

National Transportation Policy Options: A Time for Choice

1. A Perfect Storm for the Surface Transportation Program

The federal-aid transportation program has evolved over the last century in response to a combination of driving forces. These forces have reflected a changing consensus regarding key transportation-related needs, general trends in intergovernmental relationships, and growing environmental concerns—as well as the contemporary political willingness to raise revenues at the federal and state levels. Today, the 20th century transportation legacy appears to have reached the end of its useful life. A “perfect storm” of conditions and events combines to set the stage for a significant change in policy and program.

Program Maturity

Since the completion of the Interstate, there has been no comparable national consensus about priority transportation needs. ISTEA in 1991 included a national highway system option and a metropolitan planning emphasis, but stayed largely within the legacy categories of expenditure. Since then, the characteristic 21st century challenges have clarified: increasing congestion, growing preservation burden, sprawling development, global connectivity, new technology, and a set of difficult environmental problems. Meanwhile, the existing program has accreted a range of goals, programs, and requirements that have little to do with highway and transit mobility. National purpose has been an option, rather than a focus. Systematic analysis of mobility and other impacts is almost entirely absent. This mismatch has become increasingly evident to more and more constituencies

Funding Crisis

The state of the nation’s highway infrastructure—highlighted by the Minneapolis bridge collapse—has focused attention on investment levels. The Highway Trust Fund supporting the federal-aid program is about to go into deficit status unless expenditure levels are dramatically reduced. This funding crisis is likely to provoke at least a short-term “fix” in 2008. Meanwhile, increased reliance on toll funding, national infrastructure banks, and bond funds are receiving attention. Nevertheless, traditional taxes and fees will continue to be the dominant source of revenues, and the issue of tax increases must be squarely faced.

Mobility, Economic, and Environmental Challenges

“Competitive affluence” is the major dilemma facing U.S. transportation. Individual households and businesses are using more transportation, and congestion continues to grow in time, space, and intensity. As part of a globally competitive context, the U.S. economy is also increasingly dependent on just-in-time goods movement. Despite a growing economy and increasing household wealth, transportation system improvements

are constrained—both by resources and by quality-of-life issues. Logistics cost reductions and just-in-time performance have recently stagnated. The current level and mix of transportation infrastructure investment may be sufficient to maintain most of the existing system, but not to meet key mobility needs.

The Impact of Climate Change Constraints

To this mix are now added the overarching considerations of global climate change and energy independence. Surprisingly, these issues have been largely ignored in recent transportation policy studies. But recent congressional energy legislation and legislative proposals at both the state and federal level—including a CO₂ cap-and-trade system—suggest a growing commitment to combating global warming that may have significant transportation program implications. To the surprise of much of the highway and transit community, a basic commitment to reducing the transportation share of emissions may be the single largest influence on future surface transportation systems.

Policy Studies

The future of the federal-aid surface transportation program has been the subject of review by two national commissions. The National Transportation Policy and Revenue Study Commission has presented its recommendations (discussed below), including a strong minority position. The National Surface Transportation Infrastructure Financing Commission is looking in greater detail at funding needs and options, while a recent GAO report has recommended a restructured federal approach. The major transportation interest groups, associations, and think tanks are also developing position documents, many piggy-backing on issues raised by the national commissions. The first opportunity to implement changes will be presented by the reauthorization of SAFETEA-LU in 2009.

A Transformational Moment?

At various times during the history of the Federal-Aid Transportation Program, there have been key transformational moments when the program was recast to suit an emerging set of national challenges. In the last half century, there have been two such moments. The first was the recognition of the continental scale of the U.S. economy and development after WWII, embodied in the creation of the Interstate Highway System. The second was the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991 that emphasized intermodalism, planning, and environmental concerns and fostered innovative technology and finance. A programmatic resolution of existing transportation, funding, and environmental challenges represents the opportunity to create another transformational moment.

2. The National Transportation Agenda

The various policy studies—despite their disparate sponsors—have substantially converged on a set of general issues that form the substance of the dialogue on the future of the federal-aid surface transportation program.

Key Transportation Issues

The key policy issues fall into five general categories:

1. *Economic Development and Competitiveness*—improving freight efficiency in an increasingly global competitive context and supporting economic development
2. *Safety and Security*—addressing the continuing high number of highway-related crashes and fatalities together with reducing risks from both natural and human-caused disruptions and disasters
3. *Environment/Energy/Land Use*—responding to the values of natural and human environment, including global climate change and energy dependency
4. *Personal Mobility*—focusing on modal balance and modal management to increase travel options, reduce delay, and improve reliability
5. *Asset Management and Preservation*—maintaining the current system in a state of good repair and efficient operations

A New Context

Cross cutting these key issues is the daunting scale of future travel demand. Over the next 20 to 30 years, gross domestic product, household income, and the demand for travel—both passenger and freight—may well double. At the same time, the major challenges of energy independence and global climate change must be accommodated. While these challenges are daunting, it is often forgotten that growth in the U.S. economy means that as a society, we will have more than twice the real wealth to invest. Considering how our resources should be deployed sets the framework for the future federal-aid program: its scope, structure, and size.

3. Emerging Strategic Consensus

The above combination of goals and context has established a substantially common agenda of program strategies among most interest groups. While the emphasis, roles, and scale vary, the following strategies constitute the core of the ongoing national transportation policy dialogue:

- *The upgrading of federal-interest systems* (national interstate or regional networks for both freight and passenger movement, including highway, freight, and passenger rail) to maintain a high level of interregional, intermodal continuity, and connectivity.
- *The development of new approaches to mobility in metropolitan areas* based on new modal mixes, bottleneck elimination, management, and pricing that provide alternative service in congested contexts.
- *The support of new technology applications* that would improve safety, demand-responsiveness, and operational efficiency.

- *Improvement in program accountability through performance management*, including the use of asset management and operational management (including pricing) to maximize the cost-effectiveness of the existing system.
- *Improved environmental stewardship* that provides a meaningful and streamlined response to the energy and environmental challenges of global climate change, including both technology and demand management.
- *Expanded funding resources*, based on traditional tax sources as well as tolls and other innovative finance including new forms of public-private partnership.

Taken together—and realized in program form—a combination of the above strategies would constitute the same type of transformational impact as the creation of the Interstate and ISTEA.

4. Alternative Policy Perspectives on the Federal Role

Strategies must be converted into programs with eligible uses defined, funding established, and roles of key players determined. Within this context, the relative roles—both sectoral and intergovernmental—are central as a key policy issue, whether sharply targeted or broadly supportive, large or small.

Federal-State Relationship

The existing federal-aid highway and transit programs are administered through partnerships with state government (for highways) and local government (for transit) in which the federal role is to provide grants in certain specific program categories and oversight regarding program requirements—while the state or local government role is to plan, develop, and implement the projects consistent with the program purpose. As the post-Interstate program has matured, increasing discretion has been granted to state government and transit authorities in the use of federal funds. Any future federal-aid program must take a position on the level of federal direction vs. state and local discretion.

Public-Private Partnerships

The federal-aid program also involves consideration of the appropriate relationship with the private sector, especially as private interests have become increasingly involved in road development and finance as well as in maintenance and operations. Toll revenues, while historically a small share of the national total, have become a significant portion of highway finance in the fast-growing states, with the private sector providing much of the financial and management resources. This expanding role of the private sector has raised concerns about projection of the public interest

A Spectrum of Opinion

There is a range of policy and program views on the relative funding shares and program roles. These positions tend to have had a long history through the successive rounds of surface transportation reauthorization. The section below outlines the key program dimensions involved in this dialogue.

5. Program Scope, Roles, and Size—Major Issues

The discussions and recommendations of various policy studies and the positions of interest groups focus on three general areas of policy and program that together determine what and how federal transportation interests are promoted. The major dimensions include:

- Program scope—as reflected in objectives and focus of investments
- Roles of levels of government and the private sector
- Level and mix of funding

Program Scope Issues

Program scope relates to the overall policy regarding program substance, modal strategies, and type of improvements that are the focus of investment, as well as how these determinations are to be made.

Core Program Scope and Modal Roles

There is a tradeoff to be made between the specificity and strength by which overall federal-interest goals are directly reflected in the mix and emphasis of activities vs. the traditional modal programs. It is generally agreed that the federal-aid program is fragmented into too many categorical grant programs and should be consolidated. In this process, key issues will include:

- Relative emphasis on programs supporting key federal-interest investments (systems and facilities) as major categorical program activities (as distinct from more flexible programs providing discretion for individual state/regional priorities), including use of high federal-state match and needs-based funding distribution to emphasize national systems and federal-interest investments
- Changes in the modal focus appropriate to changing national objectives, moving away from programs based on mode to those relating to specific federal interests
- New forms of cooperation with private-sector freight and passenger transportation providers, including commercial highway vehicles, transit/rail, and maritime

Global Climate Change

The 30 percent responsibility of the transportation sector for CO₂ emissions ensures that increased attention (and legislation) will be given to this matter in public policy at all levels of government. The principal targets will be related to vehicle and fuel technologies and efficiencies (that will in turn impact fuel tax revenues). However, there is likely to be a range of initiatives focused on constraining the growth of vehicle-miles of travel (VMT) through the imposition of demand and supply management measures, including land-use densification, increased transit service and efficient highway systems operations.

Program Administration for Streamlining and Performance Accountability

A gradual transition to performance management is already taking place in the federal-aid program. Examples from overseas (the recent Eddington and Stern reports in the UK) indicate the potential of increased focus on cost-effectiveness. However, the use of

standards and measures and the development of plans imply greater federal mandating and a challenge for increasing streamlining of the already-complex project development process.

Allocation of Funds and Cost Responsibility

The allocation of federal-aid among program areas and how such program funds are apportioned to states remains one of the most contentious issues, as does cost responsibility and the basis for differential tax rates by vehicle type or usage. This explains the paucity of proposals for change and the omission of such mechanisms by the national commission.

Role Issues

Within a “federalist” structure, this set of issues addresses the relative roles of each level of government and how it is to be exercised.

The Federal Role

The future role of the federal government level will be substantially determined by the structure of program and funding discussed above. A key issue is whether the federal-interest programs add up to a greater federal role—in terms of share of investment and oversight of program—or whether the federal-interest programs can best be pursued with greater initiatives and discretion on the part of state and local government and the private sector.

Oversight of the Federal-Aid Program

The balance between serving federal interests vs. state/local priorities can be influenced by the conditions attached to the use of federal funds, including:

- Degree of discretion/flexibility provided to the state/local recipients in use of federal funds intended to support national-interest systems or facilities
- Use of performance or other incentives to induce increased state use of both federal and state resources in that program area for federal interest
- The presence of mandates, standards, and other constraints on the federal-aid systems

Institutional Capacity

Current studies have totally ignored the ability of the existing public-sector transportation agencies to effectively innovate and manage new programs. At all levels of government, through downsizing and turnover, transportation agencies have experienced some loss in their most experienced leadership and technical and managerial staff. The institutional context—education, conditions of employment, labor, and civil service regulations—has militated against development of needed executive, technical, and managerial capacity. Outsourcing and privatization have been partial responses, but the issue remains largely unaddressed at the policy level.

Overall Program Funding Issues

The level of overall investment, the sources of funds, and the mechanism for distribution are among the most contentious issues, as they relate to allocation of scarce resources and the prerogatives of each level of government.

Investment Needs

The current federal-aid highway program is targeted at an average of \$40 billion on average over the current six-year authorization—from federal and state fuel and related vehicle taxes. This investment level is almost sufficient to maintain current physical conditions, but not at the level to deal with the existing major bottlenecks or to add new capacity to meet freight, connectivity, or metropolitan mobility needs. Central to the future of the federal-aid program is determining what level of additional capacity is essential or desirable—as well as affordable—in light of other social needs, and what component of those needs should be met through federal funding.

Revenue Mechanisms

In the short run, there appears to be no alternative to either increasing and/or leveraging the existing federal fuel taxes, although liberalizing the collection of tolls—especially on the Interstate system—might make a substantial contribution. A range of federal and state bank mechanisms are also under consideration to advance projects financed from user fees. For the long term, there is a consensus that the fuel-based taxes will encounter increasing erosion associated with changes in fuels and increases in vehicle efficiency and, perhaps, from demand management. Furthermore, while extremely *efficient in collection*, the fuel tax provides little market incentive for the most *efficient use* of scarce infrastructure. Technology is increasingly available for a vehicle-miles-of-travel tax that can better reflect the true costs and demands. A key issue in how and when such a transition might be made is the role of fuel taxes and direct user charges in this mix.

Leverage

The federal-aid program has been built around high federal-match voluntary grant programs. A growing financial sophistication over the last decade reflected in state infrastructure banks and federal credit support (TIFIA) has increased interest both in broadening the revenues base and increasing leverage. The infrastructure bank concept offers one opportunity to encourage revenue financing by making tax credits and revenue bonds available at the national level; the use of freight-based fees has also been proposed. Additionally, improved leverage of federal aid through funding mixes involving federal grants, state debt, and private equity has been considered.

Tolling, Pricing, and Public-Private Partnerships

Tolls and other fees provide an alternative to tax-based funding for roads. While they cannot supplant the role of taxes, for many needs tolls and fees can provide an important component of program revenues in regions where new capacity is being constructed. Toll roads also present an opportunity for private road development that can tap private finance and management expertise. This includes the application of congestion pricing to maintain service levels where capacity additions are not feasible. A key issue is the

federal role with regard to tolling federal-aid facilities and the degree of federal (vs. state) regulation of how tolls are introduced and managed.

Program and Revenue Allocations

The most difficult political issue in program development is the determination of the allocation of available federal-aid funds among the various programs, and then the apportionments to states or regions to execute the programs. The historic formulas—originally designed to reflect “needs”—have, over time, produced increasing disparities among states with regard to tax funds generated vs. received (the “donor-donee” states problem). No clear resolutions have been put forth by interest groups on this issue, other than vague proposals to conduct cooperative planning activities or employ a national commission that would presumably provide credible technical bases for allocation. In the face of congressional prerogatives and the uncertainties associated with the legacy process, resolving this issue remains the major challenge to rationalizing the future federal-aid program.

6. Policy Options

Within each of the above policy areas, there is a range of views. In a broad sense, the positions currently taken are based on different definitions of overall transportation needs, but they also respond to varying philosophies about the importance of different kinds of transportation, the roles of the public vs. private sector, and the appropriate role of the federal (vs. state and local) government.

The Range of Views

Exhibit 1 presents the key policy areas disaggregated into the specific issues, as reflected in the recommendations of the national commissions, the GAO study, and the public and private interest groups and associations. The “Range of Views” column encapsulates the spectrum of positions that are apparent in the national transportation dialogue to date.

It should be noted that the columns in Exhibit 1 indicate the two ends of a spectrum of opinion on each issue—with a variety of in-between options. “Middle ground” positions between these two extremes may well characterize the policy positions of many interests. Furthermore, the alignment of options in either column does not mean that perspectives taken by various studies or groups are consistent with all of those in either column. Rather, a “Chinese menu” (one from column A and one from column B) approach is often the case in recent history.

Exhibit 1: Range of Views

REAUTHORIZATION OPTIONS			
Issue		Range of Views	
		Narrow Federal Role	Broad Federal Role
PROGRAM STRUCTURE	1. Policy	Federal-interest focus with devolution of non-federal activities	New partnership involving all levels of government
	2. Core Program Structure	Minimum targeted federal-interest orientation	Broad range of federal interest areas rather than modal
	3. Modal Roles	Strict sectoral roles and use of cost-effectiveness in public sector	Public-sector involvement in full range of multimodal including passenger and freight rail
	4. Streamlining of Planning /Environmental Process	Substantial deregulation	Streamlining of current processes
	5. Performance Accountability and C/E Investment	Reliance on pricing and incentives for improved efficiency and C/E analysis	Use of mandated performance measures, C/E, and supporting regulations
	6. Project Investment	Greater reliance on private and local investment decisions	Based on public cooperative plans/needs analysis by program areas
	7. Funding Allocation	Related to tax contribution	In line with federal-interest programs
	8. Oversight of Program Allocation and Apportionments	Rationalization of current formula (elimination of donor/donee measures)	Use of national commission for rational allocation
	9. Global Climate Change	Role limited to research	Development of new planning and operations approaches to reduce CO ₂ contribution
	10. Research and Development	Modest program targeted on only major common public sector concerns	Broad program with extensive public-private R&D partnerships
ROLES	11. Oversight of Funding Program, Planning, and Standards	Reliance on current mechanisms—with reduction	Use of national commission to set standards
	12. Level of Government Roles	Devolution of non-federal-interest activities to state/local government	Federal/state/local roles as today, supported by cooperative planning
	13. Federal Representation in States	Functionally based as required by federal programs	Focus on technical support with consolidation for efficiency
	14. Private-Sector Role	Increased reliance on private market (outsourcing, private finance, development)	Protection of federal interest within public/private partnerships
FUNDING	15. Funding Needs Estimates	To be determined by market and individual states	Investment analysis from federal perspective but via a single multimodal fund

	16. Long-term Program Investment Level	As supported by current level/mix or state replacement taxes	Significant increases to meet planned needs
	17. Tolling, Pricing, and Public-Private Partnerships	Significant increased role and flexibility	Encouraged as supplement to taxes; regulated
	18. Short-term Revenue Mechanisms	Increased reliance on tolls and pricing and other mechanisms	Immediate tax increase plus staged tax increases, including special rail fees
	19. Long-term Revenue Mechanisms	Short term transition to direct user charges	Long-term transition to VMT basis
	20. Federal Funding Share	Reduced role other than strict federal-interest programs	40% of capital (historical) on a cost-to-complete basis

7. Alternative Program Frameworks

When considering future options for structuring a national surface transportation program, positions regarding these issues can be mixed and matched into overall programs. Exhibit 2 presents a framework for examining possible program framework options. The basic framework dimensions are: *program scope*, in terms of level of emphasis on federal-interest systems and issues; and *program scale*, in terms of significant increases or decreases in the current overall program investment level.

Exhibit 2: Major Elements of Future Surface Transportation Program Options

		SCOPE	
		Narrow Federal Role/Increased State Discretion	Broad Federal Role
SCALE	Decreased Federal Program Level	1. Devolution: minimal federal program	3. Federal-interest focus leveraged by performance incentives
	Current Federal Program Level	2. Maximum state/local flexibility	
	Increased Federal Program Level	NA	4. Federal-interest focus enhanced by larger program

Note: Current Program Level = gradual reduction in buying power

Generic Program Options

As indicated in exhibit 2, at least four logical combinations are also visible on the current policy landscape. The major options (excepting continuing the current program on a “business as usual” basis) include:

1. *Devolution*—This involves downsizing the federal-aid program and funding to a minimum while retaining responsibility only for activities that would not likely be assumed by state/local entities. These responsibilities are presumed to include the Interstate, NHS, and related maintenance and bridges and other programs under direct federal administration (such as federal lands and emergency relief) and most transit programs. Responsibility for other activities—including the funding—would be left to individual state/local entities to assume as they see fit. This option, therefore, supports a very narrow range of (existing) national-interest systems and facilities and might be expected to result in an overall reduced level of public investment.
2. *Maximum state/local flexibility*—This would provide expanded discretion in the use of the existing level of federal aid toward meeting individual state/local needs with minimal constraints, including the ability to use federal funds across all program activities and modes of their own choosing, on a block-grant-like basis. The discretion provided would reduce the federal-interest focus of the federal-aid program and, instead, would support individual state/local priorities. Over time, the existing program level would not be supportable by the current level of federal revenues.
3. *Federal-interest focus leveraged by performance-driven requirements*—This option uses federal-aid program incentive and disincentive mechanisms to encourage state/local government program participants to increase their focus on certain national-interest systems and facilities. For example, new funding categories could be created that apportioned funding based on congestion reduction and effects on national mobility. A combination of higher match and performance incentives and disincentives would leverage an increased proportion of state/local investments on programs such as improved freight transportation, interstate connectivity, safety, and preservation of major routes and bridges. Other program activities might be funded but at a lower level—as there would be reduced federal resources for programs of state/local interest. Over time, the existing program level would not be supportable by the current level of federal revenues.
4. *Federal-interest focus enhanced by larger overall program*—This would achieve its federal-interest objectives by increasing the total program size so that the federal funding for systems and facilities of greatest national interest would grow as part of the total program—perhaps expanded to a wider range of programs as in option 3 above, but also to include shared investment in passenger and freight rail, urban mobility, and other areas of broad interest. Growth in overall program size

would accommodate simultaneous retention of the flexible programs serving particular state/local interests and reduce the need for difficult policy tradeoffs.

Mix and Match

In the real world, politically practical program proposals are not likely to be entirely consistent with the generic program options or with the broad vs. narrow view on issues as set forth above. A performance-based program, for example, can be part of a larger or smaller overall program. An increased level of targeting on a limited set of federal interests or increased private participation can also be built into any size program.

8. The National Transportation Commissions

Two national commissions were appointed to investigate the program and financial challenges faced by the future of the federal aid surface transportation policy and program.

The study and recommendations of the National Transportation Policy and Revenue Commission (NTPRC) represents the first systematic review of future transportation demands and related issues in more than a generation. Based on extensive staff analysis of future options, the study produced a series of major recommendations for policy and program reform calling for a new federal “compact” between levels of government and the private sector. The policies and recommendations cover many of the issues charted in Section 6 above in a combination that reflects a cross between program options 3 and 4 in Section 7. Key features of this proposal include:

- A strong federal role with increased focus on “national-interest” needs but on a multimodal basis, including private passenger and freight rail
- Increased expenditures from all levels of government and the private sector (up to three times the current level), including the presumption of a federal tax increase supplemented by tolls and other fees
- More effective use of federal aid in terms of a federal-interest focus on a mode-neutral basis
- Distribution and use of funds with increased flexibility but also increased accountability based on performance and cost-benefit outcomes
- Program reform to eliminate waste and delay by streamlining project development and environmental procedures

The commission recommends reorganizing and concentrating the surface transportation program into ten specific mode-neutral program areas, thus eliminating the need for a separate FHWA and FTA. These new program areas include:

1. *Rebuild America*—a rigorous asset management program based on a life-cycle approach
2. *Freight Transportation* as a focused multimodal plan, including public-private partnerships with private freight providers
3. *Congestion Relief* through a standards-driven, multimodal approach at the metropolitan level, including intensive operations and congestion pricing

4. *Saving Lives* via a national safety program with specific targets and plans
5. *Connecting America* in terms of non-metropolitan needs and filling gaps in the current transportation networks
6. *Intercity Passenger Rail* for high-growth corridors, including higher speed service in key corridors and a more complete national network
7. *Environmental Stewardship* via a significant mitigation program supported by a mandated take-down-funding at the state level
8. *Energy Security* pursued through a USDOT energy R&D program
9. *Federal Lands Program* continuing the current federal responsibility
10. *Research, Development, and Technology* program based on the development of a National RD&T Plan

The commission sidestepped the thorny issue of program allocations and funding distribution by calling for the creation of an independent commission that would oversee initial strategic planning, federal-aid programming budgeting, and distribution of funds to states and regions. In addition, perhaps because of time, the commission did not deal directly with the need to reduce surface transportation CO₂ impacts.

A minority position, reflecting current administration views, agreed on the general need for investment and the need for improved program streamlining and performance accountability. However, consistent with a cross between program options 1 and 3 in Section 7, it took a narrower view of the federal interest and a more expansive view of private-sector involvement, including its recommendations of a reduced dependence on federal aid and the federal gas tax and more aggressive support for tolling.

The National Surface Transportation Infrastructure Financing Commission is focused on a determination of national needs relative to the highway trust fund and alternative financing strategies. This Commission's preliminary analysis has focused on the demands for investment vs. the existing financing system. It has suggested that the fuel tax may not be a sufficient and reliable source of revenues in the future—given the needs to both maintain and expand the system. The Commission is also examining ways in which transportation investments can be made more cost-effective, including the basis of investment decisions and how assets are maintained and operated. A range of future options is under review, with special attention on an evolution towards a direct user charges approach for its potential both to augment revenues and to encourage more efficient use of the systems.

9. Basic Choices Ahead

The range of options under consideration within the transportation policy community offers significant choices as reauthorization of the federal-aid transportation program approaches. Some choices indicate an attitude toward the general importance of surface transportation, while others reflect differing views on the roles of public vs. private sector and the appropriate relationship among levels of government. Each of these issues has a spectrum of defensible positions, and they are seen from various perspectives as more or

less linked. In each case, the basic choices reflect differing levels of change from the current program structure and scope

Over the next several months, there will be an accelerating dialogue among interests and a refinement of positions. There is a broad consensus that the 21st century requires a surface transportation system more closely tailored to the new mix of needs and challenges. There is less consensus on how and when to proceed. It promises to be an exciting time for transportation policy—and potentially a transformation moment!