



# Metropolitan Transportation Authority Proposed 2008-2013 Capital Program

**Thomas P. DiNapoli**  
New York State Comptroller

**Kenneth B. Bleiwas**  
Deputy Comptroller

Report 11-2008

March 2008

- The proposed capital program is the largest in the MTA's history, 36.6 percent larger than the current program.
- Every \$1 billion in MTA capital spending generates 8,700 jobs, \$454 million in total wages, and \$1.5 billion in economic activity in the metropolitan region.
- Congestion pricing would contribute \$4.5 billion (22 percent) of the potential funding sources identified by the MTA.
- Even so, the proposed capital program has a funding shortfall of \$9.3 billion.
- The MTA has proposed securitizing anticipated intergovernmental aid, which its operating budget had assumed would narrow the out-year budget gaps.
- The cost of transportation construction projects grew at an annual rate of 9.2 percent during the past three years, but the rate is expected to slow to 2.6 percent as the economy cools.
- Expansion projects have experienced long delays and the cost has grown from \$9.3 billion to \$13.3 billion, an increase of almost \$4 billion, or 42 percent.
- Debt service on bonds issued in support of approved capital programs will peak at \$2.1 billion annually beginning in 2013—38 percent higher than the current level—and will reach \$2.5 billion by 2017 based on the proposed capital program.
- Debt service will place increasing pressure on the MTA's operating budget, and will consume 43 percent of fare and toll revenue by 2017, compared with 28 percent today.

On February 27, 2008, the Metropolitan Transportation Authority (MTA) released a proposed capital program for 2008-2013. The State Legislature had required the MTA to accelerate its capital planning process by 18 months so that the capital program could be considered in conjunction with the final recommendations of the New York City Traffic Congestion Mitigation Commission. The State now has until March 31, 2008, to adopt a congestion pricing plan or risk losing \$355 million in federal transportation grants.

The MTA has proposed a three-tier \$29.5 billion capital program, which rises in value to \$32 billion when the capital program for bridges and tunnels is included. The proposed capital program is 36.6 percent larger, on an annual basis, than the current program. One of the factors driving costs higher is the booming construction market, which has pushed up costs for materials and labor.

The first tier of the program allocates \$20.8 billion to continue restoring the transit system to a state of good repair and maintaining the system through appropriate replacement cycles. The second tier includes \$5.5 billion to complete existing expansion projects, such as East Side Access. The third tier allocates \$3.2 billion to begin new expansion initiatives, such as the second phase of the Second Avenue Subway project.

The MTA has identified \$20.2 billion in potential resources to fund the proposed \$29.5 billion capital program. Congestion pricing would contribute \$4.5 billion (22 percent) of the potential resources. If the New York City Council or the State Legislature rejects the recommendations of the Traffic Congestion Mitigation Commission and do not identify alternative resources, the unfunded portion of the proposed capital program would grow from \$9.3 billion to \$13.8 billion.

While the timetable to decide the outcome of congestion pricing will expire on March 31, 2008, the State is not under the same pressure to approve the proposed capital program because the current program will not expire until December 31, 2009. The MTA, working with its funding partners, should use this time to shore up potential sources of funding for the capital program and to develop new sources.

The Governor and some City Council members, for example, have suggested soliciting a contribution from the Port Authority of New York and New Jersey, which is contributing \$2 billion toward the cost of New Jersey Transit’s tunnel to Pennsylvania Station. Also, in the next few months, the MTA hopes to conclude negotiations with bidders for the right to develop over the eastern and western rail yards in Manhattan.

The additional time also would permit the MTA to complete its capital planning process, which was suspended to meet the accelerated submission date. With additional planning and as the economy slows, the need for a \$920 million reserve (which is included in the proposal) could be mitigated. Also, the MTA and the City still need to agree on who would fund cost overruns associated with the extension of the No. 7 subway line.

The MTA, however, must be wary about taking on additional debt. A heavy reliance on debt to fund past capital programs contributed to the fare and toll increases in 2003, 2005, 2008, as well as the large operating budget deficits currently projected for 2010 and beyond. Debt service on bonds issued in support of approved capital programs will peak at \$2.1 billion annually beginning in 2013—a 38 percent increase over the current level—and will reach \$2.5 billion by 2017 based on the proposed capital program. Growing levels of debt will place increasing pressure on the MTA’s operating budget, and will consume 43 percent of fare and toll revenue by 2017, compared with 28 percent today.

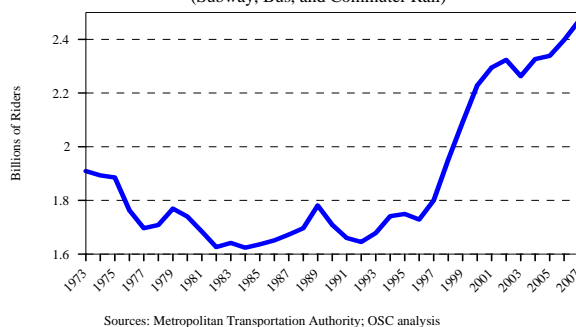
The mass transit system is too important to the regional economy to be allowed to deteriorate once again. In addition, expansion projects must be completed to accommodate expected population growth and to stimulate the regional economy. The proposed capital program demonstrates that new sources of financing will be needed to support mass transit capital investments.

## Background

The regional mass transit system experienced decades of disinvestment that, in 1981, led the State Legislature to declare a “transportation emergency.” In 1982, the State approved the MTA’s first five-year capital program. Working closely with funding partners, the MTA has invested more than \$76 billion in an effort to restore the transit system to a state of good repair, implement replacement cycles, modernize, and more recently, provide added capacity.

These investments have resulted in dramatic improvements in reliability. The mean distance between failure on the subways, for example, has grown from 7,000 miles in 1981 to 150,000 miles in 2007. Equally impressive gains have occurred on the Long Island Rail Road and the Metro-North Railroad. Improved reliability, fare discounts, and a growing regional economy have led to a 37 percent surge in ridership over the past ten years (see Figure 1).

Figure 1  
Annual MTA Ridership  
(Subway, Bus, and Commuter Rail)



According to the U.S. Census, approximately 2 million people commuted into Manhattan on an average weekday in 2000. Though Manhattan is the center of the regional economy, suburban economies are also growing and attracting an increasing number of workers. In 2005, more than 270,000 New York City residents commuted to the suburbs daily.

In 2005, 54.6 percent of New York City’s residents commuted to work using public transportation—the highest rate of mass transit usage in the United States. The Texas Transportation Institute estimates that the New York metropolitan area saves approximately 216 million hours in potentially productive time and \$4.2 billion annually through commuters’ use

of public transportation. Improved accessibility also affects the location decisions of households and businesses, and can increase property values and encourage investments. We estimate that every \$1 billion in MTA capital spending generates 8,700 jobs, \$454 million in total wages, and \$1.5 billion in economic activity in the metropolitan region.

In addition, mass transit provides environmental benefits. Although a majority of City commuters use mass transit to travel to and from the City, mass transit is only responsible for 12 percent of the City’s annual transportation-related emissions of carbon dioxide and 3 percent of its overall annual carbon dioxide emissions.

### The Proposed Capital Program

The MTA has made impressive progress toward restoring the mass transit system to a state of good repair. Certain elements have yet to be restored, however, and in some cases the target dates for achieving a state of good repair have been pushed back as hoped-for funding failed to materialize.

Even after assets achieve a state of good repair, investments are still needed on an ongoing basis to maintain normal replacement cycles. The core program is designed to restore the regional mass transit system to a state of good repair and then to maintain assets through normal replacement cycles. The MTA has also begun various expansion projects to add capacity to accommodate population growth and to shorten commuting times.

The primary planning vehicle for developing the capital plan is a 20-year needs assessment that helps the MTA prioritize projects. According to the MTA, it takes two years to update asset inventories and condition ratings to determine replacement cycles. This information is used to develop a detailed multiyear investment strategy.

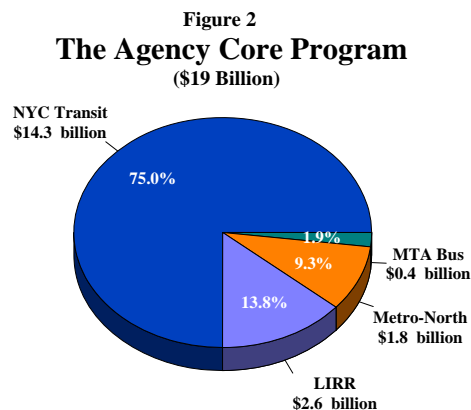
This process was underway when the State Legislature accelerated the development of the capital program by 18 months so that it could be considered in conjunction with the recommendations of the New York City Traffic Congestion Mitigation Commission. According to the MTA, the capital planning process was suspended “well before its completion” due to the new State deadline. Consequently, the capital program includes only preliminary estimates of the

condition of agency assets and project scopes, and budgets are not fully developed.

The 2008-2013 capital program covers the last 18 months of the current 2005-2009 program and the four succeeding years. The program is divided into three tiers: the first tier (\$20.8 billion) is known as the “core program” and is primarily intended to continue efforts to restore assets to a state of good repair and then maintain them through normal replacement cycles; the second tier (\$5.5 billion) would complete existing expansion projects; and the third tier (\$3.2 billion) would begin new expansion projects.

### Tier 1: The Core Program

The agency core program is valued at nearly \$19.1 billion, with the largest share (\$14.3 billion or 75 percent) allocated to NYC Transit (see Figure 2). The LIRR would receive \$2.6 billion (13.8 percent); Metro-North would receive \$1.8 billion (9.3 percent); and the MTA Bus Company would receive \$363 million (1.9 percent).



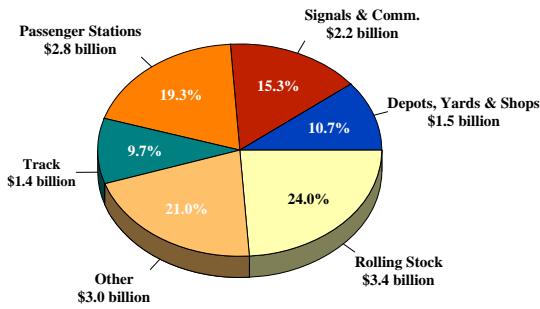
Sources: Metropolitan Transportation Authority; OSC analysis

### New York City Transit

Since 1982, NYC Transit has fully restored its buses, rail cars, mainline track and switches, and escalators and elevators to a state of good repair. Mainline pump rooms, bus depots, power stations, line structures, and yard track and switches have reached at least 90 percent of their respective states of good repair.

The proposed capital program would allocate 54 percent of the resources in the NYC Transit’s core program to normal replacement; 28 percent to state of good repair; and 18 percent to other improvements.

**Figure 3**  
**NYC Transit Core Program**



Sources: Metropolitan Transportation Authority; OSC analysis

Figure 3 and the discussion below highlight the allocation of core resources for NYC Transit.

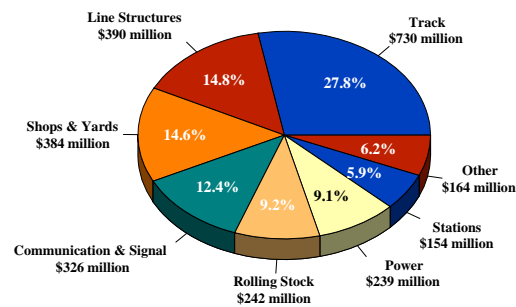
- \$3.4 billion to purchase 1,544 standard buses, 479 coach buses, and 469 articulated buses (\$2 billion), and 590 subway cars (\$1.5 billion).
- \$2.8 billion to rehabilitate 44 subway stations, make ten additional subway stations accessible in accordance with the federal Americans with Disabilities Act (the MTA reports that 79 stations are currently or will soon be ADA-compliant), and make other station improvements.
- \$1.6 billion for mainline signal modernization and \$580 million for communication upgrades.
- \$1.5 billion for bus depots (\$925 million), train yards (\$406 million), and train shops (\$193 million).
- \$1.4 billion to replace 57 miles of mainline track and 150 mainline switches.
- \$809 million to rehabilitate line structures, including painting; and another \$561 million for four fan plants, which drive smoke out of tunnels during emergencies.

While certain infrastructure categories, such as ADA subway stations, would inch closer to a state of good repair under the proposed program, other categories would still lag far behind. For example, fewer than 70 percent of car maintenance and overhaul shops, yard signals, tunnel lighting, fan plants, and stations would attain a state of good repair even after the completion of the proposed program, and are not expected to achieve a state of good repair until 2023 at the earliest.

### Long Island Railroad

The LIRR has achieved a state of good repair in all of its infrastructure categories with the exception of line structures, which have attained a state of good repair rating of only 40 percent. Given past investments to rehabilitate the system, the LIRR is now focused on maintaining replacement cycles, improving service, and providing additional capacity. Under the proposed capital program, the LIRR would be allocated \$2.6 billion. About 83 percent of that amount would be devoted to normal replacement and other improvements.

**Figure 4**  
**LIRR Core Program**



Sources: Metropolitan Transportation Authority; OSC analysis

Figure 4 and the discussion below highlight the allocation of core resources for the LIRR.

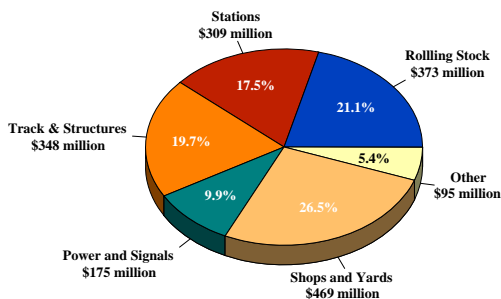
- \$949 million for train shops and yards (\$384 million); power stations and related equipment (\$239 million); and signal (\$212 million) and communication improvements (\$114 million).
- \$730 million for track replacement (\$379 million); mainline corridor improvements (\$150 million); and other track-related projects. (The program does not include funding for the third mainline track project.)
- \$390 million to restore line structures, including completion of the Atlantic Avenue Viaduct rehabilitation project (\$138 million); rehabilitation of a number of railroad bridges (\$112 million); safety improvements to the East River tunnels (\$83 million); and the replacement of seven highway bridges located in Nassau and Suffolk counties (\$42 million).
- \$242 million to purchase rolling stock, with most of the resources (\$205 million) used to purchase 68 rail cars for the electric fleet to provide rail service to Grand Central Station.

- \$154 million for station improvements, including replacing the Babylon Station platform (\$39 million); continued investments at Pennsylvania Station (\$26 million); and other customer service improvements, such as renovating elevators and escalators.

### *Metro-North Railroad*

Metro-North has made considerable progress toward restoring its capital assets to a state of good repair, but significant work remains to be completed. Stations (including Grand Central Station) have attained a 93 percent rating for state of good repair, but train shops and yards, line structures, and the Port Jervis Line are all in need of major rehabilitation work. At the end of the capital program, Metro-North will have largely completed its fleet modernization program, but other elements will still lag far behind. Metro-North would allocate 56 percent of its resources to normal replacement, 34 percent to state of good repair work, and 10 percent to other improvements.

**Figure 5  
Metro-North Railroad Core Program**



Sources: Metropolitan Transportation Authority; OSC analysis

Figure 5 and the discussion below highlight the allocation of core resources for Metro-North.

- \$469 million to rehabilitate older shops and increase the size of shops and yards to accommodate the increased rail car fleet.
- \$373 million for rolling stock, including 372 rail cars for the electric fleet.
- \$348 million for track and structure improvements.
- \$309 million for station rehabilitations, including Grand Central Station (\$95 million) and others on the Hudson and Harlem lines.

- \$175 million for communication and signal upgrades (\$86 million), and power projects (\$89 million).

### *MTA Bus Company*

The MTA would allocate \$363 million to the MTA Bus Company. Most of the resources (\$293 million) would be used to purchase 233 hybrid-electric buses, 62 articulated buses, and 189 high capacity coaches for express service.

### *Other Core Investments*

The core program includes \$1.7 billion for other investments, outlined below.

- \$920 million to create a reserve to fund potential cost overruns in the core program (\$173 million) and expansion projects (\$747 million), on top of the 3 percent to 5 percent of reserves traditionally factored into project cost estimates. Rapidly rising construction costs were a major factor behind large cost overruns on the MTA's expansion projects. According to Global Insight, the cost of transportation construction projects grew at an average annual rate of 9.2 percent during the past three years, but the rate is expected to slow to 2.6 percent during the capital plan period as the economy cools. Lower inflation and completing the capital planning process could mitigate the need for the reserve. The MTA also should consider increasing its in-house construction workforce as a hedge against future construction booms.
- \$590 million for capital security projects. The MTA had originally planned to spend \$495 million on Phase 2 of its capital security program, but most of the anticipated federal resources failed to materialize. The MTA now expects \$590 million in federal grants to fully fund Phase 2 and to fund new security projects.
- \$150 million to renovate 370 Jay Street in Brooklyn, which will serve as the headquarters of the proposed Business Service Center to support the MTA's shared services initiative.
- \$90 million for police services, including \$76 million to complete a new public safety radio system that would be part of the New York State Wireless Network. The MTA has already allocated \$89 million to this project.

## Tier 2: Existing Expansion Projects

As shown in Figure 6, current expansion projects are now significantly behind schedule and almost \$4 billion over budget. The proposed capital program would allocate an additional \$5.5 billion to complete these projects, as outlined below.

- **East Side Access:** The cost of this project has grown from \$4.3 billion to \$7.2 billion, an increase of 67 percent. The proposed capital program allocates \$3.1 billion to complete the project. Revenue service is now expected to begin in 2015, six years later than expected.
- **Second Avenue Subway:** The cost of Phase 1 has grown from \$3.8 billion to \$4.3 billion, and the completion date has been moved from 2012 to 2015. The proposed capital program allocates \$1.4 billion to complete Phase 1.
- **Fulton Street Transit Center:** The cost of this project has grown from \$750 million to \$1.2 billion and is now expected to be completed in 2011, more than three years behind schedule. The project has also been scaled down from its initial design. The proposed capital program allocates \$295 million to complete the project.
- **South Ferry Terminal:** The cost of this project has grown from \$403 million to \$482 million and its completion date has been delayed from December 2007 to February 2009. The proposed capital program allocates \$27 million to complete the project.
- **Regional Investments:** The proposed capital program allocates \$476 million to fund infrastructure improvements needed to obtain the full benefits of East Side Access. These investments include \$252 million to reroute tracks in Queens to avoid conflicts with Amtrak, New Jersey Transit, and Metro-North;

and \$107 million for an LIRR station at Sunnyside Station in Queens as well as additional rolling stock.

## Tier 3: New Capacity Expansion Projects

The proposed capital program allocates \$3.2 billion for the following projects.

- **Computer-Based Train Control:** Complete installation on the No. 7 subway line and begin work on the Queens Boulevard lines (\$1.4 billion) to shorten headways.
- **Second Avenue Subway:** Allocate \$1 billion for the next phase of the project, which could cost between \$4.4 billion and \$5.7 billion.
- **Penn Station Access:** Utilize existing Amtrak lines to provide a link for Metro-North trains to Pennsylvania Station. New stations would be built in the Eastern Bronx and the West Side of Manhattan. The capital plan includes \$400 million of the estimated \$1.2 billion cost.
- **Jamaica Capacity Improvement:** Redesign the track and switch layout to accommodate the additional train service when East Side Access becomes operational (\$150 million).
- **No. 7 Fleet Expansion:** Purchase additional subway cars to accommodate ridership growth (\$175 million).

## Financing the Capital Program

The MTA has identified \$20.2 billion in potential resources to fund the \$29.5 billion capital program for 2008-2013. These include federal and City capital grants, proceeds from bonds backed by anticipated intergovernmental assistance and revenues from congestion pricing, and proceeds from asset sales. Even with these resources, the funding gap would total \$9.3 billion (see Figure 7).

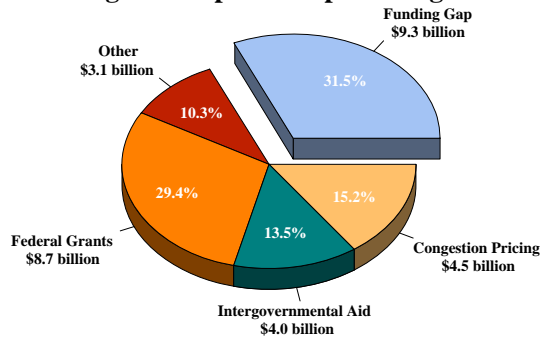
**Figure 6**  
**MTA Expansion Projects**  
(in millions)

	Original Schedule	Current Schedule	Original Estimate	Current Forecast	Cost Increase	Percent Change
East Side Access	2009	Feb. 2015	\$ 4,344	\$7,244	\$ 2,900	66.7 %
Second Avenue Subway	2012	June 2015	3,838	4,347	509	13.3 %
Fulton Street Transit Center	Dec. 2007	2011	750	1,198	448	59.7 %
South Ferry Terminal	Dec. 2007	Feb. 2009	403	482	79	19.6 %
			<u>\$ 9,335</u>	<u>\$ 13,271</u>	<u>\$ 3,936</u>	<u>42.2 %</u>

Sources: Metropolitan Transportation Authority; OSC analysis

Note: Reflects the MTA's cost estimate at the time the project was proposed.

**Figure 7**  
**Funding the Proposed Capital Program**



Sources: Metropolitan Transportation Authority; OSC analysis

### Federal Funding

The proposed plan assumes the receipt of \$7.8 billion in federal grants for the core program, which is in line with higher levels of past aid, and \$267 million for East Side Access. The MTA also assumes the federal government will provide \$590 million for security projects, a five-year average of \$118 million. The MTA, however, has never received more than \$75 million in any year from the Department of Homeland Security.

### Congestion Pricing

The federal government has pledged to provide New York City and the MTA with \$355 million in transportation grants if the State commits by March 31, 2008, to a pricing-based traffic mitigation plan that would reduce congestion in Manhattan by at least 6.3 percent. The New York City Traffic Congestion Mitigation Commission was created by the State Legislature to recommend a course of action. In conjunction, the Legislature required the MTA to accelerate its capital planning process so the commission's recommendations could be considered along with the next capital program.

On January 31, 2008, the commission released its final recommendations. These included the creation of a congestion pricing zone south of 60th Street between 6 a.m. and 6 p.m. from Monday through Friday (see Figure 8). Vehicles entering the zone would be charged (\$8 for cars and \$21 for trucks), though the cost of bridge and tunnel tolls would be deducted.

The commission estimates that this congestion pricing proposal would generate \$491 million annually (net of operating costs). The commission also stated that funding the MTA's capital

program "must be the primary goal of revenues from congestion pricing." While the commission acknowledged that there would be unfunded MTA operating costs associated with transportation services placed into operation prior to the start of congestion pricing, the source of funding for those costs was not identified.

**Figure 8**  
**Congestion Pricing Proposal**

<b>Boundary</b>	South of 60th St.
<b>Hours</b>	6 a.m.–6 p.m., Mon.–Fri.
<b>Fees</b>	\$8 for cars, \$21 for trucks \$1 per trip taxi cab surcharge
<b>Capital Cost</b>	\$767 million
<b>Transportation Costs</b>	\$104 million annually
<b>Net Revenue</b>	\$491 million annually

Source: New York City Traffic Mitigation Commission

The MTA has proposed funding the cost of additional transportation services (estimated at \$104 million annually, net of revenue from ridership gains) from congestion pricing proceeds. The MTA has also identified \$767 million in unfunded capital costs associated with congestion pricing, such as additional buses and subway cars.<sup>1</sup> The MTA would also deduct the debt service on these capital investments from congestion pricing proceeds. The remaining proceeds (about \$300 million) would be securitized to generate \$4.5 billion to support the MTA's proposed capital program. The revenue stream could only be securitized if the program were made permanent; a pilot program would provide far less benefit to the MTA's proposed capital program.

If the City Council and the State Legislature adopt the congestion pricing plan proposed by the commission or some alternative measure, the State Comptroller recommends that any proceeds be deposited in a "lockbox" for mass transit capital investments as suggested by the commission, and he further recommends that steps be taken to ensure that the proceeds are not used to supplant existing revenue streams that support mass transit.

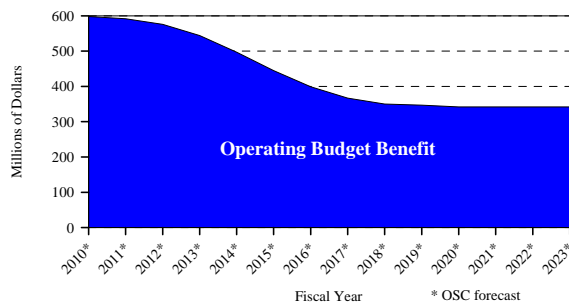
<sup>1</sup> The MTA estimates that \$951 million in capital improvements would be needed to provide the additional services contemplated under the congestion pricing proposal. The MTA assumes that \$184 million would come from federal transportation grants and that the remaining \$767 million would be funded from bond proceeds.

## New State and City Resources

The MTA's financial plan projects large budget gaps, primarily from an overreliance on debt to fund past capital programs. The plan anticipates the receipt of \$600 million in additional intergovernmental aid in 2010 to narrow the gaps. The Governor has pledged to support a \$300 million increase in State assistance, which he expects the City to match.

To help finance the proposed capital program, the MTA is now proposing that it be allowed to securitize a portion of these new resources to generate \$4 billion in bond proceeds. As shown in Figure 9, securitizing the resources in this way would reduce the benefit to the operating budget by up to \$259 million annually by 2018, which would in turn place increasing pressure on fares.

**Figure 9**  
**Operating Budget Impact of Securitizing Anticipated Intergovernmental Aid**



Sources: Metropolitan Transportation Authority; OSC analysis

## Other Resources

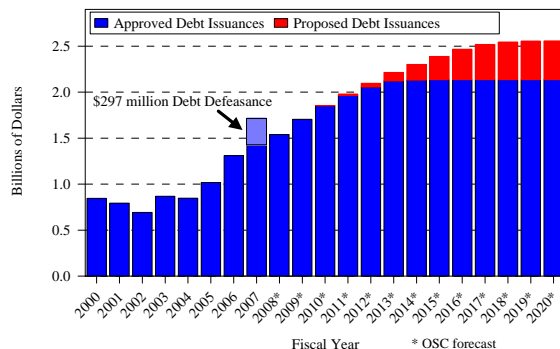
The proposed financing plan anticipates nearly \$1.9 billion in funding from projects rolled over from the current 2005-2009 capital program. The MTA also assumes that the City of New York will provide \$527 million in capital grants during the capital program period, which is 25 percent higher than currently planned by the City; and \$160 million from the abandoned LaGuardia AirTrain project. The MTA has identified only \$300 million of the \$1 billion anticipated from asset sales for the current capital program and none of the \$500 million expected for the proposed program. The MTA, however, is in negotiations to lease the rights over the western and eastern rail yards in Manhattan.

## Impact on the Operating Budget

Debt service on approved capital programs will grow from less than \$900 million annually during the early part of the decade to \$1.5 billion in FY 2008 (see Figure 10). The rapid growth in debt service is a contributing factor behind the fare and toll increases in 2003, 2005, 2008, and a planned increase in 2010. Debt service on bonds issued in support of approved capital programs is projected to peak at \$2.1 billion annually in 2013, a 38 percent increase over the current level.

The proposed capital program assumes that the MTA would issue \$4 billion in new debt backed by anticipated intergovernmental aid, and another \$2.5 billion backed by bridge and tunnel tolls to support the capital program for the Triborough Bridge and Tunnel Authority. When these planned issuances are taken into account, debt service would reach \$2.5 billion by 2017.

**Figure 10**  
**Debt Service Trends**



Sources: Metropolitan Transportation Authority; OSC analysis

Rising debt service will place increasing pressure on the MTA's operating budget. Based on the assumptions described above, the share of total revenues devoted to pay debt service will rise from 15 percent in 2008 to 20 percent by 2017.<sup>2</sup> The corresponding burden on fares and tolls will grow from 28 percent in 2008 to 43 percent by 2017. (These estimates do not reflect the MTA's policy to raise fares and tolls at the rate of inflation.)

<sup>2</sup> Estimates exclude debt service on congestion pricing bonds because these bonds would be backed by a dedicated revenue source and would not consume MTA resources.

For additional copies of this report, please visit our website at [www.osc.state.ny.us](http://www.osc.state.ny.us) or write to us at:  
Office of the State Comptroller, New York City Public Information Office  
633 Third Avenue, New York, NY 10017  
(212) 681-4840