

Testimony of
Jack Schenendorf
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Thank you, Chairman Boxer, Ranking Member Vitter, and other members of the Committee, for giving me the opportunity to testify on our Nation's surface transportation needs and financing.

I am Jack Schenendorf. I am Of Counsel with Covington & Burling LLP in Washington, D.C. Prior to joining Covington, I served on the staff of the House Transportation and Infrastructure Committee for 25 years. I also served as Vice Chair of the National Surface Transportation Policy and Revenue Study Commission (hereinafter referred to as the "Policy and Revenue Study Commission") from 2005 until 2008.

The views I express here today are my own. They do not reflect the official position or views of Covington, the T&I Committee, or the Policy and Revenue Study Commission.

It is a special honor to appear before this distinguished Committee. For almost 60 years ago, it was the leaders of this Committee, in cooperation with President Eisenhower, who had the vision, the wisdom, and the political will to make a major investment in America's future. As is often the case with major transportation initiatives, Democrats and Republicans came together to put America's interests first.

By authorizing construction of the Interstate Highway System, by establishing the Highway Trust Fund that would make the Interstate a reality, and by almost tripling the federal motor fuels tax, Congress took an action that was instrumental in making America strong and in developing the world's largest economy and most mobile society.

As President Eisenhower stated:

"Our unity as a nation is sustained by free communication of thought and by easy transportation of people and goods...Together the unifying forces of our communication and transportation systems are dynamic elements in the very name we bear—United States. Without them, we would be a mere alliance of many separate parts."

In the 1950s, there was only a small amount of travel that was truly long distance in nature. Most travel was relatively local and at low speeds (20 to 40 mph) on narrow, two- or four-lane undivided roads that were often congested, poorly maintained, and unsafe, especially in populated areas.

The Interstate changed travel in America. It provided greater capacity and made long-distance travel practicable. It made travel faster, safer, and less expensive on a per mile basis. It has become one of the foundations of America's competitive success in the global marketplace. And it made America stronger and more secure.

Now we have outgrown this system and the rest our national surface transportation network. It is time for new leadership to step up with a vision for the next 50 years that will ensure U.S. prosperity and global preeminence for generations to come.

MAP-21 took an important first step by modernizing our Nation's surface transportation policies for the 21st century. The leaders of this Committee—Chairman Boxer, Ranking Member Vitter, Senator Baucus, and Senator Inhofe—are to be commended for that effort.

My testimony today will focus on what MAP-21 left undone—ensuring an adequate level of investment in our national surface transportation network.

The Challenge

In recent decades, the United States has underinvested in the national surface transportation network. As a result, the aging, congested network is in need of repair and does not have adequate capacity to accommodate future population and economic growth.

According to estimates of the Policy and Revenue Study Commission, we need to invest at least \$225 billion annually from all sources (federal, state, local, and private sector) for the next 50 years to upgrade our existing system to a state of good repair and create a more advanced surface transportation system to sustain and ensure our international competitiveness and strong economic growth for our families. We are spending less than 40 percent of this amount today.

Even if the Commission's estimates were off by 25 percent, we would nevertheless still need a substantial increase in investment from all sources, including the federal government.

These findings should not come as a surprise. Commission after Commission, study after study, and report after report have identified serious deficiencies in the Nation's surface transportation network—aging and deteriorating infrastructure and reduced operational efficiency of key assets.

Action, Inaction, and Economic Growth

The increased investment required to maintain and improve our highways is not only needed for the convenience and the safety of individual drivers—although these are important concerns. A deteriorating public highway system also powerfully impacts the well being of the U.S. economy.

Our national highway network is a critical driver of our national economy. It is a rare example of a physical government infrastructure that reaches *every* American – if not individual drivers, then individuals who consume goods and services that could only be provided thanks to state-to-state transportation. It increases productivity and lowers transaction costs. It has been instrumental in enhancing mobility, and thus providing access to jobs, education, and other opportunities that have increased the quality of life in the United States. If no action is taken—that is, if no investments are made to maintain and improve the highway system to accommodate greater demand for access to goods and services—access to these benefits will be limited.

A recent report by the McKinsey Global Institute shows just how far behind the U.S. has fallen in terms of building a 21st-century infrastructure. Compared to the 139 countries examined by the World Economic Forum’s *Global Competitiveness Report 2010-2011*, the U.S. ranks 23rd on overall quality of infrastructure, behind countries such as France, Germany, Canada, and Japan. This represents a precipitous drop over the past decade: in 2000, the U.S. ranked 7th.

Worse still, our inadequate infrastructure imposes unnecessary additional costs on the U.S. economy and American taxpayers. The McKinsey report goes on to estimate that increasing road congestion in the United States already costs more \$85 billion year. On a per traveler basis, this cost ranges from \$1,084 in very large urban areas to \$384 in suburban and rural locations.

At a time of increasing global competition and uncertain economic growth, the United States can’t afford to undermine the benefits that a well-functioning transportation system provides or allow inaction to impose additional costs on U.S. travelers. U.S. jobs, the U.S. economy, and this country’s position as a global economic leader are at stake.

To put it bluntly, failure to adequately fund the maintenance and expansion of this system should not be an option. As a country, we can’t avoid making the choice to address this problem—and inaction is the wrong choice.

Highway Trust Fund Solvency

In 1956, the Congress established the Highway Trust Fund (“HTF”) to help build the Interstate Highway System while continuing to invest in the national surface transportation network. Created by the Highway Revenue Act of 1956, the HTF is a financing mechanism that accounts for tax receipts dedicated for expenditure on highways and transit needs. Currently, the HTF houses two accounts: one for the highway program, and one for public transit.

Since its inception, the HTF has been funded by taxes on motor fuels and vehicles. By linking transportation-related taxes with transportation-related funding, the HTF ensures that the costs of the federal highway system are primarily borne by its users. Through the ample revenue they provided to the HTF, the Eisenhower generation helped build not

only a state-of-the-art highway system, but also one that included extra capacity for generations of drivers to come.

How did we get from having one of the world's preeminent transportation systems to an overburdened system that is steadily falling into a state of disrepair? The heart of the problem is this: while we have been benefiting from the expenditures of the generation that helped to build the Interstate Highway System, we have failed to make adequate federal investments of our own.

Though national surface transportation expenditures have increased over time, they have not kept pace with national growth. Expenditures on highway maintenance and improvements are shared by local, state, and federal governments. When growth in vehicle miles traveled is taken into account, real highway spending across all these levels of government has fallen by nearly 50 percent since the creation of the HTF. The federal contribution to highway spending, in particular, has remained fairly constant, falling behind rather than responding to additional infrastructure demand.

Currently, about 90 percent of HTF revenue is derived from excise taxes on motor fuels. These taxes are set at 18.4 cents per gallon of gasoline and 24.4 cents per gallon of diesel, but are not indexed for inflation and have not been raised for almost two decades. The tax has lost about 33 percent of its purchase power since it was last raised.

Moreover, as a result of the economic downturn, declining real receipts, and more efficient vehicles, the HTF is in a solvency crisis. Since, by law, the HTF cannot incur a negative balance, Congress has been forced to authorize emergency funding infusions totaling about \$54 billion since 2008. Yet short-term and long-term shortfalls still loom – and investment needs continue to grow.

What the HTF truly needs is a significant and immediate increase in revenues. The current level of funding is not adequate to maintain the operational performance and physical condition of the highway system.

According to CBO, the HTF needs additional annual revenues equivalent to a 10-cent gas tax increase just to maintain current, inadequate levels of investment.

The Policy and Revenue Study Commission concluded that the HTF needs additional annual revenues equivalent to a 25- to 40-cent gas tax increase (5 to 8 cent increase annually for 5 years) to start meeting the future needs of our national surface transportation network.

The question is: what is the best and fairest way to raise the additional revenues needed?

Evaluating Appropriate Solutions

Public policy groups and government commissions have proposed dozens of solutions with respect to raising HTF revenue. In evaluating these solutions, three principles

should be considered. All three of these principles are important for creating revenue-raising mechanisms that are efficient, viable, and best reflect the scope of the federal highway system and its role in the U.S. economy.

First, proposed solutions should approximate a true user fee as closely as possible. The HTF's major revenue stream – motor fuel taxes – are an example of a revenue-raising solution that attempts to place the responsibility for maintaining and improving the highway system on its actual users. Revenue options that hew as closely as possible to user fees are fairer and more economically efficient, causing the individuals who impose costs on the system (for example, by increasing the need for repairs through a high level of use) to pay those costs, rather than obligating non-users to shoulder the burden.

Second, the solutions should be relatively easy to implement. The problem of federal highway funding requires an urgent response. Moreover, ease of implementation usually—though not always—translates into less costly and more politically viable programs.

The third and most important principle is the need for a truly national investment policy. Highway Account funding can be used on the federal-aid eligible highways that make up about 25 percent of the nation's 4 million miles of roads but carry more than 85 percent of the vehicle miles traveled annually.

Most of the Highway Account funding is focused on the 233,000-mile National Highway System (which includes the Interstate Highway System). It makes up just 5.7 percent of the Nation's road mileage but carries 55 percent of the of the vehicle miles traveled annually. Significant investment in the National Highway System (NHS) is needed to:

- Restore the Interstate Highway System, which is reaching 40 to 50 years of age, to a state of good repair through an aggressive program of preservation, including projects to—
 - Substantially rehabilitate, or in some cases replace, many of its 55,000 bridges; and
 - Reconstruct major portions of its 210,000 lane miles.
- Improve system performance by applying the full range of intelligent transportation systems (e.g., navigation systems, traffic signal control systems, real-time parking guidance and notification systems, and vehicle detection and notification systems) and aggressive systems of operation and management strategies.
- Replace aging interchanges that have become major bottlenecks with interchanges that have wider lanes and geometric designs to allow higher volumes of cars and trucks to exit and merge more safely at higher speeds.

- Reduce congestion by adding additional lane miles to urban and rural Interstates, where appropriate.
- Expand the Interstate Highway System, where appropriate, to provide connections to new and emerging centers of population and commerce.
- Preserve and modernize the non-Interstate National Highway System, including important corridors such as the Avenue of the Saints, Transamerica Corridor, Hoosier Heartland Industrial Corridor, Great Lakes/Mid-Atlantic Corridor, Heartland Expressway, U.S. 395 (CA, NV, OR, WA), CANAMEX, Ports-to-Plains, Wisconsin Development Corridor, Capital Gateway Corridor, East-West Corridor, SPIRIT Corridor, Theodore Roosevelt Expressway, and Camino Real Corridor, among others.
- Address urban congestion through operational improvements and, where necessary, increased NHS capacity.
- Improve rural NHS highways to keep U.S. agriculture competitive, especially lower-classification Federal-aid roads that link farm and local roads with the National Highway System.
- Upgrade narrow, two-lane, rural NHS roads that cannot safely carry the kind of trucks now moving across the United States to support the renewable fuels industry, wind farm energy production, and the development of other energy resources.
- Improve rural NHS highways to handle the growth in international and domestic trade moving through the heartland of America.
- Preserve and upgrade, where necessary, the Strategic Highway Network (STRAHNET), a network of highways that are important to the United States' strategic defense policy and that provide defense access, continuity, and emergency capabilities for defense purposes. STRAHNET Connectors—highways that provide access between major military installations and ports—would also be maintained and upgraded where appropriate.
- Provide NHS connectivity between urban and rural America, and address seasonal congestion and bottlenecks associated with interstate tourism, especially at national parks.
- Provide adequate NHS access to new and emerging cities and towns so that our highway system will be the unifying network that President Eisenhower envisioned.

Modernizing federal-aid eligible highways, especially the major highways that make up the National Highway System, will require significant, sustained investment over a considerable period of time. The HTF is uniquely suited for this type of investment.

Previous reports on the issue of highway funding often raise solutions such as credit enhancement programs, bonding, state-level tolling, national or state infrastructure banks, and private-public partnerships. These options, while worthwhile and clearly part of the overall solution, are not the complete solution. Such programs will not generate enough revenue for the system-wide, sustained investment that is needed over the long term. Moreover, they tend to reside at the local- and even project-level. State and local governments are subject to different and more narrowly-focused political pressures than the federal government. If funding fixes were aimed only at changes on the state- and local-level, there is a danger that the transportation system would become balkanized—to the detriment of the national network.

The focus in creating the federal-aid highway system was the concept of a country unified by a nationwide infrastructure. In today's highly competitive global economy, this vision is more important than ever. Only a strong federal role will help realize this unity, allowing for systemic improvements in both high-traffic and low-traffic states. There is also the issue of fairness. A very costly project in State A may be needed because of traffic destined for other distant states. It is not fair to ask the citizens of State A to pay the whole tab for a project that benefits millions of people across the network. The costs of modernizing the national network should be borne by all of the users of the network.

This approach is consistent with federal role in transportation throughout our nation's history. From President Washington's support for federal construction, maintenance and repair of existing and future lighthouses, buoys and public piers for rendering navigation "easy and safe"; to Henry Clay's support for capital improvements; to President Lincoln's support for the transcontinental railroad; to President Theodore Roosevelt's support of the Panama Canal; to President Franklin Roosevelt's support for a cross-country high level road system; to President Eisenhower's support of the Interstate Highway System and the Highway Trust Fund; and to President Reagan's support for increased motor fuel user fees to preserve and modernize the federal-aid highway network, the federal government has been instrumental in the development of our Nation's strong surface transportation network.

Thus, the solutions discussed below focus on increasing the receipts of the HTF for countrywide distribution.

Possible Solutions

Before discussing a number of possible solutions, I want to bring to your attention the options that the Policy and Revenue Study Commission evaluated and the results of the Commission's analysis. These are set forth in Appendix A. The color chart can be particularly helpful in providing an overview of the merits of each option.

In my testimony, I want to focus on the following options:

Future Replacement for Current Motor Fuel Taxes

It is imperative to find a long-term replacement for motor fuel taxes as soon as possible. There is a growing recognition that supplies of conventional petroleum-based fuels will get tighter in the future, leading to the possibility of higher fuel prices, greater disparities in vehicle fuel economy, increasing use of alternative fuels, and greater concern about energy security. However, many technical and institutional questions remain to be answered, especially with respect to mileage-based fees like VMT. The replacement for the motor fuel tax will not be available in the near term and probably the medium term as well, so it cannot be relied on to serve as a source of HTF revenues for in the near future. It is important, however, to aggressively conduct research in this area. Pilot projects should be encouraged. We must make transitioning to a replacement fee a priority.

Increased Motor Fuel and Diesel Fuel Taxes

One obvious solution that meets the three criteria outlined in the previous section is an increase in the motor fuel and diesel fuel excise taxes and indexing them to inflation.

As mentioned above, motor fuel taxes on diesel and gas constitute about 90 percent of HTF receipts. These taxes are charged at a flat rate per gallon that is set by Congress. The current tax rates on motor fuels are 18.4 cents per gallon for gasoline and 24.4 cents per gallon for diesel fuel. An increase in these rates is long overdue; Congress has not changed the rates since 1993, and because they are not indexed for inflation, their efficacy as a revenue-raising tool has diminished substantially over the past 18 years. Had the federal gas tax rate of 18.4 cents per gallon been indexed using the Consumer Price Index for all Urban Consumers beginning in 1993, the tax rate in 2008—the year of the HTF’s first emergency infusion—would be 27.5 cents per gallon.

Because the motor fuel tax is already in place as the primary funder of the HTF, implementation of a tax increase or an indexing solution is straightforward and could be easily accomplished, at least technically. Moreover, the motor fuel tax approximately places the cost of maintaining and improving the highway system on users of that system. Although the tax is collected at the fuel terminal level, it is passed on to drivers at the pump.

If Congress does not increase the current motor and diesel fuel taxes, it should, nevertheless, consider indexing them to inflation. This would at least preserve the current purchasing power of those taxes and be a part of the solution to the transportation investment crisis.

It should be noted that the Policy and Revenue Study Commission recommended a 5- to 8-cent per gallon increase in motor fuel and diesel fuel taxes annually for a five-year

period. It also recommended indexing. This would result in a total increase of 25- to 40-cents per gallon, plus indexing.

It should also be noted that the Simpson-Bowles Commission recommended a 15-cent increase in the motor fuel and diesel fuel taxes, along with indexing.

Targeted Federal User Fees

Another possible solution is based on federal user fees and is derived from a paper written by Beth Bell, an associate at Covington, and myself. The paper is attached as Appendix B.

The paper proposes the following user fees:

- (1) a Federal Interstate User Fee for all vehicles using the Interstate Highway System, with its revenues dedicated to modernizing the Interstate to meet the demands of the 21st century; and
- (2) a Federal Motor Carrier User Fee, with its revenues dedicated to freight-related transportation improvements benefiting the trucking industry.

These targeted user fees have three characteristics in common: they appropriately place the costs of maintaining and improving the federal-aid highway system on its users, they can be implemented relatively easily, and most importantly, they tackle the problem of highway funding on a comprehensive, national level.

Registration Fee Increase

All states impose an annual vehicle registration fee, and at least half the states raise more than a quarter of their dedicated transportation revenues through this mechanism. One possible way to raise additional HTF revenues would be to impose a flat federal registration fee in addition to any state charges. The fee would be set by the Congress and would flow to the HTF. Because the fee would be collected through states' existing systems, this option could be implemented with little additional cost. Unless fees become particularly high, however, the revenue potential of this solution may be limited. And although vehicle-related, the registration fee is not as user-based as some of the other possible solutions being discussed.

Oil-related solutions

Various oil-related taxes and tariffs could be imposed on producers and importers in order to raise funds for the HTF. For example, a straightforward tariff on oil, charged as either a fixed amount per barrel or as a percentage of the value of imported oil, could be imposed.

A more complex system, but one which would more directly affect oil consumption, would involve imposing a tax on oil consumption plus a tariff on imports of refined petroleum. The oil tax would be constructed as a percentage tax on each barrel of oil consumed in the United States. The rate of the tax would be adjusted on an annual or semi-annual basis (primarily to ensure that consumers are not penalized during periods when oil prices spike). The tax would be collected at the refinery level. To prevent international refiners from obtaining an undue advantage, imports of refined petroleum products would incur a tax equivalent to the oil tax. Similarly, exporters would receive a tax credit or rebate equivalent on the oil used to produce exported products.

As other studies have noted, an oil tax or tariff could be set so as to internalize various external costs associated with the consumption of petroleum products—including environmental and national security costs. An oil tariff alone could also promote U.S. energy independence. While these may be desirable policy outcomes, one drawback to a broad oil tax is that it is not user-based; the tax on barrels of oil that are not eventually used as fuels (or as asphalt) would nonetheless flow to the HTF. While it may be possible to apportion the revenue raised by the oil tax according to use, such a system may be administratively difficult and lead to delays in implementation. Additionally, because a tax on oil would necessarily place a greater burden on certain households (for example, because of regional weather differences) and businesses that consume more oil, political opposition to an oil tax may be heavy or insurmountable.

Use of royalties flowing from existing or new oil production is also a possibility.

Existing Revenue Streams

A portion of international customs fees could be dedicated to the HTF to cover the costs of improvements related to the movement of goods into and out of ports of entry. It would also be possible to dedicate a portion of corporate taxes from industries reliant on truck transportation. Increasing these fees and taxes is also an option.

General Treasury option

A final option that would offer little by way of user-targeting, but would be fairly simple to implement, involves using General Treasury funds to supplement the HTF's existing revenue streams. Again, however, a General Treasury option would move away from user-based taxation, and would potentially be an unstable source of funding.

Conclusion

During the debate on the Fiscal Year 2012 budget on the floor of the House of Representatives, one member said of the 2008 financial crisis: “Let me ask you this”—

What if your President and your member of Congress saw it coming? What if they knew why it was happening, when it was going to happen, and more importantly they knew what to do to stop it and they had time to stop it but they

didn't, because of politics? . . . We cannot avoid this choice. To govern is to choose. We are making a choice even if we don't act. And that's the wrong choice.

These remarks could apply equally, if not more so, to the impending transportation crisis facing the United States.

For decades, the United States has underinvested in the national surface transportation network. As a result, the aging, congested network is in need of repair and does not have adequate capacity to accommodate future population and economic growth. Despite the persistent calls of policy groups, as well as independent, government-sponsored commissions and studies, for increased investment, the Highway Trust Fund—the primary vehicle for federal surface transportation funding—has been perpetually underfunded.

Should this pattern of government inaction continue, our economy, which depends on the efficient and safe transportation of goods and people, will suffer as our surface transportation network literally grinds to a halt. U.S. businesses will become less competitive in the global marketplace. U.S. companies will be forced to locate plants in other countries where transportation services are adequate. U.S. private sector jobs will be lost. And the American people will suffer, in terms of lost job opportunities, longer and more stressful commutes, and a lower standard of living.

In other words, this transportation crisis is predictable. We can see it coming. We know why it is happening. We know when it is going to happen, and we have time to stop it. Most importantly, we know what to do to stop it – and, in fact, revenue-raising solutions to maintain and improve our surface transportation network can be implemented almost immediately. The problem has been politics. There has not been the political will to raise the federal motor fuel or diesel fuel taxes that comprise the majority of federal surface transportation funding, even though study after study, and report after report, has recommended doing so.

In the mid-1950's, this Committee and President Eisenhower had the foresight to understand how a system of Interstate Highways would transform the Nation. If there was ever a time to take a similarly daring look at our nation surface transportation network, it is now. The Nation faces challenges similar to those of the Eisenhower era. However, due to the global economy, the imperative for change is even stronger.

It is time to act.

ATTACHMENT A

"REPORT OF NATIONAL SURFACE TRANSPORTATION POLICY & REVENUE STUDY COMMISSION"
"TRANSPORTATION FOR TOMMORROW"

Exhibit 5-20. Evaluation of potential transportation revenue sources against generally accepted evaluation criteria

	Revenue Adequacy	Stability/Predictability	Responsiveness to Inflation	Flexibility	Appropriateness of Dedication	Compliance Costs	Administrative Costs	Equity by Vehicle Class	Equity by Income Group	Equity by Geography	Relationship to Economic Efficiency	Point of Taxation and Incidence	Evasion Potential	Ease of Implementation	Average
Fuel Tax	Good	Very Good	Very Poor	Good	Excellent	Good	Good	Not Good	Not Good	Not Good	Not Good	Excellent	Very Good	Very Good	Good
Indexed Fuel Tax	Excellent	Very Good	Excellent	Good	Excellent	Good	Good	Not Good	Not Good	Not Good	Not Good	Excellent	Very Good	Very Good	Good
Motor Fuel Sales Tax	Good	Not Good	Very Good	Good	Excellent	Excellent	Excellent	Not Good	Not Good	Not Good	Not Good	Excellent	Very Good	Not Good	Good
Value Added Tax	Not Good	Not Good	Very Good	Not Good	Not Good	Not Good	Not Good	Excellent	Not Good	Not Good	Not Good	Not Good	Not Good	Very Poor	Not Good
Registration Fee	Very Good	Very Good	Not Good	Very Good	Excellent	Very Good	Very Good	Very Good	Not Good	Very Good	Not Good	Not Good	Very Good	Very Good	Not Good
Personal Property Tax	Not Good	Very Good	Very Good	Not Good	Very Good	Not Good	Not Good	Very Good	Not Good	Very Good	Not Good	Not Good	Not Good	Not Good	Not Good
Vehicle Sales Tax	Very Good	Not Good	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Very Good	Not Good	Very Good	Very Good	Very Good	Good
Traditional Tolls	Not Good	Very Good	Not Good	Not Good	Excellent	Not Good	Not Good	Very Good	Not Good	Not Good	Very Good	Not Good	Very Good	Not Good	Good
Tolling New Lanes	Not Good	Not Good	Excellent	Not Good	Excellent	Not Good	Not Good	Very Good	Not Good	Not Good	Very Good	Not Good	Very Good	Not Good	Good
Tolling Existing Lanes	Not Good	Very Good	Excellent	Not Good	Excellent	Not Good	Not Good	Very Good	Not Good	Not Good	Very Good	Not Good	Very Good	Very Poor	Good
VMT Fees	Very Good	Very Good	Very Poor	Very Good	Excellent	Not Good	Not Good	Very Good	Not Good	Not Good	Very Good	Very Poor	Not Good	Not Good	Good
Indexed VMT Fees	Excellent	Very Good	Excellent	Very Good	Excellent	Not Good	Not Good	Very Good	Not Good	Not Good	Very Good	Very Poor	Not Good	Not Good	Good
Congestion Pricing	Not Good	Not Good	Very Good	Not Good	Excellent	Not Good	Not Good	Very Good	Not Good	Excellent	Excellent	Not Good	Not Good	Not Good	Not Good
Local Option Sales Tax	Not Good	Not Good	Very Good	Not Good	Not Good	Very Good	Very Good	Excellent	Not Good	Excellent	Not Good	Very Good	Very Good	Not Good	Good
Impact Fees	Not Good	Not Good	Very Good	Not Good	Very Good	Not Good	Not Good	Excellent	Very Good	Excellent	Very Good	Not Good	Very Good	Not Good	Not Good
Innovative Finance*	Not Good	Not Good	Very Good	Not Good	Excellent	Not Good	Not Good	Very Good	Not Good	Not Good	Very Good	Not Good	Very Good	Not Good	Not Good
Public-Private Partnerships*	Not Good	Not Good	Very Good	Not Good	Very Good	Not Good	Not Good	Very Good	Not Good	Not Good	Very Good	Not Good	Very Good	Not Good	Not Good
Container Fees	Not Good	Not Good	Not Good	Not Good	Very Good	Not Good	Not Good	Not Good	Not Good	Very Good	Very Good	Not Good	Very Good	Very Poor	Not Good
Customs Duties	Not Good	Very Good	Very Good	Not Good	Very Good	Very Good	Very Good	Not Good	Very Good	Not Good	Not Good	Very Good	Very Good	Very Poor	Good

* Assumes repayment from tolls

Legend: Excellent Very Good Good Not Good Poor Very Poor

This chart provides a subjective evaluation of a series of alternative revenue sources against a set of criteria.

Source: Commission Staff analysis.



Exhibit 5-21. Advantages and disadvantages of alternative revenue sources

Motor Fuel Taxes, Excise Tax (per Gallon)	
Source and History	<p>Motor fuel taxes have been the most important revenue mechanism for highway programs at the Federal and state levels.</p> <p>Most states have traditional “cents per gallon” excise taxes on the highway use of motor fuel. Some also have variable rates based on an inflation adjustment or a fuel price. Several alternative fuels currently are taxed on an energy equivalent basis to gasoline or diesel.</p> <p>Fuel taxes also support transit programs at the Federal level and in some states.</p>
Yield, Adequacy and Stability	<p>Historically motor fuel taxes have been attractive because of their high yield (currently about \$1.9 billion per penny of tax at the Federal level), their adequacy to support highway construction programs, and their stability. In recent years the adequacy of the fuel tax has come into question because it does not increase with inflation and because voters at all levels of government have been less willing to approve fuel tax increases</p>
Cost-Efficiency and Equity	<p>Motor fuel taxes are inexpensive to administer and have low compliance costs. Evasion has been a major issue, especially for diesel fuel, but states and the FHWA have reduced evasion levels.</p> <p>Motor fuel taxes at rates sufficient to fund all needs would not add enough to fuel prices to significantly impact travel volumes.</p> <p>Fuel taxes vary with highway use, but this relationship will become less direct as we move toward more fuel efficient vehicles and greater use of alternative fuels.</p> <p>Raising fuel taxes without at the same time raising truck taxes reduces the equity of the overall highway user fee structure because trucks would pay a lower share of their overall highway cost responsibility.</p>
Economic Efficiency	<p>Motor fuel taxes are not economically efficient because they do not vary as the cost of travel increases. They do vary with vehicle fuel efficiency, but the decline in fuel efficiency when vehicles operate in congested traffic does not reflect the full costs of travel in congested conditions.</p>
Potential Applicability at Program or Project Level and by Different Levels of Government	<p>Motor fuel taxes are applicable to financing programs of improvements, but not individual projects. All levels of government can and do impose motor fuel taxes.</p> <p>Recent studies suggest the fuel tax will be a viable revenue source for highway and transit programs for at least 15 to 20 years, but after that moves to alternative fuels and more fuel efficient vehicles will increasingly erode the ability of the fuel tax to serve its current role as the major revenue source for Federal and State highway programs.</p>
Potential Acceptability	<p>About 20 States have increased their fuel taxes since 2000, but the general aversion to tax increases has made it difficult to increase fuel taxes. The Federal tax has not been increased since 1993. High fuel prices make it even more difficult to raise fuel taxes, even though the tax represents a smaller share of the total price of fuel when prices are high.</p>
Implementation Issues and Potential Strategies to Overcome Barriers	<p>Based on history, adjustments through legislation to the motor fuel excise tax have been the method of choice in most states for major new funding resources to fill funding gaps for state highways.</p> <p>Flat rate fees per gallon have not been adjusted fast enough to keep pace with needs.</p> <p>Motor fuel taxes may be higher per gallon in some States than in neighboring states. Opponents of fuel taxes generally raise the issue of diversion of purchases to neighboring states with lower tax rates.</p>

Exhibit 5-21. Advantages and disadvantages of alternative revenue sources, continued

Motor Fuel Taxes - Indexing of Fuel Taxes

Source and History	About 5 States currently index their fuel tax to some measure of inflation.
Yield, Adequacy and Stability	The yield and adequacy of motor fuel taxes could be enhanced by indexing to inflation or, in some cases to fuel prices. They could also be indexed to needs estimates or to construction prices, making it responsive to anticipated program costs.
Cost-Efficiency and Equity	Motor fuel taxes by themselves are not equitable among vehicle classes, since the largest vehicles pay less in fuel taxes relative to the costs imposed on highways
Economic Efficiency	Indexing the fuel tax does not make the tax more economically efficient.
Potential Applicability at Program or Project Level and by Different Levels of Government	Indexing the fuel tax does not affect its applicability.
Potential Acceptability	Many argue that simply indexing the fuel tax to some measure of inflation does not constitute a tax increase and thus is more acceptable than a tax increase. Others disagree and say that changes due to indexing are tax increases.
Implementation Issues and Potential Strategies to Overcome Barriers	A ceiling and floor on the change in the indexed rate may be desirable to prevent large changes in tax rates. Many see indexing as just a backdoor way of increasing the fuel tax.

Motor Fuel Taxes - Sales Tax on Fuel

Source and History	Several States impose a tax on the sales price of fuel.
Yield, Adequacy and Stability	A sales tax on fuel is likely to be more volatile, but could be subject to limits in terms of the maximum or minimum or the rate of change each year.
Cost-Efficiency and Equity	Motor fuel taxes are mildly regressive among income groups. Basing the rate on the sales price of fuel would make them more regressive.
Economic Efficiency	Basing the fuel tax on the price of fuel rather than on a gallonage basis would not improve the efficiency of the tax.
Potential Applicability at Program or Project Level and by Different Levels of Government	Basing the fuel tax on the price of fuel rather than on a gallonage basis would not affect its applicability.
Potential Acceptability	The volatility of fuel prices would adversely affect the public acceptability, especially when fuel prices are rising.
Implementation Issues and Potential Strategies to Overcome Barriers	Sales taxes on fuel have recently been of greater interest due to the increase in fuel prices

Exhibit 5-21. Advantages and disadvantages of alternative revenue sources, continued

Other Types of Petroleum Taxes	
Source and History	
Yield, Adequacy and Stability	Other types of motor fuel taxes could be utilized.
Cost-Efficiency and Equity	
Economic Efficiency	Other types of petroleum taxes would be no more efficient than the current tax.
Potential Applicability at Program or Project Level and by Different Levels of Government	Fuel taxes by their nature are applicable only at the program level.
Potential Acceptability	Pennsylvania has an oil company franchise tax to collect fees on petroleum fuels.
Implementation Issues and Potential Strategies to Overcome Barriers	Some believe that petroleum taxes have more voter appeal because of a perception that they are imposed on petroleum companies rather than on individual drivers; however, such taxes are normally passed through to drivers the same as other types of motor fuel taxes.
Value Added Tax	
Source and History	The U.S. is one of the few countries that does not have a value added tax. The tax is similar to a sales tax, but is levied at every stage in the production process, not just on final consumption as the traditional sales tax.
Yield, Adequacy and Stability	The yield could be high and would be fairly stable, fluctuating with changes in the national economy.
Cost-Efficiency and Equity	Administrative costs would be higher than for the fuel tax since there are many taxpayers and considerable documentation involved. This potentially could also make it subject to evasion.
Economic Efficiency	The economic efficiency would not be as great as the fuel tax since a VAT would not directly reflect transportation requirements or use.
Potential Applicability at Program or Project Level and by Different Levels of Government	The VAT could be applicable to general transportation purposes. It would be applicable to financing programs of transportation improvements, but not individual projects. It almost certainly would be limited to the national level.
Potential Acceptability	Like any new tax it would face opposition from taxpayers and from businesses.
Implementation Issues and Potential Strategies to Overcome Barriers	A general VAT has been discussed for many years, but rejected. Estimating just the value added by transportation could be difficult.
Registration and Other Vehicle Fees	
Source and History	All states have traditional types of registration fees for light vehicles and somewhat higher and graduated fees for heavy vehicles. At the Federal level the Heavy Vehicle Use Tax is similar to a registration fee but it applies only to the heaviest trucks.

Exhibit 5-21. Advantages and disadvantages of alternative revenue sources, continued

Registration and Other Vehicle Fees, continued

Yield, Adequacy and Stability	Registration fees provide major revenue sources for states and local governments (through state allocations) and must be adjusted through legislation. In addition to adjusting rates, other options include revising the type of registration fee.
Cost-Efficiency and Equity	Registration fees are relatively inexpensive to administer in relation to potential yield, but not as inexpensive as fuel taxes. The fact that registration fees do not vary by miles traveled is a major source of inequity and inefficiency. Registration fees allow for collections from vehicles using alternative fuels without establishing new mechanisms for collection.
Economic Efficiency	Registration fees can be varied by vehicle size and can be set in rough relation to highway cost responsibility, except for the impacts of different mileage by similar sized vehicles. Thus for trucks they may be somewhat more efficient than fuel taxes, but for passenger vehicles they likely are less efficient because they do not vary by mileage and they do not capture costs of congestion.
Potential Applicability at Program or Project Level and by Different Levels of Government	Like fuel taxes registration fees are applicable at the program level, but not the project level. The federal Heavy Vehicle Use Tax is similar to a registration fee and all States have registration fees.
Potential Acceptability	Registration fee adjustments are promising as both a short- and long-term option for funding highways.
Implementation Issues and Potential Strategies to Overcome Barriers	Equity among vehicle classes would indicate that parallel adjustments in registration fees should be made applicable to all vehicles.

Registration Fees Based on Value - Personal Property Taxes

Source and History	A registration fee based on value can be structured as a personal property tax and be deductible from Federal income.
Yield, Adequacy and Stability	A fee on the value of a vehicle could raise substantial revenue, and could be structured to be deductible for Federal income tax purposes, thus increasing the state's revenue yield without an equal increase in net total tax payments.
Cost-Efficiency and Equity	Registration fees for light vehicles, if collected on a flat basis, are somewhat regressive by income class. Registration fees for light vehicles on the basis of value are progressive.
Economic Efficiency	Basing registration fees on value could improve their efficiency somewhat since newer vehicles tend to be driven more than older vehicles.
Potential Applicability at Program or Project Level and by Different Levels of Government	Levying fee on the basis of a vehicle's value would not change the overall applicability of registration fees.
Potential Acceptability	Registration fees (in actuality, personal property taxes on vehicles) based on value have the best revenue generating potential and are less costly to taxpayers in the state.
Implementation Issues and Potential Strategies to Overcome Barriers	Some states have recently eliminated or reduced such fees despite their advantages in comparison to collecting other state taxes that are not deductible for federal income tax purposes.

Exhibit 5-21. Advantages and disadvantages of alternative revenue sources, continued

Sales Taxes on Vehicles	
Source and History	The Federal Government and many States have sales taxes on vehicles. The Federal tax applies only to heavy trucks, but formerly had been applied to all vehicle sales.
Yield, Adequacy and Stability	Sales taxes on vehicles can be useful revenue sources. They can bring in relatively large amounts of money but their stability is threatened by trends toward the purchase of smaller, more fuel efficient vehicles that cost less than large cars and SUVs.
Cost-Efficiency and Equity	Sales taxes on vehicles will be fairly progressive. Administrative costs are relatively low, but especially with trucks there are issues concerning what specialized equipment should be exempt from taxation.
Economic Efficiency	Sales taxes do not vary with the amount of travel or other factors that affect the costs of travel and thus have poor efficiency.
Potential Applicability at Program or Project Level and by Different Levels of Government	Sales taxes are much more applicable to the program level than the project level. They are particularly applicable at the local level, but could be used at the State level as well.
Potential Acceptability	Sales taxes on vehicles have substantial revenue raising potential.
Implementation Issues and Potential Strategies to Overcome Barriers	All sales taxes already may be deposited into general revenue accounts.
Traditional Tolls	
Source and History	Selected highways and selected bridges have historically been toll facilities.
Yield, Adequacy and Stability	Existing toll facilities have been proven to be reliable and stable generators of revenue. The bonds of toll agencies are highly marketable.
Cost-Efficiency and Equity	Administration and compliance costs for tolling are greater than for motor fuel taxes, although these costs are reduced greatly through electronic toll collection.
Economic Efficiency	Traditional tolls vary by miles traveled and the size of trucks so are more efficient than fuel taxes, but traditional tolls do not vary with congestion levels.
Potential Applicability at Program or Project Level and by Different Levels of Government	Traditionally tolls have been used to finance individual projects. Several States allow tolls from one project to be used to provide front-end financing for other toll roads and thus tolls can be applicable to systems of toll roads or to transit facilities as well. Tolls are applicable at the State and local level, but have not been used at the Federal level.
Potential Acceptability	Tolls may be considered to be highly promising options for application to new highway capacity in the longer term with perhaps some limited short-term opportunities.
Implementation Issues and Potential Strategies to Overcome Barriers	A few existing toll facilities have been leased to international companies, substituting short-term revenue gains by public agencies for lesser longer-term revenues.

Exhibit 5-21. Advantages and disadvantages of alternative revenue sources, continued

Tolling New Lanes	
Source and History	In the past 10 years, 30-40 percent of new limited access highway mileage has been financed at least in part through tolls.
Yield, Adequacy and Stability	Legislation may be necessary to enable new types of tolls or pricing initiatives. Electronic pricing could significantly expand future opportunities. Toll revenues have been relatively stable at from 5-7 percent of total revenues for highways. If tolls are indexed to inflation revenues could increase substantially. Variable pricing would also increase toll revenues.
Cost-Efficiency and Equity	Tolls collected at traditional toll booths are expensive to administer, but electronic tolling is much less costly. Tolls can be set to achieve equity among vehicle classes. Concerns about the impacts of tolling on equity among income groups continue, but HOT lanes have been supported by all income groups.
Economic Efficiency	Variable tolls are much more economically efficient than fuel taxes.
Potential Applicability at Program or Project Level and by Different Levels of Government	Tolls are predominantly facility-based revenue sources used to finance individual projects. Tolls are applicable at the State and local level, but have not been used at the Federal level.
Potential Acceptability	Major positive opportunities exist to toll new future capacity. Sometimes this could be accomplished with tolls covering only a portion of needed revenues, which provides more total revenue and capacity than no tolling new facilities. Special types of toll facilities such as for truck lanes or HOT lanes could be promising.
Implementation Issues and Potential Strategies to Overcome Barriers	Acts allowing Regional Mobility Authorities (RMA) and a PPP act could expand future possibilities for tolling. Some states do not yet have a PPP act parallel to that of other states, which would enable private parties to initiate proposals to develop new facilities or to add toll lanes to existing facilities.
Tolling Existing Lanes	
Source and History	There currently are restrictions on tolling existing Interstate Highways but that can be done under several pilot programs for either pricing purposes or reconstruction of existing Interstate Highways.
Yield, Adequacy and Stability	Tolling existing lanes could provide very substantial additional revenues.
Cost-Efficiency and Equity	Tolling existing lanes could provide for greater equity than other sources of new revenues, but is widely perceived as inequitable ("paying twice"). This perception is false, however, since funds are needed for the continued maintenance and operation of the facilities.
Economic Efficiency	Variable tolls are much more economically efficient than fuel taxes.
Potential Applicability at Program or Project Level and by Different Levels of Government	Tolls are predominantly facility-based revenue sources used to finance individual projects. Tolls are applicable at the State and local level, but have not been used at the Federal level.

Exhibit 5-21. Advantages and disadvantages of alternative revenue sources, continued

Tolling Existing Lanes, continued

Potential Acceptability	Opposition to tolling existing lanes is greater than to tolling new lanes. The greatest opportunity for tolling existing lanes may come with tolling Interstate facilities when they must be reconstructed.
Implementation Issues and Potential Strategies to Overcome Barriers	Sentiment is against tolling any currently free highway lanes. Likewise, little opportunity exists for tolling existing free bridges.

VMT Fees

Source and History	Fees on VMT could be longer-term options that could supply revenues without being directly tied to fuel consumption. VMT fees could be weighted by fuel economy, weight, emissions, or other factors to support other policy goals.
Yield, Adequacy and Stability	VMT fees could be set to yield any level of desired revenues, but unless indexed to inflation their purchasing power would erode over time as does the fuel tax currently. VMT fees do not conflict with the need to reduce energy costs, reduce the balance of payments, or reduce fossil fuel consumption.
Cost-Efficiency and Equity	VMT fees would be more costly to collect and administer than fuel taxes, but long term costs are uncertain.
Economic Efficiency	VMT fees are more directly related to vehicle use than fuel taxes or registration fees. VMT fees, especially if applied as congestion pricing fees or weight-distance taxes can send strong pricing signals to users.
Potential Applicability at Program or Project Level and by Different Levels of Government	VMT fees are primarily for program financing rather than project financing – the counterpart at the project level is the toll. VMT fees could be used at the Federal, State, or local levels.
Potential Acceptability	A 2005 study of highway and transit revenue options for the U.S. Chamber of Commerce’s National Chamber Foundation identified VMT fees and congestion pricing fees as promising options in the long term (15 years or more). VMT fees do not reward use of fuel efficient vehicles as does the fuel tax, but incentives for fuel efficient vehicles could come through registration fees
Implementation Issues and Potential Strategies to Overcome Barriers	VMT fees or congestion pricing fees require the technology to collect those fees reliably and also the political will to implement a new approach. There are privacy concerns associated with VMT fees but concerns are not substantiated. Transitioning away from fuel tax and to a VMT tax will require substantial coordination and consensus building.

Congestion Pricing

Source and History	Could be applied as a special kind of VMT fee, with fees varying based on the level of congestion on the road. Pricing can also be implemented on an area-wide basis or a cordon basis. While the primary goal of congestion pricing is demand management rather than revenue generation, pricing can generate substantial revenues as well. Pricing can be either facility-based or area-wide. Oregon is demonstrating the technologies for collecting VMT fees at the fuel pump.
Yield, Adequacy and Stability	To maintain purchasing power congestion-related fees would have to be indexed to respond to inflation, but such indexing might not result in the level of congestion tolls desirable to efficiently manage demand. The yield and adequacy of congestion pricing revenues depend on where and how they are implemented. In some cases facility-based charges may cover facility construction and operations costs, but in other cases they may not.

Exhibit 5-21. Advantages and disadvantages of alternative revenue sources, continued

Congestion Pricing, continued	
Cost-Efficiency and Equity	Congestion pricing is more expensive to administer and enforce than motor fuel taxes. Concerns have been raised about the equity of congestion pricing. Equity is strongly influenced by the availability of good alternatives to driving on the priced highways. Rebate programs have been suggested as one way to reduce adverse impacts on lower income groups.
Economic Efficiency	Congestion pricing is more economically efficient than fuel taxes or most other revenue sources because users directly pay all or part of the costs their driving imposes on others. Congestion pricing could be combined with a weight-distance tax to capture the costs associated with operations of heavy trucks.
Potential Applicability at Program or Project Level and by Different Levels of Government	In the long run, VMT fees and congestion pricing could replace all or a portion of current user fees. Congestion pricing is applicable at either the project level or an area-wide level, but it generally would not be applicable to financing entire statewide transportation improvement programs.
Potential Acceptability	In the U.S. pricing generally has been limited to individual bridges and to HOT lanes and express lanes. The HOT lane and express lane applications have generally been well accepted since they provide drivers the choice of whether to pay to avoid congestion or not. Acceptance of pricing entire facilities or entire areas of a city is more controversial.
Implementation Issues and Potential Strategies to Overcome Barriers	The ability to apply pricing on the Interstate System is limited by federal law. Good transit alternatives also must be available for those who cannot afford the congestion toll and cannot change their trip destination or time of day.
Local Option Taxes	
Source and History	Have been widely used in many states to support highway and transit investments. Local governments in most states have implemented some type of local option tax, which must be specifically allowed by state enabling legislation. Local option taxes for transportation investments include motor fuel, vehicle, property, sales, and income taxes.
Yield, Adequacy and Stability	Sales taxes tend to have the highest yield compared to other local option taxes. Motor fuel and vehicle taxes tend to generate less revenue compared to other local option taxes. Except for motor fuel and vehicle taxes, other local option taxes tend to be indexed with inflation. Sales taxes respond to economic growth. Fluctuations in economic conditions tend to affect sales tax yield. Gasoline taxes and income taxes also could be impacted to some level by fluctuations in the economy.
Cost-Efficiency and Equity	Collection mechanisms already are in place to levy these taxes at the state or local level. Most local option taxes are regressive (except for income taxes). However, sales taxes tend to receive stronger support than other local option taxes. People consider that sales taxes are more "fair," since everyone pays, whether they are vehicle or transit users.
Economic Efficiency	Most local option taxes do not reflect the costs associated with highway use and thus are not economically efficient.
Potential Applicability at Program or Project Level and by Different Levels of Government	Local option taxes may be applicable to a major project, but are more applicable to a program of transportation improvements. By definition these fees are applicable only at the local level.

Exhibit 5-21. Advantages and disadvantages of alternative revenue sources, continued

Local Option Taxes, continued

Potential Acceptability	<p>State legislation must be in place that allows local option taxes.</p> <p>Sales taxes have been widely used by transit agencies to support operations and capital investments.</p> <p>Rates of success with ballot measures to fund transportation have been increasing, as documented by the Center for Transportation Excellence.</p>
Implementation Issues and Potential Strategies to Overcome Barriers	<p>Commonly, local option taxes require voters' approval. While an expenditure plan that specifies projects and/or programs to be funded with the new local option tax levies is not always required, local option taxes have better chances of success for implementation where expenditures and uses are clearly defined.</p> <p>Implementation plans that are well designed have resulted in very high success rates for ballot measures to enhance transportation revenues.</p>

Beneficiary Charges: Impact Fees

Source and History	<p>Impact fee legislation exists in 26 states (excluding Florida). Impact fees for transportation improvements are widely used in California and Florida.</p>
Yield, Adequacy and Stability	<p>Revenues from impact fees are typically dedicated for certain road and transit improvements that would serve the new development. In addition, revenues from impact fees will be highly dependent on development opportunities in the area where implemented.</p> <p>Value capture tools are subject to increases in property value realized by infrastructure improvements.</p>
Cost-Efficiency and Equity	<p>These charges can be relatively equitable if properly structured. Benefit districts can target the specific beneficiaries.</p> <p>While impact fees are directly charged to developers, they pass those charges to buyers, increasing the cost of real estate.</p> <p>TIF allocates a portion of the additional property taxes resulting from the increase in property values.</p> <p>Communities and local agencies could argue that implementation of TIF would take away revenues that otherwise would be used to meet other public needs.</p>
Economic Efficiency	<p>Beneficiary charges send modest pricing signals to encourage better transportation and land use integration.</p>
Potential Applicability at Program or Project Level and by Different Levels of Government	<p>Beneficiary charges may be applicable to a major project, or to a program of transportation improvements in a local area. These fees are applicable only at the local level.</p>
Potential Acceptability	<p>Implementation is subject to enabling legislation that allows the collection of impact fees and the formation of assessment districts.</p> <p>These tools tend to be most applicable in higher growth state or localities.</p>
Implementation Issues and Potential Strategies to Overcome Barriers	<p>Impact fees are only applicable to new development. TIF and other property assessments may require the formation of districts, where property tax levies are dedicated for transportation improvement. This may require voters' approval from district residents and business owners.</p> <p>Beneficiary charges have been the subject of numerous lawsuits in many areas.</p>

Exhibit 5-21. Advantages and disadvantages of alternative revenue sources, continued

Innovative Finance	
Source and History	Most states have used one or more forms of the IF financing tools. Innovative finance is not a source of new revenues, but rather a method of financing projects or programs of projects. It usually involves borrowing that must be repaid from other sources of funds such as fuel taxes, tolls, or other revenue sources.
Yield, Adequacy and Stability	IF financing tools are used to leverage capital in the form of debt or equity. They rely on existing or new revenue sources to pay the indebtedness.
Cost-Efficiency and Equity	Incurring longer-term debt helps advance programs and projects that would otherwise take years to develop if at all. Innovative finance may be more equitable than financing high-cost projects out of current revenues because it spreads the cost to future users who will also benefit from the investment.
Economic Efficiency	The economic efficiency will depend on the source of revenues from which indebtedness is repaid.
Potential Applicability at Program or Project Level and by Different Levels of Government	Innovative finance is more often used at the project level, but it also is applicable to the program level as well. It is most applicable to the State and local levels of government.
Potential Acceptability	Innovative finance is usually well accepted since it spreads the cost of projects over time.
Implementation Issues and Potential Strategies to Overcome Barriers	States may require enabling legislation to issue GARVEE bonds. Most innovative finance grant management tools are codified under Title 23 U.S.C. and require no special action from states to be used. To test new grant management tools, states may apply to U.S. DOT under the SEP-15 or TE-045 programs. Debt mechanisms must be balanced against long-term revenue sources. Many states cap the amount of debt that can be issued.
Public-Private Partnerships	
Source and History	PPPs are commonly used in Europe to reduce public-sector costs to construct, operate, and maintain highway facilities but are not yet widely used to support similar projects in the United States. PPPs are primarily financing and project delivery mechanisms, but like innovative finance they may help accelerate project delivery. Highway improvements are now eligible for financing with private activity bonds.
Yield, Adequacy and Stability	States and other public sponsors increasingly consider private-sector involvement as a way to spur implementation of large projects. Since these projects typically are supported by tolls, the yield, adequacy, and stability will depend on characteristics of the specific project.
Cost-Efficiency and Equity	PPPs can facilitate access to private capital and bring innovative cost-saving projects delivery methods. Cost-efficiency and equity will be similar to other types of tolls. Since the private sector often handles toll collection and must deal with enforcement, public agency costs for those items are low.
Economic Efficiency	The economic efficiency of PPPs as a financing mechanism is similar to other toll facilities, although PPPs are more likely to use electronic toll collection and other methods for improving operational efficiency. Other efficiencies unrelated to financing may also be realized through the use of PPPs.

Exhibit 5-21. Advantages and disadvantages of alternative revenue sources, continued

Public-Private Partnerships, continued	
Potential Applicability at Program or Project Level and by Different Levels of Government	PPPs that involve private sector capital generally are implemented at the project level. Several states are using PPPs to operate and maintain portions of their highway systems, but those do not all involve tolling. PPPs are applicable at either the State or local level.
Potential Acceptability	PPPs have become quite controversial. Several States routinely consider PPPs for certain types of projects while uncertain public acceptance has prevented other States from doing so.
Implementation Issues and Potential Strategies to Overcome Barriers	Specific project proposals need to be evaluated to determine if it will be cost-effective. May require enabling legislation. More than 20 states have explicit PPP acts that provide means to bring the private sector into funding and management of highways. Virginia's act has fostered a wide range of proposals.
Container Fees	
Source and History	A number of current and emerging trends are driving the exploration of container charges and other direct user fees as a transportation revenue source. These include the rapid growth in international and domestic freight volumes and recognition that new revenue sources will be needed to fund freight-specific transportation improvements.
Yield, Adequacy and Stability	Container fees represent a potentially large source of revenue. A recent NCHRP report estimated that a \$30/TEU fee applied at all U.S. ports, would generate average annual revenues of \$2.2 billion through 2017. A study performed in 2005 for the Southern California Association of Governments (SCAG) found that a container fee of \$192 per TEU assessed on every inbound loaded container at the San Pedro Bay ports could fund about \$20 billion in access infrastructure improvements.
Cost-Efficiency and Equity	Container fees offer a way to tie freight system users more directly to the resources and infrastructure they use. These fees are seen by many as a more equitable method to raise revenue that can be dedicated specifically to freight system improvements.
Economic Efficiency	Economic efficiency will depend on the extent to which the container fees reflect the costs associated with the freight facility. If congestion costs are not significant and container traffic represents the preponderance of traffic on the facility, container fees may be relatively efficient, although they would not capture differences in the container weights.
Potential Applicability at Program or Project Level and by Different Levels of Government	There are limited options to fund or finance non-highway freight improvement projects. Current federal programs may be applicable to small, localized freight system improvements, but are not well suited to larger regional intermodal freight improvements. Container fees could provide substantial revenues for such large-scale projects and would be appropriate for both rail and highway components of intermodal projects. Container fees could be applicable to either State or local projects.
Potential Acceptability	It will be challenging to develop consensus among competing jurisdictions and other stakeholders on the types and locations of projects to be developed.
Implementation Issues and Potential Strategies to Overcome Barriers	Implementing a container fee that equitably links costs and potential benefits for the mix of freight traffic using any given gateway may be difficult.

Exhibit 5-21. Advantages and disadvantages of alternative revenue sources, continued

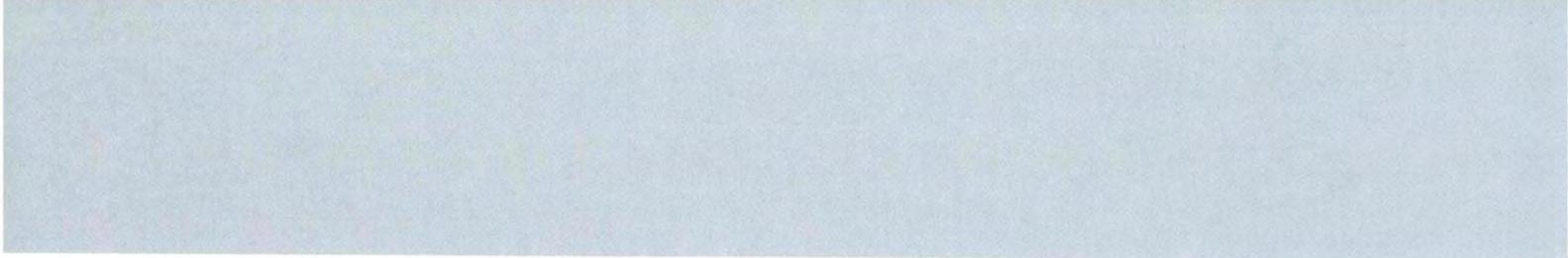
Customs Duties	
Source and History	The majority of customs duties currently are deposited into the U.S. General Fund, although a portion is used to support costs of Customs and Border Patrol operations.
Yield, Adequacy and Stability	In FY 2002 customs duties amounted to \$23.8 billion in gross revenue, three quarters of which was collected from marine sources. This would be a very stable source of revenues.
Cost-Efficiency and Equity	Fees based on the value of cargo are not as equitable as those on the volume because they do not reflect the transportation requirements as well.
Economic Efficiency	The economic efficiency of customs duties is poor since the value of cargo has little bearing on costs associated with moving the cargo. The efficiency of customs duties would also depend on the type of facilities financed from those fees.
Potential Applicability at Program or Project Level and by Different Levels of Government	Customs duties would be most appropriately used for improvements to waterside or landside port or airport facilities, to improve the connections between these facilities and the highway and freight rail systems, or to improve freight facilities serving large volumes of international shipments. They would be applicable to the Federal level only.
Potential Acceptability	One key disadvantage is the likely resistance by the Congress and federal agencies to the diversion of Customs duties to offset freight transportation investments.
Implementation Issues and Potential Strategies to Overcome Barriers	Some will argue that gateway improvement programs already exist and point to SAFETEA-LU's Coordinated Border Infrastructure Program (Section 1303), but finding from that program currently is inadequate.
Tax Credit Bonds	
Source and History	Like innovative finance, tax credit bonds are a financing mechanism and not a new source of revenue. Tax credits would represent reductions of income taxes owed by bond holders.
Yield, Adequacy and Stability	Tax credit bonds could provide a large and stable source of funds to finance transportation improvements for a fixed period of time.
Cost-Efficiency and Equity	Tax credit bonds would have low administrative and enforcement costs since those costs would be small increments of costs associated with processing Federal income tax returns. Bonds would be relatively progressive with income since bond interest would be paid from general tax revenues.
Economic Efficiency	Income tax from which bond interest would be "paid" has no relationship to costs of transportation system use.
Potential Applicability at Program or Project Level and by Different Levels of Government	This financing mechanism would be applicable at the program level and would apply to the Federal Government.
Potential Acceptability	Implementing such a financing mechanism would be difficult since it could represent a loss of General Fund revenues.
Implementation Issues and Potential Strategies to Overcome Barriers	Several tax credit bond proposals for surface transportation have been introduced in recent years (e.g., Build America Bonds, Amtrak, other rail infrastructure), but none has yet been enacted.

Exhibit 5-21. Advantages and disadvantages of alternative revenue sources, continued

Infrastructure Bank	
Source and History	Over the years various forms of infrastructure bank have been proposed as mechanisms to provide funds for infrastructure investment. These banks are not necessarily limited to transportation investment. Like other financing mechanisms, funds borrowed from the infrastructure bank would have to be repaid from some other general or project-related revenue source.
Yield, Adequacy and Stability	Infrastructure banks can provide large and stable sources of funds for a limited period of time.
Cost-Efficiency and Equity	Administrative costs generally would depend on the revenue source from which borrowed funds were repaid.
Economic Efficiency	The relative economic efficiency would depend on the source of revenues from which borrowed funds were repaid. Tolls would tend to be more efficient than fuel taxes or other general revenues.
Potential Applicability at Program or Project Level and by Different Levels of Government	This financing mechanism would be applicable to either the program or project level. Revenues to repay loans would come from the State or local level of government.
Potential Acceptability	Borrowed funds would likely come from the Federal General Fund. Getting agreement to allocate General Funds for this purpose could be difficult.
Implementation Issues and Potential Strategies to Overcome Barriers	As noted, there have been several proposals for infrastructure banks over the years, but it is not believed any have been enacted.

This table provides details supporting the summary evaluation of alternative revenue sources presented in Exhibit 5-20.

Source: December 2006 NCHRP study, *Future Financing Options to Meet Highway and Transit Needs* and Commission Staff analysis.



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Transportation

America's national surface transportation network is in crisis, writes Jack L. Schenendorf, of Counsel, Covington & Burling LLP. Without additional transportation investment, the United States economy will suffer. While raising motor fuel taxes, which comprise the majority of federal transportation receipts, would be one solution, there does not seem to be the current political will to do so. Schenendorf proposes two alternative solutions, a Federal Interstate User Fee and a Federal Motor Carrier User Fee, to supplement current federal transportation revenues in order to restore and modernize the transportation network.

Modernizing U.S. Surface Transportation System: Inaction Must Not Be an Option

By JACK SCHENENDORF AND ELIZABETH BELL

Jack L. Schenendorf, of Counsel, Covington & Burling LLP, concentrates on transportation and legislation with a particular focus on legislative strategy, legislative procedure, and the federal budget process. For nearly 25 years, Schenendorf served on the staff of the Committee on Transportation and Infrastructure of the U.S. House of Representatives. Elizabeth Bell, associate, Covington & Burling LLP in the firm's Washington, D.C. office, practices in the tax and government affairs practice groups.

On April 15, 2011, Rep. Paul Ryan (R-Wis.) stood on the floor of the House to discuss the financial health of the U.S. economy. "Let me ask you this," he said of the 2008 financial crisis:

What if your President and your member of Congress saw it coming? What if they knew why it was happening, when it was going to happen, and more importantly they knew what to do to stop it and they had time to stop it but they didn't, because of politics? . . . We cannot avoid this choice. To govern is to choose. We are making a choice even if we don't act. And that's the wrong choice.¹

Ryan asked these questions during the debate on the fiscal year 2012 budget. But his remarks could apply

¹ 157 Cong. Rec. H2900 (Apr. 15, 2011).

changes) account for about 37 million truck hours of delay each year.

These problems aren't only the result of a steadily growing usage, but also of deteriorating conditions. As of 2006, more than half of total vehicle miles traveled on the federal highway system occurred on roads that were not in good condition. More than one-quarter of the nation's bridges are structurally deficient or functionally obsolete.⁵

How did we get from having one of the world's pre-eminent transportation systems to an overburdened system that is steadily falling into a state of disrepair? The heart of the problem is this: while we have been benefiting from the expenditures of the generation that helped to build the Interstate Highway System, we have failed to make adequate federal investments of our own.

Though national surface transportation expenditures have increased over time, they have not kept pace with national growth. Expenditures on highway maintenance and improvements are shared by local, state, and federal governments. When growth in vehicle miles traveled is taken into account, real highway spending across all these levels of government has fallen by nearly 50 percent since the creation of the HTF.⁶ The federal contribution to highway spending, in particular, has remained fairly constant, falling behind rather than responding to additional infrastructure demand.⁷

The vast majority of federal-level highway funding is provided through the HTF. Currently, about 90 percent of HTF revenue is derived from excise taxes on motor fuels.⁸ These taxes are set at 18.4 cents per gallon of gasoline and 24.4 cents per gallon of diesel, but are not indexed for inflation and have not been raised for almost two decades. The tax has lost about 33 percent of its purchasing power since it was last raised.⁹ At the same time, recent legislation—most notably the Transportation Equity Act for the 21st Century and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users—substantially boosted federal highway spending.¹⁰

As a result of the economic downturn, declining real receipts, and increasing outlays, the HTF is in a solvency crisis. Since, by law, the HTF cannot incur a negative balance, Congress has been forced to authorize three emergency funding infusions totaling \$34.5 billion since 2008.¹¹ Yet short-term and long-term

⁵ For these and other statistics, see, for example, National Surface Transportation Infrastructure Financing Commission, *Paying Our Way: A New Framework for Transportation Finance 22* (Feb. 2009); Congressional Budget Office, *Alternative Approaches to Funding Highways 1-3* (Mar. 2011).

⁶ National Surface Transportation Infrastructure Financing Commission, *supra* n.5, at 34.

⁷ *Id.*

⁸ The remaining revenue comes from a sales tax on certain trucks and tractors, taxes on truck tires, and a heavy vehicle use tax. See, e.g., Congressional Budget Office, *supra* n.5, at 2.

⁹ See, e.g., American Association of State Highway and Transportation Officials, *The Forum on Funding and Financing Solutions for Surface Transportation in the Coming Decade: Conference Report 2* (Jan. 2011).

¹⁰ National Surface Transportation Infrastructure Financing Commission, *supra* n.5, at 43.

¹¹ American Association of State Highway and Transportation Officials, *supra* n.9, at 4.

shortfalls still loom—and investment needs continue to grow.

In both business and government, many managers and executives recognize the term “burning platform,” a crisis so severe that it necessitates radical and immediate change. The term's origins are traced back to the story of a man working on an oil platform in the North Sea. One night, a fire erupted, forcing the worker to the end of the platform. As the fire approached, the worker had to make a decision: submit to the fire, or jump into the waters of the North Atlantic. Although a dive into the sea is a drastic move, the worker simply couldn't wait until the fire engulfed the entire platform.

It is the position of this white paper that, in terms of funding our national surface transportation system, we are standing on a burning platform. Drastic action is necessary.

The first step is to reform federal surface transportation programs. Existing programs should be thoroughly reviewed, consolidated to the maximum degree possible, reoriented toward performance, and refocused on the national interest. Project delivery must be streamlined. And at the very least, a multi-year reauthorization bill should ensure that receipts are in line with outlays.¹²

As needed as it is, reform alone will only throw a bucket of water on the conflagration. What is really feeding the fire is increased transportation demand and usage. For example, both passenger and truck travel are anticipated to grow at an annual rate of approximately 2 percent through 2035.¹³ Current federal policies will not be able to keep pace with that growth.

What the HTF truly needs is a significant and immediate increase in revenue. Even if every dollar raised for transportation needs by our financial and institutional structures is utilized in the most effective manner, the current level of funding would not be adequate to maintain the operational performance and physical condition of the highway system.¹⁴ Indeed, revenues generated by current law will only provide enough resources to cover less than half of what is needed to maintain our highways through 2035. Similarly, those revenues will only meet about 35 percent of what is needed to *improve* our highway system.¹⁵

We can no longer take advantage of the investments of prior generations. Instead of struggling to meet the bare minimum requirements for maintenance, we should anticipate the future needs of the highway system and ensure those needs are met. Instead of watching the fire consume the current policy platform, we need to jump off.

Action, Inaction, and Economic Growth

The significant changes required to maintain and improve our highways are not only needed for the convenience and the safety of individual drivers—although these are important concerns. A deteriorating public

¹² Of course, without additional revenues, balancing receipts and outlays would require a reduction in funding, which would further exacerbate the investment crisis.

¹³ National Surface Transportation Policy and Revenue Study Commission, *supra* n.2, at 5-16.

¹⁴ *Id.* at 4-3.

¹⁵ American Association of State Highway and Transportation Officials, *supra* n.9, at 6.

This approach is consistent with the federal role in transportation throughout our nation's history.²⁰ From President George Washington's support for federal construction, maintenance, and repair of existing and future lighthouses, buoys and public piers for rendering navigation "easy and safe";²¹ to presidential hopeful Henry Clay's support for capital improvements; to President Abraham Lincoln's support for the transcontinental railroad; to President Theodore Roosevelt's support of the Panama Canal; to President Franklin Roosevelt's support for a cross-country, high-level road system; to President Dwight Eisenhower's support of the Interstate Highway System and the Highway Trust Fund; and to President Ronald Reagan's support for increased motor fuel user fees to preserve and modernize the federal-aid highway network, the federal government has been instrumental in the development of our nation's strong surface transportation network.

Thus, the solutions recommended below focus on increasing the receipts of the HTF for countrywide distribution.

Motor Fuel Excise Tax: Missed Opportunity

One obvious solution that meets the three criteria outlined in the previous section is an increase in the motor fuel and diesel fuel excise taxes. Political opposition to any such increase, however, would appear to make this solution unlikely, at least in the near term.

As mentioned above, motor fuel taxes on diesel and gas constitute about 90 percent of HTF receipts. These taxes are charged at a flat rate per gallon that is set by Congress. The current tax rates on motor fuels are 18.4 cents per gallon for gasoline and 24.4 cents per gallon for diesel fuel. An increase in these rates is long overdue; Congress has not changed the rates since 1993, and because they are not indexed for inflation, their efficacy as a revenue-raising tool has diminished substantially over the past 18 years. Had the federal gas tax rate of 18.4 cents per gallon been indexed using the Consumer Price Index for all Urban Consumers, beginning in 1993, the tax rate in 2008—the year of the HTF's first emergency infusion—would be 27.5 cents per gallon.²²

Because the motor fuel tax is already in place as the primary funder of the HTF, implementation of a tax increase or an indexing solution is straightforward and could be easily accomplished, at least technically. Moreover, the motor fuel tax approximately places the cost of maintaining and improving the highway system on users of that system. Although the tax is collected at the fuel terminal level, it is passed on to drivers at the pump.

Despite enjoying widespread support as the best and most appropriate HTF fix, at least for the short- and medium-term, a motor fuel tax increase is unlikely to

²⁰ The federal role in transportation policy is rooted in the U.S. Constitution itself. Article I, Section 8, clause 3 provides that Congress has the power to regulate interstate commerce, a power which includes the regulation of interstate transportation. In terms of highways themselves, the Constitution is even more explicit, granting Congress the power to "establish . . . post Roads" in Article I, Section 8, clause 7.

²¹ An Act for the establishment and support of Lighthouses, Beacons, Buoys, and Public Piers, ch. 9, 1 Stat. 53 (1789).

²² See National Surface Transportation Infrastructure Financing Commission, *supra* n.5, at 41.

happen.²³ Historically, motor fuel taxes have received a reasonable degree of public and political acceptance.²⁴ In the face of the current political opposition to any tax increases, however, the viability of this solution seems too low at this time.

If Congress does not increase the current motor and diesel fuel taxes, it should, nevertheless, consider indexing them to inflation. This would at least preserve the current purchasing power of those taxes and be a part of the solution to the transportation investment crisis.

Recommended Solutions: Targeted Federal User Fees

If there is not the political will for a motor fuel tax increase, other solutions exist that could avoid or minimize the pushback against raising taxes. This white paper suggests two such solutions: (1) a Federal Interstate User Fee (FIUF) and (2) a Federal Motor Carrier User Fee (FMCUF). Note that in both cases, these targeted user fees are meant to supplement, rather than replace, existing motor fuel taxes and other HTF revenue sources. If the solutions are adopted, these existing HTF revenue sources could be used to repair and modernize other portions of the national surface transportation network.²⁵

Federal Interstate User Fee

The Federal Interstate User Fee (FIUF) would impose a user fee on interstate highway users.

FIUF Design

The FIUF would impose a use-based fee on all interstate highway users. This fee would be collected through a system like E-ZPass that would detect entry onto and exit from interstate highways. No tollbooths or other major structures would be constructed in order to collect the user fee. Rather, the system would be completely electronic. Standardized transponders could be included on newly manufactured vehicles and retrofitted to older models. Entry and exit data would be collected by electronic readers stationed at highway on- and off-ramps.

Fees would be set at the level necessary to reimburse states for the federal share of the costs of restoring the Interstate Highway System to a state of good repair and the costs of expanding and modernizing the system, including projects for the improvement of international points of entry and exit. Personal and commercial travelers would pay for use of the interstate system in proportion to the costs associated with that use while maintaining the current allocation of highway cost responsibility. In addition, fees could be set at rates that differ by geographic areas to account for costs associated with repair and modernization. For example, the fee on

²³ We recognize that an increase in motor fuel taxes would not be a sustainable, long-term solution. *See, e.g., id.* at 102-103, 106 (discussing factors that would make motor fuel taxes less effective, such as fuel efficiency improvements and environmental concerns). Our recommended solutions, discussed in the next section, provide long-term revenue-raising options that are not exposed to the weaknesses of the motor fuel taxes.

²⁴ *See id.* at 106.

²⁵ Examples of FIUF, FMCUF, and base revenue projects can be found in Appendix III.

As with the FIUF program, no other policy changes with respect to freight projects would be made.²⁸ Funds disbursed from the FMCUF subaccount would be allocated solely to freight improvements, especially freight bottlenecks, high-cost freight projects, and freight projects of national significance, including intermodal facilities. These projects would be over and above the freight projects funded under the base program by existing HTF revenues. The FMCUF funds would not be geographically restricted, but would be used for freight projects throughout the country. The expert body that sets the FMCUF fees could also make recommendations regarding projects to which FMCUF receipts should be directed.

Use of Existing Revenue

As mentioned above, if the FIUF and the FMCUF are adopted, existing HTF revenues would be freed for other uses. Specifically, existing HTF revenues would no longer be used on interstate projects, since the new FIUF program would fund all interstate projects. Likewise, freight projects funded by the FMCUF would no longer be funded from that revenue.

Using the FIUF and FMCUF programs as a supplement, rather than a replacement, is a crucial part of the transportation funding solutions described above. While the interstate is the backbone of the U.S. highway system, carrying about a quarter of all vehicle miles traveled annually, all federal-aid eligible highways combined carry approximately 85 percent. These non-interstate highways will need to be repaired and upgraded to meet current and future transportation needs. By guiding existing HTF revenues from the motor fuel excise tax and other sources towards these non-interstate roads, the FIUF and FMCUF programs will aid the improvement of the *entire* National Highway System.

Advantages of FIUF, FMCUF Solutions

The FIUF and FMCUF, if designed and implemented as described, clearly meet the three principles that this white paper considers important to successful HTF funding solutions and would have a number of other economic and policy advantages. Specifically, an HTF revenue-raising framework that incorporates the FIUF and FMCUF:

- *Is based on a true user fee principle.* The FIUF and FMCUF are true user fees. While the motor fuel tax and the other current revenue sources of the HTF reach users indirectly—they tax vehicles and transportation-related goods, not highway use—the FIUF and FMCUF place the burden of funding interstate highway improvements squarely on individual drivers, based on their highway travel.²⁹

²⁸ As with the FIUF program, FMCUF projects would be implemented in accordance with the federal transportation program reforms mentioned in the previous footnote and earlier in this white paper.

²⁹ The concept of implementing targeted user fees to pay for certain transportation costs is not new. For example, President George W. Bush's administration opposed an increase in the gas tax, but proposed to raise billions through transportation user fees such as an aviation security fee, a rail safety fee, and an aviation cost-based fee.

- *Is based on a true user fee principle.* The FIUF and FMCUF are true user fees. While the motor fuel tax and the other current revenue sources of the HTF reach users indirectly—they tax vehicles and transportation-related goods, not highway use—the FIUF and FMCUF place the burden of funding interstate highway improvements squarely on individual drivers, based on their highway travel.

- *Is relatively easy to implement.* The FIUF and FMCUF could be implemented in the medium-term, if not the short-term. Implementation of the FIUF and FMCUF would require a non-negligible amount of investment, but the technology and even some infrastructure (existing structures at highway entry and exit points in the case of the FIUF, for instance) are already present.

- *Represents a truly national investment policy.* FIUF and FMCUF revenues would be distributed to projects across the Interstate Highway System and would not be restricted to certain states or localities. By design, the FMCUF would be dedicated to national freight projects, and the FIUF program would generate sufficient revenue to upgrade the Interstate Highway System to once again be the crown jewel of the U.S. transportation system. The interstate is the backbone of this system: even though it makes up a little more than 1 percent of our road mileage, it carries more than 24 percent of the vehicle miles traveled annually.³⁰

- *Modernizes our national transportation network.* The revenue from the FIUF and FMCUF programs would be specifically tailored and dedicated to meet interstate and freight improvement needs. The additional revenue would not only allow the U.S. to modernize these parts of its surface transportation system, but would also free up existing HTF resources for the rest of the national network—allowing for improvement of the entire federal-aid highway system.

- *Modernizes federal financing mechanisms.* Aside from helping to modernize our highway system, the FIUF and FMCUF programs would also modernize the way our government collects revenue: namely, through automated, electronic means. This collection system could provide an important policy model for future programs. In addition, given increased concerns about fuel prices and oil dependence, a move to targeted highway user fees represents a much-needed step towards post-gas tax revenue strategies. And, by setting a national policy regarding Interstate Highway usage, the programs will prevent the balkanization that could occur as a result of state and local tolling policies.

- *Minimizes individual driver privacy concerns.* Unlike revenue-raising proposals based on tracking all vehicle miles traveled, the FIUF minimizes individual privacy concerns by only recording entry and exit points onto the interstate system. Similar systems, such as E-ZPass, I-Pass, and FasTrak, are already used by and have gained widespread acceptance in many states.

- *Represents a politically feasible and fair solution.* As explained above, the FIUF and FMCUF are user fees, not taxes. Moreover, the FIUF and FMCUF are strongly linked to increased expenditures—the fees are set only to meet freight and interstate modernization needs. There is no demand-pricing component to the fees,

³⁰ See National Surface Transportation Policy and Revenue Study Commission, *supra* n.2, at 4-8.

United States. The rate of the tax would be adjusted on an annual or semi-annual basis (primarily to ensure that consumers are not penalized during periods when oil prices spike). The tax would be collected at the refinery level. To prevent international refiners from obtaining an undue advantage, imports of refined petroleum products would incur a tax equivalent to the oil tax. Similarly, exporters would receive a tax credit or rebate equivalent on the oil used to produce exported products.

As other studies have noted, an oil tax or tariff could be set so as to internalize various external costs associated with the consumption of petroleum products, including environmental and national security costs.³⁵ An oil tariff alone could also promote U.S. energy independence. While these may be desirable policy outcomes, one drawback to a broad oil tax is that it is not user-based; the tax on barrels of oil that are not eventually used as fuels (or as asphalt) would nonetheless flow to the HTF. While it may be possible to apportion the revenue raised by the oil tax according to use, such a sys-

tem may be administratively difficult and lead to delays in implementation. Additionally, because a tax on oil would necessarily place a greater burden on certain households (for example, because of regional weather differences) and businesses that consume more oil, political opposition to an oil tax may be heavy or insurmountable.

Existing Revenue Streams.

A portion of international customs fees could be dedicated to the HTF to cover the costs of improvements related to the movement of goods into and out of ports of entry. It would also be possible to dedicate a portion of corporate taxes from industries reliant on truck transportation.

General Treasury Option.

A final option that would offer little by way of user-targeting, but would be fairly simple to implement, involves using General Treasury funds to supplement the HTF's existing revenue streams. Again, however, a General Treasury option would move away from user-based taxation, and would potentially be an unstable source of funding.

³⁵ See, e.g., *id.* at 10-14.

CANAMEX, Ports-to-Plains, Wisconsin Development Corridor, Capital Gateway Corridor, East-West Corridor, SPIRIT Corridor, Theodore Roosevelt Expressway, and Camino Real Corridor, among others.

- Address urban congestion through operational improvements and, where necessary, increased capacity.

- Improve rural highways to keep U.S. agriculture competitive, especially lower-classification federal-aid roads that link farm and local roads with the National Highway System.

- Upgrade narrow, two-lane, rural roads that cannot safely carry the kind of trucks now moving across the United States to support the renewable fuels industry, wind farm energy production, and the development of other energy resources.

- Improve rural highways to handle the growth in international and domestic trade moving through the heartland of America.

- Preserve and upgrade, where necessary, the Strategic Highway Network (STRAHNET), a network of highways that are important to the United States' strategic defense policy and that provide defense access, continuity, and emergency capabilities for defense purposes. STRAHNET Connectors—highways that provide access between major military installations and ports—would also be maintained and upgraded where appropriate.

- Provide connectivity between urban and rural America, and address seasonal congestion and bottlenecks associated with interstate tourism, especially at national parks.

- Provide adequate access to new and emerging cities and towns so that our highway system will be the unifying network that President Eisenhower envisioned.