

FACTS AND MYTHS ABOUT TOLLS

A Compilation of Reference Materials
Prepared for
International Bridge, Tunnel, and Turnpike Association
Washington, D. C.

“There are no free roads.” TM

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FACT: Tolls are not new but they are newly relevant in an era of imbalance between transportation needs and funding resources.

- The Interstate system, authorized in 1956, now consists of 42,000 miles of roadway that are approaching the end of their useful lives and are in need of massive rehabilitation and rebuilding.
- Fuel taxes, the primary basis for funding initial Interstate construction, are inadequate to support the nation's roadway needs. In part, this reflects the vastly improved fuel economy of today's automobiles (double that of the 1950's) which has resulted in fuel taxes generating less revenue per mile driven.
- State and local governments have significant additional fiscal and operating responsibility for state highways and local roads, as well as for many other public services.
- New roadway capacity is needed to accommodate continuing traffic growth, particularly in suburban areas.
- Nationwide, not even counting new construction, there is an estimated \$26 billion gap between highway funds and required maintenance expenses.
- Tolls can help bridge the gap between transportation needs and resources. The use of tolls – where their use makes transportation and economic sense, i.e. in corridors with sufficient traffic to support toll financing – allows for better allocation of available funding resources to best fit the overall financial needs of our transportation infrastructure.
- Toll financing enables the delivery of a “value added” transportation project to the consumer that would otherwise not be available through broad-based taxation of users and non-users.
- Toll financing allows states and localities to build and maintain transportation facilities without diverting budget resources or bonding capacity from other state and local public works functions.

FACT: Tolls have numerous advantages in building and operating roadways. In brief, these advantages include:

- Tolls represent a fair and precise way of paying for transportation facilities, linking user benefits with user fees by charging only users in direct relationship to how much they use the facilities.
- Tolls provide a dedicated ongoing revenue stream to cover operating and maintenance costs and ensure that levels of service can be maintained throughout the life of the facility.
- Toll financing can accelerate the availability of initial funding and make new transportation capacity available sooner to the motoring public.
- Tolls can even enable construction of transportation facilities that would never be built otherwise from alternative funding sources.
- Toll projects often represent a win-win for the motoring public as a whole. Drivers who use the toll facility benefit directly from enhanced roadway capacity provided by a particular toll facility while drivers who choose alternate “free” routes also benefit from the congestion relief offered by the toll facility.
- Using toll revenues to repay funds raised for a specific project distributes the costs over the project’s useful life and among all users of that facility, in contrast to highway trust fund financing in which yesterday’s drivers pay for facilities that benefit future users across a state or region.
- The use of tolls ensures greater flexibility in and local control over decisions on solving mobility problems.
- Toll financing offers stronger incentives for cost-effective projects.
- Tolls establish a closer relationship between service provider (toll operator) and customers (drivers), promoting higher service levels and greater responsiveness to customers.
- Tolls are a potential tool to manage demand and meet environmental requirements.

FACT: Tolls represent a fair and precise way of paying for transportation facilities, directly linking user benefits with user fees by charging only users in direct relationship to how much they use the facilities.

- In 1776, economist Adam Smith noted: “When the carriages which pass over a highway or bridge... pay toll in proportion to their weight or tonnage, they pay for the maintenance of those public works exactly in proportion to the wear and tear which they occasion of them. It seems scarcely possible to determine a more equitable way of maintaining such works.”
- Tolls provide the ability to have out-of-state users pay their fair share. *Individual agencies should note share of traffic represented by out of state users here.*
- Tolls allow pricing to reflect user-induced variable wear and tear on a facility. For example, a recent survey showed truck tolls average more than 4 times auto tolls, consistent with the literally higher toll trucks take on roadways in the form of pavement damage.
- Charging variable rates per mile by section can ensure that users of sections that are more costly to maintain pay accordingly. *Individual agencies should note relevant examples from their operations (e.g. New Jersey Turnpike’s northern section and Masspike’s eastern section have higher toll rates per mile).*
- Those who use toll facilities benefit directly from their toll payments by enjoying an improved travel option*; non-users are not required to contribute for facilities they do not use.

* As a rule, tolls collected on a particular facility are reinvested in that same facility. There are a few exceptions to this rule. For example, some toll agencies’ revenues are used to fund public transit on the theory that roadways and mass transit form an integrated transportation system in which tollpayers benefit from the reduction in roadway traffic made possible by the availability of mass transit. Another exception is represented by multi-facility toll agencies (e.g. Oklahoma, Florida) wherein toll revenues are pooled to cover the costs of system-wide operations and improvements, including construction of new facilities. While at a given point in time, tollpayers on individual facilities may be supporting another facility, the availability of a revenue pool benefits all tollpayers over time.

FACT: Tolls provide a dedicated ongoing revenue stream to cover costs of operation, maintenance, and improvements to ensure that levels of service can be maintained throughout the life of the facility.

- U.S. Congressional Budget Office: “..by providing a source of dedicated revenues over the life of a facility, tolls afford a better guarantee of upkeep.”
- U.S. Congressional Budget Office: “Among the factors that contribute to the generally better condition of toll roads, the most important is the availability of a continuous stream of dedicated revenues.”
- Most bond instruments require care and maintenance of the transportation facility as an asset and ongoing reinvestment to preserve the value of that asset.
- *Individual agencies should note improvements funded by toll revenues in recent years.*

FACT: Toll financing accelerates the availability of initial funding for construction as compared to traditional tax-supported highway finance, thereby minimizing capital costs and making new transportation capacity available to the motoring public sooner.

- U.S. Congressional Budget Office analysis preceding reauthorization of federal highway program indicated that “...given present constraints on public money available for new highway construction, toll financing can speed the completion of a new road by as much as several years. As a result, the economic benefits of new highways may be realized sooner than under tax-supported financing.”
- Some recent examples of projects that have been expedited by toll financing include the President George Bush Turnpike in Texas (project sponsors reported that construction was accelerated 15 years ahead of schedule), SR-91 Express Lanes and the Transportation Corridor Agencies’ facilities in California, the Dulles Greenway in Virginia, E-470 in Colorado, the Southern Connector project in South Carolina (expected to open at least ten years before funding would have become available using traditional highway funding methods), and the Route 895 Connector project in Richmond, Virginia (now under construction as a tolled facility after being on hold for over ten years due to lack of funding).

FACT: Toll financing offers stronger incentives for cost-effective projects.

- U.S. Congressional Budget Office has stated that “[toll financing]..offers the potential for improved project selection because of the cost-effectiveness test that toll projects must pass in competing for capital in the municipal bond market.”
- U.S. Congressional Budget Office has also noted that once in operation, “if a toll facility should fail to meet users’ needs at any time during its life, motorists can switch to such alternate non-toll routes as are available. Thus, investors’ perception of users’ willingness to pay gives a good gauge of the soundness of an investment.”

FACT: Public policy toward tolls has changed to reflect the realization that “there are no free roads” and that traditional funding sources are inadequate to meet growing transportation needs.

- The impetus for change in toll policy dates back to the 1970s when escalations in construction cost, maintenance materials and labor combined with a decrease in the rate of growth of motor fuel tax revenue created an imbalance between highway needs and funding. At that time, an FHWA official described the Federal-Aid Highway program as “fraught with potential for disaster” and having “no simple solutions.”
- The evolution in Federal policy toward encouragement of tolls began in 1987 with the introduction of a Toll Facilities Pilot Program that allowed nine states to blend tolls with Federal aid for certain road projects.
- In 1991, the Intermodal Surface Transportation Efficiency Act (ISTEA) further expanded all states’ ability to use tolls on a broad range of transportation projects, including those undertaken as public/private partnerships.
- Under the Transportation Equity Act for the 21st Century (TEA-21), states have even greater flexibility and incentive to use tolls in meeting the significant and growing demand for new and rehabilitated transportation systems, extending as far as testing the conversion of Interstate roadways to toll facilities where state funding resources are inadequate to cover needed maintenance or improvements.
- Current federal policy allows states to use investment in toll projects as “soft” local matching funds for federal transportation assistance, thus assuring states with toll facilities of obtaining the maximum level of federal funding available without having to tap tax funding for matching purposes.

FACT: A clear majority of the public finds tolls an acceptable way to fund roadways.

- In March 2000, Illinois Tollway reported to the Governor that “there has been considerable evidence in public opinion surveys suggesting that motorists are less concerned with the need to pay tolls than with the delay and time required in the payment process itself.”
- A 1996 stated preference survey in Texas found that a majority of Texans “consider highway tolling as an acceptable.. transportation funding method,.. especially as an alternative to fuel tax increases.”
- A 1996 survey by the Southern California Association of Governments found that “fees on roads” were perceived as a “fair way to fund air quality and transportation programs” by 58 percent of survey respondents.
- A 1990 survey of members of Ohio’s affiliate of AAA found that 90 percent of respondents believed that Ohio Turnpike should continue as a toll road.
- A nationwide survey by the Roper Organization in 1986 asked drivers to state their preferences in four cases in which toll roads compete with free highways or local roads. In at least one of the four cases, 88 percent of licensed drivers indicated that they would choose the toll road. More drivers chose the toll road possibility over existing free roads in each case and in three of the four cases by a substantial majority.

FACT: Recent improvements in technology, most notably the introduction of electronic toll collection, have increased customer convenience and satisfaction levels.

- New electronic toll collection technology can reduce or eliminate the inconvenience, delays, and safety concerns associated with drivers having to stop and pay a toll manually.
- 98 percent of New York State Thruway E-ZPass customers responding to a recent survey “strongly agree” or “agree” that “E-ZPass has made it easier for me to pay tolls” (72 percent were “strongly agree”)
- 98 percent of New York State Thruway E-ZPass customers responding to a recent survey had a “very favorable” or “favorable” general impression of E-ZPass.
- *Individual agencies should add or substitute any available findings from their own ETC customers.*

GENERAL TOLL FACTS

Tolls are one of a variety of funding mechanisms used for roadway construction and operation. Others include:

- Motor fuel taxes
- Vehicle registration fees
- Sales taxes
- Mileage-based taxes
- Development impact fees

Tolls play several different roles.

- To the driver/customer, they are a direct user fee paid for use of a particular facility.
- To those responsible for providing transportation systems, they are a dedicated revenue stream to fund ongoing operations, maintenance, and improvements.
- To the bondholder, they are a security and repayment mechanism for the funding initially raised in private capital markets.

The U.S. toll network represents

- Almost 5,000 miles of toll bridges, tunnels, and highways
- More than 16,000 lane miles
- 36 billion vehicle miles of travel annually
- A cumulative capital investment growing by two to four billion dollars each year
- An important part of our transportation system that connects major roadways, overlaps with some interstate routes, and alleviates congestion in many locations

GENERAL TOLL FACTS *(continued)*

Tolls play a growing role in our transportation system.

- Toll revenues grew from \$3.1 billion in 1991 to \$5.1 billion in 1999
- Many new toll facilities constructed over the past 20 years
- More than 500 additional system miles planned as of 1999, representing a 10 percent increase in miles operated
- Toll facilities in operation or planning stages in all but 13 states *(update map)*

Tolls have a long history in financing roadways.

- First U.S. toll road chartered in 1792, more than a century before the auto era
- 29 of today's toll agencies were already in place before authorization of Interstate system in 1956
- Interstate system initially conceived as a network of transcontinental toll roads

Toll facilities are associated with a variety of organizational structures, all of which are viable:

- Independent toll authority or commission
- Part of a state department of transportation
- Within a city or county government
- Part of a multiple-function organization
- Private entities
- Public-private partnerships

FACT: Tolls suffer from some persistent myths due at least in part to an inaccurate or incomplete understanding of their role in our transportation system. The balance of this package outlines some of those myths and provides important facts to refute them.

MYTH: Toll rates are too high; driving on a toll facility costs too much.

FACT: Toll facility users benefit from a higher level of service.

1. Toll facilities provide valuable benefits for users. They “sell transportation value in exchange for a toll”.
 - For commuter trips, every 10 minutes saved in travel time is worth approximately \$1.50 (*individual agencies should estimate travel time savings generated by their facilities if possible*)
 - Drivers recognize this value and are willing to pay tolls to receive travel time benefits as shown by high occupancy/toll (HOT) lane experience.
 - Cost of operation for trucks is \$1.50 to \$3.00 per mile. Given that truck toll rates are typically only 10 to 20 cents per mile, toll facilities that save miles provide substantial cost savings.
2. Better maintenance produces improved driving conditions.
 - All other factors being equal, pavement condition averages 17 percent better on tolled versus non-tolled sections of the Interstate system
 - Pavement conditions rate “very good” on twice the percentage of roadway comparing tolled versus non-tolled Interstate sections
 - Toll road advantage even greater in rural areas (2.5 times the percentage of tolled sections have “very good” pavement conditions as compared with non-tolled sections)
3. Better roadways translate into maintenance cost savings for drivers.
 - On Interstate system, differential in pavement conditions between tolled and non-tolled sections translates into savings in vehicle maintenance cost of roughly 5 percent for drivers of tolled roads
 - Greater differentials in non-Interstate road conditions would translate into higher cost savings
4. Toll facilities are safer, in part because they are well-maintained.
 - (*contact IBTTA for latest data*)
5. Toll facilities offer other amenities such as service areas, dedicated police patrols, and landscaping, etc.

MYTH: Toll rates are too high; driving on a toll facility costs too much. (continued)

FACT: Discount programs lower the actual toll paid for some users.

Agencies should note any discount programs they offer, e.g.

1. Commercial vehicle discounts
2. Discount programs for frequent users/commuters
3. High occupancy vehicle discounts

FACT: Drivers can often choose a parallel “free” route or choose to pay a toll for premium service in the form of added convenience, time savings, greater safety, improved maintenance, etc..

Agencies for whom this argument applies should note available choices for alternate routes.

FACT: Tolls have not kept pace with inflation.

1. *Individual agencies should use an agency-specific graphic comparison.*
2. Between the 1950s and 1985, average toll rates doubled BUT the Consumer Price Index quadrupled.
3. Between 1985 and 1998, available comparative toll rate data indicate that average tolls increased by just under 40 percent while the CPI increased by just over 51 percent. (Over the same time period, the state average motor fuel tax rate increased by 80 percent.)
4. As facilities age, costs of operating, maintaining, and rehabilitating facilities escalate faster. (*Agencies should provide examples based on their own facilities, e.g. initial investment was \$x; annual operating and maintenance costs are now \$y; cost to replace/rebuild the facility is estimated at \$z*)

MYTH: Toll rates are too high; driving on a toll facility costs too much. (continued)

FACT: Higher toll rates for some groups of users, e.g. trucks, reflect the greater wear and tear they produce on roadways.

(use selectively) On average, truck tolls are four times auto tolls. These higher rates do not fully compensate for the literally higher toll such users take on roadways. Studies have shown that pavement damage increases exponentially with axle weight so that a more inclusive truck toll rate could be as high or higher than eight times the auto toll.

FACT: Toll increases are fairly infrequent, on average every 7.5 years.

Individual agencies should note when they last increased the toll, what improvements have been implemented since then, and the number of times tolls have been increased over the agency's history

FACT: Initially, toll rates for a particular facility reflect basic economic principles:

1. Break-even financial calculation such that forecast toll revenues match costs of debt service, operation, and maintenance over a period of time
2. Toll rates on comparable facilities
3. Value of time savings associated with use of a new facility

FACT: Toll increases are not proposed arbitrarily but, rather, primarily reflect one or more of the following factors:

1. Need for facility or system expansion
2. Forecast capital expenditures
3. Bond covenant requirements (e.g. revenue coverage ratios)
4. Need to cover escalations in operating and maintenance expenses related to inflation

MYTH: Toll rates are too high; driving on a toll facility costs too much. *(continued)*

FACT: External oversight and public input provide control over toll increases.

1. Typically an autonomous Board of Directors oversees the toll agency with a focus on transportation issues rather than vested political interests.
2. For two-thirds of agencies responding to a recent survey, toll increases are subject to oversight, control or approval of external entities including state legislatures, governors, and departments of transportation.
3. Public hearings required by 41 percent of respondents; a matter of practice for others.

MYTH: The cost of toll collection is excessive.

FACT: Toll collection costs are a small component of the costs of operating and maintaining toll facilities.

1. Based on data from 24 toll agencies, cost of toll collection averages 21 percent of an agency's annual operating expenses/budget.
2. *Individual toll agencies should include or substitute their own cost data, particularly if their cost of toll collection falls below the 21 percent industry average.*

FACT: Debt service is only one component of costs required to operate a transportation facility and this is the only cost that goes away when the initial bonds are paid off. Many other cost elements continue throughout the useful life of a facility beyond the amortization of the original investment.

- A well-known observer of the toll industry and publisher of "Toll Roads Newsletter" suggests that arguing that tolls should be removed once the initial bonds are paid off is comparable to suggesting that rents should be abolished once the mortgage on an apartment building is paid off.

FACT: Toll agencies make significant efforts to contain and reduce costs on an ongoing basis, such as:

1. Toll agencies closely monitor and adjust staffing levels to handle traffic most efficiently and cost effectively.
2. One-way toll collection implemented by 37 percent of a recent survey sample. One agency estimated cost savings of 40 percent.
3. Automatic coin/token machine (ACM) lanes offer substantial cost savings over staffed lanes.
4. Introduction of electronic toll collection technology promises potential long-term savings in costs, allows for more efficient throughput, and can defer the need for toll plaza expansion. *Individual agencies should cite any available data on cost savings achieved/projected with ETC. For example, Orlando-Orange County Expressway Authority reported in 1997 that ETC had allowed it to reduce the cost of toll collection from 23 cents for each dollar collected to 10 cents per dollar collected*

MYTH: Tolls should be eliminated when the initial bonds have been paid off.

FACT: The economic reality is that ongoing expenditures are required to continue operating a facility no matter what, independent of how it is initially funded. All of these costs must be paid for in some way.

1. Routine operating and maintenance expenditures (*individual agencies should note major cost elements and provide actual operating costs, e.g. pavement resurfacing, bridge deck replacement, tunnel ventilation, bridge painting, installation and maintenance of variable message and other fixed signage, landscaping, structural inspections, technological improvements including investment in Intelligent Transportation Systems, etc.*)
2. Major reconstruction and rehabilitation of aging infrastructure
3. Required expansion to meet growing travel demand
4. New costs imposed on transportation facilities, e.g. seismic retrofitting, lead paint removal, ongoing compliance with increasingly stringent safety and environmental regulations.

FACT: An ongoing maintenance and rehabilitation plan made possible by a consistent source of funding for capital improvements can extend the useful life of a facility and reduce routine maintenance costs.

- The “Pavement Life Cycle” graphic (courtesy of Oklahoma Transportation Authority) or Daniel J. Dornan’s graphs in Peter Samuel’s paper can be used to illustrate this point.

MYTH: Tolls should be eliminated when the initial bonds have been paid off. *(continued)*

FACT: Over time, the ongoing costs of operation, maintenance, repair, and rehabilitation can easily exceed the initial project investment.

FACT: Recent decades have seen steady increases in travel demand (56 percent increase in vehicle miles traveled between 1981 and 1995) necessitating toll facility improvements and expansions to handle traffic growth.

1. Often by the time the initial bonds are paid off, new bonds must be issued to fund improvements and expansions.
2. At an individual toll agency and regional level, the consequences of not being able to deliver improvements and expansions to the transportation system may be to restrict mobility and economic growth.

MYTH: Elimination of tolls would be beneficial.

FACT: Direct costs to users would be reduced but costs to general public (including non-users) would increase.

- Most of the \$6 billion now collected in tolls nationwide and available for construction, operation, and maintenance of toll facilities would have to be generated from alternative funding sources.

FACT: In the past, the FHWA has examined the feasibility of toll removal from toll roads designated as part of the Interstate highway system. For example, a 1974 study concluded that increasing state highway gasoline taxes by any significant amount to defray new costs of highway maintenance if tolls were removed did not appear feasible for most states examined.

FACT: If tolls are eliminated and alternative funding is not sufficient to replace the dedicated toll revenue stream over time, there is no guarantee that safety levels can be maintained.

- Currently, accident and fatality rates on toll facilities are roughly _____ the US average.

FACT: Service levels on previously tolled facilities could deteriorate.

1. Historically, all other factors being equal, pavement conditions on tolled sections average 17 percent better than nontoll sections of the Interstate system. Other tolled roadways are likely to have even more superior conditions as compared to nontoll alternative routes.
2. Traffic and congestion are likely to increase with removal of tolls:
 - Dallas-Fort Worth Turnpike (1977) had as much as a 40 percent increase.
 - Removal of tolls on three Kentucky roads resulted in significant traffic increases.
 - Impact of toll removal on Connecticut Turnpike was 4 to 5 percent growth in corridor traffic (beyond “normal” traffic growth) but greater in areas of toll plazas (7 to 25 percent) and for commercial vehicles (by as much as 48 percent).
 - Analysis of possible system-wide toll removal on the Illinois Tollway forecasts a 33 percent increase in traffic, resulting in twice as many miles of roadway being congested.
3. Higher traffic levels compound the impact of toll removal by increasing maintenance costs.

MYTH: Elimination of tolls would be beneficial. (continued)

FACT: Historically, independent or public consideration of possible toll removals from specific facilities has often concluded that tolls should be retained.

1. Maine Turnpike Authority: State legislature voted in 1980 to retain tolls on the basis that costs of operating and maintaining the road “could more fairly be borne by Turnpike travelers” than the gas tax. In 1997, the public showed continuing support for tolls by approving a referendum advanced by the legislature to widen the turnpike, reversing an earlier citizen-generated referendum to block the widening project.
2. Pennsylvania Turnpike Commission: Sunset review in 1987 recommended continuation of the commission and issuance of new debt to undertake \$4 billion in capital projects.
3. New York State Thruway: An independent Thruway Transition Advisory Council recommended continuation of tolls in October 1991. The Council concluded that given that “the Thruway can be made toll-free but it cannot be made free”, tolls are preferred over taxes as a source of ongoing funding because:
 - “toll financing is stable, predictable, and protected”
 - “toll financing is equitable; those who use the Thruway pay for it”
 - “tolls provided the revenue for high-quality maintenance and service; one result is a good safety record”
 - “tolls prevent new costs from falling on local governments”
4. Legislation approved by the Ohio General Assembly took effect in April 1991. Among its provisions was the authorization for the Ohio Turnpike to remain a toll road after all outstanding bonds were paid. Since that time, with the addition of a newly created Turnpike Oversight Committee and public hearing requirements, the Turnpike has implemented a gradual series of toll increases.
5. The Louisiana State Legislature has voted twice to extend tolls on the Crescent City Connection Bridge, most recently through 2012.

MYTH: Elimination of tolls would be beneficial. (continued)

6. In Massachusetts, a “Free the Pike” movement did succeed in placing a toll removal proposition on the ballot in 1998. However, the highest state court held (in a unanimous decision) that the measure was unconstitutional. The court determined that the “petition’s elimination of toll revenue constitutes a full-blown appropriation of the bondholder’s right to that property” for bondholders who had bought over \$1 billion in bonds issued the previous year by the Massachusetts Turnpike Authority. The toll removal measure did not provide any way to repay the \$1 billion to bondholders so it was ordered off the ballot. More recently (November 2000), Massachusetts voters showed support for tolls by defeating a measure that would have allowed motorists to receive income tax credits for tolls paid.
7. Recent deliberations over toll removal on the Illinois Tollway are nearing a conclusion that tolls should be retained and measures adopted to increase usage of the authority’s I-Pass electronic toll collection system.

FACT: In recent years, there have been relatively few instances of toll removal:

1. Connecticut Turnpike and parkways (late 1980s)
2. Jacksonville, Florida (1988)
3. Kentucky Turnpike parkways (1991-92)
4. Richmond-Petersburg Turnpike (1992)
5. Hutchinson/Saw Mill Parkways (1994)
6. Norfolk-Virginia Beach Toll Road (1995)

FACT: The process of removing tolls would impose additional one-time costs.

- A recent Illinois Tollway analysis estimated cost of \$320.6 million to remove tolls, including demolition of toll plazas, etc.

MYTH: Tolls represent double taxation.

FACT: As the USDOT 1968 Highway Needs Report to Congress states: "The toll road user pays a toll and also pays taxes on fuel consumed while traveling on the toll road. But this is not truly double taxation, since the fuel taxes paid are applied to other highways."

1. Except for the amount of state or federal aid received by some toll roads, all of the motor fuel tax generated by those driving on toll roads goes to operate and maintain non-toll roads.
2. Oklahoma Turnpike estimates that it generates over \$60 million annually in state and federal motor fuel tax money.

FACT: To the extent that tolls do support some roads, more tax-based funding is available for other roads. Similarly, services provided or paid for by toll facilities (e.g. police) would otherwise have to be provided and paid for from tax revenues.

FACT: Past analysis by the Congressional Budget Office has determined that "...the creation of revenue-generating roadway facilities could ease pressure for future increases in fuel taxes, and could possibly free some existing tax receipts for the repair and upgrading of non-toll routes.

FACT: *Wherever it applies, individual agencies should note that they are self-supporting and receive no funds from governmental units.*

FACT: Tolls often pay for transportation projects, improvements, and enhancements that cannot be financed from traditional fuel tax-based funding sources.

FACT: Recent federal policy changes now allow states to better meet their growing transportation funding needs by blending taxes and tolls in financing roadways. The use of tax funds means that the toll rate will be lower than if tolls alone were used to fund the project. Conversely, the use of tolls means that fewer tax dollars are needed for a particular project, stretching the limited resources available for transportation needs. Motorists don't pay twice; they simply pay the overall costs through the combination of two funding mechanisms.

MYTH: Toll facilities cause/increase traffic congestion.

FACT: The very existence of toll facilities often actually relieves traffic congestion on parallel roadways, particularly where they provide a “through” route, handling traffic that would otherwise clog up local roadways. Toll facilities are designed to operate congestion-free (e.g. with limited access) with congestion only occurring at certain peak travel times at toll plazas.

FACT: Even without ETC, other measures are used to alleviate traffic congestion at toll plazas.

1. Use of automatic coin machines speeds up vehicle movement through toll lanes.
2. Where feasible, use of one-way toll collection limits slowing or stopping of vehicles for toll payment to only one side of a toll crossing.

FACT: Toll facilities help reduce congestion by funding mass transit operations in recognition of the regional mobility improvements provided by those operations as part of an integrated transportation network.

1. MTA Bridges & Tunnels’ toll revenue subsidizes subway, bus, and commuter rail operations in the New York City area; similarly tunnel and bridge revenues from Port Authority of NY & NJ facilities offset the agency’s deficit mass transit operations
2. Portions of toll revenues from Caltrans’ seven toll bridges in the San Francisco area are redistributed to local transit operators
3. Net income from Delaware River Port Authority’s four toll bridges offsets operation losses from its high-speed transit system in the Philadelphia area
4. Funds generated by the Interstate 15 high occupancy/toll lanes are used for mass transit improvements in the San Diego area.

MYTH: Toll facilities cause/increase traffic congestion. (continued)

FACT: To alleviate congestion at toll plazas, many toll facilities have introduced electronic toll collection (ETC) over the past decade, an innovation which significantly increases vehicle throughput and decreases travel time through toll plazas.

1. A traditional staffed toll lane typically processes 300-350 vehicles per hour while ETC lanes can handle from 1,000 vehicles per hour (in a dedicated toll lane within a conventional toll plaza) to 1,800 vehicles per hour in an open highway or bypass lane configuration.
2. By processing vehicles more quickly through a toll plaza, ETC provides benefits for all drivers. For example, introduction of ETC at the Ft. McHenry Tunnel in Maryland has increased the average travel speed through the toll plaza by more than 125 percent. Similarly ETC reduces delays from queues at the toll plaza; in Orlando, for example, ETC decreased total delay by 8.5 to 9.5 vehicle hours per peak hour with the average queuing delay falling by more than one minute per vehicle.
3. Time savings for toll facility customers can be substantial. For example, MTA Bridges & Tunnels conservatively estimated in 1998 that the average weekday commuter using its E-ZPass system saved more than 40 hours of waiting time annually. Use of ETC at other times and across multiple toll facilities generates correspondingly greater time saving benefits. *Individual agencies should add or substitute findings relevant to their own facilities/customers here.*
4. ETC maximizes the overall efficiency of a toll plaza. The greater efficiency of ETC allows a toll facility to absorb traffic growth without increasing congestion. For example, simulation models developed by the University of Central Florida showed that the maximum queue length would have reached 1.5 miles in automatic lanes on the Orlando-Orange County Expressway if ETC had not been installed.
5. Within the US, ETC has spread dramatically. In 1992, only six agencies reported having installed ETC. By 1999, 118 toll facilities reported having ETC, more than double the 49 toll facilities reported in 1995. The share of a given toll facility's customers using ETC in peak travel periods is typically over fifty percent and often in the 60 to 75 percent range.

MYTH: **Toll facilities cause/increase traffic congestion.** *(continued)*

FACT: **Use of ETC for variable or value pricing provides additional potential to reduce traffic congestion. Higher tolls are charged for peak period travel (or lower tolls for off-peak use) to provide an incentive to travel in less congested times and remove vehicles from peak travel periods on the following U.S. facilities:**

1. In July 1997, the New York State Thruway Authority doubled commercial vehicle tolls during peak periods at two toll plazas in New York's Tappan Zee Bridge corridor to encourage commercial vehicles to travel alternate routes or off-peak times. Commercial vehicles receive toll discounts in off-peak hours by enrolling in the agency's E-ZPass program,
2. New Jersey Turnpike implemented a time-of-day pricing program in conjunction with its introduction of E-ZPass in the fall of 2000. E-ZPass customers during off-peak hours (with peak hours defined as weekdays from 7 to 9 AM and 4:30 to 6:30 PM) save 20 percent off cash toll rates and 12 percent off cash toll rates during peak weekday hours and on weekends.
3. In Lee County, Florida, a 50 percent reduction on bridge tolls available to ETC users during certain off-peak hours provides an incentive to travel outside the peak period.

MYTH: Toll facilities cause/increase traffic congestion. (continued)

FACT: ETC is used in high occupancy/toll (HOT) lanes. These lanes allow drivers to pay a premium (or “buy in”) to use special access lanes otherwise only available to higher occupancy vehicles. Recent experience in the U.S. indicates that HOT lanes can provide time savings and congestion relief for drivers in both the special lanes and the parallel “free” lanes.

1. Orange County’s State Route 91 features Express Lanes that give drivers of single occupant vehicles the option to pay a variable toll to use special parallel congestion-free lanes constructed in the median of the roadway. Tolls vary by time of day and direction of travel between \$.75 and \$3.65. Toll rates are adjusted periodically to maintain service levels. Express Lane users save up to 20 minutes each way on their daily commute.
2. Similar Express Lanes operate in the weekday morning and evening peak periods on San Diego’s Interstate 15. Toll rates are adjusted in real-time based on actual traffic levels to maintain free-flow conditions. Typically tolls are between \$.50 and \$4.00 per trip but can be as high as \$8 at times of severe congestion. HOT lane carpool volumes increased by 30 percent over volumes observed when the lane was operated strictly as an HOV lane. Since the increase in carpools represents a reduction in vehicles travelling in the regular lanes, drivers in the regular lanes benefit.
3. In Houston, Texas, the QuickRide program on the Katy Freeway (Interstate 10) allows drivers of two-occupant vehicles to pay a toll of \$2 per trip to use a priority lane previously available only to vehicles with three or more occupants, saving them ten to twenty minutes of travel time. The toll buy-in option has increased utilization of underutilized HOV capacity and will be extended to Houston’s Northeast Freeway (US 290) in the summer of 2001.

MYTH: Toll facilities are bad for the environment.

FACT: Toll facilities often represent critical new capacity that benefits the environment by relieving congestion elsewhere.

FACT: One common measure of air pollution is carbon monoxide (CO) emissions. As shown by the attached graph, CO emissions fall dramatically between average driving speeds of zero and ten miles per hour. Since ETC technology allows traffic to travel through toll facilities at faster average speeds (with dedicated ETC lanes typically operated at or above 10 MPH), CO emissions are greatly reduced by the use of ETC at the toll plaza.

FACT: Facility-specific studies of the impact of ETC have demonstrated its environmental benefits at several locations:

1. Field data from the Ft McHenry Tunnel, the largest toll facility in the state of Maryland, showed the impact of ETC implementation to be an 11 percent decrease in emissions of nitrogen oxide and more than 40 percent decreases in hydrocarbons and carbon monoxide.
2. MTA Bridges & Tunnels conservatively estimates that ETC's reduction of toll plaza queues at their facilities alone saves more than eight million gallons a fuel a year.
3. In Orlando, Florida ETC has reduced carbon monoxide emissions by 7.29 percent overall and 28.8 percent per vehicle.

MYTH: Toll facilities are bad for the environment. *(continued)*

FACT: Electronic toll collection technology makes it operationally feasible to use toll pricing as a strategy to manage demand and meet federal mandates for air quality.

1. Toll-based demand management can assist a facility or region in encouraging more efficient vehicular travel, thereby playing a role in compliance with Clean Air standards.
2. Using toll pricing to meet air quality mandates may help avoid federal penalties for environmental non-compliance without restricting personal mobility as severely as other strategies.