Report of the National Surface Transportation Infrastructure Financing Commission

PAYING OUR WAY

A New Framework for Transportation Finance









EXECUTIVE SUMMARY

NATIONAL SURFACE TRANSPORTATION INFRASTRUCTURE FINANCING COMMISSION

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RESPONDING TO A SYSTEM IN CRISIS

The nation faces a crisis. Our surface transportation system has deteriorated to such a degree that our safety, economic competitiveness, and quality of life are at risk.

As a nation, we have reaped the benefits of previous generations' foresight and investment, generations that developed and built a transportation system that became the envy of the world. Over the last few decades we have grown complacent, expecting to be served by high-quality infrastructure, even as we devoted less and less money in real terms to the maintenance and expansion of that infrastructure. Not only have we failed to make the needed and substantial investment; we have failed to pursue the kind of innovation necessary to ensure that our infrastructure meets the demands of future generations.

This is not to say the nation is asleep at the wheel. The United States Congress has recognized the dangers of inattention and delay and has asked for assistance to re-envision the way the federal government funds and finances our national surface transportation infrastructure. Congress established the National Surface Transportation Infrastructure Financing Commission to provide recommendations for policy and action. This report offers the results of the Commission's investigative efforts and deliberations. It provides a new framework for consideration by policy makers with responsibility for financial stewardship of the nation's surface transportation network—and for all Americans traveling that network through cities and rural areas from coast to coast.

The Commission sought out the best ideas, the latest data, and the strongest research. Commissioners vigorously debated the options and developed recommendations for improved methods to fund and finance our national surface transportation infrastructure. While no first draft of a major reform is perfect, the Commission respectfully *and unanimously* offers its report as a road map for the transition to a new funding and finance framework, in the hope that this will inspire and inform further efforts toward a national surface transportation system that is more efficient, more effective, and more sustainable. The Commission's recommendation to shift from our current funding approaches, based largely on indirect user fees in the form of federal motor fuel taxes, toward a new system built around more direct user charges in the form of fees for miles driven will require hard work, thoughtful attention to myriad policy issues and implementation details, and the cooperation and support of the American people.

- **Real highway spending per mile traveled has fallen by nearly 50 percent since the federal Highway Trust Fund was established in the late 1950s. Total combined highway and transit spending as a share of gross domestic product (GDP) has fallen by about 25 percent in the same period to 1.5 percent of GDP today.**

- **Because it is not adjusted for inflation, the federal gas tax has experienced a cumulative loss in purchasing power of 33 percent since 1993—the last time the federal gas tax was increased.**

ROOTS OF THE PROBLEM AND WIDENING INVESTMENT GAP—BACKGROUND

The roots of our current crisis lie in our failure as a nation to fully understand and, more important, act on the costs of deferred investment in our surface transportation infrastructure, especially in the face of an aging infrastructure, a growing population, and an expanding economy. From 1980 to 2006, the total number of miles traveled by automobiles increased 97 percent and the miles traveled by trucks 106 percent. Over the same period, the total number of highway lane miles grew a scant 4.4 percent—meaning that over twice the traffic was traveling on essentially the same roadway capacity. And that says nothing about the mounting neglect of the system: over half of the miles that Americans travel on the federal-aid highway system are on roads that are in less than good condition, more than one-quarter of the nation's bridges are structurally deficient or functionally obsolete,[1] and roughly one-quarter of the nation's bus and rail assets are in marginal or poor condition.[2]

1. FHWA, *2006 Conditions & Performance (C&P) Report* (2004 data).
2. FTA, *Transit State of Good Repair*.

EXHIBIT ES–1: AVERAGE ANNUAL CAPITAL NEEDS AND GAP ESTIMATES, ALL LEVELS OF GOVERNMENT, 2008–35 (in 2008 dollars)

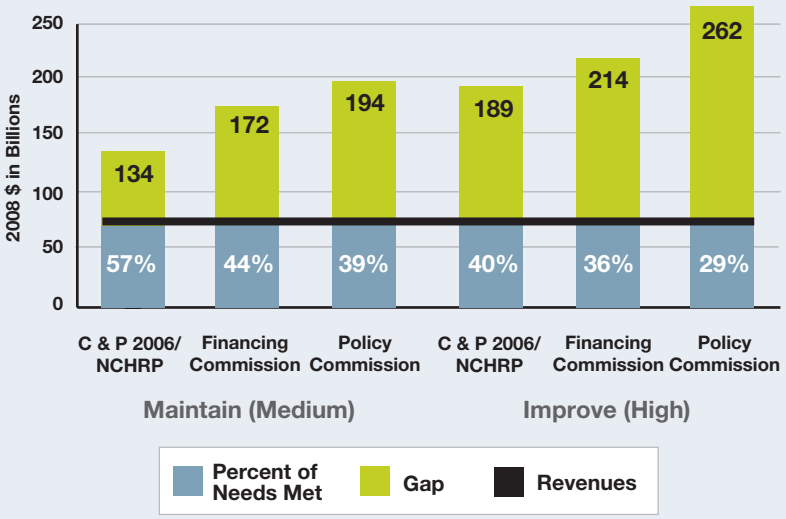
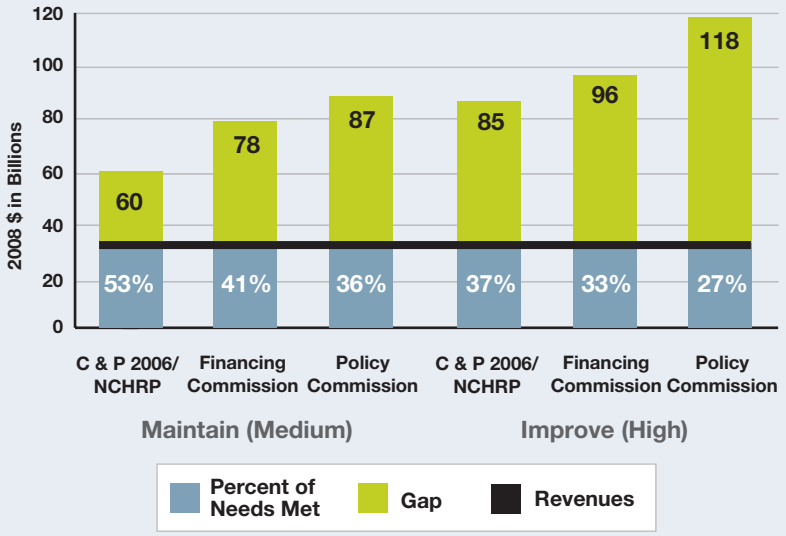


EXHIBIT ES–2: AVERAGE ANNUAL CAPITAL NEEDS AND GAP ESTIMATES, FEDERAL GOVERNMENT, 2008–35 (in 2008 dollars)



The federal government does not bear sole responsibility for the current crisis. All levels of government are failing to keep pace with the demand for transportation investment. Increasingly, policy makers at all levels must use existing revenues simply to attempt to keep pace with the preservation and maintenance of an aging system, leaving few or no resources for vitally needed new capacity and improvements to the system.

An ever-expanding backlog of investment needs is the price of our failure to maintain funding levels—and the cost of these investments grows as we delay. Without changes to current policy, it is estimated that revenues raised by all levels of government for capital investment will total only about one-third of the roughly $200 billion necessary each year to maintain and improve the nation's highways and transit systems. (See Exhibit ES–1.) At the federal level, the investment gap is of a similar magnitude, with long-term annual average Highway Trust Fund (HTF) revenues estimated to be only $32 billion compared with required investments of nearly $100 billion per year. (See Exhibit ES–2.)[4]

Meanwhile, the federal Highway Trust Fund faces a near-term insolvency crisis, exacerbated by recent reductions in federal motor fuel tax revenues and truck–related user fee receipts. This problem will only worsen until Congress addresses the fundamental fact that current HTF revenues are inadequate to support current federal program spending levels. Comparing estimates of surface transportation investment needs with baseline revenue projections developed by the Commission shows a federal highway and transit funding gap that totals nearly $400 billion in 2010-15 and grows dramatically to about $2.3 trillion through 2035. (See Exhibit ES–3.)

Traffic congestion in many of the nation's metropolitan areas is endemic, with the cost of congestion—including lost time, wasted fuel, and vehicle wear and tear—topping $78 billion per year for the nation's 437 urban areas.[3] Transit ridership has recently surged, leaving some systems operating near or beyond their physical capacity. Many rural areas currently do not have any transit services and in areas that do have service the quality and coverage are inconsistent.

The problem, however, is not simply insufficient investment. Our system is underpriced. Basic economic theory tells us that when something valuable—in this case roadway space—is provided for less than its true cost, demand increases and shortages result. Shortages in our road system are manifested as congestion. All too often the prices paid by transportation system users are markedly less than the costs of providing the transportation services

[3] Texas Transportation Institute, *2007 Urban Mobility Report*.

[4] Needs estimates are NCHRP revised estimates based on FHWA *2006 C&P Report*, Policy Commission (*Transportation for Tomorrow*) 2007 estimates, and Financing Commission estimates developed from data provided by FHWA. Revenue estimates developed by Financing Commission.

they use (including pavement repair)—much less the total social costs (including traffic congestion and pollution). This underpayment contributes to less efficient use of the system, increased pavement damage, capacity shortages, and congestion.

If the federal government fails to act now, and to act dramatically, we will only compound these problems for future administrations and Congresses and for the next generation of Americans. We will face increasingly deteriorating roadways, bridges, and transit systems. We will suffer from more accidents and fatalities on our transportation system. We will endure ever greater spans of our lives stuck in traffic, wasting our time and robbing our businesses of vital economic activity and productivity. We will waste non-renewable petroleum and harm our environment unnecessarily. And, finally but importantly, every day of delay is a day when inflation, neglect, and inefficient use waste scarce taxpayer and system-user dollars.

SEARCHING FOR SOLUTIONS—THE FINANCING COMMISSION'S CHARGE AND DELIBERATIVE PROCESS

In response to these challenges, Congress established the National Surface Transportation Infrastructure Financing Commission to embark on an investigative and analytical effort to assess the funding crisis and make recommendations to address the growing transportation infrastructure investment deficit. Specifically, Section 11142(a) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users established the Commission and charged it with analyzing future highway and transit needs and the finances of the Highway Trust Fund, making recommendations on alternative approaches to funding and financing surface transportation infrastructure, and reporting back to Congress within two years (by April 2009). While the Commission recognizes the important intersection between highways and transit and other forms of transportation, including freight rail, intercity passenger rail, inland waterways, and aviation, the focus of its work was highways and transit.

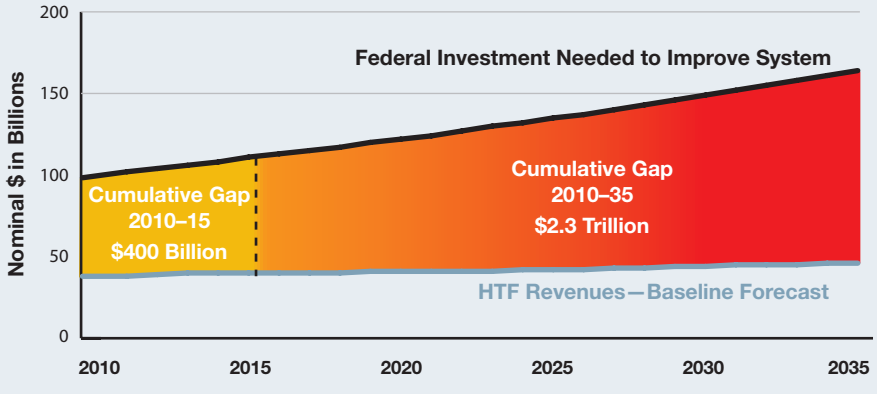
- **Urban travelers are delayed in rush hour traffic nearly one week (40 hours) per year, and in total Americans spend 4 billion hours per year stuck in traffic.**
- **As of 2006, over half of the total vehicle miles traveled on the overall federal-aid highway system occurred on roads that were in less than good condition, many of which are in rural areas that connect these regions to each other and to urban centers.**
- **Due in large part to ridership growth, many existing transit systems are operating near or in excess of their physical capacity and above a level that provides acceptable passenger comfort and safety.**

Sources: TTI 2007 Urban Mobility, FHWA 2006 C&P, TCRP 2008 State and National Public Transportation Needs.

The Commission consists of 15 individuals from diverse backgrounds—economics, finance, government, industry, law, and public policy—united by a passion to help develop a more viable model to fund and finance our national surface transportation system. Its final report has drawn heavily on available literature, ongoing debates and forums, and, most important, input offered directly by a wide range of experts and user group representatives—for which the Commissioners are extremely grateful.

In charting its course, the Commission was mindful of the important work of

EXHIBIT ES–3: A LARGE AND WIDENING GAP BETWEEN FEDERAL REVENUES AND INVESTMENT NEEDS, 2010-35 (in nominal dollars)



the National Surface Transportation Policy and Revenue Study Commission (referred to here as the Policy Commission). Given the Policy Commission's thorough treatment of how investments should be prioritized and delivered, the Financing Commission focused its efforts primarily on the question of how revenues should be raised, including whether there are other mechanisms or funds that could augment the current means for funding and financing highway and transit infrastructure. As it relates to this core question, the Commission also considered how much revenue is actually needed and a few key issues related to how it should be invested.

To guide its work, the Financing Commission established a set of goals for the national surface transportation system—that it be *safe, effective, efficient, fair, and sustainable*. And to achieve these fundamental goals, the Commission developed a set of overarching principles to guide consideration of funding and finance approaches.

Readers should recognize that there are inherent and unavoidable trade-offs among these principles, which require some subjective balancing among them. The Commission strived to achieve such a balance in its final recommendations. *Chapter 1 lays out these principles in greater detail and provides additional background on the nature of the Commission's charge.*

GUIDING PRINCIPLES TO SHAPE A NEW FUNDING AND FINANCE FRAMEWORK

- The funding and finance framework must **support the overall goal of enhancing mobility** of all users of the transportation system. The range of mobility needs throughout the nation requires an intermodal transportation network that ensures easy access, allows personal and business travel as well as goods movement without significant delays, and permits seamless transfers and choices among complementary transportation systems and services.
- The funding and finance framework must **generate sufficient resources to meet national investment needs on a sustainable basis**, with the aim of closing a significant funding gap. The framework must enable the federal government to raise sufficient funds and also support the ability of other levels of government to raise sufficient funds and make appropriate investments.
- The funding and finance framework should **cause users and direct beneficiaries to bear the full cost of using the transportation system to the greatest extent possible** (including for impacts such as congestion, air pollution, pavement damage, and other direct and indirect impacts) in order to promote more efficient use of the system. This will not be possible in all instances, and when it is not, any cross-subsidization must be intentional, fully transparent, and designed to meet network goals, equity goals, or other compelling purposes.
- The funding and finance framework should **encourage efficient investment** in the transportation system—recognizing the inherent differences between and within individual states—such that investments go toward projects with the greatest benefits relative to costs.
- The funding and finance framework should **incorporate equity considerations**—for example, with respect to generational equity, equity across income groups, and geographic equity.
- The funding and finance framework should **support the broad public policy objectives of energy independence and environmental protection**. Revenue-raising mechanisms that impose the full cost of system use (including externalities such as carbon emissions) can support reduced petroleum consumption and improved environmental outcomes.

The Commission relied heavily on previous efforts by the U.S. Department of Transportation, the Policy Commission, and others to define the extent of the needs and forecast revenues for the future. The Commission did, however, develop from these resource materials its own refinements to account for currently available information as well as its hypotheses for the future. *Chapter 2 establishes the investment needs and revenue forecasts developed by the Commission and used as the baseline for its deliberations.*

Working directly from the guiding principles and the baseline estimates, the Commission next developed systematic evaluation criteria to apply to the widest range of alternative funding approaches for the federal program, and indirectly for state and local programs, feasible for a study of this scale. *Chapter 3 presents the 14 evaluation criteria that the Commission developed and the results of a preliminary screening of a comprehensive range of alternative funding mechanisms.*

After examining the full range of potential funding approaches, the Commission conducted an additional level of review for a subset of the most promising options or those that otherwise required more in-depth analysis. *Chapters 4, 5, and 6 provide the results of these in-depth analyses for motor fuel tax mechanisms, freight-related funding options, and facility-level tolling and broad-based pricing mechanisms.*

In recognition of the supporting role that financing mechanisms can play in leveraging resources—as distinct from the underlying revenue-raising mechanisms that generate net new resources—the Commission considered alternative financing approaches, including private-sector financial participation, that can help meet the investment challenge. *Chapter 7 summarizes the results of this assessment, recognizing that these financing approaches are enhancements to rather than substitutes for much needed funding increases.*

Finally, and critically, the Commission arrived at specific policy recommendations to help narrow the federal funding gap and transform the overall funding and finance framework for the nation's investment in surface transportation infrastructure. *Specific recommendations are offered in detail in Chapter 8 and in summary form here.*

INFRASTRUCTURE STIMULUS WILL NOT SOLVE THE PROBLEM

An economic stimulus spending package that includes investments in surface transportation, while helpful, will not solve the immediate or the longer-term problems of funding system needs. The current investment shortfall is just too great.

The Highway Trust Fund will continue to need significant augmentation beyond whatever an immediate short-term stimulus plan can provide. For instance, a stimulus package that includes nearly $40 billion for highway and transit infrastructure, while important in addressing the short-term economic crisis, will pay for only about three months of the identified annual national funding gap to maintain and improve the system—a gap that repeats itself and compounds year after year.

THE FINANCING COMMISSION'S RESPONSE—FINDINGS AND RECOMMENDATIONS

Through its wide-ranging investigative and deliberative process, the Commission makes the following critical findings:

- **There is no easy "silver bullet" solution to the problem of insufficient funding.** As an important corollary, not all approaches work equally well throughout a geographically and economically diverse country. The Commission assembled a broad and balanced menu of options for Congress to consider, with an assessment of the pros and cons of each approach.

- **The current federal surface transportation funding structure that relies primarily on taxes imposed on petroleum-derived vehicle fuels is not sustainable in the long term and is likely to erode more quickly than previously thought.** This is due in large measure to heightened concerns regarding global climate change and dependence on foreign energy sources, which are creating a drive for greater fuel efficiency, alternative fuels, and new vehicle technology.

- **The current indirect user fee system based on taxes paid for fuel consumed provides users with only weak price signals to use the transportation system in the most efficient ways.** This results from three primary factors: system users are typically unaware of how much they pay in fuel taxes (as distinct from the price of gasoline), such that daily swings in price mask the tax component and blunt its effect on demand; fuel taxes and other direct and indirect user fees currently account for less than 60 percent of total system revenue (federal, state, and local), so that users do not bear anywhere near the full costs of their travel; and fuel taxes have no direct link to specific parts of the system being used or to times of the day and thus cannot be used to affect these kinds of traveler choices.

- **A federal funding system based on more direct forms of "user pay" charges, in the form of a charge for each mile driven (commonly referred to as a vehicle miles traveled or VMT fee system), has emerged as the consensus choice for the future.** The Commission cast a wide net, reviewed many funding alternatives, and concluded that indeed the most viable approach to efficiently fund federal investment in surface transportation in the medium to long run will be a user charge system based more directly on miles driven (and potentially on factors such as time of day, type of road, and vehicle weight and fuel economy) rather than indirectly on fuel consumed. At the same time, this choice for the federal system provides a foundation for state and local governments that choose to use it to develop their own mileage-based systems that piggy-

EXHIBIT ES–4: REVENUE OPTION EVALUATION SUMMARY*

Strong	Moderate	Weak	Not Applicable/ Seriously Flawed**
Federal Options			
• Vehicle miles traveled fee • Automobile tire tax • Motor fuel tax • Carbon tax/cap and trade • Customs duties • Truck/trailer sales tax • Vehicle registration fee • Heavy Vehicle Use Tax • Container fee • Tariff on imported oil • Sales tax on motor fuels • Truck tire tax	• Freight waybill tax • Vehicle sales tax • Harbor maintenance tax • General fund transfer	• Freight ton-mile tax • Driver's license surcharge • Bicycle tire tax • Dedicated income tax • Auto-related sales tax • Freight ton-based tax • General sales tax	• Vehicle inspection and traffic citation surcharge • Vehicle personal property tax • Windfall profits tax • Petroleum franchise tax • Minerals severance tax • Federal tax on local transit fares • Federal tax on local parking fees
State and Local Options Benefiting from Federal Action			
• Facility level tolling and pricing	• Proceeds of asset sales, leases, and concessions	• Cordon area pricing • Passenger facility charges	• Development and impact fees • Tourism-related taxes • Tobacco, alcohol, and gambling taxes

**For revenue options that are dependent upon utilization of a targeted investment fund as a basic premise for feasibility, such a fund is assumed for evaluation purposes (e.g., for all freight-related funding mechanisms and more specifically those more narrowly targeted to intermodal port and harbor-related investment).*

*** State and local options in this category may have applicability but there is no relevant federal action or role.*

back on the federal system in order to raise their share of needed revenues in ways that spur more efficient use of the system. The Commission believes that such a system can and should be designed in ways that protect users' privacy and civil liberties, that incorporate any necessary cross-subsidies (for instance, to benefit the national network or to meet social equity objectives), that do not interfere with interstate commerce, and that support goals for carbon reduction. Moreover, greater use of pricing mechanisms, including both targeted tolling and broad-based VMT pricing systems, may spur more efficient use of our highway network and, by shifting demand to less congested periods of the day or to other modes, may in turn enable more efficient investment, thus reducing the additional capacity that needs to be built.

- **As a nation, we cannot afford to wait for a new revenue system to be put in place to start addressing the fundamental investment challenge. And, in the short term, effective and feasible options are limited.** Given the significant current funding shortfall, the Commission concluded that the best near-term options for federal investment are increases to current federal fuel taxes and other existing HTF revenue sources. After reviewing a wide array of options and suggesting several viable candidate approaches (see Exhibit ES–4), the Commission concluded that increasing and indexing existing mechanisms satisfies the key evaluation criteria most effectively—primarily in raising significant sums with relatively low implementation costs or other hurdles. That is not to say that other options are not possible should Congress choose to pursue other avenues as well, but increases in existing HTF revenues present the best option in the near term, the Commission believes.

- **Federal actions can help expand the options available to states and localities to fund their shares of investment.** While many state and local funding options are not reliant on the federal government for implementation, several key federal actions

could help facilitate and encourage the greater application of some—specifically, user-backed funding approaches such as tolling and pricing—to help meet a portion of state and local government investment needs, including their required matching of federal support.

- **Finally and importantly, financing approaches—as distinct from revenue-raising mechanisms—are not a substitute for solving the underlying problem of insufficient funding.** Properly structured financing techniques and government financial programs, including those focused on facilitating partnerships with the private sector, can play an important supplementary role. Their success, however, will depend on their ability to leverage new revenue streams to repay upfront capital investments. Even with this, financing approaches will have limited positive impact if not coupled with substantial net new resources.

The Commission realizes that the transition from the current funding and finance model to a new model cannot be made overnight and that the immediate needs are simply too critical to wait until such a system is put in place. The Commission therefore makes the following recommendations for a multi-pronged approach to meet both short-term and longer-term challenges. More detailed recommendations are provided in Chapter 8.

Ensuring the Security and Sustainability of the Highway Trust Fund

The Commission recognizes the fundamental value of the Highway Trust Fund—not only today but also as the appropriate foundation for any new user-based revenue system for surface transportation investment in the future—and offers the following overarching recommendation.

- **Preserve the Highway Trust Fund mechanism and take any necessary actions to help ensure its security and sustainability in the near and longer term.** This should include ensuring the integrity of the trust fund structure premised on the link between direct and indirect user fees and transportation spending upon which the HTF is based. It also should include continued efforts to reduce and minimize tax evasion and methods to align spending and receipts, with interest earned on any balances accruing to the HTF.

Positioning Federal Funding for the Longer Term

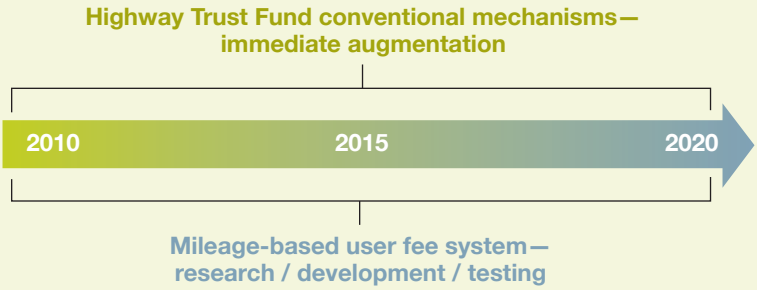
In order to transition to the longer-term solution of funding based on mileage charges, the Commission makes the following recommendations:

- **Commence the transition to a new, more direct user charge system as soon as possible and commit to deploying a comprehensive system by 2020.** Because of the complexity inherent in transitioning to a new revenue system and the urgency of the need, the Commission recommends that Congress embark immediately on an aggressive research, development, and demonstration (RD&D) program. This would identify and address critical policy questions such as privacy, administrative methods and costs, and the interplay with climate change and other national policy goals, in order to inform Congress as it moves forward. This will require investment in research and technology, including a variety of demonstration programs of mileage-based user fee systems. A research agenda of the nature envisioned would be best overseen by a body within the U.S. Department of Transportation that combines technology, policy, tax administration, and systems expertise. It also could benefit greatly from an expert independent advisory committee to help review and advise on funding of RD&D programs, further explore policy issues, and make specific recommendations to Congress.

- **Ensure that, once implemented, mileage-based fees and any other charges are set to meet the designated federal share of national surface transportation investment needs, and index these rates to inflation.** Simply shifting from one revenue system to another will not solve the underinvestment problem if rates are not set at sufficient levels and maintained over time to meet the needs. While a mileage-based direct user fee system is sustainable in the long term, it will suffer at least some of the same consequences as the motor fuel tax system if rates are not set and maintained at adequate levels. For illustrative purposes, the Commission estimates that to meet the base case "Need to Maintain and Improve" annual investment level, the federal VMT fee assessed on all miles driven, regardless of the system where they occur, would be roughly 2.3¢ per mile for cars (equivalent to a 48.4¢ gas tax). To equal the amount raised by the Commission's short-term HTF

augmentation recommendations, the fee level for cars would be about 1.4¢ per mile; to match current HTF revenues, about 0.9¢ per mile. These rates would be somewhat higher if assessed only on miles traveled on the federal-aid highway system as opposed to all highway miles. However much revenue Congress decides to raise at the federal level, the Commission believes it is critical to move forward with a VMT fee system.

MILEAGE-BASED USER FEE SYSTEM: 2020 IMPLEMENTATION



- **As the new mileage-based fee system is put in place, reduce and ultimately eliminate current fuel and other vehicle-related charges as the primary mechanism for funding the surface transportation system, recognizing that the fuel tax may play a role in meeting other important national policy objectives.** Once a national VMT fee system is in place, and assuming that rates are set at a sufficient level, the need for the motor fuel–based revenue sources for the HTF will be eliminated. To the extent, however, that surface transportation fuels are subject to a charge in the future to account for their carbon emissions (e.g., a carbon tax or priced through carbon trading), an appropriate portion of those proceeds should be credited to the HTF and dedicated to funding carbon-reducing transportation strategies.

- **Establish VMT technology standards and require original equipment vehicle manufacturers to install standardized technology by a date certain that will accommodate the desired 2020 comprehensive implementation.** Any technology deployed should be designed to accommodate the full range of potential charge systems in anticipation of the potential for state, local, and private toll roads to piggyback on the national system. These state, local, or private systems should be required to be interoperable with the national VMT standard. Ideally such systems also should incorporate in-vehicle or after-market Global Positioning System (GPS) devices.

- **Initiate an extensive public outreach effort to create a broad understanding of the current funding problem, the proposed solution, the intended method of implementation, and the anticipated impact on individual system users.** This kind of public outreach effort is imperative to a successful transition, for once individuals understand better both the current predicament and the opportunity to achieve positive change, they are more likely to embrace it. With the current indirect system (cents per gallon at the pump, hidden to most consumers in the price of gasoline), most people do not know what they are paying now relative to what is being provided and, more important, what is required to achieve an effective surface transportation system. The direct user charge system being proposed has the potential to make the connections much more evident and thus improve the willingness of individual system users to pay their fair share of the cost. But it will require education and outreach to reach that point.

Addressing the More Immediate Federal Funding Crisis

The stakes are too high and the hole we have dug for ourselves too big to wait for a new revenue system to be put in place. The Commission therefore offers the following recommendations for the federal surface transportation funding system in the short to medium term (i.e., starting with the upcoming reauthorization of federal programs if not before).

- **Enact a modest 10¢ increase in the federal gasoline tax, a 15¢ increase in the federal diesel tax, and commensurate increases in all special fuels taxes, and index these rates to inflation.** These adjustments should be enacted in conjunction with the upcoming reauthorization of the federal surface transportation programs if not sooner. The Commission recognizes that the increases recommended here are not easy to achieve, especially in the context of the current economic recession, and that larger increases would be even more difficult to enact. The Commission, however, views the need for this increase as urgent and critical to begin to stem the degradation of the Highway Trust Fund and make positive strides forward.

These adjustments approximate the amounts required to recapture the purchasing power lost to inflation since 1993, the last time the federal HTF taxes were raised. They translate into approximately $20 billion per year in additional revenue for the Highway Trust Fund. While this is necessary to fund the current level of federal commitments and helps alleviate a portion of the funding gap, it does not eliminate it—closing approximately 43 percent of the "cost to maintain" federal funding gap and 31 percent of the "cost to improve" gap for the combined highway and transit system based on the Commission's estimates. Addressing the remaining annual funding gap will require either more substantial increases or other revenue streams, or both.

The impact on individual households of the recommended gas tax increase is that on average they would pay approximately $9 per month more in federal gas taxes (individual households now pay on average $17 per month). By comparison, the average household pays about $300 per month to operate and maintain its cars (and about $800 per month to own and operate them).[5]

The proposed 10¢ gas tax increase to maintain the current federal surface transportation program level equals:

- **½¢ per mile**
- **$5 a month per vehicle**
- **$9 a month per household***

**Based on 1.89 vehicles per household and 11,818 miles driven per vehicle (2006 Highway Statistics), and 20.4 average MPG (EIA 2008 estimates).*

- **Double the Heavy Vehicle Use Tax (HVUT) to account for the fact that it has not been increased since 1983 and to recapture lost purchasing power, and index the HVUT and the excise tax on truck tires to inflation going forward. Meanwhile, maintain the current sales tax on tractors and trailers, which as a sales price-based tax is inherently adjusted (at least relative to the price of these items).** The Commission considered a number of alternative freight-related revenue sources but determined that, while several of them may be viable options, the best way to increase funds from freight sources in the short run is by adjusting the fees that the entire trucking industry currently pays into the Highway Trust Fund. In addition, the Commission recommends that Congress authorize a study to assess whether a shift toward freight users paying a greater share of total surface transportation infrastructure based on the costs they impose on the system is warranted.

Facilitating Non-Federal Investment in the Short and Medium Term

Beyond the immediate steps necessary to address the federal funding crisis and position the nation for a new direct user charge system, the Commission believes important steps are imperative to expand the ability of states and localities to use other options to fund non-federal surface transportation infrastructure investment. Historically, states and localities have contributed over 55 percent of transit and highway capital investment, and they have shouldered primary responsibility for the extensive costs of operating and maintaining the system. The Commission believes that carefully targeted federal incentives can help spur new approaches at the state and local level, including tolling and pricing, thereby fostering greater overall investment that will in turn allow federal dollars to go farther. Although other funding mechanisms undoubtedly are important at the state and local level, federal policy does not generally play a significant role.

- **Expand the ability of states and localities to impose tolls on the Interstate System by allowing tolling of net new capacity.** This recommendation builds on the currently enacted Interstate System Construction Toll Pilot Program and would remove the limit on the number of facilities that can take advantage of the program. In considering this and subsequent recommendations, and to ensure full adherence to the commerce clause of the Constitution, any potential adverse impacts on interstate commerce and local travel should be thoroughly analyzed and appropriately mitigated as a requirement for implementation.

- **Allow tolling of existing Interstate capacity in large metropolitan areas (of 1 million or more in population) for congestion relief.** This recommendation builds on the Express Lanes Demonstration Program,

[5] Based on information from AAA's 2008 edition of *Your Driving Costs* for average sedans and data from FHWA *2006 Highway Statistics*.

expands its potential applications, and removes some of the pilot requirements.

- **Continue the Interstate Highway Reconstruction and Rehabilitation Pilot Program and expand it from three slots to five.** This pilot program allows tolling of existing Interstate capacity for reconstruction and rehabilitation. If tolling the existing Interstate System is determined to be the appropriate solution by a particular state, this pilot program enables the state to use this option to help meet its funding gap. States that participate in the pilot program must ensure that there are appropriate protections for system users and interstate commerce.

- **Support standardization of tolling and information systems by completing necessary rulemaking regarding electronic tolling and interoperability.** A key role of the federal government is to spearhead the coordination that is required to ensure frictionless transitions throughout the system and to provide users with the information they need to make smart choices.

- **Reauthorize the federal credit program for surface transportation (originally authorized by the Transportation Infrastructure Financing and Innovation Act of 1998 and now commonly referred to as TIFIA) with a larger volume of credit capacity, broadened scope, and greater flexibility. In conjunction with core credit assistance, authorize incentive grants to support and encourage the development and financing of user-backed projects. The Commission recommends a total of $1 billion per year in budget authority for the following purposes:**

  Credit Assistance ($300 million in annual budget authority)—to fund core credit assistance. The Commission also recommends several programmatic refinements, including having greater flexibility to make credit commitments.

  Pre-construction Feasibility Assessment Grants ($100 million in annual budget authority)—designed to address a key obstacle that states and localities face in advancing user fee-backed projects. The program would provide funding (in the form of grants or "conditional loans" to be repaid when possible) for a portion of the costs that a state or local sponsor must incur to undertake early planning, feasibility studies, environmental clearance, and other development-stage activities. The Commission believes that such a program could create substantial leverage of limited federal assistance.

  Capital Cost Gap Funding Grants ($600 million in annual budget authority)—to provide incentive grants to states to complement TIFIA credit assistance. Recognizing that there are many projects for which partial (but not 100 percent) funding through user-backed revenue streams is possible, this program would provide grant funding to help close a portion of the estimated gap between the amount of capital for construction that can be derived from future user fees and the amount necessary to complete and maintain the facility for its useful life. Such a program could help spur states and localities to seek to build more projects that rely at least in part on user-backed revenues, allowing federal funds to go farther since they would be supplemented by additional user-based revenues.

- **Invest $500 million per year ($3 billion over a six-year authorization period) to re-capitalize State Infrastructure Banks (SIBs) and continue to allow states to use their federal program funds for this purpose as well.** While the TIFIA program focuses on large projects of national and regional significance, there are similar opportunities for smaller projects that the SIB model is well positioned to serve. Providing this level of new capitalization funding could help support a wide range of smaller projects that have the potential to leverage user-backed payments and other new revenue streams but that lack access to capital markets on a cost-effective basis.

- **Take actions to facilitate and encourage private-sector financial participation where this can play a valuable role in providing cost-effective and accelerated project delivery, and support user fee–based funding approaches to meet the country's capacity needs and, in particular, its urban congestion challenges. At the same time, ensure that appropriate governmental controls are in place to protect the public interest in all respects.** Private capital can help deliver more projects and thus play a role in helping to address the investment gap. It should only be pursued, however, with appropriate protections

for the public interest. These should include, above all else, ensuring appropriate maintenance of and access to privately operated facilities and requiring that any proceeds generated for state or local project sponsors be used for additional surface transportation investment within the state or relevant jurisdiction. Federal policy in this area should recognize the respective purviews of federal and state governments and should preserve and support the ability of state and local officials to impose appropriate restrictions on these arrangements. The federal government should support the development of best practice information to inform state and local efforts, including working with appropriate stakeholder and industry groups to develop guidelines for transparency and accountability for public-private partnerships.

- **Expand the highway/intermodal Private Activity Bond (PAB) program from its current $15 billion national volume cap to $30 billion and limit the use of the program to projects that create net new capacity.** Once the turmoil in the financial markets subsides, it is anticipated that the existing capacity of the PAB program will be consumed quickly. More states and local sponsors will be looking to take advantage of this mechanism to lower financing costs for projects with private-sector financial participation by making private provision of infrastructure eligible for the same exemption from federal taxation that state and local governments have for publicly provided infrastructure.

- **Consider authorizing the issuance of tax credit bonds to support capital investments with public benefits.**[6] The Commission encourages Congress to consider the use of tax credit bond financing as an appropriate tool for surface transportation projects where the public benefits cannot be fully monetized by direct users or other beneficiaries and where traditional HTF revenue-based programs are inadequate. Examples of investments with broad national benefits that could potentially be strong candidates for this type of federal subsidy include intercity passenger rail and goods movement projects. Use of such tax incentives, however, should be carefully targeted to capital investments with clear public benefits.

Commentary on Potential Federal Financing Institution

If Congress chooses to create a national infrastructure financing entity, the institution should be structured in a manner that addresses actual funding and credit market gaps and that targets assistance to projects that are essential to the national network but that lack access to sufficient resources through existing programs or other sources. Congress also should ensure that any such entity is properly integrated with or a logical extension of current programs, most notably federal credit programs such as TIFIA.

Any proposal to create a national infrastructure financing entity, as has been discussed in recent months in the form of a National Infrastructure Bank or National Infrastructure Reinvestment Corporation, must be considered in relation to its ability to provide necessary financing unavailable through current government programs or the private markets and to be more effective than current programs in delivering the financial subsidies. It should be noted that the Commission's finance-related recommendations can be achieved within existing agencies and programs (e.g., the TIFIA credit assistance program) and do not require the creation of a new national-level entity. Either way, the Commission urges that important steps be taken (through fundamental reform of existing programs and/or proper structuring of a new entity) to support infrastructure investment that provides the highest societal returns while leveraging limited tax dollars with private-sector investment and new sources of revenue—particularly from direct user fees.

Any existing or new federal financing for targeted investments should be structured to offer one or more of the following benefits: access to capital that is difficult to obtain in private markets, lower-cost financing and more flexible terms than available from other sources, credit enhancement to help projects gain access to private markets, or financial assistance for projects of importance to the national transportation system that cannot be fully funded with identified revenues. The Commission cautions that the potential role of a new infrastructure financing entity should be examined in the context of long-term funding needs and not only as an immediate response to the current disruption in the credit markets.

6. Tax credit bonds are a form of debt financing that significantly subsidizes the borrowing cost of the project sponsor (debt issuer) by having the federal government pick up part or all of the interest expense through the provision of tax credits to the investors.

Finally, the Commission emphasizes that the focus on new or enlarged funding programs and financing techniques should not be seen as a substitute for generating revenue by raising taxes, expanding tolling capabilities, or developing other sources. The institutional mechanisms being proposed, whatever their merit, will not in and of themselves directly address the core problem of insufficient revenue to support needed investment.

THE PATH FORWARD— CONCLUSIONS AND NEXT STEPS

The Commission has evaluated a wide range of options that could begin to close what has become an unacceptable and unsustainable investment deficit in our nation's surface transportation infrastructure. The Commission assessed each option's ability to raise significantly more resources at the federal level and to support the ability of state and local governments to do the same. In offering Congress the results of this analytical and deliberative process, the Commission recognizes that there are no easy solutions. Looking to the future, the Commission endorses the growing consensus that transitioning to a funding approach based more directly on use of the transportation system is the right foundation.

In the twentieth century, surface transportation was largely about steel and concrete: extending and expanding the physical network of roads, bridges, and rail systems and the cars, buses, and trucks that operated on it. The goal was to raise the money needed, from whatever sources, to build a robust enough system to meet the nation's mobility needs.

In the twenty-first century, steel and concrete will of course continue to be the foundation of our surface transportation infrastructure, and raising the resources needed to support that system will still be important. New capabilities of the system, however, will need to be not just big but also "smart." We are now able to use technological advances to significantly improve how people pay for their use of the transportation system. Importantly, doing so will enable the delivery of a host of other benefits, including real-time information to vehicle drivers to help reduce congestion, improve safety, and reduce emissions, to transit operators

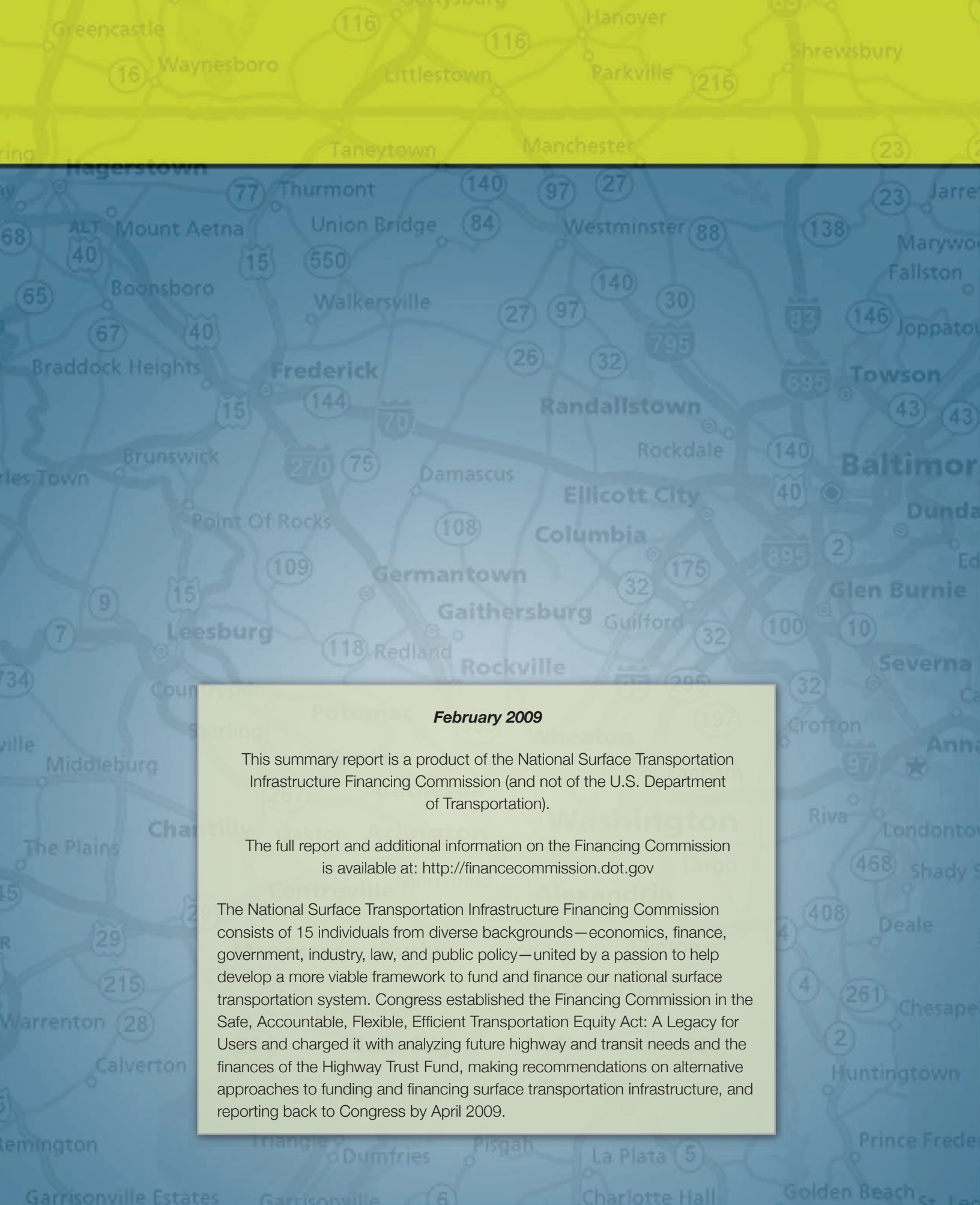
Looking to the future, the Commission endorses the growing consensus that transitioning to a funding approach based more directly on use of the transportation system, including mileage-based user fees, is the right foundation.

to improve the convenience and reliability of public transit, and to system managers to better monitor and manage the system and improve the allocation of transportation infrastructure resources.

The Commission's core recommendations focus on the first attribute of this new intelligent system: improving how the system is funded, specifically in ways that are more sustainable and more efficient. The Commission's other recommendations also play vital roles in ensuring overall funding security and staving off further system degradation through immediate action that will afford the nation the time to realign the funding framework.

Transitioning from a fuel tax–based system to one based more directly on use of the highway system measured by miles driven undoubtedly will require a great deal of planning and public education. But that is no reason to delay initiating the transition. As one Commissioner warns, "If we don't start, we won't ever get there." And, as this process commences, policy makers will need to ensure that all stakeholders are consulted and involved in the decision making for all aspects of the transition.

In closing, if we fail to address the immediate funding crisis and longer-term investment challenge facing our surface transportation system, we will suffer grim consequences in the future: unimaginable levels of congestion, reduced safety, costlier goods and services, an eroded quality of life, and diminished economic competitiveness as a nation. Our alternative future—with increased federal revenue, new funding approaches, and new technology as a foundation—is an integrated national transportation system that is less congested and safer and that promotes increased productivity, stronger national competitiveness, and improved environmental outcomes. That future is waiting for us to embrace it.



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This summary report is a product of the National Surface Transportation Infrastructure Financing Commission (and not of the U.S. Department of Transportation).

The full report and additional information on the Financing Commission is available at: http://financecommission.dot.gov

The National Surface Transportation Infrastructure Financing Commission consists of 15 individuals from diverse backgrounds—economics, finance, government, industry, law, and public policy—united by a passion to help develop a more viable framework to fund and finance our national surface transportation system. Congress established the Financing Commission in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users and charged it with analyzing future highway and transit needs and the finances of the Highway Trust Fund, making recommendations on alternative approaches to funding and financing surface transportation infrastructure, and reporting back to Congress by April 2009.