

IMPLEMENTING **ALTERNATIVE** **TRANSPORTATION** FUNDING METHODS



DRAFT WHITE PAPER ON **POLICY INITIATIVES**



CONSULTANT TEAM

Cedar River Group
Berk & Associates
Fehr & Peers
Nelson-Nygaard Consulting Associates

WASHINGTON STATE LEGISLATURE

Joint Transportation Committee

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Cedar River Group

Kathy Scanlan

93 Pike Street, Suite 315

Seattle, WA 98101

(206) 223-7660 x105

Kathy@cedarrivergoup.com

Joint Transportation Committee

Staff Contact: Gene Baxstrom

P.O. Box 40937

Olympia, WA 98504-0937

(360) 786-7327

gene.baxstrom@leg.wa.gov

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EXECUTIVE SUMMARY

The 2009 legislature directed the Joint Transportation Committee (JTC) to conduct a comprehensive analysis of transportation funding mechanisms and methods with the principal objective of identifying specific steps for the legislature and agencies to begin implementing viable mid-term and long-term funding approach.

This policy initiatives white paper provides an overview of how existing and emerging local, state and federal funding, energy, environmental, and mobility initiatives may influence or alter the nature of the transportation system, the implementation of transportation funding strategies, and the assumptions and conclusions of the JTC’s 2007 *Long-Term Transportation Financing Study*.

A. 2007 Long-Term Transportation Financing Study

Key assumptions and conclusions of the 2007 study to be updated include:

- *Motor fuel tax*, the primary source of Washington State’s transportation funding, is a set amount – 37.5 cents per gallon (cpg) – that loses purchasing power because it does not grow with inflation and is adversely affected by growing vehicle fuel efficiency.
- *Bond debt service* will become an increasingly large part of the Washington State Department of Transportation (WSDOT) budget with implementation of the 2003 Nickel and 2005 Transportation Partnership Act (TPA) capital programs.
- *Alternative and emerging revenue sources* were recommended to replace the fuel tax within the next 10 to 15 years, with the transition between medium-term and long-term funding methods dependent on how quickly gas tax receipts are eroded and the advancement of technology needed to replace fuel taxes with a vehicle miles traveled (VMT) fee.

2007 Long Term Financing Study Funding Methods Recommendations

Medium-Term (5-15 years)	Long-Term (10-15 years/5 years overlap medium term)
<ul style="list-style-type: none"> • Sales tax on fuel • Index fuel tax • More tolling <ul style="list-style-type: none"> ○ High Occupancy Tolling (HOT) Lanes ○ Extend bridge tolling ○ Area tolling • Expanded local sources <ul style="list-style-type: none"> ○ Local option tax (RTID) • Container charges 	<ul style="list-style-type: none"> • Replace fuel tax with Vehicle Miles Traveled (VMT) fee • Supplement VMT fee with a local-option VMT service fee • Vehicle weight-mile tax • Regional development impact fees

B. Funding Policies and Initiatives

Federal. Since the 2007 study, three federal level commissions have issued final reports exploring options for federal transportation funding. These reports will be part of the development of a revised transportation funding policy expected to be presented to Congress within the next 18 months.

State and Local. At the state level, the legislature has adopted key transportation, environmental, and energy legislation since 2007 including: tolling policies; extending tolling to additional projects; goals for the reduction of greenhouse gas (GHG) emissions; benchmarks for the reduction of per capita VMT; and encouraging the development of infrastructure to support electric vehicles. At the local government level, the Puget Sound Regional Council (PSRC) is assessing five alternative transportation futures that impose varying levels of tolling to affect transportation choices and has completed a traffic choices study that examined behavioral response to congestion tolling.

1. Performance Based Transportation Funding Policies

Federal. The three federal level commissions have recommended that federal transportation policy be more performance-driven and more accountable for results, and that the number of federal transportation programs be reduced to focus on five clearly articulated goals: economic growth; national connectivity; metropolitan accessibility; energy security and environmental protection; and safety.

State. RCW 47.04.280 adopted in the 2007 legislative session establishes five goals for state transportation investments: preservation; safety; mobility; environment; and stewardship.

2. Integrating Energy, Environmental and Mobility Policies through User-Based Transportation Funding and Pricing

Transportation funding methods serve two potentially circular, and sometimes conflicting, purposes. The first purpose is to raise sufficient funds to support transportation system operating and capital needs. The second purpose is to affect the behavior of transportation users – which in turn may affect the type and size of operating and capital needs.

The motor fuel tax was established as a user fee, with the amount of fuel used as a proxy for use of the system.

Federal. The federal commissions have recommended that the nation shift from its current reliance on motor fuel taxes to support transportation to a user-based funding system that integrates energy, environmental, and transportation policies through pricing. The most likely national user-based funding system is a mode-neutral VMT fee.

State. Since 2007 the state has moved towards additional user fees with the adoption of tolling legislation. RCW 47.56.830, adopted in the 2008 legislative session, designates the legislature as the only entity with the authority to impose tolls on the state highway system and establishes policies for tolling. Tolling commenced on the Tacoma Narrows Bridge in 2007 and on State Route 167 High Occupancy Toll (HOT) Lanes in 2008. In the 2009 session, the legislature authorized tolling for the 520 Floating Bridge and directed WSDOT to conduct studies of five potential tolling applications and report to the legislature in 2010.

RCW 47.01.440 established a benchmark to reduce daily vehicle miles traveled per capita by 18 percent by 2020, 30 percent by 2035, and 50 percent by 2050. RCW 47.01.440 also directed WSDOT and the Department of Commerce to prepare a report for the 2009 legislature on ways to meet the VMT benchmarks and GHG emissions reduction goals. Finding that gas tax dependent revenues and VMT reduction goals may work at cross purposes, the report recommends a shift to user-based funding that integrates energy, environmental, and transportation policies through

pricing, and that tolling policies be modified to allow broader uses and to encourage drivers to make fewer and shorter trips, use less polluting vehicles, and consider alternative modes.

The state is active in the Western Climate Change Initiative, which endeavors to fully implement a regional cap-and-trade program for GHG emissions by 2015.

3. Providing Sufficient, Sustained Funding for Transportation System Investments

Federal. The Federal Highway Trust Fund (HTF) receives 88 percent of its funding from the motor fuel tax, with the remaining 12 percent from truck related taxes. HTF supports the Federal Highway Administration, which funnels approximately \$33 billion a year to the states. The federal tax on gasoline is 18.4 cpg and on diesel is 24.4 cpg. These rates have not been increased since 1993. In FFY (federal fiscal year) 2008, \$6 billion was transferred from the General Fund to the HTF to make up for shortfalls in tax receipts that were caused by a weak economy and high motor fuel prices that led to decreased consumption. The administration has requested a \$20 billion transfer from the General Fund to the HTF in FFY 2009 to stabilize the Fund for the next 18 months while a longer term proposal for federal transportation funding is developed.

State. Major state agencies supported by the state transportation budget are: WSDOT, the Washington State Patrol, the Department of Licensing, the County Road Administration Board, the Freight Mobility Strategic Investment Board, the Traffic Safety Commission, and the Transportation Improvement Board. The State also distributes motor vehicle fuel taxes and licensing fees to local jurisdictions.

Washington State funds transportation primarily through the motor vehicle fuel tax, which under the 18th amendment to the State Constitution, is restricted to highway purposes. The current motor vehicle fuel tax is 37.5 cpg, of which 23 cents is the base rate, 5 cents supports the Nickel program and 9.5 cents the Transportation Partnership Program.

The state transportation 2009-25 16-year financial plan has total funding of \$46.7 billion, of which 38 percent is from the motor vehicle fuel tax, 18 percent from licenses and permits, 14 percent from bond sales, 12 percent from federal funds, 7 percent from ferry revenues, 3 percent each from the vehicle sales tax and tolls collected from the Tacoma Narrows Bridge and SR 167, and 5 percent from a variety of other sources.

The 16-year financial plan is based on the March 2009 revenue forecast, which was the forecast in effect when the legislature was in session. The June 2009 forecast is lower for motor vehicle fuel tax collections, given economic conditions. The consumption of motor fuel per capita has dropped in Washington State as a result of increasing vehicle fuel efficiency and increasing gasoline costs.

The 16-year financial plan ends with a \$791.2 million deficit in the 2023-25 biennium, excluding highway facility toll accounts. The deficit begins in the 2013-15 biennium. The only funds with deficits are the Puget Sound Ferries Capital Account, with a deficit of \$936.3 million, and the Puget Sound Ferries Operations Account, with a deficit of \$128.1 million.

The *Washington State Transportation Plan 2007-26* identified \$38 billion in unfunded program options, with \$25.9 billion for high priority projects. *Washington State Ferries Long-Range Plan (2009-2030)* released June 30, 2009, projects an even more severe unfunded need over a 22-year time frame than in the 16-year financial plan. Total capital funding in the 22-year time horizon is \$4.69 billion, with nearly 60 percent of the \$2.41 billion in capital expenditures in the final six years of

the plan caused by the need to replace five vessels that are due for retirement between 2027 and 2029. The 2006 *Washington State Long-Range Plan for Amtrak Cascade* estimated total rail corridor capital costs of \$6.5 billion by 2023 (in 2006 dollars), and the 2006 *State Rail Capacity and System Needs Study* recommended that the state continue to participate in both freight and passenger rail.

Local Government.

Counties. In 2007, the total amount of county road revenue generated was \$887 million, of which 43 percent was from county road property taxes, 14 percent from federal sources, 16 percent from distributions of the state motor fuel tax, 8 percent from other state funds, and 16 percent from other county sources. Counties receive 4.92 cpg of the state motor fuel tax, which is distributed by formula based on mileage, needs, resources, and population.

Counties are authorized to levy a road property tax of up to \$2.25 per \$1,000 AV (assessed value). Only two of the 39 counties are levying the full amount of the property tax and 29 counties divert a portion of their road levy taxes to other uses, primarily traffic policing expense. No counties have implemented the authorized motor vehicle and special fuel tax (10 percent of the state fuel tax) or the commercial parking tax. King, Pierce and Snohomish counties are authorized to impose a local option tax for HOV systems, which has not been implemented.

Cities. In 2007, total city transportation revenues equaled \$1.3 billion, of which 74 percent was generated by city taxes, permits and fees, and operating transfers; 7 percent from distributions of the state fuel tax; 8 percent from other state sources; 9 percent from the federal government; and 2 percent from other sources. Cities are largely reliant on general purposes taxes (i.e., sales and use taxes, real and personal property taxes) for transportation investment. In 2007 cities spent 8 percent of their operating and special funds budgets on transportation – which competes with other city funding needs such as law and justice, fire and emergency services. Cities, unlike counties, are not authorized to levy a road property tax. They are authorized to have a commercial parking tax, a border area motor fuel tax (for cities and towns within 10 miles of the Canadian border), real estate excise taxes, impact fees, transportation benefit districts, and bridge tolls.

Special purpose districts – transit. Washington State has 28 transit districts, including Sound Transit, which has authorization for high capacity transportation taxes. In 2007, the 27 transit districts other than Sound Transit had capital and operating revenues of \$1.3 billion, of which 64 percent was from sales and other local taxes, 11 percent from fares, 11 percent from the federal government, 2 percent from the state, and 12 percent from other sources. Local governments are authorized to levy a sales and use tax of up to 0.9 percent for transit. King County METRO and Community Transit, which between them had 68 percent of all transit passenger trips in 2007, levy the maximum 0.9 percent rate, and Kitsap Transit, with 2 percent of all transit passenger trips, levies 0.8 percent.

Reasons why local funding options are not being fully used fall under four categories: (1) there may be significant political hurdles, such as voter approval requirements, associated with implementing a funding mechanism; (2) the funding mechanism may be restricted in its use or applicability (i.e., funding mechanisms may be geographically or use restricted); (3) implementation of a funding mechanism may require a high level of inter-jurisdictional cooperation and coordination, which may be difficult to obtain (local option motor vehicle and special fuel tax); and (4) in the case of transportation benefit districts, the mechanism has only recently (May 2008) become available as a funding tool for all cities and counties.

Local Funding Needs. Cities, counties, and transit districts project funding deficits. Transit systems have been affected by recent declines in sales tax revenues resulting from the recession and by rising fuel costs and ridership. Counties see a need for additional funding for bridge preservation and multi-modal funding, in addition to other needs. Cities have identified a shortfall of \$3.4 billion in transportation funding.

4. Funding Method Alternatives

Existing funding methods. Ways to restructure existing funding methods to increase sustainable funding and/or to meet policy objectives include:

- Motor vehicle fuel – indexing or other modifications to keep pace with inflation.
- Tolling – allowing states to toll interstates to fund new capacity and preservation, and to relieve congestion, and the state authorizing the use of tolls for multi-modal transportation choices.
- Licenses, permits, and fees – set to encourage buying fuel efficient, low emitting vehicles.
- Motor vehicle excise taxes – The 2009 *Long-Term Ferry Financing Study* recommended the legislature impose a higher MVET tax to provide funding for Washington State Ferries and potentially other mode needs.
- Ferry fares – fuel surcharge and other modifications to stabilize funding.
- Vehicle sales tax – exemption for hybrid vehicles and vehicles exclusively using alternative fuels.

Emerging funding sources.

- User based fees – including VMT fees, vehicle weight mile fees, container fees, and sales tax on motor vehicle fuel.
- Non-user based revenues – customs duties, and exported fuel tax

C. Energy, Environmental, and Mobility Policies and Initiatives

Evolving energy, environmental, and mobility policies and initiatives suggest a very different future for Washington State's transportation system.

1. Energy

Rising oil prices, which are anticipated to continue to increase over the next 10 to 20 years, will influence the mix of fuels consumed, energy prices and supply volatility, vehicle fleet characteristics, and demand for alternative fuels. Improvements in vehicle fuel efficiency are anticipated to accelerate with the May 2009 presidential order to increase the corporate average fuel economy standard (CAFE) by 5 percent each year through 2016. The new standards will require an average mileage standard of 39 miles per gallon (mpg) for cars and 30 mpg for trucks compared to an existing average of 25 mpg. It is also anticipated that there may be an increase in the use of alternative fuels, with some forecasts estimating hybrid vehicle technologies at 15 percent of the new vehicle market in 2025, advancing to 70 percent by 2040, and there is the potential for widespread penetration of plug-in hybrid vehicles in the next 10 to 20 years. In the 2009 session, the legislature adopted 2SHB 1481 to encourage the transition to electric vehicle use and to expedite the establishment of convenient, cost-effective, electric vehicle infrastructure. While all of these

developments will help meet the state's GHG emission goals, they will also reduce the level of revenues that the current tax structure can generate per mile traveled on the roadway system.

2. Environment

Environmental policies, particularly those relative to land use and climate change, have an important and increasing role in the planning of our transportation systems. The state's GHG emission reduction mandates look to transportation, since 46 percent of GHG emissions in Washington State are generated by automobiles and light trucks. This is high compared to the rest of the country, where transportation is responsible for only 28 percent of GHG emissions on average. The transportation sector's large contribution to the state's GHG emissions occurs because the state has a relatively low total GHG emissions profile compared with the nationwide average.

The major ways to reduce the transportation sector's GHG emissions are to manage travel speeds, improve vehicle fuels, and reduce VMT. If the state benchmarks were met, per capita VMT would decrease by 30 percent by 2035. However, total VMT would not decrease to the same extent due to changes in population and employment within the state. The Governor issued an Executive Order on climate change in May 2009 directing WSDOT to: (1) estimate current and future statewide levels of VMT; (2) evaluate potential changes to the VMT benchmarks as appropriate to address low- or no-emission vehicles; and (3) develop strategies to reduce emissions from the transportation sector.

3. Mobility

Congestion is a major issue for urban areas, with the 2009 Urban Mobility Study ranking Seattle as the 19th most congested urban area in the nation, with the average driver wasting 43 hours and 30 gallons of motor fuels per year sitting in traffic. In Spokane, the study estimates that the average driver spends 9 hours and consumes 5 gallons of motor fuels annually while stuck in traffic.

Unless there are substantial reductions in VMT, congestion is anticipated to be a major issue in urban areas for some time to come. Tolling pilots, including the PSRC's traffic choices study, have shown promise in improving efficiency of roadway usage. One mobility policy that has generated considerable attention is the concept of developing a cap and trade program for GHG emissions. However, since likely carbon fees would be relatively small compared to overall fluctuations in fuel prices, many analysts conclude that most of the benefits of a cap and trade program would be realized with sources of carbon emissions other than the transportation sector. It is likely that aggressive efforts to reduce VMT per capita will result in increased demand for non-auto modes, including transit, walking, and biking, which will affect the nature of transportation investments.

Draft White Paper on Policy Initiatives

I. PURPOSE

The 2009 legislature directed the Joint Transportation Committee (JTC) to conduct a comprehensive analysis of mid-term and long-term transportation funding mechanisms and methods. Elements of the study are to include existing data and trends, policy objectives, performance and evaluation criteria, incremental transition strategies, and possibly, scaled testing (ESSB 5352 (204) (1)).

The study will analyze the feasibility and practicality of implementing funding methodologies identified in the JTC's 2007 *Long-Term Transportation Financing Study*, as well as other approaches identified by the committee, staff, and the consultants. The research and analysis must take into account existing and emerging funding, energy, environmental, and mobility policy objectives. The principle objective of this project is to identify specific implementation steps for the legislature and agencies to begin implementing viable mid-term and long-term transportation funding approaches. The primary focus of this effort is to examine state imposed and collected transportation taxes and fees.

This preliminary white paper on policy initiatives provides an overview of how existing and emerging local, state and federal funding, energy, environmental, and mobility initiatives may influence or alter the nature of the transportation system, the implementation of transportation financing strategies, and the assumptions and conclusions of the 2007 *Long-Term Transportation Financing Study*.

A second companion white paper analyzes and updates transportation funding projections made in the 2007 *Long-Term Transportation Financing Study*.

A. 2007 Long-Term Transportation Financing Study

Key assumptions and conclusions of the JTC's 2007 *Long-Term Transportation Financing Study* include:

- **Motor Fuel Tax Viability:** The study discussed Washington State's dependence on fuel taxes for transportation funding (36 percent of total transportation funding or 53 percent excluding bond sales in the 2007-09 biennium) and the loss of purchasing power of the fuel tax. The state's motor fuel tax is a set amount (37.5 cpg) that does not keep pace with inflationary increases in transportation costs. The study forecasted a 23 percent reduction in purchasing power from 2005 to 2030 weighted by projected vehicle miles traveled (VMT) due to the combined effects of increases in fuel economy and losses to inflation.
- **Bond Financing:** The study reviewed the state's anticipated bonding to support implementation of the 2003 Nickel and 2005 Transportation Partnership Act (TPA) projects. The study notes that debt service on these bonds will become an increasingly large part of the Washington State Department of Transportation's (WSDOT) budget.

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- Local Government Transportation Funding: The study examined local government transportation funding methods authorized by the state; the distribution by the state of motor vehicle fuel tax revenues to local governments; and the use by local governments of general funds to support transportation.
- Alternative and Emerging Revenue Sources: The study made medium-term and long-term funding method recommendations, as shown in Exhibit 1. The recommendations were intended to prevent the forecast 23 percent decline in future state fuel tax revenues weighted by VMT, with the transition from medium-term to long-term funding dependent on “how quickly the State’s gas tax receipts are eroded by increasing mileage of the vehicle fleet, usage of non-taxed fuels, and the advancement of technology needed to replace fuel taxes.”¹

**Exhibit 1.
2007 Long Term Financing Study Funding Methods Recommendations**

Medium-Term (5-15 years)	Long-Term (10-15 years/5 years overlap medium term)
<ul style="list-style-type: none"> • Sales tax on fuel • Index fuel tax • More tolling <ul style="list-style-type: none"> ○ High Occupancy Tolling (HOT) Lanes ○ Extend bridge tolling ○ Area tolling • Expanded local sources <ul style="list-style-type: none"> ○ Local option tax (RTID) • Container charges 	<ul style="list-style-type: none"> • Replace fuel tax with VMT fee • Supplement VMT fee with a local-option VMT service fee • Vehicle weight-mile tax • Regional development impact fees

II. FUNDING POLICIES AND INITIATIVES

Initiatives in transportation funding policies at the federal, state, and local levels since the JTC’s 2007 *Long-Term Transportation Financing Study* include:

- Performance based transportation funding policies, which are discussed in Section II A.
- Integrating energy, environmental, and mobility policies through user-based transportation funding and pricing, which are discussed in Section II B.
- Providing sufficient, sustained funding for transportation system investments, discussed in Section II C.

These policies result in consideration of a range of funding options discussed in Section II D that include restructuring of existing funding methods to meet these policy objectives as well as new funding methods.

Three federal level commissions have issued final reports exploring options for federal transportation funding. The results of the commissions’ work will be part of the development of a revised

¹ Joint Transportation Committee, *Long-Term Financing Study*, 2007, p. ES-8.

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transportation funding policy expected to be presented to Congress by the administration within the next 18 months. The federal level commissions and their reports are:

- National Transportation Policy Project, *Performance Driven: A New Vision for U.S. Transportation Policy*. June 2009.
- National Surface Transportation Infrastructure Financing Commission, *Paying Our Way: A New Framework for Transportation Finance*. February 2009.
- National Surface Transportation Policy and Revenue Study Commission, *Transportation for Tomorrow: Report of the National Surface Transportation Policy and Revenue Study Commission*. December 2007.

At the state level, the legislature has adopted key transportation, environmental, and energy legislation since 2007 including: tolling policies; extending tolling to additional projects; goals for the reduction of greenhouse gas (GHG) emissions; benchmarks for the reduction of per capita VMT; and encouraging the development of infrastructure to support electric vehicles. The Washington State Department of Commerce and WSDOT's report *Leading the Way: Implementing Practical Solutions to the Climate Change Challenge* with its companion appendix *Reducing Greenhouse Gas Emissions and Increasing Transportation Choices for the Future* were presented to the legislature in the 2009 session.

At the local government level, the Puget Sound Regional Council (PSRC) is updating the regional transportation plan. *Transportation 2040 Environmental Impact Statement*, currently in the public comment period, assesses five alternative transportation futures for the region that impose varying levels of tolling to affect transportation choices. The PSRC has also conducted a traffic choices study that examined behavioral response to congestion tolling of roadways, policy issues related to the implementation of network tolling, and technical solutions to tolling a large network of roads.

A. Performance Based Transportation Funding Policies

1. Federal

The three federal level commissions have recommended that federal transportation policy be more performance-driven, more directly linked to a set of clearly articulated goals, and more accountable for results. The studies have recommended a reduction in the number of programs administered by the US Department of Transportation to help focus on and communicate overarching goals. The Policy and Revenue Study Commission recommended reducing the current 108 federal funding programs to 10, while the Nation Transportation Policy Project recommended six.

Recommended federal goals for transportation funding are:

- Economic Growth: Producing maximum economic growth per dollar of investment
- National Connectivity: Connecting people and goods across the nation with effective surface transportation
- Metropolitan Accessibility: Providing efficient access to jobs, labor, and other activities throughout metropolitan areas
- Energy Security and Environmental Protection: Integrating energy, security, and environmental protection objectives

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- Safety: Improving safety by reducing the number of accidents, injuries, and fatalities associated with transportation.²

2. State of Washington

The State of Washington has adopted statewide transportation goals. RCW 47.04.280 (adopted in the 2007 session) establishes the following goals for state transportation investments.

- Preservation: To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services
- Safety: To provide for and improve the safety and security of transportation customers and the transportation system
- Mobility: To improve the predictable movement of goods and people throughout Washington state
- Environment: To enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment
- Stewardship: To continuously improve the quality, effectiveness, and efficiency of the transportation system.

The Office of Financial Management (OFM) is directed to: 1) establish objectives and performance measures to ensure transportation system performance at local, regional, and state government levels progresses toward the attainment of the policy goals; and 2) provide an annual progress report.³

B. Integrating Energy, Environmental, and Mobility Policies through User-Based Transportation Funding and Pricing

Transportation funding methods serve two potentially circular, and sometimes conflicting, purposes. The first purpose is to raise sufficient funds to support transportation system operating and capital needs, which is discussed in the next section. The second purpose is to affect the behavior of transportation users – which in turn may affect the type and size of operating and capital needs.

The motor fuel tax was established as a user fee, with the amount of fuel used as a proxy for use of the system. User based transportation funding methods that more directly affect the performance of the transportation system have been implemented and/or recommended at the federal, state, and local government levels. Examples of these funding methods are tolling, VMT fees, and container pricing, all of which can be used to send more direct price signals to users.

1. Federal

The federal commissions have recommended that the nation shift from its current reliance on motor fuel taxes to support transportation to a user-based funding system that integrates energy, environmental, and transportation policies through pricing. The most likely national user-based

² Bipartisan Policy Center, *Performance Driven: A New Vision for US Transportation Policy*, June 2009, p. 1.

³ The first progress report was presented to the 2009 legislature. See Office of Financial Management, *Washington State's Transportation Progress Report*, 2009.

funding system is a mode-neutral VMT fee, with recommendations that the federal government invest in research on implementing such a fee.

“Revenue collection methodologies should be directly linked to improving transportation system performance. Public revenue collection can enhance the performance of the system when users more directly understand and bear the full costs of the infrastructure they use. While the gas tax generates significant revenues at low administrative cost, its reliability as a proxy for transportation-system use has decreased dramatically. In an age of increasing fuel efficiency, growing numbers of hybrid-electric vehicles, and increased use of alternative fuels, payment of the gas tax bears a diminishing relationship to actual use of the system. In contrast, where users pay directly for their infrastructure use, they receive more timely and accurate signals about the full range of costs they impose and the benefits they receive. Ideally, user fees should capture diverse elements of use including miles traveled on roadways, vehicle weight or number of axles, contribution to congestion, and emissions.”⁴

2. State of Washington

The state has moved towards additional user fees with the adoption of tolling legislation. The Climate Action Team has recommended additional reliance on user charges. In addition, the state is active in the Western Climate Change Initiative that seeks to implement a regional cap and trade program.

a. Tolling

RCW 47.56.830 (ESSHB 1773), adopted in the 2008 session, designates the legislature as the only entity with the authority to impose tolls on the state highway system. The policy guidelines for tolling emphasize tolling as a method to manage the transportation system and as a way to raise revenues.

- Overall Direction: Washington should use tolling to encourage effective use of the transportation system and provide a source of transportation funding.
- When to Use Tolling: Tolling should be used when it can be demonstrated to contribute a significant portion of the cost of a project that cannot be funded solely with existing sources or optimize the performance of the transportation system. The social, environmental, and economic effects of the tolling should be considered, and the tolling should be directed at making progress toward the state's greenhouse gas reduction goals.
- Setting Toll Rates: Toll rates, which may include variable pricing, must be set to meet anticipated funding obligations. To the extent possible, the toll rates should be set to optimize system performance, recognizing necessary trade-offs to generate revenue.
- Duration of Toll Collection: Because transportation infrastructure projects have costs and benefits that extend well beyond those paid for by initial construction funding, tolls may remain in place to fund additional capacity, capital rehabilitation, maintenance and operations, and to optimize performance of the system.

Tolling commenced on the Tacoma Narrows Bridge in 2007 and on State Route 167 High Occupancy Toll (HOT) Lanes in 2008. In the 2009 session, the legislature authorized tolling for the

⁴ Ibid., p. 94. A similar recommendation is included in National Surface Transportation Infrastructure Financing Commission, *Paying Our Way: A New Framework for US Transportation Policy*, February 2009, p. 8.

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520 Floating Bridge and directed WSDOT to conduct studies of five potential tolling applications and report to the legislature in 2010.⁵

b. Climate Change, Energy Policy, and Transportation Funding

RCW 47.01.440 (ESHB 2815), adopted in 2008, creates a framework for reducing greenhouse gas (GHG) emissions. The bill established statewide benchmarks to reduce daily vehicle (under 10,000 pounds) miles traveled per capita based on the population of Washington residents of driving age (18+ years old).

The consultants met with the Puget Sound Regional Council (PSRC) to discuss the statewide benchmarks. Based on our discussion with PSRC, the benchmark reduction goals are based on a Year 2020 baseline forecasted VMT per capita. The specific benchmarks for each horizon year are summarized in Exhibit 2 and are shown in two ways: the first assuming that the goals are from 2008 and the other using the PSRC assumption.

**Exhibit 2.
VMT Daily Per Capita Benchmark Reduction Goals**

	2008	2020	2035	2050
% reduction from 2008		18%	30%	50%
Daily VMT Per Capita ⁶	31 miles	25.5 miles	22 miles	15.5 miles
PSRC Projection	27 miles	22.2 miles	18.9 miles	13.5 miles

RCW 47.01.440 directed WSDOT and the Department of Commerce to prepare a report for the 2009 legislature on ways to meet the VMT benchmarks and the GHG emissions reduction goals. The report, *Leading the Way: Implementing Practical Solutions to the Climate Change Challenge*, was submitted to the legislature in November 2008.

The report makes the following key findings and recommendations with regard to transportation funding policies. These findings and recommendations are similar to those in the federal studies.

- Gas tax dependent revenues and VMT reduction goals may work at cross purposes: The state faces a challenge in implementing appropriate strategies to meet the VMT per capita reduction benchmarks while addressing the impacts of the current revenue shortage on state and local transportation infrastructure and operating expenses, and on the ability of transit agencies to provide appropriate levels of service. “This challenge is compounded by the paradox that transportation funding is dependent on the gas tax; as the state achieves progress in reducing the amount of miles traveled, the funding available to provide appropriate levels and quality of transportation service will further diminish”.⁷
- Shift to user-based funding that integrates energy, environmental, and transportation policies through pricing: The report recommends that transportation funding and pricing policies be

⁵ Tolling studies are for the Alaska Way Viaduct, Columbia River Crossing, Interstate 405 Two High Occupancy Toll (HOT) Lanes, State Route 167 Corridor and 509 Corridor.

⁶ The daily VMT benchmarks are based on vehicles under 10,000 pounds. The available VMT data include mileage of all vehicles, including those over 10,000 pounds.

⁷ Washington State Department of Commerce and Washington State Department of Transportation, *Leading the Way: Implementing Practical Solutions to the Climate Change Challenge*, November 2008, pp. 19-20.

designed and structured so that direct users and beneficiaries pay for their transportation choices and receive the benefits.⁸

- Tolling policy modification: The report recommends that the state use pricing as a way to reduce per capita VMT and GHG emissions, raise revenue, and manage the system for efficiency and reliability. Specifically, the report recommends that the legislature add per capita VMT and GHG emissions reduction as a third objective in its tolling policy; allow the use of toll revenues for public transit, carpooling and other more sustainable travel patterns; and consider system-wide rather than project by project tolling. The report also recommends that the Washington State Transportation Commission (WSTC) establish toll rate policies that encourage drivers to make fewer and shorter trips, use less polluting vehicles, and consider alternative modes other than single occupancy vehicle (SOV) driving.⁹

c. Western Climate Change Initiative

The Western Climate Change Initiative (WCCI) is a partnership of several western states (Arizona, California, Montana, New Mexico, Oregon, Utah, and Washington) and three Canadian provinces (British Columbia, Manitoba, and Quebec) to reduce greenhouse gas emissions. The specific actions of the WCCI include developing regional emissions reduction targets, participating in a multi-state registry to track and manage GHG emissions, and developing a market-based program to reach reduction targets.

The WCCI endeavors to fully implement a regional cap-and-trade program for GHG emissions by 2015. This cap-and-trade program would address both stationary and mobile-source (transportation sector) emissions.

3. Local Government

The PSRC's *Transportation 2040 Draft Environmental Impact Statement (EIS)* has six policy goals that affect transportation funding methods:

- Make costs of transportation more explicit to user.
- Emphasize non-SOV travel investments. Offer a variety of transportation choices.
- Transit and non-SOV modes account for an increased proportion of trips.
- Improve mobility/accessibility.
- Make commercial movement more reliable and efficient.
- Create a sustainable, user-oriented and balanced transportation system.

The EIS assesses five alternative transportation futures for the region that impose varying levels of tolling to make the costs of transportation more explicit to the user. The five range from Alternative 1, where toll funding has minimal application, little of the system cost is explicit to users, revenues are used to operate tolled facilities, and toll rates are set to maximize efficiency. At the other end, Alternative 5 is a vision where toll funding has extensive application, most of the system cost is explicit to users, revenues are used to fund highway and transit expansion system wide, and toll

⁸ Ibid., p. 4.

⁹ Ibid., p. 29.

rates are set to maximize efficiency. Alternative 5 would result in the largest reduction in daily VMT per capita, with a 16 percent reduction compared to a 5 percent reduction in Alternative 1.¹⁰

C. Providing Sufficient, Sustained Funding for Transportation System Investments

There is insufficient funding at the federal, state, and local government levels to meet currently identified transportation capital and operating needs. This is in part the result of heavy reliance on the fixed rate motor vehicle fuel tax.

1. Federal

a. Current Transportation Funding Sources

The Federal-Aid Highway Act of 1956 initiated the Highway Trust Fund (HTF) supported by a federal tax on gasoline and diesel fuel. In 1983, the HTF was divided into two accounts: the Highway Account and the Mass Transit Account. The Highway Account supports the Federal Highway Administration, which funnels approximately \$33 billion a year to the states, the Federal Motor Carrier Safety Administration, and the National Highway Traffic Safety Administration. The Mass Transit Account supports the Federal Transit Administration.

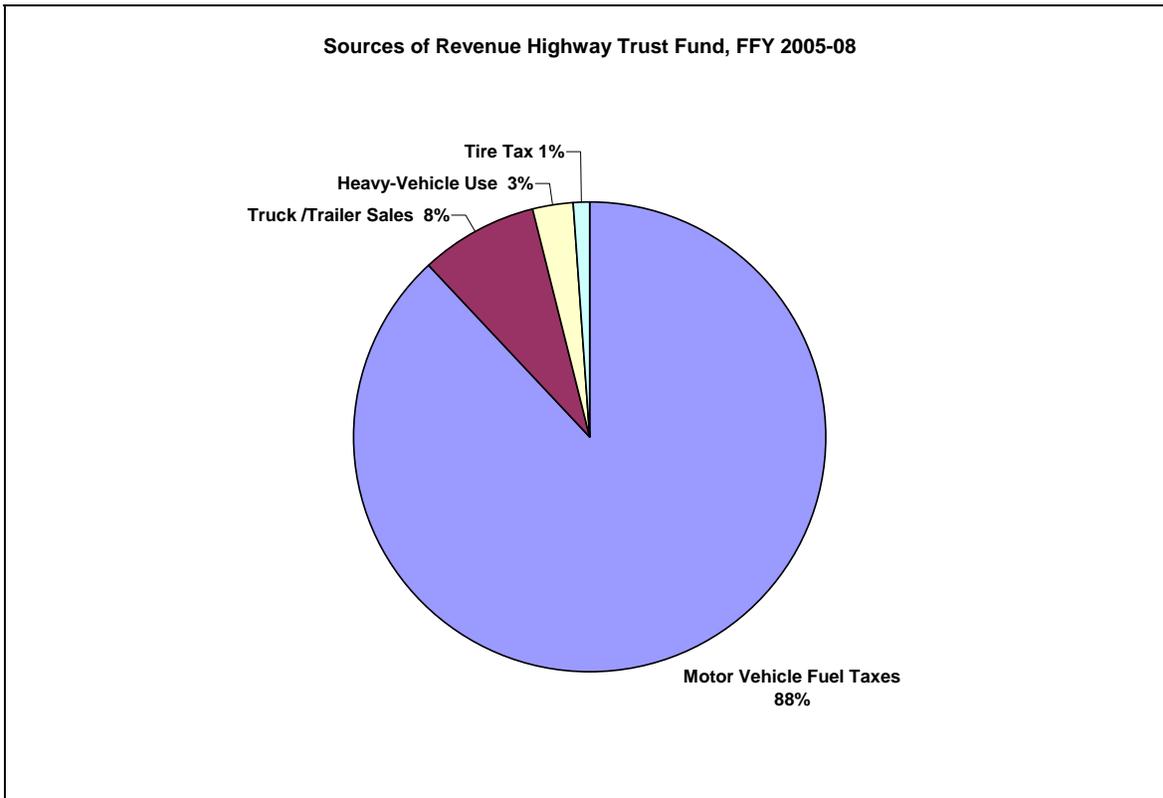
The current federal gasoline tax is 18.4 cents per gallon (cpg) and was last increased in 1993. The majority of the tax (15.44 cents) is dedicated to the Highway Account with the remaining 2.86 cents going to the Mass Transit Account. For diesel fuel, the current tax rate is 24.4 cpg with 21.44 cents allocated to the Highway Account and 2.86 cents to the Mass Transit Account.

For Federal Fiscal Years (FFY) 2005 through 2008, 88 percent of HTF revenues came from the motor fuel tax.¹¹ The remaining 12 percent of funds came from truck related taxes.

¹⁰ Puget Sound Regional Council, Transportation 2040 Draft Environmental Impact Statement, 2009, p. 51.

¹¹ The motor vehicle fuel tax includes the gasoline tax, which contributed 64 percent of revenue to the HTF, and the diesel fuel tax which contributed 24 percent.

Exhibit 3.
Sources of Highway Trust Fund Revenues FFY 2005-08



Source: General Accountability Office, *Highway Trust Fund: Options for Improving Sustainability and Mechanisms to Manage Solvency*, June 25, 2009.

b. Gap in Funding

Motor vehicle fuel tax revenues have not kept pace with costs and system needs. The funding gap is estimated at \$400 billion for the 2010-15 time period and \$2.3 trillion for 2010-35.¹²

In FFY 2008, \$8 billion was transferred from the General Fund to the HTF to make up for shortfalls in tax receipts. The balance of the HTF has declined in recent years because, as designed in the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU) outlays from the account have exceeded expected receipts over the authorization period. When SAFETEA-LU was passed in 2005, estimated outlays from the Highway Account programs exceeded estimated receipts by \$10.4 billion which would have drawn the account balance down from \$10.8 billion to \$0.4 billion. This left little margin for error. The weak economy and high motor fuel prices affected the motor fuel tax, truck sales, use tax and other sources of HTF funding, resulting in the need for the FFY 2008 cash transfer.¹³

The US Department of Transportation currently estimates that an infusion of funds – about \$15 billion – will be needed for the HTF to remain solvent through 2010.¹⁴ The administration has

¹² National Surface Transportation Infrastructure Financing Commission, pp. 3-4.

¹³ General Accountability Office, *Highway Trust Fund: Options for Improving Sustainability and Mechanisms to Manage Solvency*, June 25, 2009, p. 4.

¹⁴ *Ibid.*, p. 4.

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requested that Congress transfer \$20 billion more from the General Fund to the Federal Highway Trust Fund in FFY 2009. This transfer is expected to stabilize the Trust Fund for the next 18 months while a longer term proposal for federal transportation funding is developed.¹⁵

2. State of Washington

Major state agencies supported by the state transportation budget are: WSDOT, the Washington State Patrol, the Department of Licensing, the County Road Administration Board, the Freight Mobility Strategic Investment Board, the Traffic Safety Commission and the Transportation Improvement Board. The State also distributes motor vehicle fuel taxes and some licenses and permit fees to local jurisdictions.

a. Current Transportation Funding Sources

Washington State funds transportation primarily through the motor vehicle fuel tax, which under the 18th Amendment to the state constitution is restricted to highway purposes. With this restriction, motor vehicle fuel taxes cannot be used for transit or other transportation services that are not considered highway purposes.

In 2003 and 2005 the State raised the motor vehicle fuel tax and other fees and charges to support two WSDOT capital programs: the 2003 Nickel Funding Package and the 2005 Transportation Partnership Act Funding Package. Both funding packages invest in highway, rail, ferry, transit and freight projects across the state. The motor vehicle fuel tax is currently 37.5 cpg, of which 23 cents is the base rate, 5 cents supports the Nickel program and 9.5 cents the Transportation Partnership Program.

**Exhibit 4.
Taxes and Fees for the 2003 Nickel and 2005 TPA Packages**

Tax	Nickel Package 2003	TPA Package 2005
Motor Vehicle Fuel Tax	<ul style="list-style-type: none"> • 5 cents per gallon increase 	<ul style="list-style-type: none"> • 9.5 cents per gallon increase
Fees	<ul style="list-style-type: none"> • 15% increase in gross weight fees on heavy trucks • \$20 license plate retention fee 	<ul style="list-style-type: none"> • Vehicle weight fee • Light truck weight fee • Annual motor home fee of \$75.00 • Identicals - \$5.00 increase • Driver Instruction Permit - \$5.00 increase • License reinstatement after suspension or revocation \$55.00 increase • DUI hearings - \$100.00 increase
Sales Tax	<ul style="list-style-type: none"> • 0.3% increase in motor vehicle sales tax 	

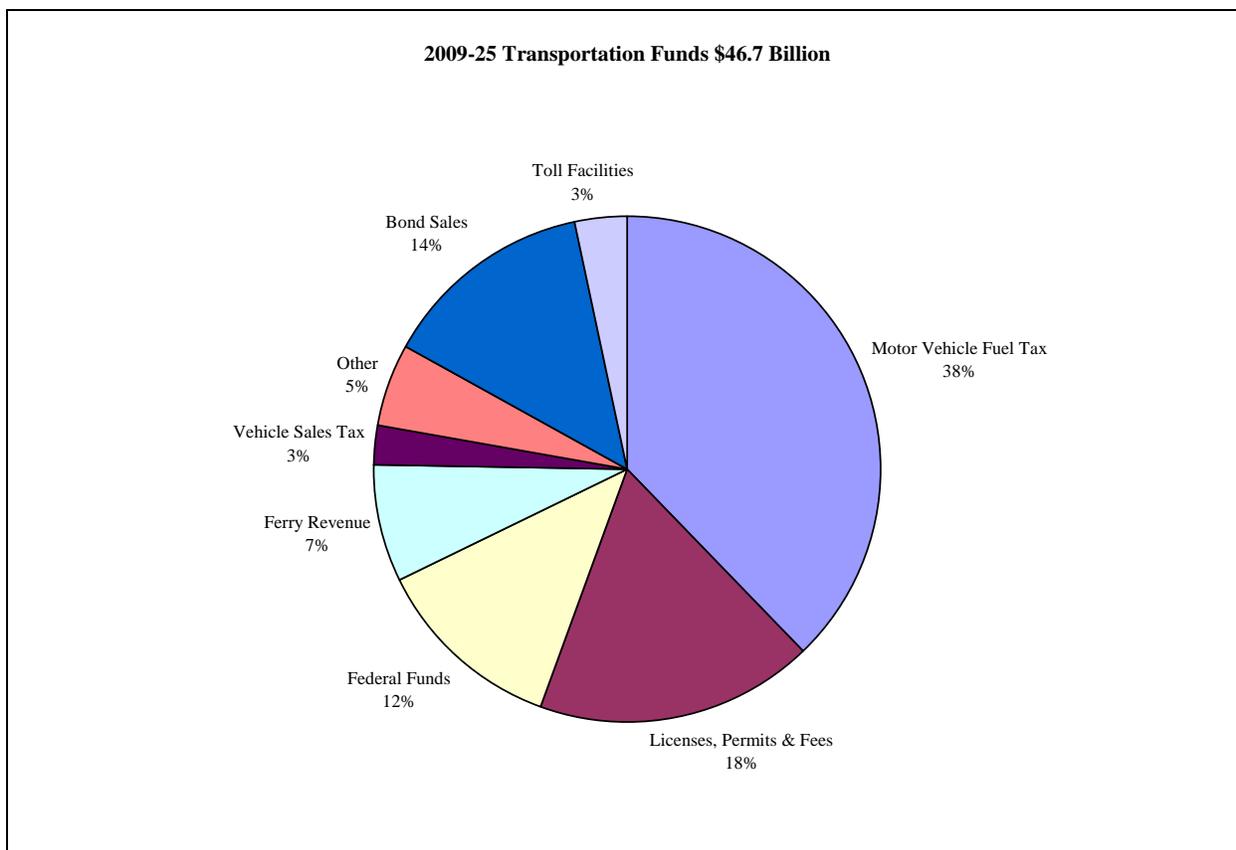
The Nickel gas tax increase will sunset when the bonds issued against the revenue expire, currently estimated to be 2053. The other components of the Nickel funding package as well as the TPA increases do not expire.

¹⁵ Administration Proposal for Stage 1 Reauthorization.

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Exhibit 5 shows the sources of state transportation funding for the 2009-25 16-year financial plan. Total funding from all sources is \$46.7 billion¹⁶, of which 38 percent is from the motor vehicle fuel tax, 18 percent from licenses and permits, 14 percent from bond sales, 12 percent from federal funds, 7 percent from ferry revenues (primarily fares), 3 percent each from the vehicle sales tax and tolls collected from the Tacoma Narrows Bridge and SR 167, and 5 percent from a variety of other sources.

Exhibit 5. Transportation Funding Sources 2009-25



Source: WSDOT and legislative staff.

Toll revenues from highway facilities are restricted by state policy to support of the tolled facility. Exhibit 6 shows state funding excluding restricted highway facility tolls. State transportation funding without tolls and bond sales totals \$4.8 billion for the 2009-11 biennium and \$38.7 billion for the entire 16-year period.

¹⁶ The motor vehicle fuel tax referenced here includes the special fuel tax which applies to other combustible motor vehicle gases and liquids such as biodiesel, propane, natural gas, and butane.

**Implementing Alternative Transportation Funding Methods
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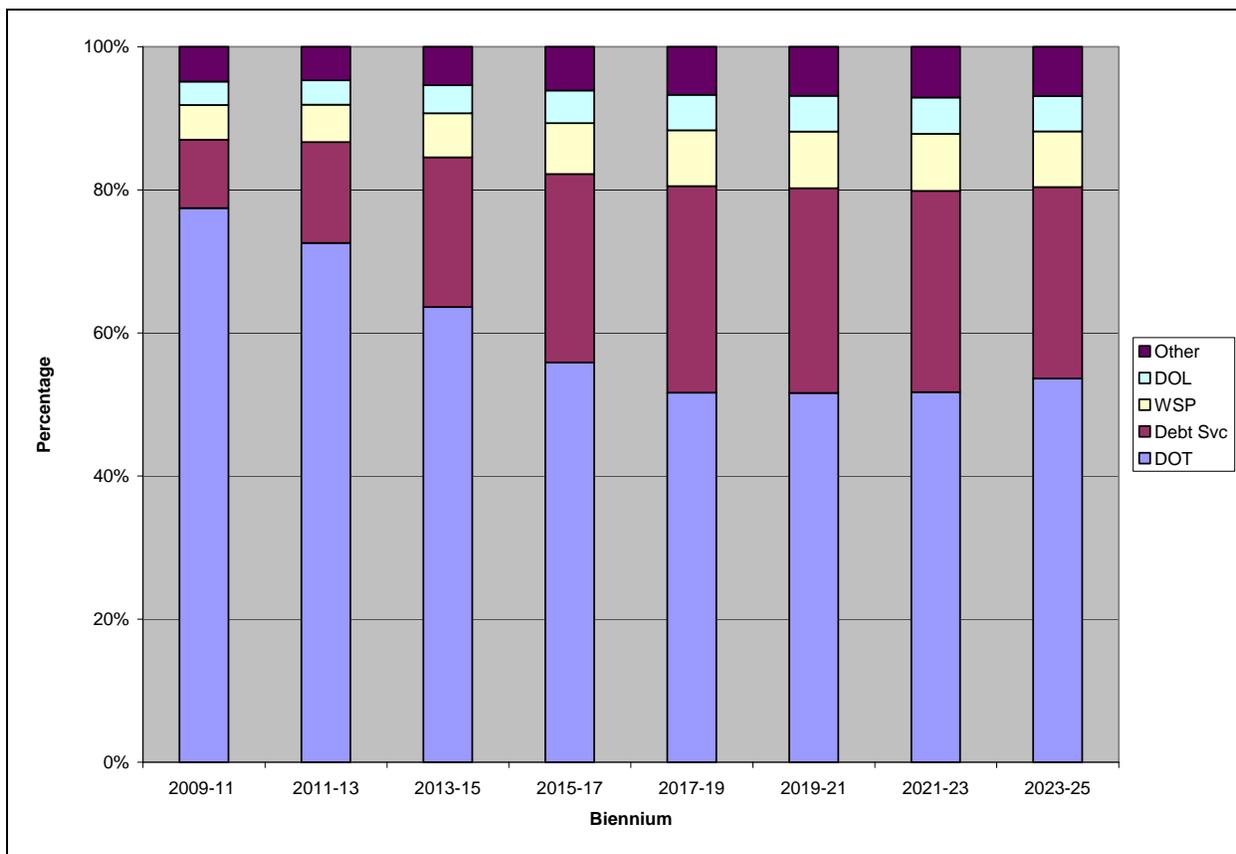
**Exhibit 6.
2009-25 16-Year Revenues and Expenditures (Excluding Highway Tolls)**

	2009-11	2011-13	2013-15	2015-17	2017-19	2019-21	2021-23	2023-25	2009-25	2009-25
(\$ millions)	Biennium	Biennium	Biennium	Biennium	Biennium	Biennium	Biennium	Biennium	Total	%
Sources of Funds										
Gross Motor Vehicle Fuel Tax	2,657.4	2,725.2	2,782.9	2,849.6	2,915.9	2,997.7	3,121.2	3,206.1	23,255.9	
Refunds & Transfers	-129.2	-135.6	-140.7	-146.2	-152.0	-158.2	-165.9	-172.4	-1,200.2	
Distributions to Local Jurisdictions	-503.0	-515.6	-526.0	-538.1	-550.0	-564.4	-587.8	-603.4	-4,388.3	
Net Motor Vehicle Fuel Tax	2,025.2	2,074.0	2,116.2	2,165.3	2,213.9	2,275.0	2,367.5	2,430.4	17,667.5	46%
Licenses, Permits & Fees¹	929.0	966.9	1,000.2	1,027.5	1,059.9	1,092.3	1,121.6	1,150.3	8,347.7	
Capron Distribution to Local Jurisdictions	-4.3	-4.5	-4.6	-4.8	-4.9	-5.1	-5.2	-5.4	-38.9	
Net Licenses, Permits & Fees	924.7	962.4	995.6	1,022.7	1,054.9	1,087.2	1,116.4	1,144.9	8,308.8	21%
DOL fees and abstracts²	165.0	165.6	170.3	177.4	176.5	186.3	188.0	193.0	1,422.0	4%
DOT Business Related Revenue	14.5	13.4	13.3	13.7	14.2	14.7	15.1	15.6	114.6	0.3%
Federal Funds	1,097.3	801.9	717.4	645.6	581.0	471.6	536.4	822.7	5,673.9	15%
Ferry Revenue	313.0	349.6	384.7	417.3	451.9	482.4	508.1	539.7	3,446.7	9%
Vehicle Sales Tax										
Vehicle Sales Tax	64.8	75.1	84.1	89.9	94.3	98.5	102.9	107.5	717.2	
Rental Vehicle Sales Tax	42.2	49.3	57.0	63.4	68.6	73.9	79.5	85.6	519.5	
Total Vehicle Sales Tax	107.0	124.5	141.1	153.4	162.9	172.4	182.4	193.1	1,236.7	3%
Local Revenue	95.0	11.5	10.6	10.8	11.0	11.2	11.4	11.7	173.1	0.4%
Miscellaneous	22.0	21.0	27.1	28.0	28.8	29.8	31.0	32.2	220.0	1%
Transfers from AROW, TNB, and HOT Lanes Accounts	19.0	6.0	9.0	1.0	0.0	0.0	0.0	0.0	34.8	0.1%
Treasurer's Interest	55.0	55.0	54.0	52.0	52.0	52.0	52.0	52.0	423.0	1%
Subtotal	4,837.6	4,584.0	4,638.8	4,687.1	4,747.1	4,782.6	5,008.4	5,435.3	38,720.9	100%
Bond Sales	2,202.3	2,342.6	1,139.6	359.5	67.7	154.6	129.6	10.7	6,406.6	
Debt Service on Bonds (excludes TNB & SR 520)	-687.1	-975.1	-1,274.1	-1,413.9	-1,451.6	-1,448.8	-1,436.2	-1,434.4	-10,121.2	
Net Bond Sales	1,515.2	1,367.5	-134.5	-1,054.4	-1,383.9	-1,294.2	-1,306.6	-1,423.7	-3,714.7	-10%
Sources of funding Including Bonds (excluding tolling accounts - TNB, SR 520, HOT Lanes)										
	6,352.8	5,951.5	4,504.2	3,632.7	3,363.2	3,488.3	3,701.8	4,011.6	35,006.3	
Expenses										
Washington State Department of Transportation	5,565.9	5,013.6	3,871.3	3,004.2	2,598.3	2,613.9	2,642.2	2,876.2	28,185.5	78%
Washington State Patrol	347.8	360.9	372.7	382.9	392.3	400.2	408.2	416.3	3,081.3	9%
Department of Licensing	235.8	234.5	239.5	244.4	249.3	254.4	259.8	265.2	1,982.9	6%
Transportation Improvement Board	217.3	200.1	204.7	208.9	217.0	222.2	233.3	240.3	1,743.8	5%
County Road Administration Board	87.9	81.6	83.2	84.5	86.4	88.4	91.6	91.8	695.5	2%
Washington Traffic Safety Commission	22.3	21.6	21.9	22.3	22.7	23.2	23.6	24.0	181.7	1%
Cost of Bond Sales	9.2	9.8	4.9	1.5	0.3	0.6	0.5	0.0	26.8	0%
Other Agencies	13.0	11.2	11.3	11.5	11.8	12.0	12.2	12.5	95.5	0%
Total Expenses	6,499.2	5,933.3	4,809.8	3,960.2	3,578.0	3,614.8	3,671.4	3,926.5	35,993.1	100%
Beginning Balances from prior period (All non-toll accounts)	195.7	49.3	67.5	-238.0	-565.5	-780.2	-906.7	-876.3		
Projected Net Ending Balance Excluding Tolling	49.3	67.5	-238.0	-565.5	-780.2	-906.7	-876.3	-791.2		
All expenditures, revenues not a part of the forecast approved by the Transportation Revenue Forecast Council and debt service are Leg. adopted plan assumptions										
¹ Incl. ORV, Snowmobile, Hiway motor veh lic fee in 06T and 201										
² Drivers License fees, ADR, commercial driving school fees, motor veh filing fees										

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Bond sales are a financing method that requires repayment from dedicated motor fuel and fees and licenses income. Excluding bond sales and highway facility tolls, the motor vehicle fuel tax is 46 percent of the remaining revenues. Bond repayment will become an increasingly large part of the state's transportation expense. As shown in Exhibit 7, revenue from bond sales net of debt service over the 16-year financial plan is a negative \$3.7 billion, excluding bonds issued for toll supported facilities.¹⁷ The 2009-11 biennium budget and 16-year plan extend the life of bonds to support the 2003 Nickel and 2005 TPA investment packages from 25 to 30 years.¹⁸ Exhibit 7 shows the increasing percentage of non-highway toll transportation expenses devoted to bond sales.

Exhibit 7.
Transportation Expenses Other Than Toll Facilities Washington State 2009-25



Source: 2009 Legislative 16-Year Financial Plan – based on March 2009 Forecast.

The legislative 16-year plan is based on the March 2009 forecast from the Transportation Revenue Forecast Council. The June 2009 forecast, which came after the legislative session ended, reduced the forecast for transportation revenues available to the state for the 2009-11 biennium by 1 percent or \$47 million and for the 16-year plan by 0.8 percent or \$241 million.¹⁹

¹⁷ Funds are from the March 2009 forecast prepared by the Transportation Revenue Forecast Council, which was the forecast in effect when the 16-year financial plan was developed by the legislature.

¹⁸ Legislative Evaluation and Accountability Program, *Budget Notes 2009-11 Transportation Budget*, 2009, p. 394.

¹⁹ Transportation Revenue Forecast Council, June 2009 Transportation Economic and Revenue Forecasts, Volume I Summary Document, June 2009, p. 5.

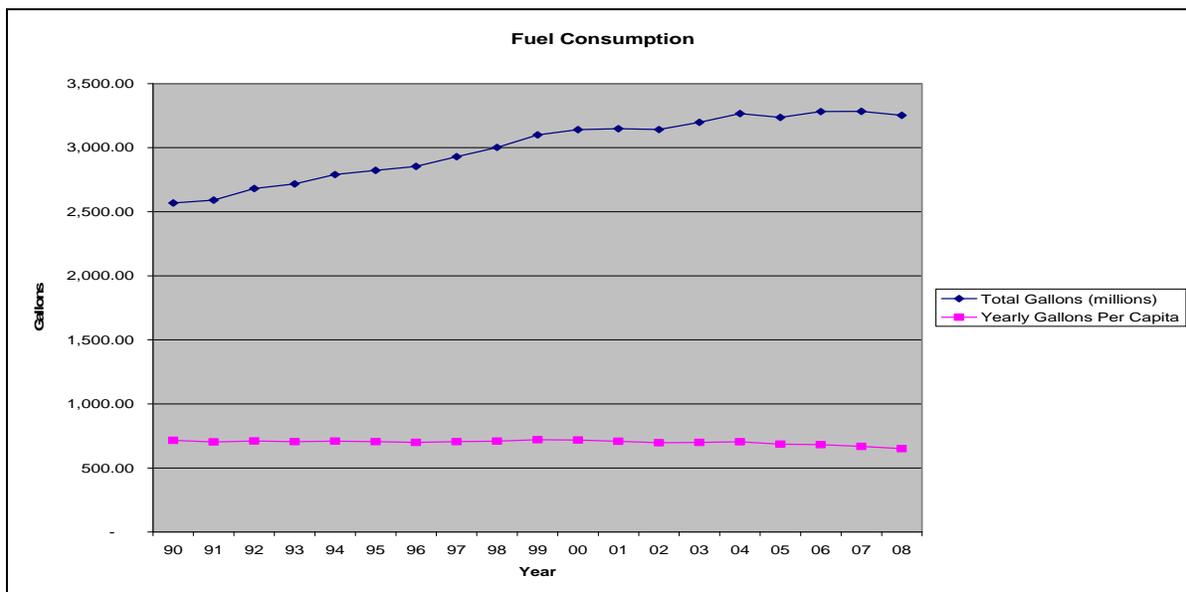
b. Motor Vehicle Fuel Tax Forecast

The forecast of motor vehicle fuel tax collections was lower in the June 2009 forecast than in the March 2009 forecast by \$48.4 million or 1.8 percent for the 2009-11 biennium and \$342.7 million or 1.3 percent for the 16-year plan period. The primary reasons for the forecast changes were projected higher retail fuel prices and slower projections for Washington real personal income growth, resulting in lower gasoline and diesel fuel tax projections.²⁰

Key variables in forecasting motor vehicle fuel tax collection include personal income, oil and gas prices, and fleet fuel efficiency.²¹

The consumption of motor fuel per capita (population 18 and over) has dropped in Washington State as a result of increasing vehicle fuel efficiency and increasing gasoline costs. In FY 2008 total motor fuel consumption dropped, with a 1 percent reduction between FY 2007 and FY 2008. Per capita consumption has declined each year since FY 1999, with a total drop of 10 percent between FY 99 and FY 08 from 720.6 gallons per capita to 650.6 gallons per capita.

**Exhibit 8.
Washington State Fuel Consumption FY 90 TO FY 08**



Source: WSDOT total VMT and population July 23, 2009.

c. Gap in Non-Highway Toll Funding

As shown in Exhibit 6, the 16-year financial plan ends with a \$791.2 billion deficit in the 2023-25 biennium excluding the highway toll accounts in the 2023-25 biennium. The only funds with deficits at the end of the 2023-25 biennium are the Puget Sound Ferries Capital Account, with a deficit of \$936.3 million and the Puget Sound Ferries Operations Account with a deficit of \$128.1 million, with the deficits beginning the 2013-15 biennium. The Washington State Ferries capital account faces an even larger deficit just outside the 16-year period due to fleet replacement needs.

²⁰ Ibid., p. 12.

²¹ Ibid., p7.

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d. Highway Toll Funds

As shown in Exhibit 9, highway toll funds from the Tacoma Narrows Bridge and the SR 167 HOT Lanes totaling \$522.8 million, net of debt service, are included in the 16-year financial plan. The major expense from these two accounts is the \$1,017.7 million in debt service on the Tacoma Narrows Bridge bonds.

The 16-year financial plan does not include revenues, or related anticipated expenses, from tolling in support of the 520 floating bridge nor from the five tolling studies currently underway.

The March forecast on which the financial plan was based assumed that the WSTC, which sets tolls, would increase the toll rate on the Tacoma Narrows Bridge to \$4.00 for electronic toll collection. The WSTC did not make this increase so the June forecast is lower. The March and June forecasts both include the assumption that tolls will increase in the outer biennia. Without these future toll rate increases, the tolling accounts ending balance would be negative at the end of the 16-year period.

**Exhibit 9.
2009-25 16-Year Tacoma Narrows Bridge & SR 167 Revenues & Expenditures**

(\$ millions)	2009-11 Biennium	2011-13 Biennium	2013-15 Biennium	2015-17 Biennium	2017-19 Biennium	2019-21 Biennium	2021-23 Biennium	2023-25 Biennium	Total
Tolling -Includes TNB Account with toll rate increases and 167 HOT Lanes Account (Excludes SR 520 Corridor Account)									
Toll facility revenue - Tacoma Narrows Bridge	115.6	136.7	168.6	197.3	209.8	214.9	221.1	227.8	1,491.9
Debt Service on TNB Bonds	-77.9	-91.0	-108.6	-134.0	-143.4	-146.9	-158.0	-158.0	-1,017.7
Transfer to Motor Vehicle Account	-5.3	-0.5	-1.5	-1.0					
Toll facility revenue - SR 167 HOT Lanes	1.5	3.4	4.5	5.9	7.6	8.3	8.6	8.9	48.6
Treasurer's interest in toll accounts	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	13.0
Total Toll Facility Revenue	35.6	50.2	64.7	69.9	75.6	77.8	73.4	80.3	522.8
Tolling facility expenditures	31.0	29.2	29.8	30.4	31.0	31.6	32.3	33.0	248.2
Beginning Balances from prior period on Toll accounts	22.5	27.1	48.1	82.9	122.5	167.1	213.4	254.4	
Projected Net Ending Balance (Toll Accounts Only)	27.1	48.1	82.9	122.5	167.1	213.4	254.4	301.8	
All expenditures, revenues not a part of the forecast approved by the Transportation Revenue Forecast Council and debt service are Leg. adopted plan assumptions									

3. Local Government

In Washington State, local transportation systems rely on a blend of federal, state, regional, and local funding mechanisms and shared responsibilities.

To inform the policy initiative analysis, this section:

- Identifies the local jurisdictions responsible for planning, operating, managing, and maintaining transportation systems.
- Describes funding sources and mechanisms available for local jurisdiction investment in transportation.
- Assesses the current local transportation funding system, including identifying the current use of available funding mechanisms and key policy trends affecting the system.

a. Local Responsibilities in Transportation

In Washington State, a host of local jurisdictions, including general purpose governments and more specialized transportation entities, are responsible for the provision of transportation systems, including roads, transit, aviation, and non-motorized transportation.

Descriptions of each jurisdiction and responsibilities are provided below.

i. General Purpose Government

- Counties: Washington's 39 counties are responsible for managing 39,828 miles of roads, approximately 3,264 bridges, and four ferry systems in the unincorporated areas of the state. The Washington State County Road Administration Board (CRAB) sets standards and provides oversight and technical assistance to the counties' road departments. Counties budget on calendar years not the state fiscal year.
- Cities and Towns: Washington's 281 cities and towns are responsible for 16,421 miles of streets and approximately 676 bridges within incorporated municipalities of the state. Cities and towns budget on calendar years not the state fiscal year.

ii. Special Purpose Districts

Special purpose districts are limited purpose local governments separate from a municipal or county government. The legislature has enabled more than 80 different special purpose districts, including several related to transportation and transit systems.

- Ports: Ports are municipal corporations of the state that are formed with a simple majority approval of voters within the proposed district's boundary. An elected board of port commissioners sets policies for the port. Ports are engaged in economic development and transportation programs. Specific transportation programs include marine shipping, operation of rail facilities, fishing terminal development, commercial and recreational marina development, and air transport, and other goods movement activities. There are 75 public port districts in 33 Washington counties. The largest port districts in the state are the Ports of Seattle, Tacoma, Vancouver, Everett, Longview, and Bellingham.
- Ferry Districts: A county legislative authority can establish a county ferry district to operate passenger-only ferry service within the district, according to RCW 36.54.110. King County established a County Ferry District in May 2008.
- Transportation Benefit Districts (TBDs): TBDs are quasi-municipal corporations and independent taxing districts formed solely for the purpose of acquiring, constructing, improving, providing, and funding transportation improvements within the district's boundaries. Under RCW 36.73 cities or counties may form TBDs and may include other cities, counties, port districts or transit districts through interlocal agreements. The members of the legislative authority (city or county) proposing the TBD is the governing body of the TBD. There are eight existing TBDs in the state: Point Roberts (Whatcom County), Liberty Lake (near Spokane), Ridgefield (Clark County), Des Moines, Lake Forest Park, Edmonds, Olympia, and Prosser.
- Public Transportation Systems. Public transportation systems are locally controlled special-purpose governments formed to provide public transit services. In Washington, there are 28 operating systems, using seven different governance structures. The enabling legislation and current use of each governance structure is identified below:
 - Public Transportation Benefit Areas (PTBAs) [RCW 36.57A]: 20 PBTAs exist across the state.
 - Metropolitan County [RCW 36.56]: King County Metro.
 - Cities [RCW 35.58.2721 and 35.95A]: Yakima, Everett, and Pullman.

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- County Transportation Authority (CTA) [RCW 36.57]: Grays Harbor and Columbia County.
- Unincorporated Transportation Benefit Areas (UTBA) [RCW 36.57.100]: Garfield County.
- Regional Transportation Authority [RCW 81.112.030]: Sound Transit in the Central Puget Sound.
- Special Needs Public Transportation Benefit Authority [RCW 36.57.130]: None formed.
- Regional Transportation Investment Districts. RCW 36.120 authorizes the formation of a special district to plan and finance improvements to highways of statewide significance in the King, Pierce, and Snohomish County region. A Planning Committee was formed in 2002 to develop plans for improvements. The plan was then adopted by the counties. However, in November 2007, voters rejected the plan and the RTID was not formed.

b. Current Funding Sources

Local jurisdictions have a toolbox of different funding mechanisms and sources available for transportation systems. Given the number of different jurisdictions, funding mechanisms, and limitations associated with those mechanisms, local transportation funding is complex. Some jurisdictions receive transportation funding from the state through direct distribution or grants. In addition, each local jurisdiction has available mechanisms to generate revenue for transportation purposes. Generally the funding mechanisms in place fall into one of the following categories:

- Federal and state grants or direct distributions.
- Local option taxes, which are “taxes that vary within the state, with revenues controlled at the local or regional level, and earmarked for transportation-related purposes”.²²
- General purpose funds, available to counties, cities, and towns.
- Fees and fares, including mechanisms such as vehicle license fees, impact fees, and farebox revenues.
- Other miscellaneous revenue, such as bond proceeds or advertising revenues.

The funding options available to each local jurisdiction and the current use of these options are described below.

i. General Purpose Government

Counties, cities, and towns, as general purpose governments, are eligible for federal and state funding sources. In particular, these general purpose governments have access to federal programs and state direct distribution and grant programs, as shown in Exhibit 10.²³

²² Todd Goldman and Martin Wachs, “A Quiet Revolution in Transportation Finance: The Rise of the Local Option Transportation Taxes,” *Transportation Quarterly* Vol. 57, No.1 Winter 2003, pp. 19-32.

²³ Transportation Resource Manual, 2009.

**Exhibit 10.
Federal and State Transportation Funding Sources Available to Counties and
Cities**

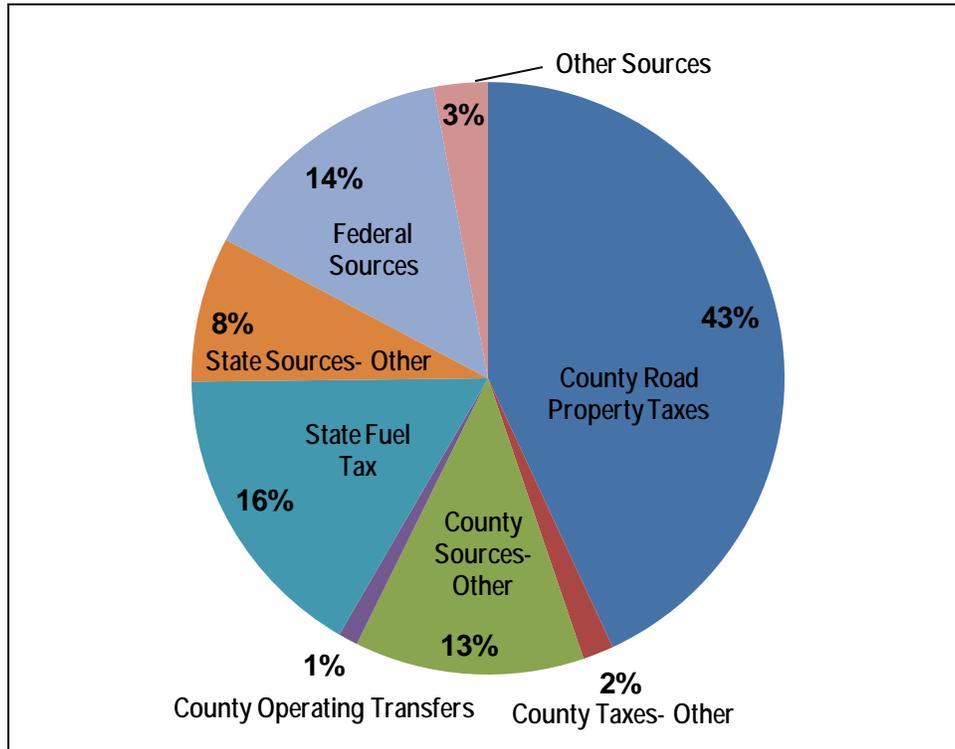
Funding Source	Counties	Cities
Federal Aid Programs		
National Highway System	x	x
Bridge Rehabilitation and Replacement	x	x
Congestion Mitigation and Air Quality	x	x
Surface Transportation Program (<i>Distribution by population</i>)	x	x
Transportation Enhancements	x	x
Highway Safety Improvement Program	x	x
High Risk Rural Roads	x	x
Safe Routes to Schools	x	x
Surface Transportation Program (<i>Distribution by population and freight and legislative projects</i>)	x	x
State Motor Fuel Tax		
4.92 cpg to counties (<i>Distribution by formula based on mileage, needs, resources and population</i>)	x	
2.96 cpg to cities (<i>Distribution by a per capita basis</i>)		x
Other State Programs:		
Transportation Improvement Board		
Urban Arterial Trust Account	x	x
Transportation Improvement Program	x	x
Small Cities Account Programs		x
Freight Mobility Strategic Investment Board		
Freight Mobility Strategic Investment Program	x	x
County Road Administration Board		
County Arterial Preservation Program (<i>0.45 cpg of state motor vehicle fuel tax, distributed according to percentage of arterial lane miles</i>)	x	
Rural Arterial Program (<i>0.58 cpg of state motor vehicle fuel tax, distributed on rural land area and mileage of paved rural arterials and collectors</i>)	x	

Source: Berk and Associates, 2009

ii. Counties

In 2007, the total amount of county road revenues equaled \$887 million. Exhibit 11 shows the percentage of funding by source. Total revenues generated by the counties, including taxes, licenses, permits, financing proceeds, and other fees and miscellaneous funding (but not operating transfers), equaled 57 percent of total funding. The largest single source for county road revenue is the County Road Property Tax at 43 percent of total funding.

Exhibit 11.
2007 County Road Revenues, Percentage by Source



Source: WSDOT- 2007 FHWA reporting of federal form #536

Washington's 39 counties are authorized to levy the following taxes for transportation, shown in Exhibit 12.²⁴

Exhibit 12.
Transportation Tax Options and Fees Available for Counties

Funding Method	Allowable Purpose	Rate	Current Use
Property Tax (RCW 36.82.040)	County roads and bridges in unincorporated areas	Up to \$2.25 per \$1,000 AV	All counties
	Ferries	Up to \$0.15 per \$1,000 AV	King County \$0.05
Motor Vehicle and Special Fuel Tax (RCW 82.80.010)	"Highway purposes" (18 th Amendment)	10% of the state fuel tax (3.75 cpg)	Not enacted, requires voter approval. Defeated twice in Snohomish County.
Commercial Parking Tax (RCW 82.80.030)	General transportation purposes	No rate set	No counties have enacted this tax.
Local Option	HOV lane development	• Motor Vehicle	Only King, Pierce,

²⁴ Transportation Resource Manual, 2009: Washington State Department of Revenue

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Funding Method	Allowable Purpose	Rate	Current Use
Taxes for High Occupancy Vehicle Systems (RCW 81.100.030, 81.100.060)	and HOV program support	Excise Tax up to 0.3% <ul style="list-style-type: none"> • Employer Tax up to \$2 per employee per month 	and Snohomish are eligible. Not enacted.
Real Estate Excise Tax (RCW 82.46.10)	“Public works” capital projects (including streets)	<ul style="list-style-type: none"> • Dependent on size, GMA, and use: 0.1%, 0.3%, 0.5% 	All counties
Impact Fees (RCW 82.02)	Facilities (roads, schools, parks, etc) new development/capacity only	<ul style="list-style-type: none"> • Varies by project. 	Varies by project.
Transportation Benefit District (TBD) Funding Mechanisms (RCW 36.73)	Roadways, high capacity transportation systems, public transit, and other transportation management programs	<ul style="list-style-type: none"> • Up to \$100 license fee with voter approval • Up to \$20 license fee councilmanic or voter approved • Sales tax • Tolls • Property tax 	Not enacted by any county (acting as the TBD legislative authority).

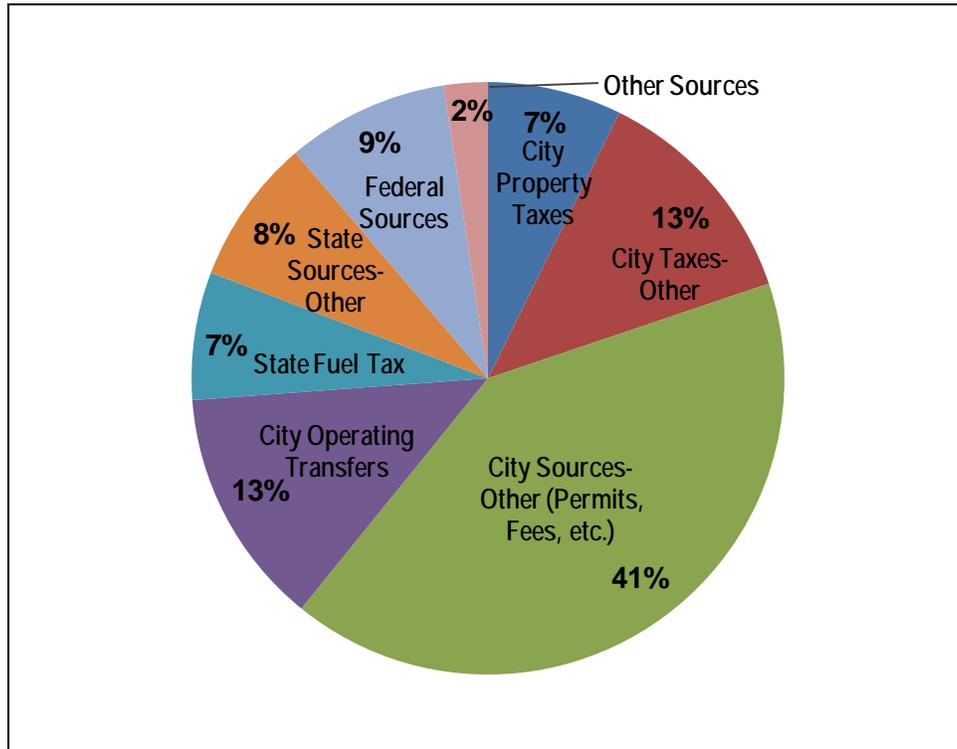
Other transportation revenue sources include SEPA mitigation, utility assessments, timber harvest tax, and timber sales.

iii. Cities

In 2007, the total amount of city transportation revenues equaled \$1.3 billion. Exhibit 13²⁵ shows the percentage funding by source. Total revenues generated by the cities, including from taxes, fees, permits, licenses, financing proceeds, and other fees and miscellaneous funding (but not operating transfers), equaled 61 percent of total funding. Other city sources, such as charges for goods and services and financing proceeds, account for the largest share of total transportation revenue at 41 percent.

²⁵ WSDOT, 2007.

Exhibit 13.
2007 City Transportation Revenues, Percentage by Source



Source: WSDOT- 2007 FHWA reporting of federal form #536

Cities have the authority to levy certain transportation taxes, as shown in Exhibit 14, but unlike counties, do not have a dedicated road revenue source for roads (county road property tax).

Exhibit 14.
City Transportation Taxes

Funding Mechanism	Allowable Purpose	Rate	Current Use
Commercial Parking Tax (RCW 82.80.030)	General transportation purposes	No rate set	SeaTac, Bainbridge Island, Bremerton, Mukilteo, Tukwila, Seattle
Border Area Motor Fuel Tax (RCW 82.47.020)	For street maintenance in cities and towns within 10 miles of the Canadian border	Up to \$0.01	Cities of Sumas, Blaine, Nooksack, and Point Roberts TBD
Real Estate Excise Tax (RCW 82.46.10)	"Public works" capital projects (including streets)	Dependent on size, GMA, and use: 0.1%, 0.3%, 0.5%	Several cities across the State have enacted REET
Impact Fees (RCW 82.02)	Facilities (roads, schools, parks, etc) new development/capacity	Dependent on size, GMA, and use: 0.1%, 0.3%, 0.5%	Varies by project

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Funding Mechanism	Allowable Purpose	Rate	Current Use
	only		
Transportation Benefit District (TBD) Funding Mechanisms (RCW 36.73)	Roadways, high capacity transportation systems, public transit, and other transportation management programs	<ul style="list-style-type: none"> • Up to \$100 license fee with voter approval • Up to \$20 license fee councilmanic or voter approved • Sales tax • Tolls • Property tax 	Eight existing in the state: Point Roberts, Liberty Lake, Ridgefield, Des Moines, Lake Forest Park, Edmonds, Olympia, and Prosser
Bridge Tolls (RCW 35.74.05)	May build and maintain toll bridges and charge and collect tolls, subject to toll rate approval by the WSTC if the toll or change in toll would have a significant impact on a state facility		None

Cities can use a variety of general purpose taxes and fees for transportation funding. Available general purposes taxes cities can choose to use for transportation funding include:

- Retail sales and use taxes
- Real and personal property taxes
- Other licenses
- Other fees and taxes ²⁶

Cities are reliant on these general purpose funds for transportation investment. In 2007, Washington cities spent eight percent of their operating and special funds budgets on transportation – or \$339.2 million.²⁷ It is important to note, however, that transportation is one of several competing needs (others, for example, include law and justice, fire and emergency, etc.) and may not be the highest priority.

iv. Special Purpose Districts:

As limited purpose governments, transportation and transit-related special purpose districts have the authority to levy specific taxes and/or impose fees and fares to raise transportation revenue. Each local jurisdiction has a number of sources from which to raise revenue for transportation, identified in Exhibit 15.²⁸

²⁶ Transportation Resource Manual, 2009.

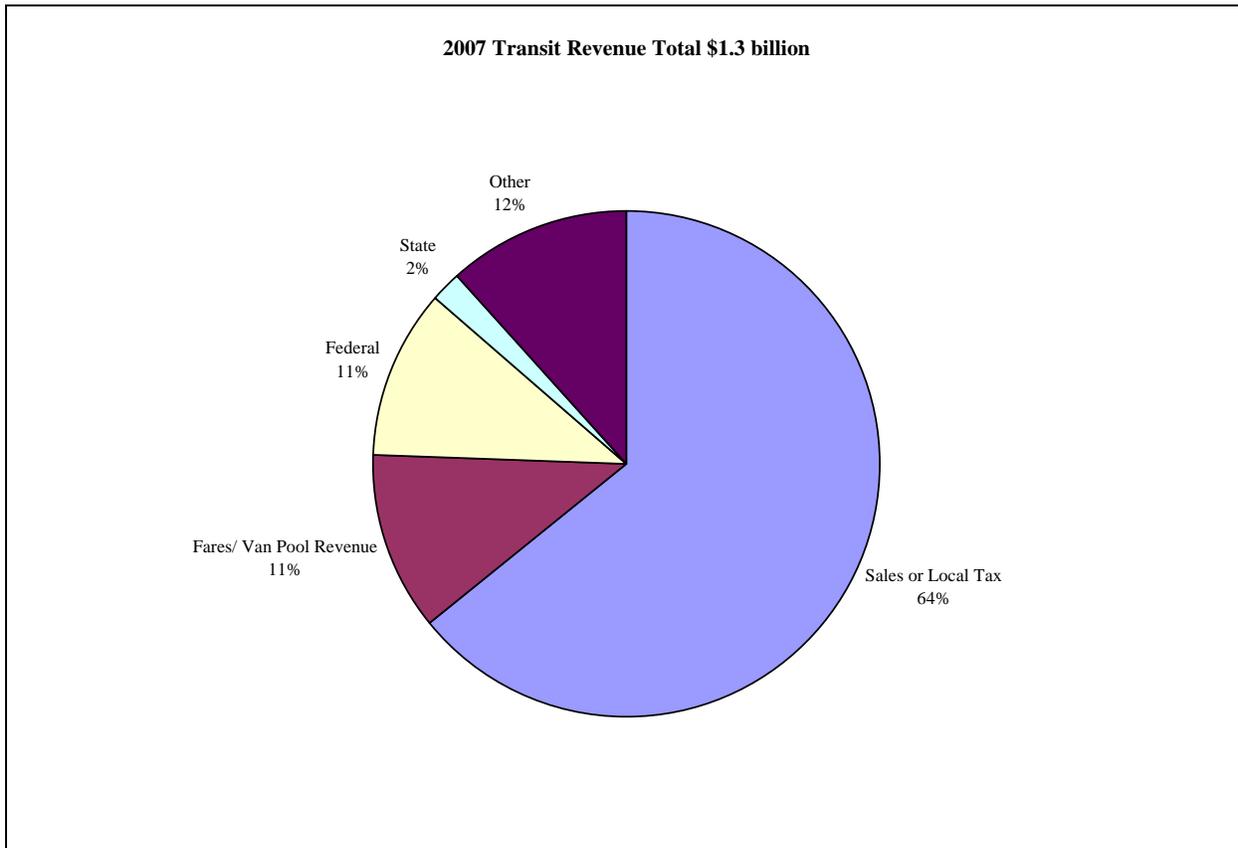
²⁷ Association of Washington Cities. City Transportation 101 Presentation to the Senate Transportation Committee January 21, 2009.

²⁸ Transportation Resource Manual, 2009 and Cambridge Systematics *Long-Term Financing Study*, 2007.

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Washington state has 28 transit districts, including Sound Transit. In 2007, the transit districts other than Sound Transit, received \$1.3 billion in operating and capital revenue, of which 64 percent was from sales and other local taxes.

**Exhibit 15.
Transit Systems Excluding Sound Transit 2007 Revenue Sources**



Source: Summary of Public Transportation 2007

King Country METRO, which had 62 percent of all transit passenger trips in the state in 2007, Community Transit, which had 6 percent, and Sound Transit are the only transit agencies that have used the maximum 0.9 percent sales tax authority. Kitsap Transit, which had 2 percent of passenger trips in 2007, has a local option sales tax of 0.8 percent, with other transit agencies ranging from 0.2 percent to 0.6 percent.

Exhibit 16.
Available Funding Sources for Transportation Special Purpose Districts

		Funding Mechanisms		
Jurisdiction	Taxes	Fees, Assessments, and Fares	Bonds	Other
Ports <i>(Title 53 RCW)</i>	<ul style="list-style-type: none"> • Property tax levy up to \$0.45 per \$1,000 AV 	<ul style="list-style-type: none"> • User fees • Tolls on bridges or tunnels 	<ul style="list-style-type: none"> • Bond proceeds 	<ul style="list-style-type: none"> • Interest income • Federal grants • Operating revenues
Ferry Districts	<ul style="list-style-type: none"> • Annual ad valorem property tax of up to \$0.75 per \$1,000 AV (RCW 36.54.130) • Voter- approved annual excess property tax (RCW 36.54.140) 			
TBDS <i>(RCW 36.73)</i>	<ul style="list-style-type: none"> • Border Area Motor Vehicle Fuel and Special Tax <i>(enacted in Point Roberts TBD)</i> • Local Option Taxes: <ul style="list-style-type: none"> ▪ Single-year, voter approved excess property tax levies ▪ Multi-year voter approved levies for bond redemption ▪ Voter approved sales tax up to 0.2% 	<ul style="list-style-type: none"> • Voter-approved motor vehicle license renewal fee up to \$100 (or up to \$20 without voter approval if TBD-wide, RCW 36.37) <ul style="list-style-type: none"> ▪ \$20 fee enacted in Des Moines, Edmonds, Lake Forest Park, Olympia, and Prosser ▪ \$100 fee not enacted • Voter approved sales tax up to 0.2% • Voter-approved vehicle tolling (administered by WSDOT) • Late-comer fees • Commercial and industrial development fees 	<ul style="list-style-type: none"> • General Obligation Bonds 	<ul style="list-style-type: none"> • Gifts and donations • Grants • LID formation
Public Transportation Systems	<ul style="list-style-type: none"> • Local Option Taxes (requires voter approval): <ul style="list-style-type: none"> ▪ Sales and use tax up to 0.9% ▪ Household up to \$1 per month per housing unit <i>(not being used)</i> ▪ B&O tax: no limit ▪ Utility tax: <i>(only City of Pullman)</i> ▪ PBTAs may use motor vehicle excise tax (up to 0.4% on renewals); sales and use tax (up to 0.4%) for passenger ferries with voter approval • High capacity transportation taxes (requires voter approval) (RCW 81.104.140—81.107.170) <ul style="list-style-type: none"> ▪ Sales and use tax up to 0.9-1%(depending on if criminal justice tax also applied in county) ▪ Employer tax up to \$2 per month per employee (RCW 81.100.030) 	<ul style="list-style-type: none"> • Farebox and pass revenues • Ferry tolls (PBTAs for ferry service) 	<ul style="list-style-type: none"> • Revenue bonds 	<ul style="list-style-type: none"> • Federal and state grants • Contracts for service to community colleges, universities • Pass programs for schools • Advertising revenues • Leasing revenues • Other, including sales of maintenance services, rental of vehicles and parking lots, etc.
RTIDs <i>(Not in use)</i> <i>(RCW 36.120)</i>	<ul style="list-style-type: none"> • Sales and use tax up to 0.1% • Local option fuel tax at 10% of the state fuel tax rate • Parking Tax • Employer tax up to \$2 per month per employee 	<ul style="list-style-type: none"> • Vehicle registration fee up to \$100 per year • Tolls on facilities identified by Improvement Plan and approved by State 		

v. Other Alternate Funding Mechanisms Available

In addition, the following mechanisms are also available for transportation funding.

- Local Improvement Districts (LIDs): LIDs are a special purpose financing mechanism that can be created by local governments (cities, counties, port districts, water districts, transportation benefit districts, and others) to fund improvements in specific areas, as authorized under RCW 36.94.220 36.94.300 35.43 and 35.56. LIDs assess a tax on property owners who benefit from the improvements. LIDs can be initiated by a local government or by petition from property owners. The improvements must directly benefit nearby property owners.
- Road Improvement Districts (RIDs): Similar to LIDs, RIDs are a special purpose financing mechanism that can be initiated by the counties to fund road improvements in unincorporated areas (RCW 36.88).
- Value capture is a method to help pay for a new piece of infrastructure, such as a road, by assessing a property that will benefit from the new infrastructure. The assessment levied on the affected properties tries to “capture” some portion of the increase in value that results from the new infrastructure. Local Revitalization Financing (LRF), as enacted in the Laws of 2009, Chapter 270, is the latest tool developed by the state. Other past Tax Increment Financing (TIF) mechanisms include the Local Infrastructure Financing Tool (LIFT) and the Community Revitalization Financing (CRF). Cities, towns, counties, and port districts are eligible to submit applications on a first-come basis on September 1, 2009.²⁹

2. Assessment of the Local Funding Transportation System

While many local funding mechanisms for transportation exist, not all are used to the same extent, if they are used at all. This section summarizes the current use of these tools by jurisdiction, and in particular, highlights mechanisms that are under-used and not used, as well as particular restrictions that may factor into their rates of use.

i. Counties

- All counties use the property tax levy (road levy), which is the county’s largest single revenue source for local transportation. The road levy is collected only in the unincorporated parts of counties and revenues must be expended in these areas. As shown in Exhibit 17, Ferry County and Walla Walla County levy the full capacity (\$2.25 per \$1,000 AV), but Ferry County diverts some of the tax for other purposes as is allowed by state law. County road levy collections are limited by both the \$2.25 per \$1,000 AV and the 1% limit enacted as a result of Initiative-747. As a result, counties are generally limited in their ability to tap unused capacity at a councilmanic level and where they might wish to exceed the 1% levy growth limit they must seek voter approval. Twenty-nine (29) of the 39 counties divert a portion of their road levy taxes to other uses, primarily traffic policing expenses.

²⁹ Foster Pepper. Comparison of Tax Increment Financing in Washington.

**Exhibit 17.
Counties Road Property Taxes**

County	Road Levy \$/1,000	% of maximum allowed \$2.25/\$1,000 allowed	Some Funds Diverted
Ferry	2.25	100%	yes
Walla Walla	2.25	100%	
Grays Harbor	2.208	98%	yes
Grant	2.189	97%	yes
Columbia	2.171	96%	yes
Douglas	2.156	96%	
Lincoln	2.154	96%	yes
Lewis	2.129	95%	yes
Whitman	2.123	94%	yes
Cowlitz	2.054	91%	yes
Benton	1.892	84%	yes
Franklin	1.859	83%	
Mason	1.82	81%	yes
Stevens	1.783	79%	
Pacific	1.776	79%	yes
Garfield	1.763	78%	
King	1.746	78%	yes
Pend Oreille	1.725	77%	yes
Klickitat	1.719	76%	
Skagit	1.623	72%	yes
Wahkiakum	1.564	70%	
Yakima	1.548	69%	yes
Clark	1.527	68%	yes
Adams	1.524	68%	yes
Pierce	1.524	68%	yes
Whatcom	1.516	67%	yes
Okanogan	1.501	67%	yes
Chelan	1.476	66%	
Spokane	1.441	64%	yes
Skamania	1.386	62%	
Thurston	1.366	61%	yes
Kittitas	1.259	56%	yes
Kitsap	1.247	55%	yes
Jefferson	1.244	55%	yes
Snohomish	1.239	55%	yes
Island	1.235	55%	yes
Clallam	1.165	52%	yes
Asotin	1.086	48%	
San Juan	0.579	26%	yes

- No counties have implemented:
 - Fuel tax, which requires voter approval and is limited to highway purposes.
 - Commercial parking tax.

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- Local Option Taxes for High Occupancy Vehicle (HOV) Systems are available to the counties of King, Pierce, and Snohomish for HOV related development.

ii. Cities

- Cities rely on a combination of general purpose taxes and fees for transportation funding.
- Six cities have implemented the commercial parking tax.
- The Border Area Motor Vehicle Fuel and Special Fuel tax is a transportation option limited to cities, towns, and TBDs within ten miles of an international border. Four city TBDs have enacted this tax.

iii. Special Purpose Districts

Not all special purpose districts authorized by statutes are in frequent use, as highlighted below.

- RTID is the only transportation-related special purpose district not being used. Only the King, Snohomish, and Pierce county region was authorized under state statute to form a RTID. In addition, the statute requires voter approval for an RTID plan. In November 2007, voters rejected the RTID Planning Commission Plan, along with the Sound Transit Phase II proposal.
- There are eight TBDs formed in the state. RCW authorizes cities, towns, and counties to form TBDs, with the restriction that no TBDs could be formed in King, Pierce, or Snohomish County prior to December 1, 2007.
- Some SPDs are, by their nature, restricted in use. For example, all counties can form a County Ferry District for the limited use of operating a passenger-only ferry. Only King County has established a County Ferry District.
- Public transportation systems have several local option taxes available for use but some are not used as frequently.
- Local Option Taxes. The City of Pullman is the only public transportation system levying a utility tax, equivalent to .314 percent sales tax.³⁰
- Local Option Taxes for High Capacity Transportation (HCT) are available to regional transit authorities (RTA) in King, Pierce, and Snohomish Counties and transit agencies in Thurston, Clark, Kitsap, Spokane, and Yakima Counties for the development of HCT, commuter rail, and feeder transportation systems. Only RTAs in King, Pierce, and Snohomish have enacted a HCT tax.

iv. Reasons Why Local Funding Options Are Not Being Fully Used

Reasons why local transportation funding mechanisms are not fully used fall under four main categories, each explored in greater detail below.

³⁰ Transportation Resource Manual, 2009.

a. There may be significant political hurdles associated with implementing a funding mechanism.

Political considerations in the use of local transportation funding mechanisms are two-fold: (1) voter approval may be an explicit requirement of enacting a funding mechanism and (2) the public's negative reaction and the subsequent political ramifications to an increase in taxes or fees factor into the decision of whether or not to use a local mechanism.

First, many local funding mechanisms require voter approval to increase taxes or fees for transportation funding. As indicated in earlier sections, examples of mechanisms requiring voter approval include most local tax increases and the license fee of up to \$100.

Voter approval for a tax increase is difficult to obtain for a number of reasons. Geography can affect the likelihood of voter approval for transportation taxes. As has been noted in past statewide ballot measures, some parts of the state are more likely to accept tax increases than others. Local jurisdictions in parts of the state with a history of not approving tax increases may be less likely to even consider tax increases as a realistic option.

In addition, local jurisdictions may not have the internal resources to prepare for and implement an effective voter campaign. There are, however, examples across the state where local jurisdictions have received voter approval for transportation funding. For example, King County Metro Transit and Community Transit in Snohomish County are at full capacity of the sales tax rate (0.9%) for transit funding, which required voter approval.

Second, even if voter approval is not technically required, raising local taxes and fees is politically costly. There is a general hesitancy to raise taxes and fees because it is a politically undesirable action to take. In addition, the revenue generated by the mechanism may be small and not be considered worth the political and extra administrative/implementation costs.

b. The funding mechanism may be restricted in its use or applicability.

Transportation funding mechanisms may be limited in their use by design or may be less applicable to a jurisdiction's local market conditions.

First, some funding mechanisms are designated for use by specific jurisdictions. Examples include the border area motor fuel tax, authorized for cities and towns within ten miles of the Canadian border; local option taxes for HOV systems, authorized for King, Pierce, and Snohomish Counties (with voter approval); and local option taxes for RTIDs, authorized for King, Pierce, and Snohomish Counties (with voter approval).

Second, the funding mechanism may require funding be used for particular purposes. For example, revenue generated from the local option motor vehicle and special fuel tax for counties is designated for "highway purposes" as defined by the 18th amendment, which includes the construction, maintenance and operation of city streets, county roads, and state highways, and the operation of ferries. Impact and mitigation fees, while not limited to transportation uses, can only be employed for public improvements for specific development projects. Likewise, LID and RTID assessments must benefit the properties assessed. The total assessment cannot be greater than the demonstrated benefit.

Third, local conditions may make a funding mechanism less desirable, effective, or applicable. A County Ferry District is only applicable to counties where there is a demand for ferry service. The commercial parking tax is a local funding tool that makes sense in areas where there is market for

Implementing Alternative Transportation Funding Methods Policy Initiatives

paid parking. In the state, there are a limited number of urban areas where this market for commercial parking exists. No counties have implemented the commercial parking tax. Another rural and urban difference can exist in the case of transit; lower demand for transit in rural areas makes it more difficult for transit agencies to receive voter approval needed to use local transit option taxes.

For local jurisdictions near the borders of Oregon and Idaho, the use of local sales tax may be less desirable than in other parts of the state because of lower sales tax rates in Idaho and no sales tax in Oregon. Local jurisdictions may be less inclined to use the sales and use tax as a transportation funding mechanism because of the closeness of these other markets. In addition, when local sales tax options are used in those areas, the revenues generated may be lower than expected because of access to these other low-sales tax or no sales tax markets.

c. Implementation of a funding mechanism can require a high level of inter-jurisdictional cooperation and coordination, which may be difficult to obtain.

Coordination between local jurisdictions is required to implement some funding methods, including:

- The local option motor vehicle and special fuel tax requires greater coordination between a county and cities. Counties are authorized to enact the tax that will benefit all jurisdictions within the county. Gas tax revenues are distributed to the county and the cities contained in the county on a weighted per capita basis.
- Cities and counties are authorized to form TBDs through interlocal agreements. These TBDs may contain multiple jurisdictions, including port and transit districts, but all jurisdictions must approve the TBD formation.
- Formation of a RTID in the King, Pierce, and Snohomish County area requires the vote of the county councils.

d. In the case of TBDs, the mechanism has only recently become available as a funding tool.

TBDs, under the current authority, are a new tool for cities, towns. The effective dates in which a local jurisdiction could first form a TBD varied as follows:

- July 2007: All counties except King, Pierce, and Snohomish counties
- December 2007: All counties, including King, Pierce, and Snohomish counties
- January 2008: All counties and cities within the 36 counties
- May 2008: All cities and counties³¹

Given the short time that this tool has been available for use, it is not surprising that there are not more TBDs in existence as of August 2009. In fact, given the short time line, there has been a lot of activity around TBDs. Six of the eight TBDs in existence were formed under the new authority. The City of Sequim's TBD was narrowly defeated by the voters. Currently, the city of Burien and the city of Bremerton are in the TBD process of formation and seeking voter approval for the TBD's revenue options.

³¹ Association of Washington Counties, 2007.

v. Local Tax Trends

Many of the transportation funding mechanisms available to local jurisdictions come in the form of local option taxes. The increasing reliance on these local option taxes is a trend seen both nationally and in Washington that is likely to continue. Nationally, the trend towards local option taxes, and sales tax in particular, is coupled with little increase in the use of user fees.³² In Washington, local option taxes—and again sales tax in particular—are an important revenue source for public transit. Most of these local option taxes (including those for high capacity transit, HOV Systems, ferry services, RTIDs, TBDs) require voter approval for enactment.

vi. Increasing Role of Transit in Urban Areas

After decades of decreasing commuter use of public transportation between 1980 and 2000 in the U.S. generally and Washington in particular,³³ ridership trends are again increasing. In 2007, King County Metro Transit reported a record-setting seven percent increase in one year with an estimated 110 million passenger boardings.³⁴ Spokane Transit has experienced 9.1 percent increase in rides between November 2007 and November 2008.³⁵ In addition, there is also a greater focus on non-motorized transportation options, such as bicycle lanes. This trend is likely to continue into the future because the factors attributed to increased transit use, such as higher fuel prices, concern regarding global warming, and regional traffic congestion, are not going away.

This trend, however, is not seen uniformly throughout the state. Increasing transit use is strong in urban areas, but is not as prevalent in rural parts of the state.

A related trend is the increasing recognition of the strong connection between transportation and land use. Concepts such as smart growth, which emphasize walkable communities and providing a variety of transportation options, and transit-oriented development are influencing planning and land use decisions at the local level.

3. Funding Gap

Similar to state and federal realities, local government needs exceed current funding capacity. The Association of Washington Cities reports that cities anticipate revenues of \$5.1 billion for transportation between 2004 and 2009, but project needs total \$8.5 billion—a shortfall of \$3.4 billion.

³⁶

4. State and Local Funding Needs

A comprehensive view of statewide needs at all jurisdictional levels does not currently exist. For the purposes of this analysis, the consultants relied on the 2007-2026 Washington State Transportation Plan adopted by the Washington State Transportation Commission (WSTC) in November, 2006. The Transportation Plan gave only a cursory review of local needs and instead published a folio in October 2004, outlining the perspectives of cities and counties. The Transportation Plan will be

³² Goldman and Wachs, 2003.

³³ Urban Form Lab, Department of Urban Design and Planning at the University of Washington, "Travel Indicators and Trends in Washington State—Summary" prepared for WSDOT, April 2005.

³⁴ King County Metro, < http://your.kingcounty.gov/kcdot/news/2008/nr080123_ridership.htm>.

³⁵ Spokane Transit, < <http://www.spokanetransit.com/aboutsta/mediareleases.asp>>.

³⁶ Association of Washington Cities. *City Transportation 101* Presentation to the Senate Transportation Committee January 21, 2009.

Exhibit 18.
Unfunded State Needs 2007-26 Washington State Transportation Plan

	High Priority	Medium Priority	Low Priority
Preservation	\$13.379 B	\$2.805 B	\$74 M
Highway Pavement	\$483.5 M		
Highway Bridge	\$6.8 B		
Other Facility	\$6.05 B		
Safety	\$2.921 B	\$98.52 M	\$13.5 M
Highway	\$620.6 M		
Local Road	\$2.3 B		
Economic Vitality	\$4.504 B	\$839 M	
Freight Constraints (I-5)	\$3.46 B		
Weather-related Constraints on Freight Routes	\$1 B		
Technology for Freight Movement	\$31 M		
Mobility	\$4.446 B	\$5.814 B	\$1.791 B
Transportation Access	\$890 M		
System Efficiencies	\$1.56 B		
Bottlenecks and Chokepoints	\$2 B		
Environmental Quality and Health	\$644 M	\$354 M	
Total	\$25.89 B	\$9.91B	\$1.87B
Note: All estimates in 2005 dollars. Source: The Washington Transportation Plan 2007-2026			

ii. Washington State Ferries

The Washington State Ferry System released its Final Long Range Plan on June 30, 2009. This Plan fits under the umbrella of the statewide Transportation Plan, but is updated under a different process.

The Long Range Plan discusses investment needs as they relate to the 16-year legislative financial plan and over a 22 year time horizon projecting out an additional six years to 2030. The 16-year plan matches the 2009-11 legislative financial plan and includes capital projects that are absolutely necessary to support existing service levels. This includes the preservation of terminals and vessels, replacing retiring vessels, modest investments in terminal improvements and an allowance for emergency repairs and vessel improvements to meet regulatory requirements. The total commitment for essential capital projects in the 16-year plan is \$2.28 billion. The 16-year legislative financial plan projects a deficit in the Puget Sound Ferries Capital Account of \$936.23 million by the 2023-25 biennium and a \$128.09 million deficit in the Puget Sound Ferries Operations Account.

The funding problem for WSF becomes more severe in the 22 year time horizon, with the Long Range Plan estimating total capital expenditure needs of \$4.69 billion. Nearly 60 percent of the

additional \$2.41 billion in capital expenditures in the final six years of the plan is the result of the requirement to replace five vessels that are due for retirement between 2027 and 2029.

iii. Amtrak Cascades

In February 2006, the Washington State Long Range Plan for Amtrak Cascades was released. While passenger rail is a component of the statewide Transportation Plan, the Amtrak Cascades Plan is updated using its own process. WSDOT continues to work with freight rail, ports and other partners to ensure adequate capacity for the entire rail system. The 2006 Plan outlined the capital and operating investments necessary to meet WSDOT's visions increased passenger rail service that maintains freight capacity needs.

The Plan estimated total rail corridor capital costs of \$6.5 billion by 2023 (estimates are in 2006 dollars). Investments include planned track and facility improvements, as well as train equipment purchases. Since the rail corridor goes into Oregon and British Columbia, these two jurisdictions were assigned \$421 million and \$500 million to \$1 billion respectively of the investment burden.³⁹ Within Washington, Sound Transit, Amtrak and BNSF were also assumed to share investments. The Plan noted that none of the jurisdictions or agencies had made a long term financial commitment.

Operating costs were estimated to rise from \$20 million in 2002 to \$83.4 million in 2023 (both estimates are in constant 2003 dollars). Since operating revenues do not cover the full costs of operations, the operating subsidy for the time period was also estimated. Over the 20 year period, it was assumed that farebox recovery would increase and average 75% over the period and that fares would not increase. Using these assumptions, the Plan estimated that Amtrak Cascades would require just under \$165 million in operating subsidies over the 20 year period.

On December 12, 2006 the Transportation Commission approved the Statewide Rail Capacity and Systems Needs Study funded and mandated by the Legislature (ESSB 6091, Section 206). The Study concluded that the State should continue to participate in the both the freight and passenger rail systems. It also noted that the systems was near capacity and that pressure on the system would increase in the decades ahead. While the report made six policy recommendations, it did not specifically estimate rail system needs.

iv. Local Needs (Cities and Counties)

As part of the Washington State Transportation Plan 2007-2026, the Association of Washington Cities, the Washington State Association of Counties, the County Road Administration Board and the Transportation Improvement Board worked with WSDOT to identify needs and potential solutions. While these needs do not figure prominently in the final plan, a folio was produced in October 2004 as a communication tool. The updated Plan will be available in late 2010 and should provide new information on city, county, and regional needs. The following were taken from the folio produced by the Transportation Commission in 2004.

Needs specific to cities included the following:

- Cities have no dedicated revenue source for preservation and maintenance. Programs such as WSDOT's Small City Pavement Preservation Program, which provided over \$9 million for 163 small city projects, have been discontinued.

³⁹ Capital costs for British Columbia were presented as a range because the Plan considered two scenarios.

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- Cities rely heavily on their general fund dollars for transportation. Increasingly, transportation must compete with essential services such as fire and police for general fund dollars.
- Of total city transportation expenditures, approximately 1/3 can be invested in maintenance/preservation due to restrictions.
- Competitive grants and a half of cities' share of the 2.46 cents of gas tax are targeted to new construction, which results in deferred maintenance /preservation.
- Available local options cannot generate enough funds to provide for construction, maintenance, and preservation programs.

Needs specific to counties included the following, per the October 2004 WTP folio:

- Counties can access the County Arterial Preservation Program (CAPP) and the Rural Arterial Program, but neither are sufficient to keep up with the increasing needs.
- Approximately half of the roads making up the County Freight and Goods system have deficiencies that necessitate weight restrictions and road closures during certain times of the year, making these routes unusable for reliable freight transport. The cost of upgrading these facilities is in the range of \$2 billion.
- The four-county operated ferries in Pierce, Skagit, Wahkiakum, and Whatcom counties have needs related to vessel and terminal asset preservation.

Counties and Cities identified the following:

- Limited transportation resources are not flexible enough. Many urban and urbanizing areas find they are spending preservation funding to meet the capacity needs of new growth while rural areas are spending capacity expansion funding to preserve the system.
- No funding available for bridges less than 20 feet and limited funding for high cost bridges.
- Of the 3,929 bridges owned by cities and counties, 1,005 need replacement or major rehabilitation, with a cost of over \$1 billion.
- Need adequate resources to maintain bicycle and pedestrian facilities, sidewalks, paths and trails.
- Lack of multi-modal funding will continue to present a roadblock to addressing issues—other sources besides the gas tax and vehicle fees will need to be considered and tapped.

Cities proposed the following solutions:

- Additional ongoing flexible state revenue stream for essential transportation needs (i.e. arterial resurfacing and reconstruction).
- Local Options, for example, VMT charge, weight based fees etc.
- Increased or reinstated grant funding:
 - Small City Pavement Program
 - Corridor Funding
 - TIB Funding
 - Dedicated funding for local freight mobility projects

- Expansion/Creation of regional transportation authority.

Counties proposed the following solutions:

- Additional program funding for preservation, maintenance, safety improvements, construction and local freight improvements in order to maintain and improve the system.
- The funding should be flexible enough to allow local elected and professional staff to manage diverse demands.

v. Transit District Needs

As noted by the Washington State Transit Association in a report to the 2009 legislature, 2008 was year of change and challenges for most of Washington State's transit systems with sales tax revenues declining in response to economic conditions, and rising fuel costs and ridership. Transit systems are, at best, maintaining service levels by drawing some reserve levels, raising fares, and/or deferring capital projects. "Almost every system in the state will face reductions in the 2010-14 timeframe if the economy does not improve or if new revenue is not found."⁴⁰

Transit systems may be further strained if, as part of the effort to reduce VMT and meet GHG emission reduction goals, there is a significant shift in ridership to transit. This will require additional funding, particularly operational funding which is largely supported by local sales and other taxes.

D. Funding Method Alternatives

The roles of the federal, state, and local governments in transportation funding are inter-related. The federal government provides funding for state and local governments and also authorizes them to impose taxes and fees. The state distributes motor vehicle fuel taxes to local governments, provides direct grants and programmatic support, and authorizes local jurisdictions to impose transportation taxes and fees. The funding alternatives presented in Exhibit 19 include:

- Existing funding methods. Some of these funding methods could be restructured to either increase sustainable funding or to meet policy objectives.
 - Motor Vehicle Fuel Tax: Recommendations to index the motor vehicle fuel tax are intended to make the taxing source keep pace with transportation costs. The National Surface Transportation Infrastructure Financing Commission recommends immediately increasing the motor vehicle fuel tax and indexing it to inflation to reduce the projected deficit in the Highway Trust Fund.⁴¹The 2007 *Long-Term Financing Study* recommended indexing Washington State's motor vehicle fuel to keep the purchasing power of the fuel tax and/or that the legislature consider replacing some of the fuel tax with a sales tax on motor vehicle fuel.⁴²
 - Tolling: The National Surface Transportation Infrastructure Financing Commission recommends that the federal government expand its authorization of the states to toll interstates to create funding for new capacity, preservation, and to relief congestion.⁴³

⁴⁰ Washington State Transit Association, *Public Transportation in Washington State, Current Status and Outlook 2009-14*, p. 2.

⁴¹ National Surface Transportation Infrastructure Financing Commission, pp. 11-12.

⁴² Long-Term Financing Study, p. ES-9.

⁴³ National Surface Transportation Infrastructure Financing Commission, pp. 12-15.

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The Climate Action Task Force recommends that Washington State apply tolling more broadly to achieve revenue, efficiency, and GHG gas emission goals.⁴⁴ Systemwide tolling is also a consideration in the PSRC's Transportation 2040 EIS.

- Licenses, Permits, and Fees: The National Transportation Policy Project recommends feebates, or reductions in fees to encourage buying fuel-efficient, low-emitting vehicles.⁴⁵
- Motor Vehicle Excise Tax: The WSTC's 2009 *Long-Term Ferry Financing Study* recommended that the legislature impose a higher MVET tax to provide funding for Washington State Ferries capital program and potentially other mode needs.⁴⁶
- Ferry Fares: The *Washington State Ferries Long Range Plan* completed in June 2009 recommends a fuel surcharge on ferry fares to provide more stable funding when fuel prices spike. The legislature has directed Ferries to evaluate other costs savings and fuel price stabilization strategies before implementing a surcharge. Other fare modifications are recommended for future consideration in the *Long-Range Plan* to help manage demand and/or increase revenues.
- Vehicle Sales Tax. At the state level, the current exemption for hybrid vehicles and vehicles exclusively using alternative fuels could be extended.
- Emerging Funding Sources. This includes a complete list of potential funding sources, some of which have been recommended in recent studies and some of which have been considered but not recommended. Emerging funding sources fall into two categories:
 - User-Based Funding Fees: Federal and state studies have recommended that transportation funding shift to a user-based funding system that integrates energy, environmental, and transportation policy through pricing.
 - Vehicle Mile Traveled (VMT) fees, which have been recommended by the National Transportation Policy Project, the National Surface Transportation Infrastructure Financing Commission, and the 2007 *Long-Term Ferry Financing Study*.
 - Vehicle Weight Mile fee: Similar to the VMT fee, this fee has been recommended to support freight investments.
 - Container fees: The JTC's 2008 *Freight Investment Study Final Report*, concluded that a per container fee over \$30 could harm Washington State's freight competitiveness.⁴⁷ The National Transportation Policy Project recommends a new mode-neutral freight fee.⁴⁸
 - Sales Tax on Motor Vehicle Fuel: The 2007 Long-Term Transportation Financing Study recommended that the legislature consider a sales tax on

⁴⁴ Leading the Way: Implementing Practical Solutions to the Climate Change Challenge, p. 29.

⁴⁵ National Transportation Policy Project, p. 88.

⁴⁶ Washington State Transportation Commission, *Long-Term Ferry Financing Study*, 2009, p. ES-10.

⁴⁷ Joint Transportation Committee, *Freight Investment Study Final Report*, January 2008, pp. ES 1-9.

⁴⁸ National Transportation Policy Project, p. 11.

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motor vehicle fuel which could potentially be used to support non-highway investments.⁴⁹

- Revenues other than User Fees.
 - Customs Duties: The National Surface Transportation Policy and Revenue Study Commission suggested having customs duties support freight needs.
 - Exported Fuel Tax: The legislature considered, but did not adopt, a bill to tax exported fuels.

**Exhibit 19.
Funding Method Alternatives**

Funding Method	Emerging/Restructuring of Existing Source	Recent Legislative Action/Study
FEDERAL EXISTING HIGHWAY TRUST FUND FUNDING METHODS		
Motor Fuel Tax <ul style="list-style-type: none"> • Motor Fuel Tax (18.4 cpg) • Special Fuel Tax (18.4 cpg) 	<ul style="list-style-type: none"> • 10% increase in gasoline tax, 15% increase in diesel tax (last increase 1993). • Index to CPI or Producer Price Index for Highway Construction. 	<ul style="list-style-type: none"> • National Surface Transportation Infrastructure Financing Commission • National Surface Transportation Policy and Revenue Study Commission
<ul style="list-style-type: none"> • Truck & Trailer Sales Tax 12% of sales price 	<ul style="list-style-type: none"> • Increase 	<ul style="list-style-type: none"> • National Surface Transportation Infrastructure Financing Commission
Truck Tire Tax <ul style="list-style-type: none"> • \$.0945 (\$.04725 in the case of a biasply tire or super single tire) for each 10 pounds of the maximum rated load capacity over 3,500 pounds 		
<ul style="list-style-type: none"> • Heavy Vehicle Use Tax \$100.00 annually for trucks 55,000 pounds graduating to \$550.00 for trucks 75,000 pounds or over/logging trucks \$75.00 to \$412.50 	<ul style="list-style-type: none"> • Double the rate (last increase 1983). • Index to inflation. 	<ul style="list-style-type: none"> • National Surface Transportation Infrastructure Financing Commission • National Transportation Policy Project
EMERGING FEDERAL REVENUE SOURCES: USER FEES		
Vehicle Miles Traveled (VMT) Fee /National User Charges	<ul style="list-style-type: none"> • Transition to a direct user charge system as soon as 	<ul style="list-style-type: none"> • National Surface Transportation

⁴⁹ Long-Term Financing Study, p. ES-9.

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Funding Method	Emerging/Restructuring of Existing Source	Recent Legislative Action/Study
	<p>possible – by 2020.</p> <ul style="list-style-type: none"> • Index to CPI or Producer Price Index for Highway Construction. • Adjust for vehicle fuel economy, congestion, and emissions to send best price signal.⁵⁰ • Reduce and, when the new mileage based fee system is in place, eliminate the current fuel and vehicle-related charges. 	<p>Infrastructure Financing Commission</p> <ul style="list-style-type: none"> • National Surface Transportation Policy and Revenue Study Commission • National Transportation Policy Project
Ton Mile Fees	<ul style="list-style-type: none"> • Weight-distance tax on commercial vehicles. 	<ul style="list-style-type: none"> • National Surface Transportation Policy and Revenue Study Commission
Carbon Pricing/Cap and Trade	<ul style="list-style-type: none"> • Assure that transportation users cover the full costs of their carbon emissions. • Carbon pricing revenue support investments to reduce transportation carbon emissions. • Would not cause a shift in transportation technology, travel demand, or patterns of infrastructure investment. • Adding costs for congestion, construction, and maintenance would send stronger price signal, but still have small effect on transportation technology, travel demand, or patterns of infrastructure investment. 	<ul style="list-style-type: none"> • National Transportation Policy Project
Ticket Tax	<ul style="list-style-type: none"> • On all transit trips to 	<ul style="list-style-type: none"> • National Surface

⁵⁰ “A simple VMT fee would provide no incentives for customers to buy vehicles with higher fuel economy ratings because the fee would depend only on mileage. Concern about a lack of incentives for reducing carbon emissions is one reason that some observers caution against a premature commitment to plan for the full substitution of the gas tax with user-based fees; while gas taxes may not be an adequate proxy for road use, they are an appropriate proxy for pricing carbon emissions and energy security externalities.” *Performance Driven: A New Vision for US Transportation Policy*, p. 95 and p. 99.

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Funding Method	Emerging/Restructuring of Existing Source	Recent Legislative Action/Study
	<p>supplement revenues from the fuel tax and general fund.</p> <ul style="list-style-type: none"> • On passenger rail users to supplement revenues from the fuel tax and general fund. 	<p>Transportation Policy and Revenue Study Commission (not recommended)</p>
Federal Freight Fee	<ul style="list-style-type: none"> • To finance freight-related improvements. • Mode-neutral freight fee to fund freight infrastructure. 	<ul style="list-style-type: none"> • National Transportation Policy Project
Container Fees	<ul style="list-style-type: none"> • Fee on import and export containers. 	<ul style="list-style-type: none"> • National Surface Transportation Policy and Revenue Study Commission – Briefing Paper 5A-06
EMERGING FEDERAL REVENUE SOURCES OTHER THAN USER FEES		
Customs Duties	<ul style="list-style-type: none"> • Use a portion for freight-related improvements. 	<ul style="list-style-type: none"> • National Surface Transportation Policy and Revenue Study Commission
Federal Investment Tax Credit	<ul style="list-style-type: none"> • For transportation facility owners who expand freight capacity. 	<ul style="list-style-type: none"> • National Surface Transportation Policy and Revenue Study Commission
EXISTING FEDERAL AUTHORIZATIONS FOR STATE AND LOCAL INVESTMENT		
Interstate Tolling	<ul style="list-style-type: none"> • Allow tolling of net new capacity. • Expand Highway Reconstruction and Rehabilitation Pilot Program which allows states to toll existing interstate capacity for reconstruction and rehabilitation work. • Allow states and localities to toll existing interstate capacity in large metropolitan areas for congestion relief. 	<ul style="list-style-type: none"> • National Surface Transportation Policy and Revenue Study Commission
Federal Credit Program	<ul style="list-style-type: none"> • Re-authorize for state transportation. 	<ul style="list-style-type: none"> • National Surface Transportation Policy and Revenue Study

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Funding Method	Emerging/Restructuring of Existing Source	Recent Legislative Action/Study
		Commission
State Infrastructure Banks	<ul style="list-style-type: none"> • Re-capitalize at \$500 million/year. 	<ul style="list-style-type: none"> • National Surface Transportation Policy and Revenue Study Commission
Private Activity Bond	<ul style="list-style-type: none"> • Expand highway/intermodal private activity bond program from \$15 billion to \$30 billion. 	<ul style="list-style-type: none"> • National Surface Transportation Policy and Revenue Study Commission
EMERGING FEDERAL AUTHORIZATIONS FOR STATE AND LOCAL INVESTMENT		
Tax Credit Bonds	<ul style="list-style-type: none"> • Support capital investments that have public benefits (such as intercity passenger rail and goods movement projects). 	<ul style="list-style-type: none"> • National Surface Transportation Policy and Revenue Study Commission
National Infrastructure Bank	<ul style="list-style-type: none"> • Fund relatively large and transformative projects that: <ul style="list-style-type: none"> ○ Cross state and local jurisdictions. ○ Integrate sector and policy goals, highway projects that consider land use and economic development. ○ Cross transportation silos, such as a bridge construction that includes a rail line and harbor dredging. • Independent entity with US Department of Transportation. • Financing through grants and credit products. 	<ul style="list-style-type: none"> • Design of the National Infrastructure Bank, June 2009. • National Surface Transportation Policy and Revenue Study Commission
EXISTING STATE REVENUE SOURCES		
Motor Vehicle Fuel Tax⁵¹ <ul style="list-style-type: none"> • 37.5 cents of which 5 cents is for the Nickel program and 9.5 cents for the TPA 	<ul style="list-style-type: none"> • Index 	<ul style="list-style-type: none"> • Long-Term Financing Study

⁵¹ The motor vehicle fuel tax referenced here includes the special fuel tax which applies to other combustible motor vehicle gases and liquids such as biodiesel, propane, natural gas, and butane.

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Funding Method	Emerging/Restructuring of Existing Source	Recent Legislative Action/Study
program		
Licenses, Permits, and Fees <ul style="list-style-type: none"> • Increases with Nickel and TPA programs 	<ul style="list-style-type: none"> • Feebates: Impose lower fees to encourage buying fuel-efficient, low-emitting vehicles. 	<ul style="list-style-type: none"> • National Transportation Policy Project
Motor Vehicle Excise Tax <ul style="list-style-type: none"> • \$30.00 	<ul style="list-style-type: none"> • Reinstitute MVET taxing percentage of vehicle value.⁵² 	<ul style="list-style-type: none"> • MVET changed to flat \$30.00 by legislature following passage of I-695 • Long-Term Ferry Financing Study
Ferry Fares	<ul style="list-style-type: none"> • Fuel Surcharge <i>Other Pricing Strategies:</i> <ul style="list-style-type: none"> • Differential vehicle and passenger fare increases. • Additional seasonal surcharge for July and August. • Small car discounts. • Non-resident pricing. <i>Future Pricing Strategies to be Considered</i> <ul style="list-style-type: none"> • Congestion pricing for vehicles. • Progressive pricing for larger vehicles. • Modifications to frequent vehicle customer prices. • Variable pricing for routes within travel sheds. 	<ul style="list-style-type: none"> • RCW 47.60.290 (ESHB 2358 “The Ferry Bill”) provides new legislative direction on ferry fares.⁵³ • Sixteen year financial plan (2009-25) anticipates 2.5 percent annual fare increases. • The 2009-11 transportation budget (ESSB 5352) if, the department proposes a fuel surcharge, the department must evaluate other cost savings and fuel price stabilization strategies that would be implemented before the imposition of a fuel surcharge. • Washington State Ferries Long-Range Plan
Tolling	<ul style="list-style-type: none"> • Consider per capita VMT and GHG emissions 	<ul style="list-style-type: none"> • Adoption of tolling policies. • Implementation of tolls on

⁵² Long-Term Ferry Financing Study, Washington State Transportation Commission, 2009.

⁵³ RCW 47.60.290 (ESHB 2358) requires that “the department shall annually review fares and pricing policies applicable to the operation of the Washington State Ferries (WSF)...the department shall develop fare and pricing policy proposals that must: recognize that each travel shed is unique, and might not have the same farebox recovery rate and the same pricing policies; use data from the current market survey conducted by the WSTC; be developed with input from affected ferry users by public hearing and by review with affected ferry advisory committees, in addition to the market survey; generate the amount of revenue required by the biennial transportation budget; consider the impacts on users, capacity, and local communities; and, keep the fare schedules as simple as possible. While developing fare and pricing policy proposals, WSF must consider the following: options for using pricing to level vehicle peak demand; and options for using pricing to increase off-peak ridership.

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Funding Method	Emerging/Restructuring of Existing Source	Recent Legislative Action/Study
	<p>reduction as a third objective in the development of pricing strategies and actions and in the regulation of toll rates.</p> <ul style="list-style-type: none"> • Use toll revenues to fund more sustainable travel patterns (e.g. public transit, carpooling). • Apply tolling more broadly to promote greater achievement of revenue, efficiency, and GHG emission reduction goals. • Establish toll rate policies that encourage drivers to make fewer and shorter trips, use less polluting vehicles, and consider alternative modes other than SOV driving. • System-wide tolling in Puget Sound metropolitan area. 	<p>Tacoma Narrows Bridge and SR 167 HOT Lanes.</p> <ul style="list-style-type: none"> • Legislative Direction for 5 additional tolling project studies. • Climate Action Team Report • PSRC Transportation 2040
Vehicle Sales Tax	<ul style="list-style-type: none"> • Extend sales tax exemption. • Extend sales tax to vehicle parts and accessories and/or vehicle services. 	<ul style="list-style-type: none"> • Hybrid cars exempt from vehicle sales tax in 2009. • Cars that exclusively use alternative fuels exempt from vehicle sales tax 2009-January 1, 2011.
Public-Private Partnerships	<ul style="list-style-type: none"> • Private investment in transportation projects. 	<ul style="list-style-type: none"> • Office in WSDOT created to pursue partnerships.
EMERGING STATE REVENUE SOURCES: USER FEES		
VMT Fee/Heavy Truck VMT	<ul style="list-style-type: none"> • Option dependent on development of technology – viable in 10 to 15 years from 2007. • Index to inflation. • Index to actual roadway costs (i.e. maintenance and rehabilitation costs). 	<ul style="list-style-type: none"> • 2007 Long-Term Financing Study
Sales Tax on Motor Vehicle Fuel	<ul style="list-style-type: none"> • Sales tax could potentially support non-highway 	<ul style="list-style-type: none"> • 2007 Long-Term Financing

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Funding Method	Emerging/Restructuring of Existing Source	Recent Legislative Action/Study
	transportation programs.	Study
Vehicle Insurance Fee	<ul style="list-style-type: none"> • Could waive for pay-as-you-go insurance programs. • Fee per insured passenger vehicle, motor home, or truck 	<ul style="list-style-type: none"> • National Transportation Policy Project
Cargo Container Fees	<ul style="list-style-type: none"> • Could be applied to exports and/or imports (although more likely imposed on a federal level due to constitutional limitations on state regulation of commerce) • Study showed fee could harm freight competitiveness of state. 	<ul style="list-style-type: none"> • 2007 Long-Term Financing Study • Freight Investment Study Final Report
Non-Auto Mode Fees	<ul style="list-style-type: none"> • To reflect costs of using the transportation system. Could include registration or other fees. 	
Tax on Alternative Fuels	<ul style="list-style-type: none"> • Tax on electricity as transition to this fuel sources occurs. 	
Carbon Tax/Tailpipe Tax	<ul style="list-style-type: none"> • Extension of federal carbon tax concept. 	
EMERGING STATE REVENUE SOURCES OTHER THAN USER FEES		
Exported Fuel Tax	<ul style="list-style-type: none"> • Charge the fuel tax rate to other states that Washington exports to and provide a credit to the states for their fuel tax that they pay in their state. 	<ul style="list-style-type: none"> • HB 2277 considered in the 2009 legislative session. The bill did not pass the House Transportation Committee.
Parking Tax	<ul style="list-style-type: none"> • Tax on commercial parking to decrease VMT per capita. 	
Sales Tax for Transportation	<ul style="list-style-type: none"> • Increase general sales tax and use for transportation. 	<ul style="list-style-type: none"> • Ferries Long-Term Financing Study

III. ENERGY, ENVIRONMENTAL, AND MOBILITY POLICIES AND INITIATIVES

Evolving energy, environmental, and mobility policies and initiatives suggest a very different future for Washington State's transportation system. While in the past we have come to expect annual increases in vehicle travel and only modest changes to fuel economy and vehicle technologies, emerging policies may reverse these trends. Three emerging trends seem most salient in identifying the viability of future transportation funding methods:

- Fuel economy is likely to increase substantially;
- Use of alternative fuels (including biofuels, electricity, and hydrogen-based fuels) will increase with advancements in vehicle technology;
- If successful, State policies seeking to reduce per capita VMT could dramatically change the demands on the State's transportation system.

The above major trends suggest that future funding methods should be adaptive to changing demands on the transportation system and should include revenue generation measures that transcend specific transportation fuels and variations in VMT. In general, future transportation funding methods should take a comprehensive approach addressing both climate change policy imperatives and changing transportation fuel sources and technologies.

A. Energy

The energy trends outlined in this section have a direct link to transportation revenue generation by influencing the mix of fuels consumed, energy prices and supply volatility, vehicle fleet characteristics, and demand for alternative fuels. The literature reviewed provides insights into how future energy trends might influence VMT, fuels consumed, travel modes, fleet mix, and personal mobility. These energy trends affect the level and type of transportation revenues generated, which, in turn, influence the viability of alternative funding options.

1. Major Trends

- **Rising Oil Prices:** Economists forecast that oil prices will continue to increase over the next 10-20 years as we reach the end of peak production and actual extraction becomes more difficult. US government forecasting entities, including the Department of Energy (DOE), that fuel prices will be on the rise due to increasing demand from developing economies like China and India and the depletion of petroleum reserves. These price increases will influence vehicle technologies, fuel economy, and the use of non-auto modes. The Washington State fuel price forecast also anticipates rising gasoline retail prices, peaking at \$4.69 in FY 2020.
- **Rising Fuel Economy:** The 2007 Energy Independence and Security Act (EISA) has mandated that passenger vehicles achieve an overall fuel economy of 35 miles per gallon by 2020, which would lead to an estimated 34 percent increase in fleetwide fuel economy by 2030. In May 2009, President Obama accelerated fuel economy standards by ordering the corporate average fuel economy standard (CAFÉ) to increase by five percent each year, building on the 2011 standard through 2016. This means an industry standard of 35.5 mpg by 2016, an average increase of eight mpg per vehicle compared to current requirements.

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Specifically, the new standards would require an average mileage standard of 39 miles per gallon for cars and 30 mpg for trucks by 2016 - a jump from the current average for all vehicles of 25 miles per gallon. The new requirements also create a nationwide standard for emissions of greenhouse gases. The administration predicted substantial environmental benefits from the program, with a projected savings over the life of the program of 1.8 billion barrels of oil, and reductions of 900 million metric tons of greenhouse gas emissions.⁵⁴ Adoption of new vehicle technologies, including plug-in hybrid vehicles, electric-powered vehicles, and fuel cells could lead to even greater gains in fuel economy. While increases in fuel economy may help the state's greenhouse gas (GHG) reduction goals, these increases also reduce the level of revenues that the current tax structure can generate per mile traveled on our roadway systems.

- **Increasing Use of Alternative Fuels:** As conventional fuel prices increase, many see an opportunity for the introduction of advanced vehicle technologies that rely on alternative fuels. Some forecasts place hybrid vehicle technologies (which use a combination of electricity with either biofuels or conventional motor fuels) at roughly 15 percent of the new vehicle market in 2025 increasing to 70 percent by 2040.⁵⁵ These forecasts also estimate that fuel cell technologies would make an appearance by 2040, constituting 30 percent of the new vehicle market. The current transportation funding system would have to be modified in order to capture revenues from many of these new fuel sources.
- **Increased Market Penetration by Plug-In Hybrid Electric Vehicles (PHEVs):** Several documents focused on the potential of PHEVs to achieve a large market share in the next 10-20 years. PHEVs leverage the combination of internal combustion, battery technology, and electricity delivery infrastructure to produce a vehicle which could travel 25-30 miles without consuming gasoline or diesel fuels. An assessment of the Pacific Northwest's electrical distribution system estimates that there is enough capacity to support additional demands from charging PHEVs through 2030. The contribution of PHEVs in meeting the state's GHG emission reduction targets relies on the source of electric generation. The potential widespread adoption of PHEVs and other electric-powered vehicles reinforces the need to look to new ways to fund transportation.

2. State

The state's transportation energy goal is to reduce reliance on foreign oil and carbon based fuels. In addition to exempting the state sales tax on hybrid vehicles, the legislature has enacted an aggressive vehicle emission standard and is encouraging the transition to electric vehicles.

a. Changing Vehicle Emission Standards

In the 2005 session, the legislature adopted the California motor vehicle emissions standards, excluding zero emission vehicle program regulations in effect on January 1, 2005, rather than the less stringent federal standards (RCW 70.120A.010; ESHB 1397).

⁵⁴ Whitehouse.gov, 2009, <http://www.autobloggreen.com/2009/03/27/cafe-standard-for-2011-model-year-will-be-27-3-mpg/>.

⁵⁵ The Fuel Tax and Alternatives for Transportation Funding: Special Report 285 (Transportation Research Board, 2006)

b. Electric Vehicles

In the 2009 session, the legislature adopted 2SHB 1481 (Chapter 459, 2009 Laws – codified in multiple chapters) to encourage the transition to electric vehicle use and to expedite the establishment of a convenient, cost-effective, electric vehicle infrastructure. The legislature found that the development of electric vehicle infrastructure is a critical step in creating jobs, fostering economic growth, reducing reliance on foreign fuel, and reducing the pollution of Puget Sound. The legislation provides:

- By the year 2015, all state agencies and local government subdivisions of the state to satisfy 100 percent of their fuel needs for all vessels, vehicles, and construction equipment from electricity or biofuels. If after 2015 the Washington Department of Commerce determines that the 100 percent biofuel use mandate is not practicable, then the Department of Commerce may suspend, delay, or modify the requirement.
- WSDOT and the PSRC to pursue federal or private funding to develop and plan for implementation of an electric vehicle infrastructure, with WSDOT directed to seek partnerships to establish an alternative fuels corridor pilot project along I-5.
- Tax incentives for electric vehicle infrastructure and batteries.
- The state to install charging outlets in areas such as rest stops and state parking and maintenance facilities.

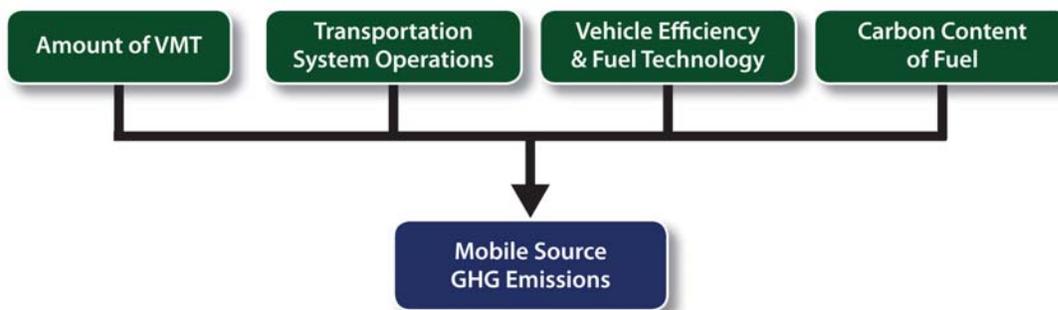
B. Environment

Environmental policies, particularly those relative to land use and climate change, have an important and increasing role in the planning of our transportation systems. The state's greenhouse gas emission reduction mandates look to transportation, since 46 percent⁵⁶ of GHG emissions in Washington State are generated by automobiles and light trucks. This is high compared to the rest of the country, where transportation is responsible for only 28 percent of GHG emissions on average. The reasons behind the transportation sector's large contribution to the state's GHG emissions are not that transportation is particularly dirty in Washington, but instead that the state has a relatively low total GHG emissions profile compared with the nationwide average. This low GHG emissions profile is a result of Washington State's low emission energy generation (mostly hydropower), investments in energy efficiency, and moderate climate.

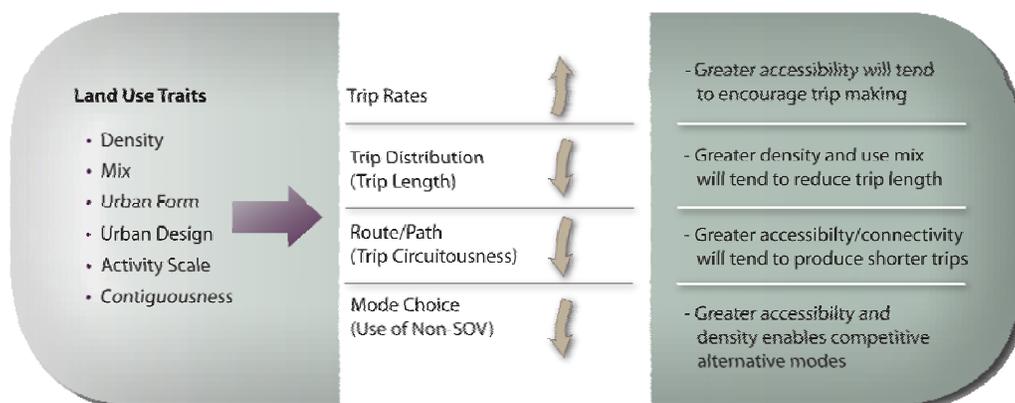
The major ways to reduce the transportation sector's GHG emissions are to manage travel speeds, improve vehicle fuels, and reduce VMT.

⁵⁶ Community Trade and Economic Development, Growing Washington's Economy in a Carbon-Constrained World: A Comprehensive Plan to Address the Challenges and Opportunities of Climate Change, , Dec. 2008, p. 19.

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As shown in the diagram below, transportation GHG emissions are also affected by land use policies.



1. VMT Growth Scenarios

- **Historic Growth in VMT Per Capita Continues:** One potential scenario is that VMT per capita continues to grow at a high rate given increases in personal wealth (which makes transportation costs a smaller portion of overall expenditures) and sprawling land use development patterns.⁵⁷ Given recent demographic trends and emerging state policies to reduce VMT per capita, this is probably not the most realistic scenario. However, the assumption that VMT will continue to grow at historic (or near-historic) rates has been a traditional source for transportation revenue forecasts. Under this scenario, highway infrastructure costs would remain high. Given potential increases in fuel economy and adoption of advanced vehicle technologies, the current fuel tax will likely generate less revenue per vehicle mile traveled. Alternative funding strategies that generate revenues through new sources and which help manage congestion would be particularly appealing.
- **Demographic Trends Lead to Relatively Flat VMT Per Capita for the Foreseeable Future:** Evidence from the past five years suggests that historical rates of VMT growth may not continue and that the recent leveling-off may continue indefinitely. This leveling trend is

⁵⁷ Climate Sensitive Transportation Management: Evaluating Alternative Goals for Traffic Growth (Replogle and Fung, 2009).

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bolstered by demographic trends including an aging population and smaller household sizes, as well as capacity constraints in the nation's transportation infrastructure.⁵⁸ If VMT growth does moderate substantially, then it is likely that advancements in vehicle technology and fuel economy will weaken the ability of the current fuel tax structure to sufficiently fund transportation infrastructure (particularly highway construction and maintenance costs, which would remain high given current levels of congestion).

- Emerging Climate Change and Land Use Initiatives Significantly Curtail VMT Per Capita: States like Washington and California have adopted aggressive goals to reduce GHG emissions. Many of the tools proposed to achieve these objectives include land use policies that would lead to higher development intensities and potential new taxes/fee structures that would make carbon emissions (including use of carbon-based petroleum fuels) more expensive. If Washington State achieves its objective to reduce per capita VMT, this would suggest that the state's transportation landscape will look very different in the future.⁵⁹ The transportation infrastructure requirements of transit and non-motorized modes would grow considerably. Funding this new transportation vision would necessitate a shift from current methods to other sources.
- Effect of Climate Change on Transportation: Beyond discussing how emerging climate change initiatives are likely to influence travel behavior, the literature also addresses how climate change itself is likely to influence transportation investment needs. The Transportation Research Board summarized how increases in heat waves, Arctic temperatures, rising sea levels, and increases in precipitation and storm events could impact transportation system operations (particularly air and sea transportation related to goods movement) and infrastructure wear-and-tear. While climate changes' effects on transportation may seem relatively far off, the report stresses that state and local governments should begin designing for these climate change considerations, given that these effects could occur within the infrastructure's intended design life.⁶⁰

2. State

The state legislature has adopted aggressive GHG emission reduction and VMT per capita reduction goals in RCW 47.01.440 (ESHB 2815, 2008). In addition to the funding recommendations discussed above, *Leading the Way: Implementing Practical Solutions to the Climate Change Challenge*⁶¹ includes recommendations that would affect VMT and the nature of the transportation system.

- Expand Transportation Choices: The study recommends expanding transit, ridesharing, and commuter choice programs as a way to achieve the desired reduction in VMT per capita (p. 10).

⁵⁸ Forecasts of Future Vehicle Miles of Travel in the United States (Polzin, Chu, and Toole-Holt, 2006).

⁵⁹ Greenhouse Gas Analysis Tools for Land Use and Transportation Plans (Washington State Department of Commerce, 2009).

⁶⁰ Greenhouse Gas Analysis Tools for Land Use and Transportation Plans (Washington State Department of Commerce, 2009).

⁶¹ *Leading the Way: Implementing Practical Solutions to the Climate Change Challenge in Washington State* (Washington State Climate Action Team, 2008).

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- Link Transportation and Land Use: The study recommends expanding compact and transit oriented development, including maximizing access to affordable public transportation and other mobility options (pp. 5 and 10).

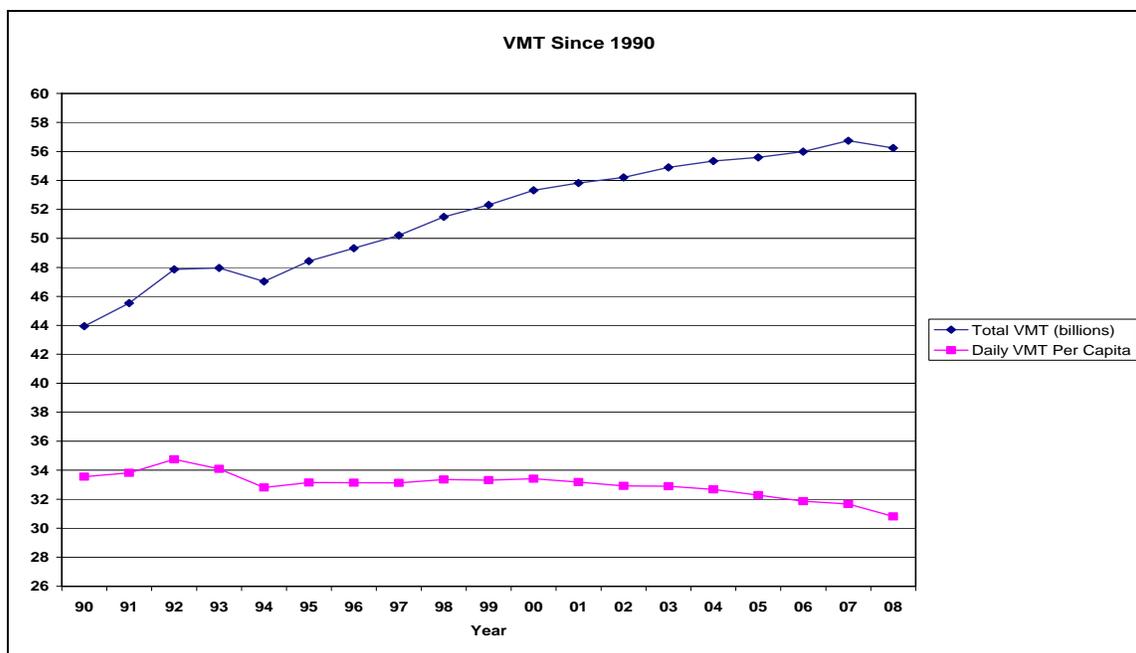
a. Total VMT

If the state benchmarks were met, per capita VMT would decrease by 30 percent by 2035 but total VMT would not decrease to the same extent due to changes in population and employment within the state. The exhibit below shows daily per capita VMT growth and total VMT growth from 1990 to 2008. While daily VMT per capita has been dropping, total VMT dropped only in 2008.

WSDOT is currently in the process of updating its forecasts of statewide VMT. It is not yet clear how total statewide VMT in 2035 would compare to today's levels, however, it is likely that these climate change policies will reduce overall VMT relative to previous forecasts.⁶² Moreover, given regional variance in employment and population growth trends, the change in overall VMT by region would not be uniform throughout the state.

In the Puget Sound Regional Council's *Vision 2040*, VMT per capita is anticipated to drop under each of five future travel scenarios. However, total VMT and total daily trips in the region are anticipated to grow in response to overall population growth. For example, in Scenario 5, which anticipates the most aggressive tolling and other measures to reduce VMT, per capita VMT drops 16 percent from 2006 to 2040, but average total daily VMT increases by 18 percent compared to 2006 and total daily trips increases by 36 percent.

Exhibit 20.
State VMT and Daily VMT Per Capita 1990-2008



Source: WSDOT – reporting of VMT and Washington population and Cedar River Group calculation of daily VMT per capita

⁶² Ibid.

Potential increases in total VMT must be considered as transportation funding strategies are weighted in light of the state's goal to reduce VMT per capita.

b. VMT Per Capita Reduction Goals

The Governor issued an Executive Order on climate change in May 2009 (Executive Order 09-05, May 21, 2009). Part of the order directs WSDOT, in consultation with the Departments of Ecology and Commerce, local governments, business, and environmental representatives, to:

- Estimate current and future state-wide levels of VMT;
- Evaluate potential changes to the vehicle miles traveled benchmarks established in RCW 47.01.440, as appropriate to address low- or no-emission vehicles; and
- Develop strategies to reduce emissions from the transportation sector.

c. VMT Forecast

WSDOT is establishing a work group to review its methodology for forecasting VMT. Up until February 2008, when WSDOT completed its latest forecast, the VMT forecast was based on the most recent growth rate in available for gasoline consumed. WSDOT concluded that this approach did not fully capture all the elements that determine the growth in vehicle miles traveled. The growth in gasoline consumed and vehicle miles traveled will not necessarily grow at the same rate.

d. Growth Management Act

In 1991, the State Legislature passed the Growth Management Act (GMA) to coordinate and plan for growth in Washington. At first, the GMA affected only 12 rapidly growing cities and counties, but today nearly all cities and counties prepare plans. The GMA's basic premise is that land use and growth must be planned. All new growth is limited to lands within the "urban growth boundary" and the transportation system should serve that growth. But where that growth takes place within the City is decided by their local land use policies.

The inter-relationship of transportation and land use are key to the GMA. Three key pieces of the GMA legislation related to transportation are:

- Identify the transportation system needed to meet the needs of future growth identified in the Land Use Element of a Comprehensive Plan;
- Balance growth while maintaining the level of service in the community (the concept of transportation concurrency) and,
- Have growth pay its way – Use impact fees to pay for growth's impacts on the transportation network.

To meet these requirements, the GMA calls for cities and counties to prepare comprehensive plans that include land use, transportation, parks and capital facility elements. These elements must be complementary with one another. For example, the GMA requires that the local transportation plan directly tie to the land use decisions and financial planning. The plan must specify level of service standards for the arterials and transit routes (note non-motorized are not required); identify existing and future deficiencies; identify the improvements needed for the at least the next 10 years based on traffic forecasts based on the adopted land use plan; identify actions to bring into compliance locally owned facilities below the LOS standard, identify TDM strategies, and a multi-year financing plan.

Concurrency, another requirement of the GMA, means that certain key public facilities must be provided at the same time (concurrently) with new growth. As applied to transportation in Washington, concurrency means that a city or county must ensure new development is accompanied by transportation facilities or programs that maintain some standard of service even as traffic increases.

Concurrency is a means of achieving goals for growth and development, not an end in itself. Concurrency can be adjusted to achieve different goals for transportation, land use, and economic development. Transportation concurrency policies can affect growth because level-of-service standards are variable; they can be set low to accommodate growth, or set high to shape it.

The GMA authorizes cities to impose impact fees on new development to pay a proportionate share of the cost of new road facilities serving that new growth. Washington State law RCW 82.02.050 specifies that Transportation Impact Fees are to be spent on 'system improvements.' System improvements can include physical or operational changes to existing roadways, as well as new roadway connections that are built in one location to benefit projected needs at another location. Generally these projects add capacity (new streets, additional lanes, widening, signalization, et al). The fees cannot be used to finance the portion of improvements needed to pay for existing capacity deficiencies. (Note: the fees can be used to recoup the cost of improvements already made to address the needs of future development). It does not require that funds be provided for non-motorized or transit service and facilities.

C. Mobility

Congestion is a major issue for urban areas throughout the nation. The Texas Transportation Institute's 2009 Urban Mobility Study found that Seattle is the 19th most congested urban area in the nation, with the average driver wasting 43 hours and 30 gallons of motor fuels per year sitting in traffic. The report also includes statistics for the Spokane urban area, where drivers spend an average of 9 hours and consume 5 gallons of gasoline annually while stuck in traffic. Congestion is expected to increase substantially in the state's urban areas by 2025. From 1980 to 2003, the state's population increased by 45 percent, while VMT nearly doubled. Looking ahead, within the three major urban areas of the state - Puget Sound, Vancouver, and Spokane - daily travel delay from 2003 to 2025 is forecast to increase by 300 percent without substantial new transportation investments.⁶³

Future changes to the transportation system (incremental, evolutionary, or fundamental) will have an effect on personal transportation options, goods movement, and modal demands (cars vs. transit vs. non-motorized modes). Below, we summarize how some of the major mobility trends described in the literature would influence transportation revenue generation and the viability of alternative funding methods.

Major Trends

- Congestion Expected to Continue Increasing, Hampering Mobility in Urban Areas: Unless we see a substantial reduction in VMT in the very near future, congestion will continue to be a major issue in the nation's urban areas for some time to come. Thus, the greatest transportation investment needs tend to reside in urban areas. At the same time, these are

⁶³ Urban Areas Congestion Analysis, (WSDOT, 2005).

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the areas where constructing transportation infrastructure can be the most expensive, given right of way, political feasibility, and environmental constraints.⁶⁴ Continued urban congestion makes congestion tolling an attractive option, since it is a way to generate revenue for capacity expansion while simultaneously managing congestion.

- Tolling Pilots Have Shown Promise in Improving Efficiency of Roadway Usage: Evidence from congestion toll pilot programs have shown that people will make incremental changes to their travel behavior, when faced with paying more directly for their travel time, route, and modal choices. These incremental changes—shifting some trips from the peak period to off-peak times, making slightly fewer auto trips, and occasionally diverting off of congested routes—add up and lead to more efficient use of regional transportation facilities.⁶⁵ Identifying transportation funding methods that achieve VMT reductions or which help manage congestion, as well as identifying revenue sources that can be directed at urban transportation facilities with the greatest needs, would help meet congestion goals.
- Vehicle Travel Insensitive to Cap and Trade Programs Adopted for GHG Emissions: One mobility policy initiative that has garnered considerable attention is the concept of developing a cap and trade program for GHG emissions. An evaluation of the potential effects of a GHG cap and trade program on VMT yields that such an institutional framework would have little effect on driving if cap and trade prices are not set high enough, given the inelasticity of vehicle travel to price fluctuations. Since likely carbon fees would be relatively small compared to overall fluctuations in conventional fuel prices (which have varied from \$2 per gallon to over \$4 per gallon in the past few years), many speculate most of the benefits of a cap and trade program would be realized with stationary, rather than mobile sources, of carbon emissions.⁶⁶
- Effects of VMT Reduction Goals on Non-Auto Modes: The extent to which the state meets its per capita VMT reduction targets will have an impact on demand for non-auto modes, including transit, walking, biking, and potentially even goods movement. In adopting future strategies, the state should consider how future transportation investment needs will evolve. None of the literature reviewed envisioned dramatic declines in personal mobility – only changes in the way that we travel. A future transportation system that features less vehicle travel must include sufficient infrastructure to accommodate personal mobility in some way. Identifying transportation funding methods that are tailored to fund the changing infrastructure needs should be a priority.

The exhibit below identifies energy, environmental and mobility trends; the effect on transportation revenue drivers and on revenues generated; and provides a preliminary assessment of how these trends affect the viability of transportation funding methods.

⁶⁴ Forecasts of Future Vehicle Miles of Travel in the United States (Polzin, Chu, and Toole-Holt, 2006).

⁶⁵ Traffic Choices Study (Puget Sound Regional Council, 2008).

⁶⁶ Cost Effective GHG Reductions Through Smart Growth and Improved Transportation Choices (Center of Clean Air Policy, 2009)

Exhibit 21.
Trends Driven by Energy, Land Use, and Climate Change Policies

Potential Future Trend	Effect on Revenue Drivers (VMT, Fuel Consumption, Fleet Mix, Travel Modes, Personal Mobility)	Effect on Type/Level of Transportation Revenues Generated	Most Viable Transportation Funding Options
ENERGY TRENDS			
<p>Rising oil prices resulting from end of peak production^{1,2}</p>	<ul style="list-style-type: none"> • Modest reductions in VMT and consumption of conventional fuels in short run, more substantial reductions in long term. • Increase in alternative fuels including natural gas and coal in the short run and hydrogen and electricity in the long run. • Fuel economy increases, truck (goods movement-related) fuel economy likely to increase faster than light duty (passenger) vehicles. • Increasing share of hybrid-electric vehicles – 14% of 2025 sales and 70% by 2040. • Shifting to non-auto modes occurs to some extent in urban areas, but limited shifts in more rural areas. 	<ul style="list-style-type: none"> • Less revenue generated from traditional per gallon gasoline/diesel tax. • Less revenue generated by diesel excise taxes related to goods movement. • Increasing potential benefit to taxing alternative fuels. 	<ul style="list-style-type: none"> • Expanded use of tolling provides interim solution for funding select facilities. • Adopting new taxes on alternative fuels. • Replacing fuel excise tax with VMT fees to provide flexibility in revenue generation regardless of fuels consumed. • Expanded implementation of container-fees and weight-mile taxes to ensure goods movement pays its way. • Implementation of local option taxes to generate transportation revenues independent of fuels used.
<p>Rising fuel economy^{3,4,5}</p>	<ul style="list-style-type: none"> • Based on national standards established in 2007 Energy Independence and Security Act, fleetwide fuel economy will rise by 30-35% between now and 2030. 	<ul style="list-style-type: none"> • Less revenue generated from traditional per gallon gasoline/diesel tax per vehicle mile traveled. • Increasing potential benefit to taxing miles traveled. 	<ul style="list-style-type: none"> • Expanded use of tolling provides interim solution for funding select facilities • Replacing fuel excise tax with VMT fees to provide flexibility in revenue generation regardless of fuels consumed.

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Potential Future Trend	Effect on Revenue Drivers (VMT, Fuel Consumption, Fleet Mix, Travel Modes, Personal Mobility)	Effect on Type/Level of Transportation Revenues Generated	Most Viable Transportation Funding Options
	<ul style="list-style-type: none"> • VMT may increase 20-25% for every 100% increase in fuel economy. • These increases in VMT are relative to lower fuel economy scenarios, since driving is cheaper. 	<ul style="list-style-type: none"> • Potential slight increase in VMT resulting from rising fuel economy could lead to revenues if VMT fee were imposed. 	<ul style="list-style-type: none"> • Expanded implementation of container-fees and weight-mile taxes to ensure goods movement pays its way. • Implementation of local option taxes to generate transportation revenues independent of fuels used. • To simultaneously achieve both climate change and fuel economy objectives, future policy strategies should be comprehensive including both increasing fuel economy standards and fuel taxes.
Increasing usage of alternative fuels ¹	<ul style="list-style-type: none"> • Replacement of conventional fuels by new sources, including electricity, biofuels, and potentially hydrogen. • By 2025, penetration of hybrid-type vehicles could be 15%, increasing to 70% by 2040. In 2040, fuel cell vehicles could constitute the other 30% market share. 	<ul style="list-style-type: none"> • Less revenue generated from traditional per gallon gasoline/diesel tax. • Increasing potential benefit to taxing alternative fuels (like electricity, bio fuels, and hydrogen) and implementing mileage-based fees. 	<ul style="list-style-type: none"> • Expanded use of tolling provides interim solution for funding select facilities. • Adopting new taxes on alternative fuels. • Replacing fuel excise tax with VMT fees to provide flexibility in revenue generation regardless of fuels consumed.
Increasing penetration of plug-in hybrid electric vehicles (PHEVs). ^{6,7,8}	<ul style="list-style-type: none"> • Reduction in fuel consumed by passenger vehicles that adopt this technology – most passenger cars are driven 25 miles or less per day. • PHEVs with 30 mile 	<ul style="list-style-type: none"> • Less revenue generated from traditional per gallon gasoline/diesel tax. • Pacific Northwest estimated to have sufficient electrical generating capacity to satisfy PHEV demand 	<ul style="list-style-type: none"> • Expanded use of tolling provides interim solution for funding select facilities. • Adopting new taxes on alternative fuels, including electricity surcharges for transportation.

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Potential Future Trend	Effect on Revenue Drivers (VMT, Fuel Consumption, Fleet Mix, Travel Modes, Personal Mobility)	Effect on Type/Level of Transportation Revenues Generated	Most Viable Transportation Funding Options
	<p>range, if widely adopted, could replace 40% of fuel consumed.</p> <ul style="list-style-type: none"> • PHEVs and other electric power innovations could increase vehicle fuel economy by 50-100% by 2030. 	<p>through 2030. Cost for recharging vehicle would likely be less than purchasing equivalent volume of conventional fuels.</p> <ul style="list-style-type: none"> • Increasing potential benefit to taxing alternative fuels (like electricity) and implementing mileage-based fees. 	<ul style="list-style-type: none"> • Replacing fuel excise tax with VMT fees to provide flexibility in revenue generation regardless of fuels consumed.
VMT TRENDS			
<p>Historical growth in VMT continues due to increasing personal wealth and sprawling land use patterns.^{9,10}</p>	<ul style="list-style-type: none"> • VMT almost doubles by 2050. • Fuel consumption increases, although potentially less than proportionally given increases in fuel economy. • Increased congestion may lead to increase use of alternative modes, including transit and non-motorized modes. 	<ul style="list-style-type: none"> • Increased revenue generated from traditional per gallon gasoline/diesel tax, but less per VMT given increases in fuel economy. • Potentially no increase in revenue generated by diesel excise taxes related to goods movement given increases in fuel economy. • Transportation infrastructure needs will remain high given critical capacity constraints. 	<ul style="list-style-type: none"> • Implement sales tax and index motor fuel taxes to ensure constant or increasing revenue per vehicle mile traveled. • Expanded use of tolling provides interim solution for funding select facilities and to provide congestion relief. • Adopting new taxes on alternative fuels, including electricity surcharges for transportation. • Replacing fuel excise tax with VMT fees to provide flexibility in revenue generation regardless of fuels consumed. • Expanded implementation of container-fees and weight-mile taxes to ensure goods movement pays its way. • Implementation of local option taxes to generate transportation revenues independent of fuels used.

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Potential Future Trend	Effect on Revenue Drivers (VMT, Fuel Consumption, Fleet Mix, Travel Modes, Personal Mobility)	Effect on Type/Level of Transportation Revenues Generated	Most Viable Transportation Funding Options
			<ul style="list-style-type: none"> • To simultaneously achieve both climate change and fuel economy objectives, future policy strategies should be comprehensive including both increasing fuel economy standards and fuel taxes. • Implement new funding methods like pay-as-you-drive insurance, feebates, and parking charges which encourage fuel economy and/or lower fuels consumption.
<p>Demographic trends lead to relatively flat VMT for the foreseeable future.^{11,12}</p>	<ul style="list-style-type: none"> • Reduction in consumption of conventional fuels from increases in fuel economy. • Increasing use of alternative travel modes, including transit and non-motorized modes. 	<ul style="list-style-type: none"> • Less revenue generated from traditional per gallon gasoline/diesel tax given increases in fuel economy. • Less revenue generated by diesel excise taxes related to goods movement given increases in fuel economy. • Reduces traditional fuel tax revenues, but transportation infrastructure needs will remain high given critical capacity constraints. 	<ul style="list-style-type: none"> • Implement sales tax and index motor fuel taxes to ensure constant or increasing revenue per vehicle mile traveled. • Expanded use of tolling provides interim solution for funding select facilities. • Adopting new taxes on alternative fuels, including electricity surcharges for transportation. • Expanded implementation of container-fees and weight-mile taxes to ensure goods movement pays its way. • Implementation of local option taxes and regional development impact fees to generate transportation revenues independent of fuels used.

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Potential Future Trend	Effect on Revenue Drivers (VMT, Fuel Consumption, Fleet Mix, Travel Modes, Personal Mobility)	Effect on Type/Level of Transportation Revenues Generated	Most Viable Transportation Funding Options
			<ul style="list-style-type: none"> • Consider adopting taxes or fees on non-auto modes to self-finance. • Implement new funding methods like pay-as-you-drive insurance, feebates, and parking charges which encourage fuel economy and/or lower fuel consumption.
<p>Attainment of State land use and climate change goals.^{13,14,15,16}</p>	<ul style="list-style-type: none"> • 20-40% reduction in VMT per capita. • Proportionate reduction in conventional fuels. • While VMT may decrease due to land use and climate change policies, person trips and total VMT could remain stagnant or even grow given population increases. • Increasing use of alternative travel modes, including transit and non-motorized modes, and reduced travel distances. • Carbon fees implemented by climate legislation may lead to increase in goods movement by ships and trains and fewer truck and air freight. 	<ul style="list-style-type: none"> • Less revenue generated from traditional per gallon gasoline/diesel tax. • Less revenue generated by diesel excise taxes related to goods movement. • Increases the potential benefit to making non-auto modes more self-financing. • Reduces traditional fuel tax revenues, but also reduces highway construction and maintenance needs. 	<ul style="list-style-type: none"> • Implement sales tax and index motor fuel taxes to ensure constant or increasing revenue per vehicle mile traveled. • Expanded use of tolling provides interim solution for funding select facilities. • Adopting new taxes on alternative fuels, including electricity surcharges for transportation. • Expanded implementation of container-fees and weight-mile taxes to ensure goods movement pays its way. • Implementation of local option taxes and regional development impact fees to generate transportation revenues independent of fuels used. • Consider adopting taxes or fees on non-auto modes to self-finance.

Sources:

¹ The Fuel Tax and Alternatives for Transportation Funding: Special Report 285 (Transportation Research Board, 2006).

² Integrating US Climate, Energy, and Transportation Policies: Proceedings of Three Workshops (Ecola, Hassell, Toman, and Wachs, 2009).

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Potential Future Trend	Effect on Revenue Drivers (VMT, Fuel Consumption, Fleet Mix, Travel Modes, Personal Mobility)	Effect on Type/Level of Transportation Revenues Generated	Most Viable Transportation Funding Options
<p>³ Fuel Efficiency and Motor Vehicle Travel: The Declining Rebound Effect (Small and Van Dender, 2006).</p> <p>⁴ Analysis of Policies to Reduce Oil Consumption and Greenhouse Gas Emissions from the US Transportation Sector (Sims Gallagher and Collantes, 2008).</p> <p>⁵ Growing Cooler (Ewing, Bartholomew, Winkelman, Walters, Chen, 2008).</p> <p>⁶ Electric Utilities: Are They The Gas Stations of the Future? (Baker and Marshall, 2008).</p> <p>⁷ A Bridge to Somewhere: Rethinking American Transportation for the 21st Century (Puentes, 2008).</p> <p>⁸ Impact Assessment of Plug-in Hybrid Vehicles on Pacific Northwest Distribution Systems (Schneider, Gerkenmeyer, Kintner-Meyer, and Fletcher, 2008).</p> <p>⁹ Climate Sensitivity Transportation Management: Evaluating Alternative Goals for Traffic Growth (Replogle and Fung, 2009).</p> <p>¹⁰ Policy Options for Reducing Oil Consumption and Greenhouse-Gas Emissions from the US Transportation Sector (Gallagher, Collantes, Holdren, Lee, Frosch, 2007).</p> <p>¹¹ Land Use Impacts on Transport – How Land Use Factors Affect Travel Behaviors (Litman and Steel, 2009).</p> <p>¹² Feebates, rebates and gas-guzzler taxes: a study of incentives for increased fuel economy (Greene, Patterson, Singh, and Li, 2005).</p> <p>¹³ Greenhouse Gas Analysis Tools for Land Use and Transportation Plans (Washington State Department of Commerce, 2009).</p> <p>¹⁴ The Economic Impact of the Florida Energy and Climate Action Plan (The Center for Climate Strategies, 2008).</p> <p>¹⁵ A Bridge to Somewhere: Rethinking American Transportation for the 21st Century (Puentes, 2008).</p> <p>¹⁶ Forecasts of Future Vehicle Miles of Travel in the United States (Polzin, Chu, and Toole-Holt, 2006).</p> <p><i>Fehr & Peers, 2009</i></p>			