





# The Future of Surface Transportation Funding in America

By Rick Geddes

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I am honored to be invited to appear before this committee to discuss some of the most critical transportation policy issues facing America today. It has been a pleasure to assist the National Surface Transportation Policy and Revenue Study Commission in its important work, and I am pleased that you are exploring its findings in detail.

I would like to begin by making some predictions about the future of funding surface transportation in America. These predictions are based on my learning as a Commission member for almost two years, and on my background as an academic economist.

As you know, in the past the majority of funding for surface transportation has come from fuel taxes at both the state and federal levels. I do not believe that will be the case in the future.

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Fuel taxes are typically determined as a fixed number of cents per gallon of fuel. The purchasing power of the revenue from such a tax naturally declines with inflation. This is a serious concern when the costs that the tax is intended to fund—here, transportation construction and maintenance—are rising considerably faster than overall inflation.

Revenue from fuel taxes is also likely to decline because motorists will rationally respond to high, sustained fuel prices by choosing more fuel-efficient vehicles, changing their driving habits, biking, walking, or carpooling, and by using alternative modes of transportation, such as public transit. There are also likely to be longer-term responses to high fuel prices, such as changes in housing locations, which will result in less fuel consumption and, thus, less fuel-tax revenue.

Moreover, the fundamental

economic drivers of the current high fuel prices are unlikely to abate any time soon. The rapid development of large, emerging economies, particularly in China and India, results in powerful demand for fossil fuels. This is driven by, among other factors, the growth in new construction and the desire for more automobiles that typically accompany an emerging middle class. This increasing competition for a scarce resource has an entirely predictable effect on fuel prices: they will rise.

I thus predict that the magnitude of fuel-tax increases necessary to even come close to meeting the formidable needs of transportation investment (which are described in the Policy Commission's report, *Transportation for Tomorrow*) will be politically impossible for the foreseeable future. But I believe there are at least two other reasons why additional revenue from fuel taxes won't be forthcoming.

First, motorists, with some justification, have little confidence that the proceeds from higher fuel taxes will be spent wisely. Once that confidence is lost, it is very difficult to regain. Second, the gas tax is a highly regressive tax in the sense that it disproportionately hits the poor. Indeed, a 2007 study by the comptroller of Texas found that, of all the taxes the state relies on, including sales taxes, franchise taxes, natural-gas taxes, and school property taxes, the gas tax

was by far the most regressive. I believe that the public will be reluctant to allow meaningful increases in so regressive a tax.

To the extent that one agrees with these predictions about the future of fuel taxes, it becomes clear that other ways to fund transportation infrastructure are called for. Two critical alternatives are the increased use of tolling and public-private partnerships, also called toll concessions. Indeed, there is evidence that these forms of funding are already rising in importance. From 2000 to 2004, for example, toll revenues grew 21.1 percent in the United States, compared with 2.5 percent and 0.1 percent for fuel and vehicle taxes, respectively. Most new highway projects over \$500 million that are currently in the development phase in the United States will be toll roads. The majority will be built using some form of toll concession.

Consistent with the above predictions, the public appears more willing to accept higher tolls than higher fuel

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taxes. The American Automobile Association recently published a national opinion poll finding that 52 percent of respondents favored tolls to fund expanded highway investment, while only 21 percent favored higher fuel taxes. A survey by the Colorado Department of Transportation found that 66 percent favored tolls to fund new highway capacity, while only 16 percent favored fuel taxes. And a 2005 *Washington Post* survey for the Washington, D.C., area found that 60 percent favored tolls, compared with only 30 percent in favor of fuel taxes, and so on.

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is why, in the course of my work on the Commission, I became concerned about several misunderstandings regarding toll concessions. A complete discussion of the range of issues surrounding toll concessions is outside the scope of this testimony, but I discuss three below.

### **Monopoly Power and Regulation**

An important issue is that of potential monopoly power. This reflects the concern that the private operator of a transportation facility might be able to increase its profits by raising prices because the facility faces limited competition. Several points should be kept in mind when trying to address such a concern. First, this concern is not unique to private investment, as a public operator possesses the same degree of monopoly power as a private operator in any particular facility. Second, unlike most other network industries, any monopoly power in transportation is likely to be highly facility-specific. That is, the amount

of competition a facility faces will vary widely across facilities. One particular highway, for example, might face competition from other nearby roads, from public transit, or from air travel, while another highway might face little effective competition.

The purpose of regulation is to mimic the forces of market competition and ensure that consumers are protected from excessive prices. Market competition might be robust for some facilities and less so for others, so that rigorous regulation (which can induce its own inefficiencies) may be undesirable for some facilities. Therefore, a one-size-fits-all approach to addressing possible monopoly power could easily do more harm than good. Rather, a flexible approach should be maintained.

As Graeme Guthrie stated in a survey article on infrastructure regulation in the December 2006 issue of the *Journal of Economic Literature*: “The two most important lessons to be drawn from the literature surveyed here are that there is no single combination of regulatory settings that is best in all situations and that the various components of a regulatory scheme are interrelated. The most appropriate regulatory scheme for a given situation will depend on the characteristics of the firm and industry being regulated, as well as the institutional environment.” These lessons would appear to counsel

against a monolithic approach to regulation in favor of a flexible approach.

Third, policymakers have learned from decades of regulatory experience. There is now a consensus that rate-of-return regulation is inferior to incentive regulation. Rate-of-return regulation is essentially cost-plus regulation. The regulated firm is allowed to earn revenue that is some fixed amount above cost, which generates a predetermined rate of return. The firm's revenue is adjusted when its cost changes, in order to hold the rate of return fixed. The main problem with this type of regulation is that it blunts the firm's incentives to keep costs down, to innovate, or to adopt efficient management practices. There are other well-known impacts, such as the incentive to overcapitalize.

Although there have been attempts to modify rate-of-return regulation to avoid some of these negative impacts, it has been abandoned in many industries

in favor of various forms of incentive regulation, two common forms of which are earnings sharing and price caps. Earnings sharing is based on the notion that allowing firms to keep some of the gains they create will give them stronger incentives to innovate and actively reduce costs. Price caps place a constraint on prices rather than profits. They are based on the notion that, if prices are decoupled from costs, the firm will benefit from any cost reduction it undertakes. Price caps not only provide strong incentives to reduce costs, they also offer some pricing flexibility.

In my view, the main lesson is that policymakers in transportation should not approach concerns about potential monopoly power by adopting methods that have been discarded in other industries—here, rate-of-return regulation. They should instead try to get ahead of the learning curve. At a minimum, the focus should not be on the “reasonableness” of the return earned by a particular firm, as this suggests a throwback to inefficient rate-of-return regulation.

### **Length of Toll Concession**

Another concern that has occasionally surfaced about tolling focuses on the length of the toll concession. Some commentators suggest that particular toll concessions may simply be “too long,” and that it would be appropriate to restrict concession lengths through



centralized regulation. This reflects a misunderstanding of the role of concession length.

As noted above, transportation facilities are likely to be heterogeneous in terms of their current and expected future traffic flow, competition, and amount of maintenance required, among many other dimensions. No one concession length is appropriate for facilities that vary so greatly. If, for example, traffic demand is low and uncertain on a particular facility, a longer concession may be necessary to attract private capital to the project. Moreover, if traffic demand as initially forecast doesn't materialize, and a facility is in danger of bankruptcy, then a simple way to retain the services of the concessionaire, if desirable, is to extend the length of the concession term.

As above, the key lesson here is that a flexible approach is warranted, and a one-size-fits-all policy that would artificially limit concession length is likely to result in social harm. Concession length should be determined by those with the most knowledge and information about the particular facility in question.

## **Balkanization**

A third concern that has been expressed about toll concessions is that our transportation system would become "balkanized" if various private concessionaires were allowed to enter. This concern is unjustified.

One motivation for using toll concessions is that they bring profit-maximizing incentives to the transportation arena. Those incentives inspire firms to keep costs down, to be customer focused, and to innovate, but they also motivate firms to increase their revenues. One way the revenues at a facility can be increased is by interconnecting with as many other facilities as possible. Just as any profit-seeking business wants as large a customer base as possible, so too will a concessionaire seek to increase its access to more motorists. The last thing a private concessionaire would seek is to cut its facility off from other nearby facilities.

Moreover, it is inaccurate to view the current system as a seamless network of perfectly coordinated units. The Interstate Highway System, for example, currently has 50 owners, in the form of individual states. The existence of both a state department of

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transportation and a state toll authority might make coordination even within a state more difficult. This situation is further complicated by a patchwork of municipal and county roads, which implies still greater coordination challenges.

Indeed, there is evidence of such coordination problems under the current system. Many state turnpikes, for example, lack interchanges with major interstates long after their bridging has been completed. Moreover, state departments of transportation may not want to encourage truck traffic, for example, because of potential harm to their roads from out-of-state truckers who don't have a political voice in that state. Such situations act to discourage greater connectivity

As long as a private concessionaire were able to earn a profit from such vehicles, it would, in contrast, see users such as truckers as customers, and would work to encourage connectivity. Because it seeks traffic and revenue, a

**Because it seeks traffic and revenue, a private concessionaire would also be more likely to coordinate across jurisdictional lines.**

private concessionaire would also be more likely to coordinate across jurisdictional lines. Concessionaires have an enhanced incentive to cooperate with various agencies because it makes solid business sense to do so. Indeed, through such cooperation, increased use of the toll-concession model has the potential to actually help “de-Balkanize” the current system, which should be counted as an important additional benefit of this approach.

I hope these thoughts are helpful in showing the promise of approaches such as tolling and public–private partnerships for funding surface transportation in America.

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