substantially reduced since 1992. The main remaining restriction is the requirement that the existing free-lane count on surface Interstate highways must remain the same, even if reconstructed. Thus, it does not appear that federal restrictions on tolling are the reason that only a small number of federal-aid highways, bridges, and tunnels have been converted to toll facilities.

Creating an Interstate Toll Network via the Reconstruction Process

One option for expanding tolling on the Interstates would be for Congress to require tolling as Interstate System roads and bridges are rebuilt with reduced federal participation. As many of these roads are not in need of near-term reconstruction, the evolving Interstate System toll network would expand over many years, and the corresponding reduction in federal-aid highway program spending would also be gradual. To accelerate the conversion, bonds might be issued to fund construction costs up front, with toll revenues from the newly rebuilt facilities then used to pay for the interest and bond retirement costs. Eventually the reconstructed facilities might coalesce into a nationwide per-mile toll network.[31] The eventual transition could require legal changes at both the state and federal levels, and there could continue to be resistance at both the national and local levels to the widespread expansion of tolling.

[30] Federal Highway Administration, "Table HF-10 toll revenues from all units of government" and "Toll Mileage Trends: 2005-2015," in *Toll Facilities of the United States.* In 2015, 3,419 miles of Interstate highways and bridges were tolled. The Interstate toll mileage in 1990 was 2,674 miles; see FHWA, *Toll Facilities of the United States: 1991.*

[31] Robert W. Poole, Jr., *Interstate 2.0: Modernizing the Interstate Highway System via Toll Finance*, Reason Foundation, Policy Study 423, Los Angeles, CA, September 2013, pp. 1-36, http://reason.org/news/show/modernizing-the-interstate-highway.

Converting the Entire Interstate System to a Toll Network

One way of estimating the revenue that could be raised by tolling the entire Interstate System is to assume that the public would pay the same average annual amount per mile, $2.35 million, as is raised on existing U.S. toll roads and bridges. In this case, tolling all Interstate highways would be expected to raise roughly $112 billion per year. Of this, approximately $8 billion is already captured by existing toll facilities, leaving around $104 billion of new revenue. This might be more than enough to maintain and operate the proposed Interstate System toll network. However, this amount would represent a much larger financial burden on Interstate users than they currently bear in the form of motor fuels taxes.

However, many portions of the Interstate System would probably not be able to generate this amount of revenue per mile. A large proportion of current toll revenue is collected on heavily traveled roads and bridges in urban areas. The rural segments that account for a majority of Interstate System mileage carry far less traffic. A Transportation Research Board (TRB) report prepared in 2007 for the National Cooperative Highway Research Program estimated that about 21% of the 28,990 miles of rural Interstate highways had the potential to be viable as toll roads.[32] In cases where an Interstate carries little traffic, the costs of building and maintaining the toll collection system might be large relative to the revenue that could be realized, and it might be necessary to set tolls on heavily traveled road segments high enough to provide cross-subsidies to the operation, maintenance, and eventual reconstruction of low-traffic rural routes.

In recent years, federal funds obligated for projects on the Interstate System have accounted for 27% to 32% of total annual federal-aid highway obligations, or about $11 billion to $12 billion annually (in 2014 dollars).[33] Hypothetically, if all Interstate highways could be instantly converted to a self-sustaining toll network and received no further federal funding, expenditures under the remaining federal-aid highway program would fall from an average of about $45 billion per year to around $33 billion. This would bring federal highway program spending in line with the motor fuels tax revenues that provide the main support for the Highway Trust Fund.[34] This assumes, however, that drivers would continue to pay federal motor fuels taxes for fuel used while driving on toll roads that do not receive federal funds.

Converting Urban Interstates to Toll Networks

A less ambitious alternative would be to convert only urban Interstates. Approximately 8% of the roughly 18,500 miles of urban Interstate highways are tolled already, leaving over 17,000 miles of road available for conversion to toll roads. Assuming tolls would be imposed at rates that generate the current average of $2.35 million per mile, tolling the currently free urban Interstates might produce nearly $40 billion in annual revenue, nearly as much as the highway account of the HTF now receives from motor fuels taxes.

However, it is doubtful that such a large sum could be realized once operating, collection, enforcement, and financing costs are covered across the urban areas. Also, it is likely that some

[32] Transportation Research Board, National Cooperative Highway Research Program, *Future Options for the National System of Interstate and Defense Highways*, NCHRP Project 20-24 (52)—Task 10, Washington, DC, May 2007, p. ix, http://transportationfortomorrow.com/final_report/pdf/volume_3/commissioner_submissions/nchrp_2024_52task10_final.pdfhttp://transportationfortomorrow.com/final_report/pdf/volume_3/commissioner_submissions/nchrp_2024_52task10_final.pdf.

[33] Federal Highway Administration, *Highway Statistics: Table FA-4c*, Washington, DC, various years, http://www.fhwa.dot.gov/policyinformation/statistics.cfm. The FY2010 figure included some stimulus funding.

[34] Congressional Budget Office, *Projections of Highway Trust Fund Accounts Under CBO's March 2016 Baseline.*

urban Interstate highways would not generate sufficient revenues to pay for their conversion, reconstruction, and ongoing operations. The TRB report estimated that up to 8,000 miles of the existing urban Interstate System had potential for "high occupancy toll lanes or other pricing and management schemes—based on near-capacity-level traffic volumes forecast."[35] This would represent 47% of the untolled urban Interstate miles. Tolling all urban Interstates could require higher tolls on the busier routes to cross-subsidize the conversion and eventual reconstruction of the less busy routes or continued financing from sources other than tolls.

Conversion Costs

Costs of establishing tolling across the Interstate System are likely to be great. States would need to construct gantries above roads and entrance and exit ramps at thousands of locations to hold toll-collection equipment and cameras to identify toll violators, in addition to building communications infrastructure. If tolling were introduced in conjunction with reconstruction of Interstate highway segments, estimates of the road-building costs involved range from $1 trillion to $3 trillion.[36] The use of bond financing would add interest expense.

However Congress chooses to proceed, the conversion of a significant portion of the Interstate Highway System from free roads to toll roads would take a number of years. Studies would need to be conducted to identify the best locations to collect tolls, equipment would have to be ordered, and physical infrastructure such as road-spanning gantries and communications structures would need to be designed and constructed. Increased use of tolling would therefore be unlikely to have a significant impact on the need for taxpayer funding over a 10- or 15-year time frame.

Increased Use of Tolling to Encourage Innovative Finance

The revenue stream provided by tolling can be used to support highway projects that rely on debt finance and private equity investment, both of which have long histories in toll road construction. In recent years, Congress has encouraged the use of innovative financing mechanisms such as P3s, which may use toll revenues in several ways.

- Toll revenues can be used to service municipal bonds that state and local agencies have issued to pay for highway projects. The federal government supports this spending by providing a tax exclusion of the interest paid on the bonds. The tax exclusion results in a loss of revenue to the federal government. Private activity bonds, in which a state or local government acts as a financial conduit for a business or individual (such as a P3), can also be serviced with toll revenues.
- The Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA) provides federal credit assistance, including loans, to leverage nonfederal funding, which may include investment from the private sector. Under the FAST Act, TIFIA is authorized to spend $1.44 billion over five years to cover the federal government's cost of providing the subsidized credit. Each $1 of budget authority can support approximately $10 in loans. TIFIA requires that each proposed project have a dedicated revenue stream to repay the loan. For highway projects, toll revenues are the most commonly proposed revenue source.

[35] Ibid.

[36] *Future Options for the National System of Interstate and Defense Highways: Task 10 Final Report*, Transportation Research Board (Washington, DC), NCHRP Project 20-24 (52), pp. 13, 21, http://transportationfortomorrow.com/final_report/pdf/volume_3/commissioner_submissions/nchrp_2024_52task10_final.pdf.

- Toll revenues could also support loans for highways and bridges provided from a National Infrastructure Bank, should one be established. The creation of a well-funded National Infrastructure Bank could thus lead to an expansion of toll roads.[37]

Any expansion of tolling due to increased use of innovative financing for highway construction, maintenance, and operation would occur over an extended period of time. In any event, toll-supported innovative financing is likely to provide only a small proportion of highway spending needs unless Congress requires its use in large-scale reconstruction of Interstate highways.[38]

Tolling Policy Issues

How Could an Interstate System Conversion Be Accomplished?

The current federal-aid highway program is essentially a state-run federal grant program, and states own the federal-aid highways within their borders. Any immediate conversion of highways to toll roads would necessarily be at individual states' discretion, with federal participation limited to technical assistance and a suggested conversion schedule. This would likely lead to a piecemeal outcome, as some states might convert quickly, some slowly, and some not at all.

Congress could insist on a much stronger federal role by making the provision of federal highway grants to a state contingent on the state implementing a program of converting Interstate highways to toll roads. FHWA might then take the lead in determining the sequence of reconstruction and conversion of Interstate highways. This approach would have the advantage of assuring that all states would begin imposing tolls at roughly the same time, and federal leadership would likely not allow the outbreak of "toll wars" among the states, whereby states attempt to impose toll rates in a way that shifts the burden of the toll to their neighbors or interstate travelers generally. Under federal oversight, the operation of the converted highways might still be under the auspices of the states, which could operate them directly, through a toll authority, or perhaps under contract to a private operator.

Whether or not implementation of tolls were linked to reconstruction of existing roads, creation of tolling systems would require up-front investments in gantries, equipment to read transponders in vehicles, communications infrastructure, software to process toll payments, and enforcement. This would have to be done before the tolls are collected.

How Would Tolls Be Regulated?

A major increase in the extent of toll facilities or a decision to convert the Interstate System to toll roads would likely bring calls for greater federal involvement in the regulation of tolling rates and strategies. Deeper federal involvement might include federal standards for tolls or a more precise definition of the requirement in current law that tolls be "just and reasonable," along with provision for the enforcement of that requirement. In such a case, Congress would need to clarify which federal agency would be responsible for enforcing tolling regulations and overseeing toll rates.

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[37] CRS Report R43308, *Infrastructure Finance and Debt to Support Surface Transportation Investment*, by (name redacted) and (name redacted) .

[38] CRS Report R43410, *Highway and Public Transportation Infrastructure Provision Using Public-Private Partnerships (P3s)*, by (name redacted) .

Although the FHWA oversees the use of toll revenues and has the authority to stop the collection of tolls on a facility that is diverting tolls to uses not authorized by federal law or not in compliance with the use of revenue provisions, some FHWA offices in state capitals have in the past shown reluctance to force states to comply.[39] States have also raised concerns that they could go to the effort and expense of implementing tolls and find after the fact that FHWA considers them in violation of the toll provisions in 23 U.S.C. Sections 129, 166, and 301.[40]

In the absence of federal toll regulation, some issues have shifted to the courts.

Commerce Clause Issues in the Courts[41]

With the advent of electronic tolling and computerized charging and collection, toll operators have the capability of electronically distinguishing among users by their residences and charging varying toll rates accordingly. However, such a course of action could create legal complications, including questions about whether variations in toll schedules based on residence violate a constitutional principle known as the "dormant Commerce Clause."[42]

The Commerce Clause of the U.S. Constitution provides that Congress shall have the power to regulate commerce with foreign nations and among the various states.[43] Congress has relied on this power as the constitutional basis for a notable portion of the laws passed over the last 80 years, and the Commerce Clause provides a broad basis for the exercise of congressional authority.[44] While the Commerce Clause is often relied on as a positive source of power for Congress to act, it also has been interpreted to have a "negative" or "dormant" effect, as courts have long held that the Commerce Clause limits *state* actions that unconstitutionally interfere with interstate commerce.[45]

However, several federal courts considering differential highway or bridge tolls for in-state and out-of-state residents have drawn a distinction between "differentiation" and "discrimination," concluding that discounted tolls for in-state residents are acceptable so long as they do not favor an in-state commercial interest. Although the meaning and application of the dormant Commerce Clause has varied over time, the modern standard, as applied to fees levied by states, is effectively a three-pronged inquiry. A state levy will generally be upheld in the face of dormant Commerce Clause challenge if it "(1) is based on some fair approximation of use of the facilities;

[39] U.S. Government Accountability Office, *Highway Infrastructure: Federal-State Partnership Produces Benefits and Poses Oversight Risks*, GAO-12-474, April 2012, pp. 20-29, 40-42, http://www.gao.gov/assets/600/590499.pdf.

[40] In response to these concerns, FHWA allows states to request memoranda of understanding with the agency that a project meets the toll eligibility requirements and that the state will comply with the requirements of 23 U.S.C. 129.

[41] This section was prepared by (name redacted), Legislative Attorney, American Law Division of the Congressional Research Service.

[42] Some of the decisions addressing disparate toll schedules also involve claims of a constitutional "right to travel." The Supreme Court has recognized that various provisions of the Constitution protect the right to travel, including the Privileges or Immunities Clause of the Fourteenth Amendment (see, e.g., *Saenz v Roe*, 526 U.S. 489, 500-03 (1999)), as well as a similar Privileges and Immunities Clause in Article IV (see, e.g., *Hicklin v Orbeck*, 437 U.S. 518, 524 (1978)) and the Equal Protection Clause of the Fourteenth Amendment (see, e.g., *Shapiro v. Thompson*, 394 U.S. 618 (1969). It does not appear that any court has concluded that disparate toll schedules violate this "right to travel." For further discussion, see *Selevan v New York Thruway*, 584 F.3d 82, 98-102 (2nd Cir. 2009).

[43] U.S. Const., Art. I, §8, cl. 3.

[44] See *Gonzales v. Raich*, 545 U.S. 1, 17 (2005) ("Our case law firmly establishes Congress' power to regulate purely local activities that are part of an economic 'class of activities' that have a substantial effect on interstate commerce").

[45] See *Gibbons v. Ogden*, 22 U.S. (9 Wheat.) 1 (1824); *Wilson v. Black-Bird Creek Marsh Co.*, 27 U.S. (2 Pet.) 245 (1829); *Cooley v. Board of Wardens of Port of Philadelphia*, 53 U.S. (12 How.) 299 (1851).

(2) is not excessive in relation to the benefits conferred; and (3) does not discriminate against interstate commerce."[46]

For example, in *Cohen v. Rhode Island Turnpike and Bridge Authority*,[47] a group of motorists who do not reside in Rhode Island challenged the constitutionality of a toll schedule for the Newport Bridge that provided discounts for residents, frequent travelers, and those using an E-ZPass transponder on the grounds that the toll schedule violated the dormant Commerce Clause. The U.S. District Court for the District of Rhode Island applied the three-part test and upheld the toll schedule. The court noted that "in order to state a claim for discrimination in violation of the Commerce Clause, a plaintiff must identify an in-state commercial interest that is favored, directly or indirectly, by the challenged statutes at the expense of out-of-state competitors."[48] Here, the court found that "Plaintiff ... failed to identify a specific in-state commercial interest that is favored by the Newport Bridge toll discount at the expense of particular out-of-state competitors, so it cannot demonstrate that the discount discriminates against interstate commerce."[49] The court further concluded that the toll schedule was based on a fair approximation of the use of the facilities and was not excessive in relation to the benefits conferred to the payer. As a result, the court concluded the schedule did not run afoul of the Commerce Clause.[50]

Similarly, in *Yerger v. Massachusetts Turnpike Authority*,[51] the U.S. Court of Appeals for the Third Circuit heard an appeal of a challenge to the Massachusetts Turnpike Authority's Fast Lane Discount Program. The program offered discounted toll fares to users of Massachusetts's Fast Lane electronic toll payment system, but not to users of the multistate E-ZPass electronic toll payment system. The plaintiffs alleged, among other things, that the different toll structures violated the dormant Commerce Clause. The court held that the toll structure was not discriminatory on its face, as the Fast Lane system was available to out-of-state drivers as well as Massachusetts drivers, nor was it discriminatory in effect, as the requirements for enrollment in the Fast Lane program were the same for all drivers regardless of residency.[52] Having found no discrimination, the court moved to a consideration of whether the tolls were excessive in relation to the local benefits conferred, concluding that the burden of potentially having to carry two transponders in order to take advantage of the Fast Lane discounts was de minimis.[53] Therefore, the court rejected the motorists' argument and affirmed the lower court's decision that the discounted tolls for Fast Lane participants did not violate the dormant Commerce Clause.[54]

These and other decisions[55] indicate that federal courts may not be inclined to find that in-state toll discounts and similar variations in toll schedules run afoul of the dormant Commerce Clause. However, it is possible that legal challenges to other tolling schedule variations might produce a

[46] *Northwest Airlines, Inc. v County of Kent, Mich.*, 510 U.S. 355, 369 (1994), citing *Evansville-Vanderburgh Airport Auth. Dist. v. Delta Airlines, Inc.*, 405 U.S. 707, 716-17 (1972).

[47] 775 F.Supp.2d 439 (D.R.I. 2011).

[48] Ibid., p. 447, quoting *Selevan v N.Y. Thruway Auth.*, 584 F.3d 82, 95 (2d Cir. 2009).

[49] Ibid.

[50] Ibid., p. 450.

[51] 395 Fed. Appx. 878 (3rd Cir. 2010).

[52] Ibid., p. 882.

[53] Ibid., p. 884.

[54] Ibid., p. 885.

[55] See, e.g., *Selevan v. N.Y. Thruway Auth.*, 584 F.3d 82 (2d Cir. 2009); *Angus Partners, LLC v. Walder*, 52 F.Supp.3d 546 (S.D.N.Y. 2014); *Janes v. Triborough Bridge and Tunnel Authority*, 977 F.Supp.2d 320 (S.D.N.Y. 2013).

different result, and at least one court has indicated that differential toll schedules could be seen as discriminatory in violation of the dormant Commerce Clause in certain circumstances—for example, if the tolls are found to discriminate in favor of in-state commercial interests,[56] or if the benefits of such tolls inure only to in-state parties.[57] In addition, Congress is always free to address any potential dormant Commerce Clause issues via legislation. As the Supreme Court has noted, "[w]here state or local government action is specifically authorized by Congress, it is not subject to the Commerce Clause even if it interferes with interstate commerce."[58]

Emerging Issues

Some states may be tempted to collect tolls at state borders rather than at internal locations where more residents would be affected, effectively taxing interstate travel at higher rates than in-state travel and in some cases putting out-of-state companies at a competitive disadvantage against local companies. State legislation has also proposed giving state residents and businesses tax credits to offset the costs of tolls for state residents as a substitute for imposing border tolls.[59]

A related emerging issue relates to whether a state's tolling of trucks engaged in the interstate movement of freight is an undue burden on interstate business.[60] Tolling out-of-state trucks differently from in-state trucks might be challenged as a tax that is in violation of the dormant Commerce Clause. Also, using commercial heavy truck tolls alone to fund toll facilities that are used by both heavy trucks and other motor vehicles could lead to dormant Commerce Clause challenges.

Charging Trucks

Commercial truck tolls are invariably higher than auto tolls, sometimes much higher: crossing the George Washington Bridge from New Jersey to New York at an off-peak hour costs $10.50 for a car with an electronic transponder, but $68.00 for a standard tractor-trailer rig. Truck tolls are set higher because the wear and tear caused by a heavy truck is much greater than that caused by most other vehicles. Trucking interests generally prefer higher fuels taxes, whose revenues are dedicated to highway improvement, to higher tolls.[61] Studies have concluded that funding highways with motor fuels taxes provides trucks a cross-subsidy from automobile users' gas tax payments.[62]

Trucking interests generally oppose additional tolling, largely out of concern that political considerations will make it easier to raise tolls on trucks than on cars. In New York, the American

[56] *Cohen v. Rhode Island Turnpike and Bridge Authority*, 775 F.Supp.2d 439, 447 (D.R.I. 2011).

[57] *Amer. Trucking Assoc., Inc. v. N.Y. Thruway Auth*., 199 F.Supp.3d 855, 882-83 (S.D.N.Y. 2016), vacated on other grounds 2017 WL 946335 (S.D.N.Y. 2017).

[58] *White v. Mass. Council of Const. Employers, Inc*., 460 U.S. 204, 213 (1983), citing *Southern Pacific Co. v. Arizona*, 325 U.S. 761, 769 (1945).

[59] "Disguised Border Toll Proposed in Pennsylvania," *Reason Foundation Surface Transportation News*, no. 162, April 7, 2017, p. 10.

[60] Craig R. Ducat, "Note—Does the Dormant Commerce Clause Put the Brakes on Residential Discounts for Road, Bridge, and Tunnel Tolls?," in *Constitutional Interpretation*, 10th ed. (Boston: Wadsworth, 2013), pp. 423-426.

[61] American Trucking Associations (ATA), "Highway Infrastructure & Funding," *Trucking Issues*, http://www.trucking.org/Trucking_Issues_Highway_Infrastructure.aspx.

[62] For the relative costs to the road network of use by different classes of vehicles, see Federal Highway Administration, *Addendum to the 1997 Federal Highway Cost Allocation Study: Final Report* (Washington, 2000), http://www.fhwa.dot.gov/policy/hcas/addendum.htm.

Trucking Associations has challenged the State of New York's use of toll revenues collected from commercial trucks using the New York Thruway to maintain canals in upstate New York.[63] Trucking interests opposed a recently passed Rhode Island law allowing imposition of truck-only tolls on National Highway System bridges in the state as they are reconstructed.[64]

"Double Taxation" and Fuels Tax Rebates

One of the common objections to the tolling of federally funded highways is that, because taxpayers have already paid for their construction and continue to pay for their use through fuels taxes and other highway taxes, adding a toll would in effect be "double taxation." Technology may help alleviate this concern, as electronic tolling facilities could credit each user for the estimated cost of motor fuels taxes and other taxes by subtracting the estimated taxes from the toll paid. This would, however, lower toll revenue unless the toll rates are adjusted upward to compensate for the rebate.

Another possibility would be to reimburse drivers for fuels taxes paid during toll road use via rebates on their tax returns. For taxpayers who file returns with the Internal Revenue Service, this could be done electronically. However, not all users file tax returns, leaving the question of how to protect these users from being charged both tolls and taxes for mileage driven on toll roads. The cost of the rebates to the U.S. Treasury could be subtracted from the HTF. If not, the rebates could be seen as a general fund subsidy to the HTF.

Will Tolling Increase Transportation Spending?

Proponents often advocate tolling as a means of increasing total spending on surface transportation infrastructure. It is possible, however, that any increase in toll revenue could be offset by a decline in other revenues spent on surface transportation at the local, state, and federal levels. Congress has at times sought to condition federal support for states' highway spending on "maintenance of effort" by state governments. Imposing similar requirements in conjunction with a large increase in the use of tolling would require increased federal monitoring of state and local transportation expenditures.

Toll Credits

An existing federal program, the toll credit program, has for many years allowed states to count expenditures of toll revenues on capital investments serving interstate travel as part of a state's required match for federal highway grants.[65] Although the statute states that the credit "shall not reduce nor replace State funds required to match Federal funds for any program under this title," some states have come to rely heavily on toll credits to meet their matching share requirements. A major expansion of Interstate highway tolling could also expand the use of toll credits

[63] Linda Chiem, "Truckers Take NY Thruway Tolls Fight to 2nd Circ.," *Law360*, March 14, 2017, https://www.law360.com/articles/901865.

[64] The 2016 Rhode Island Law, known as RhodeWorks (2016-S-2246), allows the Rhode Island Department of Transportation to establish and electronically collect tolls on heavy trucks crossing reconstructed National Highway System bridges in Rhode Island. Tolls on other vehicles are prohibited. Separately, in-state trucking companies and shippers are eligible for offsetting tax credits or rebates.

[65] See 23 U.S.C. §120(A). In general, states must pay 20% of the cost of highway projects built with federal funds distributed by formula, except that the required match is 10% for Interstate highway projects. There are certain types of projects that do not require a state match.

nationwide. This raises the possibility that states could provide less state revenue funding for their matching shares of federal formula grants, unless other changes are made in the law.

FHWA is charged with monitoring state spending to ensure that states maintain their efforts to improve the highway system. However, a 2012 Government Accountability Office report found that FHWA's responsibility for determining whether a state could receive toll credits placed the agency "in a position of approving actions it was actively and closely involved in developing."[66]

Vehicle Miles Traveled Charges as an Alternative to Tolls

A vehicle miles traveled (VMT) charge would be a toll-like charge on each mile driven. It has been advanced as an alternative to the federal and state motor fuels taxes that now support highway spending. As generally proposed, a mileage-based charge would be imposed for the use of any road within a state or nationwide, whereas tolls are imposed only on specific highway segments, bridges, or tunnels.

Most existing highway tolls are based on weight and distance traveled, and VMTs could be structured in a similar manner. Both electronic tolls and mileage-based road user charges could be used to implement congestion pricing, in which drivers are charged more for using a road at a busy time. However, a number of widely criticized aspects of VMTs, such as the difficulty of accommodating drivers who lack credit card accounts to which the charges could be billed and concerns that the vehicle tracking system would invade drivers' privacy, have generally been less prominent in discussions of tolling.[67]

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[66] U.S. Government Accountability Office, *Highway Infrastructure: Federal-State Partnership Produces Benefits and Poses Oversight Risks*, GAO-12-474, April 2012, pp. 28-29, http://www.gao.gov/assets/600/590499.pdf.

[67] CRS Report R44540, *Mileage-Based Road User Charges*, by (name redacted) and (name redacted)