

National Funding of Road Infrastructure

Australia • Brazil • Canada • China • England and Wales
France • Germany • Israel • Italy • Japan • Mexico
Netherlands • South Africa • Sweden

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Comparative Summary

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Many observers of US transportation policy have called for a reevaluation of the United States's current approach to federal funding of highway infrastructure, which mostly relies on a fuel tax of 18.4 cents per gallon, an amount set in 1993. Most notably, the National Surface Transportation Infrastructure Financing Commission, after extensive review of existing studies and conducting its own research, recommended that the US transition to a user-charge system such as a vehicle-miles-traveled system.¹

Some US states have already conducted studies with alternative funding mechanisms.² For example, Oregon has conducted two pilot studies on road-user fees. One study conducted in 2006–2007 found that a mileage fee could be implemented to replace the gas tax as the principal revenue source for road funding.³ A second pilot project conducted in 2012 found further evidence of the viability of a road usage charge administered by private-sector vendors using an easy-to-use mileage reporting and payment system.⁴ Oregon is moving forward with a mileage collection system starting July 1, 2015, for five thousand volunteer motorists; the state plans to assess a charge of 1.5 cents per mile and issue a gasoline tax refund to participants.⁵

This report on the road infrastructure funding practices of foreign countries provides an opportunity to determine whether lessons can be learned from the experiences of other countries in funding roads and highways. The individual country surveys reveal a multiplicity of approaches to the funding of road infrastructure.

Several of the surveyed countries, like the US, have a fuel tax that is dedicated, at least in part, to the financing of road construction and maintenance. These include Brazil, Canada, China, Israel, and South Africa. Other countries place fuel and other excise taxes with general revenues and fund roads from general revenues, including Australia, England, Germany, Italy, and Mexico. Japan used to dedicate fuel and vehicle taxes to road infrastructure, but began placing such revenues into the general account in fiscal year 2009.

¹ NATIONAL SURFACE TRANSPORTATION INFRASTRUCTURE FINANCING COMMISSION, *PAYING OUR WAY: A NEW FRAMEWORK FOR TRANSPORTATION FINANCE* 7 (2009), http://financecommission.dot.gov/Documents/NSTIF_Commission_Final_Report_Mar09FNL.pdf.

² For a summary of US-based pilot projects on mileage-based user fees, see US GOVERNMENT ACCOUNTABILITY OFFICE, *GAO-13-77, HIGHWAY TRUST FUND: PILOT PROGRAM COULD HELP DETERMINE THE VIABILITY OF MILEAGE FEES FOR CERTAIN VEHICLES* 61–62 (2012), <http://www.gao.gov/assets/660/650863.pdf>.

³ OREGON DEPARTMENT OF TRANSPORTATION, *OREGON'S MILEAGE FEE CONCEPT AND ROAD USER PILOT PROGRAM: FINAL REPORT* vi (2007), http://www.oregon.gov/ODOT/HWY/RUFPP/docs/RUFPP_finalreport.pdf.

⁴ OREGON DEPARTMENT OF TRANSPORTATION, *ROAD USAGE CHARGE PILOT PROGRAM: PRELIMINARY FINDINGS* 5–6 (2013), http://www.oregon.gov/ODOT/HWY/RUFPP/docs/RUCPilotPrelimFind_Feb13.pdf.

⁵ *Road Usage Charge Program*, OREGON.GOV, http://www.oregon.gov/ODOT/HWY/RUFPP/Pages/ruc_overview.aspx (last visited Feb. 3, 2014).

Several of the countries appear to rely somewhat heavily on private roads, concessions, or private-public partnerships as means to fund some of their road infrastructure, including Canada, China, France, Israel, and South Africa. In Australia, some state governments have developed networks of toll roads in partnership with private-sector investors, and the present Australian government is currently evaluating possible mechanisms for maximizing private-sector investment in major infrastructure projects.

Most of the surveyed countries have tolling systems to obtain part of their revenue for financing roads. In the case of Japan and France, the surveys note that tolls are linked with the weight of the vehicle and distance traveled. In the Netherlands, tolls known as “mobility rates” are charged for the use of roads as cars enter fee-payment gateways.

In England, a congestion tax is imposed on vehicles that enter central London during certain hours. Efforts to spread the congestion tax to other cities in England and Wales were abandoned, however. A congestion tax is also imposed in Sweden, in the cities of Stockholm and Gothenburg. This tax is not used for road maintenance; its purpose is to shift the preferred means of transportation from cars to public transportation, and to pay for the environmental effects of motor vehicle use.

Australia imposes a fuel-based, road-user charge on heavy trucks based on the amount of fuel used. A reform advisory group has proposed that trucks should be required to have GPS devices installed to enable taxation on the basis of distance traveled, and has argued that there should be a stronger relationship between revenues from user charges and the provision of the road network.

In France, the government was planning this year to implement a tax on heavy trucks that would have contributed to the financing of transportation infrastructure, which would have been calculated on a per-kilometer basis and on the basis of the vehicle’s size, age, and level of emissions. The implementation of this tax has been postponed, perhaps until 2015, because of strong public opposition.

Sweden taxes motor vehicles to pay for costs associated with them, including carbon dioxide emissions and road maintenance. The Netherlands imposes a motor vehicle tax based on the vehicle’s carbon dioxide emission level. Italy similarly imposes a vehicle tax based in part on the amount of pollution generated by the vehicle.

The Netherlands government in 2009 considered imposing a per-kilometer fee for motor vehicle use and abolishing the motor vehicle tax, but that scheme was never instituted.

In England, the prospect of a national system of road pricing based on usage was raised by a Transport Minister in 2012, but no legislation has been proposed.

In Sweden, a December 2013 government report discussing possible changes to the taxation of motor vehicles proposed a new tax on heavy-duty vehicles based on kilometers driven.

Australia

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SUMMARY Under Australia’s federal arrangements, state and local governments are responsible for road construction and maintenance. However, the federal government provides funding assistance under various programs. The federal government also collects a fuel excise tax, a Goods and Services Tax on fuel and vehicle sales, and a road user charge that applies to heavy vehicles based on fuel consumption, while state governments collect vehicle registration fees and vehicle stamp duties. Federal revenue from road transport-related activities is added to the general revenue pool and is not earmarked for road infrastructure expenditure. Rather, expenditure under the various funding programs is appropriated as part of the annual budget process. In addition to federal, state, and local revenue, private sector investment is also a source of funding for some roads, and three states maintain networks of toll roads. The current government has asked the Productivity Commission to investigate how infrastructure is currently funded and financed in Australia and to explore possible alternative mechanisms, with a particular focus on maximizing private-sector investment in major projects. A further key area for possible reform in the near future is the heavy vehicle charging system, with a reform advisory group apparently considering proposals for distance and road use charges, and for associated revenue to be directed to state and local governments to use for road infrastructure.

I. Introduction

The Commonwealth of Australia is made up of six states, two mainland territories, and several offshore territories. The Australian Constitution establishes a federal system of government.¹ Under the federal financial arrangements, all personal and corporate income tax, a value-added tax (Goods and Services Tax (GST)), excise duties, and other taxes are collected by the federal government. State and territory governments collect such taxes as land taxes, payroll taxes, motor vehicle taxes, and stamp duties. In addition, local councils levy “rates” (i.e., annual taxes) based on property values.² In the 2009–10 tax year, the taxation revenue of the federal government represented 80% of the taxation revenue for all levels of government. The revenue of state and territory governments is “supplemented by the distribution of grants from the Commonwealth Government, which includes the allocation of GST revenue.”³

¹ THE CONSTITUTION OF AUSTRALIA, <http://www.comlaw.gov.au/Details/C2013Q00005>.

² THE TREASURY, AUSTRALIA’S FUTURE TAX SYSTEM: ARCHITECTURE OF AUSTRALIA’S TAX AND TRANSFER SYSTEM – SECTION 2: OVERVIEW OF THE TAX-TRANSFER SYSTEM (2008), http://www.taxreview.treasury.gov.au/content/Paper.aspx?doc=html/publications/papers/report/section_2.htm.

³ AUSTRALIAN BUREAU OF STATISTICS, YEAR BOOK AUSTRALIA, 2012: GOVERNMENT FINANCE – TAXATION REVENUE (May 2012), <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1301.0~2012~Main%20Features~Taxation%20revenue~293>.

Under the Australian Constitution, roads are the responsibility of state and local governments. However, the federal government provides funds for the construction and maintenance of different types of road infrastructure as part of its revenue distribution arrangements.⁴ The remainder of funding for various road projects comes from state and local revenue and transfers or investment from the private sector. The federal government establishes national strategies related to significant road infrastructure and distributes funding under various programs,⁵ including dedicating funds to work related to a defined “National Land Transport Network” (commonly referred to as the National Network) of important road infrastructure links as well as providing funding to state and local governments for local and regional transport improvements.⁶

The Department of Infrastructure and Regional Development is the federal agency responsible for providing advice on various road transport policies and programs and administering these on behalf of the Australian government.⁷ The government has also established a statutory body called Infrastructure Australia, which conducts high-level analysis and advises governments, investors, and infrastructure owners on issues such as Australia’s current and future infrastructure needs and mechanisms for financing infrastructure investments.⁸

II. Fuel and Vehicle Taxes and Charges

There are a range of taxes and charges in Australia that apply to road transport-related activities, including the following:

A. Goods and Services Tax

A GST of 10% was introduced in Australia in July 2000.⁹ The rate is applied to most goods sold in Australia, including transport fuels¹⁰ and motor vehicles. GST revenue is collected from

⁴ For information on the funding arrangements from a state perspective, see PARLIAMENT OF VICTORIA ROAD SAFETY COMMITTEE, INQUIRY INTO FEDERAL-STATE ROAD FUNDING ARRANGEMENTS (Parliamentary Paper No. 361, Session 2006-10, Sept. 2010), <http://www.parliament.vic.gov.au/publications/committee-reports/819-final-report-on-the-inquiry-into-federal-state-road-funding-arrangements/download>.

⁵ See generally *Infrastructure Investment*, DEPARTMENT OF INFRASTRUCTURE AND REGIONAL DEVELOPMENT (DIRD), <http://investment.infrastructure.gov.au/index.aspx>; *Funding Programs*, DIRD, <http://investment.infrastructure.gov.au/funding/> (both last visited Jan. 22, 2014).

⁶ See *National Projects: Roads*, DIRD, <http://investment.infrastructure.gov.au/funding/projects/roads.aspx>; *National Network*, DIRD, <http://investment.infrastructure.gov.au/whatis/network/> (both last visited Jan. 22, 2014). The National Network is defined in AusLink (National Land Transport) Act National Land Transport Network Determination 2005 (No. 1) (Cth), <http://www.comlaw.gov.au/Details/F2009C00116>. This Determination was originally made under the AusLink (National Land Transport) Act 2005 (Cth), which has now been superseded by the Nation Building Program (National Land Transport) Act 2009 (Cth), <http://www.comlaw.gov.au/Details/C2009C00304>.

⁷ See generally *About the Department*, DIRD, <http://www.infrastructure.gov.au/department/about/index.aspx> (last visited Jan. 22, 2014).

⁸ *About Infrastructure Australia*, INFRASTRUCTURE AUSTRALIA, <http://www.infrastructureaustralia.gov.au/about/> (last visited Jan. 22, 2014). Infrastructure Australia was established by the Infrastructure Australia Act 2008 (Cth), <http://www.comlaw.gov.au/Details/C2013C00551>.

⁹ A New Tax System (Goods and Services Tax) Act 1999 (Cth), <http://www.comlaw.gov.au/Details/C2014C00008>.

businesses by the federal government and distributed to the states in accordance with recommendations made by the Commonwealth Grants Commission.¹¹

B. Fuel Tax

Australia has imposed customs and excise duties on transport fuel since the early 1900s. Unleaded petrol (i.e., gasoline) and diesel are both currently taxed at a rate of AU\$0.38143 per liter (about US\$1.26 per gallon).¹² Petrol excise was reduced by 6.7 cents per liter when GST was introduced in 2000, and lowered slightly further in 2001. Since 2001, the excise rate has not been indexed to inflation, and the rate has not been changed since that time.¹³ Fuel tax credits are available to businesses in relation to certain fuels and uses,¹⁴ as well as in relation to taxable fuel acquired for use in domestic (i.e., household) energy generation and nonprofit emergency vehicles.¹⁵

C. Luxury Car Tax

A luxury car tax¹⁶ (LCT) of 33% is “imposed on the GST-inclusive value of luxury cars over the relevant LCT threshold.”¹⁷ The current threshold is AU\$75,375 (about US\$65,670) for fuel-efficient cars and AU\$60,316 (about US\$52,550) for other cars.¹⁸

¹⁰ See *About Fuel Prices*, AUSTRALIAN COMPETITION AND CONSUMER COMMISSION, <http://www.accc.gov.au/consumers/petrol-diesel-and-lpg/about-fuel-prices> (last visited Jan. 22, 2014).

¹¹ COMMONWEALTH GRANTS COMMISSION, <https://www.cgc.gov.au/>; see also *Commonwealth Grants Commission*, WESTERN AUSTRALIA DEPARTMENT OF TREASURY, <http://www.treasury.wa.gov.au/cms/content.aspx?id=3654> (both last visited Jan. 22, 2014).

¹² The rates are set out in the Schedule to the Excise Tariff Act 1921 (Cth), <http://www.comlaw.gov.au/Details/C2013C00555>.

¹³ For general information on the history of fuel excise in Australia, see THE TREASURY, FUEL TAXATION INQUIRY: HISTORY OF FUEL TAXATION IN AUSTRALIA (Sept. 21, 2001), <http://fueltaxinquiry.treasury.gov.au/content/backgnd/002.asp>.

¹⁴ The fuel tax credit system is governed by the Fuel Tax Act 2006 (Cth), <http://www.comlaw.gov.au/Details/C2013C00594>. See *Fuel Tax Credits and Eligible Fuels*, AUSTRALIAN TAXATION OFFICE (ATO), <http://www.ato.gov.au/Business/Fuel-schemes/In-detail/Fuel-tax-credits---for-GST-registered-businesses/Calculating-and-record-keeping/Fuel-tax-credit-rates-and-eligible-fuels/> (last modified July 1, 2013); *Frequently Asked Questions Relating to Fuel Tax Credits*, DIRD, http://www.infrastructure.gov.au/roads/environment/fuel_tax_credit/FAQ.aspx (last updated Dec. 4, 2013).

¹⁵ *Fuel Tax Credits – Domestic Electricity Generation and Non-profit Emergency Vehicles or Vessels*, ATO, <http://www.ato.gov.au/Business/Fuel-schemes/In-detail/Fuel-tax-credits---if-no-GST-registration-requirement/Overview/Fuel-tax-credits---domestic-electricity-generation-and-non-profit-emergency-vehicles-or-vessels/> (last modified Aug. 22, 2013).

¹⁶ A New Tax System (Luxury Car Tax) Act 1999 (Cth), <http://www.comlaw.gov.au/Details/C2013C00099>.

¹⁷ *Luxury Car Tax – Getting Started*, ATO, http://www.ato.gov.au/Print-publications/Luxury-car-tax/?page=2#Getting_started (last modified Sept. 3, 2013).

¹⁸ *Luxury Car Tax Rate and Thresholds*, ATO, <http://www.ato.gov.au/Rates/Luxury-car-tax-rate-and-thresholds/> (last modified Dec. 17, 2013).

D. Heavy Vehicle Charges

Owners of heavy vehicles are required to pay a registration charge as well as a fuel-based road user charge in order to ensure that heavy vehicles “pay for their fair share of road spending.”¹⁹ Under the current arrangements, trucking operators can receive a fuel tax credit for the difference between the road user charge and the fuel excise rate.²⁰

Identical registration charges are established through regulations enacted in all states and territories and are adjusted annually in accordance with an annual adjustment formula that was established by the Model Heavy Vehicle Charges Act 2007.²¹ This formula involves the application of a seven-year average for both road expenditure and vehicle numbers.

Changes to the road user charge are calculated by the National Transport Commission (NTC) using the same factor that is applied to adjust the registration charge, and the NTC must also act in accordance with the principles set by the National Standing Council on Transport and Infrastructure and the Council of Australian Governments.²² Under the Fuel Tax Act 2006 (Cth), the federal government must undertake a consultation process on proposed changes to the road user charge.²³

Beginning July 1, 2013, the rates of both charges were increased by 2.5% to reflect changes in the level of expenditure on roads. The current road-user charge is AU\$0.2614 per liter (about US\$0.86 per gallon),²⁴ while the registration charge varies depending on the type of vehicle.²⁵ For example, the charge for a two-axle truck up to twelve tons is AU\$556 (about US\$485), while the charge for a “long combination truck” is AU\$9,595 (about US\$8,365).²⁶ The registration

¹⁹ *Heavy Vehicle Charges*, NATIONAL TRANSPORT COMMISSION (NTC), <http://www.ntc.gov.au/viewpage.aspx?documentid=2095> (last updated July 25, 2013).

²⁰ Under the Fuel Tax Act 2006 (Cth), a fuel tax credit is available in relation to heavy diesel vehicles if they satisfy one of four environmental criteria. *Fuel Tax Credit for Heavy Diesel Vehicles*, DIRD, http://www.infrastructure.gov.au/roads/environment/fuel_tax_credit/index.aspx (last updated Oct. 15, 2013); ATO, FUEL TAX CREDITS FOR BUSINESS 13 (2013), <http://www.ato.gov.au/uploadedFiles/Content/ITX/downloads/BUS18875n14584.pdf>.

²¹ National Transport Commission (Model Heavy Vehicle Charges Act) Regulations 2008 (Cth), <http://www.comlaw.gov.au/Details/F2008L02216>. For information on this legislation, see *Model Heavy Vehicle Charges Act*, NTC, <http://www.ntc.gov.au/viewpage.aspx?documentid=849> (last updated Nov. 21, 2013); see also DEPARTMENT OF INFRASTRUCTURE, TRANSPORT, REGIONAL DEVELOPMENT AND LOCAL GOVERNMENT, A NATIONAL FRAMEWORK FOR REGULATION, REGISTRATION AND LICENSING OF HEAVY VEHICLES: REGULATORY IMPACT STATEMENT (May 2009), http://www.infrastructure.gov.au/roads/vehicle_regulation/ris/files/HV_RIS_8May2009.pdf.

²² *Heavy Vehicle Charges – How Are Heavy Vehicle Charges Calculated?*, NTC, <http://www.ntc.gov.au/viewpage.aspx?documentid=2311> (last updated June 18, 2013).

²³ NTC, HEAVY VEHICLE ROAD USER CHARGE ANNUAL ADJUSTMENT: CONSULTATION REPORT (Mar. 2013), <http://www.ntc.gov.au/filemedia/Reports/HVAnnualAdjustment2013.pdf>.

²⁴ Road User Charge Determination (No. 1) 2013 (Cth), <http://www.comlaw.gov.au/Details/F2013L00990>.

²⁵ NTC, HEAVY VEHICLE CHARGES: 2013 ANNUAL ADJUSTMENT TO REGISTRATION CHARGES (Mar. 6, 2013), <http://www.ntc.gov.au/filemedia/Reports/2013HVAnnualAdjust.pdf>.

²⁶ *Heavy Vehicle Charges – Heavy Vehicle Charges 2013/14*, NTC, <http://www.ntc.gov.au/viewpage.aspx?documentid=2095> (last updated July 25, 2013).

fees are collected by the states and territories²⁷ and road user charges are collected by the federal government.

A Heavy Vehicle Charging and Investment Reform project, established by the Council of Australian Governments, will continue in 2014.²⁸ The reform advisory group's current proposals reportedly indicate that in the future trucks may be required to have GPS devices installed so that they can be charged for distances traveled and roads used.²⁹

E. Other Vehicle Registration Charges and Stamp Duty

All Australian states and territories require private vehicle owners to pay an annual registration fee in order to use public roads. Unlike the national vehicle registration system for heavy vehicles described above, the fee amount for cars varies by state as well as by type of vehicle. The total fee may also reflect different components, such as a charge for compulsory third-party insurance (e.g., in South Australia,³⁰ Queensland,³¹ Victoria,³² and the Northern Territory³³).

In addition to the registration fee, a stamp duty (variously called, e.g., “vehicle registration duty,” “motor vehicle duty,” or “vehicle licence duty”) is payable to the relevant state authority when a person registers a new motor vehicle or when transferring a registration to another person.³⁴

²⁷ See generally *Heavy Vehicle Registration*, NTC, <http://www.ntc.gov.au/viewpage.aspx?AreaId=35&DocumentId=1793> (last updated Feb. 21, 2012).

²⁸ *About the Project*, HEAVY VEHICLE CHARGING AND INVESTMENT REFORM, <http://www.roadreform.gov.au/about-project> (last visited Jan. 22, 2014).

²⁹ Annabel Hepworth, *Trucks May be Tracked by GPS for Fees*, THE AUSTRALIAN (Jan. 15, 2014), <http://www.theaustralian.com.au/national-affairs/trucks-may-be-tracked-by-gps-for-fees/story-fn59niix-1226801930220#>. The HVCIR group's high level proposals were set out in its submission to the Productivity Commission review of infrastructure funding, discussed below in section IV. See *Heavy Vehicle Charging and Investment Reform*, Submission to the Productivity Commission Inquiry into Public Infrastructure (Jan. 2014), http://www.pc.gov.au/data/assets/pdf_file/0020/131744/sub077-infrastructure.pdf.

³⁰ *Compulsory Third Party Insurance*, GOVERNMENT OF SOUTH AUSTRALIA, <http://www.sa.gov.au/subject/Transport,+travel+and+motoring/Motoring/Vehicles+and+registration/Vehicle+insurance/Compulsory+third+party+insurance> (last visited Jan. 22, 2014).

³¹ *Registering Motor Vehicles and Motorcycles*, QUEENSLAND DEPARTMENT OF TRANSPORT AND MAIN ROADS, <http://www.tmr.qld.gov.au/registration/registering-vehicles/registering-motor-vehicles-and-motorbikes.aspx> (last updated Jan. 17, 2014).

³² *Transport Accident Charge*, VICTORIA TRANSPORT ACCIDENT COMMISSION, <http://www.tac.vic.gov.au/about-the-tac/our-organisation/transport-accident-charge> (last visited Jan. 22, 2014).

³³ *Vehicle Registration*, NORTHERN TERRITORY DEPARTMENT OF TRANSPORT, <http://www.transport.nt.gov.au/mvr/registration> (last visited Jan. 22, 2014).

³⁴ See generally *Stamp Duty – Taxation*, BUSINESS.GOV.AU, <http://www.business.gov.au/BusinessTopics/Taxation/Taxesexplained/Pages/Stampduty.aspx> (last visited Jan. 22, 2014).

F. Tolls

Some state governments have developed networks of toll roads, often in partnership with private-sector investors. Toll roads are primarily situated in major metropolitan areas in the east of the country (New South Wales,³⁵ Victoria,³⁶ and Queensland³⁷).

III. National Road Infrastructure Funding

A. History

In 1959, the government announced the “termination of the hypothecation arrangements [i.e., earmarks] for road funding.”³⁸ The policy of funding road infrastructure from general revenue rather than earmarked funds continued until 1982, when the Australian Bicentennial Road Development Trust Fund Act was enacted, establishing a road development program funded by a surcharge of AU\$0.01 per liter (later AU\$0.02 per liter) on the excise of petrol and diesel. The program was replaced by the Australian Land Transport Development Act 1988,³⁹ which abolished the surcharge and allowed the government to determine what share of excise on petrol and diesel should be paid into a trust fund for the purpose of funding road projects under the Act. Although this Act is still in force, since the 1991–92 fiscal year “successive Governments have set road funding in the budget process, discontinuing the practice of hypothecating a proportion of fuel excise to roads.”⁴⁰

B. Current Federal Funding Programs

Under the current road funding arrangements at the federal level, revenue from the fuel excise tax and other road transport-related federal taxes or charges is added to the general revenue pool (the Consolidated Revenue Fund⁴¹) and is not earmarked or placed in designated funds for road (or other transport) infrastructure projects.⁴² Federal expenditure related to road infrastructure is

³⁵ *Paying Tolls*, NSW ROADS AND MARITIME SERVICES, http://www.rms.nsw.gov.au/usingroads/motorways/andtolling/tolling_tolling.html (last updated Dec. 23, 2013).

³⁶ *Tollways*, VICTORIAN GOVERNMENT, <http://www.vic.gov.au/transport-vehicles/roads-road-transport/tollways.html> (last visited Jan. 22, 2014).

³⁷ *Tollways and Tolling*, QUEENSLAND DEPARTMENT OF TRANSPORT AND MAIN ROADS, <http://www.tmr.qld.gov.au/Travel-and-transport/Road-and-traffic-info/Toll-roads-and-tolling.aspx> (last updated Jan. 9, 2014).

³⁸ FUEL TAXATION INQUIRY: HISTORY OF FUEL TAXATION IN AUSTRALIA, *supra* note 13.

³⁹ Australian Land Transport Development Act 1988 (Cth), <http://www.comlaw.gov.au/Details/C2008C00377>.

⁴⁰ FUEL TAXATION INQUIRY: HISTORY OF FUEL TAXATION IN AUSTRALIA, *supra* note 13.

⁴¹ For information on the federal budget process, see *The Commonwealth's Appropriation Framework – An Introduction*, DEPARTMENT OF FINANCE, <http://www.finance.gov.au/budget/budget-process/appropriation-bills.html> (last visited Jan. 22, 2014).

⁴² See Richard Webb, *Petrol and Diesel Excises* (Parliamentary Library Research Paper 6, 2000-01, Oct. 3, 2000), http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp0001/01RP06. According to an information sheet produced by the Bureau of Infrastructure, Transport and Regional Economics, in the 2008-09 fiscal year the federal government spent AU\$4.9 billion on road infrastructure, while state and territory governments spent AU\$9.9 billion and local government expenditure was AU\$3.4 billion, for a

therefore funded by appropriations as part of the annual budget process. This includes payments to states and territories for road infrastructure projects that come under the “Nation Building Program,”⁴³ which is part of the “National Partnership Payments to the States” distribution system agreed upon between the federal and state governments.⁴⁴ Funding under this program is appropriated through a “special account” appropriation mechanism authorized by the Nation-building Funds Act 2008 (Cth).⁴⁵ Allocations under the relevant fund are guided by an infrastructure priority list developed by Infrastructure Australia.⁴⁶

The following are some of the major funding programs specifically related to road infrastructure that are administered by the Department of Infrastructure and Regional Development as part of its broader “Infrastructure Investment” program.⁴⁷

1. National Projects

This program “targets projects on the National Network that will deliver the highest benefits to the nation.”⁴⁸ It involves the distribution of funds to individual states for major road works that will “significantly improve the efficiency and safety of the National Network.”⁴⁹

total of AU\$15.8 billion. In comparison, a total of AU\$15.6 billion was collected in the same year from public road-related taxes and charges. The agency clarified that “[j]oint presentation of the government road-related expenditures with motor vehicle revenues in this information sheet does not imply that there is any direct linkage between revenue and expenditure.” DEPARTMENT OF INFRASTRUCTURE AND TRANSPORT, BUREAU OF INFRASTRUCTURE, TRANSPORT AND REGIONAL ECONOMICS, PUBLIC ROAD-RELATED EXPENDITURE AND REVENUE IN AUSTRALIA 2 (2011), http://www.bitre.gov.au/publications/2011/files/is_040.pdf.

⁴³ Funding for land transport-related projects is distributed under the Nation Building Program (National Land Transport) Act 2009 (Cth), <http://www.comlaw.gov.au/Details/C2009C00304>. See also *Nation-building Funds Expenditure Processes*, DEPARTMENT OF FINANCE, <http://www.finance.gov.au/investment-funds/nation-building-funds/expenditure-processes.htm> (last visited Jan. 22, 2014).

⁴⁴ For the various areas of infrastructure funding provided under this system see Australian Government, Budget 2013-14, Budget Paper No. 3, Part 2: Payments for Specific Purposes – Infrastructure, http://www.budget.gov.au/2013-14/content/bp3/html/bp3_03_part_2g.htm; *National Partnerships – Infrastructure*, STANDING COUNCIL ON FEDERAL FINANCIAL RELATIONS, <http://www.federalfinancialrelations.gov.au/content/npa/infrastructure.aspx> (last visited Jan. 22, 2014).

⁴⁵ Nation-building Funds Act 2008 (Cth), ch 2 (“Building Australia Fund”), <http://www.comlaw.gov.au/Details/C2012C00340>. See also *Nation-building Funds: Building Australia Fund*, DEPARTMENT OF FINANCE, <http://www.finance.gov.au/investment-funds/NBF/BAF.html> (last visited Jan. 22, 2014); *Building Australia Fund Projects*, DIRD, <http://www.infrastructure.gov.au/infrastructure/baf/index.aspx> (last updated Oct. 17, 2013). For information on the special account appropriation mechanism, see *The Commonwealth’s Appropriation Framework – An Introduction*, *supra* note 41.

⁴⁶ *Infrastructure Priority List*, INFRASTRUCTURE AUSTRALIA, http://www.infrastructureaustralia.gov.au/priority_list/index.aspx (last updated Dec. 12, 2013).

⁴⁷ *Funding Programs*, DIRD, <http://investment.infrastructure.gov.au/funding/> (last updated Dec. 20, 2013); *What Is Infrastructure Investment*, DIRD, <http://investment.infrastructure.gov.au/whatis/index.aspx> (last updated Sept. 18, 2013); DIRD, Budget Statements 2013-2014 – Section 2: Outcomes and Planned Performance, https://www.infrastructure.gov.au/departement/statements/2013_2014/budget/dit2b.aspx.

⁴⁸ *National Projects*, DIRD, <http://investment.infrastructure.gov.au/funding/projects/index.aspx> (last updated Sept. 18, 2013).

⁴⁹ *Id.*

2. *Off-Network Projects*

Under this program, funds are provided to state, territory, and local governments for road projects not on the National Network.⁵⁰

3. *Roads to Recovery Program*

This program involves the allocation and direct payment of funds to local authorities in each state and territory to support the “maintenance of the nation’s local road infrastructure asset.”⁵¹ Each council is guaranteed a share of the available funding and nominates projects to be funded.⁵² Funding is then distributed “according to a formula based on population and road length set by the Local Government Grants Commissions in each state and the Northern Territory.”⁵³ General conditions apply related to expenditure of payments under the program as well as planning and reporting.⁵⁴

4. *Funding for Local Roads*

Unlike the Roads to Recovery program, this program provides untied local road grants to councils as part of annual financial assistance grants.⁵⁵ The local road grants program reflects the following features:

- The amount provided is increased annually to compensate for both population growth and inflation.
- Each State receives a fixed share of the grant; the share being set out in legislation.
- Each council’s share of the grant is determined by the State’s local government grants commission.
- The grants are untied.

⁵⁰ *Off-Network Projects*, DIRD, http://investment.infrastructure.gov.au/funding/projects/off_network.aspx/ (last updated Sept. 18, 2013).

⁵¹ *Roads to Recovery Programme Funding Allocations 2009-2014*, DIRD, <http://investment.infrastructure.gov.au/funding/r2r/index.aspx> (last updated Jan. 17, 2014). The original Roads to Recovery program was established by the Roads to Recovery Act 2000 (Cth), <http://www.comlaw.gov.au/Details/C2004C01154>, which provided a special appropriation over four years. A further four-year program was established under the AusLink (National Land Transport) Act 2005 (Cth), <http://www.comlaw.gov.au/Details/C2008C00561>, and was funded through annual appropriations. The current program started in 2009 and comes under the National Building program. It is currently scheduled to end in June 2014.

⁵² *Roads to Recovery Funding Conditions*, DIRD, http://investment.infrastructure.gov.au/funding/r2r/r2r_funding_conditions.aspx (last updated Jan. 17, 2014).

⁵³ *Funding for Local Roads*, DIRD, <http://investment.infrastructure.gov.au/funding/roads/index.aspx> (last updated Jan. 17, 2014).

⁵⁴ Nation Building Program (National Land Transport) Act 2009 (Cth): Determination of Conditions Applying to Payments under Part 8 of the Act (Apr. 2013), http://investment.infrastructure.gov.au/publications/administration/pdf/R2R_Funding_Conditions_March_2013.pdf.

⁵⁵ *Financial Assistance Grants to Local Government*, DIRD, <http://www.regional.gov.au/local/assistance/index.aspx> (last updated Oct. 23, 2013).

- South Australian councils also receive supplementary funding for local roads in addition to their financial assistance grants.⁵⁶

5. *Black Spot Program*

Projects funded under this program include various measures aimed at addressing issues at road locations where many accidents are occurring.⁵⁷ Individuals and organizations are able to nominate a “black spot” for funding consideration, and these are assessed by the relevant state authority and state “Consultative Panels” before being submitted to the federal government.⁵⁸ In order to be eligible for funds, project proposals must include information on whether there have been a minimum number of casualty crashes at the road or site and “should be able to demonstrate a benefit to cost ratio of at least 2:1.”⁵⁹

IV. Future Direction

A change in the federal administration occurred in September 2013 with the election of the center-right Coalition led by Tony Abbott of the Liberal Party, who became Prime Minister. Part of the Coalition’s election platform was to pursue a “significant infrastructure agenda” involving AU\$5 billion in additional funding, including funding for several major road projects.⁶⁰

In November 2013, the Prime Minister, the Treasurer, and the Assistant Minister for Infrastructure and Regional Development announced that the Australian Productivity Commission would be tasked with analyzing and reporting on the following areas:

- How infrastructure is currently funded and financed in Australia, including by the Commonwealth, the States and the private sector;
- The rationale, role and objectives of alternative funding and financing mechanisms;
- Examine the cost structure of major infrastructure projects in Australia, including where infrastructure project costs have increased considerably, compared with other countries;
- Provide advice on ways to improve decision-making and implementation processes to facilitate a reduction in the cost of public infrastructure projects; and

⁵⁶ *Funding for Local Roads*, *supra* note 53.

⁵⁷ *Black Spot Programme*, DIRD, <http://investment.infrastructure.gov.au/funding/blackspots/index.aspx> (last updated Dec. 11, 2013).

⁵⁸ *Black Spot Programme Funding Conditions*, DIRD, http://investment.infrastructure.gov.au/funding/blackspots/bs_funding_conditions.aspx (last updated Dec. 11, 2013).

⁵⁹ *Black Spot Sites Eligibility*, DIRD, http://investment.infrastructure.gov.au/funding/blackspots/eligibility_of_sites.aspx (last updated Dec. 11, 2013).

⁶⁰ Press Release, Liberal Party, Final Update on Federal Coalition Election Policy Commitments (Sept. 5, 2013), <http://www.liberal.org.au/latest-news/2013/09/05/final-update-federal-coalition-election-policy-commitments>.

- Comment on other relevant policy measures, including any non-legislative approaches, which would help ensure effective delivery of infrastructure services over both the short and long term.⁶¹

The Productivity Commission subsequently released a detailed Issues Paper and received a number of submissions from interested parties.⁶² It is set to release a draft report in March 2014 and will then hold public hearings before submitting a final report to the government in May 2014.⁶³ A major part of the discussion, and a “key plank” in the government’s approach, relates to possible mechanisms for maximizing private sector investment in major infrastructure projects, including roads.⁶⁴ In January 2014, *The Australian* reported that various submissions to the Productivity Commission called for greater direct charging of all road users through tolls.⁶⁵

There is considerable information and analysis available related to private investment in infrastructure in Australia. As indicated above, various states have previously examined and utilized different private funding mechanisms for the development of road infrastructure, including Public Private Partnerships and the use of tolls. In 2008, the Council of Australian Governments endorsed the National Public Private Partnership Policy and Guidelines for use by all state and territory governments.⁶⁶

In 2011, a report prepared for the Department of Infrastructure and Transport (as it was then called) found that “over-optimistic patronage forecasts have contributed to the commercial

⁶¹ Press Release, Hon. Jamie Briggs, Hon. Tony Abbott, & Hon. Joe Hockey, Productivity Commission Inquiry into Infrastructure Costs (Nov. 13, 2013), http://www.minister.infrastructure.gov.au/jb/releases/2013/November/jb008_2013.aspx. Previously, in 2009, the Productivity Commission published a staff working paper that looked at the financing of public infrastructure from a comparative perspective. Chris Chan et al., *Public Infrastructure Financing: An International Perspective* (Productivity Commission, Mar. 31, 2009), <http://www.pc.gov.au/research/staff-working/public-infrastructure-financing>. Later, in 2012, the Infrastructure Finance Working Group, made up of senior officials and consultants, published a report on infrastructure funding reform: INFRASTRUCTURE FINANCE WORKING GROUP, INFRASTRUCTURE FINANCE AND FUNDING REFORM (Apr. 2012), http://www.infrastructure.gov.au/infrastructure/iff/files/IFWG_Report.pdf.

⁶² PUBLIC INFRASTRUCTURE (Productivity Commission Issues Paper, Nov. 2013), http://www.pc.gov.au/data/assets/pdf_file/0003/130089/infrastructure-issues.pdf. Submissions can be viewed on the Productivity Commission’s website, at <http://www.pc.gov.au/projects/inquiry/infrastructure/submissions>.

⁶³ *Public Infrastructure*, PRODUCTIVITY COMMISSION, <http://www.pc.gov.au/projects/inquiry/infrastructure> (last visited Jan. 23, 2014).

⁶⁴ Speech, Hon. Warren Truss, IPA Partnerships 2013 – Infrastructure & Investment Conference: Keynote Address (Oct. 18, 2013), http://www.minister.infrastructure.gov.au/wt/speeches/2013/wts005_2013.aspx.

⁶⁵ David Crowe, *Drivers Face More Tolls to Use Roads*, THE AUSTRALIAN (Jan. 7, 2014), <http://www.theaustralian.com.au/national-affairs/drivers-face-more-tolls-to-use-roads/story-fn59niix-1226796162625#>. See also Gary Bowditch, *Should Users Pay the Toll for Australia’s Infrastructure Problem?*, THE CONVERSATION (Dec. 3, 2013), <https://theconversation.com/should-users-pay-the-toll-for-australias-infrastructure-problem-20774>.

⁶⁶ *National Public Private Partnership Policy and Guidelines*, INFRASTRUCTURE AUSTRALIA, http://www.infrastructureaustralia.gov.au/public_private/ppp_policy_guidelines.aspx (last updated Aug. 21, 2013).

failure of a series of major toll roads in Australia.”⁶⁷ The Department then undertook further examination of the issues and potential solutions for managing patronage forecasting.⁶⁸

In 2013, Reuters reported that the Queensland government was considering selling its toll road business to “capitalise on strong demand for the country’s infrastructure assets.”⁶⁹ The approach of initially publicly funding the building of toll roads, including through borrowing money, and then later selling the project to private investors was also being considered for a project in New South Wales.⁷⁰ Most recently, it was reported that China Merchants Group, one of China’s biggest state-owned enterprises, “is eyeing investment opportunities in Australia as state governments look to privatise assets such as toll roads and other infrastructure to reduce debt.”⁷¹

In addition to possible changes in the use of various public and private financing mechanisms under the new government, future reforms appear likely to include changes to the heavy vehicle charging system discussed above, depending on the outcomes of recommendations made by the Heavy Vehicle Investment and Charging Reform group. Furthermore, according to the group’s submission to the Productivity Commission, it is “strongly of the view that there must be a stronger relationship between the revenues associated with user charges and the provision of the road network. That is, heavy vehicle charges revenues should flow back to road providers as a source of funding for road provision and maintenance.”⁷² The reform proposals will apparently be considered at the next meeting of the Council of Australian Governments, which is likely to be held around April 2014.⁷³

⁶⁷ GHD, REVISED FINAL REPORT TO THE DEPARTMENT OF INFRASTRUCTURE AND TRANSPORT: AN INVESTIGATION OF THE CAUSES OF OVER-OPTIMISTIC PATRONAGE FORECASTS FOR SELECTED TOLL ROAD PROJECTS 1 (Dec. 8, 2011), http://www.infrastructure.gov.au/infrastructure/infrastructure_reforms/files/Attach_C-GHD_Report.pdf.

⁶⁸ DEPARTMENT OF INFRASTRUCTURE AND TRANSPORT, ADDRESSING ISSUES IN PATRONAGE FORECASTING FOR PPP/TOLL ROADS: CONSULTATION PAPER (Feb. 2012), http://www.infrastructure.gov.au/infrastructure/public_consultations/files/patronage_consultation_paper.pdf; DEPARTMENT OF INFRASTRUCTURE AND TRANSPORT, DISINCENTIVISING OVERBIDDING FOR TOLL ROAD CONCESSIONS (Sept. 2012), http://www.infrastructure.gov.au/infrastructure/infrastructure_reforms/files/Disincentivising_Overbidding_Toll_Road_Concessions.pdf.

⁶⁹ *Australia’s Queensland State Mulls Sale of Toll Road Assets*, REUTERS (Nov. 8, 2013), <http://www.reuters.com/article/2013/11/08/australia-infrastructure-idUSL3N0IT2IT20131108>.

⁷⁰ Michaela Whitbourn, *Private Funding Dumped in New Plan for Toll Roads*, FINANCIAL REVIEW (June 18, 2013), http://www.afr.com/p/national/private_funding_dumped_in_new_plan_epZkG1r0xOmzcVVKuFvtON.

⁷¹ Damon Kitney, *Qld Motorways a Likely Target as \$63bn China Merchants Group Eyes Investment*, THE AUSTRALIAN (Jan. 20, 2014), <http://www.theaustralian.com.au/business/economics/qld-motorways-a-likely-target-as-63bn-china-merchants-group-eyes-investment/story-e6frg926-1226805393662#>.

⁷² Heavy Vehicle Charging and Investment Reform, *supra* note 29, at 14.

⁷³ *Id.* at 7; Press Release, Council of Australian Governments, COAG Meeting, 13 December 2013, <https://www.coag.gov.au/node/516>.

Brazil

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SUMMARY The Brazilian federal government administers a federal transportation system, which is implemented through federal agencies or by concession, authorization, or lease to a public or private enterprise, or to a public-private partnership. Regardless of the type of administration, the federal government is authorized to apply financial resources to the system.

In 2001, a new federal agency subordinated to the Ministry of Transportation was created to implement the policies formulated for administering the infrastructure of the federal transportation system, including the operation, maintenance, servicing or replacement, adjustment of capacity, and expansion of the infrastructure through the building of new roads and terminals.

A federal tax levied on the import and sale of oil and oil products, natural gas and its derivatives, and ethanol fuel was instituted in 2001 to finance, among other things, transportation infrastructure programs. Twenty-nine percent of the collected proceeds must be delivered to the states and the Federal District, which are obligated to apply these funds to the financing of transportation infrastructure programs. The states must, in turn, deliver 25% of the funds allocated to them to their municipalities, to be used in the financing of transportation infrastructure programs. Brazil is not contemplating the enactment of a vehicle-miles-traveled tax.

I. Road Infrastructure

A. National System of Transportation

Article 1 of Law No. 12,379 of January 6, 2011, provides for the National System of Transportation (Sistema Nacional de Viação, SNV),¹ in accordance with subsections XII and XXI of article 21 of the Federal Constitution,² which determines that the federal government (*União*) has the power to operate, directly or through authorization, concession, or permission, the services of interstate and international passenger transportation by road. There are transportation systems at three levels: the federal, state, and municipal level. These systems encompass not only road traffic but also rail, waterway, and air transportation. Of these, the federal system is administered by the SNV.³

¹ Lei No. 12.379, de 6 de Janeiro de 2011, art. 1, http://www.planalto.gov.br/ccivil_03/_Ato2011-2014/2011/L12379.htm.

² CONSTITUIÇÃO FEDERAL [C.F.], art. 21(XII) & (XXI), http://www.planalto.gov.br/ccivil_03/constituicao/constituicao.htm.

³ The SNV consists of the physical and operational infrastructure of the various modes of transportation of people and goods, under the jurisdiction of the different entities of the Federation. Lei No. 12.379 art. 2. As to jurisdiction, the SNV consists of the Federal System of Transportation (Sistema Federal de Viação, SFV) and the transportation systems of the states, the Federal District, and the municipalities. *Id.* art. 2(§ 1).

B. Federal System of Transportation

The SFV is composed of the Federal Highway Subsystem, Federal Railroad Subsystem, Federal Waterway Subsystem, and Federal Airway Subsystem.⁴ The administration of the SFV belongs to the federal government and involves the planning, construction, maintenance, operation, and exploitation of its components.⁵

The federal government must exercise its powers related to the SFV directly through federal agencies and organs,⁶ or by concession, authorization, or lease to a public or private enterprise,⁷ or to a public-private partnership.⁸ The federal government may apply financial resources to the SFV, whatever the system of administration is adopted.⁹

II. Funding for National Road Infrastructure

Highway construction and maintenance is essentially funded by the federal government through tolls, concessions, and taxation imposed on the import and sale of oil and oil products, natural gas and its derivatives, and ethanol fuel.

A. Tolls

Article 150(V) of the Constitution prohibits the federal government, the states, the Federal District, and the municipalities from establishing limitations on the movement of persons or goods by means of interstate or intercounty taxes, except for the collection of tolls for the use of government-maintained highways.¹⁰

B. Concessions

The government may grant concessions for the construction and operation of federal highways and the operation of road projects, as well as for the operation and administration of existing highways through toll collection.¹¹

⁴ *Id.* art. 3.

⁵ *Id.* art. 5.

⁶ *Id.* art. 6.

⁷ *Id.* art. 6(II).

⁸ *Id.* art. 6(III). Lei No. 11.079, de 30 de Dezembro de 2004 [Law No. 11,079 of December 30, 2004], regulates public-private partnerships (PPP). Article 2 of the Law defines a PPP as an administrative concession contract, which can be sponsored or administrative. Paragraph 1 defines sponsored concessions, and paragraph 2 defines administrative concessions. Lei No. 11.079, de Dezembro de 2004, http://www.planalto.gov.br/ccivil_03/_ato2004-2006/2004/lei/111079.htm.

⁹ *Id.* art. 7.

¹⁰ C.F. art. 150(V).

¹¹ Decreto-Lei No. 791, de 27 de Agosto de 1969, art. 7, http://www.planalto.gov.br/ccivil_03/Decreto-Lei/1965-1988/Del0791.htm.

Law No. 8,987 of February 10, 2005, regulates the concession of public services and public works, and the permission to render public services, both of which must be governed by the terms of article 175 of the Constitution,¹² by Law No. 8,987, by the relevant legal standards, and by the clauses of all indispensable contracts.¹³

The government is authorized, through the Ministry of Transportation, to delegate, for a period of up to twenty-five years and renewable for up to twenty-five more years, to municipalities, states, and the Federal District, or to a consortium between them, the administration of highways, exploitation of stretches of highway, or development of federal road projects.¹⁴ The delegation must be formalized through an agreement (*convênio*),¹⁵ which must have a clause providing for the possibility of enforcing the laws of the municipality, the state, or the Federal District regarding the charging of tolls or port tariffs, or other form of collection, as long as it is not contrary to federal law.¹⁶ The income generated from such charges must be applied to additional works, improvements, expansion of the traffic capacity, preservation, and signs and signals on the highway on which it is charged, and on road sections that give access to the highway.¹⁷

The federal government may allocate financial resources to a concessionaire for the construction, maintenance, improvement, and operation of highways, portions of highways, federal road projects, or federal ports, provided that such projects and services are not the responsibility of the concessionaire.¹⁸

On June 5, 2001, Law No. 10,233 created the National Department of Transportation Infrastructure (Departamento Nacional de Infraestrutura de Transportes, DNIT), a federal agency subordinated to the Ministry of Transportation and charged with the duty of implementing the policies formulated for administering the infrastructure of the SFV, including the operation, maintenance, servicing or

¹² Article 175 of the Constitution determines that the rendering of public services is incumbent upon the government (*Poder Público*) directly or under a regime of concession or permission, and always through a bidding process. C.F. art. 175.

¹³ Lei No. 8.987, de 13 de Fevereiro de 1995, art. 1, http://www.planalto.gov.br/ccivil_03/leis/18987cons.htm. Law No. 8,987 defines “concession of public services” as the delegation of the concession’s performance through competitive bidding to the legal entity or consortium of companies that demonstrate the capacity to perform the services, at their own risk and for a specified period of time (art. 2(II)); “concession of public services preceded by the execution of public works” is defined as the construction (total or partial), conservation, renovation, expansion, or improvement of any works of public interest, that are delegated through competitive bidding to the legal entity or consortium of companies that demonstrate the capacity for their implementation, at their own risk, so that the investment of the concessionaire is paid and amortized through the exploitation of the work or service for a specified period of time (art. 2(III)); “permission for public service” (*permissão de serviço público*) is defined as the temporary granting, through competitive bidding, of permission to render a public service, to the persons or entity that demonstrates the ability to perform the service, at their own risk (art. 2(IV)).

¹⁴ Lei No. 9.277, de 10 de Maio de 1996, art. 1, http://www.planalto.gov.br/ccivil_03/leis/L9277.htm.

¹⁵ *Id.* art. 3.

¹⁶ *Id.* art. 3(§ 1).

¹⁷ *Id.* art. 3(§ 2).

¹⁸ *Id.* art. 5.

replacement, adjustment of capacity, and expansion of the infrastructure through the building of new roads and terminals, according to the principles and guidelines established in Law No. 10,233.¹⁹

C. Revenue from Taxes

1. Law No. 10,336 of December 19, 2001

Law No. 10,336 of December 19, 2001 created the Contribution of Intervention in the Economic Domain (*Contribuição de Intervenção no Domínio Econômico*, CIDE), a tax levied on the import and sale of oil and oil products, natural gas and its derivatives, and ethanol fuel.²⁰

The proceeds from the collection of the CIDE will be allocated, according to the budgetary law, for subsidizing the prices or transportation of ethanol, natural gas and its derivatives, and petroleum products; the financing of environmental projects related to the oil and gas industry; and the financing of transportation infrastructure programs.²¹ This revenue finances not only federal highways but also state and municipal highways and roads.²²

The CIDE is triggered by the import and domestic sale, by the contributors mentioned in article 2, of gasoline and its chains;²³ diesel and its chains; aviation kerosene and other kerosene; fuel oil; liquefied petroleum fuels, including those derived from natural gas and naphtha; and ethanol fuel.²⁴

The following specific CIDE rates apply to the import and domestic sale of

I – gasoline, R\$860,00 [approximately US\$358.33] per cubic meter;

II – diesel, R\$390,00 [US\$162.50] per cubic meter;

III – aviation kerosene, R\$92,10 [US\$38.37] per cubic meter;

IV – other kerosene, R\$92,10 (US\$38.37) per cubic meter;

V – fuel oil with high sulfur content R\$40,90 [US\$17.04] per ton;

VI – fuel oil with low sulfur content R\$40,90 [US\$17.04] per ton;

¹⁹ Lei No. 10.233, de 5 de Junho de 2001, arts. 1(V), 79–80, http://www.planalto.gov.br/ccivil_03/Leis/LEIS_2001/L10233.htm.

²⁰ Lei No. 10.336, de 19 de Dezembro de 2001, art. 1, http://www.planalto.gov.br/ccivil_03/leis/leis_2001/L10336.htm.

²¹ *Id.* art. 1(§ 1)(I)–(III).

²² C.F. arts. 159(III) & 177(§ 4). C.F. article 177(§ 4)(II)(c) establishes that the law that creates the CIDE must determine that the funds raised be used to finance programs of transportation infrastructure. Lei No. 10.336 art. 1-A.

²³ For the purposes of article 3 of Law No. 10,336, in accordance with the standards established by ANP, the petroleum-derived liquid hydrocarbons and liquid hydrocarbons derived from natural gas for use in mechanical mixing for the production of gasoline or diesel are considered chains. *Id.* art. 3(§ 1).

²⁴ *Id.* art. 3.

VII – liquefied gas derived from petroleum, including that derived from natural gas and naphtha, R\$250,00 [US\$104.16] per ton; [and]

VIII – ethanol fuel, R\$37,20 [US\$15.50] per cubic meter.²⁵

2. *Law No. 10,636 of December 30, 2002*

Law No. 10,636 of December 30, 2002, established the criteria and guidelines for the application of funds raised through the CIDE, pursuant to the terms of Constitutional Amendment No. 33 of December 11, 2001, which amended articles 149 and 177 of the Constitution. Law No. 10,636 also created the National Fund for Transportation Infrastructure (Fundo Nacional de Infra-Estrutura de Transportes, FNIT).²⁶

The application of CIDE funds to programs of transportation infrastructure must have as key objectives reducing automotive fuel consumption, achieving the most economical way to meet the demand for the transport of people and goods, ensuring the safety and comfort of users, decreasing the travel time of public transportation users, improving the quality of life of the population, and reducing inefficiency in the use of productive resources. These objectives must be achieved despite the increase in the cost of building urban centers and with the lowest possible transportation and port/terminal costs in the domestic use and export of consumer products.²⁷

The FNIT, which is subordinated to the Ministry of Transportation, was created for the purpose of financing transportation infrastructure investment programs.²⁸ FNIT funds must have a multimodal application, according to the annual budget law, and meet the objectives established in article 6 of Law No. 10,636.²⁹

Article 12 of Law No. 10,636 determines that the administration of the federal road infrastructure and the operation of transportation under the control of the federal government must preferably be performed in a decentralized manner, promoting their transfer, where possible, to public entities and to other entities of the federation through delegation, or to the private sector through concession, permission, or authorization, provided that the corresponding legislation is respected.³⁰

III. New Initiatives on Road Infrastructure

Law No. 10,336 of 2001 was the last legislative initiative designed to raise funds for highway infrastructure. In this regard, Brazil is not currently contemplating the enactment of taxation based on the miles traveled by a vehicle.

²⁵ *Id.* art. 5.

²⁶ Lei No. 10.636, de 30 de Dezembro de 2002, art. 1, http://www.planalto.gov.br/ccivil_03/leis/2002/110636.htm.

²⁷ *Id.* art. 6.

²⁸ *Id.* art. 10.

²⁹ *Id.* art. 11(§ 1).

³⁰ *Id.* art. 12.

Canada

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SUMMARY Under Canada’s Constitution Act, the provinces and territories have exclusive jurisdiction over the building and maintenance of national highways. Local and municipal roads are under the jurisdiction of municipal governments. The federal government administers a number of federal funds to assist with road infrastructure projects, many of which are structured through bilateral cost-sharing agreements with specific provinces, territories or municipal governments for specific projects. Most of the monies for these various funds come from consolidated revenue, which is then allocated through a budgetary process. However, part of the federal gas tax revenue is earmarked for municipal infrastructure projects under the Federal Gas Tax Fund.

Provincially, the general practice is not to tie fuel taxes to highway or road infrastructure projects. In most provinces, expenditure on highway infrastructure projects is allocated under a government budget from the general revenue rather than from a particular tax source. Public-private partnerships have also been utilized to fund major road infrastructure projects.

I. Introduction

Under the *Constitution Act, 1867*, the provinces and territories of Canada are exclusively responsible for enacting legislation on “Local Works and Undertakings,” which includes highways.¹ According to Transport Canada, provincial and territorial governments are responsible for the “planning, design, construction, operation, maintenance and financing of highways within their jurisdiction.”² Nonetheless, the federal government contributes to funding for highway or road construction projects under specific legislation or programs of departments and agencies.³ Local road infrastructure is largely under the jurisdiction of local municipalities, which receive a large portion of their revenue through property taxes. However, they also receive funding assistance, typically through tax transfer agreements, from both the federal and provincial governments.

¹ Constitution Act, 1867, 30 & 31 Vict., c. 3, § 92, <http://www.canlii.org/en/ca/const/const1867.html>.

² *Highways*, TRANSPORT CANADA, <http://www.tc.gc.ca/eng/policy/acg-acgd-menu-highways-2141.htm> (last updated Jan. 4, 2010).

³ Allison Padova, Library of Parliament, Economics Division, Federal Participation in Highway Construction and Policy in Canada (Feb. 2006), PRB 05-69E, <http://www.parl.gc.ca/content/lop/researchpublications/prb0569-e.htm>.

II. National Road Infrastructure Funding

A. Federal Funding

Canada's approach to federal government assistance for highway infrastructure funding has historically been described as ad hoc as opposed to long-term.⁴ There does not appear to be a dedicated federal tax that only supports building and/or maintenance of national highways or roads.

As noted above, although "highways are the responsibility of the provinces and territories, the federal government has a long history of providing assistance for highway construction in Canada."⁵ Federal taxes, including the excise tax on gasoline and diesel fuel, go into the general coffers and help sustain a number of federal programs. Federally funded infrastructure programs that assist in funding highways and roads, as detailed below, are primarily structured through bilateral cost-sharing agreements with specific provinces and territories. The majority of these infrastructure funds are administered by Infrastructure Canada.

In 2007, the federal government of Canada launched a *Building Canada Plan*, which aimed to provide "\$33 billion in stable, flexible and predictable funding to provinces, territories and municipalities, allowing them to plan for the longer-term and address their ongoing infrastructure needs."⁶ Some of the funds created under the Plan that are still accepting applications and are not set to wind down include the Federal Gas Tax Fund, Building Canada Fund, and Provincial-Territorial Base Fund.

1. Federal Gas Tax Fund

Two billion⁷ of the approximately five billion⁸ dollars in revenue the federal government receives annually from the Federal Gas Tax is allocated to the Federal Gas Tax Fund. The Fund supports municipal infrastructure projects, which can include building and maintaining local municipal roads. According to Infrastructure Canada,

⁴ *Id.*

⁵ *Id.*

⁶ *Building Canada Plan*, INFRASTRUCTURE CANADA, <http://www.infrastructure.gc.ca/prog/bcp-pcc-eng.html> (last updated Oct. 26, 2011). The current exchange rate is Can\$1 to US\$0.90. *Daily Currency Converter*, BANK OF CANADA, <http://www.bankofcanada.ca/rates/exchange/daily-converter/>. For purposes of this report, all references to "dollars" are to Canadian dollars unless otherwise specified.

⁷ *Gas Tax Fund*, INFRASTRUCTURE CANADA, <http://www.infrastructure.gc.ca/prog/gtf-fte-eng.html> (last updated Nov. 22, 2013). Also according to the Infrastructure Canada website, "[t]he federal Gas Tax Fund represents a \$13 billion investment from 2005 to 2014. On April 1, 2009, Gas Tax Fund payments doubled to \$2 billion annually. Agreements for this funding are in place until 2014. In 2011, legislation was passed to make the Gas Tax Fund permanent at \$2 billion per year. Municipalities across the country will continue to receive stable, annual funding for their long-term infrastructure priorities." *Id.*

⁸ CAMILA VAMMALLE, OECD, PUBLIC INVESTMENT ACROSS LEVELS OF GOVERNMENT: THE CASE OF BRITISH COLUMBIA, CANADA 11 (2012), https://www1.oecd.org/gov/regional-policy/British%20Columbia_edited.pdf.

[e]very municipality in Canada receives a portion of the Fund. The funding allocation is determined at the provincial or territorial level based on population. Funding is provided up front, twice a year to provincial and territorial governments or to the municipal associations which deliver this funding within a province, as well as to Toronto. Projects are chosen locally and prioritized according to the infrastructure needs of each community. Municipalities can pool, bank and borrow against this funding, providing significant financial flexibility.⁹

2. *Building Canada Fund*

The Building Canada Fund works by “making investments in public infrastructure owned by provincial, territorial and municipal governments, and in certain cases, private sector and non-profit organizations. Funding is allocated to each province and territory based on population.”¹⁰ The Building Canada Fund is a cost-shared contribution program with a “maximum federal contribution to any single project being 50 per cent.”¹¹ The Fund’s aim is to “build a stronger Canadian economy by investing in infrastructure projects that contribute to increased trade, efficient movement of goods and people, and economic growth.”¹² One of the categories of investments that support economic growth includes the National Highway System.¹³

3. *Provincial-Territorial Base Fund*

The Provincial-Territorial Base Fund is a Can\$2.275 billion fund that “provides predictable funding to provinces and territories to address core infrastructure priorities.”¹⁴ It also requires the recipient to “sign a Provincial-Territorial Base Fund Agreement with the Government of Canada.”¹⁵ According to Infrastructure Canada, “[t]o receive funding, provinces and territories must submit a capital plan containing a list of initiatives for federal cost-sharing. The plan includes a brief description of each initiative, the eligible category of investment and the total eligible cost. The federal government will contribute up to 50 per cent of the plan’s eligible costs for provinces and up to 75 per cent for territories.”¹⁶

⁹ *Id.*

¹⁰ *Building Canada Fund*, INFRASTRUCTURE CANADA, <http://www.infrastructure.gc.ca/prog/bcf-fcc-eng.html> (last updated Oct. 26, 2011).

¹¹ *Id.*

¹² *Building Canada Fund - Funding Categories*, INFRASTRUCTURE CANADA, <http://www.infrastructure.gc.ca/prog/bcf-fcc-categ-eng.html>.

¹³ *Id.*

¹⁴ *Provincial-Territorial Base Fund*, INFRASTRUCTURE CANADA, <http://www.infrastructure.gc.ca/prog/ptbase-finbasept-eng.html> (last updated Oct. 26, 2011).

¹⁵ *Id.*

¹⁶ *Id.*

4. Other Funds

The following funds have stopped accepting applications and will be winding down in the next few years.

a. Canada Strategic Infrastructure Fund

The Canada Strategic Infrastructure Fund (CSIF) is a cost-shared contribution program for large-scale infrastructure projects, which comprises five categories of investments. Highway infrastructure is included in the investment category that supports “large-scale projects that facilitate the movement of goods and people on Canada’s National Highway System – or highways that connect to the system.”¹⁷ The projects are said to be “[in] support of sustaining the economic growth and enhancing the quality of life for Canadians.”¹⁸ The federal government can contribute up to a maximum of 50% of the total eligible costs of the projects. Projects are typically “chosen according to regional and national infrastructure priorities,”¹⁹ in consultation with provinces, territories, and municipal governments as well as the private sector.²⁰ Moreover, funding is delivered through negotiated agreements with provincial, territorial or local governments as well as nongovernmental organizations, private companies and individuals.²¹ The CSIF was established under the Canada Strategic Infrastructure Fund Act.²²

b. Border Infrastructure Fund

The Border Infrastructure Fund (BIF) is also a cost-shared contribution program that funds “infrastructure projects that help sustain and increase the long-term efficiency of the Canada-US border.”²³ The focus is on projects at or near the busiest Canada-US border crossings. The Canadian government has contributed up to a maximum of 50% of total eligible costs.

III. Provincial Road Infrastructure Funding

It appears that provincial-level fuel taxes and other road-related fees (including motor vehicle licensing and registry fees) and fines contribute to covering a large portion of highway-related construction and maintenance costs. However, in most provincial jurisdictions the fuel taxes flow into the general revenues and highway infrastructure funding is not necessarily tied to any

¹⁷ *Canada Strategic Infrastructure Fund (CSIF)*, CANADA-MANITOBA INFRASTRUCTURE SECRETARIAT <http://www.infrastructure.mb.ca/csif.html>.

¹⁸ *Other Programs*, INFRASTRUCTURE CANADA, <http://www.infrastructure.gc.ca/prog/other-autres-eng.html#csif-fcis> (last updated Oct. 26, 2011).

¹⁹ *Id.*

²⁰ *Id.*

²¹ *Canada Strategic Infrastructure Fund*, TREASURY BOARD OF CANADA SECRETARIAT, <http://www.tbs-sct.gc.ca/hidb-bdih/initiative-eng.aspx?Hi=53> (last updated June 14, 2013).

²² Canada Strategic Infrastructure Fund Act 2002, S.C., c. 9, <http://laws-lois.justice.gc.ca/eng/acts/C-10.3/FullText.html>.

²³ *Other Programs*, *supra* note 18.

specific revenue source. Nova Scotia is an exception, as under the Public Highways Act all revenue from its provincial gas tax and from fees and fines that are to be paid to the Department of Transportation is dedicated to a provincial highway fund.²⁴ In addition, in Ontario, “[p]rovince-wide, fuel taxes and other fees cover between 70 and 90 per cent of annual road construction, maintenance and policing costs.”²⁵

Historically, Canada has not made significant use of tolls/congestion charges and other road pricing mechanisms. However, there is increasing recognition that the gas tax base is shrinking, and major municipal governments like Vancouver are increasingly considering various road-pricing mechanisms to help fund transportation infrastructure projects.²⁶

No information was found concerning usage of vehicle kilometers traveled (VKT) taxes or charges at the federal or provincial level. However, some reports indicate that VKT charges are being proposed at the municipal level, to help fund transportation and transit projects.²⁷

IV. Public-Private Partnership Funding

Canada appears to heavily utilize public-private partnerships (P3s) to fund major infrastructure projects, including roads and highways. According to a report by the Fraser Institute, “[c]umulatively, Canada has planned, underway, or completed the sixth greatest number of transportation P3 projects in the OECD from 1985 to 2013 (as of Jan. 30).”²⁸ Moreover, “on a cost basis, Canada’s cumulative transportation P3s total ninth highest. Of the various types of transportation, including roads, rail, airports, and seaports, transportation P3s in Canada are most concentrated in roads, both in terms of number and cost.”²⁹ Early examples of the use of P3s at the provincial level is the building of Highway 104 project³⁰ and Ontario Highway 407.³¹

In February 2009, the federal government of Canada established PPP Canada, a federal Crown corporation, whose mandate is to “improve the delivery of public infrastructure by achieving

²⁴ Public Highways Act, R.S., c. 371, § 9(1), <http://nslegislature.ca/legc/statutes/pubhighw.htm>.

²⁵ *Majority of Ontario Road Infrastructure Costs Paid by Motorists*, CONFERENCE BOARD OF CANADA (Oct. 17, 2013), http://www.conferenceboard.ca/press/newsrelease/13-10-17/majority_of_ontario_road_infrastructure_costs_paid_by_motorists.aspx.

²⁶ Jeff Nagel, *Road Pricing Viable but Tricky in Metro Vancouver: Experts*, ABBOTSFORD NEWS (Oct. 18, 2012), <http://www.abbynews.com/news/174802561.html?mobile=true>.

²⁷ Robert Mackenzie, *11 Ways to Pay for Transit? Metrolinx Proposes Taxes, Tolls and Fees*, TRANSIT TORONTO (Apr. 23, 2013), http://transit.toronto.on.ca/archives/weblog/2013/04/23-11_ways_to.shtml.

²⁸ CHARLES LAMMAM ET AL., FRASER INSTITUTE, USING PUBLIC-PRIVATE PARTNERSHIPS TO IMPROVE TRANSPORTATION INFRASTRUCTURE IN CANADA 43 (Studies in Economic Prosperity, May 2013), <http://www.p3canada.ca/files/file/Information%20and%20Resources/using-public-private-partnerships-to-improve-transportation-infrastructure-in-canada.pdf>.

²⁹ *Id.*

³⁰ CONFERENCE BOARD OF CANADA, DISPELLING THE MYTHS: A PAN-CANADIAN ASSESSMENT OF PUBLIC-PRIVATE PARTNERSHIPS FOR INFRASTRUCTURE INVESTMENTS 6 (Jan. 2010), http://www.pwfinance.net/document/research_reports/12%20pan%20canadian.pdf.

³¹ *History*, 407 ETR, <http://www.407etr.com/about/background-information1.html> (last visited Feb. 4, 2014).

better value, timeliness and accountability to taxpayers, through P3s.”³² More specifically PPP Canada provides “expertise and advice in assessing and executing P3 opportunities at the federal level.”³³

PPP Canada also manages a \$1.2 billion P3 Canada fund, which provides funding on a merit-basis for infrastructure projects that are procured by public authorities (including provincial, territorial, and municipal governments) through P3s.³⁴

³² *Corporate Profile*, PPP CANADA, <http://www.p3canada.ca/about-ppp-canada-overview.php> (last visited Feb. 4, 2014).

³³ *Id.*

³⁴ *Overview*, P3 CANADA FUND, <http://www.p3canada.ca/p3-canada-fund-overview.php> (last visited Feb. 4, 2014).

People's Republic of China

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SUMMARY Funding for road construction and maintenance in China derives from a combination of government and commercial sources. Only a small share of funding has been provided by central government budgetary revenue. A 10% vehicle purchase tax is collected on the purchase of vehicles; revenue of the special taxation is dedicated to road development projects. Tolling is widely allowed, which is believed to have enabled rapid expansion of the country's road system over the last two decades.

Effective 2009, a fuel tax reform abolished road maintenance fees, which had been a stable source of funding for road maintenance.. The reform also significantly increased the oil product consumption tax, revenue from which is to be used not only to substitute the road maintenance fees, but also for several other purposes.

I. Introduction

Under the Highway Law of the People's Republic of China (Highway Law), funding of road construction may come from

- appropriations made by various levels of government, including those deriving from special funds collected through taxation;
- loans from domestic and foreign banks or foreign governments;
- investment made by domestic or foreign economic organizations;
- funds raised from enterprises and individuals to build highways (which must be on voluntary basis as required by the Highway Law); and
- funds raised through other means that conform to laws or regulations of the State Council.¹

Tolling revenue is required by law to be limited to highway uses.² According to the Highway Law, upon approval, tolling is allowed for highways built with loans, funds raised from enterprises and individuals, and investment made by economic organizations.³

In practice, toll financing has been used widely, which is believed to have enabled rapid expansion of the country's road system over the last two decades.⁴ Only a small share of funding

¹ 中华人民共和国公路法 [Highway Law of the People's Republic of China], art. 21, 2004 LAWS OF THE PEOPLE'S REPUBLIC OF CHINA 173–92.

² *Id.*

³ *Id.* art. 59.

has been provided by central government budgetary revenue. According to the Ministry of Transport, in the year 2012, a total of RMB1112.490 billion (about US\$183.93 billion) was invested in highway construction nationwide. Only 1.8% of the overall funding came from central government budgetary revenue, and 17% from vehicle purchase tax (VPT) revenue. Local government self-financing counted for 33%, domestic loans 36.4%, and foreign investment 0.4%.⁵

Before 2009, road maintenance fees (RMFs) were collected from owners of vehicles for the maintenance, repair, technology reform and improvement, and administration of highways, based on the rational of “who uses, maintains.”⁶ The RMFs was abolished along with five other road-use surcharges during a fuel tax reform plan that was implemented from 2009.⁷

II. Tolls

A. Toll Roads

Under the Regulations on Administration of Toll Roads, upon approval and in accordance with the laws, tolls may be collected from users of

- Government-repaying-loan highways: highways constructed by a competent department for transportation under a local government through a loan or funds raised from enterprises or individuals; and
- Commercially operated highways: highways constructed with investments provided by domestic or foreign economic organizations, or highways with the right to collect tolls on government-repaying-loan highways assigned to such organizations.⁸

B. Limits on Lengths of Toll Collecting

The number of years that tolls can be collected for each toll road is subject to approval and is limited by law to a maximum period of time, as follows:

⁴ ASIAN DEVELOPMENT BANK, FINANCING ROAD CONSTRUCTION AND MAINTENANCE AFTER THE FUEL TAX REFORM (hereinafter ADB REPORT) at 1 (2012), <http://www.adb.org/publications/financing-road-construction-and-maintenance-after-fuel-tax-reform>.

⁵ 2012年公路水路交通运输行业发展统计公报 [2012 Highway and Waterway Transportation Industry Statistical Bulletin] (Apr. 25, 2013), http://www.moc.gov.cn/zhuzhan/zhengwugonggao/jiaotongbu/guihuatongji/201304/t20130426_1403039.html.

⁶ 公路养路费征收管理规定 [Provisions on the Administration of Collection of Road Maintenance Fee] (Jiao Gong Zi [1991] No. 714, Oct. 10, 1991) art. 2, WESTLAWCHINA.

⁷ 国务院关于实施成品油价格和税费改革的通知 [Notice of the State Council on Implementing the Oil Product Price and Tax Reform] (Guo Fa [2008] No. 37, Dec. 18, 2008) (hereinafter Fuel Tax Reform Plan), http://www.gov.cn/xxgk/pub/govpublic/mrlm/200812/t20081219_33048.html.

⁸ 收费公路管理条例 [Regulations on Administration of Toll Roads] (published by the State Council on Sept. 13, 2004, effective Nov. 1, 2004), art. 10, http://www.gov.cn/zwgk/2005-05/23/content_241.htm.

- For government-repaying-loan highways, fifteen years, which may be extended to twenty years for those highways located in a central or western province.
- For commercially operated highways, twenty-five years, which may be extended to thirty years for those highways located in a central or western province.⁹

III. Vehicle Purchase Tax

The Chinese vehicle purchase tax (VPT) is a special tax dedicated to road development projects. It provides a stable funding source for road development (17% in 2012). According to statistics released by the Ministry of Finance, the VPT revenue in 2013 was RMB259.6 billion (about US\$42.9 billion).¹⁰

A. Vehicle Purchase Surcharges

A 10% surcharge on purchasing vehicles was first created in 1985. According to the document creating the vehicle purchase surcharge,¹¹ the entire income from the surcharges must be used to fund the country's road development.¹¹

B. Taxable Vehicles and Rate

On January 1, 2001, the surcharge was replaced by a formal VPT. Vehicles subject to the tax include automobiles, motorcycles, electric vehicles, trailers, and transport vehicles for agricultural use.¹²

The VPT rate remains 10% on the taxable price of vehicles,¹³ to be paid in a lump sum within sixty days after the date of purchase and before a vehicle is registered.¹⁴

According to the regulations governing the VPT, the tax is levied only once on each vehicle, so that purchasing a vehicle for which a VPT has been paid is not subject to the tax for a second time.¹⁵

⁹ Highway Law, *supra* note 1, art. 14.

¹⁰ 2013年全国公共财政收入12.9万亿元 完成全年预算略有超收 [2013 National Public Revenue 12.9 Trillion, Slightly Over Annual Budget], XINHUANET (Jan. 23, 2014), http://news.xinhuanet.com/fortune/2014-01/23/c_119101065.htm.

¹¹ 车辆购置附加费征收办法 [Measures for the Imposition of Surcharges for Purchases of Motor Vehicles] (issued by the State Council on Apr. 2, 1985, effective May 1, 1985, abolished Oct. 6, 2001), WESTLAWCHINA.

¹² 中华人民共和国车辆购置税暂行条例 [Interim Regulations of the People's Republic of China on Vehicle Purchase Tax] (issued by the State Council on Oct. 22, 2000, effective Jan. 1, 2001) (hereinafter VPT Regulations), art. 3, http://www.gov.cn/banshi/2005-08/19/content_24868.htm.

¹³ *Id.* arts. 4 & 5. In January 2009, the VPT rate was reduced from 10% to 5% for certain passenger cars to encourage car sales as part of the economic stimulus package while incentivizing energy savings and achieving emission reductions. The rate was then adjusted to 7.5% in early 2010 but reverted to 10% in 2011 for all vehicles. ADB REPORT, *supra* note 4, at 1.

¹⁴ VPT Regulations arts 13 & 14.

¹⁵ *Id.* art. 8.

C. Collecting Authority and Uses of Tax Revenue

The VPT is collected by the central government, and allocated to local governments to fund road-development projects.¹⁶ In addition to construction projects for roads, bridges, and tunnels, construction projects for road passenger and cargo hubs (including logistics parks (areas zoned for purposes relating to logistics) and inland waterways may also be funded by VPT revenue.¹⁷

Annual revenues from the VPT have grown steadily in recent years, primarily due to the rapid increase in vehicle ownership. According to a report by the Asian Development Bank, it increased from RMB21.6 billion (about US\$331 million) in 2000 to RMB116.4 billion (about USD\$17.8 billion) in 2009, of which about 90% was used for highway-related purposes.¹⁸

IV. Fuel Tax Reform

A. Road Maintenance Fees

Road Maintenance Fees (RMFs) used to be a stable source of funding for road maintenance. RMF revenue was dedicated to highway maintenance, repair, technology reform and improvement, and administration, according to the Provisions on the Administration of Collection of Road Maintenance Fee.¹⁹

B. Fuel Tax Reform

The central government had been contemplating a fuel tax reform for many years in order to address several policy issues, including: (1) concerns arising from collecting RMFs, which were collected by various local governments with a wide variety of fee levels, and toll road charges; (2) demand for oil, which is rapidly rising; and (3) environmental concerns, etc.²⁰

As early as in 2000, when the government decided to replace the vehicle purchase surcharges with the VPT, a fuel tax reform was also proposed to replace the RMFs and other road use surcharges with a new fuel tax.²¹

However, when the State Council released the final fuel tax reform plan in late 2008 after several years of contentious debate, it significantly marked up the rate of the existing consumption tax

¹⁶ 车辆购置税用于交通运输重点项目专项资金管理暂行办法 [Interim Measures on Special Funds for Funding Key Transportation Projects with Vehicle Purchase Tax] (Cai Jian [2011] No. 93, Mar. 28, 2011), art. 2, http://www.moc.gov.cn/zizhan/siju/caiwusi/zhengceguiding/guizhangzhidu/201302/t20130227_1372317.html.

¹⁷ *Id.* art. 3.

¹⁸ ADB REPORT, *supra* note 4, at 9.

¹⁹ 公路养路费征收管理规定 [Provisions on the Administration of Collection of Road Maintenance Fee] (Jiao Gong Zi [1991] No. 714, Oct. 10, 1991), WESTLAWCHINA.

²⁰ Fuel Tax Reform Plan, *supra* note 7.

²¹ 交通和车辆税费改革实施方案 [Plan of Implementing Transportation and Vehicle Taxes/Fees Reform] (Guo Fa [2000] No. 34, Sept. 4, 2000), http://www.gov.cn/gongbao/content/2001/content_60855.htm.

on oil products instead of creating a new fuel tax.²² Under the final fuel tax reform plan, which took effect on January 1, 2009:

- the RMFs, waterway conservation fees, road transport management fees, road passenger and freight surcharges, water transportation management fees, and water passenger and freight surcharges were abolished; and
- the rate of the existing consumption tax on oil products was raised by RMB0.8 (about US\$0.13) per liter for gasoline, RMB0.7 (about US\$0.12) for diesel, and corresponding amounts for other oil products.²³

C. New Oil Product Consumption Tax (Fuel Tax)

1. Tax Rates

The consumption tax on oil products is assessed as a fixed amount per liter.²⁴ Prior to the fuel tax reform, the consumption tax per liter on gasoline was RMB0.2 (about US\$0.03) and on diesel RMB0.1 (about US\$0.02), which was “fairly negligible.”²⁵ The new rates of consumption tax on oil products are shown in the table below.

Table: New Rates of Consumption Tax on Oil Products

Tax Category	Tax Rate
Oil Product:	
1. Gasoline	
(i) Unleaded gasoline	RMB1.0 (US\$0.17)/Liter
(ii) Leaded gasoline	RMB1.4 (US\$0.23)/Liter
2. Diesel	RMB0.8 (US\$0.13)/Liter
3. Airplane kerosene	RMB0.8 (US\$0.13)/Liter
4. Naphtha	RMB1.0 (US\$0.17)/Liter
5. Solvents	RMB1.0 (US\$0.17)/Liter
6. Lubricants	RMB1.0 (US\$0.17)/Liter
7. Fuel Oil	RMB0.8 (US\$0.13)/Liter

Source: Notice of the Ministry of Finance and State Administration of Taxation on Raising Oil Product Consumption Tax (Cai Shui [2008] No. 167, issued Dec. 19, 2008, effective Jan. 1, 2009), <http://www.chinatax.gov.cn/n8136506/n8136593/n8137537/n8138502/8734242.html>.

²² Fuel Tax Reform Plan, *supra* note 7.

²³ *Id.*

²⁴ 关于提高成品油消费税税率的通知 [Notice of the Ministry of Finance and State Administration of Taxation on Raising Oil Product Consumption Tax] (Cai Shui [2008] No. 167, issued Dec. 19, 2008, effective Jan. 1, 2009), <http://www.chinatax.gov.cn/n8136506/n8136593/n8137537/n8138502/8734242.html>.

²⁵ ADB REPORT, *supra* note 4, at 20.

2. Collection

Unlike the previous RMFs, which were collected by various local governments, the new fuel tax is a central tax collected by the State Administration of Taxation (and Customs in cases of imports). The tax is currently imposed on the manufacturers and importers of oil products.²⁶

3. Uses of Tax Revenue

The newly-raised revenue from the oil product consumption tax will first be used as a substitute for RMFs and other road-use charges that were abolished by the reform, according to the reform plan.²⁷ A significant factor of the fuel tax reform is that, under the reform plan, authorization for current and future tolls on Class II Highways²⁸ will gradually be removed. Accordingly, revenue from the new fuel tax will also be used to compensate for the loss of the toll fees from these roads. The fuel tax reform plan also pledged to subsidize grain producers, the poor, and public welfare sectors.²⁹

²⁶ Fuel Tax Reform Plan, *supra* note 7.

²⁷ *Id.*

²⁸ Chinese highways are classified as Expressways, Class I Highways, Class II Highways, Class III Highways, and Class IV Highways in terms of technical grading. Highway Law, *supra* note 1, art. 6.

²⁹ Fuel Tax Reform Plan, *supra* note 7.

England and Wales

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SUMMARY Roads in England were built and maintained through statutory labor, tolls, and ultimately taxes raised from vehicles paid into a specific fund to provide roads. All of these methods of funding and maintaining roads ultimately failed through corruption or misapplication of funds. Currently, all taxes and duties obtained from vehicle taxes and excise duties on fuel are paid directly into the government's main fund, and monies provided for roads are allocated from the budget. The government has announced that it will likely need to reconsider how vehicles are taxed, given the advances in technology that are reducing the amount of taxes collected through traditional methods; however, it has yet to propose any changes.

I. Introduction

The United Kingdom of Great Britain and Northern Ireland is comprised of England, Wales, Scotland, and Northern Ireland. The four countries have recently undergone a period of devolution, with the power to legislate in certain areas reverting back to Scotland, Northern Ireland, and Wales. Transportation is a "reserved matter," meaning that Scotland, Wales, and Northern Ireland have the ability to legislate and create policy independently in this area. This report focuses on England, with the exception of the subheading relating to heavy vehicles, as the levy on these vehicles applies across the UK.

Road funding has a long history in England, dating back to the well-constructed and well-maintained roads of the Romans. England and Wales currently have a sizeable network of roads, and funding is currently provided at two different levels. The major roads (the strategic road network) are funded by the central government and managed by the Highways Agency. Local roads, on the other hand, are the responsibility of local authorities. The maintenance and improvement of these roads are funded through local council taxes, fees, and central government grants.

II. History of Road Funding

The history of roads in England dates back many centuries to Ley Lines, which were simple, straight trackways of rudimentary construction. In 43 AD, the invasion of the Romans led to the construction of "Roman roads," many of which are still in use today. However, after the Romans left, the roads were left unmaintained and in disrepair until the late thirteenth century, when local councils stepped in and repaired some of these roads.¹ The Highways Act 1555² saw

¹ DAVID BAYLISS, WHAT WENT WRONG? BRITISH HIGHWAY DEVELOPMENT BEFORE MOTORWAYS 4 (Mar. 2008), http://www.racfoundation.org/assets/rac_foundation/content/downloadables/roads%20and%20reality%20-%20bayliss%20-%20highways%20development%20-%2020070308%20-%20background%20paper%201.pdf.

² Highways Act, 1555, 2 & 3 Ph. & Mary, c. 8.

the first attempt to create a statutory responsibility to provide for road upkeep. The Act put responsibility for the maintenance of roads on local parishes, imposing a statutory duty on each man with a team of horses to provide labor for six days annually for road upkeep.³ In 1654 parishes were provided the power to collect money through levying a local rate (tax) to supplement the labor provided by the horses for the upkeep of roads.⁴ The standards of road maintenance across England varied greatly and, as most travel was local, parishes focused solely on local roads. In 1835, the system of statutory labor was abandoned as it was considered largely ineffective, and parishes were expected to maintain roads “solely through a local rate.”⁵

The Industrial Revolution and the increase of travel by stagecoach led to the expansion of travel and an increase in trade. Between 1720 and 1840, 1.1 million Turnpike Trusts were created, providing 32,000 kilometers of road.⁶ The Turnpike Trusts charged users tolls to use their roads in return for providing roads and maintaining them.⁷ However, corruption within these Trusts was rife, and oftentimes money was either misappropriated or not used effectively.⁸ The roads were not able to bear heavy loads, and the Industrial Revolution instead saw an expansion of the canal and rail network to transport both goods and people. This lessened demand for travel by road and, as a result, the Turnpikes saw a reduction of monies collected, leading to neglect in road maintenance and the closing of large numbers of the Turnpike Trusts in the late 1800s. As a consequence, the maintenance of roads once again reverted back to local parishes.⁹ By 1888, the national roads were in such a state of neglect that Parliament acted and imposed responsibility for the maintenance of roads on the newly created county councils.¹⁰

The 1909 budget introduced the first tax on all vehicles in England (with rates based on horsepower) and a tax on oil.¹¹ The Development and Road Improvement Fund Act 1909¹² established a road fund, through which all roads in England were funded. All car taxes that were collected by county councils were paid into this fund, which was then passed along to local authorities to finance road improvements and maintenance. In practice, the fund was “never

³ BAYLISS, *supra* note 1.

⁴ *Id.*

⁵ 1 WILLIAM T. JACKMAN, *THE DEVELOPMENT OF TRANSPORTATION IN MODERN ENGLAND* 242 (Cambridge University Press 1917).

⁶ BAYLISS, *supra* note 1, at 5.

⁷ *Id.*

⁸ JACKMAN, *supra* note 5.

⁹ BAYLISS, *supra* note 1, at 5.

¹⁰ Local Government Act 1888, 51 & 52 Vict., c. 51, § 11, <http://www.legislation.gov.uk/ukpga/Vict/51-52/41/contents>.

¹¹ 4 PARL. DEB., H.C. (5th ser.) (1908–09), 495–98 and 502–05, available at <http://hansard.millbanksystems.com/sittings/1909/apr/29>.

¹² Development and Road Improvement Fund Act 1909, Edw. 7, c. 47. See also 24 *THE LAWS OF ENGLAND* (Rt. Hon. Earl of Halsbury et al. eds., 1912).

spent in full and was notorious for being raided for other purposes.”¹³ It was formally ended in 1936 after Winston Churchill asserted the following:

[I]t is a monstrous assertion that any important body of taxpayers should claim proprietary rights over the particular quota of taxation which they contribute, and that all should not be brought into an area freely justiciable by the House of Commons.¹⁴

Since 1937, all monies raised from these taxes have been paid directly into the Consolidated Fund, the government’s general bank account held at the Bank of England.¹⁵ The annual budget determines the allocation of these funds.

III. National Road Infrastructure Funding

The Department for Transport is the government department responsible for the provision of roads in England. The maintenance, operation, and improvement of the strategic road network in England, made up of 4,300 miles of motorways and major roads, or “trunk roads” (the most significant ‘A’ roads),¹⁶ is the responsibility of the Highways Agency,¹⁷ which was created in 1994. The strategic road network comprises less than 2% of roads by length in the United Kingdom but carries the vast majority of traffic.¹⁸ The Highways Agency has a statutory responsibility to maintain these highways;¹⁹ in FY 2012/13, a third of the Highways Agency’s budget was devoted solely to maintenance.²⁰

The money provided from the government is put forth each year in the annual budget, which allocates annual spending from the Consolidated Fund.²¹ The exact amount to be spent on highways is then determined by a Spending Round, a government led “process to allocate resources across all government departments, according to the government’s priorities.”²² From

¹³ LOUISE BUTCHER, ROADS: VEHICLE EXCISE DUTY (VED), HOUSE OF COMMONS LIBRARY STANDARD NOTE, Jan. 17, 2013, H.C. SN01482, at 4, <http://www.parliament.uk/briefing-papers/SN01482.pdf>.

¹⁴ 311 PARL. DEB., H.C. (5th ser.) (1935–36) 327, available at <http://hansard.millbanksystems.com/commons/1936/apr/23/amendment-of-law>.

¹⁵ *Consolidated Fund*, WWW.PARLIAMENT.UK, www.parliament.uk/site-information/glossary/consolidated-fund/ (last visited Jan. 14, 2014).

¹⁶ *What We Do*, HIGHWAYS AGENCY, <http://www.highways.gov.uk/about-us/what-we-do/> (last visited Jan. 13, 2014). A map of the roads that the Highways Agency is responsible for is available at http://www.highways.gov.uk/wp-content/uploads/2012/07/Highways_Agency_Network_Map_-_November_2011.gif?9d7bd4 (last visited Jan. 13, 2014).

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ Highways Act 1980, c. 66, § 41, www.legislation.gov.uk/ukpga/1980/66/contents.

²⁰ LOUISE BUTCHER, ROADS: MAINTENANCE, REPAIRS AND STREET WORKS, HOUSE OF COMMONS LIBRARY STANDARD NOTE, Aug. 5, 2013, H.C. SN739, at 3, <http://www.parliament.uk/briefing-papers/SN00739.pdf>.

²¹ HER MAJESTY’S TREASURY, BUDGET 2013, (2012–13), HC 1033, www.gov.uk/government/uploads/system/uploads/attachment_data/file/221885/budget2013_complete.pdf.

²² HM Treasury, *What is the Spending Round?*, GOV.UK (June 14, 2013), www.gov.uk/government/news/what-is-the-spending-round.

2010/11–2014/15 the government is slated to provide over £1.6 billion (approximately US\$2.7 billion) for the maintenance of highways.²³ However, during the most recent Spending Round, the government announced that to provide certainty for the Highways Agency, it will provide long-term funding over time periods of at least five years in length.²⁴ Accordingly, it has allocated £12 billion (approximately US\$19.9 billion) to maintain the local and national highway networks from 2015/16–2020/21. Half of the funds have been allocated to the Highways Agency for the renewal of the strategic road network and half to local authorities for local maintenance and renewal.²⁵ The Secretary of State for Transport is responsible for the government’s policy on strategic roads and determines the financial resources for these roads.²⁶ Any strategic road project that requires funding of more than £10 million (approximately US\$16 million) is generally financed through public funds, or through a private-public partnership.²⁷

The maintenance of local roads remains the responsibility of local authorities in each area. The Department for Transportation provides policy, guidance, and funding to local authorities to help them with their road networks. This funding covers operational costs, maintenance, and the development of new major transport schemes.²⁸ There is no single point of funding for local authorities to spend on roads; instead, road funding is taken from a number of available sources, including government grants, locally charged council taxes, and other fees and charges. The cost of road maintenance in 2011/12 was £1.63 billion (approximately US\$2.7 billion).²⁹

The government’s current focus regarding road infrastructure is on improving the efficiency and effectiveness of existing roads, rather than building new ones. The government has stated that it does not intend to actively seek out private financiers to build new toll roads.³⁰ Despite this,

²³ BUTCHER, *supra* note 20, at 6.

²⁴ DEPARTMENT FOR TRANSPORT, ACTION FOR ROADS: A NETWORK FOR THE 21ST CENTURY ¶ 4.9 (July 2013), www.gov.uk/government/uploads/system/uploads/attachment_data/file/212590/action-for-roads.pdf.

²⁵ DEPARTMENT FOR TRANSPORT, GEARING UP FOR EFFICIENT HIGHWAY DELIVERY AND FUNDING (Jan. 2014), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/273820/efficient-funding-2015-2021.pdf.

²⁶ LOUISE BUTCHER, ROADS: HIGHWAY INFRASTRUCTURE, HOUSE OF COMMONS LIBRARY STANDARD NOTE, Nov. 2, 2010, SN/BT/1448, at 2, <http://www.parliament.uk/briefing-papers/SN01448.pdf>.

²⁷ *Highways Agency’s Major Road Schemes Programme*, HIGHWAYS AGENCY, www.highways.gov.uk/our-road-network/managing-our-roads/improving-our-network/major-projects/highways-agencys-future-delivery-programmes/ (last visited Jan. 14, 2014). See also *Private Finance Initiatives – Design Build Finance and Operate (DBFO)*, HIGHWAYS AGENCY, www.highways.gov.uk/our-road-network/managing-our-roads/operating-our-network/how-we-manage-our-roads/private-finance-initiatives-design-build-finance-and-operate-dbfo/ (last visited Jan. 14, 2014).

²⁸ *What We Do*, DEPARTMENT FOR TRANSPORT, <https://www.gov.uk/government/organisations/department-for-transport/about> (last visited Jan. 13, 2014).

²⁹ BUTCHER, *supra* note 20, at 3.

³⁰ TRANSPORT COMMITTEE, UNCORRECTED TRANSCRIPT OF ORAL EVIDENCE: THE SECRETARY OF STATE’S PRIORITIES FOR TRANSPORT, July 2010, HC 359, at 26, <http://www.publications.parliament.uk/pa/cm201011/cmselect/cmtran/uc359/uc35901.htm>.

funding continues for various projects in process, and new funding has been allocated for fourteen new projects that will alleviate congestion and improve roadways.³¹

IV. Transportation Taxes and Duties

A. Vehicle Taxes

England taxes car owners in two ways. The first is a vehicle excise duty (VED), which is charged on every registered “mechanically propelled vehicle” and is a tax on ownership.³² The second is a fuel duty, a tax on the use of cars. Historically, the monies raised from these taxes were specifically used for building and maintaining roads. In 1937 this changed, and these taxes are now a means of raising “general revenue.”³³ Any changes to rates are made in the annual Finance Acts, which implement that the budget the government announces each year.³⁴

The current rate of VED for cars is tied to the carbon dioxide emissions of vehicles built after 2001. Since 2001, there has been a first-year tax that is charged at a higher rate than the subsequent annual tax. The rate varies according to the level of carbon dioxide emissions, and ranges from charges of £0 for vehicles that emit less than 100g of CO₂ per kilometer up to £1,065 (approximately US\$1,700) for vehicles that emit over 255g of CO₂ per kilometer. After the first-year tax, the subsequent annual tax ranges from £0 for vehicles that emit less than 100g of CO₂ per kilometer up to £490 (approximately US\$780) for vehicles that emit over 255g of CO₂ per kilometer.³⁵ For heavy goods vehicles (HGVs) the rate of the annual tax does not vary from year to year and is tied primarily to weight. It ranges from £165 (approximately US\$265) to £1,850 (approximately US\$3,000). There is a discounted rate for low-polluting HGV’s, which ranges from £160 (approximately US\$255) to £1,350 (approximately US\$2,200).³⁶ It is an offense to keep a vehicle without paying the VED, unless a statutory off-road license is in effect.³⁷

B. Fuel Taxes

The second manner in which England taxes car owners is the fuel duty—a tax on gas, or on the use of a vehicle. The two main fuels used by vehicles in England—ultra-low sulfur petrol and ultra-low sulfur diesel—are charged excise duty at 57.95 pence per liter (approximately US\$0.95 per liter, or approximately US\$3.59 per gallon).³⁸ When the value-added tax (charged on almost

³¹ BUTCHER, *supra* note 20, at 3.

³² Vehicle Excise and Registration Act, 1994, c.22, § 1, www.legislation.gov.uk/ukpga/1994/22/contents.

³³ BUTCHER, *supra* note 13, at 1.

³⁴ *Id.*

³⁵ DRIVER & VEHICLE LICENSING AGENCY, RATES OF VEHICLE TAX, V149 (2013), www.gov.uk/government/uploads/system/uploads/attachment_data/file/175492/V149_rates_of_vehicle_tax.pdf.

³⁶ *Id.*

³⁷ Vehicle Excise and Registration Act, 1994, c.22, § 29, www.legislation.gov.uk/ukpga/1994/22/contents.

³⁸ *Fuel Duty*, HM REVENUE AND CUSTOMS, <https://www.gov.uk/fuel-duty> (last updated Sept. 26, 2012).

every good sold in the country) is factored in, taxes make up around 60% of the price paid for gas and diesel fuel in England.³⁹

C. Heavy Goods Vehicle Road Levy

England is part of the European Union (EU), which provides for free movement of goods and people within EU countries. England is also physically connected to continental Europe by the Channel Tunnel, while ferries provide an easy connection to France. These factors have led to England's road haulage companies facing competition from European road haulers, who do not pay England's road taxes and can often avoid the high fuel duties by filling up across the Channel before arriving in England. In an attempt to counterbalance the financial burden of taxes and duties faced by road haulers, the government introduced the HGV Road User Levy Act 2013.⁴⁰ This Act implements a road levy specific to HGVs, with the aim of ensuring that these vehicles make a contribution for the wear and tear they cause to the road network.⁴¹ The road levy is due to enter into effect in April 2014, and the funds generated will be paid into the Consolidated Fund. Both English and foreign haulers will be required to pay the levy on vehicles weighing more than twelve tons, with a maximum daily charge of €11 (approximately US\$15), set in accordance with vehicle excise duty bands.⁴² HGVs and foreign HGVs will pay the levy prior to entering the UK. UK HGVs will pay the levy as part of their vehicle excise duty and get a reduced rate on the HGV levy portion of the duty, with the result that the majority of UK-registered operators will not pay more than they do at the moment.⁴³ There is a penalty of up to £5,000 (approximately US\$8,000) for nonpayment of this levy, which is expected to raise £80 million (approximately US\$130 million) from 2014–2017/18.⁴⁴

D. Tolls

Despite the historically prolific use of tolls in England, the collection of tolls on modern roads has been very limited.⁴⁵ The government has the authority to implement a toll on any road that has received consent for construction under the Planning Act 2008.⁴⁶ In 2013, the government looked at using this provision to introduce a toll on a road it was improving that required significant amounts of investment. After hearing concerns from residents and businesses, the

³⁹ ANTONY SEELY, TAXATION OF ROAD FUELS, HOUSE OF COMMONS LIBRARY STANDARD NOTE, Jan. 10, 2014, SN824, <http://www.parliament.uk/briefing-papers/SN00824.pdf>.

⁴⁰ HGV Road User Levy Act, 2013, c. 7, <http://www.legislation.gov.uk/ukpga/2013/7/contents>.

⁴¹ *HGV Road User Levy*, DEPARTMENT FOR TRANSPORT (Sept. 26, 2013), www.gov.uk/government/collections/hgv-road-user-levy.

⁴² LOUISE BUTCHER, ROADS: LORRY ROAD USER CHARGING, HOUSE OF COMMONS LIBRARY STANDARD NOTE, Apr. 17, 2013, SN588, at 2, <http://www.parliament.uk/briefing-papers/SN00588.pdf>.

⁴³ *HGV Road User Levy*, *supra* note 41.

⁴⁴ BUTCHER, *supra* note 42, at 2.

⁴⁵ For a description of the major toll roads currently in operation in England, see LOUISE BUTCHER, ROADS: TOLLS, HOUSE OF COMMONS LIBRARY STANDARD NOTE, Oct. 2013, SN442, <http://www.parliament.uk/briefing-papers/SN00442.pdf>.

⁴⁶ Planning Act, 2008, c. 29, § 144, <http://www.legislation.gov.uk/ukpga/2008/29/contents>.

government decided against implementing a toll when the road is finally constructed.⁴⁷ The charging of tolls by the public sector is regulated by section 167 of the Transport Act 2000.⁴⁸ This section provides that a toll may be implemented only on a trunk road that the Secretary of State has authority for, and that the road must include either a bridge or tunnel that is at least six hundred meters long. The current government published a report in 2013 that looked at future models for roads in England and stated that the use of tolls for new roads remains a possibility, but that it is unwilling to introduce tolls for existing roads.⁴⁹ Any revenue generated from tolls goes to the highway authority and must be used for the road network or related transportation measures.⁵⁰ Local authorities may introduce tolls on roads, but only if there is a local transport plan in place to achieve such aims as reducing congestion or preventing traffic growth.⁵¹ The London congestion charge (see discussion, Part V(B), below) implemented in 2008 by London's first elected mayor, Ken Livingstone, was introduced under similar provisions as those provided in the Transport Act 2000, but at the time the powers to implement such charges were available only in the Greater London area under the Greater London Authority Act 1999.⁵²

Tolls by private companies are regulated by the New Roads and Street Works Act 1991.⁵³ This Act provides that in return for financing, constructing, building, or maintaining a road, the operator may charge a toll.⁵⁴

V. New Initiatives on Transportation Taxes and Duties

A. “Road-Pricing” Structure

The VED and petrol tax system is the one currently in operation in England and Wales. However, a former Transport Minister has noted that the movement towards cleaner gas-driven and electric cars will force whichever government is in power to change the tax structure towards a “road-pricing” structure. Under this structure, users would pay on a usage basis—those making heavy use of the roads would pay more, and those making smaller journeys would pay less. The Minister stated that

[i]n the medium term, there's no question that we're going to have to move towards road-pricing and I would like it to be on a revenue neutral basis for the average motorist. So what you pay in using the roads, you get off in road taxes and fuel so that you end up

⁴⁷ BUTCHER, *supra* note 42, at 14.

⁴⁸ Transport Act, 2000, c. 38, <http://www.legislation.gov.uk/ukpga/2000/38/contents>.

⁴⁹ BUTCHER, *supra* note 42, at 8.

⁵⁰ *Id.* at 10.

⁵¹ Transport Act, 2000, c. 38, § 163, <http://www.legislation.gov.uk/ukpga/2000/38/contents>.

⁵² Greater London Authority Act, 1999, c. 29, § 295, <http://www.legislation.gov.uk/ukpga/1999/29/contents>.

⁵³ New Roads and Street Works Act, 1991, c. 22, <http://www.legislation.gov.uk/ukpga/1991/22/contents>.

⁵⁴ *Id.* § 1.

even on it. It wouldn't be an extra tax, it would be just a different way of raising money.⁵⁵

As of yet, no new initiative has been put forward in legislation.

B. London Congestion Charge

The London congestion charge has been in existence since February 2003. It was introduced by a statutory instrument,⁵⁶ issued under the powers provided to the Mayor by the Greater London Authority Act 1999.⁵⁷ The congestion charge requires users of central London roads to pay a fee each day they drive their vehicle in a specific area during the period of 7:00 a.m.–6:00 p.m., Monday through Friday. The current charges are £9 if paid automatically, £10 if paid on the day of travel, or £12 if paid the following day (these charges range from approximately US\$14–20).⁵⁸ There are penalties of up to £130 (approximately US\$200) if a vehicle enters the congestion charge area and does not pay. There are no toll gates for this area; instead it is monitored by closed-circuit television, and license plate numbers are read and checked against a database to check for payments or exemptions.⁵⁹

The Transport Act 2000⁶⁰ provided the power to the Secretary of State to charge other local road users throughout the rest of England and Wales. To encourage the spread of road charging plans by local authorities, the Labor government provided incentives in the form of a £9.5 billion (approximately US\$15.2 billion) Transport Innovation Fund, which was available from 2005–10. Very few areas implemented such plans and the fund was dissolved in 2010. The reasons cited for the failure were the lack of public acceptance for charging, and the fund's overly narrow focus in addressing solely the issue of congestion.⁶¹

⁵⁵ *Road Tax to Be Scrapped*, SUNDAY EXPRESS (Sept. 23, 2012), <http://www.express.co.uk/news/uk/347695/Road-tax-to-be-scrapped>.

⁵⁶ The Road User Charging (Charges and Penalty Charges) (London) Regulations, 2001, S.I. 2001/2285, http://www.legislation.gov.uk/uksi/2001/2285/pdfs/uksi_20012285_en.pdf.

⁵⁷ Greater London Authority Act, 1999, c. 29, § 295, <http://www.legislation.gov.uk/ukpga/1999/29>.

⁵⁸ *When to Pay*, TRANSPORT FOR LONDON, <http://www.tfl.gov.uk/roadusers/congestioncharging/17097.aspx> (last visited Jan. 27, 2014).

⁵⁹ *Id.*

⁶⁰ Transport Act, 2000, c. 38, pt. III, <http://www.legislation.gov.uk/ukpga/2000/38/contents>.

⁶¹ LOUISE BUTCHER, TRANSPORT INNOVATION FUND (TIF), 2005–2010, HOUSE OF COMMONS STANDARD NOTE, Aug. 2010, SN/BT/3711, <http://www.parliament.uk/briefing-papers/SN03711.pdf>.

France

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SUMMARY French roads are divided into three main categories: municipal, departmental, and national. The latter category includes both highways and other national roads. Different levels of government have jurisdiction over different types of roads, but the construction of new roads is often financed by more than one source. No special tax or duty is specifically tied to funding road infrastructure, except that many French highways are funded by tolls. Furthermore, these toll highways are managed by private companies under a concession system. A recent effort by the French government to impose tolls on heavy vehicles using national roads and highways that are not under a concession regime was postponed in the face of strong popular opposition.

I. Introduction: Organization of the French Road System

French roads fall into three categories, according to which level of government has authority over them. The national road system (*voirie nationale*) is part of the state's domain,¹ and is itself divided into two subcategories: highways (*autoroutes*) and national roads (*routes nationales*).² Departmental roads (*routes départementales*) belong to the *départements*³ in which they lie.⁴ Lastly, local municipal roads (*voies communales*) belong to the municipalities.⁵

There were about 21,157 km of roads in the national road system as of 2011, including 11,412 km of highways and 9,745 km of other national roads.⁶ In addition, there were about 377,857 km of departmental roads and 654,201 km of municipal roads.⁷

Although the responsibilities for building and maintaining roads are divided among the three levels of government as mentioned above, the state nevertheless has the duty to ensure the coherence and efficiency of the French road network as a whole.⁸

¹ CODE DE LA VOIRIE ROUTIERE [CODE OF THE ROAD SYSTEM] arts. L111-1 & L121-1.

² *Id.* art. L121-1.

³ The *départements*, which are governed by an elected general council, are the main territorial and administrative subdivisions of France (*Département*, ENCYCLOPÆDIA BRITANNICA ONLINE ACADEMIC EDITION, <http://www.britannica.com/EBchecked/topic/158208/departement> (last visited Jan. 24, 2014).

⁴ CODE DE LA VOIRIE ROUTIERE arts. L111-1 & L131-1.

⁵ *Id.* arts. L111-1 & L141-1.

⁶ REPERES: CHIFFRES CLES DU TRANSPORT – ÉDITION 2013 [REFERENCES: KEY NUMBERS OF TRANSPORTATION – 2013 EDITION], MINISTÈRE DE L'ÉCOLOGIE, DU DÉVELOPPEMENT DURABLE, ET DE L'ÉNERGIE (Mar. 1, 2013), http://www.developpement-durable.gouv.fr/IMG/pdf/Rep_-_Chiffres_cles_transports_2013.pdf.

⁷ *Id.*

⁸ CODE DE LA VOIRIE ROUTIERE art. L111-1.

II. Funding of National Road Infrastructure

The national road system is a “coherent network of roads and highways of national or European interest.”⁹ The government is supposed to issue a decree every ten years determining which roads belong to the national road system.¹⁰ This national road system is subdivided into two categories: highways and “national roads.” All roads belonging to the national road system that are not highways are considered national roads.¹¹

A. Construction of New Road Infrastructure

1. National Roads in General

New road projects are managed through one of twenty-one *services régionaux de maîtrise d’ouvrage* (regional construction management services), which ultimately fall under the authority of the Ministry of the Environment, Sustainable Development and Energy.¹²

New road developments can be financed by governmental spending (either by the state on its own, or in partnership with other levels of government, such as regions or départements) or by public-private partnerships.¹³ A third approach, consisting of a concession arrangement, may also be used for highways (see part II(A)(2), below).¹⁴

Public-private partnerships allow the state to hire a private company to take charge of one or several aspects of a new infrastructure project, such as financing, planning, construction, maintenance, or management.¹⁵

The state’s financial contribution to any road infrastructure project is undertaken through the Agence de financement des infrastructures de transport de France (AFITF) (Agency for the Funding of the Transportation Infrastructure of France).¹⁶ The AFITF’s financial resources are principally made up of the following elements:

⁹ CODE DE LA VOIRIE ROUTIERE art. L121-1.

¹⁰ *Id.*

¹¹ *Id.* art. L123-1.

¹² *Les services routiers de l’Etat [The State’s Road-Related Services]*, MINISTERE DE L’ECOLOGIE, DU DEVELOPPEMENT DURABLE, ET DE L’ENERGIE (July 7, 2010), <http://www.developpement-durable.gouv.fr/Presen-tation-des-services-routiers.html>.

¹³ *Projets routiers [Road Projects]*, MINISTERE DE L’ECOLOGIE, DU DEVELOPPEMENT DURABLE, ET DE L’ENERGIE (May 30, 2012), <http://www.developpement-durable.gouv.fr/Le-financement-des-infrastructures.html>.

¹⁴ *Id.*

¹⁵ *Id.*; Ordonnance no. 2004-559 du 17 juin 2004 sur les contrats de partenariat [Ordinance No. 2004-559 of June 17, 2004 on Partnership Contracts], JOURNAL OFFICIEL DE LA REPUBLIQUE FRANÇAISE [J.O.] [OFFICIAL GAZETTE OF FRANCE], June 19, 2004, p. 10994, art. 1.

¹⁶ Décret no. 2004-1317 du 26 novembre 2004 relatif à l’Agence de financement des infrastructures de transport de France [Decree No. 2004-1317 of November 26, 2004, Regarding the Agency for the Funding of Transportation Infrastructure of France], J.O., Dec. 1, 2004, p.20474, art. 1; *Projets routiers*, *supra* note 24.

- contributions from the state
- fees paid by highway concessionaires
- a special tax paid by highway concessionaires
- 40% of fines resulting from automatic control and penalty systems
- income from investments
- loans¹⁷

The AFITF also benefitted from a one-time allocation of €4 billion (about US\$5.5 billion), which came from the proceeds of the privatization of highway concessionary companies in 2006.¹⁸

2. *Highways and Highways Tolls*

Article L122-4 of the French Code of the Road System states that “the use of highways is free in principle.” That same article, however, goes on to say that the state may install toll systems to help finance the construction, management, maintenance, and development of that infrastructure.¹⁹ The state may also delegate the construction, management, maintenance, and development of a highway to a third party under a concession system, in which case the toll may also serve as profit for that third party.²⁰ Furthermore, a highway may be financed jointly by a concessionary, the state, and/or a local government (such as a département), and toll proceeds may then be shared between the partner entities.²¹

A special body called the Caisse nationale des autoroutes (CNA) (National Highway Fund) exists to facilitate the financing of highway construction. Concessionaires may borrow from the CNA for the purposes of constructing and managing highways.²² The CNA’s own financial resources come primarily from issuing bonds on the primary bond market.²³

As of 2011, approximately 75% of French highways were the objects of a concession.²⁴

¹⁷ Décret no. 2004-1317 du 26 novembre 2004 [Decree No. 2004-1317 of November 26, 2004] art. 5, *as modified by* Décret no. 2006-894 du 18 juillet 2006 modifiant le décret no. 2004-1317 du 26 novembre 2004 relatif à l'Agence de financement des infrastructures de transport de France [Decree No. 2006-894 of July 18, 2006, Regarding the Agency for the Funding of Transportation Infrastructure of France], J.O., July 20, 2006, p.10911, art. 3; *Projets routiers*, *supra* note 24.

¹⁸ *Projets routiers*, *supra* note 13.

¹⁹ CODE DE LA VOIRIE ROUTIERE art. L122-4.

²⁰ *Id.*

²¹ *Id.*

²² CODE DE LA VOIRIE ROUTIERE art. R*122-7.

²³ *Modalités de financement [Modes of Financing]*, CAISSE NATIONALE DES AUTOROUTES, <http://www.cna-autoroutes.fr/Modalite-de-financement.html?lang=fr> (last visited Jan. 24, 2014).

²⁴ *Consistance et cartes du réseau routier national [Consistency and Maps of the National Road Network]*, MINISTERE DE L'ÉCOLOGIE, DU DÉVELOPPEMENT DURABLE, ET DE L'ÉNERGIE (June 10, 2013), <http://www.developpement-durable.gouv.fr/Consistance-et-cartes-du-reseau.html>.

Toll rates are normally based on the type of vehicle, and the distance between the vehicle's entry and exit points on a particular highway.²⁵ Thus, in 2013, a car driven on the highway between Toulouse and Bordeaux paid €18.80 (about US\$25.70), whereas a tractor-trailer or heavy bus paid €57.20 (about US\$78.25) for the same trip.²⁶ The per-kilometer rates can vary significantly among different routes, as the toll rates for conceded highways are set by the individual concessionaires.²⁷ Furthermore, additional fees may be charged for the use of certain tunnels.²⁸

B. Maintenance of Existing Roads

1. National Roads

The state maintains and manages existing national roads through local agencies called *directions interdépartementales des routes* (interdepartmental directorates for roads), or DIR.²⁹ These agencies, of which there are currently eleven,³⁰ and which fall under the authority of the Ministry of the Environment, Sustainable Development and Energy,³¹ are tasked with the maintenance and management of the national road system.³²

The maintenance of national roads is financed by the general national budget, by cofinancing from local authorities (municipal, departmental, or regional governments), and by the AFITF.³³

²⁵ PRINCIPAUX TARIFS 2013 [PRINCIPAL RATES FOR 2013], ASSOCIATION DES SOCIÉTÉS FRANÇAISES D'AUTOROUTES [ASSOCIATION OF FRENCH HIGHWAY COMPANIES] (Feb. 2013), <http://www.autoroutes.fr/FCKeditor/UserFiles/File/Tarifs%2022%20f%C3%A9vrier%202013.pdf>.

²⁶ *Id.*

²⁷ Stephanie Fontaine, *Autoroutes: coup de chaud sur les prix des péages en France* [Highways: Heat Wave on Toll Prices in France], L'EXPRESS, July 23, 2013, http://votreargent.lexpress.fr/consommation/autoroutes-coup-de-chaud-sur-les-prix-des-peages-en-france_316039.html.

²⁸ *Principaux tarifs 2013*, *supra* note 25.

²⁹ *Les services routiers de l'Etat*, *supra* note 12.

³⁰ *Id.*

³¹ Décret no. 2006-304 du 16 mars 2006 portant création et organisation des directions interdépartementales des routes [Decree No. 2006-304 of March 16, 2006, Creating and Organizing the Interdepartmental Directorates for Roads], J.O., Mar. 17, 2006, p.4048, art. 1; *Présentation de la DIR Atlantique* [Introduction to DIR Atlantique], DIR ATLANTIQUE, <http://www.dir.atlantique.developpement-durable.gouv.fr/presentation-de-la-dir-atlantique-r1.html> (last updated Jan. 24, 2014).

³² Décret no. 2006-304 du 16 mars 2006 art. 3.

³³ CHRISTIAN ECKERT & ALAIN RODET, RAPPORT FAIT AU NOM DE LA COMMISSION DES FINANCES, DE L'ÉCONOMIE GÉNÉRALE ET DU CONTRÔLE BUDGÉTAIRE SUR LE PROJET DE LOI DE FINANCES POUR 2013, ANNEXE NO. 17 [REPORT FOR THE COMMISSION ON FINANCE, GENERAL ECONOMY, AND BUDGETARY CONTROL, ON THE PROPOSED BUDGETARY LAW FOR 2013, ANNEX NO. 17] 17, (Oct. 10, 2012), <http://www.assemblee-nationale.fr/14/pdf/budget/plf2013/b0251-tiii-a17.pdf>.

2. Highways

Concessionaires are responsible for the maintenance and management of the highways conceded to them.³⁴ In the case of nonconceded highways, the state is responsible for maintenance and management in the same manner as for other national roads.³⁵

In theory, the maintenance of highways can be financed by tolls regardless of whether that highway is the object of a concession or not.³⁶ In practice, however, only conceded highways currently have tolls.³⁷ The maintenance of these conceded highways, therefore, is primarily financed by tolls, while the maintenance of nonconceded highways is financed in the same manner as other national roads.³⁸

III. Funding of Departmental and Municipal Road Infrastructure

A. Departmental Roads

Each département is responsible for funding the layout, construction, and maintenance of the departmental roads within it.³⁹ The general councils of the départements are required to include expenditures for the construction and maintenance of the departmental roads in their yearly budgets.⁴⁰

The general councils have fairly extensive budgetary powers, including the ability to incur debts⁴¹ and the power to impose departmental taxes.⁴² These may include taxes on motor vehicles,⁴³ but the proceeds of such taxes are not necessarily tied to expenditures on road infrastructure.

³⁴ *Projets routiers*, *supra* note 13.

³⁵ *Répartition par type de route* [*Distribution According to Road Type*], MINISTÈRE DE L'ÉCOLOGIE, DU DÉVELOPPEMENT DURABLE, ET DE L'ÉNERGIE, <http://www.developpement-durable.gouv.fr/Repartition-par-type-de-route> (last updated Oct. 21, 2013).

³⁶ CODE DE LA VOIRIE ROUTIERE art. L122-4.

³⁷ *Répartition par type de route*, *supra* note 35.

³⁸ *Id.*

³⁹ CODE DE LA VOIRIE ROUTIERE art. L131-2.

⁴⁰ CODE GENERAL DES COLLECTIVITES TERRITORIALES [GENERAL CODE OF REGIONAL AND LOCAL AUTHORITIES] art. L3321-1(16).

⁴¹ *Id.* arts. L3336-1 & L2337-3.

⁴² *Id.* arts. L3212-1–L3212-2.

⁴³ *Id.* art. L3332-1(5).

B. Municipal Roads

Each municipality is required to include expenditures for the maintenance of its municipal roads in its yearly budget.⁴⁴ Municipalities can generate revenue from various local taxes, or from nontax sources, such as fines and revenue from investments.⁴⁵ Spending on municipal roads does not appear to normally be tied to any specific type of revenue.

C. Cross Funding

Construction of municipal and departmental road infrastructure is often financed by more than one entity. Several municipalities can form “public intermunicipal cooperation bodies” (*établissements publics de coopération intercommunale*) to conduct joint projects, including road construction.⁴⁶ Other territorial authorities can come together for joint projects as well: a département can participate in a joint project with one or several municipalities, or with regional authorities, or with other départements.⁴⁷ Départements can receive contributions from municipalities for investment spending,⁴⁸ and each département also receives subsidies from the state for the specific purpose of infrastructure investments (including, but not limited to, roads) in rural areas.⁴⁹

IV. Recent Developments

The French government was planning on implementing a tax on heavy trucks (weighing at least 1.5 metric tons) using national roads and nonconceded highways, starting on January 1, 2014.⁵⁰ This tax, commonly referred to as the *écotaxe*, was meant to contribute to the financing of transportation infrastructures.⁵¹ The *écotaxe* was to be calculated on a per-kilometer basis, based on the vehicle’s size and age, and modified according to its level of polluting emissions.⁵²

⁴⁴ *Id.* art. L2321-2(20); CODE DE LA VOIRIE ROUTIERE art. L141-8.

⁴⁵ CODE GENERAL DES COLLECTIVITES TERRITORIALES arts. L2331-1–L2331-10.

⁴⁶ *Id.* arts. L5111-1 & L5210-1-1A.

⁴⁷ *Id.* art. L5111-1.

⁴⁸ *Id.* arts. L3212-3 & L3332-3(6).

⁴⁹ *Id.* arts. L3332-3(6), L3334-10–L3334-12.

⁵⁰ *Taxe poids lourds (TPL ou écotaxe)* [Heavy Truck Tax (TPL or Ecotax)], SERVICE-PUBLIC.FR, <http://vosdroits.service-public.fr/professionnels-entreprises/F31213.xhtml> (last updated Dec. 12, 2013).

⁵¹ *Id.*

⁵² *Id.*

The prospect of paying this *écotaxe* triggered significant demonstrations, some of them violent, particularly in the region of Brittany.⁵³ This eventually led the government to postpone the implementation of this tax,⁵⁴ perhaps until 2015.⁵⁵

⁵³ Stanislas du Guerny, *La Bretagne reste vent debout contre l'écotaxe pour les poids lourds* [Brittany Remains Up in Arms Against the Ecotaxe on Heavy Trucks], LES ECHOS (Oct. 27, 2013), <http://www.lesechos.fr/economie-politique/politique/actu/0203092773914-la-bretagne-reste-vent-debout-contre-l-ecotaxe-pour-les-poids-lourds-622721.php>.

⁵⁴ Jean-Marc Ayrault, Premier ministre [Prime Minister], Déclaration de à l'issue de la réunion avec les élus Bretons [Declaration After Meeting with Breton Elected Officials] (Oct. 29, 2013), http://www.gouvernement.fr/sites/default/files/interventions/10.29_discours_de_jean-marc_ayrault_premier_ministre_a_lissue_de_la_reunion_avec_les_elus_bretons.pdf.

⁵⁵ Cyrille Pluyette, *L'écotaxe devrait être décalée d'un an* [The Ecotaxe Will Probably Be Pushed Back One Year], LE FIGARO (Nov. 29, 2013), <http://www.lefigaro.fr/conjoncture/2013/11/29/20002-20131129ARTFIG00572-l-ecotaxe-devrait-etre-decalee-d-un-an.php>.

Germany

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SUMMARY Germany does not have a national highway fund. Federal highways are funded by the federation through a combination of general revenue and receipts from tolls imposed on truck traffic. The revenues from the German taxes on gasoline and motor vehicle registration accrue to the federation, yet they are not tied to highway maintenance or construction. Plans for requiring passenger cars to pay tolls on federal highways are under discussion.

I. Introduction

Germany differentiates between federal, state, and municipal roads and highways. Federal highways consist of the long-distance interstate highways (*Autobahnen*), major divided four-lane highways that connect to the interstate system, and some thoroughfares through local communities.¹ Most other highways and roads belong to the states, except for the road systems of major municipalities, for which these municipalities are responsible.² The federation is responsible for maintaining and constructing federal highways. The states, on the other hand, have the responsibility of administering the federal highways within their territory, a task that they carry out under the supervision of the federation.³ This administrative responsibility includes setting up and maintaining the agencies that administer federal highway construction and maintenance.⁴

In accordance with the constitutional principle that each governmental body finances the expenditures for which it is responsible,⁵ the federation bears the burden of financing the construction and maintenance of federal highways. The states, on the other hand, are responsible for financing the administrative activities that relate to the federal highways and also for all expenditures connected to state highways and roads.

¹ GRUNDGESETZ FÜR DIE BUNDESREPUBLIK DEUTSCHLAND [BASIC LAW] art. 90, *translation at* http://www.gesetze-im-internet.de/englisch_gg/englisch_gg.html; Bundesfernstrassengesetz [Federal Long-Distance Highway Act], *repromulgated* June 28, 2007, BUNDESGESETZBLATT [BGBl.] I at 1206, *as amended*, § 1, <http://www.gesetze-im-internet.de/fstrg/BJNR009030953.html>.

² Robert Uerpmann-Wittzach, *Verkehr*, in 4 HANDBUCH DES STAATSRICHTS 796 (Josef Isensee & Paul Kirchhof eds., 2006).

³ BASIC LAW art. 90.

⁴ BASIC LAW art. 85; Bundeshaushaltsplan 2013 [2013 Federal Budget], Strassenbauplan 2013 [Road Construction Plan 2013], ¶ 1210, p. 27, http://www.bundeshaushalt-info.de/fileadmin/de.bundeshaushalt/content_de/dokumente/2013/soll/Haushaltsplan-2013.pdf.

⁵ BASIC LAW art. 104a.

In the German fiscal system, revenue is generated primarily through taxes imposed through federal law. The revenue from some of these taxes is either allocated exclusively to the federation, the states, or the municipalities, or is shared between these entities. In particular, individual and corporate income tax and value-added tax revenues are shared.⁶

II. Funding for National Road Infrastructure

Germany does not have a dedicated fund for building and maintaining highways. The annual federal budget, however, has a highway construction plan that describes ongoing and planned construction projects, and lists the revenues achieved by the federation that are tied to highway construction and maintenance.⁷ The most important of the tied revenues is the toll imposed on truck traffic on federal highways;⁸ in addition, there is some miscellaneous income, such as fees and concessions. The remainder of the needed funds for federal highway construction and maintenance comes from general revenue.

Germany taxes gasoline consumption within the framework of an energy tax,⁹ and the operation of motor vehicles through a motor vehicle tax.¹⁰ The revenue from both these taxes belongs to the federation.¹¹ In popular opinion, these taxes serve to finance highway construction and maintenance, yet there is no legal requirement for limiting their use to these purposes.¹² Until 2006 gasoline consumption was taxed through a mineral oil tax,¹³ and part of the proceeds from this tax were tied to federal highway construction and maintenance.¹⁴ The mineral oil tax was repealed in 2006 with the enactment of the Energy Tax Act,¹⁵ and the revenue from the latter is not tied to highway construction.

III. New Initiatives on Road Infrastructure

Germany has not contemplated alternative means of highway funding, such as a vehicle-miles-traveled (VMT) tax. Instead, there has been an intense debate on the desirability of introducing

⁶ BASIC LAW art. 106.

⁷ Strassenbaufinanzierungsgesetz [Highway Construction Financing Act], Mar. 28, 1960, BGBL. I at 201, *as last amended* by Verordnung, Oct. 31, 2006, BGBL. I at 2407, art. 3.

⁸ Gesetz über die Erhebung von streckenbezogenen Gebühren für die Benutzung von Bundesautobahnen und Bundesstrassen [Federal Highway Toll Act], July 12, 2011, BGBL. I at 1378, § 11.

⁹ Energiesteuerengesetz [Energy Tax Act], July 15, 2006, BGBL. I at 1534, *as amended*, § 2.

¹⁰ Kraftfahrzeugsteuergesetz [Motor Vehicle Tax Act], *repromulgated* Sept. 26, 2002, BGBL. I at 3818, *as amended*, <http://www.gesetze-im-internet.de/kraftstg/BJNR005090927.html>.

¹¹ BASIC LAW art. 106(1), Nos. 2 and 3.

¹² Walter Schulz, *Handwerk kämpft für Meistertitel; ABRECHNUNG Beim Jahresempfang der Kreishandwerkschaft fielen deutliche Worte*, KÖLNER STADT-ANZEIGER 44 (Jan. 11, 2014), *available at* Lexis (by subscription).

¹³ Mineralölsteuergesetz [Mineral Oil Tax Act], *repromulgated* Dec. 20, 1988, BGBL. I at 2277, *as amended*.

¹⁴ Highway Construction Financing Act art. 1.

¹⁵ Energy Tax Act art. 3.

tolls for passenger cars on federal highways.¹⁶ The most discussed option of the new toll scheme was to impose it only on passenger cars registered in other countries, on the theory that Germans already pay enough for automobile usage through the taxes on motor vehicles and gasoline. To date, the proposal has stagnated owing to its potential incompatibility with European Union law.¹⁷ The governors of the German states would reportedly welcome the creation of a special highway construction fund to alleviate the current shortage of funding that is particularly felt in the states and municipalities, where many state roads and bridges are in disrepair.¹⁸

IV. Conclusion

The German experience has shown that the financing of highway construction and maintenance is an urgent task that requires the country to look for new approaches to updating an aging infrastructure. It is not quite clear what lessons can be drawn for the United States from the German experience, considering Germany's geographical situation as a country with considerable transit traffic, the intertwined nature of fiscal and administrative relations between the states and the federation, and Germany's adherence to EU requirements.

¹⁶ Michail Hengstenberg, *Streitthema Autobahngebühr: Seehofer erneuert Forderung nach Maut für Ausländer*, SPIEGEL ONLINE (Sept. 8, 2013), <http://www.spiegel.de/politik/deutschland/pkw-maut-seehofer-erneuert-forderung-nach-der-maut-fuer-auslaender-a-921050.html>.

¹⁷ *Id.*

¹⁸ *Verkehrsministerkonferenz – Milliarden für Sanierung marode Strassen*, MITTELDEUTSCHER RUNDFUNK, <http://www.mdr.de/nachrichten/verkehrsministerkonferenz102.html> (last visited Jan. 22, 2014).

Israel

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SUMMARY Funding for road construction and maintenance in Israel derives from both public and private sources. Public funding is utilized for the development of interurban and municipal roads. The state imposes indirect taxes and fees on transportation-related goods and services, including purchase, import, and value-added taxes on vehicles; excise taxes on gasoline; and a variety of vehicle fees such as an annual licensing fees, car radio fee, etc. The construction and maintenance of interurban roads in Israel has been delegated to two government companies, the operations of which are partially funded by private sources. In the case of one of these companies, such sources include the collection of toll-road fees from drivers.

I. Investments in Road Infrastructure

Funding for the development and maintenance of roads in Israel derives from both governmental budget allocations and private sources.

The total governmental budget allocation for roads reportedly amounted to approximately 6.4 billion New Israeli Shekels (NIS) (about \$US1.8 billion) in 2013 and NIS 7 billion (about \$US2 billion) in 2014.¹ In providing funding for road construction and maintenance, Israel's Ministry of Transportation, National Infrastructure and Road Safety (MTNIRS)² differentiates between interurban highways and municipal roads.³

This report provides information on funding sources for the development of road infrastructure and maintenance in Israel from both public and private sources.

II. Interurban Construction and Maintenance

Interurban highway construction and maintenance in Israel is conducted by two government companies—Netivei Israel and Cross-Israel Highway (CIH). Funding for the companies' operations derives from MTNIRS allocations as well as from private financing and, in the case of the CIH, also from the payment of tolls by drivers.

¹ *The Open Budget: Development of Transportation*, ISRAEL GOVERNMENT PORTAL, http://budget.msh.gov.il/#0079_2014.0.1.1.1.0.0.0.0.0 (scroll down to 2013 and to 2014; in Hebrew; last visited Jan. 6, 2014).

² Information on the MTNIRS is posted on the Ministry's website, at <http://en.mot.gov.il/about-mot-cbl/5-minister-katz> (last visited Jan. 7, 2014).

³ MTNIRS, BUDGET PRINCIPLES FOR 2013–2014, at 165, http://www.mof.gov.il/BudgetSite/StateBudget/Budget_2013_2014/MinisteriesBudget/Foundations/Lists/List3/Attachments/1/Tahabora_Main.pdf (in Hebrew).

A. Implementation

1. *Netivei Israel Ltd.*

Netivei Israel – National Transport Infrastructure Company Ltd. is “a government-owned company that is responsible for the planning, development and maintenance of Israel’s interurban road network as well as railway development.”⁴ According to the Netivei Israel website, the company currently operates a program that is designed to “bring the periphery closer to the center of the country by networking intersecting roads and railways in the north and south.”⁵

BdiCoface, an Israeli business information group, describes the operating model of Netivei Israel as one that is “based on outsourced personnel along with salaried employees [Netivei Israel] regularly monitors, supervises and manages traffic over more than 7,000 km of roads, 1,200 bridges and tunnels and tens of thousands of traffic lights and lighting points.”⁶ BdiCoface lists the integration of the private sector in financing, planning, and implementing projects as one of Netivei Israel’s main objectives.⁷

2. *Cross-Israel Highway Ltd. (CIH)*

CIH is the second government company that is involved with the development of road infrastructure in Israel. The company was established in March 1993 with the objective of paving the Cross-Israel Highway. According to information posted on its website, CIH is engaged in promoting the paving of the highway, which extends for approximately 250 kilometers (155.343 miles) from Shlomi in the Galilee to the Negev Junction.⁸ The Cross-Israel Highway project is said to be “the first major privately financed project to be implemented in Israel, serving as an important experience for the government, lending institutions and the private sector, and setting the standard for future projects in Israel.”⁹

CIH reportedly offered to pave the central section of the highway as a toll road using a concessionaire to finance and pave the road, and to operate it for a period of thirty years. After the expiration of this period, ownership of the highway passes to the state. Accordingly, the Derech Eretz company was selected in an international tender as the implementing authority and

⁴ *Netivei Israel – National Transport Infrastructure Company Ltd.*, BDI COFACE, http://www.bdicode.co.il/CompanyTextProfile_ENG/1940_694_0/Netivei%20Israel%20%e2%80%93%20National%20Transport%20Infrastructure%20Company%20Ltd (last visited Jan. 6, 2014).

⁵ See *Who Are We*, NETIVEI ISRAEL, <http://iroads.co.il/he/about> (translated from Hebrew by author, R.L.; last visited Jan. 6, 2014).

⁶ *Id.*

⁷ *Id.*

⁸ *Implementing Authority and the Concessionaire*, KVISH HOZE ISRAEL, <http://www.hozeisrael.co.il/template/default.asp?PageId=66&catId=12&maincat=6> (in Hebrew; last visited Jan 6, 2014).

⁹ Yehuda Ravehet et. al., *Cross-Israel Highway Leads the Way to Public-Private Partnerships*, INTERNATIONAL LAW OFFICE (ILO) (Nov. 19, 2002), <http://www.internationallawoffice.com/newsletters/detail.aspx?g=da09f7a9-f8e1-4c88-8dfd-251ef254b4bb&redir=1>. The article provides additional information on financing and operations.

the concessionaire of the Cross-Israel Highway on behalf of the state. Derech Eretz is therefore responsible for monitoring the concessionaire's areas of activities that are related to the toll road, including road construction, construction of interchanges, toll gates, cost of travel, methods of collection, road maintenance, etc.¹⁰

B. Funding Sources

1. Public Funding

The MTNIRS's budget for development of interurban roads for 2013 and 2014 is composed of government appropriations, conditional expenditures, and authorizations to commit.¹¹ While a conditional expenditure is an authorization for an expense beyond the approved budget expense and depends on receipt of income from nongovernmental sources, an authorization to commit allows the obligation of funds for a plan during the fiscal year, even if payment will be made in the coming years. According to information posted on Israel's Ministry of Finance website, this arrangement allows the government to operate within the framework of multi-year programs while being subject to adequate budgetary supervision.¹²

The monetary values of the budget allocation components for interurban road development for 2013 and 2014 were reportedly NIS 5.37 billion (about \$US1.52 billion) and NIS 5.9 billion (about \$US1.67 billion) respectively in spending appropriations; NIS 17 million (about \$US4.84 million) and NIS 18 million (about \$US5.12) respectively in conditional expenditures; and NIS 13.2 billion (about \$US3.76 billion) and NIS 4.45 billion (about \$US1.26 billion) respectively in authorizations to commit.¹³

2. Toll Road Fees

The financing of road maintenance and construction of the Cross-Israel Highway through collection of usage fees is regulated by the Toll Road (Israel National Highway) Law 5755-1995¹⁴ and subsidiary legislation. The Law establishes the rules governing the designation of parts of the Cross-Israel Highway as toll roads,¹⁵ the procedures for selection and replacement¹⁶

¹⁰ KVISH HOZE ISRAEL, *supra* note 8.

¹¹ *Id.*

¹² MINISTRY OF FINANCE, BUDGET PRINCIPLES FOR 2011–2012, at 252, http://www.mof.gov.il/BudgetSite/StateBudget/Budget2011_2012/Lists/List4/Attachments/1/ekronotHok_2011_12.pdf; see also YNET LEXICON FOR ECONOMICS, http://www.yediothsfarim.co.il/lexicons/econ/glossary/g_691.asp (both in Hebrew; last visited Dec. 24, 2013).

¹³ See BUDGET PRINCIPLES FOR 2013–2014, *supra* note 3.

¹⁴ Toll Road (Israel National Highway) Law 5755-1995, SEFER HAHUKIM [SH] [OFFICIAL GAZETTE] 5755 No. 1545 p. 490, as amended (in Hebrew).

¹⁵ *Id.* § 2.

¹⁶ *Id.* §§ 3–5, 11.

of the highway's concessionaire,¹⁷ and the enforcement authorities of the state and the concessionaire.¹⁸

III. Development of Municipal Roads

Local authorities in Israel are responsible for developing, paving, and maintaining roads, sidewalks, traffic signs, and other transportation equipment located within their jurisdictions. The financing of qualified projects within local jurisdictions, however, is partially funded by MTNIRS appropriations. The Ministry's contributions can be used to develop municipal arteries to ease traffic congestion, increase road safety, and improve road infrastructure in minority communities. Governmental budget allocations for the development of municipal roads during 2013 and 2014 are listed on the MTNIRS website.¹⁹

IV. Criteria for Taxation of Cars and Gasoline

In addition to toll-road fees,²⁰ which are collected from drivers based on authorization under the Toll Road (Israel National Highway) Law 5755-1995,²¹ the state collects additional revenues that partially support road infrastructure from a variety of indirect taxes. Such revenues go into a general pool rather than a special road infrastructure fund.

Indirect taxes on automobile industry products and services generate sizeable revenues for the state.²² “[I]ndirect taxes are imposed on a citizen's expenses (goods and services) and not on income. Taxes are normally reflected in the price of the commodity/service that the consumer purchased, so that the indirect tax is paid by the final consumer.”²³ The following indirect taxes apply to transportation-related expenses:

A. Purchase Tax on Motor Vehicles

A purchase tax²⁴ is imposed on motor vehicles in accordance with the Purchase Tax (Goods and Services) Law, 5712-1952,²⁵ as amended, and subsidiary legislation issued under that Law. According to a report published on the Ministry of Finance website,

¹⁷ *Id.* §§ 6, 7.

¹⁸ *Id.* §§ 12–12D.

¹⁹ BUDGET PRINCIPLES FOR 2013–2014, *supra* note 3.

²⁰ See Part II(B)(2) of this report.

²¹ Toll Road (Israel National Highway) Law 5755-1995, SH 5755 No. 1545 p. 490, *as amended* (in Hebrew).

²² For specific figures, see AVICHAH ODESAR, MINISTRY OF FINANCE, TAXATION OF VEHICLES ch. 14, <http://govx.mof.gov.il/Lists/List26/Attachments/491/%D7%A4%D7%A8%D7%A7%20%D7%9E%D7%99%D7%A1%D7%95%D7%99%20%D7%A8%D7%9B%D7%91.docx> (in Hebrew; last visited Dec. 31, 2013).

²³ *Details Regarding Support for Implementation of Payments and Reporting*, PURCHASE AND EXCISE TAXES-ISRAEL TAX AUTHORITY, <http://taxes.gov.il/OTHERINDIRECTTAXES/Pages/TaxesIndirectTaxLobby.aspx> (translated from Hebrew by author, R.L.; last visited Jan. 6, 2014),

²⁴ For general information on the Purchase Tax, see ISRAEL TAX AUTHORITY, <http://taxes.gov.il/OtherIndirectTaxes/Pages/TaxesAAPurchaseTax.aspx> (in Hebrew; last visited Jan. 7, 2014).

[i]n 2011 the statutory purchase tax rate remains as it was in 2010. This after the statutory tax rate reductions beginning in 2005 and the green tax reform starting in August 2009. Compared to the statutory tax rate, the effective tax rate has been in decline since 2000 . . . and in 2011 was about 63%, a fact that can attest to the effectiveness of green taxes.²⁶

Lower tax rates were introduced in 2013 for hybrid and electric vehicles to reduce air pollution. It is expected that “by 2020 a uniform tax regime will apply to all vehicle types.”²⁷

B. Import Tax on Vehicles

Israel applies an import tax on the importation of vehicles. Import tax rates vary depending on whether the vehicle was produced in a country or area that is subject to a free trade agreement (FTA) to which Israel is a party.²⁸ Current partners to FTAs with Israel include the European Union, United States, European Free Trade Association, Turkey, Mexico, Canada, Jordan, Egypt, Mercosur (the South American-based trade organization), and Colombia.²⁹ The following rates apply to imported vehicles:³⁰

Type of Vehicle	Vehicles Produced or Imported Directly from FTA Partners	Other Vehicles
Sedan/Motorcycle/Field Car	116%	131%
Collectors Cars	102%	117%
Hybrid Cars (air pollution rates 1-2)	53%	64%
Plug-in Hybrid Cars	42%	51%
Electric Cars	27%	36%

However, specific tax relief rates apply to vehicles according to their air pollution capacity and whether they include safety accessories.³¹

²⁵ Purchase Tax (Goods and Services) Law, 5712-1952, SH No. 110 p. 344.

²⁶ ODESAR, *supra* note 24, at 2 (translated by R.L.).

²⁷ *Id.*

²⁸ *Id.*

²⁹ For additional information on and links to the text of Israel’s FTA agreements, see *Trade Agreements and Bilateral Issues*, MINISTRY OF INDUSTRY, TRADE AND LABOR, <http://www.moit.gov.il/NR/exeres/00E158D1-2672-4B9F-B35C-29D4A6D56009.htm> (last visited Jan. 7, 2014).

³⁰ ISRAEL TAX AUTHORITY, THE STATE OF ISRAEL, MINISTRY OF FINANCE, GUIDE FOR INDIVIDUAL IMPORT OF VEHICLES 4 (updated to Aug. 5, 2013, <http://taxes.gov.il/customs/PersonalImport/Documents/MadrihYevuIshiRehev.pdf> (in Hebrew)).

³¹ *Id.* at 4–5.

C. Value-Added Tax on Purchase of Vehicles

The value-added tax (VAT) is an additional, indirect tax imposed on the purchase of vehicles.³² The current VAT rate is 18%.³³

D. Excise Tax on Gasoline

Israel imposes an indirect tax on gasoline.³⁴ The excise tax on gasoline was expected to rise by 1.6% of Israel's consumer price index on September 1, 2013, thereby reaching the rate of 56% of the price of one liter of 95 octane gas.³⁵

E. Vehicle Fees

In addition to the indirect taxes listed above, Israel also collects vehicle fees including annual licensing fees, radio fees, transfer of vehicle ownership fees, etc.³⁶ The total revenues from vehicle fees in 2011 reportedly increased by 0.6% compared to 2010.³⁷

³² Value Added Tax Law, 5736-1975, 30 LAWS OF THE STATE OF ISRAEL 46 (5736-1975/76), *as amended*.

³³ Decree on Value Added Tax (Rate of Tax on a Transaction and on Import of Goods), 5765-2005, *as amended*, § 1, KOVETZ HATAKANOT [KT] [SUBSIDIARY LEGISLATION] No. 6416 p. 913; *see also* Yoel Shwarz, *VAT [for] Cars More Expensive*, AUTO.CO.IL (June 2, 2013), <http://www.auto.co.il/את-המכוניות-את-המע-מ-מייקר-30073-כתבה.aspx> (both in Hebrew).

³⁴ *Rates of Indirect Tax on Gasoline*, ISRAEL TAX AUTHORITY (updated to Apr. 30, 2014), <http://taxes.gov.il/Other/IndirectTaxes/Documents/DelekSoler/delek300414.docx> (in Hebrew).

³⁵ Avi Bar-Eli, *Tax on Gasoline will increase in 6 Agorot for Liter*, THE MARKER (Aug. 21, 2013), <http://www.the-marker.com/dynamo/1.2103071> (in Hebrew).

³⁶ ODESAR, *supra* note 24, at 8.

³⁷ *Id.*

Italy

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SUMMARY Italy’s national government provides all funding for national highways, while regions enjoy limited power to fund regional roads. Tax revenue on automobile and gas usage is not applied to dedicated funding for road infrastructure construction. No programs for taxing road usage by vehicle miles traveled exist in the country. Automobile taxes are determined according to several criteria, such as an automobile’s environmental impact, engine power, or historical interest. Other factors related to road usage, such as the type of road or road congestion, are not considered in determining automobile taxes. A percentage of revenue generated by tolls goes to the National Autonomous Roads Corporation (Azienda Nazionale Autonoma delle Strade, ANAS) for monitoring highways under concession.

I. Introduction

According to the Italian Constitution,¹ Italy’s national government exercises enumerated powers,² but also shares some powers with Italy’s twenty regions. These shared powers include passing legislation related to “major transportation and navigation networks.”³ Accordingly, in 2009 Italy introduced the concept of “federal infrastructure” (*Federalismo infrastrutturale*)⁴ with the passage of a decree law giving the national government authority to maintain the national highways and limiting the regional branches of the National Autonomous Roads Corporation (Azienda Nazionale Autonoma delle Strade, ANAS) to the maintenance of roads within their regions.⁵ After its federalization, the toll system for federal highways and motorways previously

¹ CONSTITUTION OF THE ITALIAN REPUBLIC (English version published by the Parliamentary Information, Archives and Publications Office of the Senate Service for Official Reports and Communication of the Senato della Repubblica, Apr. 2009), http://www.senato.it/documenti/repository/istituzione/costituzione_inglese.pdf.

² *Id.* art. 117, paras. 1 & 2.

³ *Id.* art. 117, para. 3.

⁴ Decreto Legge [D.L.] 25 settembre 2009, n. 135, Disposizioni urgenti per l’attuazione di obblighi comunitari e per l’esecuzione di sentenze della Corte di giustizia delle Comunità europee [Decree Law No. 135 of September 25, 2009, Urgent Provisions for the Implementation of Community Obligations and for the Execution of the European Court of Justice’s Decisions], GAZETTA UFFICIALE [G.U.] [OFFICIAL GAZETTE] No. 223, Oct. 25, 2009, <http://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:decreto.legge:2009;135~art19quater>.

⁵ D.L. n. 135 of 2009 art. 3-ter.

managed by ANAS was changed in 2010⁶ from a concessionaire-operated toll system to a free-flow collection system.⁷

Appropriations for road infrastructure are stipulated in the annual budget of the national government.⁸ The budget law for 2014 includes several provisions related to providing funding for road infrastructure.⁹ For example, the Law appropriates €335 million (about US\$453.8 million) for 2014 and €150 million (about US\$203.2 million) for 2015 to ensure the maintenance of the road network throughout the country, initiation of new projects, and completion of initiatives under program contracts already signed by the Ministry of Infrastructure and Transportation and existing contractors.¹⁰ The same Law also approves funding for the promotion of connections between the sea, rail, and road transportation systems in the area of the Strait of Messina, that is, at the regional level.¹¹

Since 2001,¹² the implementation of road infrastructure projects has taken place through the Strategic Infrastructure Program in conjunction with construction projects for the Trans-European Transport Networks (TEN-T) and the Pan-European corridors.¹³ Since 2003, the

⁶ Decreto Legge 31 maggio 2010, n. 78, Misure urgenti in materia di stabilizzazione finanziaria e di competitività economica [Decree Law No. 78 of May 31, 2010, Urgent Measures Concerning Financial and Economic Competitiveness Stability], art. 8, paras. 1–5, G.U. No. 125, May 31, 2010, <http://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:decreto.legge:2010-05-31:78!vig=>.

⁷ This system became operational on April 30, 2011. See Decreto Legge 5 agosto 2010, n. 125, Misure urgenti per il settore dei trasporti e disposizioni in materia finanziaria [Decree Law No. 125 of August 5, 2010, Urgent Measures for the Transportation Sector and Concerning Financial Matters], G.U. No. 182, Aug. 6, 2010, <http://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:decreto.legge:2010-08-05:125!vig=>.

⁸ *Redazione ed Approvazione del Bilancio Dello Stato Italiano* [Preparation and Approval of the Italian State Budget], LIBERO, http://digilander.libero.it/lancia/Il_bilancio_dello_stato_italiano.htm (last visited Feb. 6, 2014).

⁹ Legge 27 dicembre 2013, n. 147, Disposizioni per la formazione del bilancio annuale e pluriennale dello Stato (Legge di stabilità 2014) [Law 147 of December 27, 2013, Provisions for the Preparation of the Annual and Pluriannual Budget of the State (Stability Law of 2014)], G.U. No. 302, Dec. 27, 2013, <http://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:legge:2013:147>.

¹⁰ *Id.* art. 1, No. 68.

¹¹ *Id.* art. 1, No. 81; see also Decreto Legge 6 luglio 2011, n. 98, Disposizioni urgenti per la stabilizzazione finanziaria [Decree Law 98 of July 6, 2011, Urgent Provisions for Financial Stability] art. 32, para. 1, G.U. No. 155, July 6, 2011, <http://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:decreto.legge:2011-07-06:98> (creating, under the Ministry of Infrastructure and Transportation, the railroad and highway infrastructure related to the Strategic Interest Works Fund, appropriating €930 million [about US\$1,271,000] for fiscal year (FY) 2012 and €1,000 million [about US\$1,367,000] for FYs 2013 to 2016).

¹² Legge 21 dicembre 2001, n. 443, Delega al Governo in materia di infrastrutture ed insediamenti produttivi strategici ed altri interventi per il rilancio delle attività produttive [Law 443 of December 21, 2001, Delegating in the Government the Concerning Infrastructure and Strategic Production and Other Investments for the Revival of Productive Activity], G.U. No. 299, Dec. 27, 2001, <http://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:legge:2001:443>.

¹³ *Temî dell'attività Parlamentare: Le infrastrutture strategiche* [Topics of Parliamentary Activity: Strategic Infrastructure], PARLAMENTO ITALIANO, <http://leg16.camera.it/465?area=32&tema=71&Le+infrastrutture+strategiche> (last visited Feb. 6, 2014).

government has sent Parliament an annual report titled *Infrastructure Annex*,¹⁴ in which it informs Parliament about the implementation of strategic infrastructure throughout the country.

II. National Road-Infrastructure Funding

A. Income from Taxes and Tolls

Revenue generated by taxes on road and automobile usage goes to the general Italian treasury. Road usage as expressed through fuel consumption is taxed with an excise tax and a value-added tax (VAT). The excise is a type of consumption tax distinct from the VAT in that it is not proportional to the value but to the quantity of the product.¹⁵ The fuel-consumption VAT, on the other hand, is a general consumption tax that is not tied to road construction or maintenance.

Automobile taxes, in turn, are levied on vehicle owners and are paid independently of car or highway usage. The amount of the tax varies according to the vehicle's engine power. Another factor involved in determining the automobile tax is the class of pollution generated by the vehicle (Euro 1, Euro 2, etc.): the lower the class number, the higher the amount paid because the vehicle pollutes more. Several other criteria also affect the determination of automobile taxes.¹⁶

With respect to highway-usage tolls under the concession regimen, highway concessionaires have been required to pay an annual fee to the state since 1994.¹⁷ The rate of this fee, which has

¹⁴ The documents composing the *Infrastructure Annex* are called “documents of economics and finance,” pursuant to Legge 7 aprile 2011, n. 39 Modifiche alla legge 31 dicembre 2009, n. 196, conseguenti alle nuove regole adottate dall’Unione europea in materia di coordinamento delle politiche economiche degli Stati membri [Law 39 of April 7, 2011, Amending Law 196 of December 31, 2009, Arising from the New Rules Adopted by the European Union Concerning the Coordination of the Economic Policies of the Member States], G.U. No. 84, Apr. 12, 2011, <http://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:legge:2011:39>.

¹⁵ *Id.* In addition to fuels, the excise is applied to gas, electricity, alcohol, and tobacco.

¹⁶ Vehicles with a low environmental impact—such as hybrid electric vehicles fueled exclusively by GLP (natural gas) or methane sources— may take advantage of a large tax reduction. Also, vehicles of historical interest that are enrolled in special registries are subject to the payment of a reduced rate (“Minitax”), payable only in the case of effective use, and disabled persons have a right to a complete exemption from the tax if their vehicle is adapted to the particular type of disability. In addition, the so-called “Supertax,” applicable since 2012, is an additional increment of the automobile tax on passenger cars and motor vehicles used for the transportation of persons and goods, which applies to two large categories: (a) vehicles with power above 225 Kw acquired between July 7 and December 31, 2011; and (b) vehicles with more than 185 Kw registered after 2008, which had to comply with the new rules before January 31, 2012. Legge 14 giugno 1990, n. 158, Norme di delega in materia di autonomia impositiva delle regioni e altre disposizioni concernenti i rapporti finanziari tra lo Stato e le regioni [Law 158 of June 14, 1990, Norm for the Delegation of Powers Concerning the Tax Autonomy of the Regions and Other Provisions Related to the Financial Relationship Between the State and the Regions] art. 4, G.U. No. 144, June 22, 1990, <http://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:legge:1990-06-14:158>. Finally, effective in 2011, passenger cars and motor vehicles used for the transportation of persons and goods with power higher than 225 Kw are subject to an additional increment over the tax introduced by D.L. 98, *supra* note 11, which was converted into law by Legge 15 luglio 2011, n. 111. [Law No. 111 of July 15, 2011] art. 23, para. 21, G.U. No. 164 of July 16, 2011, [http://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:legge:2011-07-15:111!vig=.](http://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:legge:2011-07-15:111!vig=;)

¹⁷ Legge 24 dicembre 1993, n. 537, Interventi correttivi di finanza pubblica [Law No. 537 of December 24, 1993, Corrective Actions of Public Finance] art. 10, para. 3, G.U. No. 393, Dec. 28, 1993, <http://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:legge:1993-12-24:537>.

been modified several times,¹⁸ is currently 2.4% of the net proceeds of the tolls that are due to the concessionaires. Forty-two percent of the fee is paid directly to ANAS, which directs those funds toward supervising and controlling concessionaires in accordance with the relevant costs¹⁹ for maintaining the ANAS network.²⁰ This is the only exception to the general rule that funds for building roads in Italy are not treated separately from funds for operating and maintaining roads.

B. Other Financing Mechanisms

Other mechanisms for financing public infrastructure projects include “project financing,”²¹ the issuance of titles of credit (bond projects),²² the issuance of bonds by insurance companies,²³ and *defiscalizzazione* (tax exemptions) for certain activities and public-private partnerships (PPPs).²⁴

¹⁸ Legge 27 dicembre 2006, n. 296, Disposizioni per la formazione del bilancio annuale e pluriennale dello Stato (legge finanziaria 2007) [Law 296 of December 27, 2006, Provisions for the Formation of the Annual and Pluriannual Budget of the State (Financial Law of 2007)] art. 1, para. 1020, G.U. No. 299, Dec. 27, 2006, <http://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:legge:2006-12-27:296!vig=>; Decreto Legge 23 ottobre 2008, n. 162, Interventi urgenti in materia di adeguamento dei prezzi di materiali da costruzione, di sostegno ai settori dell'autotrasporto, dell'agricoltura e della pesca professionale, nonché di finanziamento delle opere per il G8 e definizione degli adempimenti tributari per le regioni Marche ed Umbria, colpite dagli eventi sismici del 1997 [Decree Law No. 162 of October 23, 2008, Urgent Action Concerning the Adjustment of Prices of Building Materials, Support of the Road Sectors, Agriculture and Professional Fishing, as well as Financing of the Works for the G8, and Definition of Tax Compliance for the Regions of Umbria and Marche, Affected by the Earthquake of 1997] art. 19, para. 9-bis, G.U. No. 249, Oct. 23, 2008, <http://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:decreto-%20%20%20%20%20%20%20%20%20%20%20legge:2008:162>; D.L. 78 of 2009, *supra* note 6, art. 5(7).

¹⁹ See Decreto Legge 8 aprile 2008, n. 59 Disposizioni urgenti per l'attuazione di obblighi comunitari e l'esecuzione di sentenze della Corte di giustizia delle Comunità europee [Decree Law No. 59 of April 8, 2008, Urgent Provisions for the Implementation of Community Obligations and for the Execution of the European Court of Justice's Decisions] art. 8-duodecies, G.U. No. 84, Apr. 9, 2008, <http://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:decreto.legge:2008:59> (introducing a new tariff adjustment mechanism between tolls to both the effective inflation rate of the preceding year and the return on investments).

²⁰ For more information on Highway Concessions by ANAS, see Camera dei deputati, XVI Legislatura, Documentazione e ricerche, L'Anas e le concessioni autostradali [ANAS and Highway Concessions], n. 249, July 6, 2011, <http://documenti.camera.it/leg16/dossier/Testi/Am0234.htm#dossierList>.

²¹ Decreto Legge 6 dicembre 2011, n. 201, Disposizioni urgenti per la crescita, l'equità e il consolidamento dei conti pubblici [Decree Law No. 201 of December 6, 2011, Urgent Provisions for the Growth, Equity, and Consolidation of Public Accounts] art. 42, paras. 6 & 7, G.U. No. 284, Dec. 6, 2011, <http://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:decreto.legge:2011:201>.

²² Decreto Legge 24 gennaio 2012, n. 1, Disposizioni urgenti per la concorrenza, lo sviluppo delle infrastrutture e la competitività [Decree Law No. 1 of January 24, 2012, Urgent Provisions for Competition, Development of Infrastructure and Competitiveness] art. 41, G.U. No. 19, Jan. 24, 2012, <http://www.normattiva.it/atto/caricaDettaglioAtto?atto.dataPubblicazioneGazzetta=2012-01-24&atto.codiceRedazionale=012G0009>, amended by Decreto Legge 22 giugno 2012, n. 83, Misure urgenti per la crescita del Paese [Decree Law No. 83 of June 22, 2012, Urgent Measures for the Growth of the Country] art. 1, G.U. No. 187, Aug. 11, 2012, <http://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:decreto.legge:2012-06-22:83>.

²³ D.L. 201 of 2011, *supra* note 22, art. 41, para. 5-bis (regulating the adjudicating authority, the submission of proposals, and the procedure for the financing of infrastructure projects).

²⁴ Legge 12 novembre 2011, n. 183, Disposizioni per la formazione del bilancio annuale e pluriennale dello Stato (Legge di stabilità 2012) [Law 183 of November 12, 2011, Provisions for the Formation of the Annual and

To facilitate the implementation of new infrastructure projects performed through PPP contracts worth a minimum of €500 million (about US\$677.4 million), tax credits are granted to holders of PPP contracts via the corporate income tax and the regional tax for activities related to the construction and management of such works.²⁵

III. New Initiatives on Road Infrastructure

There are no pending developments in this area. In particular, there are no plans to institute dedicated funds for road construction aside from the general revenue of the state nor are there any plans for taxing road usage by taxing vehicle miles traveled.

IV. Conclusion

It appears that there are no specific funds directed toward financing national highway infrastructure in Italy, which is funded by the general revenue. Highway revenue is generated by taxes and tolls, but this revenue is not tied to highway construction. Likewise, revenues from gas and automobile taxes go to the general revenue of the country, and not to specific highway projects or to the regions.

Pluriannual Budget of the State (Stability Law of 2012)] art. 18, G.U. No. 265, Nov. 14, 2011, <http://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:legge:2011-11-12:183>.

²⁵ Decreto Legge 18 ottobre 2012, n. 179 Ulteriori misure urgenti per la crescita del Paese [Decree Law No. 179 of October 18, 2012, Further Urgent Measures for the Country's Growth] art. 33 et seq., G.U. No. 245, Oct. 19, 2012, <http://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:decreto-legge:2012-10-18:179!vig>.

Japan

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SUMMARY Japan traditionally constructed highways through highway public corporations, but these corporations incurred huge amounts of debt over the years. In 2005, four highway public corporations were dissolved and the Japan Expressways Holding and Debt Repayment Agency (JEHDRA) and six new highway companies were established. JEHDRA took over the highway assets and debts of four former highway public corporations and leased highways to the highway companies.

Previously, the major source of government funding for highway construction was earmarked tax revenues, such as the gasoline tax and car-related taxes. The toll from highway users was used to pay off loans. However, the earmarked tax revenue system for road construction was abolished in 2008.

The government supports JEHDRA, and JEHDRA in turn provides financing to highway companies through grants and debt guarantees. The government constructs and manages those highways that are not profitable by themselves.

I. Highway Construction System

Public road planning, including for highways, is under the jurisdiction of the Ministry of Land, Infrastructure and Transportation (MLIT).¹ The Cabinet determines the routes for “high-standard arterial roads” (highways) in the context of nationwide land planning.² The current routes were set in 2008 by the Grand Design of Land in the 21st Century.³ There are two categories of highways: national expressways and national highways with access control.⁴

A. National Expressways

Routes of national expressways were designated by the Act on Construction of Arterial Roads for Land Development.⁵ The MLIT develops the basic plan for a route that is to be constructed upon consultation with the Committee on Construction of Arterial Roads for Land

¹ Dōro hō [Road Law], Act No. 180 of 1952, *amended by* Act No. 30 of 2013, art. 12.

² Kokudo keisei keikaku hō [National Spatial Planning Act], Act No. 205 of 1950, *amended by* Act No. 89 of 2005, art. 2, para. 1, item 6; Kokudo kaihatsu kansen jidōshadō kensetsu hō [Act on Construction of Arterial Roads for Land Development], Act No. 68 of 1957, *last amended by* Act No. 160 of 1999, art. 3 & attached table.

³ The 5th Comprehensive National Development Plan, Grand Design for the 21st Century, Cabinet Decision (Mar. 31, 1998), <http://www.mlit.go.jp/kokudokeikaku/zs5-e/>.

⁴ Road Law arts. 3, 3-2 & 48-2. *See also* MLIT, Expressways in Japan, Presentation, at 4, http://www.mlit.go.jp/road/road_e/03key_challenges/6-1.pdf (last visited Jan. 27, 2014).

⁵ Act on Construction of Arterial Roads for Land Development art. 3 & attached table.

Development,⁶ which was established under the jurisdiction of the MLIT.⁷ Committee members consist of members of the Diet (Japan's parliament) and scholars.⁸ The MLIT then plans the construction upon consultation with the Committee and relevant prefectures.⁹

1. Former Highway Companies

The construction and maintenance of highways may be managed by designated highway corporations.¹⁰ In fact, national expressways were mainly managed by highway public corporations until 2004.¹¹ In 1956, the first law to establish a highway public corporation was enacted¹² and the Japan Highway Public Corporation (JH) was founded.¹³ The toll-road system was introduced in 1952¹⁴ to cover a part of highway maintenance costs and repay construction loans.¹⁵ The JH and three other highway public corporations that were founded later collected tolls from users.¹⁶ In 1970, the Local Road Public Corporation Act was enacted and local road public corporations commenced toll-road management.¹⁷

There were four main financial sources for national expressway construction: “toll revenues, highway bonds, loans from banks, and government subsidies and social capital fund[s].”¹⁸ However, highway public corporations accumulated huge debts over the years. Those debts and other problems lead to the privatization of these public corporations in the early 2000s.¹⁹

⁶ *Id.* art. 5, para. 1.

⁷ *Id.* art. 11.

⁸ *Id.* art. 13.

⁹ Kōsoku jidōsha kokudō hō [National Highway Act], Act No. 79 of 1957, amended by Act No. 76 of 2013, art. 5.

¹⁰ Dōro seibi tokubetsu sochi hō [Special Act on Road Construction and Maintenance], Act No. 7 of 1956, last amended by Act No. 101 of 2004, art. 3.

¹¹ Special Act on Road Construction and Maintenance, Act No. 7 of 1956, art. 2-2, as amended by Act No. 80 of 1957.

¹² Nihon dōro kōdan hō [Japan Highway Public Corporation Act], Act No. 6 of 1956.

¹³ *Welcome to JH*, Japan Highway Public Corporation (JH), http://warp.da.ndl.go.jp/info:ndljp/pid/236639/www.jhnet.go.jp/english_new/ (Jan. 1, 2005). The website was archived by the National Diet Library of Japan.

¹⁴ Dōro seibi tokubetsu sochi hō [Special Act on Road Construction and Maintenance], Act No. 169 of 1952, art. 3. This Act was abolished by the Act of the same name referenced in note 10.

¹⁵ Takaaki Nambu, Roads Fund Board, United Republic of Tanzania, *Histry [sic] of Road Development, Finance and Investment in Japan*, at 8, <http://www.roadfundtz.org/web/pdf/session%204/Japan%20History%20of%20Road%20Development%20Finance%20and%20%20%20%20%20Investment.pdf> (last visited Jan. 3, 2014).

¹⁶ *Id.*

¹⁷ Chihō dōro kōsha hō [Local Road Public Corporation Act], Act No. 82 of 1970.

¹⁸ Fumitoshi Mizutani & Shuji Uranishi, Privatization of the Japan Highway Public Corporation: Policy Assessment, Paper for the 46th Congress for the European Regional Science Association, at 11 (2006), <http://www.sre.wu-wien.ac.at/ersa/ersaconfs/ersa06/papers/226.pdf>.

¹⁹ *Id.* at 14.

According to experts who analyzed the JH's debt, the two main costs that the JH incurred—the highway construction costs and the corporation's management costs—were financed by three sources: highway bonds, loans from banks, and government investments. The principal and interest for such debts were repaid by toll revenues and government subsidies. Because the JH constructed more highways than its repaying ability could cover, its debts become larger.²⁰

In 2002, the Cabinet established the Promotion Committee for the Privatization of the Four Highway-related Public Corporations (Promotion Committee) to examine “new organizational modalities” premised on privatizing JH and other highway public corporations and “ways to ensure [their] economic viability.”²¹ The Promotion Committee submitted its comments to the Cabinet near the end of 2002.²² The MLIT discussed the privatization proposal for a year, taking the comments into consideration. Then, the Cabinet made a final decision and submitted bills to the Diet during the 2004 ordinary session.²³ The Diet passed the bills and, as a result of the legislation, four highway public corporations were dissolved and the Japan Expressways Holding and Debt Repayment Agency (JEHDRA) and six highway companies were established in 2005.²⁴

JEHDRA, an incorporated administrative organization, took over the highway assets and debts of four former highway public corporations.²⁵ JEHDRA repays such debts and also pays incremental debts due to new highway construction by collecting highway fees from the six companies. The six highway companies construct and manage highways, and collect tolls. “The lease fees that the companies pay to JEHDRA are variable depending on the level of traffic. The revenue risk is hence transferred from the companies to JEHDRA and ultimately to the Japanese government which is JEHDRA's owner.”²⁶ In addition, JEHDRA holds the interest rate risk when the interest rate of the loans is variable under this system.²⁷ JEHDRA plans to repay the debts of the former public corporations within forty-five years. After finishing repayment, JEHDRA will be dissolved.²⁸

²⁰ *Id.* at 11.

²¹ *Promotion Committee for the Privatization of the Four Highway-related Public Corporations*, PRIME MINISTER OF JAPAN AND HIS CABINET, http://www.kantei.go.jp/foreign/policy/road/index_e.html (last visited Jan. 21, 2014).

²² *Promotion Committee for the Privatization of the Four Highway-related Public Corporations*, Comments (summary) (Dec. 6, 2002), http://www.kantei.go.jp/foreign/policy/2002/021206iken_s_e.pdf (copy and paste URL into browser).

²³ Nobuhiro Yamagoshi, *Doro kankei yon kodan mineika no kensho* [Examination of Privatization of Four Public Corporations Relating to Roads], RIPPŌ TO CHŌSA No. 260, at 35, 37–38 (Oct. 2006), http://www.sangiin.go.jp/japanese/annai/chousa/rippou_chousa/backnumber/2006pdf/20061006035.pdf.

²⁴ *President's Message*, JEHDRA (Sept. 2013), <http://www.jehdra.go.jp/english/president.html>.

²⁵ *Dokuritsu gyōsei hōjin nihon kōsoku dōro hoyū-saimu hensai kikō hō* [Japan Expressways Holding and Debt Repayment Agency Act], Act No. 100 of 2004, *last amended by* Act No. 66 of 2006, art. 12.

²⁶ JOSÉ MANUEL VASSALLO, EXECUTIVE REPORT: ANALYSIS OF THE JAPANESE TOLL EXPRESSWAY SYSTEM IN THE FRAMEWORK OF THE CURRENT TREND OF THE TOLL ROAD BUSINESS IN THE WORLD 133 (Nov. 2008), <http://www.jehdra.go.jp/english/pdf/others/107.pdf>.

²⁷ *Id.*

²⁸ *Gyōmu no gaiyō* [Summary of Our Business], JEHDRA, <http://www.jehdra.go.jp/gyoumunogaiyou.html> (last visited Jan. 7, 2014).

2. Direct Construction by National Government

During the discussion of the privatization of public highway corporations, the Promotion Committee recommended that, “[t]o handle investments for construction that are unprofitable for new companies, the Government . . . establish a new system based on sharing of cost burden with central and local governments under the formula of joint implementation.”²⁹ The government decided that it would directly manage some highways that were difficult to make profitable, but nonetheless important. Such highways have been financed by national and local governments and are free of tolls.³⁰

B. National Highways with Access Control

National expressways are a critical part of Japan’s national road traffic network. On the other hand, national highways with access control facilitate the smooth flow of traffic, although some of them function almost the same as national expressways.³¹ Of the 14,000 km of arterial high-standard highways formulated in the Arterial High-standard Highway Network Plan in 1987, 2,480 km consist of access-controlled national highways,³² which are managed by the national government.³³

II. Funding

A. Funding System

JEHDRA borrows money from financial institutions and issues bonds upon the approval of the MLIT.³⁴ The government may guarantee bonds.³⁵ JEHDRA also issues Fiscal Investment and Loan Program (FILP) bonds.³⁶ When JEHDRA provides companies with interest-free loans, those loans are funded by government subsidies.³⁷

²⁹ Promotion Committee, *supra* note 22, at 2-3.

³⁰ MLIT, KŌSOKU JIDŌSHA KOKUDŌ NO HYŌKA KEKKA NI TSUITE [REGARDING EVALUATION RESULTS OF NATIONAL EXPRESSWAYS] 1, http://www.mlit.go.jp/kisha/kisha03/06/061128_2/02.pdf (last visited Jan. 17, 2014). National Highway Act and Okinawa Promotion Special Measures Act Amendment, Act No. 36 of 2003.

³¹ MLIT, MAINTENANCE STANDARDS OF GENERAL NATIONAL ROADS AND NATIONAL EXPRESSWAYS THAT THE NATIONAL GOVERNMENT MANAGES (DRAFT) 1, http://www.mlit.go.jp/road/ir/ir-council/pdf/iji1_1.pdf (in Japanese).

³² MLIT Presentation, *supra* note 4, at 4.

³³ Road Law, Act No. 180 of 1952, *amended by* Act No. 30 of 2013, art. 12.

³⁴ JEHDRA Act, Act No. 100 of 2004, art. 22, para. 1.

³⁵ *Id.* art. 23.

³⁶ The funds for FILP bonds are “procured through the government bond issuance supply resources to Fiscal Loans of the Fiscal Loan Fund and their principal and interest repayment is covered by returns from these loans, while ordinary government bonds supply resources to expenditures of the General Account and their repayment is covered by taxation etc.” *How Do FILP Bonds Differ from Government Bonds?*, MINISTRY OF FINANCE, http://www.mof.go.jp/english/filp/filp_report/zaito2010/zaito2010-4-04.html (last visited Jan. 13, 2014).

³⁷ JEHDRA Act, Act No. 100 of 2004, *last amended by* Act No. 66 of 2006, art. 12, paras. 4–6 & art. 25.

In the case of national expressways that are directly managed by the MLIT, the national government pays three-quarters of the construction costs, and relevant prefectures pay the remaining one-quarter. Maintenance costs are paid entirely by the national government.³⁸

In the case of national highways with access control, the national government pays two-thirds of the construction costs, and relevant prefectures pay the remaining one-third.³⁹ Again, the national government pays for all maintenance costs.⁴⁰

B. Tolls

The Japanese expressway system consists mostly of toll roads. The system was originally intended to become toll free as soon as the national expressway network was completed and construction debts repaid.⁴¹ However, this did not work as planned.

The highway companies pay JEHDRA the lease fees⁴² out of their income from tolls, excluding costs for expressway maintenance and management, and JEHDRA uses these funds to repay debts.⁴³

Tolls are expensive in Japan. “Japan’s tolls average ¥24.6 per km [about US\$0.38 per mile], compared with the equivalent of ¥10.8 to ¥13.45 per km in France and ¥7.01 in Italy,”⁴⁴ with the 315.4-km (196-mile) journey from Tokyo to Nagoya on the Tōmei Expressway costing 6,900 yen (about US\$69) in tolls for an ordinary car. Discounts are available at night and during holidays.⁴⁵ With a few exceptions, tolls on national expressways are based on distance traveled.

C. Earmarked (Special Purpose) Taxation

In order to develop the road network, large-scale and stable funding is required. The major source of funding for highway construction in Japan was previously the earmarked tax-revenue system, which appropriated gasoline and car-related taxes.⁴⁶ The government established a special fund for financing roads in 1953.⁴⁷ After that, fuel taxes and other vehicle-related taxes

³⁸ National Highway Act art. 20, para. 1.

³⁹ Road Law, Act No. 180 of 1952, *amended by* Act No. 30 of 2013, art. 50, para. 1.

⁴⁰ Road Law art. 49.

⁴¹ Mizutani & Uranishi, *supra* note 18, at 2.

⁴² JEHDRA Act, Act No. 100 of 2004, art. 16.

⁴³ *Id.* art. 13; *see also* VASSALLO, *supra* note 26, at 133.

⁴⁴ Kazuaki Nagata, *A Highway System that Ever Exacts Toll*, JAPAN TIMES (Dec. 16, 2008), <http://www.japantimes.co.jp/news/2008/12/16/news/a-highway-system-that-ever-exacts-toll/>. *See also* MLIT, Changes of Highway Pricing System in Other Countries, Hand-out at the 9th Meeting of Experts Committee on Highway System 3 (Aug. 22, 2011), http://www.mlit.go.jp/road/ir/ir-council/hw_arikata/pdf9/6.pdf (in Japanese).

⁴⁵ *Tsūkō ryōkin sisutemu [Toll System]*, CENTRAL NIPPON EXPRESSWAY COMPANY LIMITED, <http://www.c-nexco.co.jp/shintomei/images/toll/02.pdf> (in Japanese; last visited Jan 21, 2014).

⁴⁶ Nambu, *supra* note 15, at 6.

⁴⁷ Temporary Special Measures Act on Financial Source of Road Construction, Act No. 73 of 1953.

have been earmarked for road works. The gasoline tax was established in 1954 as an earmarked tax to be sent to the special fund.⁴⁸ The following earmarked taxes were then added to the system: a local gasoline tax in 1955,⁴⁹ a diesel fuel transaction tax in 1956,⁵⁰ a liquefied petroleum gas tax in 1966,⁵¹ an automobile acquisition tax in 1968,⁵² and a motor vehicle tonnage tax in 1971.⁵³ In 1958, the special account for road construction was established, replacing the special fund.⁵⁴

When a manufacturer of gasoline transfers gasoline from the manufacturing location, it must pay gasoline tax. A person who receives imported gasoline from a customs bonded area must also be required to pay gasoline tax.⁵⁵ The tax rate is 48,600 yen (about US\$486) per one kiloliter.⁵⁶ The local gasoline tax is imposed in a similar fashion. The tax rate is 5,200 yen (about US\$52) per kiloliter.⁵⁷ The diesel fuel transaction tax is imposed on consumers. Manufacturers, importers, or wholesale companies add a tax on the price and pay it to the local government.⁵⁸ The tax rate is 15,000 yen (about US\$150) per kiloliter.⁵⁹ The liquefied petroleum gas tax is imposed on gasoline station operators.⁶⁰ The tax rate is 17.5 yen (about US\$0.18) per 1 kilogram of liquefied petroleum gas.⁶¹ The gasoline tax and the liquefied petroleum gas tax are considered to fit the benefit principle because the amounts of the taxes are proportional to driving distances.⁶²

A prefectural automobile acquisition tax is paid by persons when they acquire a car.⁶³ The tax rate is 5% of the purchase price for nonbusiness use, and 3% for business use.⁶⁴ When the

⁴⁸ *Id.* art. 3.

⁴⁹ Local Gasoline Tax Act, Act No. 104 of 1955, *amended by* Act No. 114 of 2011.

⁵⁰ Local Tax Act Amendment, Act No. 81 of 1956, art. 700.

⁵¹ Liquefied Petroleum Gas Tax Act, Act No. 156 of 1965.

⁵² Local Tax Act Amendment, Act No. 4 of 1968.

⁵³ Motor Vehicle Tonnage Tax Act, Act No. 89 of 1971.

⁵⁴ Dōro seibi tokubetsu kaikei hō [Act on Special Account for Road Construction], Act No. 35 of 1958.

⁵⁵ Gasoline Tax Act, Act No. 55 of 1957, art. 3.

⁵⁶ *Id.* art. 9; Tax Special Measures Act, Act No. 26 of 1957, *amended by* Act No. 45 of 2013 art. 88-8.

⁵⁷ Local Gasoline Tax Act, Act No. 104 of 1955, *amended by* Act No. 114 of 2011, art. 4; Tax Special Measures Act art. 88-8.

⁵⁸ Local Tax Act, Act No. 226 of 1950, *amended by* Act No. 63 of 2013, art. 144-2; *see also Keiyū Torihiki Zei [Diesel Fuel Transaction Tax]*, BUREAU OF TAXATION, TOKYO METROPOLITAN GOVERNMENT, http://www.tax.metro.tokyo.jp/shitsumon/tozei/index_n.htm (last visited Jan. 14, 2014).

⁵⁹ Local Tax Act art. 144-10.

⁶⁰ Liquefied Petroleum Gas Tax Act art. 4.

⁶¹ *Id.* art. 10.

⁶² Nambu, *supra* note 15, at 5.

⁶³ Local Tax Act art. 118.

⁶⁴ *Id.* art. 119; Supplemental Provisions art. 12-2-3.

consumption tax is raised from 5% to 8% in April 2014, the tax rate for qualified fuel-efficient cars will be reduced from 5% to 3% for automobiles used for nonbusiness purposes and from 3% to 2% for automobiles used for business.⁶⁵ When the consumption tax rate is raised from 8% to 10% (planned in October 2015), this tax will be abolished.⁶⁶ A national motor vehicle tonnage tax is paid by vehicle owners at the time of registration and mandatory inspections.⁶⁷ In the case of a new passenger car for nonbusiness use, the tax amount is 12,300 yen (about US\$123) per 500 kilograms (1,102 pounds). For example, the weight of a Toyota Corolla is about 1,400 kilograms.⁶⁸ Therefore, a motor vehicle tonnage tax of 36,900 yen (about US\$369) is imposed when the buyer of the new car registers it. In the case of a Lexus LS, which weighs around 2,000 kilograms,⁶⁹ the buyer would pay 49,200 yen (about US\$492) or 61,500 yen (about US\$615), depending on the model. After three years from the date a new car is registered, a vehicle inspection is mandated every two years. Up to the fifth inspection, the owner of a car must pay 8,200 yen (about US\$82) per 500 kilograms of the vehicle weight. The tax rate is higher for older cars. The tax is reduced if a car meets ecofriendly standards.⁷⁰

The Japanese government began reviewing this special-purpose tax system in 2005. At the end of 2008, the government decided to abolish the special purpose tax system, and all tax revenues listed above have now been incorporated into the general account as of fiscal year 2009.⁷¹

⁶⁵ LIBERAL DEMOCRATIC PARTY & KOMEI PARTY, SUMMARY OF TAX REFORM IN FISCAL YEAR 2014 at 97 (Dec. 12, 2013), http://jimin.ncss.nifty.com/pdf/zeisei2013/pdf128_1.pdf (in Japanese).

⁶⁶ *Id.* at 4.

⁶⁷ Motor Vehicle Tonnage Tax Act, Act No. 89 of 1971, *amended by* Act No. 53 of 2013, art. 4.

⁶⁸ *Corolla Fielder Specification*, TOYOTA, http://toyota.jp/corollafelder/003_p_003/spec/spec/gasoline/2wd/ (last visited Jan. 16, 2014).

⁶⁹ *Specification LS460/LS460L*, LEXUS, <http://lexus.jp/models/ls/specifications/specifications/ls460/index.html> (last visited Jan. 16, 2014).

⁷⁰ Motor Vehicle Tonnage Act art. 7; Tax Special Measures Act, Act No. 26 of 1957, *amended by* Act No. 45 of 2013 arts. 90-11, 90-11-2 & 90-12. *See also* *Jidosha juryo zei* [Motor Vehicle Tonnage Tax], *Shaken to kuruma no tetuduki annai senta* [Car Inspection and Other Car Procedures Guidance Center], DISTRICT TRANSPORT SUB-BUREAU, <http://annai-center.com/documents/juryozei.php> (last visited Jan. 16, 2014).

⁷¹ *Doro tokutei zaigen no ippan zaigenka ni tsuite* [Regarding Making Road-Specific Revenue Source Into General Revenue Source], MLIT, <http://www.mlit.go.jp/road/ir/ir-funds/minaoshi.html> (last visited Jan. 16, 2014).

Mexico

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I. Introduction

The highway system of Mexico is made up of federal highways, state highways, and rural roads. Federal highways are those that connect with roads from foreign countries; link two or more states of the Federation; and are wholly or mostly built by the Federation with federal funds or through federal grants by individuals, states, or municipalities.¹ Federal highways are built and maintained by the federal government through the Secretariat of Communications and Transportation.²

II. Funding for National Road Infrastructure

The Federal Constitution mandates that the states may not in any case “levy duties on persons or goods transiting their territory.”³ In compliance with this mandate, Mexico has networks of federal and state highways that have free access.⁴ The federal government finances the construction and maintenance of federal highways with revenues from the annual federal budget.⁵ Mexico also has networks of federal and state highways that charge tolls.⁶

Mexico does not tax road usage by vehicle miles traveled (VMT). The Mexican government sets the retail prices of gasoline and diesel fuel monthly. Gasoline and diesel fuel have been subsidized since 2006, whereas previously they were consistently taxed. However, vulnerable groups in society, such as the poor, have generally not benefited from the subsidy because they often lack the income to purchase cars or other goods that use fuel; consequently, since 2010, the government has instituted small, monthly retail-price increases with the aim of eventually

¹ Ley de Caminos, Puentes y Autotransporte Federal [Law of Roads, Bridges and Federal Motor Transportation], art. 2, DIARIO OFICIAL [D.O.], Dec. 22, 1993, *as amended*, <http://www.diputados.gob.mx/LeyesBiblio/pdf/27.pdf>.

² *Id.* art. 5.

³ CONSTITUCIÓN POLÍTICA DE LOS ESTADOS UNIDOS MEXICANOS [POLITICAL CONSTITUTION OF THE UNITED MEXICAN STATES], *as amended*, art. 117(IV), D.O., Feb. 5, 1917, <http://www.diputados.gob.mx/LeyesBiblio/pdf/1.pdf> (translated by the author).

⁴ César Alberto Cortés Prado, Metodología Para la Selección de Alternativas de Conservación de Carreteras, Usando el Modelo HDM-4 (2005) (unpublished civil engineering degree thesis, Universidad de las Américas, Puebla), available at http://catarina.udlap.mx/u_dl_a/tales/documentos/lic/cortes_p_ca/.

⁵ Presupuesto de Egresos de la Federación para el Ejercicio Fiscal 2014 [Federal Budget Expenditures for Fiscal 2014], D.O., Dec. 3, 2013, http://www.diputados.gob.mx/LeyesBiblio/pdf/PEF_2014.pdf.

⁶ Cortés Prado, *supra* note 4.

phasing out the subsidy. By the end of 2013, these increases had brought Mexican fuel prices nearly on a par with international fuel costs.⁷

The Federal Revenue Law of 2014 mandates that the Special Tax on Production and Services (Impuesto Especial Sobre Producción y Servicios, IEPS) apply to gasoline and diesel fuel,⁸ with the aim of reducing the growth rate of greenhouse gas emissions.⁹

III. New Initiatives on Road Infrastructure

Although no official discussion on alternative means of highway funding was located, a recent publication by a Mexican civil engineer on the preservation of federal toll-free highways recommends that funds for highway maintenance be generated through a tax on gasoline.¹⁰

⁷ Michael D. Plante & Amy Jordan, *Getting Prices Right: Addressing Mexico's History of Fuel Subsidies*, in FEDERAL RESERVE BANK OF DALLAS, *SOUTHWEST ECONOMY: THIRD QUARTER 2013* at 10, 11 & 13, available at <http://www.dallasfed.org/assets/documents/research/swe/2013/swe1303d.pdf>.

⁸ Decreto por el que se Expide la Ley de Ingresos para el Ejercicio Fiscal de 2014, y se Reforma el Primer Párrafo del Artículo 2 de la Ley de Ingresos de la Federación para el Ejercicio Fiscal de 2013 [Decree on the Revenue Act for Fiscal Year 2014, and to Amend the First Paragraph of Article 2 of the Federal Revenue Act for Fiscal Year 2013], art. 1, D.O., Nov. 20, 2013.

⁹ *El 2014 Inicia con Nuevos Impuestos: Gasolina, Pan, Comida, Chatarra y Para Mascotas ya Tienen Carga Fiscal*, SINEMBARGO.MX (Jan. 1, 2014), <http://www.sinembargo.mx/01-01-2014/859905>.

¹⁰ ING. ARTURO M. MONFORTE OCAMPO, *CONSERVACIÓN DE CARRETERAS FEDERALES LIBRES DE PEAJE 10–11* (Academia de Ingeniería, A.C. 2008), <http://www.ai.org.mx/ai/> (click on “Eventos Y Publicaciones,” then “Coloquios,” then “VI,” and then, under “Ing. Arturo Manuel Monforte Ocampo,” click on “Descargar Trabajo”).

Netherlands

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SUMMARY The Netherlands funds state highways through a national Infrastructure Fund, which is fed by express lane fees and regular tolls. Provinces, municipalities, and district water boards may also set tolls on motor vehicles passing through certain tollgates on state-managed roads. Additionally, the government applies one-time and recurrent taxes on registered motor vehicles, and levies fuel taxes and a general VAT of 21%. Whether or not these taxes are applied to road construction and maintenance is unclear. In 2009, the Dutch government considered charging a per-kilometer fee for motor vehicle use and abolishing the motor vehicle tax, but that scheme was never implemented. In recent years, the use of public-private partnerships to fund road construction in the Netherlands has enjoyed a revival.

I. Introduction

According to European statistical sources, the highest motorway density in Europe is found in the Netherlands (78 km per 1000 km² on average in 2009), Luxembourg (59), and Belgium (58). As might be expected, the highway network is especially concentrated in the urbanized areas of those regions.¹ In the highly developed highway system of the Netherlands, the costs of infrastructure investment are high “despite the favourably flat landscape” because they “are inflated by high population density, legal and regulatory aspects (e.g. complicated and lengthy land-freeing procedures, environmental regulation), a high number of crossings with existing infrastructure and waterways and problems associated with building on wet land, particularly reclaimed from the sea.”² According to a 2007 study, on average it takes over twenty years from the proposal of a road to its construction, which may reduce the incentive to handle congestion by infrastructure-based solutions.³

The main motorways are part of the Dutch national road system (Autosnelwegen).⁴ This system is administered by the Rijkswaterstaat (Directorate-General for Public Works and Water

* This report was prepared chiefly on the basis of materials available in English in the Law Library collection and online. At present the Law Library does not have staff with Dutch language skills.

¹ *Inland Transport Infrastructure at Regional Level*, EUROPEAN COMMISSION/EUROSTAT (Dec. 2010), http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Inland_transport_infrastructure_at_regional_level.

² Tomasz Kozluk, *How the Transport System Can Contribute to Better Economic and Environmental Outcomes in the Netherlands* 12 (OECD Economics Department, Working Paper No. 804, Oct. 6, 2010), <http://dx.doi.org/10.1787/5km68g0zh71s-en> (click on “PDF”).

³ *Id.*, citing to L. Molenkamp, PowerPoint Presentation, *Traffic Congestion – The Netherlands’ Approach*, Ministry of Transport, Public Works and Water Management, Rijkswaterstaat (London, July 2007).

⁴ *Welkom op Autosnelwegen.nl* [*Welcome to Autosnelwegen.nl*], AUTOSNELWEGEN.NL, <http://www.autosnelwegen.nl>. This website “is dedicated to the history of Dutch national roads system in general, and motorways in particular” and is not part of the Rijkswaterstaat, which administers the highway network. *Id.* For a map of the

Management).⁵ The Rijkswaterstaat, which is under the Ministry of Infrastructure and the Environment, “is responsible for the design, construction, management and maintenance of the main infrastructure facilities in the Netherlands,” including the main road network, waterway network, and water systems.⁶ Roadways are managed by authorities at different levels, including the national, provincial, Water Board (*Waterschappen*), and municipal levels, as well as by ports, individual homeowners, etc.⁷

II. Funding for National Road Infrastructure

A. Constitutional Provisions

The Constitution of the Netherlands provides in general that rules on the management of the state’s finances⁸ and the levying of taxes imposed by the state⁹ are to be prescribed by acts of Parliament. Other acts of Parliament are to provide for estimates of the state’s revenues and expenditures,¹⁰ regulate taxes that may be levied by the administrative organs of provinces and municipalities, and regulate the financial relationships of those organs with the central government.¹¹ The regulation and administration of the internal affairs of provinces and municipalities are delegated to their administrative organs, which may be required by or pursuant to an act of Parliament to handle such matters.¹²

B. Road Fees/Tolls

According to the Dutch Law on Accessibility and Mobility, the net proceeds of “mobility rates” (*mobilitiestarieven*) will be donated to an Infrastructure Fund.¹³ Mobility rates are fees payable at the time a motor vehicle with domestic or foreign registration passes through a designated fee

system, see Rijkswaterstaat, http://www.rijkswaterstaat.nl/en/images/main-highway-network_tcm224-340839.jpg (last visited Feb. 20, 2014).

⁵ *Welkom op Autosnelwegen.nl*, *supra* note 4.

⁶ *About Us*, RIJKSWATERSTAAT, http://www.rijkswaterstaat.nl/en/about_us/ (last visited Feb. 20, 2014).

⁷ *Wegbeheer in Nederland [Road Management in the Netherlands]*, RIJKSWATERSTAAT, http://www.rijkswaterstaat.nl/wegen/feiten_en_cijfers/wegbeheer/ (last visited Feb. 27, 2014).

⁸ GRONDWET VOOR HET KONINKRIJK DER NEDERLANDEN VAN 24 AUGUSTUS 1815 [CONSTITUTION OF THE KINGDOM OF THE NETHERLANDS OF 24 AUGUST 1815] (last amended June 27, 2008, in force on July 15, 2008), available on the official government website OVERHEID.NL, at http://wetten.overheid.nl/BWBR0001840/geldigheidsdatum_05-02-2014; for an English translation, see THE CONSTITUTION OF THE KINGDOM OF THE NETHERLANDS 2008 art. 105(4), <http://www.rijksoverheid.nl/documenten-en-publicaties/brochures/2008/10/20/the-constitution-of-the-kingdom-of-the-netherlands-2008.html>.

⁹ *Id.* art. 104.

¹⁰ *Id.* art. 105.

¹¹ *Id.* art. 132(6).

¹² *Id.* art. 124(1 & 2).

¹³ *Wet bereikbaarheid en mobiliteit [Law on Accessibility and Mobility]* (July 4, 2002, as last amended effective Jan. 1, 2013), art. 10 ¶ 1, http://wetten.overheid.nl/BWBR0013854/geldigheidsdatum_21-02-2014.

payment gateway,¹⁴ at which time the fee is levied on the vehicle owner.¹⁵ Mobility rates are governed by article 15, paragraph 1, and article 21, paragraph 1, of the Law. These paragraphs state, respectively, that a vehicle's express lane fee will be determined by the relevant Ministry and the Minister of Finance to ensure good flow in designated express lanes, and that a "toll" refers to the mobility rate levied by the state on a motor vehicle passing through a designated fee-payment gate on a state-managed road.¹⁶ A province, municipality, or a district water board may likewise set a mobility rate, or "toll," on a motor vehicle passing through a designated gateway on a road managed by the state.¹⁷ For the purposes of the laws on provincial taxation, municipal taxation, and district water board taxation, respectively, this rate is deemed to be a provincial, municipal, or water board tax.¹⁸ Thus, the Netherlands funds road infrastructure not only at the national level but at the local level as well.

The Infrastructure Fund is established under the Infrastructure Fund Act as a fund for the financing and defrayment of the costs of the construction, management, and maintenance and operation of infrastructure that is or will be managed by the government, and for the financing and defrayment of the costs for related basic information.¹⁹ The Infrastructure Fund also finances and defrays the costs of the construction, management, and maintenance and operation of infrastructure that is not or will not be managed by the government.²⁰

C. Motor Vehicle Taxes

Motor vehicle taxes are also applied in the Netherlands. Beginning in 2010, the system of using net list-price as the basis for the vehicle sales tax was gradually phased out for passenger cars, and replaced by the vehicle's "absolute" CO₂ emission level as the basis, so that the tax rate increases with the emission level. This has resulted in cheaper rates for fuel-efficient cars and a price hike for those that waste fuel.²¹

Thus, anyone in the country who registers for the first time a car, a vehicle that transports light goods, or a motorcycle must pay a one-time tax called the tax on passenger cars and motorcycles (*belasting op personenauto's en motorrijwielen*, BPM), which is levied on the basis of a car's

¹⁴ *Id.* art. 4 ¶ 1.

¹⁵ *Id.* art. 4 ¶ 2.

¹⁶ *Id.* arts. 15 ¶ 1 & 21 ¶ 1.

¹⁷ *Id.* art. 21 ¶ 2.

¹⁸ *Id.* art. 21 ¶ 3. This provision refers to the respective sections of the tax laws concerned, i.e., ch. XV of the Provinciewet, §§ 1 & 4 of ch. XV of the Gemeentewet, and chs. XVI & XVIII of the Waterschapswet.

¹⁹ Wet Infrastructuurfonds [Infrastructure Fund Act] (May 27, 1993, as last amended effective Jan. 1, 2012), art. 2 ¶ 2a, http://wetten.overheid.nl/BWBR0006001/geldigheidsdatum_21-02-2014.

²⁰ *Id.* art. 2 ¶ 2b.

²¹ Jordy van Meerkerk, Gusta Renes & Geert Ridder, *Greening the Dutch Car Fleet: The Role of Differentiated Sales Taxes* (PBL Netherlands Environmental Assessment Agency, Working Paper No. 18, Jan. 2014), <http://www.pbl.nl/en/publications/greening-the-dutch-car-fleet-the-role-of-differentiated-sales-taxes> (click on "download the working paper"). The authors provide a table of selected pretax prices (net list-price), the value, and the rate of the vehicle sales tax in the Netherlands for 2005 (before the new system began) and 2010.

CO₂ emissions and the van's or motorcycle's list price.²² The BPM rates are set forth in section 2 (*Tarief*), chapter 3, of the Passenger Car and Motorcycles Tax Act 1992.²³

The person in whose name a car, van, motorcycle, bus, or vehicle for heavy goods is registered must pay a motor vehicle tax (*motorrijtuigenbelasting*, MRB). This tax, which is to be paid every three months, is based on the registration of the vehicle, not on road use.²⁴ There is no BPM or MRB payable on electric cars.²⁵ Chapter 4 of the Motor Vehicle Tax Act 1994 covers the tax rates applicable to various vehicles.²⁶

Transport companies must pay a heavy vehicle tax (*belasting zware motorrijtuigen*, BZM, or a Eurovignette), a road-use charge for vehicles that carry heavy loads. Evidence of payment of the tax is valid in the Netherlands, Belgium, Denmark, Luxembourg, and Sweden. For Dutch vehicles the tax is in addition to the MRB.²⁷

D. Fuel Tax

The Netherlands applies an excise duty of about €0.846 per liter (about \$US1.16) for leaded gasoline and €0.759 per liter (about \$US1.04) for unleaded.²⁸ In addition, there is a value-added tax in the Netherlands of 21%.²⁹ It is unclear if these taxes are used to fund highway construction, maintenance, and management.

²² *Vehicle Taxes*, GOVERNMENT OF THE NETHERLANDS, <http://government.nl/issues/taxation/vehicle-taxes> (last visited Feb. 24, 2014); Wet op de belasting op personenauto's en motorrijwielen 1992 [Passenger Car and Motorcycles Tax Act 1992] (Dec. 24, 1992, as last amended effective Jan. 1, 2014), http://wetten.overheid.nl/BWBR0005806/geldigheidsdatum_24-02-2014.

²³ Passenger Car and Motorcycles Tax Act 1992 arts. 9–12.

²⁴ *VEHICLE TAXES*, *SUPRA* NOTE 22; WET OP DE MOTORRIJTUIGENBELASTING 1994 [MOTOR VEHICLE TAX ACT 1994] (DEC. 16, 1993, AS LAST AMENDED EFFECTIVE JAN. 1, 2014), [HTTP://WETTEN.OVERHEID.NL/BWBR0006324/GELDIGHEIDSDATUM_24-02-2014](http://wetten.overheid.nl/BWBR0006324/geldigheidsdatum_24-02-2014).

²⁵ *Vehicle Taxes*, *supra* note 22.

²⁶ Motor Vehicle Tax Act 1994 arts. 22–32.

²⁷ *Id.* See also *Taxation of Heavy Goods Vehicles: Eurovignette Directive*, EUROPA, http://europa.eu/legislation_summaries/internal_market/single_market_for_goods/motor_vehicles/interactions_industry_policies/124045b_en.htm (last updated Oct. 13, 2008).

²⁸ Wet op de accijns [Law on Excise Duty] (Oct. 31, 1991, as last amended effective Jan. 1, 2014), arts. 26–27, http://wetten.overheid.nl/BWBR0005251/geldigheidsdatum_04-01-2014.

²⁹ *Netherlands - VAT Rates Table* (effective rates Mar. 1, 2013) (last reviewed Sept. 1, 2013), International Bureau of Fiscal Documentation online subscription database, http://online.ibfd.org/kbase/#topic=doc&url=%252Fcollections%252Fvatrates%252Fhtml%252Fvatrates_nl.html&q=fuel+tax+fuels+taxes&WT.z_nav=outline&colid=4929&hash=vatrates_nl.

III. New Initiatives on Road Infrastructure

In 2009 the Dutch government considered charging a per-kilometer fee for motor vehicle use and abolishing the motor vehicle tax. That scheme was never instituted, however.³⁰ The Law on Accessibility and Mobility, while not adopting the road-pricing scheme, was created on the basis of the repealed Road Pricing Act and a package of related measures aimed at improving access to major economic centers in the Netherlands.³¹

The use of public-private partnerships (PPPs) in the Netherlands has revived in recent years and been applied to road construction.

The Netherlands was one of the first European countries to explore the benefits of PPP. However, after a promising start the Dutch PPP market did not really live up to the expectations. In recent years, however, the Dutch PPP market has been gradually picking up as a result of both the financial crisis [of 2008] . . . as well as the acceptance by many that privately funded projects are beneficial to both public as well as private market parties.³²

For example, in late August 2012, government officials took “a different approach to helping pension funds meet their goals” by investment in infrastructure projects; specifically, the Ministry of Infrastructure and Environment chose a PPP for a pilot program on expansion and maintenance of highway N33 (a connecting road) for a twenty-year period.³³ However, the government subsequently announced that this would be the only project of its kind.³⁴ In February 2013, the tender process was completed for a PPP project for the “design, build [sic],

³⁰ See, e.g., Kozluk, *supra* note 2; Ministerie van Verkeer en Waterstaat [Ministry of Transport, Public Works and Water Management], PowerPoint Presentation, *Road Pricing in the Netherlands: Overview* (Jan. 13, 2010), <http://www.internationaltransportforum.org/jtrc/RoundTables/RTfeb10vanWortel.pdf>; MINISTER OF TRANSPORT, PUBLIC WORKS AND WATER MANAGEMENT, RULES FOR CHARGING A PAY-BY-USE PRICE FOR DRIVING WITH A MOTOR VEHICLE [DUTCH ROAD PRICING ACT] (undated), http://i95coalition.org/i95/Portals/0/Public_Files/pm/reports/Netherlands%20Road%20Pricing%20Study.pdf.

³¹ The package of measures comprised the Bereikbaarheidsoffensief Randstad [Accessibility Offensive Randstad], the Randstad being a conurbation of Amsterdam, Rotterdam, The Hague, and Utrecht and their surrounding areas. *OECD Territorial Reviews: Randstad Holland, Netherlands*, OECD), <http://www.oecd.org/netherlands/oecd/territorialreviewsrandstadhollandnetherlands.htm> (last visited Feb. 28, 2014).

³² Eduard Scheenstra, *The Netherlands, in PPP IN EUROPE* 81 (Aug. 2010), http://www.cmslegal.cn/Hubbard.File/System/files/Publication/ed219c67-c7b1-40c6-a54d-3494ef81e6c8/Presentation/PublicationAttachment/33ec4891-c549-49f4-b161-370b851fd78/CMS_PPPinEurope_Guide082010.pdf.

³³ Thao Hua, *British, Dutch Forge Path for Infrastructure Investing: Government-Backed Initiatives Ease Way for Pension Funds to Invest in Asset Class*, PENSIONS & INVESTMENTS (Sept. 17, 2012), <http://www.pionline.com/article/20120917/PRINT/309179984/british-dutch-forge-paths-for-infrastructure-investing>.

³⁴ MARK COBLEY, *DUTCH FUNDS DISAPPOINTED BY GOVERNMENT'S INFRASTRUCTURE PULLOUT* (JUNE 12, 2013), [HTTP://WWW.EFINANCIALNEWS.COM/STORY/2013-06-12/DUTCH-FUNDS-UNPLEASANTLY-SURPRISED-GOVERNMENT-INFRASTRUCTURE](http://www.efinancialnews.com/story/2013-06-12/dutch-funds-unpleasantly-surprised-government-infrastructure).

financing and maintenance of the extension of the, A1/A6 Diemen-Almere Havendreef” highway” (“A” roads are major thoroughfares).³⁵

Another aspect of the roadway infrastructure in the Netherlands is the Intelligent Transport Systems (ITS) initiative. According to a 2012 report published by the Ministry of Infrastructure and the Environment, in conformity with the European Union’s ITS Directive (2010/40/EU),³⁶

[t]he Netherlands has invested many billions (in hardware, software, people and expertise) in order to enable the current range of ITS applications. . . . Many millions are also spent each year on operations, management, maintenance and upkeep. For example, Rijkswaterstaat spends around €200 million [about US\$273,648,000] a year on (dynamic) traffic management on the primary road network.³⁷

The report noted that in future the country’s “Better Utilisation Programme” would invest about €170 million [about US\$232,601,000] in regional-level ITS applications and about €50 million [about US\$68,412,000] would be “available for innovative and effective ITS applications at a national level.”³⁸ The report stated, however, that the need to cut costs of road construction, management, and maintenance was resulting in cost cutting for the roadside systems as well, especially ones on the primary road network that provide information to road users.³⁹

³⁵ *Linklaters Advises on Major Dutch Roads Project - A1/A6*, LINKLATERS (Feb. 17, 2013), <http://www.linklaters.com/News/LatestDeals/2013/Pages/Linklaters-advises-major-Dutch-roads-project-A1A6.aspx>.

³⁶ Directive 2010/40/EU of the European Parliament and of the Council of 7 July 2010 on the Framework for the Deployment of Intelligent Transport Systems in the Field of Road Transport and for Interfaces with Other Modes of Transport, 2010 O.J. (L 207/1), <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:207:0001:0013:EN:PDF>.

³⁷ MINISTRY OF INFRASTRUCTURE AND THE ENVIRONMENT, *ITS-PLAN THE NETHERLANDS: 2013–2017* 16 (2012), http://ec.europa.eu/transport/themes/its/road/action_plan/doc/2012-its-plan-the-netherlands-2013-2017.pdf.

³⁸ *Id.*

³⁹ *Id.*

South Africa

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SUMMARY The South African National Roads Agency SOC Limited (SANRAL), an independent statutory company whose sole shareholder and owner is the South African government, is in charge of all matters affecting the country's national road network. These include the financing, management, control, planning, development, maintenance, and rehabilitation of national roads.

Over 80% of South Africa's national roads are nontoll roads funded largely through government appropriations. The rest are toll roads, over 10% of which are under the direct management of SANRAL, and funded in large part through a mix of toll revenues and capital market borrowings. The latter are generated by auctioning government guaranteed and nonguaranteed bonds. SANRAL has also made limited use of funding for its toll-road projects from additional sources, including direct foreign investment and loans backed by export credit agencies. The remaining toll roads are funded through thirty-year concessions to private investors, who build, manage, and maintain the toll roads for the term of their contract.

I. Introduction

The current South African Constitution established a three-tiered system of government: national, provincial, and local.¹ The national and provincial governments enjoy concurrent legislative jurisdiction over matters relating to public transport and the regulation of road traffic.² Provincial governments enjoy exclusive legislative jurisdiction over matters affecting provincial roads and traffic.³ However, in special circumstances, the national government may legislate on matters exclusively reserved for provincial governments, including those affecting provincial roads and traffic.⁴ As a result, there are a number of national and provincial laws regulating roads and road transport in South Africa.⁵

¹ S. AFR. CONST. § 40(1), 1996, <http://www.info.gov.za/documents/constitution/1996/index.htm>.

² *Id.* sched. 4.

³ *Id.* sched. 5.

⁴ *Id.* § 44(1). Pursuant to Section 44 (2), the national government legislates on such matters when it is necessary

- a. to maintain national security;
- b. to maintain economic unity;
- c. to maintain essential national standards;
- d. to establish minimum standards required for the rendering of services; or
- e. to prevent unreasonable action taken by a province which is prejudicial to the interests of another province or to the country as a whole.

⁵ Marvyn Dendy, *Roads and Road Transport*, in 23 THE LAWS OF SOUTH AFRICA (W.A. Joubert et al. eds., 2d ed. 2009).

This report briefly describes the legal framework for funding national roads in South Africa. Specifically, it discusses the functions and activities of the South African National Roads Agency Limited (SANRAL), an independent, wholly state-owned statutory company responsible for developing, maintaining, and managing South Africa's national road network, in accordance with its governing legislation, the South African National Roads Agency Limited and National Roads Act.⁶

II. National Roads and SANRAL

A national road is any road or route declared as such; it includes any toll road, interprovincial bridge, and interstate bridge used in conjunction with a national road.⁷ The process of having a particular road declared a national road may involve the Minister of Transportation, SANRAL, provincial premiers, and the Constitutional Court. The Minister of Transportation may declare as a national road “any existing road, or any route of which the boundaries have been fixed by survey,” and may amend or reverse such declaration.⁸ However, the Minister can only do so on the recommendation of SANRAL.⁹ In addition, if the road in question is an existing road, the Minister needs to reach into an agreement with the premier of each province in which the road is situated; however, if it is a new road the Minister can declare it a national road upon consultation with the premiers of the provinces that will be affected.¹⁰ If, in the process of having an existing road declared a national road, the Minister and a premier of an affected province cannot reach an agreement, the matter is referred to the Constitutional Court.¹¹

SANRAL is in charge of matters affecting every aspect of South Africa's national road system.¹² Incorporated in 1998, SANRAL is an independent statutory company registered in accordance with South Africa's Companies Act, with the South African government as its sole shareholder and owner.¹³ It is governed by a board of eight members, most of whom are appointed by the Minister of Transportation.¹⁴ Its main functions include all strategic planning concerning South Africa's national roads; planning, designing, constructing, operating, managing, controlling, maintaining, and rehabilitating all national roads; and financing all these activities.¹⁵

In addition to its main functions, SANRAL is afforded various additional powers by law. For instance, in addition to its duties regarding national roads, at the request of a municipality or a

⁶ South African National Roads Agency Limited and National Roads Act No. 7 of 1998, 31(1) BUTTERWORTHS STATUTES OF THE REPUBLIC OF SOUTH AFRICA (*rev'd.* through 2012).

⁷ *Id.* § 1.

⁸ *Id.* § 40.

⁹ *Id.*

¹⁰ *Id.*

¹¹ *Id.*

¹² *Id.* § 2.

¹³ *Id.* § 3.

¹⁴ *Id.* § 12; *Overview*, SANRAL, http://www.nra.co.za/live/content.php?Item_ID=151 (last visited Jan. 22, 2014).

¹⁵ South African National Roads Agency Limited and National Roads Act § 25.

provincial government and with the approval of the Minister of Transportation, it may perform any of its main functions on roads under the jurisdiction of a municipality or a province on behalf of any such authority.¹⁶ It may charge a fee for any service it provides.¹⁷ It also has the authority to contract out any of its functions to a private person or institution.¹⁸ In addition, with the Minister's approval, it may take part "in ventures, involving national or other roads, jointly with the road authorities, or (as the case may be) any private persons or bodies, who have or will have ownership or control of the other roads."¹⁹ Furthermore, it has the authority to operate any national road as a toll road.²⁰

III. Funding of National Roads

The South African National Roads Agency and National Roads Act envisages various sources of funding for SANRAL, including

- capital investments or loans made by the state;
- revenue generated from fuel taxes in accordance with any applicable law;²¹
- loans;
- interest from cash balances or investments;
- revenue generated from participation in joint ventures;
- revenue generated from the sale of assets;
- revenue generated from tolls;
- revenue generated from collecting fines;
- revenue generated from developing, leasing, or managing assets;
- revenue generated from any fees collected;
- parliamentary appropriations; and
- revenue generated from grants, donations, or inheritances.²²

¹⁶ *Id.* § 26.

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *Id.*

²¹ A fuel levy is imposed under the Customs and Excise Act No. 91 of 1964, § 47, 10 BUTTERWORTHS STATUTES OF THE REPUBLIC OF SOUTH AFRICA (*rev'd.* through 2012). The levy goes into the country's National Revenue Fund (NRF) and it does not appear to be earmarked specifically for infrastructure spending. The NRF is a fund "into which all money received by the national government must be paid, except money reasonably excluded by an act of Parliament." (S. AFR. CONST. § 213.) There are two ways of withdrawing money from the NRF: through parliamentary appropriations; or as a direct charge against the [NRF] if mandated by the Constitution or an Act of Parliament. (*Id.*)

²² South African National Roads Agency Limited and National Roads Act § 34.

Currently, SANRAL operates two separate business areas (toll and nontoll operations). The reports on and budgets for each are kept strictly separate for purposes of management and cash flow obligations; “no cross-subsidization between the two are permitted.”²³

A. Nontoll Roads

Most of South Africa’s national road network falls into the category of nontoll roads and is largely funded through appropriations. At present, SANRAL manages a road network of 19,705 kilometers (about 12,244 miles), including both toll and nontoll roads throughout South Africa.²⁴ Most of these (81%) consist of nontoll roads.²⁵ The vast majority of the funding for nontoll roads comes from tax-based revenues generated by the national government and disbursed through appropriations; in 2012/2013, this amounted to ZAR9.7 billion (about US\$875 million).²⁶ A small portion of the funding is generated from other income; in the same year this amounted to ZAR355 million (about US\$32 million).²⁷ Of the total nontoll budget for the year, ZAR466 million (about US\$42 million) was allocated for routine road maintenance contracts.²⁸

B. Toll Roads

Toll roads are a relatively recent phenomenon in South Africa. Government appropriations were the only source of funding for roads in the country until 1995, when toll roads were introduced to compensate for inadequate government funding for the development, management, and maintenance of national roads.²⁹ Currently, 19% of South Africa’s national road network consists of toll roads.³⁰ The total budget for toll-road development and management for 2012/2013 was ZAR4.7 billion (about US\$424 million), including ZAR293 million (about US\$26 million) allocated for full-time routine road maintenance.³¹

SANRAL is authorized by law to determine which national roads should be turned into toll roads. SANRAL may, with the approval of the Minister of Finance, declare “any specified national road or any specified portion thereof, including any bridge or tunnel on a national road,

²³ *Id.* § 26; *Finance*, SANRAL, http://www.nra.co.za/live/content.php?Category_ID=29 (last visited Jan. 22, 2014).

²⁴ SANRAL, ANNUAL REPORT 2013, at 26 (undated), http://sanral.ensight-cdn.com/content/Sanral_Annual_Report_13_LRES.pdf.

²⁵ SANRAL, STRATEGIC PLAN 2012/2013–2016/2017, at 7 (undated), http://www.nra.co.za/live/click.php?u=//sanral.ensight-cdn.com/content/Strategic_Plan_2012_13_2016_17%7E1.pdf&o=Item%2B4582&v=1ba306.

²⁶ SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LTD. OPERATING SUMMARY (NON TOLL) BUDGET (undated), http://sanral.ensight-cdn.com/content/Non_Toll_Budget_Summary_Page_2012_2013~1.pdf.

²⁷ *Id.*

²⁸ SANRAL, STRATEGIC PLAN, *supra* note 25, at 7.

²⁹ STRATEGIC VISION OF THE SOUTH AFRICAN NATIONAL ROADS AGENCY FOR THE YEAR 2010, at 25 (2004), <http://www.nra.co.za/content/horizon2010.pdf>.

³⁰ SANRAL, STRATEGIC PLAN, *supra* note 25, at 14.

³¹ *Id.*

to be a toll road.”³² However, the Minister determines the amount of the toll that may be imposed as well as any increase or decrease in such fees.³³

Toll roads in South Africa are developed in one of two ways: SANRAL may fund the development of a toll road and directly collect tolls, or contract the management aspect to a private company.³⁴ It may also enter into a contract with any person to finance, plan, design, construct, maintain, or rehabilitate a national road and operate it as a toll road.³⁵

1. SANRAL-Funded Toll Roads

SANRAL has directly developed and manages about 11% of the over 19,000 kilometers of national roads, which it funds largely through a mix of toll revenues and capital market borrowing.³⁶ In raising funds for toll roads, SANRAL seeks to follow two key principles: reducing the cost of borrowing and tying the maturity of the funding to the life of the roads.³⁷

One of the principal ways SANRAL raises funds to finance toll roads is by issuing government-backed bonds.³⁸ It has a government guarantee on borrowing of ZAR6 billion (about US\$547 million) with no expiration date.³⁹ This helps SANRAL keep the cost of borrowing low.⁴⁰ The country’s National Treasury has approved for SANRAL a borrowing ceiling of ZAR47.91 billion (about US\$4.3 billion); ZAR37.9 billion (about US\$3.4 billion) of this amount will be underwritten by the national government through a guarantee.⁴¹

SANRAL may also issue nonguaranteed bonds for the purpose of accessing additional sources of funding.⁴² It is authorized to raise funds through the issuance of nonguaranteed bonds of up to ZAR15 billion (about US\$1.35 billion).⁴³

SANRAL bond auctions have been temporarily suspended since September 2011.⁴⁴

³² South African National Roads Agency Limited and National Roads Act § 27.

³³ *Id.*

³⁴ *Id.* §§ 27 & 28.

³⁵ *Id.* § 28.

³⁶ SANRAL, STRATEGIC PLAN, *supra* note 25, at 7.

³⁷ *Id.* at 53.

³⁸ *Id.*

³⁹ *Finance*, SANRAL, *supra* note 23; South African National Roads Agency Limited and National Roads Act § 33.

⁴⁰ SANRAL, STRATEGIC PLAN, *supra* note 25, at 53.

⁴¹ SANRAL, ANNUAL REPORT, *supra* note 24, at 121.

⁴² SANRAL, STRATEGIC PLAN, *supra* note 25, at 53.

⁴³ SANRAL, ANNUAL REPORT, *supra* note 24, at 121.

⁴⁴ *Id.*

In addition to bonds, SANRAL has also explored and made limited use of additional sources to fund its toll-road program. One such source is direct foreign investment. In 2010/2011, SANRAL obtained a government-guaranteed, twenty-year loan from the European Investment Bank in the amount of ZAR1.1 billion (about US\$99 million).⁴⁵ SANRAL has also explored Export Credit Agency (ECA) supported loans. Recently, SANRAL was able to obtain an Austrian ECA guaranteed line of credit from a local South African bank for ZAR550 billion (about US\$49 million) at a favorable rate for the purchase of goods and services to finance a particular toll road.⁴⁶

2. *Privately Funded Toll Roads*

In addition to the 81% of nontoll roads and about 11% toll roads under SANRAL's direct management, 8% of South Africa's national roads, which are also toll roads, are developed and managed by private parties through concession contracts under public-private partnerships.⁴⁷ The concessionaires get a thirty-year term to build the roads, collect tolls, and manage them in accordance with the terms of their contracts; at the conclusion of the concession, they turn the roads over to SANRAL.⁴⁸ The roads under concession remain the property of SANRAL, and all improvements made by the private investors are reflected on SANRAL's balance sheet as assets.⁴⁹

SANRAL has awarded concessions to three private companies to build, operate, and maintain three sections of the national road network.⁵⁰

⁴⁵ *Id.* at 121 & 147; SANRAL, STRATEGIC PLAN, *supra* note 25, at 54.

⁴⁶ SANRAL, ANNUAL REPORT, *supra* note 24, at 121 & 147.

⁴⁷ SANRAL, STRATEGIC PLAN, *supra* note 25, at 14.

⁴⁸ *Id.*

⁴⁹ *Id.* at 52.

⁵⁰ SANRAL, ANNUAL REPORT, *supra* note 24, at 35.

Sweden

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SUMMARY Sweden finances its highways through municipal and state taxes. The state receives revenue from the taxation of motor vehicles and fuels, and from congestion fees in the two largest cities. There are two international toll bridges and plans to make part of Sweden's largest divided highway toll-based. Planning for major infrastructure projects is undertaken by the municipalities and the national government. The current national infrastructure plan covers 2014 to 2025.

I. State and Municipal Road Infrastructure Projects

Ownership and responsibility for road infrastructure in Sweden is divided between the state, municipalities, and individuals. Individuals have responsibility for their private roads whereas the state and municipalities have responsibility for public roads. Swedish highways (i.e., divided highways) are all state owned. Because of the division of power between the state and the municipalities, road infrastructure projects are determined collaboratively between state and municipal agencies.¹

All road construction must be undertaken pursuant to a road plan, which is jointly drafted by Länsstyrelsen (the County Administrative Board), the affected municipalities, and those individuals directly affected by the construction.² When the plan affects public transportation, relevant agencies need to be heard as well. In addition to describing the project and its geographic scope, the plan must include a discussion of the proposed project's effects on the environment.³

Although municipalities have a responsibility to their own taxpayers, it is possible for a municipality to contribute to the financing of public roads in neighboring municipalities where doing so benefits the municipality, or to the financing of roads owned by the state. However, the contribution cannot be the greater part of the financing.⁴ One example of when a municipality might want to invest in neighboring infrastructure is when the municipality attracts a large number of workers (commuters) from the neighboring municipality.⁵

¹ 11 § VÄGLAG (Svensk Författningssamling [SFS] 1971:948), <http://www.notisum.se/rnp/sls/lag/19710948.htm>. If these agencies cannot agree then the issue is sent to the government for review.

² *Id* § 14b.

³ *Id*.

⁴ ALF BOHLIN, *KOMMUNALRÄTTENS GRUNDER* 136–37 (6th ed. 2011).

⁵ *Id*.

Trafikverket (the Swedish Transportation Administration) is the government agency responsible for state-owned roads. Most highways are state owned. There is no private funding of highways in Sweden; all funding comes from state or municipality coffers, although there are toll bridges (see discussion, Part III, below).

Sweden has developed a National Road Plan for 2014–2025.⁶ The Plan allocates a total of SEK 522 billion (approx. US\$80 billion) of national budget.⁷

To date Sweden has 98,500 kilometers of state-owned roads and 4,600 kilometer of roads owned by municipalities,⁸ in addition to private roads.⁹

II. Taxation of Motor Vehicles

Sweden uses annual taxation of motor vehicles to pay for the costs associated with traffic, i.e. increases in CO₂ emissions, wear and tear on road infrastructure, and other state expenses.¹⁰

The rate of taxation of motor vehicles is dependent on the model year of the car and the amount of CO₂ emissions generated.¹¹ Cars manufactured from 2007 to the present are taxed under the Vägtrafikskattelag (Road Traffic Tax Act).¹² Older cars are taxed at a higher rate under the lag med särskilda bestämmelser om fordonsskatt (Law on Special Provisions Regarding Vehicle Taxation).¹³

For cars manufactured in or after 2007, the tax amount is calculated by multiplying the amount of CO₂ emitted per kilometer during mixed driving.¹⁴ The emission is calculated in grams (above the 117 g threshold) then multiplied by 20 Swedish kronor (SEK) (approx. US\$3.08) per gram of CO₂.¹⁵ The tax is thus based on the gas/mileage emission of CO₂. In addition, a second

⁶ TRAFIKVERKET, FÖRSLAG TILL NATIONELL PLAN (Oct. 18, 2013), <http://www.trafikverket.se/Foretag/Planera-och-utreda/Planer-och-beslutsunderlag/Nationell-planering/Nationell-plan-for-transportsystemet-2014--2025/Forslag-till-Nationell-plan/>.

⁷ GUNNAR MALM, GENERALDIRECTÖR, TRAFIKVERKET, NATIONELL TRANSPORTPLAN 2014–2025 (June 14, 2013), http://www.trafikverket.se/PageFiles/129095/presentation_14_juni_forslag_nationell_transportplan.pdf.

⁸ Sveriges vägnät, TRAFIKVERKET, <http://www.trafikverket.se/Privat/Vagar-och-jarnvagar/Sveriges-vagnat/> (last updated Jan. 23, 2014).

⁹ *Id.*

¹⁰ See Statens Offentliga Utredningar [SOU] 2004:63 Skatt på väg, at 221, <http://www.regeringen.se/sb/d/108/a/24111> (government report series).

¹¹ Proposition [Prop.] 2005/06:65 Ny trafikskattelag m.m. at 70, <http://www.regeringen.se/sb/d/5019/a/55391> (government bill).

¹² VÄGTRAFIKSKATTELAG (SFS 2006:227), http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svensk-forfattningssamling/Vagtrafikskattelag-2006227_sfs-2006-227/.

¹³ LAG MED SÄRSKILDA BESTÄMMELSER OM FORDONSSKATT (SFS 2006:228), <http://www.notisum.se/rnp/sls/lag/20060228.htm>.

¹⁴ 2 ch. 9 § VÄGTRAFIKSKATTELAG.

¹⁵ *Id.*

amount is added onto this calculation if the car uses diesel fuel,¹⁶ effectively at least doubling the tax.¹⁷

The Swedish government encourages its citizens to purchase or upgrade to newer cars by exempting certain new cars from the vehicle tax for the first five years of a car's life.¹⁸

III. Fee-Based Financing

Sweden currently has no fee-based system for driving on larger state highways. The state does, however, collect taxes for motor vehicle congestion in Stockholm¹⁹ and Gothenburg,²⁰ and collects tolls for the use of two international bridges.

A. Congestion Tax

Sweden has adopted the use of a “congestion tax,” which is paid more or less as a toll for entering and exiting major cities with a motor vehicle.²¹ The tax is paid to the state.²² Depending on what time of day one enters the city of Stockholm, the tax ranges from SEK 10 to SEK 20 (approx. US\$1.54 to 3.08).²³ The government bill proposing the congestion tax said that it was generally being undertaken to either finance infrastructure changes or to influence how the flow of traffic is directed.²⁴ The tax is meant to shift the preferred means of transportation from cars to public transportation.²⁵ It is not meant to generate funding to maintain streets but rather to deter the use of cars during certain hours of the day and to pay for the environmental effects of pollution caused by cars.²⁶ Payment of the tax is made by the individual who is registered as the owner of the car.

There are no physical toll booths for payment of the congestion tax; instead, the license plates of motor vehicles are registered when passing and the owner is then billed monthly by

¹⁶ *Id.* 10 §.

¹⁷ *See id.*

¹⁸ 11 § VÄGSKATTELAGEN. For a historical background on the motor vehicle tax, which was previously only based on a car's weight, see Prop. 2005/06:65 Ny vägtrafikskattelag, m.m. at 64, <http://www.regeringen.se/sb/d/5019/a/55391>.

¹⁹ *Trängselskatt i Stockholm*, TRANSPORTSTYRELSEN, <http://www.transportstyrelsen.se/Vag/Trangselskatt/Trangselskatt-i-stockholm/> (last modified Jan. 8, 2014).

²⁰ *Trängselskatt i Göteborg*, TRANSPORTSTYRELSEN, <http://www.transportstyrelsen.se/sv/Vag/Trangselskatt/Trangselskatt-i-goteborg/> (last modified Jan. 8, 2014).

²¹ LAG OM TRÄNGSELSKATT (SFS 2004:629), http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svensk_forfattningssamling/Lag-2004629-om-trangselskat_sfs-2004-629/.

²² *Id.* 1 §.

²³ *Trängselskatt i Stockholm*, TRANSPORTSTYRELSEN, *supra* note 19.

²⁴ Prop. 2003/04:145, TRÄNGSELSKATT at 23.

²⁵ *Id.* at 35.

²⁶ *Id.*

Transportstyrelsen (the Swedish Transport Agency).²⁷ A missed payment results in an added fee of SEK 500 (approx. US\$77).²⁸

Sweden first considered implementing a congestion tax in 1989 when a government bill was introduced that would have allowed municipalities to tax entry into their cities after receiving approval from the government.²⁹ Several government reports and bills were presented without ever resulting in a congestion tax until such a tax was implemented in Stockholm on August 1, 2007.³⁰

B. International Toll Bridges

Sweden collects a toll for passage over two international bridges, Öresundsbron (which connects Sweden to Denmark) and Svinesundsförbindelsen (which connects Sweden and Norway).³¹ These fees are meant to cover the cost of building and maintaining the bridges. On both bridges the fees are collected through physical and electronic toll stations. At Öresundsbron, Sweden and Denmark divide the toll revenues 50/50.³² At Svinesundsförbindelsen, Sweden collects tolls from vehicles entering Norway.³³ Motorcycles and mopeds, ambulances, fire trucks, and public buses are exempted from the toll.³⁴ As of January 2, 2014, it cost SEK 21 (approx. US\$3.23) for a car to pass into Norway and SEK 105 (approx. US\$16.16) for a truck.³⁵ Payments made electronically through a form of “easy pass” receive a 13% reduction in the amount of the toll.³⁶

IV. Tax on Energy

Sweden taxes oil, petroleum, diesel, etc. in accordance with the Tax on Energy Act.³⁷ Currently, the tax on petroleum is SEK 5.63 per liter (approx. US\$3.11/gallon) and constitutes a subset of the environmental tax, which will increase to SEK 5.85 in 2015.³⁸ The total national tax is made

²⁷ *Trängselskatt i Stockholm*, TRANSPORTSTYRELSEN, *supra* note 19.

²⁸ *Id.*

²⁹ Prop. 2003/04:145 at 24.

³⁰ *Id.* at 23–26.

³¹ *Id.*

³² *Svinesundsförbindelsen*, TRANSPORTSTYRELSEN (May 5, 2010), <http://www.transportstyrelsen.se/sv/Vag/Fordon/Vagavgifter/Vagavgifter-i-Sverige/Svinesundsforbindelsen/> (last updated Dec. 10, 2013); *Vägavgift vid Svinesund*, SVINESUNDFÖRBINDELSEN AS, <http://www.svinesundsforbindelsen.no/svensk/svinesund.htm> (last visited Feb. 7, 2014).

³³ 2 § FÖRORDNING OM AVGIFT FÖR FÄRD PÅ SVINESUNDSFÖRBINDELSEN (SFS 2005:531), http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/Forordning-2005531-om-avgif_sfs-2005-531/.

³⁴ *Id.* 2 § st. 2.

³⁵ *Id.* 5 §.

³⁶ *Id.* 6 §.

³⁷ LAG OM SKATT PÅ ENERGI (SFS 1994:1776), http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/sfs_sfs-1994-1776/.

³⁸ *Id.* ch. 2:1 §.

up of a two-part tax: an energy tax and a CO₂ tax.³⁹ Diesel is taxed at the considerably lower rate of SEK 4.85 (approx. US\$0.75) per cubic meter.

In addition, a state value-added tax (VAT) of 25% is added to gasoline and diesel sold to consumers, making the end price of a liter of gasoline SEK14.58 (approx. US\$2.24) in 2008 when the actual cost of gasoline prior to taxation was approximately SEK 5 (approx. US\$0.77).⁴⁰

V. Future Sources of Financing for Infrastructure Projects

A. E20

Public opinion strongly favors making the two-way highway E20 into a highway without two-way traffic. Such a change would have to be financed partly by the municipalities in the region, as the state has found that the region does not meet the requirements for it to pay the costs of expanding it to a highway with two lanes in each direction (separated by a barrier).⁴¹ Municipal opposition and the state have instead opted for a 2-1 lane option where the highway has a barrier in the middle and alternates one or two lanes in each direction.⁴²

B. Förbifart Stockholm

A much debated project, Förbifart Stockholm, that will allow traffic to circumvent Stockholm while traveling on the E4an (a major Swedish highway) may become the first toll road in Sweden, as once built it will be largely financed through user tolls (80%) with the remaining funds coming from the state.⁴³

VI. Future Legislation

On December 16, 2013, the government published *Fossilfrihet på väg (Fossil Free on the Road)*,⁴⁴ a report discussing several possible changes to the current calculation of motor vehicle taxes and a possible increase in taxation on diesel of SEK 0.77 (approx. US\$0.11) per liter.⁴⁵

³⁹ *Id.*

⁴⁰ *Så här byggs bensinpriset upp*, PREEM, http://www.preem.se/templates/page_791.aspx (last visited Jan. 17, 2014).

⁴¹ *Vill medfinansiera E20-utbyggnad*, VÄSTRA GÖTALANDSREGIONEN, <http://www.vgregion.se/sv/Vastra-Gotalandsregionen/startside/Om-Vastra-Gotalandsregionen/Nyheter/Aktuella-nyheter/Vill-medfinansiera-E20-utbyggnad/> (last updated June 7, 2013).

⁴² Ulf Nyström, *Regionstrid om utbyggnad på E20*, GP (Apr. 10, 2012; updated Apr. 11, 2012), <http://www.gp.se/nyheter/goteborg/1.911834-regionstrid-om-utbyggnad-pa-e20>.

⁴³ *Förbifart Stockholm*, TRAFIKVERKET, <http://www.trafikverket.se/forbifartstockholm> (last updated Jan. 14, 2014).

⁴⁴ SOU 2013:84 *Fossilfritt på väg*, <http://www.regeringen.se/sb/d/17075/a/230739>.

⁴⁵ *Id.* at 628.

The report also proposes a new congestion tax on heavy-duty vehicles based on the kilometers driven.⁴⁶

⁴⁶ *Id.*; see also *Vägavgifter i Sverige*, TRANSPORTSTYRELSEN, <http://www.transportstyrelsen.se/sv/Vag/Fordon/Vagavgifter/Vagavgifter-i-Sverige/> (last modified May 5, 2010).